



End User Computing Devices Support

SOLICITATION NUMBER: 0900000383

August 14, 2019 – 3:00 PM CST

TECHNICAL VOLUME

Original

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A. Section One – Introduction (E.13.1)

A.1 Letter of Introduction (E.13.1.a)

August 14, 2019

Marc Brown
Office of Management and Enterprise Services
5005 N. Lincoln Blvd
Oklahoma City, Oklahoma 73105
Re: Solicitation # 0900000383

Dear Mr. Brown:

NTT DATA, Inc. (NTT DATA) presents its proposal for the acquisition, deployment, management, and support of end-user computing (EUC) devices on a subscription/service basis to the Oklahoma Office of Management and Enterprise Services (OMES) in response to Solicitation # 0900000383. NTT DATA's Public Sector unit is part of a global information technology (IT) services company, headquartered in Plano, Texas, with 120,000 technologists proudly serving commercial and government entities worldwide. We also have a 120,000 square foot space in Oklahoma City to service OMES on this program. NTT DATA offers OMES and the State of Oklahoma the benefits of our global knowledge base while receiving the support and management of a local experienced team.

As detailed in our proposal, NTT DATA offers a comprehensive IT end user support solution based on more than 50 years of experience providing similar services to many clients, including the Georgia Technology Authority (GTA). Our proposal leverages our vast experience providing value, service excellence, and innovation to our clients. Our solution is designed to:

- 1) Align with Oklahoma's forward-looking strategy
- 2) Reduce risk while improving efficiency and uniformity
- 3) Increase overall value while driving costs down
- 4) Provide a Device as a Service based pricing model

In addition to NTT DATA's global knowledge and expertise, we have strategically selected Dell Technologies and Sterling Computers as members of the NTT DATA Team to create an overall solution that provides the lowest possible transition risk and highest value to OMES. Together, the NTT DATA Team is not only able to meet or exceed the solicitation requirements, but to drive innovation and value. In 2016, we acquired Texas-based Dell Services, vastly expanding the strength of our end user services and cybersecurity capabilities. Drawing on these additional capabilities, we will improve the end user experience at OMES and accelerate innovation. In the years to come, we will focus on the mission, objectives, and interests of OMES, delivering services in a spirit of mutual trust and respect that enables OMES to provide the highest quality of services to the citizens of Oklahoma.

Sincerely,



Timothy Conway, President, Public Sector
NTT DATA, Inc.

A.2 Responding Bidder Information (Completed OMES Form 076) (E.13.1.b)



Responding Bidder Information

"Certification for Competitive Bid and Contract" MUST be submitted along with the response to the Solicitation.

1. **RE: Solicitation #** 0900000383

2. **Bidder General Information:**

FEI / SSN: XXXXXX66

Supplier ID: STS-14617334-05

Company Name: NTT DATA, Inc.

3. **Bidder Contact Information:**

Address: 7950 Legacy Drive, Suite 900

City: Plano

State: Tx Zip Code: 75024

Contact Name: Timothy Conway

Contact Title: President, Public Sector

Phone #: 703.848.7349

Fax #: 703-848-7600

Email: Tim.Conway@NTTDATA.com

Website: https://us.nttdata.com/en/

4. **Oklahoma Sales Tax Permit¹:**

☒ YES – Permit #: 1988468736

☐ NO – Exempt pursuant to Oklahoma Laws or Rules – Attach an explanation of exemption

5. **Registration with the Oklahoma Secretary of State:**

☒ YES - Filing Number: 2312548865

☐ NO - Prior to the contract award, the successful bidder will be required to register with the Secretary of State or must attach a signed statement that provides specific details supporting the exemption the supplier is claiming (www.sos.ok.gov or 405-521-3911).

6. **Workers' Compensation Insurance Coverage:**

Bidder is required to provide with the bid a certificate of insurance showing proof of compliance with the Oklahoma Workers' Compensation Act.

☒ YES – Include with the bid a certificate of insurance.

☐ NO – Exempt from the Workers' Compensation Act pursuant to 85A O.S. § 2(18)(b)(1-11) – Attach a written, signed, and dated statement on letterhead stating the reason for the exempt status.²

¹ For frequently asked questions concerning Oklahoma Sales Tax Permit, see <https://www.ok.gov/tax/Businesses/index.html>

² For frequently asked questions concerning workers' compensation insurance, see <https://www.ok.gov/wcc/insurance/index.html>

7. Disabled Veteran Business Enterprise Act

- ☐ YES – I am a service-disabled veteran business as defined in 74 O.S. §85.44E. Include with the bid response 1) certification of service-disabled veteran status as verified by the appropriate federal agency, and 2) verification of not less than 51% ownership by one or more service-disabled veterans, and 3) verification of the control of the management and daily business operations by one or more service-disabled veterans.
- ☒ NO – Do not meet the criteria as a service-disabled veteran business.



Authorized Signature

8/13/2019

Date

Timothy Conway

Printed Name

President, Public Sector

Title

A.3 Certification for Competitive Bid and Contract (Completed OMES Form 004) (E.13.1.c)



Certification for Competitive Bid and/or Contract (Non-Collusion Certification)

NOTE: A certification shall be included with any competitive bid and/or contract exceeding \$5,000.00 submitted to the State for goods or services

Agency Name: Office of Management & Enterprise Services (OMES) Agency Number: _____

Solicitation or Purchase Order #: Solicitation # 900000383

Supplier Legal Name: NTT DATA, Inc.

SECTION I [74 O.S. § 85.22]:

A. For purposes of competitive bid,

1. I am the duly authorized agent of the above named bidder submitting the competitive bid herewith, for the purpose of certifying the facts pertaining to the existence of collusion among bidders and between bidders and state officials or employees, as well as facts pertaining to the giving or offering of things of value to government personnel in return for special consideration in the letting of any contract pursuant to said bid;
2. I am fully aware of the facts and circumstances surrounding the making of the bid to which this statement is attached and have been personally and directly involved in the proceedings leading to the submission of such bid; and
3. Neither the bidder nor anyone subject to the bidder's direction or control has been a party:
 - a. to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding;
 - b. to any collusion with any state official or employee as to quantity, quality or price in the prospective contract, or as to any other terms of such prospective contract, nor
 - c. in any discussions between bidders and any state official concerning exchange of money or other thing of value for special consideration in the letting of a contract, nor
 - d. to any collusion with any state agency or political subdivision official or employee as to create a sole-source acquisition in contradiction to Section 85.45j.1. of this title.

B. I certify, if awarded the contract, whether competitively bid or not, neither the contractor nor anyone subject to the contractor's direction or control has paid, given or donated or agreed to pay, give or donate to any officer or employee of the State of Oklahoma any money or other thing of value, either directly or indirectly, in procuring this contract herein.

SECTION II [74 O.S. § 85.42]:

For the purpose of a contract for services, the supplier also certifies that no person who has been involved in any manner in the development of this contract while employed by the State of Oklahoma shall be employed by the supplier to fulfill any of the services provided for under said contract.

The undersigned, duly authorized agent for the above named supplier, by signing below acknowledges this certification statement is executed for the purposes of:

☒ the competitive bid attached herewith and contract, if awarded to said supplier;

OR

☐ the contract attached herewith, which was not competitively bid and awarded by the agency pursuant to applicable Oklahoma statutes.

Supplier Authorized Signature

8/13/2019

Certified This Date

Timothy Conway

Printed Name

President, Public Sector

Title

703.848.7349

Phone Number

Tim.Conway@NTTDATA.com

Email

703-848-7600

Fax Number

A.4 Signed Amendments (E.13.1.d)

A.4.1 Amendment 1



Amendment of Solicitation

Date of Issuance: July 26, 2019 Solicitation No. 5100000773
Requisition No. _____ Amendment No. 1

Hour and date specified for receipt of offers is changed: ☐ No ☐ Yes, to: _____ CST

Pursuant to OAC 260:115-7-30(d), this document shall serve as official notice of amendment to the solicitation identified above. Such notice is being provided to all suppliers to which the original solicitation was sent.

Suppliers submitting bids or quotations shall acknowledge receipt of this solicitation amendment prior to the hour and date specified in the solicitation as follows:

- (1) Sign and return a copy of this amendment with the solicitation response being submitted; or,
- (2) If the supplier has already submitted a response, this acknowledgement must be signed and returned prior to the solicitation deadline. All amendment acknowledgements submitted separately shall have the solicitation number and bid opening date printed clearly on the front of the envelope.

ISSUED BY and RETURN TO:

U.S. Postal Delivery:

5005 N. Lincoln Blvd., Ste. 200
Oklahoma City, OK 73105

or

Personal or Common Carrier Delivery:

5005 N. Lincoln Blvd., Ste. 200
Oklahoma City, OK 73105

Kristen Johnson

Contracting Officer

405 - 522 - 5351

Phone Number

Kristen.johnson@omes.ok.gov

E-Mail Address

Description of Amendment:

a. This is to incorporate the following:

Question #1: Whether companies from outside the USA can apply for this (like from India or Canada)?

Answer #1: You can apply but must be able to provide requirements in C.2.1 and C.2.5.

Question #2: Whether we need to come over there for meetings?

Answer #2: No meeting required.

Question #3: Can we perform the tasks (related to RFP) outside the USA?

Answer #3: See Answer #1

Question #4: Can we submit the proposals via email?

Answer #4: No, all proposals must be submitted via mail.

Question #5: Is there a current provider and, if so, can we see their current contract?

Answer #5: Yes, there is a current provider but you must submit an open records request to view the contract.

Question #6: If there is no current provider, is there a back log of work to be processed and how much of it is there?

Answer #6: Yes, approximately 20 boxes.

Question #7: If there is a backlog, will it all need to be picked up in one trip before the monthly pick-ups begin and will they all need to be returned at one time?

Answer #7: Yes and yes.

Question #8: Will files need to be reassembled in the same way as received or just have all documents replaced in the same order in the file folder?

Answer #8: - Do not need to reclip - can put colored divider sheets in between applications - yes, they will need to remain in same order in the box, numeric.

Question #9: Do we need to apply any naming convention to files?

Answer #9: Yes as specified in C.2.3

Question #10: Is there any fix time frame for digitization?

Answer #10: Estimate one week/box

Question #11: Are all of the documents in good condition?

Answer #11: Yes

Question #12: Are you specifically looking for an Oklahoma local vendor?

Answer #12: Yes, for pickup and delivery to Department of Libraries.

Question #13: When indexing the documents will indexing of "name" be first, middle and last?

Answer #13: Last, First, Middle

Question #14: On Attachment A-Pricing could you please clarify what information you are asking for on Cost Year One (Initial Year) Cost Option Year Two and Cost Option Year Three?

Answer #14: Cost per image scanned - contract has options for renewal - if cost will increase each year, indicate what cost per image will be each year

Question #15: What is the length of the contract?

Answer #15: 1 year with options for renewal

Question #16: Is it possible to get a sample of work prior to the bidding closes on August 2nd?

Answer #16: Yes, the vendor is welcome to come by and look at actual documents that will be scanned.

Question #17: Is there an approved budget? If so, what is the designated budget for this project?

Answer #17: This solicitation will help with establishing a budget for these services.

Question #18: Section C.2.11 states prompt scanning and delivery...Can this timeframe be defined? Since the quantity may fluctuate, maybe days per box to process and return?

Answer #18: See answer number 10.

Question #19: Is it possible to go see these records?

Answer #19: Yes

Question #20: What is the level of reassembly of documents required?

Answer #20: The documents just need to be put back in the box in the same order, can be separated by colored paper if desired, not necessary to be clipped.

b. All other terms and conditions remain unchanged.

NTT Data, Inc.
Supplier Company Name (PRINT)

8/13/2019
Date

Timothy Conway
Authorized Representative Name (PRINT)

President, Public Sector
Title


Authorized Representative Signature

A.4.2 Amendment 2



Amendment of Solicitation

Date of Issuance: 07/23/2019

Solicitation No. 0900000383

Requisition No. 0900013016

Amendment No. 2

Hour and date specified for receipt of offers is changed: ☐ No ☒ Yes, to: August 14, 2019 3:00 PM CST

Pursuant to OAC 260:115-7-30(d), this document shall serve as official notice of amendment to the solicitation identified above. Such notice is being provided to all suppliers to which the original solicitation was sent.

Suppliers submitting bids or quotations shall acknowledge receipt of this solicitation amendment prior to the hour and date specified in the solicitation as follows:

- (1) Sign and return a copy of this amendment with the solicitation response being submitted; or,
- (2) If the supplier has already submitted a response, this acknowledgement must be signed and returned prior to the solicitation deadline. All amendment acknowledgements submitted separately shall have the solicitation number and bid opening date printed clearly on the front of the envelope.

ISSUED BY and RETURN TO:

U.S. Postal Delivery:

Office of Management & Enterprise Services
5005 N. Lincoln Blvd.
Suite 300
Oklahoma City, OK 73105

Marc Brown

Contracting Officer

405 - 496 - 9148

Phone Number

Marc.brown@omes.ok.gov

E-Mail Address

Description of Amendment:

a. This is to incorporate the following:

Please provide clarification on whether this bid is for information technology support (answering tickets) or whether this is for providing equipment. Please also tell us where to find the VPAT. Thanks!

The solution the state is seeking is for equipment. The state requests that responding vendors provide a link within their response to their VPAT if available.

- 1) C.2.1.2. To pursue solutions that provide significant cost savings, improve service, and reduce ongoing operating risks for the State.

Please provide the cost details or at least total cost per user for which the State will be comparing cost saving against?

- 2) C.2.1.10. The Supplier will be responsible for maintaining all State owned software licensing for all products.

Please provide the list of software labels to be maintained and license details required for reporting.

- 3) Does the State of OK have an Enterprises License Agreement with Microsoft for your Operating System.
- 4) Who would manage The State's image and is there an expectation to where the image will be loaded?

1. The current operating cost is not reflective of how much the costs actually are.

2. Here is the link to the Oklahoma approved software list:

<http://approved.ok.gov/approved-software>

3. Yes, The State of Oklahoma currently has an Enterprise Agreement with Microsoft.

4. We believe the development of the image will be a collaboration between the vendor and the Device Engineers Team, we do not have a preference of where it is loaded if they are talking about physical location.

D.4.2 Is OMES requesting Suppliers to respond within the referenced workbooks? Or, is Attachment A for reference and Attachment C for Supplier pricing responses?

Section 4 – EITA Compliance. Will providing a link to our organization's VPAT site satisfy OMES' requirement?

C.3/C.9 Will OMES maintain existing service desk for initial triage of events? Can the OMES please describe the level of services that would be required from the help desk?

C.3 Of the 4,437 monthly tickets, do all require dispatch for resolution or is there a portion of incidents which are resolved via the service desk?

C.9.1 Are there any sub groups/user segments (i.e. VIPs) which required an enhanced level of coverage / support? Please provide examples.

C.9.1 What is the existing call/case workflow for a case that is dispatched to a resolver group for resolution? Are there documented process flows that can be provided?

C.6.2 How many images does the State maintain across all agencies?

C.6.10 Does the OMES have a defined process/task list of activities that need to be conducted while onsite performing a deployment?

C.6.11 Is the expectation that the successful bidder includes required shipping expenditures to return the legacy devices to either centralized OMES-IS or Leasing organization, or should the successful bidder prepare devices and arrange for pickup?

C.11.2 Are there any data retention / legal hold requirements?

C.6.10 Does the State currently have a data migration strategy? Please explain; (a) Is data migration required? If so, what is the average amount of data? (b) What tools are you using today, specific to data migration?

C.6.6 Approximately how many physical sites / locations and number of users per site/location? Can OMES supply a list of addresses included in the request?

C.6.6 Approximately how many agencies are there within the State of Oklahoma?

C.8 How is asset management being conducted today? Is there a documented process defined that can be shared?

C.8.2 Does the State have any SAM (software asset management) tools or modules deployed?

C.8.2 Does the State have agreed to centralized processes that control how software enters and leaves the organization? Please provide software policy.

C.8.3 What software tools / solutions does the State use to track/manage the software environment?

C.8 Do all systems have internet access? If not, what percentage of systems would not have internet access?

C.10 Please provide a list of the software titles / publishers the State would like to track?

C.10.2 Does the state have a current list of all devices and software loaded?

C.10 What is the current application packaging run rate? (Monthly volume?)

C.12.1 What procurement system does the State use?

C.2.1.8 Based on previous history, does the State have a record of how often an employee leaves and is not replaced?

OMES FORM CP 011 – Purchasing | Rev. 05/2016

C.2.1.8 Does the State have need for "temporary" employee deployments such as interns where devices will be in use for a limited term? If so, can the state provide any guidance on the annual number of devices needed and average length of use?

D.4.2 OMES is referencing its preferred manner of response via the attachments. Vendors do not have to respond within the workbooks, but should respond in a similarly structured fashion.

Section 4 Yes, a link within vendor's response to your VPAT is preferred.

C.3/C.9 The intention is that the vendor will take PC calls and do the initial triage to determine if it is within the services they provide or OMES is responsible. The service desk information is listed in the RFP for the information we are requesting. If you have specific questions please let us know.

C.3 There are a portion that could be resolved via the service desk however we do not have the data to provide how many.

C.9.1 Yes we have a VIP status which is usually reserved for Agency Directors, Gov Office, etc. Those tickets are prioritized above all else.

C.9.1 We do not have this documented. However the service desk has a knowledge base that is used to review the case to determine if it is something they can fix otherwise it is assigned to the specific resolver group.

C.6.2 approx. 16

C.6.10 No

C.6.11 We would want this included in the price.

C.11.2 Section A.15 Audits and Records clause addresses data retention and how litigation affects the retention period.

C.6.10 No there is not a current strategy, yes it is required. Do not have the average information. Today it is manual via copying files and data and restoring on the new device. Looking for opportunities to improve.

C.6.6 Copy of Locations.xlsx

C.6.6 Approx. 203

C.8 http://eclipse.omes.ok.gov/ISD/guidances/reusableassets/resources/11.1.2_PC_Inventory_Tracking.pdf

C.8.2 The state currently uses Altiris to deploy some software, there is not a true SAM.

C.8.2

http://eclipse.omes.ok.gov/ISD/guidances/reusableassets/resources/09.3.2_Requesting_PC_Software_Installation.pdf

C.8.3 The State currently uses Altiris

C.8 The State does not have this information.

C.10 Please visit: approved.ok.gov

C.10.2 The State can pull a list from Altiris.

C.10 The State does not have this information available.

C.12.1 Oracle's People Soft

C.2.1.8 The State does not have this information available.

C.2.1.8 Yes, however we do not have this level of information.

B.3. Probationary Pilot Program- Page 16 - Can the Government confirm the probationary period of 180 days mentioned in this paragraph assumed to be post transition period?

C.3 Scope - Page 17 - Please provide an asset file containing the following information for all devices requiring services under this contract. File should contain Asset type, Age, Warranty Status, End User Device Configuration Type (Category 1-7), and count by physical street address and zip code

C.3 Scope - Page 17 - Is it your expectation that the provider would purchase out all owned and leased devices currently in use by the State? If so, can you please provide the estimated FMV the State is anticipating receiving for these assets?

C.5.4 - Page 19 - Can the State clarify whether there are any current Linux configurations, and if so how many?

C.11 Asset Management - Page 21 - Will the State be providing space for field service employees and depot inventory? If so, how many and at which locations?

C.15 Warranty and Break/Fix Services - Page 21 - Is there a requirement for VIP support (e.g. the Governor or Executive Directors). If so, please provide the number and locations.

C.15 Warranty and Break/Fix Services - Page 21 - Is home support for end users in scope? If so, please provide the number and locations.

C.2 Scope - Page 17 - What is the State's plan for any devices that are not able to run Windows 10 effective 1/14/2020? It is our understanding that around half of the State's devices will be affected by this.

C.6.3 Deployment Services - Page 19 - Is there any application virtualization such as App-v that requires support? If so, please provide the number of applications and target devices.

C.8.3 Device Management - Page 20 - Do you use any peer to peer caching technologies in remote offices as part of the State's distributed architecture? What is the typical WAN bandwidth in remote offices? Do you use any profile management tool such as Microsoft UE-V or Ivanti/AppSense?

C.8.3 Device Management - Page 20 - When a device is replaced, is there a need to copy data from one device to the next, or does the State currently employ a Cloud (or similar) backup system?

C.10.1 Application Packaging - Page 21 - How many applications are in the environment (% Simple, medium, complex) and how many app updates are there per month? Are there any applications not compatible with Windows 10?

C.10.2 Application Packaging - Page 21 - Please describe your current tool for application packaging and deployment.

C.11.4 Asset Management - Page 21 - How many software titles are tracked for Software Asset Management purposes?

C.3 Scope - Page 17 - Is there currently a support expectation for VDI in the environment?

C.3 Scope - Page 17 - Can the State please describe the bandwidth available at each of their state facilities?

C.3 Scope - Page 17 - Is managing Antivirus in scope for NTT DATA? What Antivirus/malware products do you use today?

C.8.3 Device Management - Page 20 - Are agencies on a common Active Directory domain? If not, how many domains are there?

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C.8.3 Device Management - Page 22 - Please provide your current application inventory/catalog?

C.8.3 Device Management - Page 20 - Please describe the channels (Voice/non-voice) available for the end users to contact Service Desk.

C.8.3 Device Management - Page 20 - Please provide the list of tools used by the Service Desk to interact with or resolve users' issues, including but not limited to the following:

- i) Password Management tool
- ii) Chat/Collaboration tool (Skype for business, Lync, etc.)
- iii) Email client (Outlook, Lotus Notes, Google, etc.)
- iv) Remote device management
- v) Self-help portal
- vi) Telephony platform
- vii) knowledge management system

C.8.3 Device Management - Page 23 - Does the state have a Single Sign On solution in place today? If yes, what is it?

C.8.3 Device Management - Page 20 - Does the Service Desk currently maintain a Knowledge Base which will be handed over to the supplier during Transition? If yes, please describe the maturity of the Knowledge base in terms of no. of KB articles and utilization by users and agents to resolve issues.

C.8.3 Device Management - Page 20 - Please describe the tools used for service desk related Management Reporting. Does the state expect the supplier to use these going forward?

C.8.3 Device Management - Page 20 - What will be the Tool Strategy going forward? Which Tools will OMES continue to own? Is OMES open to Tool Recommendations/replacements?

C.8.3 Device Management - Page 20 - Please confirm if the supplier has to work with OMES's ITSM toolset and if yes, OMES will provide access to all required tools and licenses?

C.8.3 Device Management - Page 22 - Please provide the total average monthly contact volume, average handle time, SLA's and top call drivers for the last 12 months, classified by:

Distribution by channel, e.g. voice, chat, web, email etc.,

call patterns by hour,

Average handle times for phone contacts,

Average handle times for non-voice contacts,

Distribution by top call drivers

C.8.3 Device Management - Page 20 - Does OMES own current ITSM knowledge and problem management processes? Is OMES looking to continue owning these in the future and have Supplier participate in them OR is OMES looking for Supplier to own these functions in future state.

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C.8.3 Device Management - Page 22 - Please provide the list of weekly and monthly KPI metrics that OMES will require Supplier to track and meet.

C.8.3 Device Management - Page 20 - For how many years has the State been using Cherwell? Please provide a list of Cherwell modules purchased and implemented as of today (eg. Software Asset Mgmt, CMDB, KB)

C.8.3 Device Management - Page 20 - Is the current Active Directory hosted in the cloud or on-premise

C.8.3 Device Management - Page 23 - Is the state interested in providers offering re-badging opportunities to potentially displaced state employees as a result of this solicitation?

B.3 The probation period is intended to be a time when the new process can be tested out and tweaked before we roll out across the entire state.

C.3 Pg. 17 The State provided the counts, we will not be able to provide this information.

C.3 Pg. 17 No, that is not the intention.

C.5.4 Pg. 19 The State does not currently support Linux.

C.11 Pg. 21 No, it is the intention that the vendor will provide space for their staff.

C.15 Pg. 21 Yes, the State considers the agency director for each agency a VIP and the Gov. Office. Locations vary widely.

C.15 Pg. 21 We do not visit staff homes, we may assist them remotely if they are at home working. They may also visit a county office for assistance in their county.

C.2 Pg. 17 We continue to work to upgrade the devices that can take a windows 10 image if the machine itself can not take a windows 10 image we are directly the agency to upgrade the machine or they will need to pay the MS extended support.

C.6.3 Pg. 19 Not currently, we are looking some of the legacy applications to application virtualization, but that would be the responsibility of OMES at this time.

C.8.3 Pg. 20 We do not currently use peer to peer. We do not know the WAN for each remote location. We do not currently use any profile management tool.

C.8.3 Pg. 20 Yes, it would need to be transferred. We do not currently have a cloud solution.

C.10.1 Pg. 21 We do not have a complete list. Yes there are applications that are not compatible with Windows 10 which we are working with agencies to potentially visualize or replace.

C.10.2 Pg. 21 We currently use Altiris.

C.11.4 Pg. 21 Please visit our website, approved.ok.gov

C.3 Pg. 17 It is not a requirement, but it was requested as a possible value add.

C.3 Pg. 17 Not currently available.

C.3 Pg. 17 No managing of the Antivirus will stay with the State. We currently use Symantec.

C.8.3 Pg. 20 We have a main which most are on, but we do have some larger agencies with their own.

C.8.3 Pg. 22 Information not available.

C.8.3 Pg. 20 Currently we have email, voice, self service portal. We are implementing chat and knowledge base as well.

C.8.3 Pg. 20 password management / not a single one, chat/collaboration tool / piloting chat, but not currently available statewide

email client / Outlook, self help portal / In-Cherwell, Telephony platform / In Contact, knowledge management system / Cherwell, One Note and Bomgar

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C.8.3 Pg. 20 The service desk is currently using a one note to document their knowledge base. We are in the process of transitioning to and actual knowledge base system.

C.8.3 Pg. 20 We currently use Cherwell for all our service desk reporting. We are open to options that would be proposed.

C.8.3 Pg. 20 Yes, we are interested in tool recommendations/replacements.

C.8.3 Pg. 20 It is anticipated that the vendor will have their own system and there may be an integration between their system and the states system.

C.8.3 Pg. 22 Chat - 5 tickets / Email - 3,476 / Phone - 1,523 / Portal - 675 / Walk In - 53

Handle Times Phone Contacts/ Do not have this information for just PC tickets (we handle all tech tickets for the state currently).

Handle Times for Non Voice Contacts / Overall average handle time is about 5 minutes at Tier 1

Distribution by Top Call Drivers / We do not have this information except what was included in the RFP.

C.8.3 Pg. 20 It may be a blend of the vendors process and the States, but we would want some involvement.

C.8.3 Pg. 22 These were listed in the RFP.

C.8.3 Pg. 20 Cherwell has been in use for approx 4 years. We using the following modules: Incident Management, CMDB, KB)

C.6.2 Will agency images require additional configuration options (loading software as an example) beyond the base image?

C.6.5 Can you provide a rough estimate of the total size of the base images in use?

C.6.6.4 Is there a list of site-specific requisites for a survey to confirm a go for successful deployment?

C.6.6.4 If a site survey turns up needs for remediation, will the vendor be responsible for remediation or will the state resolve and then report back to the vendor when ready?

C.7.1 Is there a standard set of peripherals to be considered for setup and support? Approximate attach rate? Do you have data related to troubleshooting requirements?

C.6.6 Will the vendor be responsible for deinstall including the wipe of legacy devices as part of the installation process?

C.15.4 Assume this refers to returning any non-reparable devices/parts to the vendor for future devices. Is this also in scope for legacy devices?

C.3 Is the monthly volume exclusive to desktops? Or does it cover all volumes for the ~32,000 FTEs?

C.3 The provided ticket averages make up 9.3% of the overall monthly case volumes. Are there any other, more general, case type references to estimate the remaining 90.7% of monthly events?

C.6.2 Yes

C.6.5 State does not have this information available.

C.6.6.4 We do not have an established list however at high level: minimum downtime for the employee, all needed files, software, etc. are ready to use after the deployment team leaves.

C.6.6.4 It would depend on the remediation that was needed.

C.7.1 No, there is not a standard.

C.6.6 Yes, the State would like this to be included if provided.

C.15.4 Yes, however those may require some additional steps.

C.3 All volumes

C.3 The other 90% were not in scope for the vendor to take over at this time. Those mostly consist of agency specific software remediation/troubleshooting.

B.13. Probationary Pilot Program -

What is the scope of the pilot in terms of services provided?

Part of the reason that we are doing the pilot is the unknowns that are part of the process. We do not have a set of success criteria for the pilot.

B.13. Probationary Pilot Program - Do you have an expected number of devices to be part of the pilot?

This will be negotiated with the successful vendor.

B.13. Probationary Pilot Program - What determines the success of the pilot and the decision to move forward?

This will be negotiated with the successful vendor. The intent of the pilot is to get a true implementation for a subset of users so we can master the process and communication for a successful statewide implementation.

C.2.1.8.

Is employee leaving the only "return" scenario? What other scenarios apply? It would be helpful to have parameters around this requirement. For instance, if an employee orders a desktop and decides 3 months later they want a laptop instead, is that a scenario that should be accounted for in response?

Yes. If there are any implications of a return please state those in your response as you see the need.

A.20. Insurance

Does the Supplier need to insure the devices for risk management purposes or will the State insure them in the event of loss or damage?

Yes

E.13. Bid Deliverables

Note: Bid deliverables are to be submitted on a thumb drive in a machine-readable format.

Does OMES desire a hard copy or copies of Supplier responses? If so, how many copies?

No hard copies are required.

C.2.1.10/Attachment C

The Supplier will be responsible for maintaining all State owned software licensing for all products.

Could you please explain exactly what is meant by this statement and what the State expects from the Supplier in this regard?

More information is needed to develop pricing as required on the pricing sheet.

We will maintain the license rights to these software through our existing contracts. We are not expecting the vendor to provide these licenses per their pricing.

E.3.2. The Bid should be paginated and indexed in alpha order with reference to specific sections of this Solicitation.

Should the Table of Contents be arranged in alphabetical order per this instruction? Or would OMES prefer an index be added in alpha order as an appendix to the response?

The table of contents should follow the same sequence as the response.

E.3.3. and E.3.4. Submission format and number of response copies.

Is the response required in hard copy in addition to the thumb drives? If so, how many copies are required of the technical proposal and the price proposal?

Hard copies are not required.

G.1.3.6. - G.1.3.11. Can OMES provide information on the agencies and their locations that will be included in the support services area?

Locations.xlsx

G.1.3.6. - G.1.3.11.

Can the State provide a listing of the State offices in each county and their addresses? It is understood that this contract will be open for other local and county entities to utilize, but guidance on the initial geographical scope would be helpful.

Locations.xlsx

C.5. End-User Device Configurations

On most of the configurations, the state is asking for 1 or more USB Type-C 3.0 (or better) ports. Numerous compatibility issues and conflicting proprietary standards have been reported for USB Type-C. How important is having these ports as part of the configuration? Will not including them disqualify the response?

Yes this is part of our standard. However a vendor can specify concerns or additional options as necessary.

C.6.9. Bench stock/ Loaner Pool

Can the state provide a timeline of events when an increase in the number of devices is needed for conferences, temp employees, etc.?

There is a not a defined set of dates for these and are dependent on the agencies business.

G. Price and Cost/ Attachment C: Device Purchase Cost with and without Operating System

The pricing sheet asks for Device Purchase Costs with and without OS. Does the State intend to purchase some devices rather than use the subscription model?

Yes some federal dollars not no allow subscription type models.

G. Price and Cost/ Attachment C: Monthly per unit device cost with and without management.

The pricing sheet asks for Monthly per unit device costs with and without management, but also asks for the Monthly per unit cost for management only. However, the RFP asks for pricing with and without an OS (as does the purchase device request). Does the state wish the responses to include an option for "with and without OS" in addition to "with and without management" for the monthly unit costs?

Yes we want complete package pricing along with individualized pricing for each component.

C.5. End User Device Configurations - P. 18 - Could you please provide details on the Mobile Iron architecture ? (Is it on-premises, Version of MobileIron, number of servers , is it high available mode ? And is there a DR and Staging/test environment ?

C.5. End User Device Configurations - P. 18 - Please provide an approximate number of tickets received per month on MobileIron support ? Please add the Service requests and incidents

C.5. End User Device Configurations - P. 18 - What device platforms will be supported? (iOS, Android, Blackberry, Windows Phone, Windows 10 etc...) Please also specify if any rugged devices are in scope under Mobile Iron ? Are these Corporate Liable (CL) or Individual Liable (IL) ?

C.5. End User Device Configurations - P. 18 - Is there a plan or desire to migrate from an existing MDM tool? (ex: tool does not meet customer requirements)

C.5. End User Device Configurations - P. 18 - How many Mobile Applications are in scope to be deployed on MDM tool ? (Both Inhouse and Public apps)

C.5. End User Device Configurations - P. 18 - Is secure intranet connectivity (e.g. VPN) required for other mobile device applications?

C.5. End User Device Configurations - P. 18 - Will users need access to corporate content and file share repositories and documents from their mobile device?

C.5. End User Device Configurations - P. 18 - Will users need access to browse corporate intranet sites from their mobile device?

C.5. End User Device Configurations - P. 18 - Is there a current TEM(Telecom Expense Management) in place today delivering the services? If yes, Please provide the details below :

1) Total number of device under TEM

2) Please provide details on the Telecom vendors

3) Please provide Geo wise break up of total number of Wired and wireless devices inscope for TEM?

C.5 It is currently on prem, we are looking at moving to the cloud. The core is v10.2 the sentry's are v9... We have 1 core and 10 sentry's./ No HA core but the Sentry's are load balanced between two pairs.

C.5 approx.88 tickets per month

C.5 IOS is the state standard. These are all corporate liable.

C.5 Yes, if it makes sense. We have looked at moving to Intune.

C.5 Apps are not currently deployed through MDM.

C.5 Yes

C.5 Only through email/office 365.

C.5 No

C.5 No

C.18.3. Any resources that will handle CJIS (Criminal Justice Information System) devices will require CJIS background checks performed by the State.

Who will bear the cost of these background checks?

The vendor would bear the cost.

C5. End-user Device Configurations -- Ruggedized Device Configurations

What features/functionality does the state expect to see in a ruggedized device? How does the state define rugged?

A rugged computer is a computer specifically designed to operate reliably in harsh usage environments and conditions, such as strong vibrations, extreme temperatures and wet or dusty conditions. Not limited to ability to withstand higher and lower operating temps than typical components, things like sealed keyboards, scratch resistant screens, readable in direct sunlight, etc.

B.13 Probationary Pilot Program - P. 16 - During the Probationary period, will the State of Oklahoma continue to provide all in scope services to end users except for the Probationary pilot group members?

B.1 Contract Term, Renewal and Extension Option - P. 14 - Per Section B.1.2 of the Solicitation - Under Oklahoma law, the State may not contract for a period longer than one (1) year (the "Initial Term"). By mutual consent of the parties hereto, it is intended that there shall be four (4) options to renew, subject to the terms and conditions set forth herein, each for duration of one (1) year. - Is the "initial Term" inclusive of all transition and Probationary Period requirements? In other words, is steady state operations, where the new provider's services support the entire State of Oklahoma, only in effect for the balance of the 60 months represented by the "initial Term" plus the "four (4) options to renew", or will these 60 months commence after all transition and Probationary pilot requirements have been successfully completed?

C.3 Scope - P. 17 - IS Password reset in scope? If so, please provide more details on the process of Password Reset? Which tool is used by the Service Desk to perform a password Reset? How many such tickets does the state perform per month?

C.3 Scope - P. 17 - No reference is made to call recording requirements for the support desk. Other than for our own internal quality assurance processes, does OMES have specific recording and/or recording retention requirements?

C.11 Asset Management - P. 21 - What types of assets/devices are currently being tracked by the state? (i.e. desktops, laptops, tablets, smartphones, printers, peripherals etc.) Does the state have an expectation that all of the above items will be tracked in an asset management system and reported on a routine basis?

C.10.2 Application Deployment Sets - P. 21 - How are SW entitlements tracked today?

C.11.4 License Management - P. 21 - How many unique Enterprise type agreements are currently active?

B.13 Yes

B.1 The first 12 months would begin at the initiation of the probation period.

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C.3 Not in scope at this time.

C.3 It is not required, but could be considered a value add.

C.11 Yes, all of the items listed would be tracked

C.10.2 They are managed and tracked individually by the person themselves or their supervisor. We want to be able to manage/track them at a higher level.

C.11.4 3-5

E.3.1 - Submission of Bid - As we craft our solution in response to Solicitation Request 0900000383 – End User Computing - We would like to formally request a 2 week extension to the existing due date of July 31, 2019. This is to allow appropriate time for us to properly update our solution based on answers to the pending questions around items such as the probationary period, estimated user counts by pricing options, and usability of the existing toolsets. We strongly feel that by allowing for an extension OMES and the State of Oklahoma will benefit from the additional time allowed in order to create a truly dynamic and cost effective solution.

The State has agreed to extend the response due date to August 14, 2019 at 3:00PM CST.

Can you clarify - is your extension to August 14, 2019?

Yes, August 14, 2019. It has been corrected.

C.3 - Scope - Will all agencies be required to fall under the entity who is awarded or will some agencies still have the ability to use the existing Master Lease Agreement in place?

C.3 - Scope - Can you provide the count of Agents currently staffing the service desk today?

C.3 This is a mandatory state contract. If an agency wants to use someone else they will have to request an exception and be approved by OMES.

C.3 Just to be clear this is not a complete replacement of the States IT Service Desk as the current service desk handles many types of calls including tier 1 PC support, agency specific application support etc. We have approx. 40 staff members on the entire service desk.

G.13 – Pricing and Cost - Attachment C – Columns C & D - Does a "without management" requirement mean that end user will not need any support for their device, including calls to the Service Desk?

G.13 – Pricing and Cost - Please differentiate the meaning of the pricing options of "with management" an "without management"? If an end-user purchases a system without management, how will they receive support, e.g. break/fix etc.?

C.3 – Scope - Of the 32,000 end user total, how many devices are anticipated to be purchased without management? How many are anticipated to be purchased with management?

C.10 – Application Packaging - What version of Altiris is currently running within the environment, and what modules are included?

C.3 – Scope - How many devices are in scope for MDM support? Please provide details on device types for MDM Support (IOS, Android, etc.)?

C.9 – Support - Does the current Support Desk assign any tickets to parties outside of OMES, e.g. Agency support groups?

C.9 – Scope - Is it the intent of the State to vector (by means of a voice menu option) calls to the proposed EUC specific service desk?

C.10 Application Packaging - It is our understanding that SCCM licenses are owned by the state. Can you confirm that the selected supplier may include use of these licenses in their solution and that the number of licenses cover the entire state employee and contractor population?

C.5 End-User Device Configurations - Due to the limited manufactures of 17inch rugged laptops, please confirm this requirement is still valid and if a 15inch model might be an appropriate substitute.

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C.16.5 – Service Level Agreements – The SLA requirement requested in C.16.5 requests the application packaging timelines. This request seems in conflict with C.10.3 (The State will maintain ownership of building Agency specific applications for deployment) and C.10.1 (The supplier will Assist with packaging updated software version releases as they are provided by software vendors). Can you please clarify the requirement for application packaging?

G.13 The ones without management would be where they are only getting hardware support but not support of Windows, Microsoft, Altiris, etc. we do have some agencies that only specifically use the devices themselves but OMES does not support them.

G.13 Please see answer above.

C.3 The State does not have this information.

C.10 The latest version.

C.3 5,500 Apple, approx. 50 android in our current environment.

C.9 No

C.9 Yes that could be an option proposed.

C.10 For the licenses we have for Q365 those licenses are included for however not all staff use the full Q365 licenses and these are not already paid for.

C.5 We are willing to look at other possibilities.

C.16.5 There may be an instance where we need to the vendor to build a package because of resource shortages. Would want to know the cost of that.

What are the expectations around iPad and iPhone management? Does this include full lifecycle management services, (i.e. ordering, activations, remote management/support, break/fix, replacement)?

Yes, it could include all of these things.

C5. End-user Device Configurations -- Ruggedized Device Configurations

Would the state accept an alternative configuration to the 17" rugged laptop if the minimum specifications from the state cannot be met?

The State would be willing to look at other options.

C.6.2 How were the current images created (i.e. SCCM, MDT, etc.)?

C.6.2 Will we receive the images in a sysprepped state?

C.6.2 How often do the images get updated (i.e. monthly, quarterly, etc.)?

C.6.2 How large are the images?

C.6.2 How long do the images take to load?

C.6.2 What is the touch time for the images?

C.6.2 Do any settings need to be changed in the BIOS prior to imaging?

C.6.2 Is there a post-imaging process?

C.6.4 What information needs to be on the asset tag?

C.6.4 What are the requirements for the asset tag (i.e. size, material, etc.)?

C.6.4 Where will the asset tags be applied on the systems?

C.6.5 What encryption software is being used today?

C.6.6 What is the timeframe to deploy the new systems (i.e. start date, end date, etc.)?

C.6.6 Will the deployments be performed by Department, location, building, etc.?

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C.6.7	How often do re-deployments occur?
C.6.8	How often do office moves occur?
C.6.8	Will office moves occur during normal business hours or after hours?
C.6.10	Will data need to be migrated from legacy system to the new system?
C.6.10	If so, how much data will need to be migrated?
C.15	How many service tickets are created on a monthly/annual basis?
C.15	What percentage of these tickets are resolved by the help desk?
C.15	How many of these calls result in a hardware issue?
C.15	How many of the hardware issues result in a technician be
C.15	How many VIP tickets are received on a monthly basis?
C.6.2 The images are created virtually with Hyper-V. They are then acquired and deployed via Symantec Ghost; however, they can be acquired in WIM format via the Dell ImageAssist Tool.	
C.6.2 Yes the image will be in a sysprepped state when delivered.	
C.6.2 Quarterly is the closest cadence at this time; however, they are updated more frequently if new systems are acquired (needing new drivers) and/or a major enterprise update needs to be added or updated in the image. Recently, our goal is to update images twice a year (when new W10 versions are released approx April and October).	
C.6.2 Approximately 25gb. Images in WIM format, with No Drivers, via Dell Image Assist 13 gb	
C.6.2 Approximately 30 minutes, start to finish.	
C.6.2 The image is pretty much ready to go when deployed.	
The machine is named and joined to the appropriate domain, drives mapped, printers installed post-image.	
C.6.2 As far as imaging, No. All of our images are UEFI which has been the default in System Setup for quite some time.	
Occasionally a tech will need to make some changes (ie. Thunderbolt... etc) for docks or other accessories. After imaging, the encryption needs to be installed, data transferred from legacy device, install agency/individual specific software, set up peripherals, please review the deployment section of the RFP for a complete list.	
C.6.4 Asset tag#, bar code at a minimum	
C.6.4 None	
C.6.4 By the vendor	
C.6.5 Symantec	
C.6.6 It is unclear what new systems are being referred to.	
C.6.6 This may not be an entire state replacement at the beginning of the contract start date. They will vary by location, dept, and building.	
C.6.7 It varies by agency.	
C.6.8 It varies by agencies, numbers were provided in the RFP background section for the number of tickets we get for office moves.	
C.6.8 Most will occur during business hours, however there may be some that need to occur after/before hours.	
C.6.10 Yes	
C.6.10 It will depend on the user.	
C.15 This information was provided in the RFP in the background section.	
C.15 Routinely 54% of tickets are resolved by tier 1.	
C.15 The ticket numbers were included in the RFP in the background section.	
C.15 The State does not have this information.	
C.15 The State does not have this information.	

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b. All other terms and conditions remain unchanged.

NTT Data, Inc.

Supplier Company Name (**PRINT**)

8/13/2019

Date

Timothy Conway

Authorized Representative Name (**PRINT**)

President, Public Sector

Title



Authorized Representative Signature

A.5 Solicitation Terms and Conditions (E.13.1.e)

NTT DATA has reviewed the terms and conditions contained in the solicitation. While we substantively agree with them, we respectfully request discussion of the few items set forth in the table below. We look forward to the prospect of resolving these and any other outstanding contractual exceptions following notification of award on this procurement. We are confident that, through good faith negotiations, we will be able to resolve all outstanding concerns, while satisfying the needs and mandates of the State.

Document Section No.	Discussion Item
A.15	Reasonably exclude underlying cost information from audit scope.
A.18	Include a reasonable opportunity for contractor to cure.
A.28	Reasonably make confidentiality provisions mutual.
A.37	Add mutual limitation of liability language previously agreed to by State in similar technology contracts.

B. Section Two – Company Information (E.13.2)

NTT DATA is a global company that helps public and private organizations grow and thrive in a digitally dynamic world. We provide a wide range of IT services that help our clients create, operate, maintain, and evolve mission-critical IT systems and business processes. Through these services, we help our clients improve their operations in a measurable, sustainable way. With a team of 120,000 IT professionals worldwide, NTT DATA offers IT services that can improve every dimension of Government operations, as shown in **Figure 1**.



Figure 1. NTT DATA offers a broad menu of services to address every government IT need, including consulting services, digital and application services, and infrastructure services.

NTT DATA combines these services as needed to meet specific needs. For example, we serve about 4.4 million users with an array of dynamic workplace services, including service desks, field services, and other related managed workplace services. NTT DATA also provides broader IT outsourcing solutions that involve full operation and management of enterprise applications or infrastructure, and we deliver innovation as part of both one-off projects and ongoing improvement programs.

Company Overview

Name of Company	NTT DATA, Inc.
Principals	Tim Conway, President, Public Sector Dave Mahoney, Chief Financial Officer
Number of Employees	120,000
Location	- Public Sector headquarters: 7950 Legacy Drive, Suite 900, Plano, Texas 75024 - NTT DATA Oklahoma-area business location: 10401 W Reno Ave, Oklahoma City, OK 73127
Years in Existence	52 years

Our company was launched December 15, 1965, and incorporated on March 6, 1967, as John F. Keane Associates, Inc. This name was changed to Keane Associates, Inc. on July 11, 1969 and to Keane, Inc. on July 22, 1980. Our company took its present name on January 31, 2012, soon after acquisition by the NTT DATA Corporation.

NTT DATA is part of the NTT Group, one of the world's largest information and communications technologies companies. This association with the NTT Group means NTT DATA is associated with literally hundreds of other companies. NTT DATA, Inc. is the North American arm of the Tokyo-based NTT DATA Corporation, a top 10 global IT services provider with operations in more than 50 countries. The NTT DATA Corporation, in turn, is the IT services arm of the NTT Group, the world's 55th-largest corporation according to *Fortune* magazine. Our association with the NTT Group means NTT DATA has additional capabilities to draw on, as required, to support the OMES program and Oklahoma State Government. Strengths of NTT Group include cloud computing, data center operations, networking, and IT security. The group is also committed to innovation. The NTT DATA Innovation Institute, Inc., for example, guides \$3.6 billion in annual research and development (R&D) on behalf of the entire group from a facility in East Palo Alto, California.

NTT DATA was recently recognized as an industry leader in Managed Workplace Services by Gartner (**Figure 2**), who included multiple client references, citing their flexibility, willingness to adapt, and customer-centric approach as keys to success.



Figure 2: Gartner's Magic Quadrant for Managed Workplace Services, North America

Mission and Corporate Philosophy

NTT DATA's mission is to use IT to create new paradigms and values that help contribute to a more affluent and harmonious society. We carry out this mission by (1) realizing the dreams of our clients through long-term relationships; (2) developing evolving ecosystems with our clients through leading-edge technologies; and (3) enhance our creativity by respecting diversity.

This distinctive mission reflects NTT DATA's tradition of service to the public sector. For decades, NTT DATA was a wholly government-owned telephone provider with a special responsibility to the public. This heritage gives us a special understanding of the intrinsic value that well-run government agencies can offer society. In serving government clients, our motto is, "Better IT. Better Government."

Our Vision for OMES

At NTT DATA, our delivery teams aggressively pursue service improvement by thoroughly documenting performance, proactively addressing potential issues, and embracing innovation. We pursue ongoing continuous improvement programs that improve service and lower cost over time, and we lead large transformation projects that deliver more pronounced gains. Innovation is a part of our DNA.

Our vision for the State of Oklahoma is to deliver commercial-grade IT services that closely align with the State's vision and mission as part of a long-term relationship. We operate with full transparency, gathering and sharing metrics that will help OMES make informed decisions about the course of IT in the State of Oklahoma. This approach, with its emphasis on innovation, will provide more value.

Global Experience, Local Delivery

NTT DATA's global presence includes an Oklahoma City-area office at 10401 W Reno Ave, Oklahoma City, OK 73127. For this program, NTT DATA will use in-state personnel to deliver most of our services, including field services, support desk, device deployment project management, and account leadership. Certain other services, that are not client facing, will be delivered from our delivery center in Plano, Texas, near our corporate headquarters.

NTT DATA's local economic impact goes beyond our local office footprint for the services we deliver. The NTT DATA Team collectively employs more than 2,800 OK-based employees, with more than 250,000 square feet of office space throughout multiple buildings in Oklahoma City, highlighting the team's local presence in and support of Oklahoma. We also participate directly in our communities and contribute to the overall prosperity of local citizens, having provided more than 15,000 hours of community service and an economic output of nearly \$1 billion.

Subcontractors

NTT DATA has teamed with two locally trusted companies as our proposed subcontractors for the OMES project: Dell Technologies and Sterling Computers. Per Solicitation Sections B.2.1 and E.13.6, we have provided information on these subcontractors. Each operates from facilities based in the Oklahoma City area.

B.1 Statement of Financial Stability

NTT DATA, Inc., is a subsidiary of the NTT DATA Corporation, a publicly-held corporation based in Tokyo that generated more than \$19.5 billion in revenue during our last fiscal year, which ended March 31. As **Figure 3** shows, NTT DATA has been consistently profitable during the past six years with steady sales growth.

NTT DATA Corporation Past Financial Performance

All figures are in millions of dollars (USD).

	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Net Sales	\$12,126	\$13,642	\$14,572	\$15,633	\$18,395	\$19,513
Operating Income	\$565	\$758	\$910	\$1,057	\$1,110	\$1,332
Net Income	\$210	\$290	\$572	\$593	\$773	\$881
Total Assets	\$15,249	\$16,449	\$16,787	\$20,203	\$20,474	\$22,331
Shareholders' Equity	\$6,016	\$6,227	\$6,626	\$7,083	\$7,451	\$8,348
Operating Cash Flows	\$2,116	\$1,659	\$2,100	\$2,153	\$2,117	\$2,183
R&D Expenses	\$116	\$117	\$112	\$112	\$132	\$136

Note: These figures were converted from Japanese yen (JPY) at the rate of 0.9 cents per yen. This was the annual average rate of our 2018 fiscal year, which ended March 31, 2019. Also, note that NTT DATA has adopted the IFRS accounting standard. Figures for FY 2017 and FY 2018 are based on the IFRS standard. All prior years are based on the Japan GAAP accounting standard.

Figure 3. NTT DATA has maintained steady sales growth and profitability over the past 6 years.

As these financials suggest, the NTT DATA Corporation is a large, consistently profitable company with the ability to honor the commitments we make to our clients. Two rating agencies that have considered the NTT DATA Corporation's capacity to fulfill its obligations are the Japan Credit Rating Agency (JCR) and Rating and Investment Information (R&I):

- JCR's current long-term issuer rating, AA+, equates to a "very high level of certainty to honor the financial obligations" in question.
- R&I's issuer rating, AA, is a mark of "very high creditworthiness supported by some excellent factors."

B.2 Litigation Statement

In the past 5 years, NTT DATA has only been involved in routine contract and employment actions (e.g., non-public personnel claims) in the ordinary course of business, none of which had any material impact on NTT DATA's ability to provide services.

C. Section Three – Response to Specifications and Requirements (E.13.3)

C.1 Background

The Office of Management and Enterprise Services (OMES) has responsibility for providing financial, property, purchasing, human resources, and information technology (IT) services to all Oklahoma state agencies, as well as supporting the development of annual state budget and state financial reports. These important activities directly support the men and women that service the State of Oklahoma. Whether it be a transportation worker assisting the free flow of goods and services via the state highways, or a social worker working until 2 AM to ensure a child finds a safe place to sleep, OMES has the responsibility to make sure those individuals have a quality and reliable computing device to use 24 hours a day, in an office or in the field. In addition to delivering end user computing (EUC) devices, OMES seeks to acquire the accompanying acquisition, deployment, management, and support of these devices in the most financially responsible way while standardizing solutions and improving efficiency and customer experience.

To this end, the NTT DATA Team provides herein a comprehensive description of the products and services we propose to best meet OMES' requirements and objectives while also providing recommendations for cost savings, innovation, and transformation.

C.2 Objectives

OMES' key objectives of this engagements are the acquisition of EUC services and solutions that provide significant cost savings, improved service, and reduced risks while avoiding large capital investments for refresh, lease arrangements, and payments for devices that are not deployed or in service. To meet mission requirements and achieve key objectives, we understand that OMES requires a proven supplier that will:

- Align with Oklahoma's forward-looking strategy
- Reduce risk while improving efficiency and uniformity
- Increase overall value while driving down costs
- Provide an as-a-service pricing model

NTT DATA's Commitment to OMES

The NTT DATA Team will provide:

- A smooth transition
- New device deployment guaranteed in 96 hours or sooner
- Investment into OMES for continual technology improvement
- Improved customer experience

The NTT DATA solution will achieve each of these objectives quickly, securely, and with minimal risk.

Aligning with Oklahoma's Forward-Looking Strategy is achieved by the incorporation of our dedicated Innovation Office. NTT DATA will utilize a team of continuous improvement, quality, automation, and modernization managers to help OMES realize change throughout the multi-year journey of this engagement. These individuals continuously identify opportunities to be considered for co-investigation and co-development activities that may result in new innovative solutions. They will work with OMES governance committees and customers to facilitate identification of potential ideas, services, and solutions that help solve immediate and future customer problems.

Reducing Risk while Improving Efficiency and Uniformity is at the core of our solution. By leveraging proven processes and procedures, already tested with similar customers like the Georgia Technology Authority (GTA), Texas Department of Transportation (TxDOT), and MedStar, we avoid complications and ensure consistent reliability from the start. NTT DATA teammates, Dell and Sterling, allow for a localized delivery arm that understands existing challenges and builds upon reusable foundational aspects that are already in place.

Increasing Overall Value while Driving Down Costs is crucial to delivering a successful outsourcing program and is at the heart of the NTT DATA Team's operating model. Our proposed solution will generate savings by delivering statewide standards to reduce complexity and overhead, streamlining operational procedures based on proven methodologies, and improving the end user experience with increased device reliability and faster user support. Any new device ordered is guaranteed to be delivered to an end-user in 96 hours (4 days) or less.

Providing an As-a-Service-Based Pricing Model is something NTT DATA does now for the State of Georgia engagement – on which NTT DATA and Dell Technologies have also teamed together to provide world-class services. Familiarity with this pricing model, as well as our proven collaboration, benefits OMES as we leverage structure and arrangements already in place to deliver a flexible, proven as-a-service procurement model.

NTT DATA's Proven Success

NTT DATA offers OMES a solution based on best practices developed previously with similar clients, strong partners who directly support parts of the operations today, and a plan for evolution that has brought measurable return on investment (ROI) to comparable programs. An example of this is the successful buyback program of existing assets, created for the State of Georgia. This program allowed NTT DATA to write Georgia a check for \$22 million at the start of the engagement. Another example, after we began our TxDOT engagement, we were able to increase customer satisfaction from 41% to 94% while reducing total IT costs by 25%.

NTT DATA's Successful Asset Management	
	Georgia Technology Authority (GTA): 39,000 devices
	Texas Department of Transportation (TxDOT): 28,000 devices
	MedStar Health: 34,000 devices

Our Solution

NTT DATA's solution is different and proactive. We are proposing to deliver a complete Device-as-a-Service (DaaS) solution to the employees of the State of Oklahoma while we help the State modernize its Digital Workplace offerings. Our plan is to provide NTT DATA-owned assets with accompanying installation and ongoing service. OMES has requested a number of configuration options and services bundles, and we will provide these as prescribed while providing improved service and delivery time.

NTT DATA will establish an electronic means of ordering these devices and services through a Web-enabled portal. We will then account for each service, asset, and license and provide OMES with financial asset and software license detail for the services and products rendered. We make use of technologies, leveraging investments already made by the State as appropriate, and bringing new ones as part of our service. Technologies such as Microsoft's Configuration Manager, Flexera Flexnet, Dell Client Deployment Manager, Cherwell, Altiris, and our own Performance Direct and Digital Service Online™ will be utilized to automate several aspects of the service. The story that we are describing is not simply about the integration of

proven processes and technology, but one that is fully integrated to provide a seamless offering that is cost effective, capital free, and sets a foundation for future transformation.

Our services will be properly governed, with transparent operations, to reduce risk to the State. We are offering, not only, routine summary reporting but also offering OMES and customer IT several online portals where operational data can be consumed in semi-real time, down to the detail the State feels necessary. Our solution also includes attention to day-to-day service excellence. Working closely with OMES, NTT DATA will foster creativity, innovation, and agility based on a strong governance model, operating across an integrated environment. This model will help manage risks, control costs, and minimize service disruptions.

This solution will improve State of Oklahoma IT operations by drawing on NTT DATA's deep reservoirs of technical expertise to resolve issues more quickly and by combining local touch with global technical and process expertise and a hands-on, dedicated leadership team.

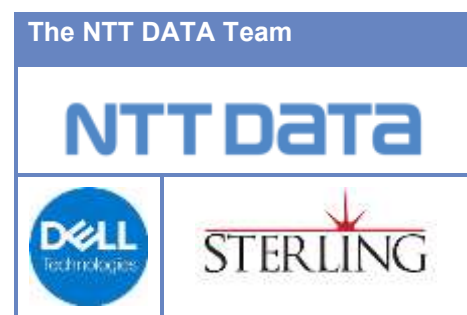
Technical Ability and Expertise. NTT DATA maintains an array of specialized technical practices on which we can draw from to address the IT challenges facing the State. This means we can apply an appropriate skill level for particular tasks and take advantage of economies based on task complexity and the relative cost for labor to complete tasks. Our technicians, engineers, and analysts all operate in a structured manner based on the IT Infrastructure Library (ITIL) framework, with all efforts documented in process, procedures, and work instructions.

Faster Resolution. In addition to the traditional Levels 1, 2, and 3 (L1, L2, L3) of service management, our solution also employs the use of "Level 1.5" remote resolvers. These IT professionals use IT Service Management (ITSM), automation, and other methods to support end-user device issues remotely. Incidents and requests that cannot be resolved by the service desk will flow to these L1.5 specialists to resolve issues more quickly and at a lower cost by avoiding the need to push such issues to Level 2. This translates into faster resolution of issues for State agency employees.

Experienced Local Leadership. Our delivery team will be led by a Client Executive (CE), Paul Phillips, who is locally based and available to OMES whenever needed. Our CE will be the face of NTT DATA's delivery team, responsible and accountable for all delivery and account management activities including helping to maintain a strong, long-term relationship with the State.

The NTT DATA Team

The NTT DATA Team, with Dell Technologies and Sterling Computers, creates a unique value proposition. OMES will benefit from a solution with the lowest possible transition risk and disruption in service due to utilization and transformation of Dell and Sterling's current knowledge and processes already established with OMES today. Secondly, the combined localized presence of all three companies creates an end-to-end local delivery arm while leveraging extensive global knowledge and expertise.



NTT DATA: The Right Choice

The solution we are offering OMES is guaranteed to drive savings and improve quality, technical ability, delivery time to end users, and overall customer satisfaction. It combines a strong, ongoing commitment to transformation with reliable service delivery using proven processes. As an IT services provider with a long tradition of delivery success, NTT DATA's

leadership in EUC services, infrastructure, and other IT services has been recognized by industry analysts as illustrated in **Figure 4**.



Figure 4. NTT DATA is an IT services industry leader.

This is an important moment for the State as it looks to the future and its strategic initiatives. NTT DATA's proposal offers an actionable plan to seize the opportunity at hand. Our solution for the State draws on significant experience achieving similar results with other large organizations, and it includes a local delivery team and proven local partners.

As a service provider, the success of OMES will be measured by how its services enable the success of its customers – the state's workforce and agencies. Transforming traditional IT to support a digital environment will empower a thriving business, delight the workforce and agencies, and enable continuous optimization for efficiency. For OMES specifically, this means empowering the workforce by safely enabling:

- **Control with Choice:** The ability to modulate services as the organization changes in a way that is both fast and impactful for the State and enables the workforce with some control over how it works, what tools it will use, and how it will interact with IT.
- **Speed and Responsiveness:** Real-time request feedback, enabled by next generation portals and dashboards, facilitates high-velocity IT that is proactive and predictive, whenever possible, and responsive to requests and changing business needs.
- **Transparency:** We track requests and changes throughout the approval and provisioning process and provide visibility into service management workflows. This enables greater cost transparency encouraging improved spending alignment, more granular service consumption options, and outcome-focused billing summaries. Outcome-based invoices direct to the business are a resurging trend we see in large shared service organizations.
- **Flexibility and Convenience:** Digital Workplace enables and embraces trends like shifting work styles, temporary teams or Hollywood models, and consumerization. Interacting with IT should be convenient and simple allowing multiple channels for effective interaction.

These are the qualities a modern workforce expects from all service providers – including OMES – and should be key tenants to guide a digital workplace transformation. The meaning and importance of this is that when customer stakeholder's have a clear and powerful voice in creating design objectives, the requirements and success metrics must shift to meet those new requirements. To simplify our attempts at rationalizing solution outcomes, NTT DATA

recommends an effort to identify specific organization value attributes that translate to specific managed workplace service requirements. **Figure 5** summarizes several of the attributes developed in collaboration with our customers and market analysts reflecting a more modern, digital imperative for IT success measurement in workplace services.



Figure 5. Attributes that contribute to more modern measurements.

By selecting NTT DATA, the State stands to gain EUC services that meet modern digital expectations and provide granular visibility into IT consumption. NTT DATA will unleash innovation over the long term based on enterprise data, automation, analytics, and other innovation. All of this is the future of the State of Oklahoma's IT with NTT DATA.

C.3 Scope

C.3.1 Solution Summary

NTT DATA will provide managed services in support of OMES' workplace services requirements as described in the solicitation and subsequent question and answer responses, including:

- Online Ordering Web Site
- Service Desk
- Warranty and Break/Fix Services
- Deployment Services
- Device as a Service
- Device Management Services
- Automation
- Asset Management
- License Management
- Service Management

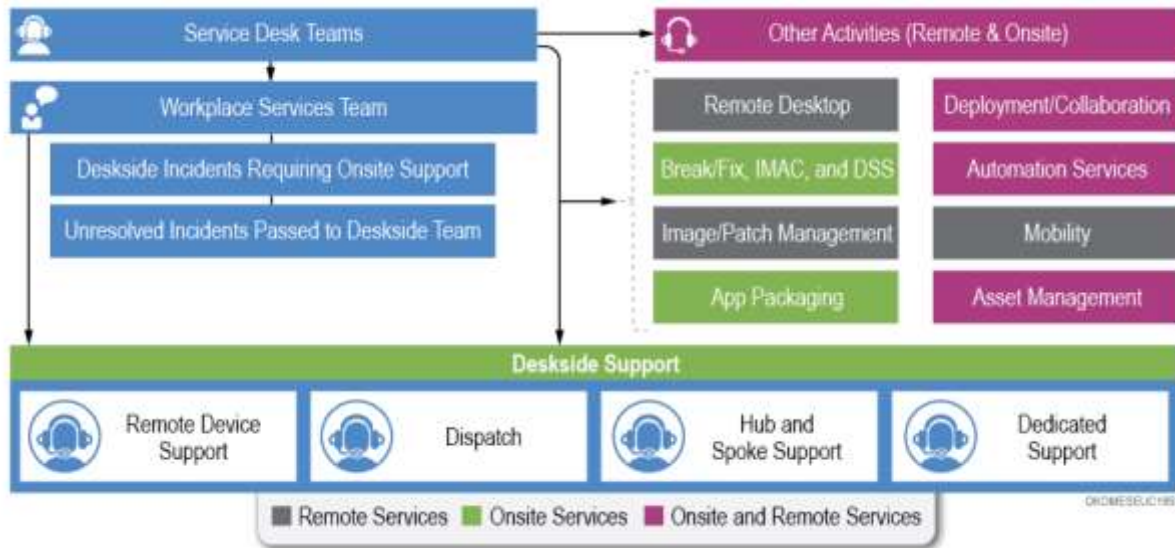


Figure 6. Proposed Delivery Model

We will deliver the services based on industry standards such as ITIL best practices and leverage our experience in handling similar engagements for other clients.

We based our solution on the following factors and principles:

- OMES stated objectives including quality and user experience improvements
- Publicly available information about OMES activities and services, digital transformation goals, and other State of Oklahoma leadership announcements
- Current industry trends, including recent developments across the managed workplace market and modern consumer/workforce expectations
- Modern management principles for workplace services
- Minimizing business disruption during transition with our robust transition methodology
- Leveraging our experience in similar engagements to provide a seamless transition
- Applying high-touch management and operational structure with U.S. based teams
- Following an industry best-practice-based process and tooling architecture to include ITIL processes as well as governance and transition frameworks
- Improving IT operational performance and reducing IT costs
- Lowering risks and providing higher controls to OMES

Key Solution Differentiators

By providing the proper balance of people, process, and technology, we operate in a way that is efficient, effective and empowering for OMES customers. **Figure 7** highlights three distinguishing features.

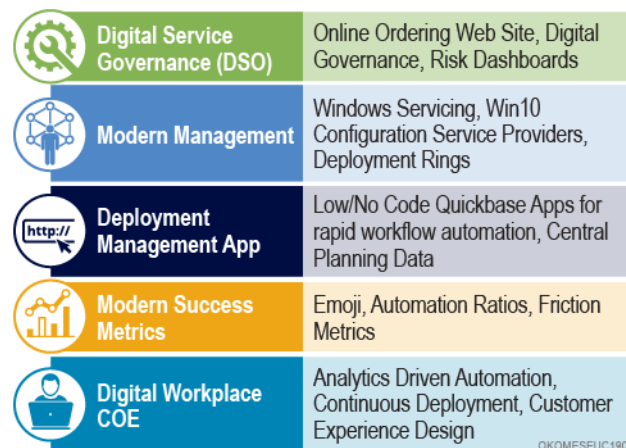


Figure 7. Key Solution Differentiators

Our deep technical bench, unmatched process experience, and rich governance will reduce cost, decrease risk, and increase customer satisfaction. The NTT DATA solution leverages the right blend of people, automation process, toolset, and unique intellectual property. **Figure 8** highlights solution features that will directly benefit OMES.

Figure 8. Solution Features and Highlights

Solution Feature	Highlights
Proven, locally-based delivery team	- Local Client Executive - Local Client Delivery Executive will lead our delivery teams - Local Deployment Project Manager
A dedicated service SME and a sophisticated digital services portal to improve transparency and reporting	- Our solution includes Digital Services Online™ (DSO), NTT DATA's fully integrated service catalog and governance platform. Services will be requested, consumed, and reported on via DSO. DSO will act as a wrapper around all services, providing visibility, control, and a digital platform for governance, service management, provisioning, financial transparency, and collaboration. - A dedicated service management lead will govern incident, request, and problem processes. - NTT DATA will use ITILv3 best practices and processes based on more than a decade of experience with ITIL.
Customer Experience (CX) Design and digital success metrics	- CX Design includes persona creation and journey mapping as a standard part of our due diligence and design efforts. This approach guides our clients through the end-to-end process of creating and implementing a transformational CX strategy. At NTT DATA, CX is about transforming experiences that happen into experiences that are designed. - Our CX team offers three service lines: CX Advisory, CX Design, and CX Engineering. CX Advisory is the first line of service that helps our clients: - Uncover areas of user friction via Research and Experience Insights - Define a path to address those problem areas through strategy and road mapping - Evaluate and determine success through CX/EX Measurement
Digital Workplace Center of Excellence (COE)	Digital Workplace COE provides an incremental and continuous deployment approach for automation and technology currency across all NTT DATA provided services. NTT DATA included a role for a workplace analytics coordinator, who will be responsible for dashboards, analytics, and reporting. The workplace analytics coordinator will work closely with the COE to

Solution Feature	Highlights
	maintain relevant and insightful analytics, central to the design process and decision support, on an ongoing basis.
Windows 10 Servicing and Modern Management	NTT DATA Windows 10 Modern Management Service is an operational support and management service for Microsoft Windows as a Service (i.e. Windows 10 Servicing). The Service includes management and support of the Systems Management infrastructure, feature updates, quality updates, servicing channels, insider previews, and deployment rings. For simplicity, our proposed solution includes modern management as well as traditional and co-management approaches blended into the management rate.
Managed Deployment Application	The Managed Deployment Application is a low code, no code set of applications and workflows developed in QuickBase. This tool was designed by NTT DATA deployment engineers leveraging many years of specialized experience. We leverage use of our Managed Deployment Application to enforce and enable accurate and automated workflows related to deployment services.
A fully automated asset management process based on tools such as Flexera, SCCM, and DSO	Flexera and Microsoft SCCM will support asset management based on continuous discovery. These tools will help manage the full hardware and software lifecycle for devices under NTT DATA management. We will fully automate the asset management process into the State's ITSM system. DSO will provide discovery and electronic asset reconciliation. We will standardize asset management processes.
A 24x7 service desk along with call deflection strategies that improve the end user experience	Experts at our regional service center in Oklahoma City will provide service desk services 24x7. The service desk will provide L1.5 remote resolver resolution capability to provide faster resolution and avoid time consuming dispatches.
Precise financial accountability and reporting utilizing DSO finance capability	• Automatic invoice generation • Cost exploration capability at a very granular level • Roll-up capability to the State level, agency, department, location, etc.
Automated Deployment service utilizing flex asset stock to buffer deployment delays	• Workflow automation to streamline receipt, asset logging, and image process • Software push capability to allow electronic distribution of non-birthright software
Configuration Center and Bench Stock service to facilitate rapid exchanges and repairs	Strategically placed spares caches to facilitate rapid repair/exchange throughout the state.

To help fund the initiatives identified by the innovation program, NTT DATA will set aside 1% of all paid invoices, for a matching Innovation Fund. This fund will be available to the State for select transformation initiatives delivered by NTT DATA.

Our solution starts with the ordering and provisioning of new or replacement systems. End users will choose their configurations from an electronic web catalog. They will also choose optional items such as installation, service, and peripherals. Once ordered, our delivery will communicate with the end user to understand end-user preferences and applications. They will quickly image the device and electronically load any agency specific applications. If installation was a selected option, the device will be transported to the end user's location where it will be installed. The installation technician will familiarize the end user with their new device, perform any last-minute, site-specific customizations and leave the customer with a welcome packet that

provides tips for their device, instructs them on the options for service requests, and explains the service process.

The end user's next encounter with IT will be a friendly and courteous end user service desk agent. He/she will have a choice of contact methods: telephone, chat, email or through the Web portal. Agents will attempt to resolve the end user's needs and will move the support request to a more specialized technician if they are unable to resolve the matter. **Figure 9** illustrates the flow of a service desk contact and the governance that surrounds the process.

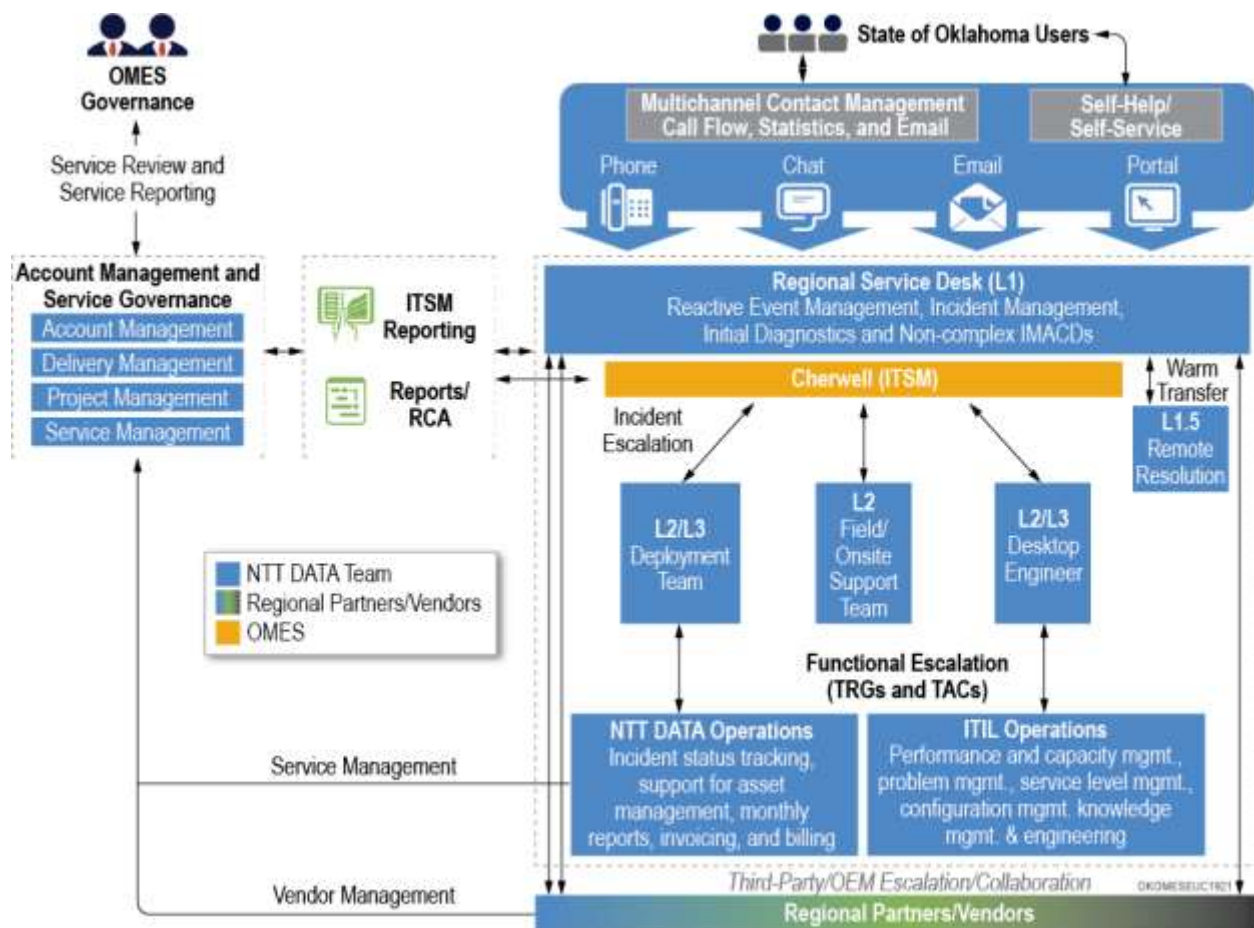


Figure 9. Support Model

If a desk side support technician is dispatched to resolve the end user's need, the technician will be prepared to swap the device or to provide a loaner device if the issue cannot be resolved within 24 hours.

The deployment and incident resolution procedures are backed by a full desktop engineering team that manage tasks such as: L3 support, patching, image management, software distribution, package construction, and asset management.

Digital Services Online (DSO)

DSO is our proprietary Digital Governance Portal that provides a service wide governance dashboard along with a single portal to raise IT requests and track progress of incidents. DSO provides billing and consumption views as well as clear visibility into the streamlined governance related to:

- Onboarding, offboarding, and device refresh
- Request and incident tracking
- Risk/audit dashboard
- Hardware and software asset management
- Billing and services consumption

We will integrate DSO with all service delivery components to provide consistency. Services Online (DSO) provides more visibility, automation and user engagement for these activities.

Figure 10 summarizes key aspects of DSO.

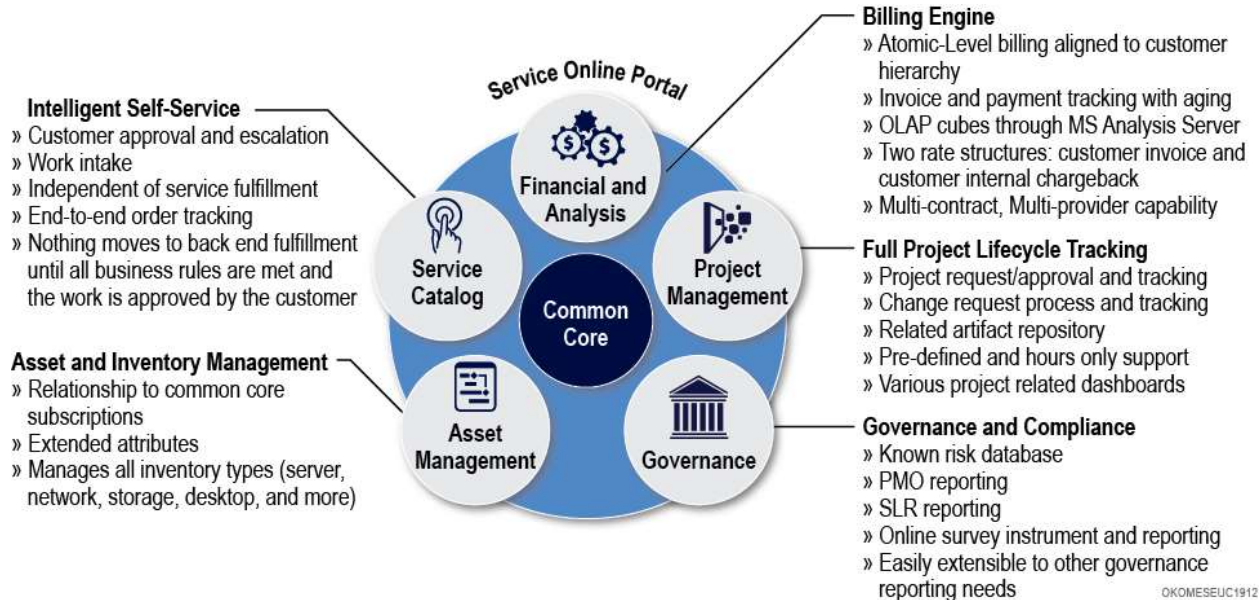


Figure 10. DSO will provide the State a single dashboard to measure and improve operations.

Digital Workplace Center of Excellence (COE)

NTT DATA will provide Digital Workplace COE services, which will provide data, analytics, reporting, and automation services in relation to the digital workplace environments that are in scope for this service. The COE provides the following services:

- Endpoint automation driven by data and analytics
- Self-service and provisioning related workflows
- Windows 10 Analytics and build readiness
- Microsoft Office 365 Analytics

In addition, the COE will incrementally transform the OMES environment from 'no response or basic reporting' toward more autonomous responses such as alerting or fully autonomous actions. The COE will incrementally evolve and mature OMES IT responses to event stimuli as shown in **Figure 11**.

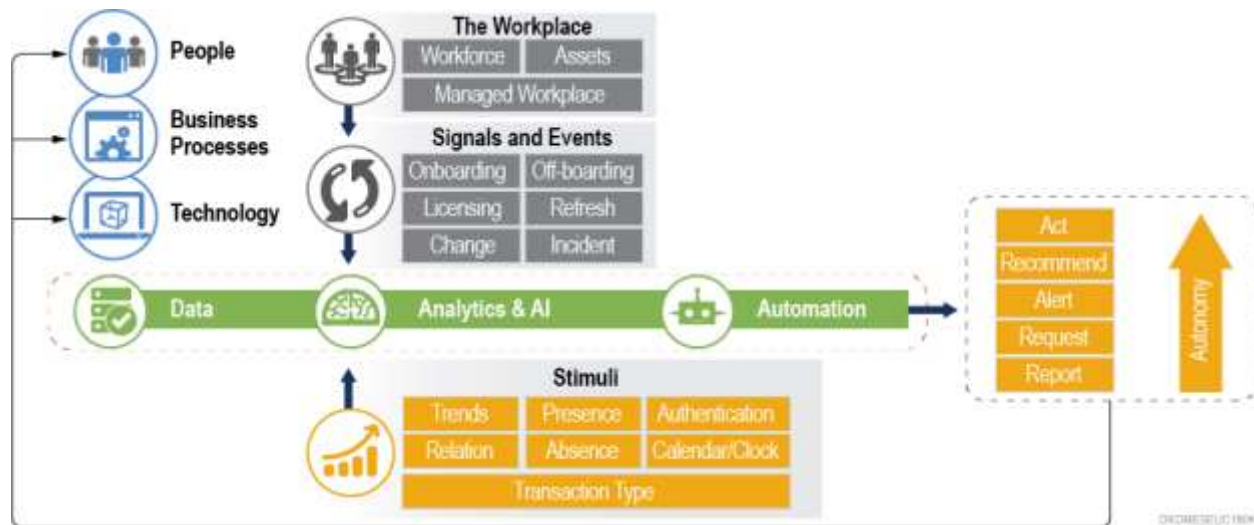


Figure 11. Digital COE Maturity Response Framework

Digital Workplace COE provides a continuous deployment approach for efficient operations and improved user experience. The Digital Workplace COE is a DevOps team that incorporates the following approaches:

- Continuous testing, integration, and deployment
- Small batch or single unit processing
- Problem swarming
- DevOps driven experimentation

The Digital Workplace COE will have a technology currency charter across the entire scope of workplace services. This team will also provide design and automation services for catalog entitlement, continuous deployment, device lifecycle, and holistic workplace management and support processes. Technology and process decisions will be guided with relevant data from multiple sources, summarized in the Central Intelligence Database (CIDB). NTT DATA has also included a role for a workplace analytics coordinator, responsible for the CIDB, dashboards, analytics, and reporting. The workplace analytics coordinator will work closely with OMES to maintain relevant and insightful analytics, central to the design process and decision support, on an ongoing basis.

Understanding beyond the IT landscape is vital for future innovation and State employee satisfaction. Therefore, to develop our solution, we invest the time to understand the needs of each organization, agency, and person – including a program of walking in the shoes of your employees to gain their perspective. Not a survey or a phone call, but by spending time with your employees, in their environments, while they are performing their valuable roles. This exercise enables us to see the impact of an IT issue while in the face of a customer, discover what works and what does not, and learn how IT can become a tool and not a distraction for these valued employees.

Our delivery team members will spend at least a half-day in the presence of your employees every 6 months. The delivery management team will have first-hand experience with the very people in which we were hired to support. This program will not only bring the sensitivity needed to serve these employees, it enables NTT DATA to develop innovation and automation focused specifically on their needs.

Tools

NTT DATA uses a standard set of processes and tools for client engagements that are aligned to ITILv3 best practices and certified under ISO 27001. The following table lists the tools that we will use to deliver the requested services:

Figure 12: NTT DATAs Toolset

Tool Name	Owned By	Purpose
Cherwell	OMES	ITSM
Altiris or SCCM	OMES	Device management and discovery
DSO	NTT DATA	Online ordering and digital governance portal
Flexera FlexNet	NTT DATA	Hardware and software asset management tool
BT Cloud Contact Center	NTT DATA	Contact Center for queue call routing and reporting
QuickBase	NTT DATA	Managed deployment application and adhoc Configuration Center and field services workflow
PerformanceDirect	NTT DATA	Online portal that provides near-real time visibility into service delivery performance and includes historical data for trending analysis and service improvement
Lakeside Systrack	optional upgrade	User experience monitoring, device analytics, persona modeling, and advanced troubleshooting
1E Widows Servicing Suite	optional upgrade	Advanced device management, real time compliance enforcement, and advanced Win10 servicing features

NTT DATA's Enterprise Service Management and Service SME Overview

NTT DATA will implement Enterprise Service Management (ESM) for the State of Oklahoma using fully integrated, ITILv3 based services and processes, in concert with the Cherwell ITSM environment and the enabling tools such as DSO, Flexera (Asset Management) and Quick Base deployment automation (Deployment Services) needed to facilitate incident, service request, and problem management services and reporting for all in-scope managed IT service offerings.

Implementing ESM services, and adopting ESM processes, capabilities, and reporting will enable NTT DATA to provide the State of Oklahoma with the following benefits:

- 1) Control the reliability and predictability of IT services to support critical business initiatives
- 2) Provide continual improvement to processes and systems to achieve service levels set to business needs
- 3) Leverage a standardized and proven resource model to drive productivity and reduce cost
- 4) Accurately measure performance against service level objectives to meet expectations

Service SME

The responsibility of delivering these ESM processes to the State of Oklahoma belongs to the ESM Service SME. The Service SME functions, described in the next sections, define a variety of services across the entire range of service management processes. The Service SME is responsible for seeing that all service levels are managed in accordance with State of Oklahoma requirements and that all owners of service levels are held accountable for that performance. The Service SMEs use service management methodology components including:

- A set of standard processes (ITIL)

- A set of standard tools
- Educating all accountable parties of their level of accountability on SLAs—including individual contributors, team leaders, managers, and public sector leadership
- Meeting and maintaining metrics and providing additional reporting in real-time or relatively real-time performance information
- Conducting meetings with the State of Oklahoma, including a daily operations meeting (reviews high-priority incidents) and weekly aging incident ticket review meetings, to bring appropriate visibility to current performance and check that corrective measures for underperforming begin as quickly as possible
- Driving the core ITIL processes and bringing visibility to non-compliance with processes and/or SLAs
- Communicating monthly performance and developing improvement plans with the State of Oklahoma for any service levels or KPIs not successfully remediated before month-end reporting

The Service SME functions as the 'traffic-cop' within our delivery model to enforce adherence to established processes, identification/resolution of recurring issues, timely communication and escalations to State of Oklahoma and NTT DATA stakeholders for outages and non-compliance, reporting of service level metrics, and driving the continual service improvement (CSI) initiatives required to improve our services.

The NTT DATA Service Management delivery model for the State of Oklahoma consists of three distinct functional types of tasks and responsibilities: Relationship, Transactional, and Problem.

Relationship Service Management

Relationship service management is a client-facing function with high levels of interaction with the State of Oklahoma. This function is most familiar with the State's environment, processes, and personnel, and develops a deep knowledge of the State's tools, contract, and business operations. Examples of the relationship function tasks include conducting Service Management meetings such as the Daily Operations (Daily Ops), CAB (Change Advisory Board), and Problem Review meetings.

In addition, this function is responsible for proactive SLA monitoring and reporting and any CSI related activities. They are the POC for any issues or requests related to Service Management during business operations.

Transactional Service Management

The transactional service management function is the repeatable and measurable task work such as making updates to the CMDB and foundational data. This function tracks the aging and timely completion across all processes, incidents, service requests, and problem records. It implements the clear, defined escalation path for each process to ensure business and technical staff are compliant with all service management processes. They also follow up on incidents verifying they are updated consistently and resolved in a timely manner. The service management team also executes CMDB tasks such as creating new, modifying attributes, and disposing of configuration items (CIs).

ITIL Process, Incident Change, Request, Problem

NTT DATA has been engaged with ITIL since its inception over 20 years ago. In fact, through our corporate family, we were involved in its development. As a result, our team has a long

history of delivering IT services developed in harmony with our ITIL-aligned processes for ITIL workflows such as incident, problem, change, and request management. The graphics below provide simplified, but representative examples of process standardization we will use in delivering our Device as a Service capabilities to OMES.

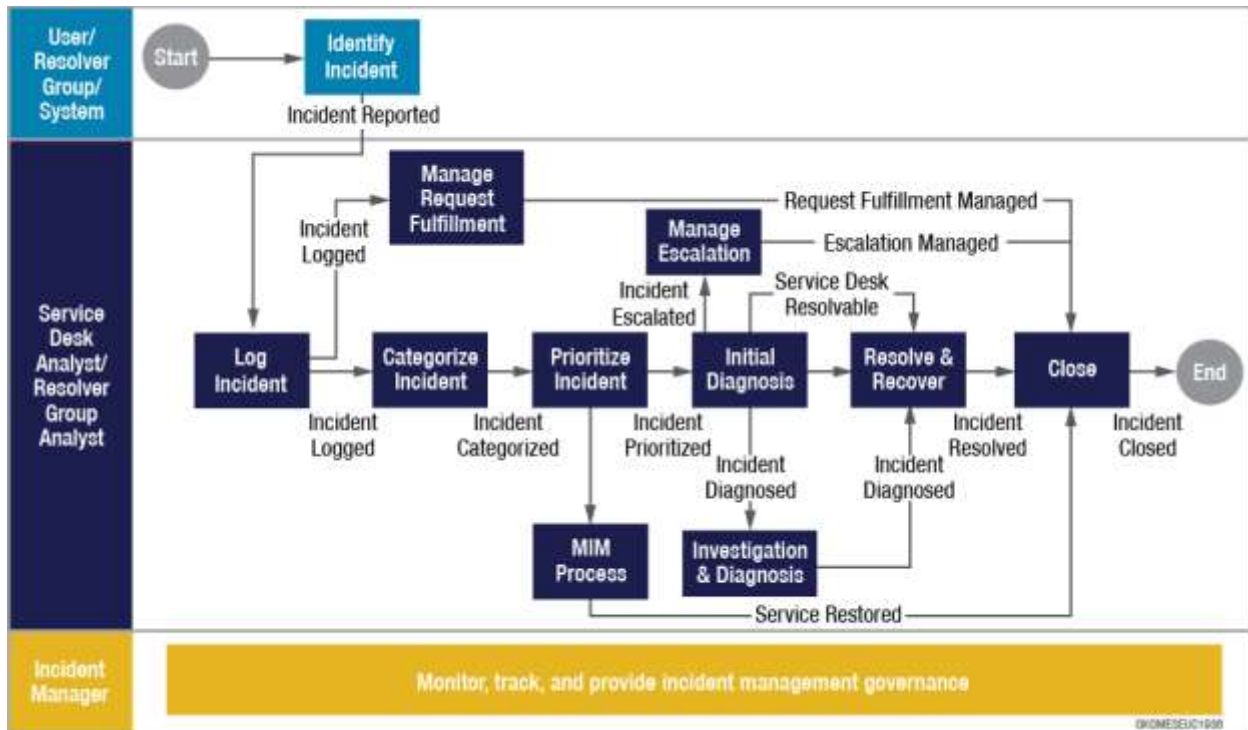


Figure 13. NTT DATA's Trouble Ticket Process

Our issue resolution and escalation management processes are designed to bring order, structure, focused management attention, and additional resources as necessary to resolve issues at the lowest possible level of leadership resolution.

It is our priority to prevent unneeded escalations from occurring in the first place. To drive this outcome, we empower our staff to use their judgment and make tactical day-to-day decisions with customer satisfaction top-of-mind. Our approach to issue resolution is driven by four key objectives:

- Resolve issues expeditiously and in accordance with agreed-upon procedures
- Resolve issues and conflicts at their originating level or at the lowest possible level in the escalation process
- Emphasize resolving business issues as a priority
- Avoid issues by dealing with each other promptly, professionally, and fairly

Our goal is to avoid disruptions while seeking to resolve issues so they do not surface again. Operationally, once issues are identified they are documented with an impact statement to establish impact to the business and priority level.

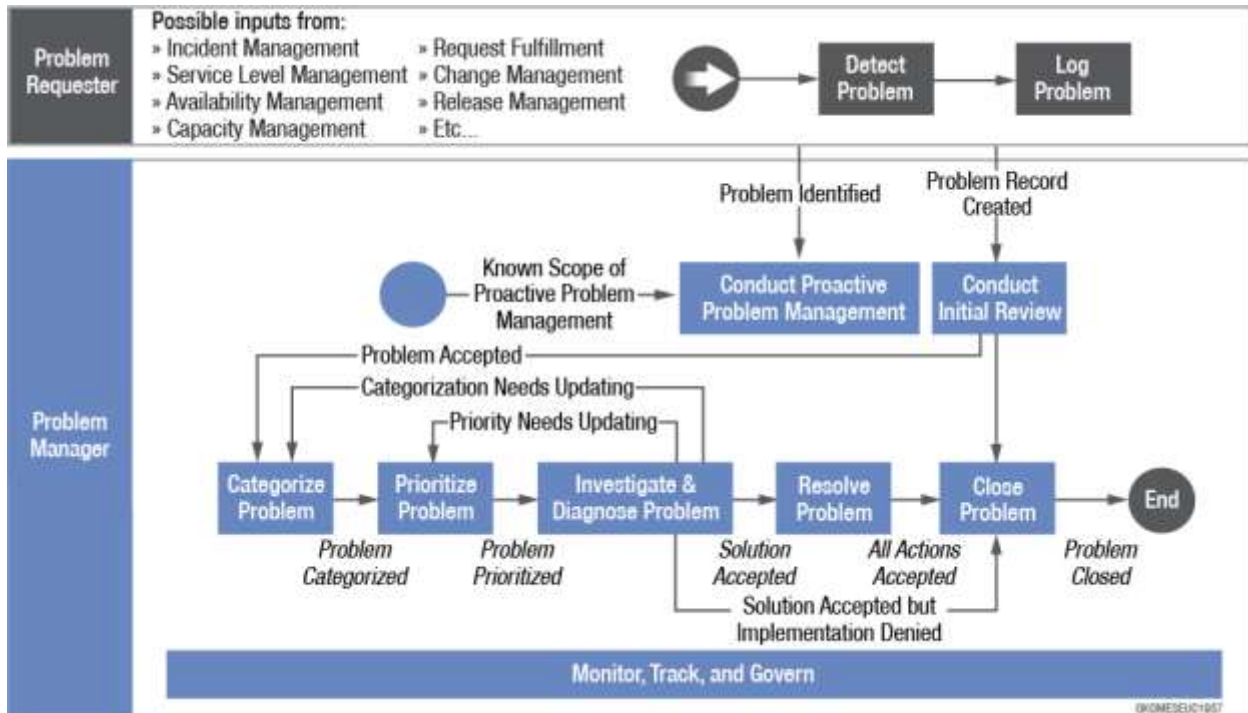


Figure 14. Problem Management

Problem management support consists of processes for researching all aspects of a critical priority incident within the State of Oklahoma that requires a root cause analysis (RCA). The problem management team ensures action items needed to remediate issues are completed. The RCA is typically completed within 10 business days.

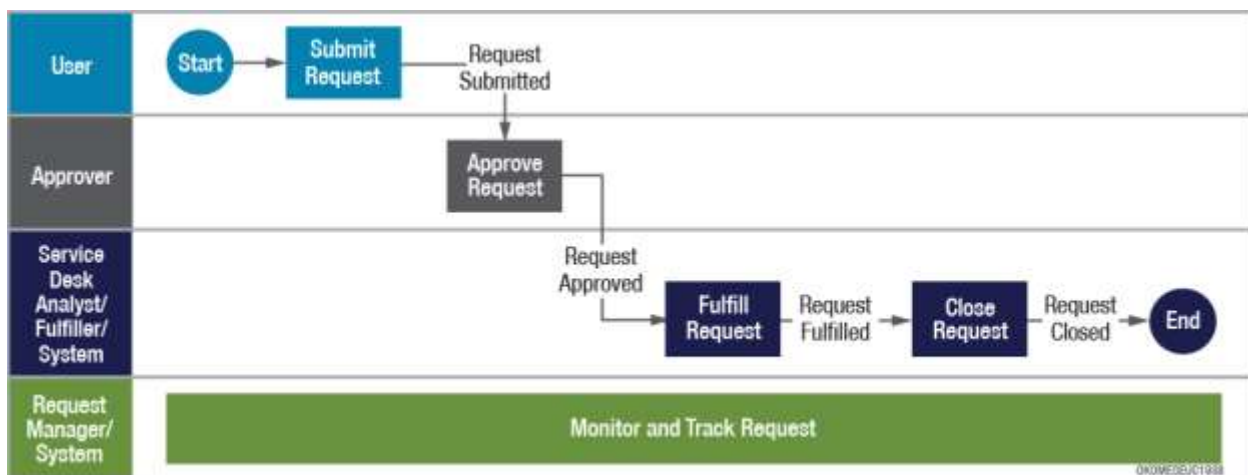


Figure 15. Request Management

The graphics above reflects our standard processes for these ITSM workflows. Our team will modify processes as needed, to align with State of Oklahoma business priorities, required standards and leadership approved expectations. These types of standardized processes allow us to deliver predictable results while enhancing environmental stability and end user productivity.

Management Alert

It is a standard practice of NTT DATA to provide management alerting to key stakeholders when a disruption to standard business operations occurs. This is typically communicated in an electronic manner and may also be triggered by the resolver, the service desk, or the service SME. The initial point of alert will be the delivery manager. If the issue continues to escalate, or if the customer is extremely unhappy, the Client Delivery Executive may engage and execute the incident escalation process as described in the governance section (C.5) of this document. We also understand there are some outages that are of the highest priority and impact to the environment when they are initially encountered. In those cases, we alert leadership and key stakeholders immediately, and continue to provide status updates for the duration of the outage.

Recurring Meetings and QBRs

Ongoing, transparent, and continuous communication is critical to our mutual success. NTT DATA's robust communications plan is designed to create a scheduled, open atmosphere for both parties to keep track and report on recurring and project-related activities. In addition to providing status reporting, NTT DATA views meetings as forums to proactively address challenges and issues, and resolve concerns before they become problems. The following table summarizes a sample communication plan highlighting key reports and regular meetings.

Figure 16. NTT DATA's Recurring Meetings

Communication Artifact/Event	Purpose	Responsibility	Audience/ Participants
Quarterly QBR Meetings	- Review client goals and address strategic project to address those needs - Introduce transformation or cost saving projects - Review risk, contractual, and financial	NTT DATA Client Executive	OMES, IT and Agency executives as appropriate
Weekly Project Review Meetings	- Review key aspects of the weekly project status report - Discuss demand/capacity planning (for example, every week examine enhancement pipeline relative to existing team bandwidth and capabilities)	NTT DATA Client Delivery Executive and delivery managers	State Program Manager/others as required
Monthly Service-Level Report (KPI trends and performance)	- Report NTT DATA's performance against agreed-upon service levels - Review trending elements across months and other dashboards - Review customer satisfaction and prioritize actions to retain high satisfaction	NTT DATA Delivery Managers	State Program Manager/others as required
Annual Senior Executive Meeting	Review client long-term goals Allow NTT DATA to share future plans and ideas for OMES Review any necessary risk, contractual and financial	NTT DATA President of Public Sector	OMES, IT and Agency executives as appropriate
Other Meetings as OMES and the	Status, planning, escalation, innovation idea submission, etc.	NTT DATA Client Delivery Executive,	OMES, IT or agency representatives

Communication Artifact/Event	Purpose	Responsibility	Audience/ Participants
State deem necessary		Project Manager, and delivery managers	

Transformation Approach

NTT DATA has been an industry leader within the Workplace Services space since the beginning of the personal computer. This history of delivering complex solutions for global clients provided us a unique operational perspective into how to achieve success. Workplace Services are how our clients face their business and their customers. Helping clients succeed in the eyes of their business is how we strive to succeed and it is critical that we match our approach with client intent.

Phased Approach

By combining reliable day-to-day IT services with integrated transformation strategies, NTT DATA will guide the State of Oklahoma on a full digital journey to stabilize, optimize, and transform both technical infrastructure and operational services throughout the life of the contract. This transformation will strengthen the State's ability to effectively support the workforce and constituents by supporting the State's IT infrastructure. Specifically, we will transform the State's IT in three phases:



- **Transition Phase.** This four-month phase will be the start of the State's big leap. The State of Oklahoma will gain a smooth transition to NTT DATA's locally-led delivery team with no disruption in service based on leadership from an experienced, dedicated transition manager. Our transition manager will run this transition using a standard process informed by hundreds of previously successful NTT DATA led transitions.
- **Stabilization and Optimization Phase.** In this one-year phase, State of Oklahoma end users will benefit from more consistently reliable, cost effective, and transparent services as NTT DATA implements an ITIL-based service delivery framework for OMES using repeatable processes. The State of Oklahoma will benefit from executive and operational dashboards that provide more transparent insights into the flexible consumption of enterprise IT services. We will also provide a modernized experience for end users, including next generation services such as a modern tech bar and device lockers that provide a convenient way for employees to securely drop off and pick up end user devices to maximize productivity. This is particularly important to emergency services personnel.
- **Ongoing Transformation Phase.** As the State's digital transformation journey continues, available and consumable services will also improve. Over time, the channels and methods used to engage IT services will increasingly resemble the models that users outside the State of Oklahoma have come to expect based on the standards set by leading commercial organizations. For the State, "digital" will come to mean IT that is intuitive, integrated, and that simplifies and automates service provisioning and consumption. As digital transformation takes hold, NTT DATA will steadily ratchet up service delivery quality through projects that drive down unnecessary costs, improve the end user experience, and enhance security and operational performance. We will position the State of Oklahoma to use

enterprise data effectively, automate processes, and use analytics to improve infrastructure, monitor network operations, and end user services.

In developing this solution, we drew upon our successes across the United States serving other large organizations. At the Georgia Technology Authority, we introduced an innovation program to drive ongoing transformation. Additionally, at the Texas Department of Transportation, we freed up millions of dollars for other IT transformation projects by significantly cutting the cost of end user services and infrastructure operations while also improving customer satisfaction.

To improve service management, we will draw upon service transformation tools we have developed, including NTT DATA's DSO. Included in the price of our base solution are 20 initiatives identified with checkmarks in **Figure 17**, in the Transition Phase and Stabilization and Optimization Phase columns. These initiatives will resolve existing operational challenges for the State of Oklahoma and improve operational efficiency through implementation of new, industry leading tools. In this way, we will resolve current asset management challenges, including poor reporting and inadequate information on incidents.

The remaining initiatives, as checkmarks in **Figure 17** under the Transformation Phase columns, show our vision for what is possible for the State. We will evaluate these initiatives more closely as the engagement proceeds, working closely with the State of Oklahoma during the Transformation Phase to continually identify, evaluate, plan, and execute each transformation. The goal with each initiative: Provide the State of Oklahoma with a modern user experience, next generation services, and flexible consumption. Governance for this ongoing transformation commitment will be incorporated in our innovation program and executed at a pace that is aligned with the State's business priorities, budget, and appetite for change.

Uniquely Qualified to Serve

- We offer reliable solutions proven successful across the country and around the world.
- NTT DATA is part of the NTT Group, which invests \$2 billion annually in R&D. We provide end user services to 4.4 million users, and desktide and field support to 285 organizations similar in size to (or larger than) the State of Oklahoma.



Figure 17. NTT DATA will take the State of Oklahoma on a digital transformation journey that will deliver a modern user experience and flexible consumption of next generation services.

C.3.2 Transformation Summary

Overview

NTT DATA's solution allows OMES to dramatically improve the service delivery model across all workplace services functions. We will proactively pursue a transformational approach to modernize the service desk, offering a "consumerized" experience for the State's workforce. Transformation value is realized in 3 areas:

Service Assumption

After transition, OMES will experience an improved quality of service simply by switching to NTT DATA managed workplace. In terms of process and tooling, our service will start delivering value immediately and without additional project efforts. Our solution leverages a best-of-breed tools and rigorous process standards. The following functions will noticeably improve:

- Device ordering and deployment experience
- Simplified governance, service management, and accountability
- Risk and performance transparency
- Service desk speed and quality
- ITIL standards

Organic Transformative Features

As we deliver these services, NTT DATA also will lead the State on a highly productive digital transformation journey. In pursuing transformation, we will combine a relentless, process-driven approach to continuous innovation with broader transformation efforts aligned with the State's business priorities and budget.

- **Digital Governance Portal:** DSO provides a service wide governance dashboard along with a single portal to raise IT requests and track progress of incidents. We will integrate DSO with all service delivery components to provide consistency. DSO is a self-service portal that streamlines our interactions with OMES customers, providing greater visibility, automation, and user engagement for these activities. DSO provides billing and consumption views as well as clear visibility into the streamlined governance related to:
 - Onboarding, offboarding, and device refresh
 - Request and incident tracking
 - Risk/audit dashboard
 - Hardware and software asset management
 - Billing and services consumption

NTT DATA included DSO bots for procurement automation in a phased implementation, starting with procurement labor and shifting to automation after the first year.

- **Asset Data Integrity and Automation:** We will implement Flexera FlexNet to automate hardware and software asset management and maintain asset details in a new Asset Management Database (AMDB). The NTT DATA solution also includes our Managed Deployment Application (Quickbase) for refresh planning and other ad-hoc deployment and field services workflow automation. Several custom OMES workflows are included in the solution and will be developed as requirements are identified and finalized.
- **Continuous Service Improvement (CSI):** CSI functions are included in the solution and start immediately. Opportunities for improvement will be driven by ITSM-based analytics and reported through our service SMEs and governance activities. Our analytics engine will drive everything we do to modernize the service and provide CSI initiatives. We have included several solution features that will transform the OMES services incrementally throughout the life of the engagement.
- **The Digital Workplace COE:** We will begin creating automation and continuous improvement features immediately following the stabilization period. Benefits include:

- Reduce MTTR and improve workforce satisfaction
- Reduce overall time the workforce must spend interacting with IT
- Accelerate and optimize IT integration processes
- Build friction-free, seamless workflows for workplace services functions
- **Security:** NTT DATA will continuously engage with OMES IT Security to optimize vulnerability management of devices and end user computing environments. OMES will experience a new level of transparency around compliance and risk in the workplace, which will drive meaningful improvements. In addition, NTT DATA recommends leveraging virtual workspace solutions for high security use cases.
- **Innovation Program:** Our proposal also includes implementation and governance of an innovation program. This program will identify, evaluate, plan, and execute transformation initiatives that align with the State's business priorities and deliver significant value.
- **Customer Experience (CX) Design:** High priority user experiences will be designed to optimize convenience, speed, and empowerment. This is achieved through persona and journey mapping as part of post-transition activities.

Optional Transformation Projects and Services

- **Application Store:** Deploy a friction free application store with end-to-end procurement and provisioning workflows. We recommend integration with our device ordering portal to provide a "one stop shop" experience for onboarding and refresh activities.
- **Walk-in Service Centers:** are an optional upgrade to establish tech lounges, tech bars, digital lockers, and vending machines that allow users to drop in or schedule visits for refresh and other high-touch or high-friction events.
- **Virtual Applications and Desktops:** We offer the option to virtualize desktops (VDI) and applications using leading technology partners like Citrix and VMWare. This approach will induce and accelerate agency adoption, provide a more flexible and secure computing environment for the workforce, and drive employee engagement and digital dexterity throughout the organization. Virtualized computing will provide rapid new hire provisioning, reduce the mean time to restore service, and offer rapid site migrations. A virtualized computing assessment and design are highly recommended for any organization targeting a digital transformation.

Based on our experience with hundreds of clients, NTT DATA recommends that a thorough examination of the risks and benefits before a mass deployment of virtual desktop technologies. While there are certainly many advantages of deploying this technology, our experience has shown that very specific personas and use cases must be thoroughly explored with the risks and benefits considered for each use case before deployment. The technology may be viewed by particular user personas as restrictive and cumbersome and therefore demand careful examination. NTT DATA is including customer experience assessments in this proposal. These assessments map the experiential perception of the end-users in order to improve both the service and technology experience. The appropriateness of technologies is a standard outcome of these experience assessments. After the CX assessment NTT DATA will be in a strong position to recommend where the State may benefit from desktop virtualization technologies.

- **User Experience Monitoring, Analytics, and Reporting:** NTT DATA recommends an endpoint and end user experience monitoring and analytics service to enhance the user experience. This service will help our engineers predict failures and avoid incidents that

impact end user productivity. These tools can also be used to fine-tune our persona definitions for hardware and support entitlements.

- **Experience Level Agreements (XLAs):** NTT DATA recommends a collaborative effort to develop and commit to Experience Level Agreements (XLA) for the new service that are in addition to the SLAs proposed in section C.16. These XLAs will focus on specific and material user experience measurements, such as the time it takes to provision a new hire to be ready to work or aggregated user experience related metrics that are most important to OMES objectives.
- **AI Virtual Agents:** We offer the option to improve the service desk resolution time and provide context aware support with end users by implementing virtual agents. This optional upgrade will improve service by empowering service desk agents to focus on more complex interactions.
- **Optional Persona-Based Catalog:** Personas bring a genuine flexibility in service governance as well as key operational, strategic, and commercial benefits, like:
 - Ability to construct, approve, and consume persona-based service bundles from a service catalog and self-service governance portal .
 - Ability to adjust volumes monthly for any persona group from a self-service governance portal (i.e. Utility mode consumption controlled through a portal).
 - Continuous persona governance process as defined in the governance portal to encourage and facilitate OMES and NTT DATA collaboration.
 - Dynamic services catalog compatible with a self-service portal. This leads to shifting the requester and approver authority closer to the business units so business leaders can communicate with IT under a standard and predictable language.
- **Image Consolidation:** Reduce the number of images to one per OS (Win7, Win10) by implementing intelligent configuration manager task sequences that utilize dynamic driver capabilities. Move away from complex and cumbersome images to a more generic image provided by the OEM vendor and shift to Windows 10 servicing model.
- **Network Remediation:** NTT DATA can help improve the network and leverage Configuration Manager to apply the common image to a wide variety of models in many locations utilizing distribution points and/or peer caching technology. Once the image is laid down, Config Manager can be used to keep the system up-to-date along with Active Directory group policy.
- **Hot Swap Commodity Devices:** The end user's profile and documents need to be abstracted from the device. Microsoft UE-V can be utilized to capture user profile settings that are either device specific or user specific. Microsoft OneDrive is part of Office365 and can be used to store end user data in a redundant cloud solution, accessible from various devices in many locations. This model enables a quick and easy replacement of a malfunctioning device.
- **Application Packaging Expansion:** Expand the use of application packaging. Once an application has been packaged and tested, it can be repeatedly deployed to many devices for end user consumption. This approach has dependencies on network connectivity and capacity.
- **Microsoft Intune:** Intune should replace Mobil Iron and the primary MDM technology for mobile devices. This allows end users to access corporate data or SaaS applications in a secure manner. Microsoft Intune is tightly integrated with the existing Microsoft suite of

management tools and can be used to deploy packages to various endpoint devices including Win32 apps.

C.3.3 Suggested Changes to drive additional savings for OMES

In line with our commitment to sharing our market knowledge and producing an overall best value solution to the State of Oklahoma we were able to identify some potential levers to lower overall cost. These changes are individually exclusive of each other and allow the State to reassess the value of some of the requirements that are driving up the overall price of the solution.

The estimated savings below are approximations based on our assumptions and would be discussed in further detail before any final agreement. We estimated savings based on total annual spend of 32,000 supported devices with 20,000 of those under full management.

- Adjust the need for high-touch delivery and installations per C.6 requirement and related questions and answers follow up related in order to allow for standard direct shipment with remote assistance on installations. **Savings - \$1.1 million**
- Adjust the requirement that any device within the state called in before 3 PM has to be fixed by noon the next day. If it were adjusted to end of next day (instead of noon) it was a KPI of 24 hours, SLA 48 hours. **Savings - \$1 million**
- Network modernization to a single unified domain would allow to savings on deployment and break fix costs. **Savings - \$1.6 million**
- Bring 100% of all 32,000 devices under management. Savings: 8 - 15% per device under management

C.4 Preferred Documentation

NTT DATA has included in its proposal service level information, documentation, training, account team/support provisions, escalation process, and pricing for each service. NTT DATA did not include a section on hosting as a hosting requirement is not included in our solution. All tools and automation provided by NTT DATA in this proposal are served from NTT DATA's data centers or are cloud based. These tools and automation are offered as a service and the hosting thereof is considered a part of the service and therefore, are included in our price. Pricing for each included in our response to Solicitation Attachment C.

NTT DATA's delivery excellence is dependent upon the execution of repeatable processes based on ITIL, ITSM, and Project Management Book of Knowledge (PMBOK) best practices. These processes must be trained to every employee responsible for executing the process and subordinate procedures and work instructions. It is imperative that each and every process is documented and managed as processes change over time. NTT DATA establishes these processes during our transition period. If modifications or updates to our processes or documentation are either requested by our client or prompted by changes to the environment, our transition team will make the alteration to the reference process, document the new process, and train the delivery teams on the new process. Following transition, we will maintain all documentation. We will maintain the documentation in an NTT DATA document management system (ISPAL) and under version control similar to how we maintain our corporate ISO process documentation per the NTT DATA Quality Management System (QMS).

Starting at the point of assumption of service, NTT DATA's Client Delivery Executive will host a monthly performance review meeting with OMES-ISD to review the prior month's service level attainment, performance trends, billing overview, project status, and other relevant information.

In the subsections that follow, we describe the documentation for each required element.

C.4.1 Service Level Agreements

Service level agreements (SLAs) document our performance against established expectations. Documentation of how well we meet these SLAs can provide trend analysis and generate meaningful data to facilitate ongoing decision support. NTT DATA will comply with the SLAs provided in Section C.16. In addition, we recommend a collaborative effort with OMES to establish additional service level performance goals that are meaningful to OMES' stakeholders. Once we agree on the final list of SLAs and assign a baseline, we will review them annually for scope changes, such as new applications, new services, or significant revisions to existing services. NTT DATA has documented our initial SLA list in proposal Section C.16.

C.4.2 Billing Information

NTT DATA will provide a monthly invoice of charges for devices, device management, installations and incidental device component. The invoice will include a summary of charges. We will generate and maintain billing information in our governance portal, DSO, and provide access to OMES to review monthly invoice detail to the atomic level with the capability to arrange the data to suit the needs of the OMES user. The system will provide the ability to summarize charges, to display by location, agency, device type, service type or a variety of other parameters. Users of this portal will have the ability to save report parameters, saving time in subsequent visits. The DSO portal will be available to OMES 24x7.

C.4.3 Detailed Documentation of Services

NTT DATA will provide documentation that outlines in detail the services provided to entities on an on-going basis to include services by location and account information. During the Transition Phase of this engagement, specific requirements will be gathered for service catalog entries and general service information. NTT DATA intends to both provide this information on the DSO service catalog as well as a training flyer that will be included in each new or replacement device kit. NTT DATA believes the service experience will be enhanced through education of the end-user population.

C.4.4 Training

NTT DATA will specify the general requirements for providing training for implementing and using the solution at the end user and administrative/operational personnel levels.

In the development of training materials, regardless of the format for delivery (e.g., presentation, manual), NTT DATA will begin with an understanding of the desired end result (i.e., objectives and outcomes) and the intended audience; both of which will drive the level of detail to be provided in a manner that best achieves knowledge retention of the subject matter. Throughout the training development cycle, materials will be provided to OMES for review/comment and ultimately for final approval. NTT DATA request and adhere to any relevant State processes and procedures for material development (e.g., Style Guides, Section 508) specific to format (e.g., written, web content). For the training delivery to specific levels of users, NTT DATA will work with OMES to establish an agenda in support of the training goals and objectives. The agenda will serve to ensure goals/objectives are met within the allotted time to include participant discussion. NTT DATA will document each training (attendees, time, date) and solicit feedback from participants as part of our continuous process improvement and customer satisfaction efforts.

C.4.5 Account Team and Support Provision

Our proven governance structure reflects an end-to-end solution approach that includes the appropriate leadership, operational, tactical, and governance infrastructure coupled to an open architecture that allows NTT DATA to scale the organization organically to meet the State's needs. Long term support is built on innovation, alignment, quality, and techniques that will assist the State of Oklahoma to effectively and efficiently run, enhance, and operate.

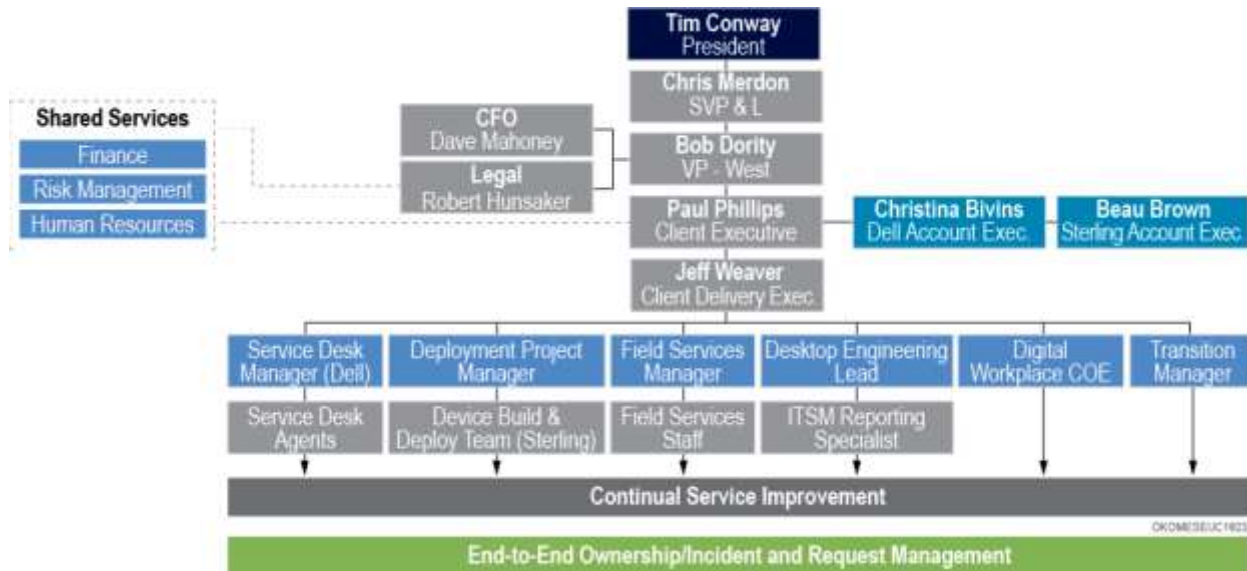


Figure 18. NTT DATA Account Team Leadership Structure

Our proposed leadership team assigned to this engagement is led by NTT DATA Client Executive, Paul Phillips, who has overall accountability for the business relationship with the State of Oklahoma and will assure visibility of the program and access to NTT DATA Public Sector Leadership Team and corporate back office support (e.g., Human Resources, Legal, Finance and Accounting) as needed. Mr. Phillips is an experienced managed services executive who managed our TXDOT contract detailed in section C.22.2 and will lead this effort from his base in Oklahoma.

Reporting to Mr. Phillips is NTT DATA's Oklahoma-based Client Delivery Executive, who has responsibility for all aspects of service delivery to the State and will act as the day-to-day operations manager for this program.

The Client Delivery Executive oversees several accountable delivery managers in the areas of service desk, device deployment, field services, desktop engineering, Digital Workplace COE, service management, and reporting.

Our assigned State delivery team has extensive experience leading successful enterprise transition/migration, business transformation, and ongoing operations. This experience, coupled with our structured governance, provides the State with a reduced risk operation. Our leaders, through this governance process, will manage our relationship, risks, escalation, and contractual obligations.

Key objectives of our account team and provisions governance structure include the following components:

- Clearly defined roles and responsibilities, decision rights, and points of accountability
- Providing as needed support and oversight to support committees and groups

- Flexible, actionable plans from NTT DATA stakeholders targeted to improve business performance, while sustaining an effective business relationship
- Driving alignment between the policies and procedures used to guide operating behavior and OMES' objectives and goals
- An operating structure that exists and functions both when everything is going well and when issues and/or escalations are required
- Accurate reporting with measurable results
- Sets the foundation for continuous quality improvement in all processes supporting service delivery

Our governance model is divided into service delivery, operational and strategic levels, as depicted in **Figure 19**. These levels are logically separated to specific job functions.



Figure 19. NTT DATA's Governance Structure

Strategic Level: Includes senior leaders from OMES and NTT DATA public sector leadership team as part of a steering committee. The steering committee will be responsible for defining the OMES and IT goals of our support. The steering committee typically meets every quarter

and monitors progress at a high-level to deliver support as per expectations and provides support in resolving agreement level issues and risks. Topics of the steering committee include:

- Reviewing progress and evaluating whether the business goals of OMES are achieved. Recommending improvement actions, if necessary
- Reviewing the value created by NTT DATA for the State and recommending improvements/ actions, if necessary
- Finalizing the roadmap and investments for the future through innovation workshops/ industry roundtables
- Resolving strategic/escalated issues to this level
- Reviewing program risks along with mitigation and contingency actions

Operational Level: This level acts as the first level of escalation. It includes OMES's Client Executive and the NTT DATA delivery managers and Client Delivery Executive. The prime objective of this level is to monitor the status of the engagement through progress, issues, and risks and identify areas of improvement. The NTT DATA Client Executive submits a monthly report of the progress which is reviewed along with other items such as:

- Reviewing delivery performance through reports, key performance metrics/SLAs and identifying areas of improvement
- Reviewing customer satisfaction indicators
- Reviewing project status, identifying risks and recommended solutions
- Reviewing proactive improvement proposals from the team and making a go/no-go decision
- Addressing all the issues escalated to this level
- Reviewing risks identified for the program along with their mitigation and contingency plans
- Reviewing invoicing and billing

Service Delivery Level: This is the base level comprising NTT DATA's delivery managers and project managers, and OMES/IT project management counterpart. NTT DATA's delivery managers and project managers enable optimum quality of service deliverables and OMES/IT's project manager works with NTT DATA on day-to-day operational matters. The operational level team will meet on a weekly basis, and sometime daily basis, to discuss certain project aspects, deliberate the project/delivery status, address issues and risks.

Account Management Methodology (AMM)

NTT DATA's governance delivery is underpinned with an account management methodology (AMM) that provides guidance and repeatable processes for managing risk, innovation, customer relationships, the customer experience, continuous quality improvement, contract administration, projects, human resources, finances, procurement, and vendors. AMM guides the responsibilities of the Client Executive and the Client Delivery Executive.

The process is detailed and includes automation components to ensure proper corporate oversight is delivered. All elements of this methodology are visible to the Client Executive and senior NTT DATA Delivery Executives. Components of this method include:

- **Critical Practice Audit.** This process is an internal audit of the practices, process documentation, and execution within all delivery towers delivered to our respective clients. The critical practices audit is conducted by an independent internal audit team and results

are tracked, made visible on executive dashboards and managed until all audit findings are resolved.

- **Risk ALM.** The risk management component of AMM manages risks through NTT DATA senior delivery leadership oversight of risks identified within our engagement. As an example, if a risk was identified concerning a personnel matter, the risk would be logged into our Risk ALM risk tracking application and an NTT DATA corporate Risk Manager would assist the delivery team in managing that risk.
- **Compliance Track.** NTT DATA provides governance of contractual obligations through a Compliance Tack tool and accompanying process. It is critical that NTT DATA and our partners meet all obligations set forth in our agreement with the State. To that end, we have developed a process by which all obligations within contracts and their associated amendments are captured into a workflow application that alerts the responsible party of their obligation before it becomes due. If the obligation is not responded to by the due date, a reminder is sent and an escalation notification is sent to the accountable party. A status of all obligations are included in a report that is reviewed by NTT DATA public sector leadership team.

Our experience providing EUC support and the NTT DATA Team's operational capacity reinforces our ability to support the scope identified, the current end user population of 32,000, and the current monthly average ticket volumes for desktop support services of 4,437 trouble tickets – and ability to scale to accommodate future scope. In Georgia, NTT DATA supports more than 41,000 devices, 37,000 end users across 18 executive branch agencies at 19 different sites while meeting 100% of our SLAs for handling problems and incidents. On NTT DATA's TxDOT project, we support more than 30,000 devices, 800 applications, 12,000+ laptops, 1,500 desktops, nearly 1,500 tablets; and 25 different operating systems for more than 14,000 end users at more than 330 locations while meeting or exceeding all of our SLAs. We look forward to the opportunity to support the full scope of the OMES environment and implement our scalable approach to accommodate any future growth.

NTT DATA's Ability to Scale for Future OMES Growth

For Texas, NTT DATA is currently supporting:

- +5 times the number of OK laptops
- +21 times the number of OK tablets
- 12,000 more tickets per year

NTT DATA takes a logical view of the process and validates our work through reporting and governance. Our approach encourages communication and builds consensus.

Capabilities for World-Class Support and Account Service to OMES

Over the past 5 years, NTT DATA has planned and executed thousands of projects for hundreds of clients worldwide. Whether conducting a consulting engagement or assessment; an application design, development, and implementation (DDI); or an infrastructure build out, NTT DATA follows a set of guiding project management principles that allow us to deliver projects on time and on budget. Strong project management practices are an important part of our company's heritage dating back to 1984, when a senior executive at our company documented our approach to IT project management in a book that influenced the field and long shaped our company's approach to managing IT projects.

NTT DATA supports millions of users, providing consistent support, resolving issues more quickly, and increasing workforce productivity and satisfaction. We also promote CSI through user experience analytics and award-winning automation. We implement new technologies and simplify IT in ways that boost functionality, improve performance, and contain costs These

capabilities have been proven to provide world-class support and account service for multiple state agencies:

- During the first 2 years working with TxDOT, NTT DATA was able to reduce IT operating costs by 30%. We also reduced the size of technology portfolio by 45% in the first 3 years and handled 40% more tickets with 24% less staff, resolving more than 60% of tickets during the initial call. Customer satisfaction improved 25% from 2014 to 2015, and overall satisfaction continues to improve quarter to quarter.
- When NTT DATA first assumed responsibility for IT services at TxDOT, the application and infrastructure portfolio included unsupported systems, overlapping and redundant applications, and slow response times. Overall, IT costs were 15% to 35% higher than benchmarks. Because everyone involved recognized the scope of the challenges that needed to be addressed, the original contract included transformation activities, with large transformation projects defined ahead of time for the first couple of years of the program.
- For GTA, NTT DATA improved the customer experience by offering end user services similar to our Dynamic Workplace, including expedited service resolution and proactive self-help and self-healing tools. Our innovations and process simplifications at GTA have enabled continuous improvement of our infrastructure IT support services as well other innovations, such as flexible service consumption, pragmatic automation, and a tech bar (see Section C.23).

The NTT DATA Team is poised to deploy these capabilities for the success of OMES.

C.4.6 Escalation Process

NTT DATA has predetermined levels of escalation for incidents and problems (Section C.3), risks (Section C.19.2), and emergencies up to and including a full Disaster Recovery Plan (Section C.19.1).

In the event of an emergency, whether it be related to people, processes, or technology, our predetermined levels of escalation include:

- **Every NTT DATA Team Staff Member:** Trained in their jobs and our ITIL-based processes, is expected and empowered to anticipate, monitor, identify, and try to resolve situations that could rise to the level of an emergency. This may include contacting local emergency personnel when an issue relates to personnel safety. When emergency situations are outside a staff member's control, they escalate to their immediate supervisor, team lead, or any other manager.
- **Team Leads/Supervisors/Line Managers:** Have responsibility for coordinating staff activities and communicating laterally and vertically within the NTT DATA Team as well as with the client in the event of an emergency.
- **Project Manager:** Will ensure NTT DATA Team processes are followed, emergency situations are documented and reported, client counterparts and NTT DATA management are kept informed, and perform lessons learned on emergency situations.
- **NTT DATA Executive Management:** Works to evaluate emergency situations and responses, implement recommendations for improvements in personnel, security, operations or other processes and policies to ensure similar situations are avoided or mitigated in the future.

An example of the importance NTT DATA places on potential emergency situations, based on today's environment and as a result of workplace incidents of violence across the country, it

instituted a Workplace Violence Awareness and Safety program and formed the NTT DATA Public Sector Threat Management Team.

As a part of our transition process, NTT DATA will work with OMES to define and document an appropriate escalation structure to meet the State's needs. Typically, technical escalation starts with the Delivery Managers. The escalation path then extends to the Client Delivery Executive. The Client Delivery Executive is accountable for delivery and is able to reach into the NTT DATA corporate structure through our Client Executive to obtain the necessary resources to satisfy any technical situation. The highest point of escalation is the Client Executive, Mr. Phillips, who is also responsible for any contractual, financial, or legal matters that require attention.

C.5 End-User Device Configurations

The NTT DATA solution includes hardware devices designed to meet the requirements of each of the end-user device configurations for all seven categories as specified in the solicitation (**Attachment A, C.5-C.5.1**). We understand the Attachment A specifications are minimum specifications only (**C.5.3**). We worked with our teammate, Dell, to understand the needs of the environment and engaged them in designing configurations which meet or exceed the requirements needed to enable and improve end user productivity. **Figure 20** details each proposed device, by configuration category:

Figure 20. NTT DATA Proposed End-user Devices to Meet/Exceed OMES Category Configuration Requirements

Device Configuration Category	Device Specification	Proposed Device Type with SKU
1) Category One – Desktop Computer	Micro Form Factor	Optiplex 7070 MFF MLK - 210-ASEF
	Small Form Factor	Optiplex 7070 SFF MLK - 210-ASEC
	Workstation	Precision 5820 XL Tower XCTO Base - 210-ANJM
2) Category Two – Laptop Computer	15" Laptop	Latitude 5500 XCTO Base - 210-ASJH
	17" Laptop	Mobile Precision 7740 CTO Base - 210-ASFR
3) Category Three – Windows Tablet	12" Tablet	7200 - 2 in 1 210-ARNY
4) Category Four – 2-in-1/Convertible Tablet	2-in-1 Convertible Tablet	7200 2 in 1 - 210-ASRG
5) Category Five – Ruggedized Device	15" Laptop	Dell Latitude 7212 Rugged Extreme 12" - 256 GB Storage- 210-AMTI
	17" Laptop	Dell Latitude 5424 Rugged 15" - 210-AQPY
	Rugged Tablet	Dell Latitude 7212 Rugged Extreme - 12" 128 GB Storage - 210-AMTI
	Rugged Convertible Tablet	Dell Latitude 7212 Rugged Extreme – 12" 128 GB Storage - 210-AMTI with a ruggedized keyboard, cover, and kickstand
6) Category Six – Mac Computer	13" Laptop	MacBook Air 13"/2.2/8GB/512GB SSD/6000
	13" Laptop with touch bar	MacBook Pro 13"/2.8/16GB/512GB SSD/655 - Space Gray
	15" Laptop	MacBook Pro 15"/2.6/16GB/512GB SSD 560X - Space Gray

Device Configuration Category	Device Specification	Proposed Device Type with SKU
	15" Laptop with touch bar	MacBook Pro 15"/2.4/16GB/512GB SSD/Vega 16 - Space Gray
	27" Desktop - 16GB RAM	iMac 27/5K/3.6Ghz/16GB/1 TB Fusion/Radeon Pro 575K
	27" Desktop - 32GB RAM	iMac 27/5K/3.6Ghz/32GB/1 TB Fusion/Radeon Pro 580K
7) Category Seven – Mobile Device Management	We will manage existing in-scope mobile devices leveraging the MobileIron Toolset	

It should be noted that not all configurations could to be matched to exact specifications. In those instances, we identified alternate configurations (C.5.6) we believe will meet the requirements of the end-user community; however, we are prepared to provide additional options as identified and approved by the State of Oklahoma. All configurations are offered in both the current semi-annual Windows 10 version (and current MAC OS versions), and a no Operating System configuration for staff using Linux-based configurations (C.5.4). Also included is a firmware-embedded agent allowing remote management, tracking, and theft recovery (C.5.5).

We acknowledge that datacenter services are not in the scope of this program (C.5.7).

C.6 Deployment Services

NTT DATA will analyze the current workflow and procedures and align them with industry best practices, bringing efficiencies through the use of NTT DATA tools and expertise. NTT DATA uses customized tools for request process and allows for full transparency in the deployment process with the State providing a clear “chain of custody.”

NTT DATA's detailed solution to the requirements in C.6.1 – C.6.11 are included below. Several solution elements apply to multiple requirements, including:

Managed Deployment Application

NTT DATA will leverage our Deployment Database Application to enforce and enable accurate and automated workflows. This tool was designed by NTT DATA deployment engineers leveraging many years of specialized experience. The Deployment Database is a low code, no code set of applications and workflows developed in QuickBase.

Field Services

The deskside support technicians focus on install/move/add/change/decommission (IMACD) and hardware break/fix activities. NTT DATA will use our L2 Remote Resolution team to reduce the number of incidents that require deskside dispatch for resolution.

The desktop services team operates closely with the service desk, communicating resolutions and fixes that do not require future dispatch support. This shift-left methodology enables OMES and NTT DATA to reduce dispatch incidents over the term of the agreement by empowering the user or service desk agent to resolve more incidents, or driving automated, silent resolutions.

C.6.1 Configuration Center

NTT DATA teammate, Sterling Computers, will provide a configuration center in Oklahoma City, supported by five depots with automated storage lockers in cities throughout Oklahoma, that will allow delivery of orders within the specified service levels. This staging center will house the

facilities necessary to receive, stock, build, deploy, retrieve, wipe, and return or dispose of State-owned devices and assets that are used under the scope of this Device as a Service. NTT DATA has chosen to utilize a single configuration center and will mitigate the risk of lengthy deployment timelines by maintaining a sufficient buffer of pre-staged device systems to enable a speedy deployment that will exceed the State's expectations.

Depot Asset Management

NTT DATA will manage the devices that enter, pass through, or are retrieved into the configuration center. These devices and their associated peripherals will be managed using an Inventory Lifecycle Stages Methodology (**Figure 21**). From the point of order through disposition, the location and configuration of devices throughout our depots will be managed within our asset management system.

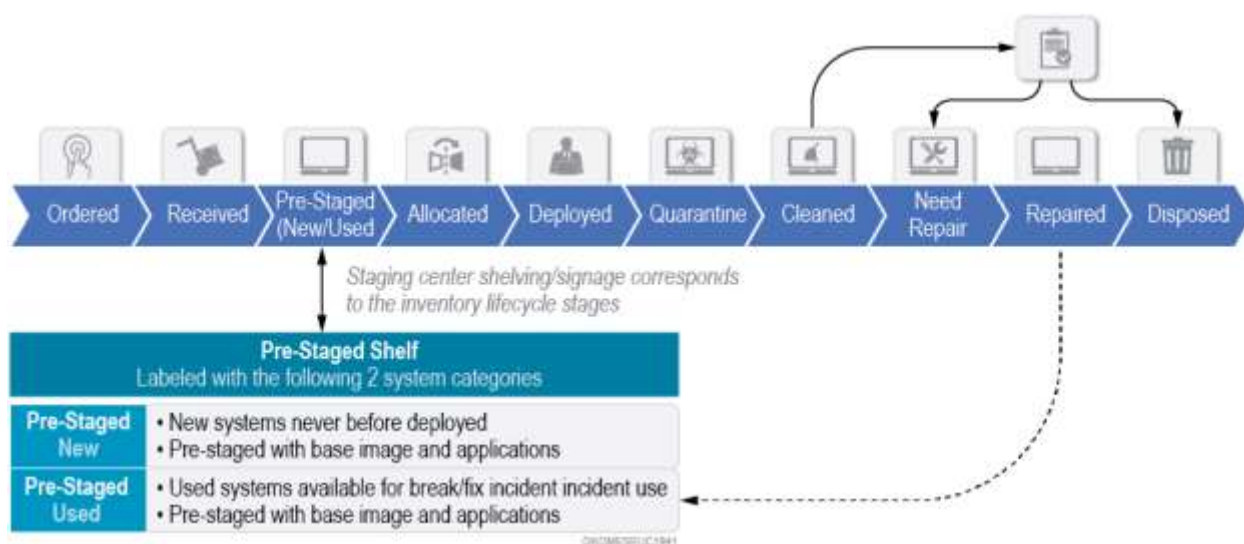


Figure 21. Inventory Life Stages Methodology

Staging center and disposition storage shelving will be organized based on the inventory lifecycle stages. NTT DATA estimates the staging center could have as many as 900 devices in a single month. These large numbers and various statuses of the devices demand a strong process and inventory system to manage the flow. The lifecycle stages we will use to manage these devices are shown below.

Asset Management Status	Definition
Ordered	• Equipment is on-order but specific serial numbers, service tags or tenet asset tags have not been updated into the asset management system
Received	• Serial numbers, service tags, asset tags system and user information, specified for asset tagging in section C.6.4 are noted in asset management system • Includes any new product received into inventory - systems, monitors and peripherals • All equipment except systems will remain in this category until allocated for a specific end user • Systems will move from received to pre-staged as soon as possible
Pre-Staged New/Used	• Pre-staged new equipment is new from the factory

Asset Management Status	Definition
	- Pre-staged used equipment include used devices that have remaining warranty coverage - Systems have been imaged with the State's base image and common applications but not yet allocated and deployed for use by a specific end user - Unique agency applications have not yet been installed
Allocated	- Upon receipt of a service ticket (incident or request) the depot technician will pull a system from the pre-staged shelf along with any associated peripherals from stock and final configuration and staging is completed - Includes installing agency specific applications, additional hardware (i.e. memory, upgraded video card) if required and adding the system to the correct container in Active Directory - Depot technicians deliver the equipment to the end-user's location for installation.
Deployed	- Systems and other items delivered to the local End User location to fulfill a specific request or bulk refresh project - Depot technicians install equipment at end user's desk providing orientation, site specific customization and agency specific installations if warranted - Equipment remains in deployed status in the asset management system as long as the end user has possession of it
Quarantine	- Systems returned to depot inventory that are to be disposed or redeployed will be placed in quarantine for a number of days (to be determined during transition) in order to retain any user data that may not have been transferred during the install/refresh process - Gives end user time to make sure they did not overlook any critical files when their system was replaced
Cleaned	After the quarantine period systems will have their hard drives wiped in preparation for disposal or redeploy
Need Repair	After the quarantine period systems will have their hard drives wiped in preparation for disposal or redeploy
Repaired	- Repaired used systems that have warranty remaining - Repaired systems can be used as break/fix whole unit exchanges but are not to be used for deployment or refresh request activity
Disposed	- Systems and other serialized items with no remaining warranty - All hard drives have been cleaned (data wiped) - Inventory that is returned to the lessor or delivered to an authorized disposal vendor will be placed in disposed status

C.6.2 Staging

NTT DATA will perform pre-staging functions for all new devices that arrive from orders at our Configuration Center. The steps for this function include:

- Receive shipments and inspect the package contents for damage
- Verify the service tag for each new system against the packing slip
- Scan the unit item barcodes to load basic asset information into the asset management database

- Affix an asset tag to the device and record basic asset information into the Flexera asset management system
- Image the device using an OMES provided, agency-specific image, including applicable drivers and birth-right applications
- Conduct basic functionality test to ensure image load success
- Place systems in the appropriate category in the asset management system and return the system and its components to the pre-staged location in the storage depot

After a customer places an order through the electronic order process, a depot technician will receive an automated ITSM request ticket to deploy a system specified in the request ticket. The technician will then complete the second phase of the build process by performing the following steps:

- Mark an available asset, that meets the needs described in the request ticket, into the asset management system to allocated status
- Pull the marked asset from the pre-staged storage location
- Update the asset management system with user information from the end-user installation questionnaire
- Attach the system to the agency's domain, configure the default login to the end user's account, and load any agency specific applications or non-birthright applications on the system
- Perform a basic system test, verifying functionality
- Package the system for customer delivery and return to the appropriate storage location awaiting customer schedule and installation technician pick-up

After the previous set of steps, the system will be configured (with the exception of any special site considerations or special access requiring the customer to login) and marked for delivery to a customer.

C.6.3 Application Discovery

Flexera's powerful SW Rationalization Engine automates the rationalization and normalization of raw discovery data thus enabling the license reconciliation process by comparing the inventory of installed software to license entitlements, to determine an accurate compliance position and to allow for easy identification of software that may need to be packaged or included as one-off solutions not included in the base images.

Flexera discovers application data by installer evidence, file evidence, registry data and ISO tags, etc. and provides a list of installed software per device (desktop, laptop, server, HW partition or virtual machine). The application recognition library covers more than 180,000 applications from 16,000+ SW vendors across multiple platforms including MS Windows, Linux, UNIX (including over 1,000 IBM titles), and MAC OS. The ARL supports the use of ISO 19770-2 tags to identify installed software, when such tags are available.

The SKU Library contains more than 340,000 software product SKUs and is used to match software purchase orders and contracts. It helps automate the creation of license records in the asset management repository that contain software license entitlements from purchase orders.

C.6.4 Asset Tagging

NTT DATA configuration center technicians will affix a State asset tag to each new device or returned repair that does not have an asset tag. NTT DATA transition SMEs will work with OMES to determine asset tag qualification during the transition. Asset metadata information described in sections **C.6.4.1** through **C.6.4.13**, and any additional required tags discovered during transition, will be captured in the asset management system. This data will be tracked and made available to the state 24x7 through our DSO portal.

C.6.5 Storage Encryption

NTT DATA Digital COE engineers will work with the OMES-ISD security department to make recommendations for a single storage encryption solution that we will load onto each device during staging/configuration. Our suggestions will be informed by our experience with offerings such as Symantec Endpoint Encryption and MS Bit Locker and can bring our lessons learned and best practices around each solution. This experience suggests that Bit Locker would be the preferable solution since it is the most used in the industry (and therefore has the most robust service options) and is included in all windows devices.

C.6.6 Deployment Coordination

NTT DATA will provide a device lifecycle project manager for this engagement. The project manager will coordinate with an OMES and OMES customer counterparts as required throughout deployment activities. This project manager will be a senior project management resource and the functions of the deployment center will be accountable to this leader.

The project manager will provide coordination of the deployment, including but not limited to:

- Gathering of discovery information including who within the agencies the devices are being deployed to, installation addresses, and agency-specific software installs needed, etc. (**C.6.6.1**). OMES SRD/NTT DATA will send discovery tool information to NTT DATA, after which we will schedule a kick-off call with the agency to determine next steps.
- Providing schedules and regular status updates and deployment metrics to the NTT DATA Client Delivery Executive and OMES oversight leadership (**C.6.6.2**). NTT DATA will manage, update, and share a workbook with all deployment data visible to both our team and OMES.
- Coordinating the scheduling of customer deployment orders, directly with the acquiring agency (**C.6.6.3**). This will be completed during the deployment kick-off call.
- Conducting necessary site surveys with the acquiring agency to collect information necessary for deployments on capabilities of site for deployment (**C.6.6.4**). This will be completed during the deployment kick-off call.
- Gathering customer feedback on deployment experience (**C.6.6.5**). NTT DATA receives customer sign-off of all deployment activities and feedback is shared with all stakeholders.
- Working with OMES-IS to obtain necessary information for the configuration of the device as necessary (**C.6.6.6**). OMES-IS is included on the deployment kick-off call and the configuration information is provided in the discovery tool prior to the call.
- Sending pre-deployment preparation documentation to affected users receiving a new device (**C.6.6.7**). During the deployment kick-off call we will discuss necessary information and steps for end user preparation.

- Retrieving existing asset for disposition (Return to lessor, dispose if owned and retired, return to stock if the asset has remaining life) (C.6.6.8). NTT DATA field techs will dispose of retrieved assets as described in **Section C.11.3**.
- Obtaining customer sign-off on received device (C.6.6.9). At the end of each deployment, NTT DATA will receive sign-off from the end user or site representative and place it on the shared drive.

Many critical steps in the deployment process require customer communications. NTT DATA's deployment project manager will ensure that these communications are timely, courteous and effective. Some deployment communications will take the form of electronic correspondence and some by direct telephone contact. The table below illustrates communication events related to the deployment process.

Figure 22. Communication Events

Communication	Description
Invitation	Initial email to an end user assigned to an asset
Invitation Reminder	Reminder to an end user assigned asset a pre-determined number of days after the initial email; end user's supervisor is copied
Confirmation	Communication sent once requirements gathering is complete
Schedule	Sent to the end user to establish/confirm an installation schedule
Reminder Notice	Sent to the end user a pre-determined number of days before the scheduled installation
Customer Satisfaction	Sent to the end user a pre-determined number of days after the installation is complete
Reschedule	Communication to/from the end user if/to reschedule the installation
Cancellation	Communication to the end user to inform of cancellations of the impending installation
Device/Service Order Approval	Sent to the manager to approve the device or service selection
Device/Service Order Approval Reminder	A reminder sent to the end user's manager if device or service has not been approved within a pre-determined period of time
Device/Service approved	Communication sent to the end user informing them of the approval of their order request
Order Denied	Communication sent to the end user informing of denial of their order

To facilitate the deployment, NTT DATA will provide the project manager with an automated deployment workflow software application. The workflow application will guide the project manager and configuration center technicians to a repeatable process. The deployment workflow system contains the following features:

- Refresh manager
- Custom asset bar-code scanning tool
- System discovery and customer device application scanner
- Drive mapping scanner
- Auto-check to verify all aspects of the build are complete
- Deployment scheduling

The screenshot displays the Deployment Workflow System interface. It includes a top navigation bar with tabs: 'Schedule', 'Process Tracking', 'Discovery Data', and 'Assets Log'. Below this, there are several input fields for tracking deployment steps: 'Refresh Type' (set to 'Bulk'), 'Software Discovery DateTime' (20-14-2017 07:45 AM), 'Reserved Old Equipment DateTime' (20-09-2017 09:00 AM), 'Build Complete DateTime', 'Shipped DateTime', 'Shipping Return DateTime', 'Shipping Tracking Number (SPB)', 'Return Tracking Number (SPB)', 'Deployed DateTime', 'Quarantined DateTime', 'Wipe DateTime', and 'ARS Pickup DateTime'. On the right, a window titled 'Asset Tracker S.F.' shows a summary of the process, including 'COMPILE DATE: 8/20/2017' and a list of assets with their status (e.g., '10-51-2017 Reserved (10/10/17) Date User: P. P. P.', '10-51-2017 Deployed (10/10/17) Date User: P. P. P.', '10-51-2017 Quarantined (10/10/17) Date User: P. P. P.'). At the bottom right, there are buttons for 'Select Type Of Scan' (Reserved - Old Serial, Deploy - New Serial, Scan To Quarantine) and 'NTT DATA' logo.

Figure 23. Deployment Workflow System

- Deployment issues tracking
- Deployment progress tracking
- Reporting

This tool will assist configuration center technicians and the project manager in tracking repeatability, quality, timeliness, and transparency for each deployment.

Additionally, the project manager will be responsible for process improvements to the asset lifecycle. The full set of responsibilities include but are not limited to:

- Identifying a site coordinator for each customer site
- Ensuring all configuration center employees adhere to asset management, workflow automation, and ITSM procedures
- Developing and maintaining end user orientation documents and training guides
- Ensuring all necessary State provided resources are available for the duration of the program, including technical contacts
- Managing a master list of State locations and ensuring these locations are available in the asset management system
- Coordinating the scheduling of all necessary configuration center resources required to meet KPI goals
- Providing NTT DATA or partner technicians with access to customer facilities and systems as needed to provide the deployment services
- Providing a supervisory resource to sign off on each installation
- Facilitating communications between the deployment center and OMES, as needed, to engage appropriate management levels and to obtain approvals

C.6.7 Re-Deployment Services

NTT DATA will manage and facilitate the reassignment and redeployment of devices from one user to another. This asset transfer will include updates to relevant billing information, reports, and configurations. Transactions of this type will typically be requested through the included DSO or one of the service desk channels and will be exercised through our ITSM (Cherwell), installation, move, add or change (IMAC) request that will also be generated through DSO automation.

Additionally, end users may request this activity through the service desk.

Assets transferred in this manner will typically move through the deployment center to be refurbished, reloaded, and transferred. NTT DATA will manage this request process and provide governance to OMES to prevent costly waterfalling of assets. The deployment project manager will communicate with OMES if this pattern develops. Our deployment technicians will treat reassignments as new deployments to the receiving end user.

C.6.8 Office Moves

All IMAC activity for the anticipated average of 75 requests for office moves per month, including office moves for one person moving to a new office space within the same building, several agency staff moving within the same building, or one or more people moving to a new building, includes the following services and best practices:

- Perform activities required for planning the deployment of equipment and software in conjunction with the customer procurement and engineering teams
- Coordinate all installations and changes with the customer and third-party OMES, as required
- Manage all upgrades, changes, and installations, while adhering to all of our change management procedures
- Test all new installations and changes in a safe, non-critical test environment prior to making any desktop changes to the production environment, advising the customer of any change factors or problems
- Provide recommendations on new configurations and products, as they are available
- Adhere to our best practices and change management procedures

NTT DATA will perform moves for single end users or for larger groups and departments. For each move related IMAC, NTT DATA field services personnel will understand the scope of the move and include project management involvement for moves of 10 or more devices.

A single move encompasses the relocation of a work area with its associated peripherals under the following scenarios:

- Between work locations in the same campus or building facility in one contiguous event
- Between a storage location and an active work location in the same campus or building facility in one contiguous event
- Between an active work location and a storage facility in the same campus or building facility in one contiguous event

Moves will involve, but are not limited to:

- Verification that the existing system is in working order before powering down the unit
- Disconnection of devices
- Physical transportation of the hardware within a building to a new location, as required
- Unpacking the new equipment at the new desktop location
- Equipment placement at a new desktop location
- Login to the network
- Verification of printer settings and change network access capabilities
- Restoring the client system to agreed functionality
- Update of the asset repository to reflect new physical address and/or new user assignments

While it is reasonable to process more than one move of personnel in a department from one location to another, larger departmental moves may require the involvement of a project manager and may be treated as a project, including all of its requisite planning. NTT DATA will communicate larger efforts, viewed as projects, with OMES.

Our field services technicians will execute the moves and will present a Customer Sign-Off document for signature to the end user or move coordinator when the work is completed. This verifies that the work has been successfully accepted as requested on the work request and in accordance with the completion criteria. In the event that an end user is not available to sign the

Customer Sign-Off, the NTT DATA field services technician will make a note in the respective work request ticket in the service management tool.

Add Activities

Add activities include the installation of hardware internal and external devices in an existing work area, to include, but not limited to, memory, internal CD-ROM, video cards, external CD-ROM, monitor, printer, scanner, or modem. Once a hardware device has been added, the technician performs a power on operational check, installs included drivers, performs a functionality test, and updates the asset repository, as required. Following a successful add, the work request is closed out.

For add activities that include multiple devices, NTT DATA will wait until all components have arrived prior to scheduling the add activity to minimize trips to the desktop. Add requests that include multiple devices to be installed as they are available will be treated as separate add activities for each component requiring a separate, approved visit to the desktop to perform the add activity.

Change Activities

A hardware or software change to a single work area is viewed as a single IMAC request. Change activities include, but are not limited to:

- Installing the new component and/or removal of the old component, as in the case of a memory upgrade
- Reconfiguring printer preferences while at the deskside
- Updating to a current version of approved software while at the deskside

Once a software application or hardware device has been changed, the technician performs a power-on operational check and updates the asset repository, as required. Following a successful change, the asset management system will be updated, reflecting the new configuration and the IMAC request will be closed.

C.6.9 Bench Stock/Loaner Pool

Section C.11.1 of this proposal describes NTT DATA's approach to repair and loan bench stock.

C.6.10 Installation/Setup

An installation of a work area includes new or used PCs that are to be delivered to the OMES environment and configured for use at an OMES site or end-user work area. Installation activities will be provided for workstations, laptops, and their attached peripherals, including, but not limited to: monitors, personal printers, docking stations, scanners, and CD-based storage devices, in conformance with the supported hardware and software requirements of the deployment.

NTT DATA deployment center technicians will provide a high-touch installation experience for State end users. Each installation will be planned, scheduled and expectations of the experience will be communicated to the requesting end user, or their requesting supervisor.

Although we are providing this high-touch option at the request of OMES, NTT DATA is prepared to discuss an alternate option for light touch installations with OMES. The light option would include shipping a device with installation instructions, training and orientation documentation, remote configuration, telephone support during the installation and electronic quality signoff.

NTT DATA will perform the following functions associated with the installation of a work area:

- Coordination with the end user to schedule the install
- Installation of PCs including cable management
- Configuration and application loading
- Data migration, as necessary
- Encryption of data, if required, per OMES-ISD standards
- End user orientation training and familiarization with services available, contact options and electronic information sources for services offered, and service expectations at that particular location/agency
- Removal of replaced devices and packing materials

C.6.11 Returns/Retrieval

NTT DATA has, through its decades of end-user support experience, developed processes to retrieve assets for departing State employees, employees that are receiving new devices or employees that are due for technical refresh.

Device assets that are due for refresh due to either the end-of-lease (from the previous contract) situation or that have reached the 3-year refresh cycle will be collected as a part of the refresh process. In these cases, the end users will be notified of the pending refresh and invited to choose a replacement device from the electronic product and services catalog, pending management and OMES approval. These customers will receive deployment services (**Sections C.6.2, C.6.6 and C.6.10**) which includes retrieval and disposition services, including device data sanitation and return to the lessor, to NTT DATA or disposal. If the retrieved device asset is not leased, a determination will be made, based on the service life of the asset if it should be returned to deployment stock or to migrate to repair/loaner stock for the remainder of its support life.

Regardless of the nature of the disposition, NTT DATA will remove all data (electronic wipe) and image configuration.

C.7 Peripherals

NTT DATA will provide support service for peripheral devices in the environment such as scanners, monitors, and ancillary computing devices (**C.7.1**). This support will start with the service desk, who assist the end user in troubleshooting the faulty device. Typical support will involve driver installation, device fault diagnosis and corrective action recommendations. If the end user is enrolled in device management, this service will extend to field services, who will continue the troubleshooting and if necessary and available, dispatch the original equipment manufacturer (OEM) to the third party OMES-ISD engineers assigned to maintain that particular device or device ecosystem. During transition, end-user device transition SMEs will work with OMES to identify these OEM and third-party representatives.

The NTT DATA Team will also provide support and triage for network and desktop printers including best-effort problem resolution, troubleshooting, and coordination/handoff with third parties for complex printer support (**C.7.2**).

C.8 Device Management

NTT DATA will provide unified endpoint management to include: managing global configurations settings, patching, applying application updates, device health monitoring and reporting, collecting of hardware and software asset information, reporting compliance to access and security policies. NTT DATA developed this solution offering after careful consideration of the existing environment and limitations that the current environment would offer. As such, we are suggesting a multi-tiered approach to device management.

NTT DATA proposes to leverage a single, centralized user device management platform (e.g. either Altiris or Configuration Manager) owned by OMES but managed and supported by NTT DATA. NTT DATA's device engineering services will provide centralized remote management of end user devices across the OMES organization. We use standard processes and procedures to enable consistent management to keep costs low, optimize the efforts required to deliver the services, and exceed end user expectations.

The following subsections outline the set of in-scope activities and provide a summary of our approach on how we propose to deliver OMES requirements.

Modern Management and Windows 10 Servicing

NTT DATA Windows 10 Modern Management Service is an operational support and management service for Microsoft Windows as a Service (i.e. Windows 10 Servicing) and modern management. Our proposed solution includes modern management as well as traditional and co-management options with the following service features:

- **Modern Management:** A management approach based on the Configuration Service Providers (CSP) features in Windows 10, and the ability to provision and manage a device from the cloud without the traditional management platform. Modern Management includes support for an option called Out of the Box Experience (OOBE) or Autopilot. This ideal model leverages a generic or commodity device to facilitate quick refresh or replacement of devices shipped directly to end users. This approach moves away from rigid, complex, and highly customized operating system images that make updates and refresh more cumbersome. It shortens delivery time and reduces costs as there is no extra shipping to a staging area to load a custom image before sending to the end user.

Modern management also encompasses mobile platforms such as phone and tablets using Mobile Device Management (MDM) or Enterprise Mobility Management (EMM) to securely manage corporate content while still allowing users the freedom to use their personal data and apps on their own devices as they see fit.

Another component of modern management is manner in which Microsoft releases frequent fixes and enhancements to Windows 10 so it can be as secure as possible as well as adapt to new technologies and meet the consumer driven expectation of constant improvement. Some organizations find it challenging to keep up with this release cadence but that is where NTT DATA's large and skilled teams can bring their vast experience to migrate and maintain the State of Oklahoma's Windows 10 devices.

- **Traditional Management:** The most mature and proven management model based on Microsoft's 'Configuration Manager' program. It has extensive capabilities to manage Windows endpoints and many well-known integrations with other popular software systems. This option includes the current Windows Servicing model.
- **Co-Management:** The management of a Windows 10 device with both Traditional Management and Modern Management platforms. This is currently the most popular option as few organizations can cut over 100% to Modern Management overnight. This co-existing

of the two methodologies allows the smoothest transition on a more flexible schedule and provides the best of both worlds.

For convenience and simplicity, all of these ongoing management options are included in our solution and presented as a blended device management catalog unit. We can support separate prices and distinct catalog units for these options, should OMES desire that level of granularity.

Current limitations with the environment, such as group policies, application compatibility and architecture preference of the state's architects will guide the aggressiveness of this move to modern management using the features of Windows 10. Similarly, mobile devices would be migrated to Microsoft Intune management as policies and limitations are eliminated. We view this transition as one that would require architectural work, organizational training, policy setting and application compatibility reviews would occur as a component of the transformation. It must be noted that for the foreseeable future both configuration manager and facilities of modern management would be used in the environment with a preference for modern management where possible.

As the transformation between the methods of management is not a simple one. NTT DATA is including Digital Workplace COE resources to assist the State with this transformation to the future desired state.

Devices that are not ready for modern management would be managed through Microsoft Configuration Manager and mobile devices through MobileIron.

Mobile Device Management

NTT DATA will provide operational and technical MDM services for approximately 5,500 devices at OMES through the ongoing management of the EMM environment. We will leverage OMES' existing MobileIron implementation to provide the following services:

- Manage the solution to provide mobile device management service for OMES
- Gather end user requirements for mobility devices (for example, applications, functionality, and access)

Support and use OMES' or third-party supplier's unified endpoint management or mobile device management tool to manage mobility devices. For example:

- Device adds
- User account modifications
- New user account setup
- Operating system and application distribution
- Network connectivity
- Configuration settings
- Security settings
- Data distribution
- Patching
- Device removal
- Configure user authentication and access controls to enforce standard device security, authentication, and encryption

Image Management

Image Management includes building, updating and maintaining approved images. Building an image is the process of designing and developing images for the desktop, laptop, and tablet environment. Image updates are performed, as a standard, on a quarterly basis. The images that are released into the computing environment are stored in a secure image repository. The

image repository details the history of changes for the State and includes the details of each image, the specific configuration for which it is applicable.

The desktop engineering team operating system image service, includes the development of the image and establishment of deployment methods, including zero-touch system deployment, network or pre-installation environment boot and by interfacing with the NTT DATA desktop support team and OMES engineers. Image Management is designed to simplify the complexities of software image development, validation, deployment, and maintenance. This service component will allow the State to achieve platform stability and consistency while allowing the flexibility to meet specific agency requirements.

NTT DATA's desktop engineering team will create new custom images supporting multiple desktops for the State's functional needs. Images include applications, operating systems, service packs, system software and hardware drivers. Additionally, the NTT DATA desktop engineering team can support Apple MAC OS images. A standard desktop/laptop/tablet operating system image includes the operating system, and key security software products (as required and made available by the OMES) such as firewall, anti-virus, other malware detection software and security patches/updates available at the time of the image build. It also includes essential device drivers and other facilitating software to help ensure hardware and software compatibility and is layering of required software applications.

Images are created using industry-standard toolsets, to ensure maximum portability and compliance with diverse deployment tools. Once an initial image is constructed, it is updated or refreshed periodically (using an agreed update schedule) to ensure that applicable security updates and critical software are included.

The introduction of new hardware and software standards into the production environment requires careful testing and acceptance. This is done so that the build environment meets the needs of the client and assists in the management of the State's user expectations.

Hardware Model Integration. The NTT DATA desktop engineering team will regularly review the driver requirements for each supported model so the right drivers are included in the image to support OMES hardware without adding unnecessary driver files that tend to inflate its size.

Each time OMES certifies a new hardware model for employee purchase, a hardware model integration task request is created to modify the collection of drivers included in the operating system image deployment. NTT DATA will use configuration center deployment buffer stock for image build, and hands-on compatibility testing, where the desktop engineering team confirms no device-related errors or conflicts exist when the image is installed.

Patch Management

Patch Management function delivers all activities related to planning, scheduling and controlling the test and production deployment of updates and security updates to remediate vulnerabilities within the environment while protecting the integrity of existing services.

Although patch management was not specifically called out in the RFP requirements NTT DATA believes this is a critical element to device management. NTT DATA has included patch management for all managed devices as a part of this proposal. As part of this service, critical patches that mitigate identified security risks would take priority and will be expeditiously deployed. Although patching is critical, the application of patches to the production environment requires deliberate controls and approvals. NTT DATA will work with OMES during the Transition Phase to define a process that meets this important risk control while keeping the process swift to reduce risks. NTT DATA views patches in three distinct categories:

Mass deployment which is any deployment that is affecting a large number of users regardless of the method adopted to deploy the software (mandatory or optional).

In-band patches which are pre-established periodic release of patches and updates by third party application software vendors.

Out-of-band updates are security updates that address zero-day vulnerability and might require application as soon as possible.

In providing patch management services, we also will adhere to the following best practices

- Apply all Microsoft security patches and all critical Adobe and Java patches.
- Design and document a process for security updates, then seek the approval of the OMES/ IT leadership to execute it. This new process will consolidate all existing patch management processes into an overarching process supported by standardized documentation, steps, and phases across all applicable organizations and agencies.
- Define and test a rollback plan for each patch set we deploy.
- Strictly adhere to the change and release management process, including reviews and approval gates, required inputs, and outputs.

Figure 24 illustrates the patch management lifecycle and the services that are part of our solution. As part of this lifecycle, we will:

- Create and define patch management policies
- Tailor NTT DATA's standard patch management process to the State and communicate relevant aspects of the process
- Create baseline patch health reports to identify missing critical patches before NTT DATA assumes responsibility for service
- Update the patch catalog
- Coordinate and schedule patch distribution
- Monitor and report on patch distribution
- Present and report on rejected patches and patch deployment metrics
- Troubleshoot and remediate failed and problematic patches, rolling them back if necessary

In working with security patches, NTT DATA classifies patches into one of three categories: notice, advisory, or critical. Critical patches typically address identified security risks and will take priority. We will expeditiously deploy patches in this category by obtaining (if required) an out-of-band approval from the State's change advisory board and by using an accelerated test and deployment methodology.



Figure 24. Proper patch management reduces the number of incidents, improves application performance and uptime, and reduces security risk.

Our patching process integrates with the ITIL processes that will govern all other service towers and services. **Figure 25** illustrates our ITIL-driven patch management process.

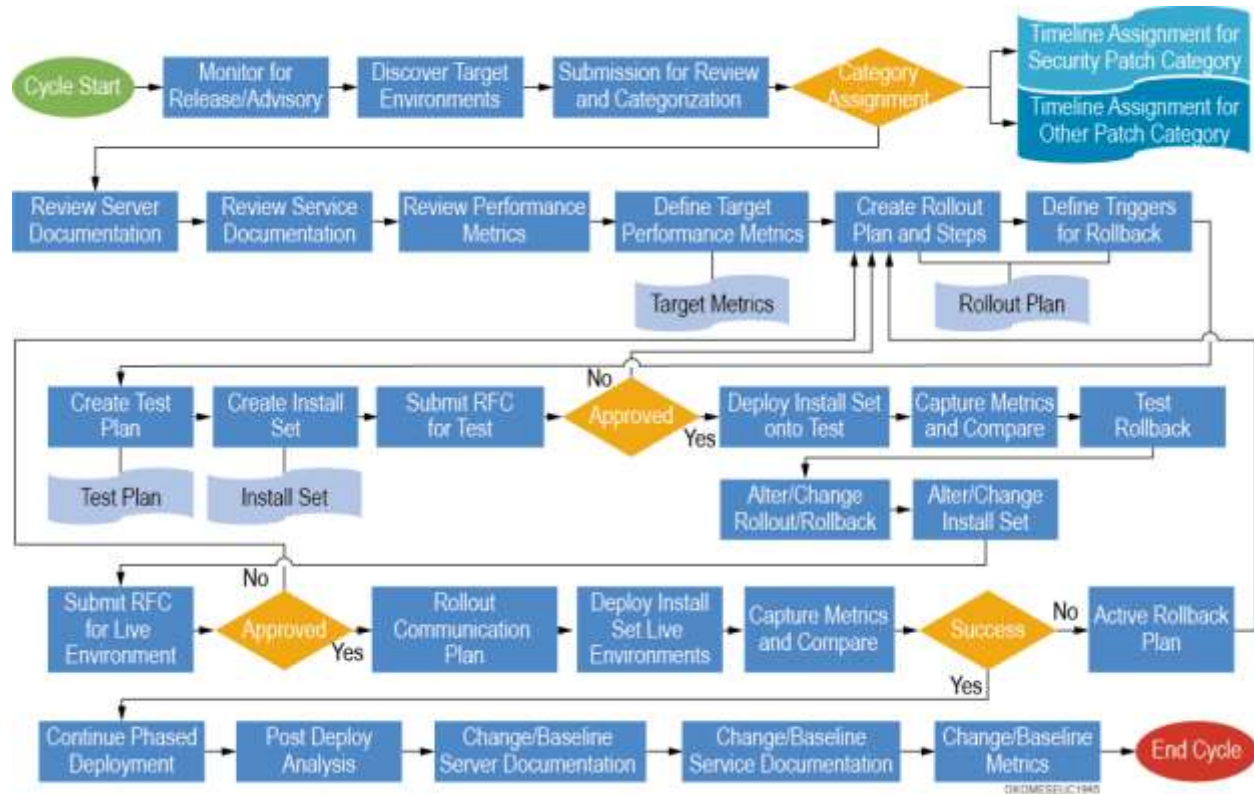


Figure 25. Patch Management Process.

C.8.1 System and Software Configuration

NTT DATA has experience with both traditional management using configuration manager in conjunction with Active Directory Group Policy Objects (GPO) as well as the more modern approach utilizing Microsoft Intune and Configuration Service Providers (CSP). Microsoft has gone to great lengths to make sure the two policy engines can coexist peacefully and even provides a CSP setting called ControlPolicyConflict\MDMWinsOverGP, where the preference of which policy wins can be controlled. While there are new advancements with Intune almost monthly and it is ideal for mobile platforms such as phone and tablets, there is still significantly more policies and granularity available in traditional GPO's for a Windows 10 PC. NTT DATA recommends a hybrid solution using both GPOs and CSPs to get the best of both worlds and allow for a smoother transition to modern management.

C.8.2 Software Inventory

NTT DATA understands the requirements that the State requires for inventory of software on each managed device including any associated metadata. This will be achieved through a discovery process using the Microsoft System Center agent being pulled by the Flexera Flexnet asset system. The discovery is intended to operate within the confines of the State network or to any internet attached State assigned device that is within scope. If SCCM is not currently enabled to manage internet-based devices, NTT DATA will offer the engineering recommendations to accomplish this change.

Flexera will gather both hardware and software assets and insert these assets into the respective hardware asset management (HAM) and software asset management (SAM) AMDB components. After software assets are pulled into the SAM database, we will make use of upper layer applications (e.g., software license compliance) within the Flexera product to manage licenses. This will be offered in greater detail in the asset management section of this response (**Section C.11**).

Asset metadata will then be pulled into our DSO for adjudication and staging before additional process steps are taken. The asset cleansing function of DSO operates in two respects; first a bot within DSO will attempt to auto-adjudicate configuration item data (e.g. asset components) and if it is able, using its proven logic, then the asset will stand as DSO sees the landscape. If DSO cannot auto-adjudicate the assets because it senses an unresolvable conflict in the data, it will send the conflict information to one of the asset managers assigned to this engagement and the asset conflict will be researched and corrected in DSO.

In the final step, DSO will copy the corrected asset configuration item information to Cherwell's CMDB. This process and its associated automation will ensure asset information is collected.

C.8.3 Software Deployment

Deployment management is the support and maintenance of the distribution engine for app packages, patches, or any other configuration changes to an endpoint such as registry modifications or file placement. Microsoft Configuration Manager is the tool that NTT DATA would employ to manage software distribution with an ultimate goal of using modern management for the deployment of applications, where application compatibility and device readiness permits. As the environment and compatibility of applications permits, NTT DATA would recommend utilizing the line-of-business application mechanism to deliver remote deployment of software packages to .msi, .appx, .appxbundle, .msix, and msibundle capable applications. The digital COE team would work closely with State architects to guide both compatibility verification and recommend the appropriate time to shift the deployment method to the Windows 10 supported application distribution methods. NTT DATA understands the State wishes to retain application packaging responsibility. NTT DATA will work with the State to assist with the architecture for packaging and distribution and provide a service to package applications when the State requires assistance with this duty.

C.8.4 Device Status/Health

NTT DATA has included a role for a Workplace Analytics Coordinator, who will be responsible for the dashboards, analytics, and reporting. NTT DATA will provide regular device status/health reports (including OS versions, update compliance, and firmware/BIOS versions along with device security information including disk encryption status and user logins) using native functionality and existing OMES investments. Although not required, if the State is investing in Azure Analytics, NTT DATA recommends the recently released Device Health features from Microsoft. Device Health is the newest Windows Analytics solution that complements the existing upgrade readiness and update compliance solutions. Device Health is a solution built in Azure Portal, a cloud-based monitoring and automation service that has a flexible servicing subscription based on data usage and retention. This release is free for customers to try and will not incur charges on the Azure Portal workspace for its use. Use of Windows Analytics Device Health requires one of the following licenses:

- Windows 10 Enterprise or Windows 10 Education per-device with active Software Assurance

- Windows 10 Enterprise E3 or E5 per-device or per-user subscription (including Microsoft 365 F1, E3, or E5)
- Windows 10 Education A3 or A5 (including Microsoft 365 Education A3 or A5)
- Windows VDA E3 or E5 per-device or per-user subscription

If the State wishes to have a more granular view of the end-user landscape, NTT DATA can submit optional analytics services in the following areas of specialty:

Optional Services: We can provide separate pricing for an optional service called *End User Analytics-as-a-Service*. This service includes a monitoring agent for end-user devices, as well as analytics and reporting experts to enable the following outcomes:

- Trends and problem areas related to User Experience (UX) scores
- Device stability, capacity, and suitability
- Personas and holistic UX design
- Advanced troubleshooting tools for agents

C.8.5 Conditional Access

NTT DATA will support the existing conditional access policies of the State of Oklahoma in any way we can. For example: including additional files, certificates, registry settings or other agents/tools in the Windows OS image or deploying encryption so it can be verified by the Azure policy during authentication. We understand this may also entail our own staff interacting with the policies such as requiring additional multi-factor authentication for accounts with administrative privileges. Whatever requirements are needed to support the conditional access capability we are willing to fulfil.

C.9 Support

For the State of Oklahoma, our approach to managing and optimizing end-user device environment services will be centered on a tiered, ITIL-based support model that maps NTT DATA capabilities to OMES requirements. It includes:

- L1 and L1.5 service desk personnel for triage and rapid problem resolution
- L2 and L3 field service technicians for remote resolution and to be dispatched to agency locations when needed.
- L2, and L3 engineering personnel who will perform imaging, packaging, and patching services, and related resolver activities.
- L2 deployment services to manage ready spares, image new devices and deliver new and replacement devices to agency employees
- L2 and L3 to perform advanced hardware and software asset management
- L3+ Digital Workplace COE will provide currency and automation services in relation to the digital workplace and support workflows.

NTT DATA's ITIL-based processes will enable us to accurately map our standard services to State underlying business requirements and KPIs. For the State, this support structure will:

- Provide rapid solutions to customer needs
- Maximize automation and standardization

- Reduce service disruption when personnel changes occur (when compared to single-tier support models)
- Establish a SME function as the ultimate escalation level. This will reduce the number of escalations to OEMs

Service Desk

Support begins with the service desk. NTT DATA Teammate Dell's service desk offering provides OMES an integrated, outcome-driven, transformative solution designed to meet current and future business objectives while mitigating current risks. Our service desk is delivered from Oklahoma City and is supported by reliable failover to Nashville in the event of an emergency, leveraging resources using a shared service model, a central knowledge base, and central toolsets.

Our platform-agnostic L1 support team will follow defined process documents in completing tasks for the State. Our engineering team will create standard operating procedures for these L1 team members to follow, customizing NTT DATA's standard templates to meet the State's specific requirements. All services will be wrapped in our service management governance wrapper to ensure adherence to our strict ITIL processes and to provide a framework for continuous improvement. In the pages ahead, we will provide additional detail on the services to be delivered by our service desk and L1, L2, and L3 workplace services teams.

NTT DATA will provide services resources at both the Oklahoma City and Tulsa campuses, which will float between performing deskside support and support in the OMES Configuration Centers. These resources will be responsible for managing inventory as well as incident and requests management. At the Oklahoma City, Tulsa, Enid, Lawton, Suphur and McAlester campuses, we will manage the OMES whole unit spares and spare parts (bench stock) and leverage this inventory to perform same-day incident repair.

Device Support

NTT DATA's field services technicians will receive incident, requests from the ITSM system, DSO workflow, dispatch or warm transfer from the service desk. As service requests are received, NTT DATA field services technicians will respond to each based on its assigned priority/severity. Naturally, VIP support requests and critical incidents will take priority over other support requests and will be attended to immediately.

Level 2 (L2) Remote Resolvers

With the exception of VIP requests, which will receive an immediate contact from a skilled technician, incidents will be examined by a L2 remote resolver team. The L2 remote resolvers are highly skilled device support technicians equipped with both the knowledge and tools to effect repairs remotely with the exception of failed hardware. These technicians will contact the end user and use chat, voice contact and remote-control technologies to conduct a speedy resolution to the end user's needs.

NTT DATA is employing the L2 remote resolver service to both provide a speedy resolution to end users as well as to reduce the high cost and delays of sending a technician to the desk side.

NTT DATA field services technicians, in the normal course of ticket management and dispatch will respond to desk side requests and incidents with the express intent of resolving the incident within the service levels specified by OMES. Specifically, they will attempt to repair the issue and if they cannot resolve it the technician will provide a whole unit exchange or a loaner device while the original system is being repaired or serviced under warranty by the OEM.

These services will be provided for device assets in three categories: (1) devices delivered by NTT DATA under the scope of the Device as a Service, (2) devices leased by the state prior to this agreement, and (3) devices purchased by the State prior to this agreement. NTT DATA will attempt to correct issues with devices that have expired warranties on a best effort basis, and we assume that OMES will make repair parts available to NTT DATA or will purchase extended warranty support.

For end users that have elected the management option, NTT DATA will provide full services, including repair, MAC, PC installed operating system and software support, full asset management, software updates, patching, and loaner services.

End users that did not select the management option will receive service desk, warranty service, and refresh support.

Onsite and Virtual Support Campus

NTT DATA's approach is to use big campus locations as the sub-regional hub (virtual campus) for field support engineers/dispatch engineers with dedicated SMEs and leaders within that sub-regional hub. The sub-regional, culturally aligned leadership support to campus locations ensures better customer satisfaction and end-user experience. All tickets to campus/virtual campus engineers get assigned by the NTT DATA remote dispatch/coordination support desk or customer service desk.

NTT DATA's solution provides a blended cost-effective model that will employ both dedicated resources for the campus and just-in-time dispatch-based support for remote/home office-based employees. NTT DATA's solution also includes support for deskside support (DSS) events not related directly to a hardware failure. NTT DATA understands that certain events will drive the need for deskside help to complete tasks such as network drive or printer mapping, software installation (though much of this may be via remote control), re-imaging support for issues that cannot be identified by the service desk, or general "how to" issues.

Deskside Software Support

Utilizing OMES's remote control Infrastructure, the L2 technician will attempt to resolve the ticket via remote control prior to dispatching deskside resources. This is the least costly method of resolution, and NTT DATA's solution will maximize this capability. However, NTT DATA's proposal includes deskside support, where necessary. Technicians are dispatched as tickets are assigned to their ticket queue within the case management tool.

NTT DATA's field service technicians are made proficient at the deskside through training, processes, and tools. Deskside support and break/fix technicians receive NTT DATA DCSE certification training in addition to training on installation and support of standard desktop operating system and common commercial software applications. NTT DATA also works with our customers to obtain desktop configuration, hardware and software standards, and environmental information and processes that are specific to the environment. This documentation is used to train the field service technicians on the supported environment and to make them proficient at resolving issues specific to the customer's environment.

VIP and Critical System Support

NTT DATA acknowledges the need to provide for the immediate needs of VIP users and systems deemed critical to the business functions. NTT DATA will provide named support staff to facilitate the highest level of support. The most seasoned engineers will be assigned to the campus sites and will have access to both parts and whole unit spares to guarantee the restoration of functionality within the defined service levels. Incidents for VIP users will have a higher incident priority than incidents from the general user population.

VIP support for executives and critical business users and/or devices is typically accomplished via a whole unit spare or parts, to immediately restore service. For whole unit spare replacement, NTT DATA will complete the repair of the exchanged unit "offline" using onsite or dispatched parts. In order for VIP user support to be effective in the event of a hard drive failure, the system must have user data mirrored to a shared location or securely stored on a network drive.

Self-Service

Our NTT DATA experience enabling users in self-service and self-resolution increased user satisfaction and improved productivity. Our experience shows 10% reduction in incidents can be reached year over year (YoY) by moving responsibility from the desk to the user. To facilitate this for OMES, we analyze OMES data, and factor into cost estimates, the number of incidents and requests that might be handled by a self-service portal, and an estimated adoption rate of that capability.

The reduction in tickets is dependent on end users adopting self-help which NTT DATA, Dell, and OMES will use organizational change management (OCM) to encourage throughout the service lifetime. This requires compelling OMES sponsorship and end user encouragement to use self-help first, instead of raising a call to the service desk.

Our long term goal is to dramatically increase remediation at the L1 service desks and to realize adoption of Level 0(L0) self-service functions leading to cost reductions. Self-service activities are facilitated through self-help tools, the application center in SCCM or other sources like proprietary scripts. We assume that OMES's service desk currently uses these tools and will continue to provide NTT DATA and Dell with access to them.

Provider Responsibilities

- Provide a 24x7x365 single point of contact, global support model and an end-to-end management of IT related service desk services for OMES and/or OMES's affiliates and subsidiaries.
- Receive, diagnose, route, and track all service desk contacts from receipt to resolution.
- Determine end user "management" entitlement and provide best-effort support and warranty dispatch for end users that are not subscribed to device management.
- Deliver support in English utilizing service desk agents based in Oklahoma City
- Ensure resources will have the appropriate customer facing skills and technical knowledge required to provide the services.
- Provide personnel that can deliver the services while reading, writing, and speaking with fluency.
- Continually define and refine activities to maximize efficiency and effectiveness of the services whilst optimizing the service costs and the ITSM processes for service improvement.
- Use OMES's method of distribution to broadcast messages provided by OMES to end users.
- Notify OMES of planned and/or unplanned outages, along with any other issues occurring within OMES's information technology environment.
- Warm transfer of critical, high priority and VIP Incidents to the appropriate support group.

- Disseminate page-outs to the appropriate on-call support team(s) to join the technical bridge to resolve critical or high priority incidents and interaction with the business recovery management team.
- Train service desk personnel on OMES environment, new or current products, services, and issues that are implemented or arise within OMES's information technology environment.
- Ensure NTT DATA SMEs have focused knowledge on OMES's strategic business groups ("SBGs") subject to such information being made available to NTT DATA and Dell by OMES.
- Support and participate in the following processes that will be owned and administered by OMES:
 - Knowledge Management and Self-Help
 - Escalation Management
 - Problem Management
 - Complaint Management
 - Change Management
 - Incident Management
 - Request Management
 - Identity and Access Management
- Support activities as required (and within the scope of service desk tasks) by OMES to facilitate the addition and or removal of new or existing end users into OMES's environment.
- Report on service desk statistics and trends as specified in OMES's Procedures Guide (e.g. service request volumes and trends by types of end users).
- Report on trends of incidents and service requests indicating a need for end user training, development of documentation, changes in procedures and other CSI initiatives.
- Customer satisfaction monitoring.
- Use the processes in OMES's Operational Procedures Manual (OPM) related to end user satisfaction survey requirements.
- Generate reports that track and trend customer satisfaction.
- Analyze data and provide input to the CSI program.

OMES Responsibilities

- Provide and update end user (people) data from a validated customer source such as OMES's HR system.
- Provide incident management following OMES's defined processes and procedures to be followed by the service desk agents.
- Provide automated password reset tool.
- Provide remote take-over tool.
- Add or remove OMES end users (due to planned growth, departing employees or the temporary addition of contractors) to OMES's support environment and configuring end use information in the ITSM system so that the service desk can support them.

- Manage the integration or divestment of OMES end users into NTT DATA's service desk and comply with OMES security policy.
- Major incident management.

Optimize the Resolution Point

NTT DATA's solution incorporates and advocates an approach to continually optimize the support service by enhancing end user incident resolution speeds, promoting end user self-help and continually reducing the overall costs of service. In practice, it implements self-help as a new support level L0 Based on our experience, the higher the escalation level (Level 0 to Level 3) the slower and more expensive the service.

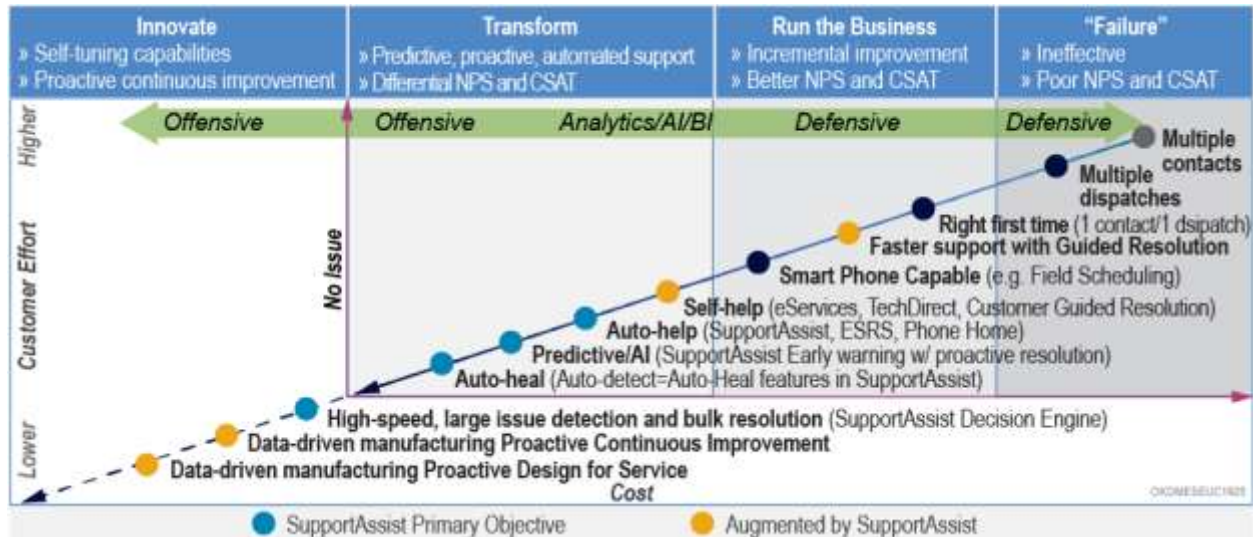


Figure 26. Service Desk Transformation

NTT DATA Teammate Dell transforms labor-centric events to low-cost tool and process-centric events through strategy which:

- Moves fewer complex calls to L0, yielding lower contact volume, and allowing service desk agents to focus on more complex calls.
- Moves calls that may have been previously supported by a resolver group L2 to the service desk L1 and engaging across resolver groups with an end-to-end lifecycle optimization process.

The benefits of optimization are described in **Figure 27** below.

Figure 27: Features and Benefits of Resolution Optimization

Resolution Optimization Features	Benefits to OMES
Moving to Resolution Optimization	• Standardize the end-user environment • Work with resolver groups to increase knowledgebase articles • Self-help • Remote control and resolution • Leverage ITSM data for ticket routing, trend assessment, and top contact drivers • Password reset automation • Increase ITSM data capture

Benefits of Optimization	• Quality: increase in customer satisfaction and improve end-user experience • Cost: increase in end-user productivity and reduce desk side visits • Cycle Time: increase in first contact resolution (FCR) • Throughput: reduce and eliminate contact volumes with proactive support (CSI)

With NTT DATA's approach the closer the incident resolution gets to L0, the more the service is optimized and standardized. This provides a rich and rapid end-user experience and reduced cost footprint. We expect this to be the case for OMES and have factored the benefits of optimizing the resolution path into our pricing.

C.9.1 Work Order/Trouble Ticketing System/Process

NTT DATA will provide hours of operations in alignment with OMES's requirements. Our service desk agents will use OMES's Cherwell ITSM instance, and will allow new service incidents and requests to be received, escalated and updated from customer's own ITSM instance.

At NTT DATA, ESM is the "glue" that ties our delivery processes and people using a best-in-class toolset and is built on the three fundamental components: processes, people, and technology, as seen in **Figure 28**.

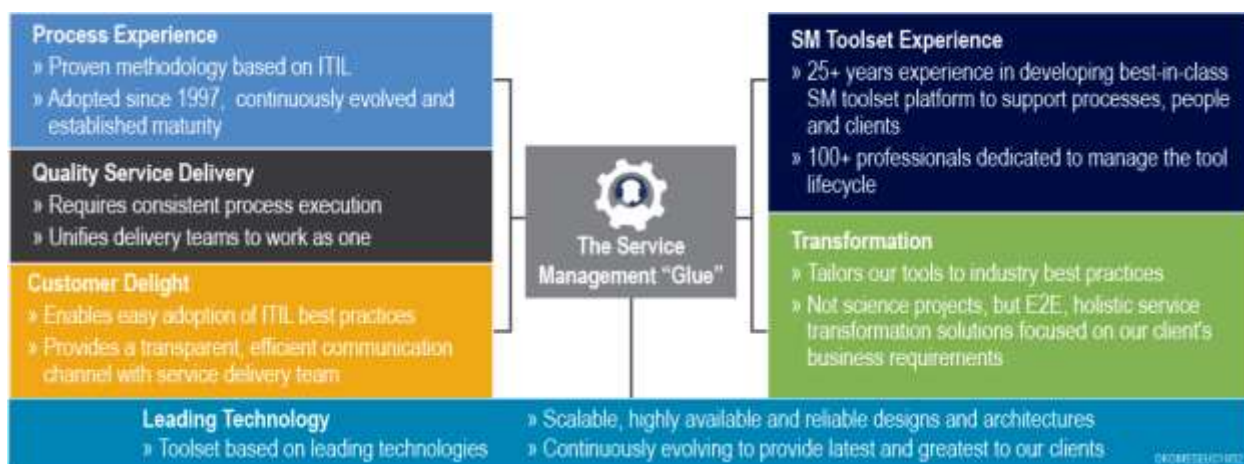


Figure 28. NTT DATA's Enterprise Service Management

Behind the scenes, there are six component parts that enable us to successfully coordinate our clients' business functions. This "glue" is a differentiator that makes NTT DATA a service client, not just an IT vendor.

Our ESM delivers high-quality, efficient, and reliable IT services by adopting ITIL best practices and adapting them to create effective operational procedures and processes. ESM further merges ITIL proven practices and processes with enabling technologies to automate and integrate them to deliver the most cost-effective IT services available. The result is an ESM architecture is proven by more than 20 years of working with diverse clients to:

- Control the reliability and predictability of IT services to support critical business initiatives
- Provide continual improvement to processes and systems to achieve service levels set to the business needs
- Leverage the right resources to reduce cost
- Accurately measure performance against service level objectives to meet expectations

NTT DATA understands that effective service management is critical to our client-provider support to offer services aligned with the business. Our ESM determines how we:

- Interact with users and systems
- Resolve service issues
- Measure results
- Provide reliability and validate that IT services are delivered in alignment with agreed service levels

In line with ITIL v3 best practices, NTT DATA service SMEs establish governance over the service teams, support the quality of IT services, maintain standard operational processes, and provide metrics and operational reports for managing SLAs.

NTT DATA will implement ESM for the State of Oklahoma using fully integrated, ITILv3 based services and processes, in concert with the Cherwell ITSM environment and our enabling tools, to facilitate incident, service request, and problem management services and reporting for all in-scope managed IT service offerings.

Shift Left for Faster Resolution. To improve operational efficiency for the State, we will shift requests and incidents to the left when feasible. "Shift left" refers to the practice of moving the resolution of requests and incidents from dispatched technicians toward remote and automated resolution methods. As depicted in **Figure 29**, these requests may be directed to a manual resolution, a self-service option, or automated support. We will accomplish this through process improvements, automation, and better use of information.

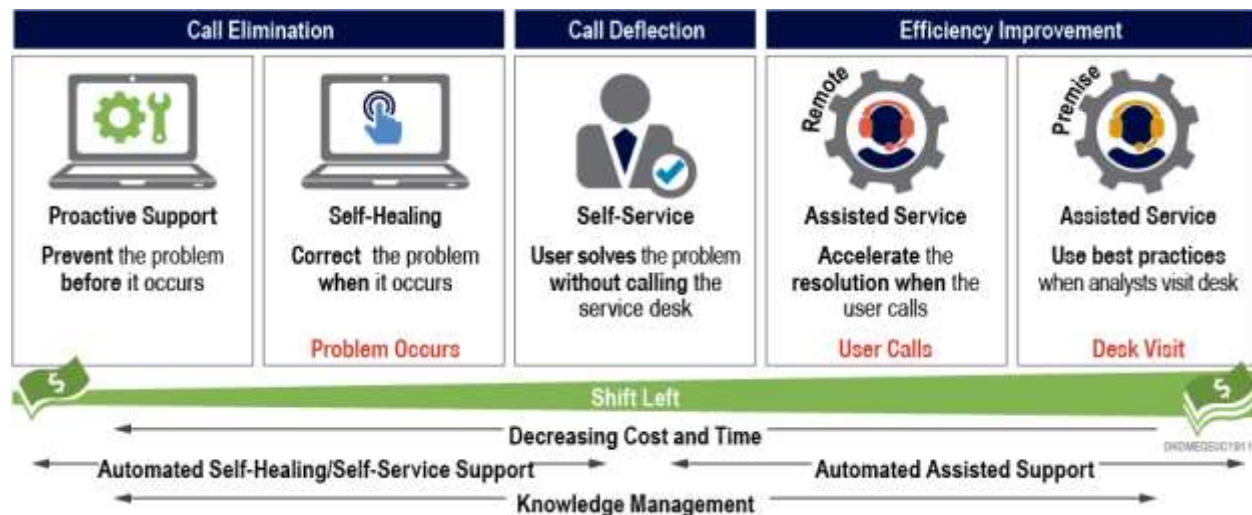


Figure 29. The shift-left approach is part of Dynamic Workplace solution and is used to increase servicing efficiency.

NTT DATA uses:

- Effective use and distribution of resources, e.g. allocation of resources across service hours to deal with peaks and troughs in call volumes.
- Efficient and effective tooling that streamline the process of dealing with end user requests.
- Staff training which enhances the ability of all service personnel to quickly deal with incidents and service requests.

Figure 30 shows an overview of our service desk operating model.

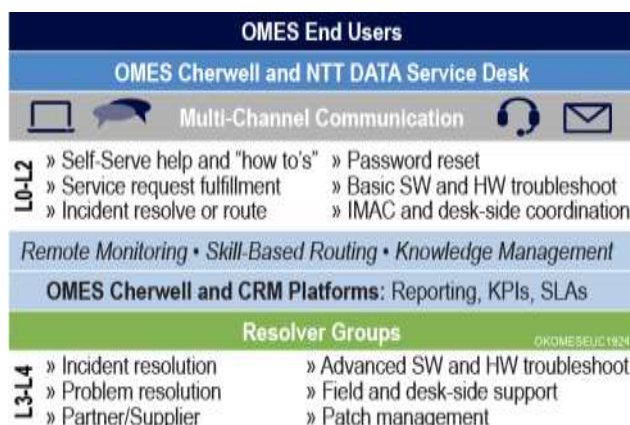


Figure 30: Service Desk Operating Model

C.9.2 Availability of Key Personnel During Normal Business Hours

NTT DATA and its partners are providing account dedicated resources in the areas of service desk, configuration center, field services, account leadership, COE and service management. These resources will work from our two facilities or will be stationed in one of five metro areas in Oklahoma. The resources listed will be available to solely serve the needs of OMES and the State. With the exception of several off-shift service desk agents, all resources (including all key personnel) will have standard working hours aligned to the required normal business hours and will be local to the state of Oklahoma.

C.9.3 Providing 24x7 Support

NTT DATA will provide 24x7x365 support for all in-scope devices and their associated end users. The service desk offering in this proposal operates 24x7x365. If a call requires escalation to a L2 technician during business hours, a Cherwell ticket assignment will be made to the appropriate assignee group via L2 remote resolver, field services or warranty services as appropriate.

Calls received after hours will be attended by the service desk with L1 and L1.5 resources and if escalated will be placed in a resolver ticket queue for action.

VIP calls received after hours will be attended to by the L1 and 1.5 technicians at the service desk and will be dispatched, if necessary, to an on-call L2 resource for resolution.

C.9.4 Communications Strategy

NTT DATA views client communications as a vital component of the service transaction. We believe that many escalations can be avoided through proper and timely communications. In fact, many escalations can be eliminated if the customer receives status updates and feels in some control of the service experience. Regardless of the service being delivered, at NTT DATA communications are mandatory. Communications requirements are woven into our processes and procedures and are coached by our delivery managers and the Client Delivery Executive.

During transition, key stakeholders will be identified as points of contact in the event of disruptions to normal business operations. Additionally, to facilitate the flow of communication between leadership teams, we will provide a website which includes a listing of personnel on the NTT DATA account team and their contact information.

Some communications may be electronically delivered unsolicited communications. For example, if an issue is resolved for an end user, they may receive an email confirmation of the resolution and the ITSM ticket number in case they need to reopen the incident or request. In other cases, the communication will be deliberate and via a channel that can facilitate a two-way dialog. This type of communication may be used when a schedule is slipping, when the resolver wants to inform the end user of the status of their issue or establish a schedule for service. Regardless of the situation, communications are mandatory.

C.9.5 Trouble Ticket Classification, Prioritization, Assignment, Escalation, Tracking, Quality, and Notification

Classification, Prioritization, Assignment, Escalation, Tracking, and Communication:

Service desk agents will provide expert and advanced L1 support and L1.5 remote resolution of incidents.

Figure 31. High-level Service Desk Services

Operations Function	Description
Single Point of Contact (SPOC)	NTT DATA's service desk subcontractor, Dell provides a SPOC for IT issues. NTT DATA owns the OMES experience and focuses on first call resolution and end-to-end efficiency. NTT DATA will deliver a lower resolution time and act as a custodian across the OMES IT environment to ensure superior end-to-end user experience. OMES end users can engage the service desk via phone, web, chat, or self-service portal.
Level 1 Remote Support	- L1 support includes basic how-to information, password resets, IMAC coordination, end user communication, monitoring of dispatches, support for OS issues and applications, and remote hardware troubleshooting. A detailed list of service desk resolvable incident types and a description of L1 support will be established at the time of transition. The list will be revised as-needed, on an on-going basis, in consultation with OMES. - On receiving and logging an incident in the service desk incident system, service desk agents gather additional information about the end user's incident and will attempt to troubleshoot and resolve incidents following appropriate training and scripts. - The service desk will attempt to resolve L1 incidents and fulfill service requests across all technologies via a two-stage process: - First (triage), our service desk agents respond to and logs the basic information related to each incident or request, following standard ITIL incident management and request management principles for the initial stage of capture (login, categorization, and prioritization). This information will be captured in the State's Cherwell ITSM system. - Second (resolution), provides the technical services necessary to resolve the issues with known incident models, or the fulfillment of service requests which have identified workflows and approvals. - The agent documents the steps taken to resolve and assigns the ticket to the resolver group (Cherwell) if unable to resolve it at the desk. The agent communicates with the end user about status, updates the status of the ticket, and monitors the ticket until closure. - NTT DATA surveys end users after each incident is closed to determine satisfaction of service desk experience and ask for feedback on agents and the process. - The service desk makes call-backs to any dissatisfied end users to instigate a root cause analysis, determine resolver issues, outage and IT

Operations Function	Description
	issues, process issues, and tools and technology issues. This information is then fed back to the CSI teams. Service desk offers accelerated treatment of tickets for certain user types or profiles and will work across functions such as remote, field services, multi-vendor, OMES SMEs and other resolver groups to proactively gain the knowledge and skills required to increase first time contact resolution.
Support Escalation	Any task that cannot be performed by the service desk will be assigned to the appropriate resolver group or third-party support vendor. When required, a L1 front agent will escalate the ticket to a more experienced agent within L1, to a L2 field service engineer, if onsite support is required, or to another resolution support group. For those issues requiring support beyond L1 or L2, NTT DATA will electronically route each support request back to the appropriately assigned support team. This could be NTT DATA, OMES, or a third-party supplier. The NTT DATA service desk will apply case management discipline to every incident, including logging, routing, follow-up, and closure.

Although we have generally described the process above, a detailed procedure will be created in conjunction with the existing service desk and with the oversight of OMES so that the standard OMES process is followed and improved upon. This activity will occur during the Transition Phase of this engagement. During the Initiation and Planning Phase of Service Desk Transition, the transition managers will review the existing ITSM tool configuration to understand how ticket classification occurs. Based on the findings and best practices, a recommendation will be made to either continue using the existing classification process or introduce modifications to it via change control. The transition managers will also conduct an in-depth, due diligence and discovery exercise to review the existing data, tools, and processes. Ticket prioritization will be a part of this exercise.

Quality through CSI and Value Engineering

The service desk finds and implements process improvements. To increase effectiveness and lower cost, NTT DATA realigns services as business needs change. The service desk operates a single standard approach to CSI. The CSI process is an ITIL-based blueprint used by service management to identify and place service enhancements. NTT DATA brings best practices from our experience with other customers and personalize it for OMES.



Figure 32. CSI is a Core Tenet of ITIL

NTT DATA's CSI programs are metric driven to measure benefits and results. Our organization audits our managed services accounts as part of our quality program. These audits assess delivery processes against ITIL-based standards. NTT DATA then makes specific recommendations to enhance processes for efficiency.

Examples of CSI processes:

- Identify opportunities to reduce incoming incident volumes (e.g. via effective and optimized change management and problem processes). This helps not just the service desk, but all IT support groups.
- Identify opportunities to automate part or all aspects of high-volume service request types (e.g. password resets or desktop software installs).
- Consider other opportunities to reduce inbound calls, such as: effective usage of interactive voice response (IVR) messages and online noticeboards to head off calls about known outages; creation and promotion of FAQs and self-help tools and documentation.
- Identify other tasks the service desk currently fulfills and whether they should be doing these tasks.
 - Identify the impact of walk-ups to the service desk, or remote outposts (e.g., walk-up desks). Determine whether the organization is prepared to bear the cost, due to other benefits to the business, of these remote outposts.
- Consider the cost/benefit of attracting higher skilled staff into service desk positions than what is currently done.
- Provide business analytics and communication of environmental trends and gain advantages from process improvements, efficiencies, and enhancements to the service desk function. Some of the activities associated with these objectives include:
 - Follow-up on open tickets with all resolvers
 - Create forums across the resolver groups to ensure maximum productivity and improve a better end user experience
 - Leverage the data-rich environment of OMES's end user interactions and drive insightful improvement to the overall IT environment processes

NTT DATA's collaborative CSI model extends to both OMES and partner environments. We implement methods to develop, prioritize, and place CSI plans with support and input from all parties. In the NTT DATA CSI model, accountability for delivery of service improvements rests with the Client Delivery Executive. Each account has a service improvement resource and plan. The plan may include tactical process changes to the implementation. More improvements may include complex transformation projects like introducing new tools, innovations, and extending contracted services. Service improvement plans may include complementary work streams to measure quality of service, improve on service quality and change projects that deliver increased service quality over time. Examples of such work streams are:

- Event-based customer satisfaction surveys (CSAT) to measure the current quality of service.
- A CSI program under the control and management of a PMO that will be driven by the CSAT results.
- A business process improvement (BPI) program that complements the CSAT and CSI program, to manage the delivery of large-scale quality and service improvements, best practices and toolset changes utilizing proven methodologies.

The CSI process for OMES is transparent and results are presented in scheduled review meetings. NTT DATA will regularly report back to OMES on CSI progress and benefits as part of our commitment to CSI, and our confidence in improving services over time.

C.9.6 Service Desk Reporting

Service desk reporting is included in proposal **Section C.17**, Reporting.

C.9.7 Assistive Technology Experience

NTT DATA's experience with assistive technology and providing service to users with disabilities or accessibility needs goes back many years. For example, eight years ago, working for the Commonwealth of Massachusetts, Division of Banking, we successfully transferred an application from North Carolina that allowed a vision disabled individual to conduct a subset of operations. A blind person on the NTT DATA team tested the application. A more current example is our present work with the Department of Justice (DOJ). As a standard practice, all of our DOJ projects comply with Section 508 guidelines for accessible electronic and information technology. Our NTT DATA project teams continuously perform compliance testing throughout the life of the project, on several different platforms. For testing, we use a combination of static analysis tools and manual testing with assistive technologies. Tools include JAWS, Hi Software Compliance Sheriff, and the Web Accessibility Evaluation Toolbar.

C.10 Application Packaging

Application packaging addresses the preparation of software applications, ensuring the appropriate applications and add-on modules are appropriately bundled and readied to be deployed in the end-user computing environment. Applications are configured to install without end-user intervention to minimize human error, avoid work disruption, and take advantage of advanced deployment methods that install with elevated privileges.

Application packaging includes the following process:

Application Inventory. Working with the State, Supplier Services compiles a list of applications that are, or will be, deployed in the end user computing environment and assembles applications into logically grouped bundles according to organizational group or machine profile.

Requirements Gathering. All of the requisite information associated with each application to be packaged is gathered and logged, including patches and application add-ons, installation and un-installation instructions, license keys, test scripts, and specific configuration details.

Application Assembly. With all of the application requirements quantified and understood, the application is assembled and packaged with all of the approved patches, service packs, and application add-ons.

Quality Assurance Testing. Quality assurance testing is performed on each application package to ensure the application package functions properly, prior to its handover to the deployment team. This is done to avoid business interruptions caused by any application package failure. Once the application is successfully packaged and thoroughly tested, it is ready for distribution. Supplier Desktop Engineering can also provide support for acceptance testing, by collecting the outputs of this process and verifying they are included in the remediation package or subsequent package releases, handled as a new application package request.

During the quality assurance testing, the assigned Supplier Services Desktop Engineers will validate the successful execution of the application packaging functions focusing on performing the following validations:

- Package installation/uninstallation without errors
- Application starting and termination without error

- Correct registry file writes and modifications during the install and removal during the uninstall
- Correctly initiated of self-repair and “as-usual” startup of the application if application executable has been deleted (if applicable)

Image Management

We designed NTT DATA's image management to simplify the complexities of software image development, validation, deployment, and maintenance. This service component helps our clients achieve platform stability and consistency while allowing them the flexibility to meet their specific business requirements. Our image management service provides for the building, updating, and vaulting of approved images. Building an image is the process of designing and developing images for the desktop environment. Image updates are performed on an as-needed basis and are typically triggered by significant operating system security patches and key updates to application packages.

We store the images released into the computing environment in an image repository. The image repository is part of the software vault that details the history of changes for each client and includes the details of each image and the specific configuration for which it is applicable.

Software images are built for each related group of hardware released into the computing environment. The exact number of images required depends upon the number of hardware manufacturers and models that exist in the environment and the commonality between models. Often, a single image can be used for different models for a given manufacturer hardware line.

Software Distribution

Electronic software distribution provides the infrastructure conduit for timely distribution of packaged applications and patch updates. This service component allows for software to be prioritized and scheduled for distribution to the desktop and helps optimize the end user computing environment. A general overview of the activities associated with the software distribution delivery function are as follows:

- Administer distribution requests and validate request details are complete and approvals are gathered
- Create and manage packages, collection, and advertisements that meet the requested deployment objectives
- Track failure trends and report results
- Compare distribution metrics to updated software inventory confirming results
- Rationalize failures and perform a remote remediation

C.10.1 Application Packaging Updates

NTT DATA, through its desktop engineering and COE resources will assist OMES-ISD personnel with packaging update to software packages. NTT DATA understands that OMES-ISD retains ownership of packaging duties and will operate in a consultative role unless called upon to create packages.

C.10.2 Application Deployment Sets

NTT DATA's desktop engineering team will provide the design, implementation, of package sets in Microsoft SCCM. As Microsoft's modern management capability reaches maturity, NTT DATA's engineering team will recommend moving packages to the cloud under Microsoft's

MISX packaging format. In the interim, NTT DATA's COE engineers will consult with State engineers to determine if co-management should be adopted for application packaging.

NTT DATA will remotely deploy package sets to designated agency groups during device deployment, refresh, loaner issues and repairs that result in device replacement. NTT DATA will attempt to remotely deploy package sets based on network bandwidth and other factors that may make local installation a necessity. Automated remote deployment will be accomplished using Active Directory (AD), allowing the state to direct updates to specific users, user categories, or devices based on configurable AD groups.

C.10.3 State Ownership

NTT DATA acknowledges that the State will retain ownership of agency package construction. NTT DATA will assist, where possible to consult, test and assemble packages in deployment sets for remote and local distribution.

C.10.4 Application Management Access

In order to bring the best value and lowest risk to OMES and the State of Oklahoma, our solution assumes we leverage the existing SCCM toolsets. This strategy allows OMES to avoid the costs of additional toolsets and maximize existing investments. It also allows us to integrate quickly onto an established platform. We reviewed the capabilities associated with this approach, along with proposed future enhancements and value adds that can be achieved with SCCM. If SCCM is not the strategic objective, or if there is a gap that we are not aware of in the coverage, our solution allows us to adjust and deploy one of our proven toolsets like 1e Tachyon and complimentary products to fill the gap.

C.11 Asset Management

NTT DATA will provide complete IT Asset Management (ITAM) for in-scope devices. ITAM includes managing the lifecycle of both the hardware and any applications associated with the device and include the complete lifecycle of those components. To achieve this, we must manage hardware assets from requisition to disposal. This includes any assets that are temporarily inserted into the ecosystem or assets that are sitting in deployment or repair stocks (Section C.11).

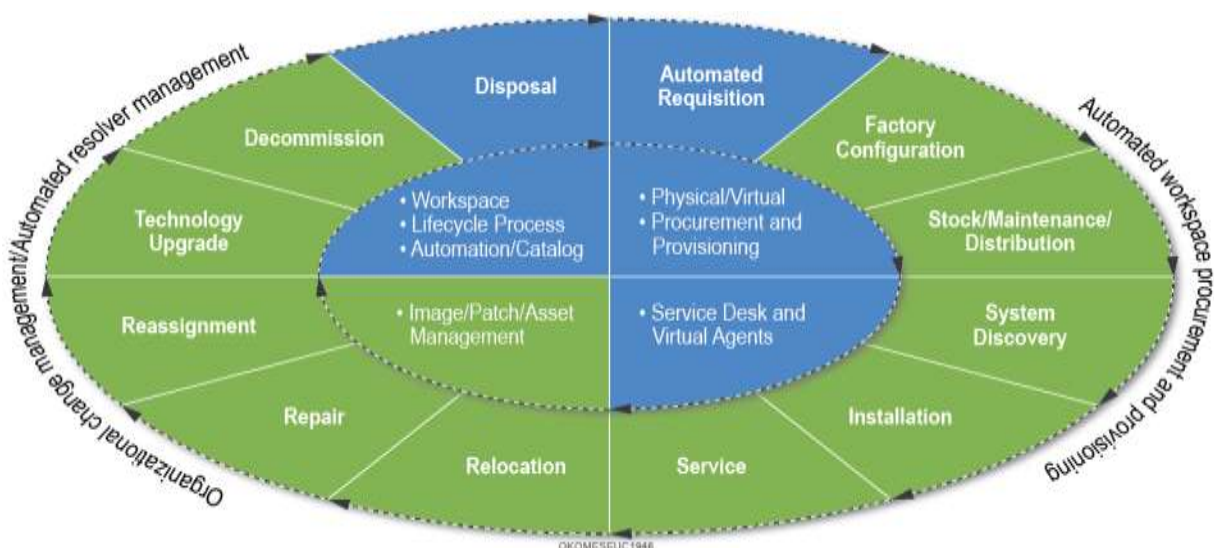


Figure 33. Asset Management Process

NTT DATA will provide an integrated asset lifecycle service as a part of this offering. Within the lifecycle continuum this section will specifically speak to hardware and software asset discovery, validation and integration to a configuration management database (CMDB). Lifecycle components such as requisition, configuration, maintenance stock, installation, service, relocation, repair reassignment, upgrade decommission, and disposal are covered in other sections of this response although this section speaks briefly to depot asset management.

To manage the asset continuum, NTT DATA will employ several automation tools to serve various aspects of asset management. These will be coupled with processes to manage the complete lifecycle. **Figure 34** shows the electronic portion of the asset ecosystem.

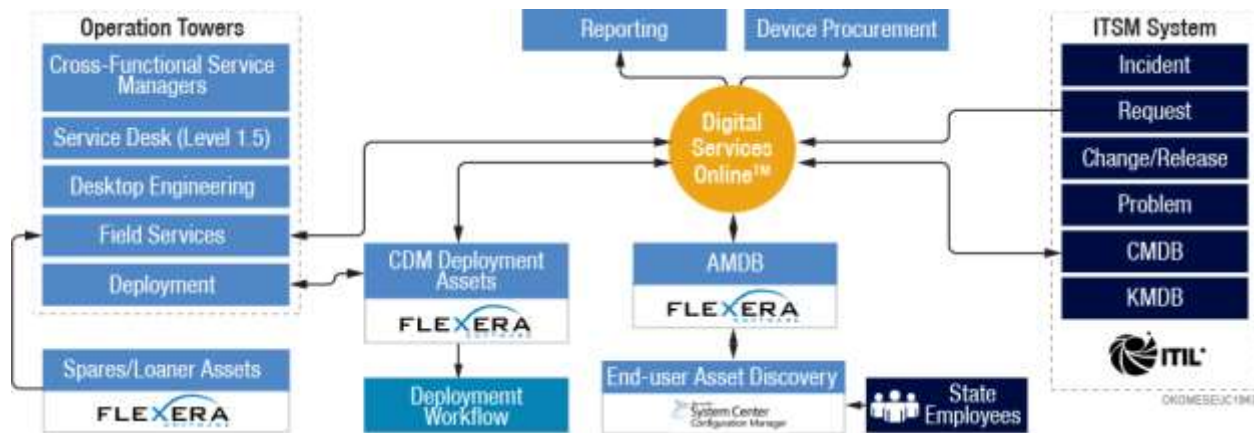


Figure 34. Asset Ecosystem Electronic Portion

NTT DATA will make use of three asset repositories: end-user assets, deployment depot assets and repair depot assets. Assets from these three pools will occasionally interchange and will be tracked as the exchanges occur but only end-user assets be electronically discovered. The asset management solution for the two respective depots will be discussed in the respective deployment services and support sections.

C.11.1 Central Storage

NTT DATA will establish a central device storage capability in the configuration center located in Oklahoma City. This device pool is sized to provide a 30-day supply buffer for the anticipated device request/refresh demands. Having a pool of this size will allow NTT DATA to deliver devices in an extremely short timeframe. Additionally, this stock will ensure that device refresh commitments are delivered as expected. We have calculated the sizing of this stock based on the anticipated order rate and technical refresh commitment of three years for each device.

NTT DATA will provide, as a part of this response, facilities that will maintain device buffer stock intended to allow for the rapid deployment and repair of State employee needs. These depot centers that will house whole unit replacement buffer stock will also carry incidental repair parts. We have placed these parts depots at strategic locations across the State to enable NTT DATA to meet its repair/replacement objectives. The locations for these depots are: Oklahoma City, Tulsa, Enid, Lawton and Sulphur. The whole unit replacement depots will be equipped with intelligent lockers to allow NTT DATA field technicians to retrieve repair exchanges and for end users, if appropriate, to retrieve loaner devices. These loaner devices can be used for the need of agencies for conference, presentations, training, etc. They can also be used as a stock of devices where one is needed faster than the standard deployment timeline or when break/fix is not feasible within 24 hours (C.6.9).



Figure 35. Intelligent Device Lockers

The intelligent locker technology provides convenience to the end user by allowing them to retrieve devices simply, using their state badges to access the appropriate locker bin to get the necessary device. These lockers are network attached and in addition to the badge open feature, NTT DATA can remotely issue a code to retrieve or deposit devices in the lockers. The locker systems are a secure and convenient device storage and transfer system, providing access to devices through NTT DATA authorization.

Devices could also be deposited where a State employee may want to drop off a device for service. The device would then be repaired and either returned directly to the end user or be placed in a locker for pickup if that method is more convenient for the end user.

Occasionally, whole unit exchange spares and deployment buffer assets may cross inventories. This may occur if a unit is returned and is then sent to whole unit spares stock or, if an unplanned commitment requires transfer of assets from one pool to another as described in the software inventory (C.8.2) section above. NTT DATA will be tracking the location and status of all parts, e.g. end user, whole unit replacement depot or configuration center buffer stock, through the Flexera asset management tool. Assets will be defined to two possible depots: Configuration Center and whole unit exchange. These assets will at some point in their lifecycle pass to an end user and back to one of these two depots. By using the two-depot concept and the statuses defined in the inventory lifecycle stages in configuration center section of this response (C.6.1) NTT DATA and its partners will always know where assets reside and their status.

C.11.2 Asset Disposition

Asset disposition will take several forms depending upon the category of the device asset. These categories can be summarized into four groups:

- 1) Assets owned by the State and not on a lease
- 2) Assets owned by the State and on a terminating lease
- 3) Assets owned by NTT DATA being refreshed or removed from inventory
- 4) Assets in categories 1,2,3 that are being returned to service within the State

Assets in categories 1 will be wiped (electronic wipe) of their data and applications and disposed of through a DoD approved asset disposal service. Pricing for this option is included in the value-added requirement response (**Section C.23**) of this response. Steps include:

- 1) Remove hard drive of legacy unit
- 2) Document all barcodes and serial numbers on hard drive and paperwork
- 3) Perform hard drive wipe process and certification at depot
- 4) Send paperwork to asset management
- 5) Document condition of legacy equipment prior to transport
- 6) Obtain sign off of equipment to be transported and condition of equipment
- 7) Remove legacy equipment from customer premises
- 8) Transport legacy equipment to OMES Warehouse/Depot
- 9) Obtain sign off for delivery of equipment to OMES Warehouse
- 10) Work with OEMs and other resell partners to recoup fair market value for assets when appropriate; these funds are returned back to OMES minus any costs

Assets in categories 2 and 3 will be electronically wiped of all data and applications and returned to either NTT DATA if the asset is an NTT DATA provided asset, or to OMES if the device was leased by OMES. Devices in this category will follow steps 2, 3, 4, 5, 6 and 7. Devices leased by OMES will also include steps 8 and 9.

Assets in category 4 will be reimaged and returned to service in the deployment or repair depots.

It is assumed that devices will not leave the state unless their data and applications have been electronically removed from the systems. We produce a certificate printout confirming data wipes to include with the certificates of destruction we will obtain from the State for the disposal of the physical device(s), while ensuring all hard drives stay in the state even though their data has been wiped.

C.11.3 Asset Disposal

NTT DATA will provide DoD approved asset disposal for all State owned/leased assets. Our approach on this account is to have centralized drop sites for State assets to provide pickup of assets and depot inventory control. NTT DATA will then conduct a certified data wipe of all drives using technology purchased for the sole purpose of producing printout and records to the State for the certified process to meet the requirements of the State of Oklahoma (OMES).

C.11.4 License Management

Once software inventory data is loaded into Flexera's SAM database, Flexera's upper level applications allow detailed analysis of software titles, using inventory data and through loading parameters of software license agreements into the application.

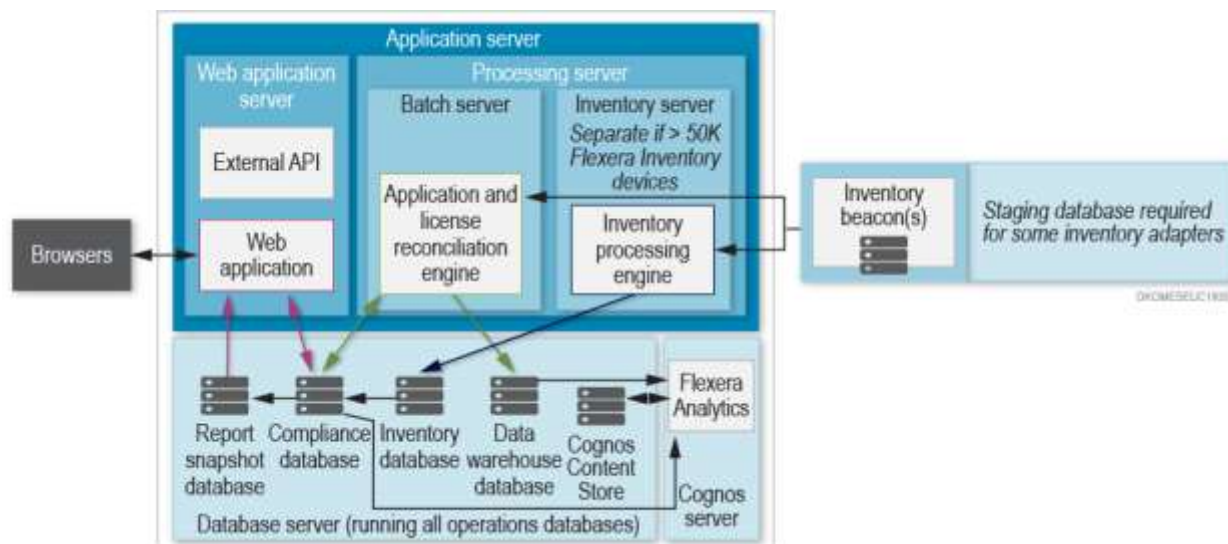


Figure 36. NTT DATA's License Management

Flexera's powerful SW rationalization engine automates the rationalization and normalization of raw discovery data thus enabling the license reconciliation process by comparing the inventory of installed software to license entitlements, to determine an accurate compliance position. Flexera discovers application data by installer evidence, file evidence, registry data and ISO tags, etc. and provides a list of installed software per device (desktop, laptop, server, HW partition or virtual machine). The application recognition library covers more than 180,000 applications from 16,000+ SW vendors across multiple platforms including MS Windows, Linux, UNIX (including over 1,000 IBM titles), and MAC OS. The ARL supports the use of ISO 19770-2 tags to identify installed software, when such tags are available.

The SKU library contains more than 340,000 software product SKUs and is used to match software purchase orders and contracts. It helps automate the creation of license records in the asset management repository that contain software license entitlements from purchase orders.

NTT DATA will solicit license agreement information from the state and populate Flexera to establish entitlements from the software suppliers. Flexera's powerful compliance reports will provide both an inventory by user, by title and has the ability to export the information for custom reporting purposes, such as entitlement by agency.

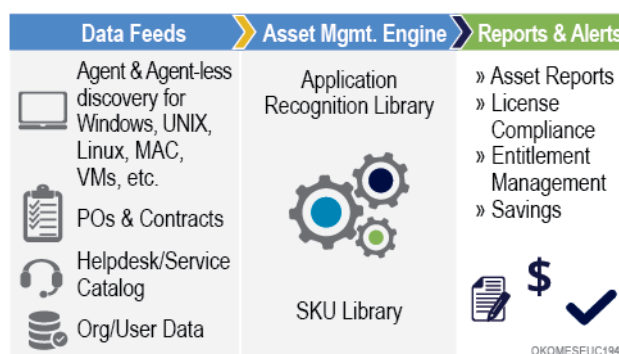


Figure 37. High-Level Asset Management

Software Metering (Software Usage) and Software Harvesting: Software metering/software usage is defined as the monitoring of a software application to determine the last time it was

launched. This regular process, tracking and associated reporting enables OMES to recycle assets, avoid new license purchases and ultimately drive cost reduction. The overall objective of software metering is to support the reclaiming or, avoidance of new license acquisition thus supporting cost reduction efforts.

Software harvesting represents the process of automatically discovering and gathering data related to existing software usage for compliance and reuse assessment purposes in order to reassign the existing titles based on their "idle" or "non-used" status.

This provides the following benefits to the State of Oklahoma:

- Identifies opportunities to remove unused and underutilized software licenses
- Potentially reuse software throughout the organization
- Protects against audits and fines, using the same harvesting process as the software manufacturers

The software harvesting process relies on four major, pre-defined steps:

- 1) Software asset management service delivery team determines the target list for removal based on non-use reports, by application.
- 2) The removal script is built and tested for accuracy, with support from the OMES desktop support team.
- 3) The targeted end users are notified via email from OMES, usually two weeks before the software product is targeted for removal via automated script.
- 4) The script is executed, and reporting is produced in order to reveal success rates.

If, during the removal process, issues are encountered (inability to remove software product due to technical issues), the asset management delivery team can implement a manual removal of the software product usually via service desk or field services incident management support.

License Compliance

In order to maintain the State's data is always up-to-date and to enable the support for audit processes on software titles, hardware devices and current usage, NTT DATA employs four major steps, applied continuously, to ensure audit readiness:

- **Discovery and Reporting.** Discovery installed software titles and utilized assets, together with creating managed software lists and reports
- **Documentation.** Matching software with licenses and hardware devices, securing and documenting proof of ownership and reviewing terms and conditions of use
- **Policies and Procedures Review.** Software and hardware use policy, harvesting mechanisms, software/hardware acquisition process review and entitlement data gathering
- **Reconciliation.** Between discovered assets and entitled usage and continuously address exception

The above approach enables our team to assist the State with third party software vendor audits, industry-compliance reviews and true-ups, by providing insights into asset level audit (validate lost/stolen, non-deployed, off-network) and proactively perform data level accuracy audits.

License Management/Harvesting

Software Licensing Optimization: NTT DATA asset management service delivery team is focused on creating value by regularly assessing the existing software portfolio and identifying opportunities to better utilize existing investments, mitigate compliance issues, in advance, to avoid audit settlements and consulting efforts for negotiating enterprise licensing agreements.

The goal is to create self-funding mechanisms, by also ensuring alignment between the approved software catalog and the actual software portfolio, to enable more efficient utilization of resources going forward.

Additionally, prioritizing the publishers contained in the State of Oklahoma's organization software portfolio by total spend and agreement anniversary dates provides an evolutionary approach to software savings over time.

This service is delivered by integrating client's automated software requisition processes into the ITAM function to ensure compliance and optimization of all software investments. This approach involves importing the Effective Licensing Position statements or equivalent, for all utilized software publishers in the definitive software library managed by Flexera FlexNet.

Configuration Center Asset Inventory

Tools for inventory management will include Flexera, DSO, and the Managed Deployment Application (Quickbase). Asset inventory will be controlled in "Inventory Lifecycle Stages". Configuration Center shelving and workstations are laid out and labeled based on the inventory Lifecycle and correlating containers are maintained in Flexera Flexnet. The managed deployment application (QuickBase) will be integrated with FlexNet, so deployment planners and technicians will leverage the Inventory Lifecycle Stage containers and corresponding physical labels for efficient deployment operations.

Software Asset Management Reports

- **Effective License Position Report:** Software licenses with installation consumption counts. Used to identify over-utilized and under-utilized licenses.
- **Inventory Report:** Applications installs at the detailed level (e.g., Machine, Application).
- **Prohibited Software Report:** Applications currently found in the environment that are strictly prohibited in the environment as defined by OMES.
- **Renewals Report:** Software licenses that are not perpetual and set to expire within client agreed number days from the report date or software maintenance that is set to expire within the client agreed number days from the report date.
- **Unlicensed Applications Report:** Applications currently found in environment that are not associated with a license. Includes all license types.

The information provided by Flexera will enable NTT DATA's asset managers and technicians to manage a pool of licenses and to harvest licenses for potential reuse.

C.12 Online Ordering Process

DSO will provide a business-oriented service portal for the State to request, consume, and report on service usage. For the State of Oklahoma, DSO will:

- Enforce State business rules, such as IT policies, regulations, and security requirements
- Control costs through approval workflows and show-back/charge-back capabilities

- Simplify billing and invoicing, providing finance teams with comprehensive online analytical processing capabilities
- Speed delivery and reduce errors through automation and orchestration functions
- Automate rules-based patching of PCs with an end user notification capability

DSO will allow end users to select from approved configurations, management services, installation, upgrades and peripherals. Selection of an option for procurement will start an automated notification process for identified approvers. Upon approval, the selected device(s) will be procured by NTT DATA, and (depending on the type of resource procured) be charged to the State of Oklahoma as a service, or as a one-time purchase upon installation. The status of orders will be tracked in DSO and can be viewed by end users at any time. Upon order fulfillment (for workstation orders), devices will be delivered to our Deployment Center (in Oklahoma City), where their asset tags will be updated, entered into the asset management database, staged to State of Oklahoma specifications, and then coordinated with the point of contact for the device (or the site point of contact for refresh deployments) for scheduling. Our team will then deliver and provide required additional user specific setups. Upon completion of the installation the end user will provide a confirmation, and the asset management database will be updated with an 'in-service' status for the device.

C.12.1 Web Site

NTT DATA will leverage our DSO portal toolset to implement a web-based Service Catalog which encompasses all device configurations and service requirement types. This portal will provide the ability for end users to select devices (with or without management and with or without installation services), device upgrades and peripherals. These devices will be billed to the State of Oklahoma in alignment with OMES procurement requirements. The DSO portal will also support an approval process which will route requests to authorized approvers. The approval workflow will be determined in consultation with OMES during transition. Orders placed on the web portal must have authorized approvals to execute the purchase and/or delivery of specified services. The portal will be updated at regular intervals, to provide additional device options as approved by the State of Oklahoma. Functions of the portal are shown in **Figure 38**.

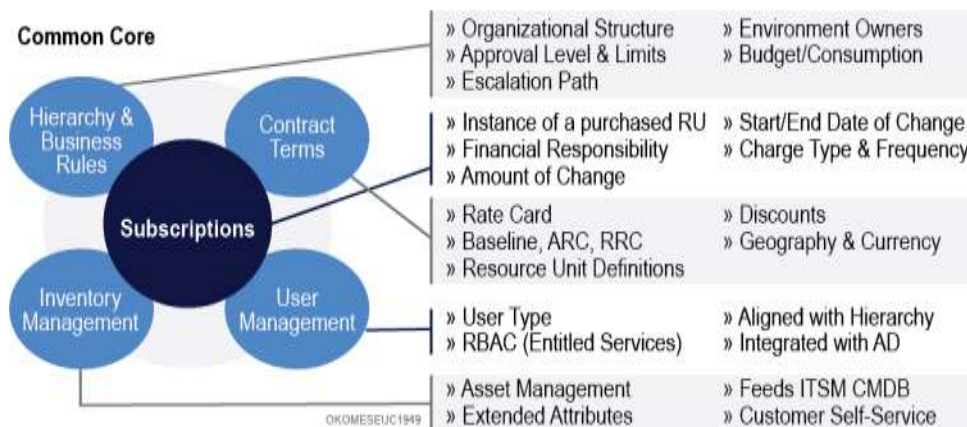


Figure 38: DSO Portal Functions

The web-based catalog is more than a device ordering portal. Services, such as management and installation will also be orderable through the online catalog. DSO will operate the workflow necessary to process hardware orders through business-to-business connections with Dell and other suppliers. DSO will then, through its workflow, issue requests through the Cherwell ITSM system, which will be assigned to the configuration center technicians. Services will also be a

part of the order process. DSO will capture the services, associated or not with a new purchase and use this information to both create the monthly invoice after the successful installation and to report granular detail of configuration items concerning the end user.

The powerful workflow automation and work intake capability allows DSO to provide many services through its catalog and to self-provision those services in minutes, while recording its actions in Cherwell request tickets. Services such as creating an Office 365 mailbox can be automated using this method. This capability will not only increase the speed to service but will also reduce the cost of service delivery. **Figure 39** shows a live catalog that is currently running in production at one of NTT DATA's client sites.

The Digital Services Online product is based on a robust data and application architecture which:

- » Provides sufficient abstraction between customer contractual charges, back end fulfillment and input collection.
- » Provides maximum flexibility to intelligently collect inputs for the providers.
- » Maximizes what we know about the customer and their environment and either supplies directly to the provider or limits choices to the requestor.
- » Provides re-use of required fulfillment inputs across multiple customers.
- » Easily extends workflows without creating multiple versions of the same workflow.
- » Is fully data driven.

The Service Catalog draws on these features and common core to provide work intake capability and collects associated billing inputs as a byproduct. This input process is broken down into a collection of table defined attributes, categories, work units, and services.

Once defined, a specific collection of these, can be **instantiated to intelligently collect input from a user for a specific request, hand off the work to one or more back end fulfillment systems through one or more provider interfaces and track each work request through it's lifecycle.**

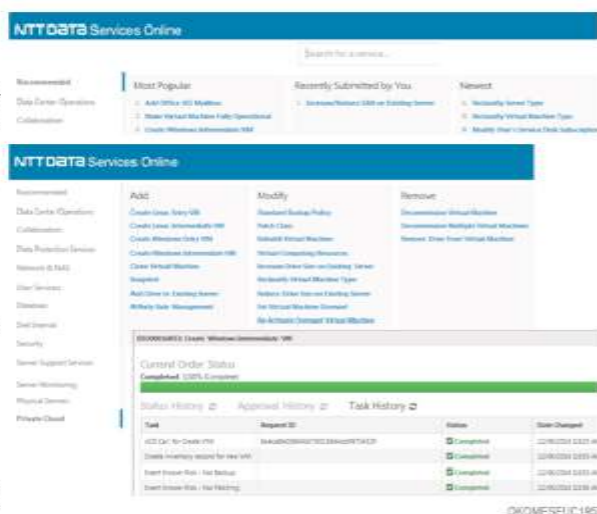


Figure 39. Dynamic Service Catalog

C.12.2 Multiple Configurations per Agency

NTT DATA understands the desire of OMES to maintain and use several sets of images per agency and to deploy these images in the configuration center. We also understand that OMES wishes to specify which configuration would be imaged in the configuration center. DSO's workflow and approval capability will easily satisfy this OMES requirement.

C.13 Hardware Costs

NTT DATA, under the specifications in the OMES solicitation, will provide devices specified in the End-User Device Configurations (**Section C.5**) of this response. NTT DATA will bear all costs for the standard hardware configurations (**C.13.1**). These devices will have a useful life of 3 years and be maintained on a matching refresh cycle. NTT DATA will retain ownership of devices ordered under this program and will offer a right to use the device in exchange for the monthly device fee.

NTT DATA will provide a web catalog ordering capability to purchase peripherals, connectors and computer component upgrades. These items will be purchased by NTT DATA and the costs for such components will be billed to the State as a one-time fee for each order and will become the property of the State (**C.13.2, C.13.3**). NTT DATA will provide OMES with reasonable detail for these orders (e.g., ordering end-user, price, transaction date, installation date).

C.14 Warranties

NTT DATA has provided SLAs to protect the state against a problematic model or component, as included in the "Warranties" category of the SLA table in **Section C.16**.

C.15 Warranty and Break/Fix Services

For in-warranty equipment, our strategy will be replacement with hot-swap units and coordination with the respective OEM to arrange for repairs/replacement. This approach leverages the State's prior warranty investment, NTT DATA's warranty coverage and minimizes additional cost.

For devices that are not covered under warranty, NTT DATA will leverage the current OMES spare stock consisting of spares and whole units, where possible to effect repairs. Additionally, when a service call is initiated for an onsite device, it will be repaired using depot spares stock. Faulty parts are then sent to the depot for repair or replacement, as appropriate.

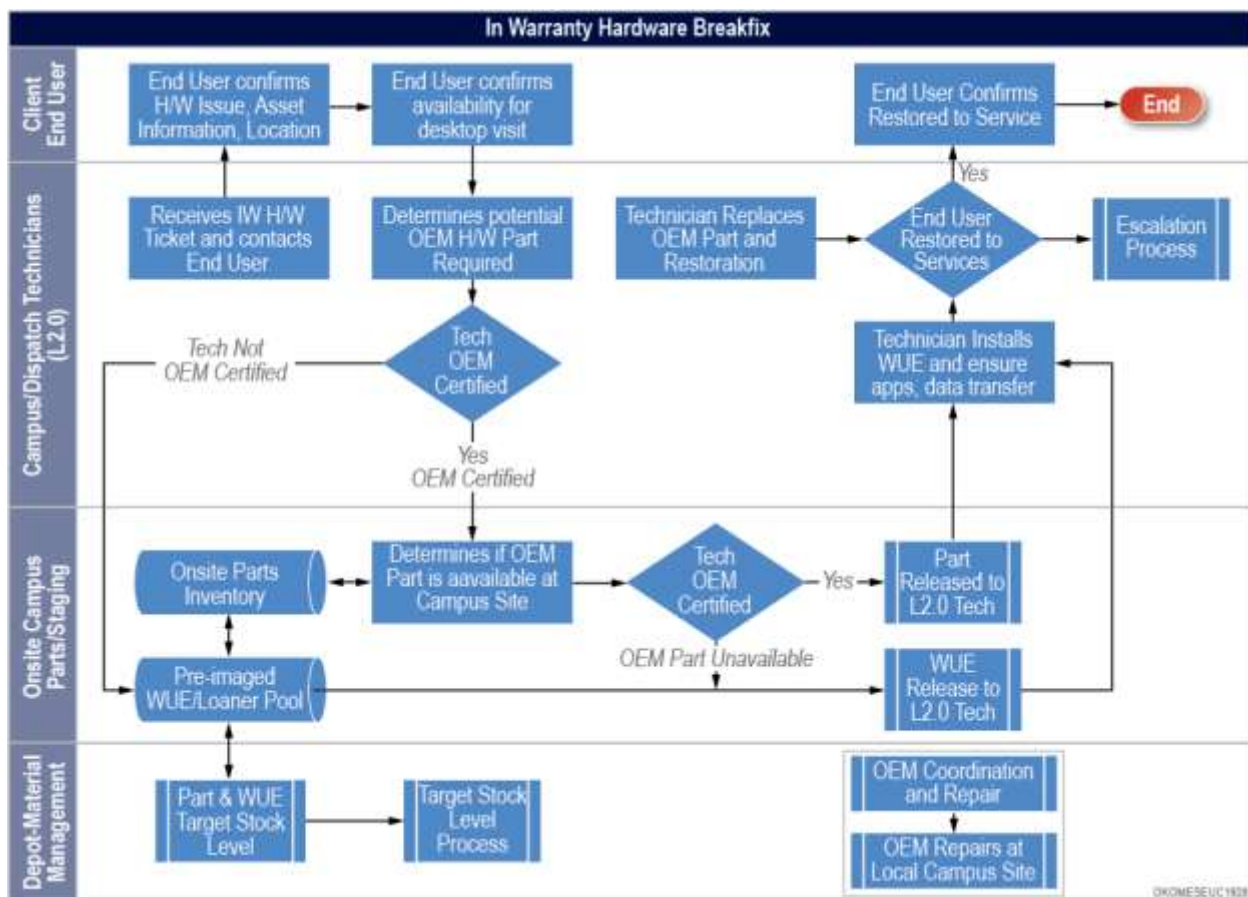


Figure 40. In-Warranty Hardware Break/Fix

Proposed Delivery Model

NTT DATA proposes delivering the services with an onsite team at the major office locations (campus sites). The campus desktop support team also provides support for remote offices within a 30-mile radius. Onsite desktop support includes typical desktop-related break/fix, deskside support, IMAC, troubleshooting, and operations support.

Configuration Center Services

Configuration Center Management: NTT DATA will provide services resources at both the Oklahoma City and Tulsa campuses, which will float between performing deskside support and support in the OMES-supplied configuration centers. These resources will be responsible for managing inventory as well as incident and requests management.

Bench Stock: At the Oklahoma City, Tulsa, Enid, Lawton, Suphur, and McAlester campuses, NTT DATA will manage the OMES whole unit spares and spare parts and leverage this inventory to perform the same-day incident repair.

Equipment Break/Fix

The NTT DATA ISO 9000-certified processes for service delivery and logistics enable it to consistently achieve break/fix SLAs and deliver a level of quality unparalleled in the industry.

NTT DATA has provided a break/fix solution based on the needs and SLAs identified by OMES. When an issue is diagnosed as a hardware failure, an onsite technician is dispatched with the appropriate parts, retrieved from an onsite parts locker, where applicable, to initiate the repair. Once the system has been returned to service, the asset management database is updated, where applicable. In the case of remote locations, warranty calls are dispatched via our DSP network, and parts and technicians are expedited to affect the repair.

In Warranty

For in-warranty equipment, our strategy will be replacement with hot-swap units and coordination with the respective OEM to get faulty parts repaired or replaced. This approach leverages the customer's prior warranty investment and minimizes additional cost. NTT DATA will also leverage bench stock consisting of spares and whole units. New parts from the configuration center or bench stock are shipped to replenish onsite stock and/or faulty parts. Faulty parts are then sent to the depot for repair or replacement, as required.

Out of Warranty

For State owned out-of-warranty device events, we have assumed the ability to leverage OMES's existing spares pool to handle break/fix requirements and an ongoing replenishment of stock levels (per the spare parts acquisition requirements outlined for this submission).

Device Replacement/Loaner Process

NTT DATA will guarantee 24-hour replacement of non-functional systems in compliance with the solicitation section C.15. Bench stock (i.e. Whole Unit Spares) will be stocked at the Oklahoma City, Tulsa, Enid, Lawton, Suphur, and McAlester campuses. NTT DATA will manage the OMES bench stock and leverage this inventory to perform the same-day incident repair. Replacement spares and parts for other remote sites will be shipped from the configuration center.

C.15.1 24-hour Replacement

NTT DATA will guarantee 24-hour replacement of non-functional systems in compliance with the solicitation section C.15.

NTT DATA will leverage whole unit spares at the Oklahoma City, Tulsa, Enid, Lawton, Sulphur and McAlester depot locations to affect the 24-hour replacement expectation. Additionally, NTT DATA will utilize and manage the OMES provided whole unit spares and spare parts and will leverage this inventory to perform the same-day incident repair for devices with expired warranties.

C.15.2 Timing on 24-hour Replacement

NTT DATA technicians will perform the initial triage of the device using the service desk and appropriate toolsets to troubleshoot the problem. If found to be a hardware issue in need of repair, NTT DATA shall overnight ship or deliver a replacement unit, loaded with the same configuration, to the end user by 12PM CST the following business day (assuming the issue is called in and processed before 3PM CST, orders processed after 3PM CST will be allowed arrive on or before 12PM on the second day after the failure, excluding delays for inclement weather outside of NTT DATA's control). If necessary, we will dispatch a deskside support agent to ensure the new device is delivered and in use within the required timeframes.

C.15.3 No Computer will Leave the State

NTT DATA acknowledges that devices, regardless of their ownership or entitlement in this program are not permitted to leave the State unless the data and State-owned applications are electronically wiped from the system using auditable means. NTT DATA intends to provide all direct device services within the state and with the exception of returns to the OEM for warranty exchange, to the lessor at the end of the service life or through our DoD approved disposal service, that all devices will be electronically wiped prior to leaving the custody of State employees or NTT DATA and its subcontractors. Hard drives from returned devices will always be retained and never returned to an end user.

C.15.4 Process to Return Defective Equipment

NTT DATA will manage the returns of equipment that is defective and no longer in use. **Section C.11.2, Asset Disposition**, generally speaks the disposition process and this category of asset would appropriately fall under the disposition process. NTT DATA will wipe and return all defective and non-repairable equipment to the OEM. Typically, if a device that is under warranty is not repairable, the OEM will provide a suitable replacement and the unusable equipment will be returned to the OEM. NTT DATA will ensure ALL devices that leave the state have been recorded in the asset management system, detailed in an incident ticket and electronically wiped of all data and applications. If a device issued under this agreement requires shipment to an OEM, NTT DATA will ensure the authorized warranty repair technician or NTT DATA will be responsible for shipping of the returned device.

C.16 Service Level Agreements

NTT DATA's approach to creating SLAs involves leveraging our vast experience in delivering IT services across multiple industries to identify which measurements reflect how well our services provide end users with improved productivity in supporting the State of Oklahoma. Our ITIL-aligned processes include a CSI framework to facilitate these ongoing efforts.

At NTT DATA, we view a missed SLAs as the point where we breached our promise and we take that very seriously. Our objective is not to just achieve the SLAs but to achieve them with a healthy margin. NTT DATA conducts an executive review of any situations that caused even a temporary SLA problem (e.g. receiving 10 times the number of expected refreshes in the same week) to determine root causes and process updates necessary to mitigate the problem in the future. **Figure 41** details the expected service levels the NTT DATA Team will provide to the State.

Figure 41. Proposed NTT DATA Team SLAs

Category	SOW Reference	Service Level Categories	Stabilization Period	Expected	Minimum	Measurement Window	SLA Type	Allocation	% of Invoice
Warranties	C.14.1: Warranties: Problematic Model or component	Replacement of problematic models or components: Number of Impacted models/components <= 100	Post-Pilot + 90 days	>=95% replacement within 2 weeks of confirmed problematic model or component	>=90% replacement within 2 weeks of confirmed problematic model or component	Per Occurrence	KM	NA	NA
	C.14.1: Warranties: Problematic Model or component	Replacement of problematic models or components: Number of Impacted models/components >=101	Post-Pilot + 90 days	As per client-approved plan	As per client-approved plan	Per Occurrence	KM	NA	NA
End User Compute	C.16.1-2: Response Times	Time for Initial Response to End-User	Stabilization Period	Expected	Minimum	Measurement Window	SLA Type	Allocation	% of Invoice
		Critical (P1) Response – Local with state fiber (LF)	Post-Pilot + 90 days	<= 15 min / 98% of Tkts	<= 15 min / 95% of Tkts	Monthly	SL	6.0%	0.18%

		Critical (P1) Response – Remote with no state fiber (RNF)	Post-Pilot + 90 days	<= 15 min / 98% of Tkts	<= 15 min / 95% of Tkts	Monthly	SL	5.0%	0.15%
		High (P2) Response	Post-Pilot + 90 days	<= 2 hr / 95% of Tkts	<= 2 hr / 90% of Tkts	Monthly	SL	4.0%	0.12%
		Medium (P3) Response	Post-Pilot + 90 days	<= 6 hrs. / 90% of Tkts	<= 8 hr / 90% of Tkts	Monthly	SL	3.0%	0.09%
		Low (P4) Response	Post-Pilot + 90 days	<= 6 hrs. / 90% of Tkts	<= 8 hr / 90% of Tkts	Monthly	SL	1.0%	0.03%
	C.16.1-2: Resolve Time Managed Devices	Time to Resolve Issue for End-User	Stabilization Period	Expected	Minimum	Measurement Window	SLA Type	Allocation	% of Invoice
		Critical (P1) Resolve – Local with State Fiber (LF)	Post-Pilot + 90 days	<= 4 hours / 98% of Tkts	<= 4 hours / 95% of Tkts	Monthly	SL	15.0%	0.45%
		Critical (P1) Resolve – Remote with No State Fiber (RNF)	Post-Pilot + 90 days	<= 8 hours / 98% of Tkts	<= 8 hours / 95% of Tkts	Monthly	SL	10.0%	0.30%
		High (P2) Resolve	Post-Pilot + 90 days	<= EoBD / 95% of Tkts	<= EoNBD / 90% of Tkts	Monthly	SL	8.0%	0.24%
		Medium (P3) Resolve	Post-Pilot + 90 days	<= 3 BD / 95% of Tkts	<= 3 BD / 90% of Tkts	Monthly	SL	5.0%	0.15%
		Low (P4) Resolve	Post-Pilot + 90 days	<= 5 BD / 95% of Tkts	<= 5 BD / 90% of Tkts	Monthly	SL	3.0%	0.09%
	C.15.1-2: Warranty and Break/Fix Services	Field Services Response Time	Stabilization Period	Expected	Minimum	Measurement Window	SLA Type	Allocation	% of Invoice

		Break/Fix & Warranty	Post-Pilot + 90 days	>=90% within 4 hours	>=85% within 4 hours	Monthly	SL	15.0%	0.45%
		IMAC Request	Post-Pilot + 90 days	>=90% within 8 business hours	>=85% within 8 business hours	Monthly	SL	10.0%	0.30%
	C.15.1-2: Warranty and Break/Fix Services	Field Services Resolve Time	Stabilization Period	Expected	Minimum	Measurement Window	SLA Type	Allocation	% of Invoice
		Break/Fix & Warranty - Single User Non-VIP	Post-Pilot + 90 days	>=90% completed NBD by noon ¹	>=85% completed by NBD by noon ¹	Monthly	SL	10.0%	0.30%
		IMAC Request - 1 to 9 Users	Post-Pilot + 90 days	>=90% completed within 3 BD or as scheduled by user	>=85% completed within 3 BD or as scheduled by user	Monthly	SL	5.0%	0.15%
	C.16.6: Device Deployment	Time to Deploy a New Device	Stabilization Period	Expected	Minimum	Measurement Window	SLA Type	Allocation	% of Invoice
		Time to deliver new device to end user after receipt of request and confirmation of delivery details	Post-Pilot + 90 days	>=98% delivered to end-user within 96 hours	>=95% delivered to end-user within 96 hours	Monthly	KM	NA	NA
Service Desk	C.16.3: Contact Center Metrics	Average Speed to Answer Rate / Abandon Rate	Stabilization Period	Expected	Minimum	Measurement Window	SLA Type	Allocation	% of Invoice

		Average Speed to Answer (phone)	Post-Pilot + 90 days	<= 60 seconds	<= 60 seconds	Monthly	SL	25%	0.75%
		Average Speed to Answer (chat)	Post-Pilot + 90 days	<= 120 seconds	<= 120 seconds	Monthly	SL	20%	0.60%
		Average Speed to Answer (email)	Post-Pilot + 90 days	<= 30 minutes	<= 30 minutes	Monthly	SL	15%	0.45%
		Call Abandon Rate (phone)	Post-Pilot + 90 days	<= 5%	<= 5%	Monthly	SL	15%	0.45%
	C.16.4: Contact Center Metrics	First Contact Resolution Rate	Stabilization Period	Expected	Minimum	Measurement Window	SLA Type	Allocation	% of Invoice
		First Contact Resolution	Post-Pilot + 90 days	>=70% (Promote to 75% by end of Year 1 of contract)	>=65% (Promote to 70% by end of Year 1 of contract)	Monthly	SL	25%	0.75%
	C.16.# (Added): Customer Satisfaction	End-User Satisfaction Score	Stabilization Period	Expected	Minimum	Measurement Window	SLA Type	Allocation	% of Invoice
		Percent of End User Responses Satisfied or Better	Post-Pilot + 90 days	>=85%	>=80%	Monthly	KM	NA	NA
Asset & Platform Management	C.16.5: Application Packaging	Application Packaging Timelines	Stabilization Period	Expected	Minimum	Measurement Window	SLA Type	Allocation	% of Invoice
		End User Application Packaging - Simple. Time to complete package after receipt of all software and client requirements necessary	Post-Pilot + 90 days	>=95% complete in <= 10 days	>=90% complete in <= 10 days	As Requested	KM	NA	NA

		to package the application							
		End User Application Packaging - Complex. Time to complete package after receipt of all software and client requirements necessary to package the application	Post-Pilot + 90 days	>=95% complete in <= 30 days	>=90% complete in <= 30 days	As Requested	KM	NA	NA
	C.16.# (Added): Image Management	Creation of new image (base client environment)	Stabilization Period	Expected	Minimum	Measurement Window	SLA Type	Allocation	% of Invoice
		Time to build and test new standard images (base client environment)	Post-Pilot + 90 days	>=98% of new images completed within 10 business days	>=95% of new images completed within 10 business days	Per Image / Upgrade Schedule	KM	NA	NA
	C.11.# - Asset Management	Accuracy and Completeness of Asset Management Repository	Stabilization Period	Expected	Minimum	Measurement Window	SLA Type	Allocation	% of Invoice
		Completion & Accuracy of Defined Best Practice Fields based on 2% Sampling of All Hardware Assets	Post-Pilot + 90 days	1) Quarterly accuracy measure completed within three business days after the first day of each calendar quarter 2) Asset	1) Quarterly accuracy measure completed within five business days after the first day of each calendar quarter	Quarterly	KM	NA	NA

				inventory accuracy of Best Practice Fields (e.g.) location serial #, User, cost center, asset type) <=95%	2) Asset inventory accuracy of Best Practice Fields (e.g.) location serial #, User, cost center, asset type) <=90%				

¹Next Business Day by Noon if called in & processed before 3:00 PM CST. If processed after 3:00 PM CST the machine to be delivered on or before 12:00 PM CST the second day.

Assumptions for Service Levels include:

1. Minimum Sample Size - if the number of measured items does not equal or exceed 100 then the minimum compliant number of items is determined by multiplying the number of items by the SLA target with the product rounded down to the nearest whole number.
2. In the event that a single incident results in a failure to meet multiple Service Levels then the Service Provider's Credit shall be calculated on the highest applicable Service Level Credit, but in no event will the Service Provider be subject to multiple Service Level Credits for the same incident.
3. Additions, deletions and modifications of the Service Levels, the Service Level weightings, and the Service Level Credits will be upon agreement of the parties.

Modern Success Measures

NTT DATA is known for the quality and effectiveness of our IT solutions, outstanding value delivered to clients, and the responsiveness of our employees. Our goal is to deliver unsurpassed client satisfaction, guided by a client-aligned model that applies the correct success measures for modern management. OMES can provide feedback on our service performance, including quality of delivery, responsiveness, depth of knowledge, and ease of doing business at any time during the engagement. More frequently, on a mutually agreed upon frequency, NTT DATA will conduct client satisfaction surveys to identify areas of service improvement. These surveys will be conducted either quarterly, for development, maintenance, and support projects, on project closure, or randomly generated through ticket closures. NTT DATA's standard process for executing these surveys will be tailored for OMES requirements or existing processes. We believe in conducting a 360-degree survey analysis to provide and give feedback, develop action plans, and work towards the improvement areas in a more collaborative way to increase productivity.

Surveys can be a burden on the workforce if they are too complex or too frequent. To remedy this problem, we will implement a simple and easy-to-use client satisfaction capability (e.g. emoji voting) that occurs at the point of contact to better gauge the user's satisfaction with the service and minimize complex follow up surveys or email surveys.



We will also have a CSI team to drive the improvements and be accountable to our Client Delivery Executive. Additionally, we recommend the following Digital Workplace success metrics should be considered for the new service:

- End-user satisfaction (CSAT, NPS)
- Self-help/tools adoption rate
- Percentage of service desk tickets resolved using automation
- Aggregated user experience score
- Emoji voting
- Formalized friction metrics for discrete user experiences (e.g. new hire process, IT request, refresh)

Proposed Service Levels

SLAs document the quality of work. Metrics also generate meaningful data to facilitate ongoing decision support. NTT DATA will comply with metrics and SLAs stated in the solicitation. In addition, we recommend a collaborative effort with OMES to establish additional service level performance goals that mean the most to the State of Oklahoma stakeholders. Once we agree on the final list of SLAs and assign a baseline, we will review them annually for scope changes, such as new applications, new services, or significant revisions to existing services.

Customer Experience (CX) Design

In the modern consumer marketplace, IT is realizing more than ever the importance of making customers and the workforce their highest priority. The urgency of implementing a “people-first” (human-centric) business approach requires reimagining the CX strategy to create positive, accurate interactions that generate satisfaction and loyalty.

This is where our CX team comes in. Fusing the art of design thinking with the science of agile methodologies, our CX team will guide OMES through the end-to-end process of creating and implementing a transformational CX strategy. CX at NTT DATA is about transforming

experiences that happen, into experiences that are designed. Purpose-built experiences that connect our clients to their customers, employees, and partners. We listen to the wants and needs of our clients and our clients' customers and employees, and we respond by implementing relevant data and technology to construct platforms and portals that create world-class personalized experiences, enable self-service opportunities, and improve customer service. NTT DATA's CX team offers three service lines: CX Advisory, CX Design and CX Engineering. CX Advisory is the first line of service that helps our clients achieve the following:

- Uncover areas of user friction through research and experience insights
- Define a path to address those problem areas through strategy and road mapping
- Evaluate and determine success through CX/EX measurement

For OMES, we have included advisory services from our CX design team during our service design and due diligence phases. We will optimize that effort by focusing on the highest priority user experiences. These experiences will be designed to optimize convenience, speed and empowerment. This is achieved through persona modeling, journey mapping, and customer friction factor scoring. In addition, NTT DATA invites OMES stakeholders to take advantage of our Customer Experience Center in Plano, Texas. This facility is designed exclusively for use by our customers to enjoy off-site problem-solving workshops, journey mapping, and design thinking sessions using all the latest collaboration technology.

Innovation Program

Our proposal also includes implementation and governance of an innovation program. This program will identify, evaluate, plan, and execute transformation initiatives that align with the State's business priorities and deliver significant value. As noted earlier on, we recently created a similar program for the GTA and have used a similar program at TxDOT for 6 years with excellent results.

To help fund the initiatives identified by the innovation program, NTT DATA will set aside 1% of all paid invoices, for a matching Innovation Fund. This fund will be available to the State for select transformation initiatives delivered by NTT DATA.

To manage and govern this innovation program, our service SME will create an innovation plan. This plan will include:

- **Executive Sponsors.** To co-chair the program, we will seek one executive sponsor from the State and one from NTT DATA.
- **An Innovation Executive Steering Committee.** This steering committee will include 4-6 State leaders and stakeholders.

A Core Innovation Team. Typically, our core innovation teams in other engagements include 6-10 members from the Innovation Executive Steering Committee, daily operations staff, and other sources. Depending on specific program needs, we could expand participation to include key technical representatives.

Our innovation plan will define a series of ongoing innovation activities, including a semi-annual innovation summit. These summits will include core innovation team members, State Agency business leaders, and invited guests to discuss topics of interest to the State.

C.17 Reporting

NTT DATA will provide electronic reports or online access to State stakeholders, so they have immediate information on performance metrics. We will make available daily, weekly, and

monthly reports on metrics such as: overall incident summary (C.17.1), incident summary based on agency/location (C.17.2), call documentation (C.17.3), average call answer time (C.17.4), response rate (C.17.5), first contact resolution (C.17.6), assets to include all items in C.6.4 and responsible agency and physical location of the asset (C.17.7), deployment (C.17.8), data wipes and disposals (C.17.9), and returns and retrievals (C.17.10).

NTT DATA's Performance Direct tool will offer OMES/IT leaders 24x7 on-demand, online access to an executive summary of the most important indicators of performance and health of all delivered services. By importing data from the ITSM tool into our data warehouse, we will be able to provide a pre-defined package of reports in Performance Direct that can be generated on demand by users of the tool. During the transition, we can discuss ways to extend this package to provide additional reports for the State. Performance Direct includes a:

- Dashboards section with a list a default list of reports, including drill-down views of KPIs and service desk call metrics. This list can be customized to the State's specific needs.
- Health-at-a-Glance section with a list of links to the current health and status of incidents and requests. It provides a summary of open requests and incident aging with three different views: ITIL Group, Assignee Group, and Affected Item.
- Reports section that includes links to categories of standard detailed views that we will build to the State's reporting preferences.

Our service reporting team will leverage the capabilities of this powerful tool, which will be integrated with Cherwell for feeding tickets and updates for tracking purposes (C.17.11). **Figure 42** provides a representative example of the type of detail Performance Direct produces.

Analytic rolling 13 month view on open Incident tickets						
SUMMARY	Breakout	Diagnostic	Chart	Detail	Hide NAV	Reset View
Status Name	In Progress	Open	Pending	Resolved		
Incident Count	32	60	101	278		
Children Count	0	0	0	21		
Open Duration (Days hh:mm:ss)	12 days 21:52:19	9 days 13:22:04	13 days 20:46:21	5 days 05:58:52		
Average Hold Duration (Days hh:mm:ss)	131 days 20:35:37	1 days 14:30:00	140 days 23:33:16	62 days 09:27:25		
Average Monitor Duration (Days hh:mm:ss)	0 days 00:00:00	0 days 00:00:00	0 days 00:00:00	0 days 00:00:00		
Average Response Time Duration (Days hh:mm:ss)	0 days 00:00:00	0 days 00:00:00	0 days 00:00:00	0 days 00:00:00		
Response On Time	22	8	86	250		
Response On SLA	68.75%	13.33%	85.15%	90.25%		
Average Suspend Duration (Days hh:mm:ss)	2 days 04:44:36	0 days 00:38:30	2 days 08:23:33	1 days 00:57:27		
Average time between System Interruptions (Days hh:mm:ss)	0 days 11:08:54	0 days 02:13:41	1 days 01:59:22	0 days 05:17:17		
Average Open Age (Days hh:mm:ss)	16 days 03:00:00	11 days 23:36:00	15 days 12:21:23	6 days 15:11:39		

Figure 42. Sample Report from NTT DATA's Performance Direct Tool

This tool provides visibility into incident status' such as number of ticket open, closed, pending or resolved for a specified timeframe. It also provides drill down capabilities to provide visibility into SLA adherence for items such as response time and time to resolve.

NTT DATA's DSO will also provide 24x7 on-demand, online access to a wide range of data, including information on financials, asset inventories, order tracking, the status of patching activities, and other information. DSO offers the ability to drill down data views to a highly detailed level and export these views to Microsoft Excel.

We will leverage DSO to provide visibility into procurement order status, and current state device inventory statistics, such as those presented in **Figure 43** and **Figure 44**.

DSO00000102: Provision VM - VMware (TEST MODE)

Current Order Status
Completed (100% Complete)

Status History Approval History Task History

Status	Notes	Changed By	Date Changed
Queued		James Clott	4/05/2019 5:45 PM
Approved	Auto-approved due to no financial impact	James Clott	4/05/2019 5:45 PM
Completed		DSO System	4/05/2019 5:59 PM

Summary

DSOID	DSO00000102
Requestor	James Clott
Entered By	James Clott
Hierarchy Node	NTT Data
Virtual OS Template	Windows Server 2016 STD
Application	ASCP Application
Environment	Development
Function	Print Server
Server Name	ZZOTBOWVMRP001
Application Owner	James Clott
Datacenter	NDC
Data Retention	BACKUP008 - No backup
Network Zone	DEV
IP Address	10.91.130.74
Virtual Connection Resource	

Figure 43. DSO Order Status Sample

Digital Services Online

Services Catalog Asset Management Delivery Management Administration

End User Computing Inventory

Drop a column header and drop it here to group by that column

ID	Discovered Source	Name	Description	Asset Type	Enterprise Certificate Inventory	Asset Name	Request ID	Node Name	Received Date	Site Location	Application Name
7284	DSO Agent	10.91.130.13	10.91.130.13	VDI		NTT Data		NTT Data			NTT Data
7288	DSO Agent	10.91.130.55	10.91.130.55	VDI		NTT Data		NTT Data			NTT Data
5245	DSO Agent	ACS-SERVER	ACS-SERVER	DESKTOP	BUAD00000	NTT Data		NTT Data			NTT Data
8385	DSO Agent	ADMT01328	ADMT01328	DESKTOP	BUV1115	NTT Data		NTT Data			NTT Data
9938	DSO Agent	ADMT01335	ADMT01335	DESKTOP	BUV1115	NTT Data		NTT Data			NTT Data
2627	DSO Agent	ADMT01340	ADMT01340	DESKTOP	BUV1115	NTT Data		NTT Data			NTT Data
8781	DSO Agent	ADMT01405	ADMT01405	DESKTOP	BC07115	NTT Data		NTT Data			NTT Data
9936	DSO Agent	ADMT01420	ADMT01420	DESKTOP	BC07115	NTT Data		NTT Data			NTT Data
2094	DSO Agent	ADMT01422	ADMT01422	DESKTOP	AD07115	NTT Data		NTT Data			NTT Data
2468	DSO Agent	ADMT01487	ADMT01487	DESKTOP	BUV1115	NTT Data		NTT Data			NTT Data

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Figure 44. DSO Current State Device Inventory Statistics Sample

Our tracking of assets (C.17.7) includes reporting on devices returned by end users or retrieved from sites as a component of refresh, and/or devices to be scheduled for redeployment (C.17.10). Additionally, we will integrate Flexera FlexNet with DSO, to provide for all software

asset management requirements including license management details, to include harvesting or retiring licenses from returned devices and, where applicable, returning those licenses to the State of Oklahoma's license pool for later use.

Additionally, our Deliver Manager will leverage OpenBase for deployment tracking and monthly status reporting (**C.17.8**).

We will also integrate with our service desk phone system (via BT Cloud) to provide granular detail into the service levels achieved by that team. **Figure 45** provides details on the standard service desk reports which will be reported on monthly as part of our solution to OMES.

Figure 45. Standard Service Desks Reports

Report	Description
Measure: Contact (various channels)	
Total Offered	Total contacts offered by contact channel (telephony, chat, email, etc.) during reporting period
Total Handled	Total contacts handled by contact channel (telephony, chat, email, etc.) during reporting period
Total Abandoned	Total contacts abandoned by contact channel (telephony, chat, email, etc.) during reporting period - Abandon before threshold - Abandon after threshold
Abandon Rate	(Total contacts abandoned after threshold) / (Total contacts offered - Total contacts abandoned before threshold) during reporting period
Average Speed to Answer	(Total speed to answer) / (Total contacts handled) during reporting period
% Answered on Time	(Total contacts answered before threshold) / (Total contacts handled + Total contacts abandoned after threshold) during reporting period
Average Handle Time	(Total handle, hold, and/or talk time) / (Total contacts handled) during reporting period
Measure: Customer Satisfaction	
Total Survey Responses	Total survey responses during reporting period
Customer Satisfaction %	(Total SAT response count) / (Total survey responses) during reporting period
Measure: First Contact Resolution	
Total Tickets Resolved	Total tickets resolved during reporting period
First Contact Resolution	Total tickets resolved at first contact during reporting period
First Contact Resolution %	(Total FCR tickets resolved) / (Total tickets resolved) during reporting period
Measure: Ticket Management	
Total Tickets	Total tickets opened, resolved, closed during reporting period
Mean Time to Resolve	(Total time to resolve) / (Total tickets resolved during reporting period)
Opened Tickets	Tickets opened during reporting period...by priority, category/subcategory, assignee group, contact type
Aging Tickets	Ticket aging by priority, category/subcategory, assignee group during the reporting period

Our team will perform onsite DoD level data wipes on all required hard drives. We will also generate monthly reports with confirmations on each drive for which a wipe has been completed as well as for disposals (**C.17.9**).

The combination of our toolsets and the proven integrations between them allow us to provide the State of Oklahoma with continual environmental awareness to support statistics which

underscore our efforts to support improved customer experience and enhanced end user productivity.

Software Asset Management Reports

- **Effective License Position Report:** Software licenses with installation consumption counts. Used to identify over-utilized and under-utilized licenses.
- **Inventory Report:** Applications installs at the detailed level (e.g. machine, application).
- **Prohibited Software Report:** Applications currently found in the environment that are strictly prohibited in the environment as defined by the Client
- **Renewals Report:** Software Licenses that are not perpetual and set to expire within OMES agreed number days from the report date or Software Maintenance that is set to expire within the Client agreed number days from the report date
- **Unlicensed Applications Report:** Applications currently found in environment that are not associated with a license. Includes all license types.

Hardware Discovery

FlexNet Manager Platform provides both agent-based and agentless technology to collect physical (Windows, Linux—including Ubuntu support, UNIX, and MAC OS platforms) and virtual machine (VM) inventory of hardware and software across the IT estate. Additionally, FlexNet Manager has standard integration with popular systems management solutions such as SCCM.

Hardware Reporting

- Hardware asset management reports
- Count of assets by location
- Leased hardware — leased supported hardware that has gone to a post-lease, and month-to-month status.
- Hardware inventory exception — list of supported hardware where location and status are no longer available in the asset management system.
- Refresh master list — list of all supported hardware eligible for refresh in a given year
- Hardware disposal report — supported hardware to be scheduled for disposal or replacement

NTT DATA will have appropriate level staff and/or SMEs attend the State's daily stand up meeting to make sure the knowledge and skill sets are available to discuss current changes, current issues, and other aspects of the program (C.17.12).

C.18 Security

Firmware and BIOS security and tracking

The NTT DATA solution includes a BIOS and firmware tool called Absolute Resilience that will perform the following functions:

- Track hardware
- Monitor Software
- Assess security posture
- Measure device usage

- Monitor device location
- Remotely freeze devices
- Delete data from devices

Device Status/Health

NTT DATA will provide device health reports using native functionality and existing OMES investments. Although not required, if the State is investing in Azure Analytics, NTT DATA recommends the recently released Device Health features from Microsoft. NTT DATA's DSO, our governance platform, will provide 24x7 on-demand, online access to a wide range of data, including a risk and compliance dashboard. DSO offers the ability to slice and dice data views to a granular level and to export these views to Microsoft Excel. NTT DATA has included a role for workplace analytics coordinator, who will be responsible for the dashboards, analytics, and reporting.

C.18.1 Security Policy

NTT DATA has, administers, and maintains a security policy under the authority of the NTT DATA Chief Information Security Officer (CISO) that provides the framework for information security management within our organization. This policy will remain active and maintained at all times during the term of the OMES agreement. Our security policy mandates a security framework that includes mandatory annual education, awareness training and reminders, standards, procedures, and guidelines. Within this framework, our Information and Data Privacy Standard (INC_ISC_STD_016) governs the confidentiality, integrity and availability of information. Specifically, this standard governs records retention, classification of personal information, handling of personal information (acquisition, storage, access and disclosure, transmission and disposal). This standard is directly supported by our Data Classification and Handling Procedure (INC_ISC_PRC_002). This procedure directs the actions with regards to data labeling, information lifecycle management, acquisition and generation, storage, distribution and use, and disposal/destruction of data after its useful life.

NTT DATA acknowledges the security policy requirement, confirms our compliance with it, and agrees to make it available upon request by the State as part of the evaluation process.

In addition to our Security policy, NTT DATA also provides the following internally:

- **NTT DATA Security and Ethics Training.** Each NTT DATA employee and contractor, during new employee orientation, is required to attend security awareness, privacy and ethics training. Refreshers are required each year for all employees and contractors. This annual required training includes: global code of business conduct, information security policy and General Data Protection Regulation (GDPR). Additionally, all employees are required to attend training on HIPAA and privacy.
- **NTT DATA Security Certifications.** NTT DATA maintains an ISO 9001: 2015 certification for all of its facilities. Additional certifications include ISO 27001: 2013, AS9100: 2016, ISO/IEC 20000-1: 2011, NIST SP 800-53, and HITRUST CSF v9.1. Several of these certifications are specific to locations where NTT DATA operates data centers and stores sensitive data.

C.18.2 Chain of Custody

NTT DATA will maintain a chain of custody for all devices. NTT DATA uses customized tools for the request process and allows for full transparency in the deployment process with the State providing a clear chain of custody. Device assets will either be assigned to an end user or stock depots or in process of configuration, repair, or disposal. NTT DATA's asset management system and DSO will be tightly integrated with Cherwell to provide precise tracking of assets throughout their lifecycle. Service information such as repair, swaps, and configurations will be coupled with the asset management system and DSO to provide an asset known state at all times.

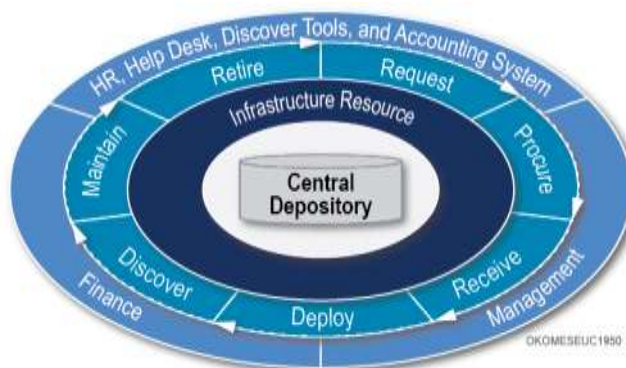


Figure 46. Chain of Custody Throughout the Device Lifecycle

C.18.3 Compliance with CJIS Background Checks Requirement

NTT DATA acknowledges and will comply with the requirement that any team resources who handle Criminal Justice Information System (CJIS) devices will be subject to CJIS background checks performed by the State.

C.18.4 Background Checks

NTT DATA understands that the State reserves the right to require background checks on any of our staff that handle devices used by the State. In general, when NTT DATA hires an individual, we conduct a background check using the services of a third-party vendor, First Advantage, which specializes in this type of work. Specific aspects of the background check vary according to the needs and expectations of NTT DATA and the role where we anticipate placing the candidate. Typical aspects include verifying educational credentials, a validation of past employers, a drug screening, or a criminal background check. Overall, we use dozens of different background check "packages" that we have developed with this vendor, each tailored to the needs of clients we serve and of NTT DATA.

In addition to these hiring stage background checks, we also consider background checks when we reassign an employee to a different client who has background check requirements. We will comply with the State's requirements in this area, as defined by the mutually agreed upon final contract that guides our efforts.

C.19 Risks

C.19.1 Disaster Recovery

NTT DATA, as a component of the IT Security policy specifies standards and procedures for disaster recovery of our data processing and facility entities. Each of our centers that process data are hardened facilities that include multiple inbound data paths that originate from multiple carriers and enter our facilities through underground fiber optic approaches. Additionally, our data processing facilities make use of multiple electrical grid power sources supplemented with private power generation. Each service center has a designated backup facility where the disaster recovery plans designate the backup center assignments and any associated training

for those facilities. Each employ is equipped with a laptop device and electronic access and telephony capability to allow remote work.

One of the benefits of our solution is that our partnership with Dell provides direct access to the OEM of most devices. Additionally, due to our history together (NTT DATA buying what was formerly known as Dell Services) we have forged strong operational and go to market bonds that allow for amplified treatment to our customers and solutions in situations such as these.

Depending on the supply chain event many different actions could occur. First, we will leverage Dell's DR strategies in place today for these types of events. As an OEM they have pre-set procedures to monitor and address any disruption. This includes pre-monitoring potential supply chain interference and managing inventory levels accordingly, arrangements with backup suppliers for certain part coverage, and potential stock pools that can be leveraged. These procedures have been tested for years and is our first line of protection to mitigate supply chain risk.

NTT DATA will also work to minimize the impact of such an event. For any disruptions, and with pre-approval from OMES, we will leverage the 900+ stock of devices we carry on hand. Any longer-term disruptions that may cause delays beyond the ability of our stock could be handled by looking to our other accounts for reserve stock supplies that are available. Finally, in the event of a catastrophic or otherwise debilitating event to the supply chain of end-user devices we would work to maintain the existing stock beyond its 36-month proposed lifecycle until the disruption was resolved and the devices can be replaced.

C.19.2 Risks of a Device-as-a-Service Model

With any change, there are inherent risks to the business. NTT DATA strives for solutions that mitigate, to the fullest extent possible, the risks to our customers. We recognize and have mitigated the following risks:

- 1) Services change and there is a risk that the service level may be lower. NTT DATA has mitigated the risk of lower service levels by:
 - Bringing the incumbents who understand the State's business, Dell (HW provider) and Sterling (Deployment Services), into our service partnership
 - Rebadging a portion of current service desk and desktop support employees
 - Proposing SLAs that demonstrate our commitment to high service levels
- 2) With process and tool changes, there is a risk to end-user acceptance and satisfaction. NTT DATA has mitigated the risk of end-user rejection and dissatisfaction by:
 - Proposing frequent OMES-approved communications to end users
 - Retaining end user known tools as appropriate
 - Applying appropriate training for end users and OMES
- 3) The change to a new service provider risks a less immediate, and possibly less satisfactory client view into the operations. NTT DATA has mitigated the risk of dissatisfaction by:
 - Creating crucial trust and acceptance of the new solution among remaining and complimentary support staff
 - Establishing a split delivery model of sharing services with a new provider
 - Ensuring proper RACI's are established during transition and throughout the contract to prevent any gaps from occurring

C.20 Implementation Plan

The State's decision to change IT service providers will mean a significant amount of change for State business support teams and to State processes in a relatively short time. We recognize that organizations can only absorb so much change at once.

Our goal in this transition will be to implement and ready our managed services solution for ongoing delivery to the State. We will achieve this based on more than 25 years of NTT DATA experience transitioning into IT services engagements. Based on this experience, we understand how to position IT services delivery teams for success in delivering predictable, measurable outcomes while preserving service continuity.

C.20.1 Transition Plan

Transition Organization and NTT DATA Roles and Responsibilities

To manage this transition smoothly, we will assign a dedicated transition manager and a transition team to oversee it as a project. The professionals we assign to this project will be skilled in planning and executing transitions. For this transition, we have established the organizational structure shown in **Figure 47**. It includes well-defined roles and responsibilities, with our CDE working closely with the State's transition manager.

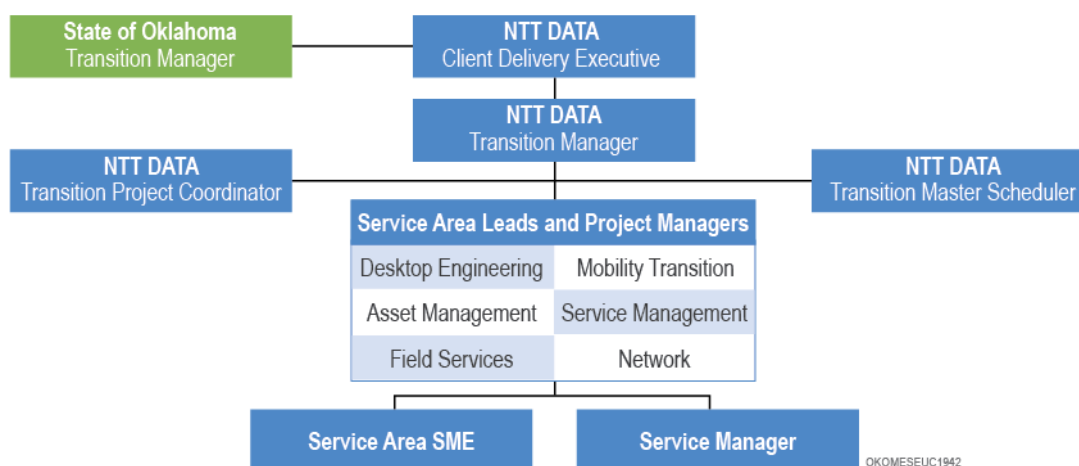


Figure 47. This organizational structure will establish a clear transition chain of command.

Our transition team will implement each element of our solution with support from NTT DATA service area leads responsible for delivery of workplace services, data network services, service desk services, and service management. The transition team will also receive support from an extended team of SMEs in areas such as networking, security, reporting, desktop support and engineering, and asset management. **Figure 48** summarizes the roles and responsibilities of this transition team.

Figure 48. Each member of our transition team will have a role to play in making this 6-month transition a success.

NTT DATA Role	Responsibilities
Transition Manager	- Serve as the single point of responsibility for implementation of the transition program. - Coordinate a proactive communications plan with State stakeholders. - Report weekly on the progress of the transition and chair governance meetings with the State.

NTT DATA Role	Responsibilities
	• Manage all NTT DATA transition project team members. • Coordinate with other projects that are aligned to or affiliated with the transition, such as any data center migrations.
Project Coordinator	• Facilitate creation of a requirements traceability matrix. • Manage RAIDs (risks, assumptions, issues, and dependencies), including reporting and chairing ongoing weekly reviews. • Facilitate adherence to NTT DATA's internal project management requirements, in accordance with our project management methodology. • Build, execute, and manage the transition project schedule. • Report on project schedule progress.
Master Scheduler	• Develop and manage the project schedule. • Coordinate with service area leaders and SMEs on tasks assignments and due dates. • Report on the progress of the transition implementation.
Service Area Leads and Project Managers	• Perform discovery of the current state environment. Perform gap analysis and facilitate support from other service areas. • Manage the implementation of steady-state service operations, including knowledge transfer and training. • Lead testing and validation as part of an operational readiness checkpoint. • Facilitate processes, procedures, and workflow development for end-user support.
Service Area SMEs	• Perform discovery of the current state environment. • Set up the future state service delivery model for each service area, including tools, people, processes, and other technologies. • Shadow incumbent teams during the transition and, as part of that process, provide assistance when needed.
Service Manager	• Manage the setup and implementation of a service management platform, including all process and procedures necessary for service delivery in accordance with State requirements and expected service levels. • Coordinate interfacing and integration of the State's ITSM platform with NTT DATA's platform. • Work with reporting teams to set up and ready all reporting mechanisms.

Transition Governance

NTT DATA will establish an account governance model to oversee a successful transition. At the heart of our approach to transition governance will be a joint transition program steering committee to oversee program management. We recommend this committee include key State leaders and decision makers as well as NTT DATA's service SME, our transition manager, and our corporate executive sponsor. This transition program steering committee will meet monthly to achieve the following:

- Verify that work has been performed in accordance with the transition program
- Provide an executive decision-making forum
- Manage, prioritize, and authorize change
- Serve as an escalation point for both State and NTT DATA
- Provide a communication channel for the State, thus promoting transition success

In our experience, keys to a successful transition from one operating model to another include open communication, careful planning, and the identification and management of risks. NTT DATA will use a series of workshops from the executive level to the staff level that identify scope and highlight the interrelationship of services and business needs.

Knowledge Transfer and Management

To build a foundation for ongoing delivery success, our transition team will put a significant amount of effort into knowledge transfer—the transfer of knowledge about current delivery processes and systems from the State and from the incumbent service provider's SMEs to our personnel. To this end, we will create a detailed knowledge transfer plan during the Transition Initiation and Planning Phase. Our knowledge transfer process will involve training sessions, study of documentation, and gradual validation of existing knowledge. This process will enable NTT DATA to gain more insight into systems and processes through hands-on browsing. Our knowledge transfer efforts will culminate in the creation of a knowledge management repository for use by our delivery team. Error! Reference source not found. summarizes NTT DATA's knowledge management framework.

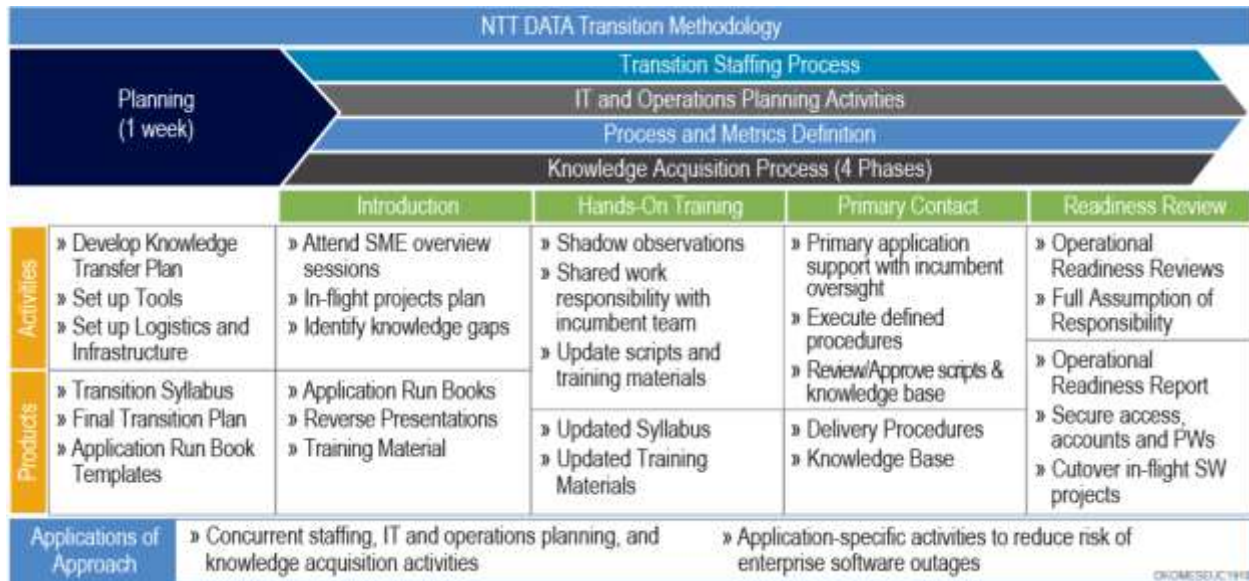


Figure 49. NTT DATA's Knowledge Transfer Management Processes

We will use this framework to document information and current processes, including:

- Information on the current system landscape
- Users' roles and the audit process for security, including daily, weekly, and monthly monitoring reports
- Current practices for handling tickets and providing service desk support
- Practices used for backup, archiving, patching, and handling field service notes
- Tools and templates for generating monitoring reports and handling user requests
- Key State applications and infrastructure contacts and owners

To make this effort a success, we will need the State and its incumbent IT support leaders and team members to be available for interaction with NTT DATA, to provide access to systems, and to provide information and clarifications on business processes and existing documentation.

In transferring knowledge, NTT DATA personnel will shadow incumbent personnel, provide assisted support, perform a readiness review, and document processes, workflow, and procedures.

Shadowing. As a part of knowledge transfer, we gather knowledge on technical areas associated with application support. This includes observation of incumbent personnel. As part of this observation process, our personnel will begin to work with the State's incumbent personnel in a hands-off manner. In this way, our team members validate our understanding of incumbent support processes and technical knowledge. Based on this experience shadowing the State's incumbent team, our team members develop and refine documents and plans drafted in earlier stages.

Assisted Support. Later in the transition, our team members will begin owning responsibility for application support with help and guidance from the incumbent team. At this stage, NTT DATA will work with the State to define a variety of process templates and requests. As noted, our team will also prepare a services interface guide that documents all management and support processes and workflows as approved by the State. Together, with the State, we will continue to closely monitor the transition progress and preparedness of our team as we begin to assume ownership of support responsibilities.

Readiness Review. To assess the progress of our knowledge transfer efforts, we will develop a proficiency matrix and review it with the State each week. Once our team achieves an acceptable level of knowledge of existing systems and processes, the knowledge transfer process will be complete.

Documentation of Processes, Workflows, and Procedures. It will be important to the State for NTT DATA to document all processes and procedures. We will accomplish this by using NTT DATA's standard operating procedures and runbooks in combination with the service integration processes we implement specifically for the State. To this end, we will capture all current documented processes and procedures from the State and interview existing service providers to capture all the undocumented processes and procedures. We will use all of this information as a foundation for understanding the current mode of operations.

Based on this understanding, NTT DATA will build a service interface guide to map the State's current mode of operations to NTT DATA standard processes. This document will include interface process and workflows with other State support teams and retained services. Members of the transition teams from both NTT DATA and the State will participate in the planning processes, testing, and the service cutover.

Testing

The transition team creates test plans used by the service desk on-boarding delivery team. The test plan is a key training tool. Once agents complete training, they take part in testing to show readiness to assume providing service. Testing includes:

- User acceptance testing to verify call quality
- Stress testing to determine maximum call volume
- Business continuity plan (BCP) testing to ensure a site transfer can be made
- Testing continues as necessary to ensure agents are ready for live calls and tickets.

C.20.2 Application Transition

NTT DATA will not be replacing any currently used systems or applications during the transition to our solution.

C.20.3 Guiding Principles and Critical Success Factors

NTT DATA recognizes the critical nature of service transitions. Our transitions are designed to appropriately set expectations, minimize business disruption, and maintain service levels as services move from one service team or provider to the new service provider. Leveraging more than 25 years of experience leading service transitions, NTT DATA has developed robust templates and tools to facilitate the transition of critical network and security support operations leading multi-industry companies and making sure that no material activities are skipped in the process.

NTT DATA's 4 Guiding principles:

- Positive people and business sector focused transition experience
- Consultative operational and organizational change management approach with a dedicated, focused team to help manage change
- Proven transition methodology addressing people, process, technology, and integration to the managed service solution
- Reduce risk to the business with a phased transition of services, devices and site support

NTT's global transition methodology features detailed transition planning and precise execution. We start by defining both the success criteria and the exit criteria for the Transition Phase. We assign a dedicated transition team who specialize in onboarding people and new services—no matter if internal to the State of Oklahoma or outsourced to a third-party provider—to facilitate and program manage this effort. We will reinforce this team with service delivery leads and experts who will remain on the account through steady-state delivery. Our delivery team will onboard early in the transition and work with our existing State of Oklahoma support teams so that we do not suffer from any lack of hand-off information between our respective teams.

Our transition plans focus on strategic, tactical, and operation needs and encourage stakeholder participation enabling informed decisions with no adverse impact on the business. Throughout, there is clear communication on progress status. Assessing requirements to mitigate risk, capture knowledge, and facilitate a seamless transition, we developed our timeline within a best-practice framework of core operational processes that deliver predictable and reliable results, meeting agreed-on service levels. Our shared vision and goals will be keys in our relationship to facilitate a successful transition. These include:

- Early buy-in from State of Oklahoma business units and service locations on the organization and operational changes. This is achieved through comprehensive communications driven from a cultural fit and aligned with the transformation program journey.
- Hands-on collaborative access to SMEs for knowledge retention and transfer, job shadowing, and mapping of current roles and responsibilities to understand early on and lower the risk of any potential gaps and risks.
- Maximized process, procedures, and governance knowledge with the State of Oklahoma to progress to a more robust and efficient alignment and accelerate the delivery of true managed network services.
- Expedient services delivery readiness and the flexibility for phased services approach to minimize the effects of business change at any given time and in alignment with the State's business cycles.

By executing our transition framework, our transition plan will allow us to implement our managed services solution based on alignment with the State of Oklahoma's business sectors.

C.20.4 Timeline

We have already initiated our pre-transition activities, including organizational planning, tower allocation, personnel plan development, and risk assessment. Upon award, we will implement our services for the State of Oklahoma using parallel phased approaches for each of the services being transitioned to NTT DATA shown in **Figure 50**.

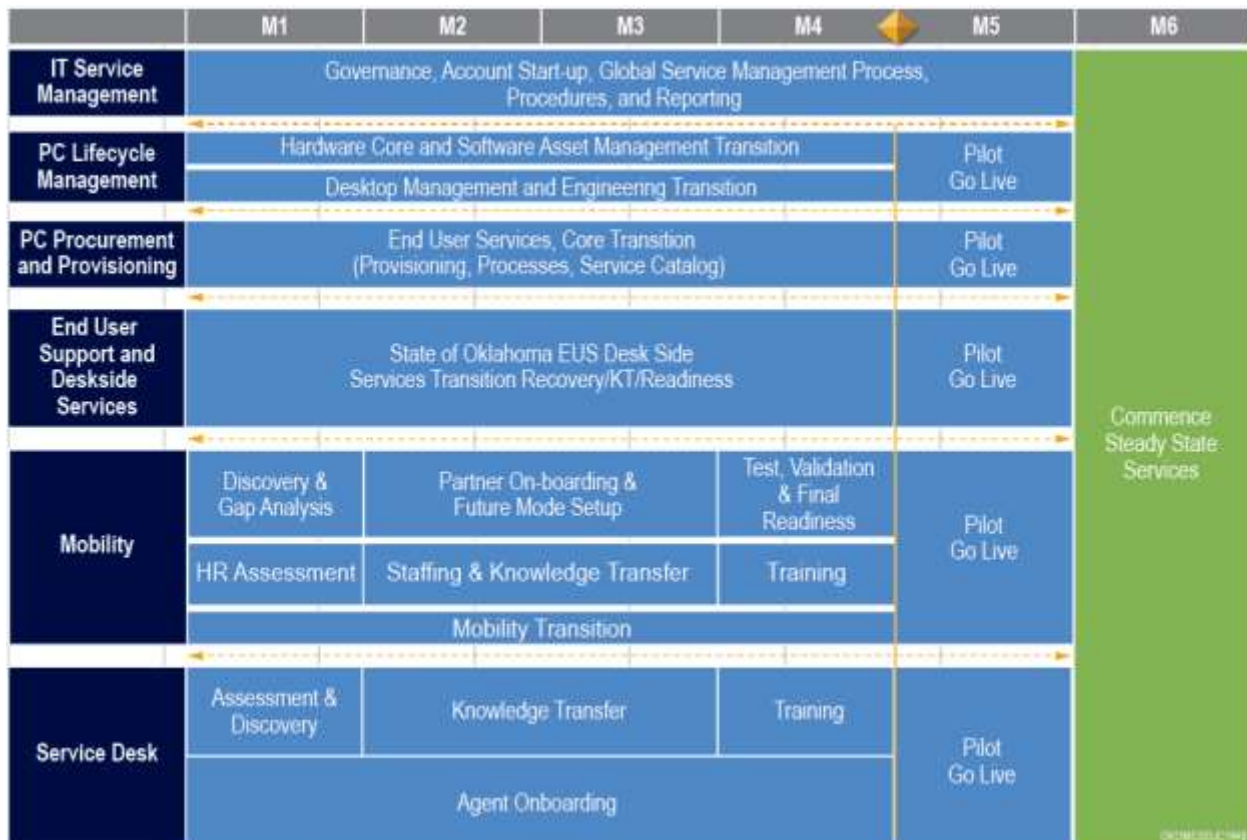


Figure 50. This transition will include parallel phases, with NTT DATA going live four months after a contract is signed.

C.20.5 Critical Information and Activities

Key Transition Support Requirements from the State

For this transition to be a success, we will require participation from both OMES and your customers. This includes access to people, facilities, systems, and tools.

Access to People. We will need reasonable, timely access to and participation from business, technical, and management personnel. This includes active participation in NTT DATA-led transition workshops. A project executive workshop will involve a half-day from State representatives. Also, a project initiation and planning workshop will require three to five days (not including follow-up breakout sessions) from State IT service tower experts. In these workshops, to support knowledge transfer, we will reach agreement with the State on access to and involvement of incumbent experts now performing services. Typically, when capturing knowledge, we require access to as much as 25%–50% of incumbent SMEs' time, but this

varies by service area and type of support. This requirement typically falls to 10%–15% as we capture knowledge.

Access to Information. We will need timely assistance gathering information, including written policies, procedures, standards, management decisions, information, approvals, and other related information. We will need documentation and other information on applications, infrastructure, equipment, hardware, and software. This includes runbooks, standard operating procedures, and architecture diagrams. We also will need information on current tools, including their function and whether they will remain after go live. Finally, we will need: (1) information on backup and data policies, (2) a mapping of applications to servers, devices, databases, businesses, and IT owners, (3) all scripts (custom or otherwise) used in the environment, (4) known system issues and persistent points of failure, and (5) details on in-flight projects, including their status both at the start of the transition and during the transition.

Access to Facilities. Our on-site team will need sufficient and reasonable office or other working space. This includes furniture, reproduction services, telephones, fax machines, data lines, and other necessary equipment, supplies, and services (provided without charge) at in-scope State locations.

Access to Systems and Tools. We will need access to any systems necessary for the delivery of in-scope services. This includes access to and use of proprietary and third-party software and tools, and access to other applicable hardware, software, and network configurations. It also includes IDs and passwords our personnel will use in delivering services.

Other Requirements. We will need OMES to continue providing current state support for IT services and environments until all services are fully transitioned NTT DATA, per a sign off from the State. We will also need the OMES to designate an executive to represent State for all matters connected to the transition. This individual will need to have the authority to resolve escalated issues or problems and approve and accept deliverables. **Figure 51** outlines our typical transition communications plan.

Figure 51. Transition Communications matrix

Meeting	Purpose	Minimum Frequency	State Participants
Project Update	Project plan progress review	Weekly	Transition points of contact (POCs)
Service Area Progress Updates	Service-tower specific progress reviews	Weekly	Service area POCs including the incumbent provider's SMEs
RAID Review	Resolve risks, validate assumptions, and address issues	Weekly	The transition POC and any individuals assigned as owners
Status Reviews	Transition overall status update	Weekly	The transition POC and all service area leaders and POCs
Executive Update	Transition overall status update	Monthly	The governance team and executive stakeholders
Go-Live Readiness Reviews	Go-live readiness gate reviews	Typically: 90 days, 60 days, 30 days, 15 days, and 5 days, before go-live, then daily until go-live	The governance team and key SMEs

During transition planning, NTT DATA's transition project manager will work with the OMES to implement and execute a communication plan.

Transition Milestones and Documentation

During the detailed planning of this transition, our transition planners will place key milestones into the schedule. **Figure 52** lists these milestones and their respective acceptance criteria.

Figure 52. These milestones will provide the State assurance that this transition is on track.

Key Milestones	Date	Acceptance Criteria
Delivery of a detailed transition plan and a detailed transition schedule to the State.	30-45 days	- The detailed transition plan and detailed transition schedule have been reviewed and accepted in writing by State. - NTT DATA has conducted a project planning workshop, produced material that defines the execution plan for the project, and included the required activities for all services. - NTT DATA has updated the Microsoft Project Plan (MPP) created from the first project schedule and provided a baseline requirements traceability matrix (RTM). NTT DATA has included feedback from the project planning workshop and additional input gathered through operational transition planning meetings and knowledge transfer sessions. - NTT DATA has walked through the transition plan (both the MPP and the RTM) with the State to help with review.
Delivery of the procedure's manual.	45-60 days	- The manual includes all roles, responsibilities, work-steps and controls as required by the detailed transition plan and the detailed transition schedule. - The manual meets RTM acceptance criteria and NTT DATA has reviewed document components with the State. - The manual documents the processes and workflows needed to deliver the in-scope future mode of operations at the point of transition. - NTT DATA has reviewed managed services run process and procedures for final alignment to the State's outsourcing objectives.
Achievement (by NTT DATA) of the steady state readiness criteria defined in the detailed transition plan and detailed transition schedule.	90 to 120 days	- All of the tools, technologies, and connectivity required to be provided by NTT DATA are live and fully operational. - NTT DATA has completed knowledge transfer, information is fully documented, and this work is accepted by the State. - Baselines are recorded and documented. - NTT DATA is executing 100% of the services in production - The service management platforms are set up and ready to include any tools and process integrations needed for an initial go-live. - NTT DATA has completed a service management operational readiness checklist and the work described in the RTM. All agreed-upon test scenarios have been completed. - NTT DATA is reporting and measuring each of the performance indicators detailed in the State's RFP.
Delivery of the first monthly performance report.	120 to 150 days	The performance report contains applicable performance data, as described in the detailed transition plan and detailed transition schedule.
Delivery of an initial end user satisfaction survey.	120 to 150 days	NTT DATA has conducted an initial end user satisfaction survey to evaluate the satisfaction of State users, in accordance with service desk requirements.

Key Milestones	Date	Acceptance Criteria
Delivery of a report on the initial end user satisfaction survey.	120 to 150 days	NTT DATA has developed a report that includes detailed analysis, external benchmarks, key findings, and insights provided by an independent survey provider.
Delivery of the first services manuals.	120 to 150 days	NTT DATA has delivered a data center services manual, a service desk service manual, a workplace services manual, and a data network services manual. These documents detail tower services.
Ownership of delivery by NTT DATA.	120 to 150 days	NTT DATA account delivery team and governance processes are set up and ready to launch.

In addition to these milestones and the associated work, NTT DATA's transition team will also provide other documentation. **Figure 53** identifies this documentation.

Figure 53. As part of this transition, NTT DATA will create these documents.

Document and Purpose	Approach
Project Schedule. This document will capture, track, and manage tasks, dependencies, timelines, and resources.	We will assign a master scheduler who, will develop a detailed project schedule. We will use this schedule to track and manage the transition project, proactively measuring and managing progress. The project schedule will be the key artifact document that follows the completion of transition planning.
RTM. The transition requirements traceability matrix will capture and track all contract requirements related to the transition.	The RTM will be a comprehensive workbook that captures State business objectives and associated requirements in the contract. The RTM will also capture and define associated acceptance criteria to be used to demonstrate that NTT DATA has met these implementation requirements.
Discovery Gap Analysis. We will review gaps between the current state and proposed future state and make recommendations for remediation.	Through discovery, we gain a full, detailed understanding of the current state of service delivery and support as well as interrelated and interfacing services. We compare the results of this discovery with the proposed future state solution to identify gaps. We review major gaps in detail to determine if any remediation efforts are needed. Once the discovery effort is complete, we will review the results with the State.
RAID. Documentation. This documentation will capture, and manage all risks, assumptions, issues, dependencies, and related information.	NTT DATA tracks and manages all identified RAID items from the time we identify them until they are mitigated or accepted. As noted, we would expect to have a weekly RAID review with the State on the status of RAID items. Any RAID items that remain open after go-live will be transitioned to the steady state account team for future action as needed.
Process and Procedures. We will capture information on future state process, procedures, and workflows.	We use ITIL-standard managed services practices to deliver services. With that said, we will create processes, procedures, and workflows for new services or for updates or changes to services. We document this information in a services interface guide, which we will update during transition and provide to State for walkthroughs and approvals. This will be a living document for the life of this engagement.

C.20.6 Critical Assumptions

The State of Oklahoma will continue to deliver all existing in scope services and maintain all contracts related to such services until they are successfully transitioned to NTT DATA.

- State of Oklahoma will assign a transition manager or equivalent, who will have approval authority on all things transition with exception of decisions requiring executive governance approval.
- State of Oklahoma and its third-party providers will materially participate in the transition in support of the agreed to project schedule and follow the NTT DATA transition methodology and approach.
- State of Oklahoma will make available subject matter experts to the facilitate the discovery, transfer of knowledge and full understanding of the existing service support state according to the agreed to project schedule.
- State of Oklahoma will provide sufficient and timely access to all systems, facilities and operations required for NTT DATA to perform the implementation as well as delivery the services.
- State of Oklahoma will provide all current documentation and support artifacts used to deliver the existing in scope services.
- State of Oklahoma will provide timely (3-5 business days) approvals for all decision and deliverables acceptance in support of the agreed to transition project schedule.
- State of Oklahoma will provide the necessary business and operational change window(s) as required to transition services to NTT DATA.
- Any State of Oklahoma tools, technology and software planned to be used by NTT DATA to deliver the services are functionally setup and ready to provide such support or will be able to during the implementation period.
- If required to deliver any services as well as report on them, State of Oklahoma will allow an open database connection (ODBC) or equivalent between both parties applicable systems for service performance or reporting.

C.20.7 Acquiring and Retaining Resources

Overview

Overall, NTT DATA has more than 80 recruiters working throughout the United States to identify talent that we can put to use on behalf of the organizations we serve. Our recruiters maintain an active pipeline of talent flowing to our company by using a range of strategies. We maintain an updated internal database of thousands of individual candidates. We also accept professional referrals, participate in industry-based networking, use social media, and monitor leading job boards.

At the center of our personnel matching process is our Resource Management Team. When new needs emerge, the resource manager takes responsibility for identifying promising candidates within our company. They also work with our recruiters to identify and hire talented new IT professionals from outside our company.

Given the size of NTT DATA and the ongoing investment we make in recruiting, we are often able to staff projects with people already employed at our company. NTT DATA has more than 120,000 employees; this includes IT professionals who become available for new challenges as they successfully complete other projects for our clients. We also have the ability to reach out to our affiliate companies for support when necessary.

In other cases, we may look outside the company to meet our resource needs. When we do so, our resource managers work with three externally focused recruitment teams:

- **NTT DATA's Talent Acquisition Team** – This is the team dedicated to identifying new, fulltime salaried and hourly employees for NTT DATA. If we see a hiring need, this team identifies candidates for fulltime employment at our company.
- **NTT DATA Strategic Staffing** – This is our strategic staffing business unit devoted to sourcing top IT talent on an as-needed basis for our customers. For more than 30 years, NTT DATA Strategic Staffing has made specialized IT expertise available to our clients when needed, and in volume when necessary. The personnel supplied by NTT DATA Strategic Staffing are typically hourly workers or individuals working with our company as independent contractors.
- **NTT DATA's Vendor Management Group** – This team cultivates and manages relationships with other IT companies who can serve as subcontractors to us in cases where we need to augment our personnel or the personnel we provide clients. We maintain relationships with both major IT companies and small businesses, including woman- and minority-owned companies.

The technology at the center of our talent management process is iCIMS, a web-based talent management and applicant tracking system from a company with the same name. iCIMS contains profile data and resumes for all of our current employees as well as external candidates. It also contains resource requests we have received for staffing. Our recruiters and resource managers rely on iCIMS to keep track of job candidates and also to quickly exchange information about our clients' evolving staffing needs.

Recruitment

As we have indicated, our search for personnel always starts with a careful review of the talent available within our 120,000-employee workforce. This is a good place to start because these are the IT professionals we know best. Our project managers have had an opportunity to evaluate the skills and strengths of our colleagues, and this means we are in a strong position to carefully match these IT professionals to the State of Oklahoma's needs.

When we look outside the company, our recruiting process is straight forward. We maintain an employee referral program to encourage our staff members to identify talented IT professionals. We also:

- Advertise
- Participate in job fairs, open houses, and trade shows
- Monitor job boards and social media sites such as LinkedIn
- Engage in campus recruiting efforts
- Network with professional organizations such as the Project Management Institute and reach out to such organizations when we have openings to fill
- Work with placement agencies

Overall, between our Talent Acquisition Team, NTT DATA Strategic Staffing, and our Vendor Management Group, we have more than 80 recruiters across the United States working to identify talent that we can put to use on behalf of the clients we serve. They are highly trained, they follow structured processes, and they are managed through the use of weekly and monthly performance objectives that encourage them to dependably deliver IT professionals that meet the specialized needs of our clients.

Assessment and Screening

Once we have identified possible candidates, our recruiting teams follow structured assessment and screening processes in order to deliver the best available talent to our clients. While each of our recruiting teams' processes differ somewhat, the overarching goal is to put candidates through a rigorous screening process that includes interviews led by professional recruiters, technical specialists, and senior NTT DATA managers who understand the specific challenges our customers are facing.

Assessment. First, our recruiters carefully assess each candidate's skills based on a resume and other information available to them, looking for a match with the needs of our clients. Our recruiters look for:

- Technical competency
- A professional attitude and image, ethical work habits, and a commitment to quality
- Excellent verbal and written communication skills
- Flexibility and willingness to adapt to changing environments
- Dedication to achieving client satisfaction

Also, as part of our hiring process, our recruiters spend time verifying the location of the candidate, employment eligibility in the United States, and present availability. It is also our policy at NTT DATA to obtain three professional references for any employee who joins the company. Our recruiters check these references.

Screening. Once candidates clear an initial assessment, our staff will conduct an interview by telephone, by video conference, or in person. Usually, the first interview is led by a professional recruiter. We also conduct interviews with technical specialists or NTT DATA senior managers who understand the specific challenges our client is facing. The input of our technical experts is important, as it helps us assess candidates' skills to make sure they meet or exceed the qualifications sought by our clients.

The goal is to match the candidate with NTT DATA and client needs, the client environment, and the other members of the project team. A candidate must have more than the right set of technical skills to succeed; we also look for overall suitability in terms of professional aptitude, attitude, career aspirations, and potential for future growth.

Background Checks. We understand the importance of stringent background checks in maintaining workplace security and protecting our reputation as a quality vendor with well-qualified and reliable IT professionals. Once personnel are selected, we will perform background checks according to the specific requirements. This will include validation of a Social Security number, U.S. citizenship/immigration status, a criminal background check, a verification of past employment and education/professional credentials.

Once we have found the best candidate, our human resources team will guide the onboarding process, bringing each IT professional quickly up to speed and facilitating their integration with the project team. We will strive for:

- An accurate matching of skills to project needs
- Cultural compatibility
- A quick onboarding process in the interest of immediate productivity
- Ongoing support to promote OMES continued satisfaction

Committed to Diversity

NTT DATA is committed to meeting small business goals for minority-owned business enterprises (MBEs) and women-owned business enterprises (WBEs), which we understand to be 15 percent and 10 percent, respectively, for the total dollar value of the contract.

In order to meet these goals, NTT DATA has obtained commitments from seven different State-certified MBEs or WBEs to work with us for this engagement. We will highlight these companies in our administrative submittal.

We are confident that, together with these partner companies, we can meet your PeopleSoft and Oracle-related staff augmentation needs with a high degree of quality.

In the next section, we will discuss how we specifically plan to meet your timelines when you issue staffing requests, or when we need to replace an existing NTT DATA consultant.

Retention and Attrition

NTT DATA has consistently demonstrated our ability to attract and retain highly skilled personnel. For example, we have consistently achieved turnover rates lower than the industry average for IT services companies.

We track our global attrition rates annually. Our numbers show that, in North America, our attrition rate is 15.7 percent, well below current industry levels (which range from 22 to 25 percent). We review our retention policies annually at the corporate level, by each country we do business in, and by each of our business units so that we identify employee retention strategies that promote maximum engagement. In order to protect our clients, we provide our employees with offer letters that they sign and return to NTT DATA. We also pursue a range of other strategies to deliver first class services to all of our clients—which we know rests in part on our ability to retain employees who our clients have grown to trust.

While all of our staff are considered “at-will” employees, we recognize that staff turnover is costly and disruptive. We value our employees and understand the importance of retaining our staff and offering them job satisfaction.

We attract highly qualified personnel, in part, by offering competitive compensation packages, performance incentives, and career development opportunities. We also try to attract and retain staff by fostering a positive work environment that includes:

- **Intrinsic Personal Interest** – activities that are personally interesting and worthwhile in their own right.
- **Challenge and Stimulation** – work that provides challenges of sufficient difficulty so that addressing them requires a satisfying use of mental agility.
- **Personal Involvement** – work that our employees care about, or that supports a cause that matters to them.
- **Significance** – tasks that make a real contribution and foster a feeling of employee impact.
- **Recognition** – employee efforts are recognized and appreciated. They want to be valued as a contributor and feel that their work matters.
- **Influence** – the ability to have some say regarding the job and the overall enterprise. Employees want to feel that the organization accounts for and values their input.
- **Creativity** – opportunity to contribute ideas and solutions and to receive support and recognition for such contributions.

- **Independence** – the ability to work independently and make decisions autonomously without constant scrutiny.
- **Security** – the reasonable prospect of dependable, ongoing employment.
- **Positive Environment** – a work environment that fosters inclusion and respects the diversity of the workforce.

Figure 54 highlights some of the strategies we have taken to retain employees. At a broad level, these strategies include offering our employees a sense of belonging and ownership, consistently improving employee satisfaction levels, delivering a high level of employee service, and focusing on employee career needs.

Figure 54: NTT DATA pursues a four-pronged strategy for minimizing employee attrition.

Creating a Sense of Belonging and Ownership	
• We provide a structured orientation that inducts new employees into the company and its values. • We maintain a “buddy system” that aligns new employees with senior associates who become their mentors. • We maintain a range of communication channels with employees, including regular town halls and a company intranet.	• We organize regular communication and feedback sessions with senior management teams. • We offer a range of workplace programs including a scholarship program for the children of our staff. • We encourage employee involvement in frequent company events, such as picnics or cooking competitions.
Consistently Improving Employee Satisfaction Levels	
• We monitor employee satisfaction through surveys, town halls, and question-and-answer sessions involving senior management teams. • We have dedicated teams to manage and resolve issues related to employee satisfaction.	• We maintain performance incentive programs designed to provide recognition and rewards for exceptional and continually improving performance. • We offer special incentives to help attract and retain the best people.
Delivering a High Level of Employee Service	
• We deliver prompt, responsive employee service through a state-of-the art, web-based PeopleSoft human resource management system and an employee portal hosted on NTT DATA's intranet.	• We maintain dedicated resource management and employee relations personnel who are available 24x7 to respond to issues faced by our employees.
Focusing on the Career Needs of Our Employees	
• We require regular performance reviews—including an annual performance review—to provide our project teams with timely feedback. • We require employees to maintain individualized training plans that address skill-, knowledge-, and attitude-related career needs and the need of our clients. • We maintain a project management training program that provides NTT DATA project managers with the training and on-the-job experience necessary to achieve the Project Management Institute's Project Management Professional certification	• We offer web- and computer-based training, onsite courses delivered by NTT DATA instructors, and other regularly scheduled education and training programs. • We offer tuition assistance to provide our personnel opportunities to expand their skills to keep pace with technological change. • We provide our employees assignments with progressively greater challenges. This helps help develop skills and improve job satisfaction by providing our employees the opportunity to specialize and diversify.

C.20.8 Employee Rebadging Program

Transitioning employees into NTT DATA is a fundamental competency and a vital part of our company's DNA. We have grown through multiple acquisitions and outsourcing partnerships, including an initiative in 2012 that brought together more than 18,000 employees from six different companies. In 2016 NTT DATA purchased Dell Services, transitioning approximately 24,000 new employees into the NTT DATA family.

By transitioning to NTT DATA, employees have an opportunity to grow their career through a broad range of capabilities, including consulting, applications services and ERP, infrastructure services, BPO services, business intelligence, analytics and performance management.

NTT DATA welcomes the opportunity to interview and potentially transition displaced and interested State employees. We have estimated up to 20% of our planned State of Oklahoma staffing to be available to transitioning employees.

Immediately upon down-select, the State and NTT DATA HR teams will begin the detailed employee transition planning, which consists of an overall communication plan and individual consultations, HR negotiations, offer letter process, scheduling employee town halls, and individual hiring meetings. We will work to create a plan that is Statewide in nature so the activities in different counties occur simultaneously whenever possible.

Once we are in a position to meet directly with identified employees, NTT DATA proposes holding a group kick-off session. At this meeting, we would introduce NTT DATA, our history, values, and products. We would also talk through the employee transfer process so the employees know what to expect. This session would close with a group question and answer session. Along with relevant business leaders, a member of the NTT DATA transition and HR teams would be in attendance to respond to all employee queries.

Following the kickoff meeting, all interested State employees will be invited to attend individual meetings where they will have the opportunity speak with NTT DATA account and tower leaders. After these individual meetings, all selected State employees will receive a personal offer letter from NTT DATA.

Upon offer acceptance, the candidates will be able to complete their employment application, begin the background check process, and complete any additional new hire paperwork electronically. NTT DATA HR will keep the State informed during the offer process as to who has accepted and who may decline our offer. To help navigate the State employees throughout the entire hiring and onboarding process, we have an HR team dedicated to helping make the employee experience seamless, efficient, and above all—informative.

Transitioning employees will all go through new hire orientation. NTT DATA has an employee orientation program to ease the transition into our culture and provide a comprehensive understanding of the client environment. Orientation activities are initiated through our New Employee Orientation (NEO) portal, which gives employees an overview of NTT DATA, benefits available to them, and a general sense of what to expect in the first several weeks.

Employees participate in additional onboarding activities, led by either their people-care manager or project manager.

Beginning with an overview of NTT DATA and the industries we serve across numerous technical practices, this onboarding includes an overview of time and expense reporting, as well as an introduction to the extensive training resources employees can use to sharpen their skills.

The NTT DATA manager plays an important role in orienting new employees by sharing an overview of the business unit, organization chart and business unit goals and how those translate to individual goals. We also develop training plans for new employees to help them continue building their technical skills.

New Employee Orientation Portal (U.S.)



After orientation, managers continue playing an important role in helping new employees navigate NTT DATA, including where they fit into the business—by practice or industry—as well as the specific role they have in serving our clients. As the graphic below outlines, the manager creates an onboarding process that includes an overview of the business, as well as functional onboarding focused on account- or project-specific details.

New Employee Orientation	Business Onboarding	Functional Onboarding
 - New Employee Orientation (NEO) Portal for all employees contains self-paced content distributed across the first 3 weeks - Links to learning modules with overview of benefits, HCM systems, and tools - Survey to collect feedback - In-person orientation offered at some locations	 - Manager-led overview of NTT DATA industries and organizations - Network-building across various organizations or practices - Knowledge-sharing opportunities for new hire - Short- and long-term goals tied to corporate goals	 - Account- or project-led training focused on specific department or role - Client-specific information shared such as: - Key contacts - Contract deliverables and expectations - Service level agreements - Client location specifics - Work history

C.20.9 Training Plans

NTT DATA recognizes that OMES like many other large customers may require specific training in accordance with State policies for all employees, contractors, and subcontracts that operate in support of this engagement and/or have access to the State's networks. NTT DATA and

partners Dell and Sterling will work with OMES to identify the necessary training and establish a plan to ensure this training is conducted in a way that meets OMES's requirements.

We will provide training to orient our future service delivery teams (**Figure 55**) with the steady-state processes and tools. In addition, the service delivery teams will attend an orientation session to learn about the State's business, culture, values, and goals.

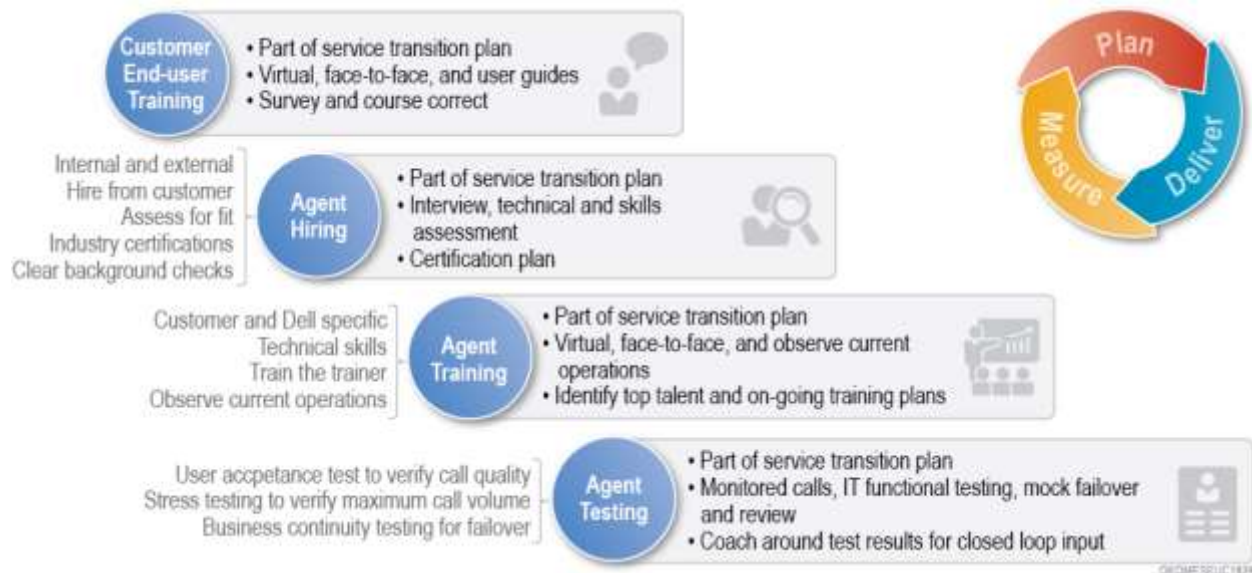


Figure 55. Overview of training for service desk

NTT DATA will provide yearly reviews and updates of all training materials so that they remain in-line with the latest best practices and processes. We will also review incidents and trouble tickets throughout the contract to identify agencies that may require additional or refresher end user training to reduce errors and increase understanding. We will deliver this training either in-person or through on-line training, based on end user availability.

NTT DATA has a dedicated talent development team that oversees training programs that develop cross-disciplinary competence among our employees. These programs span a wide range of technologies, industry domains, and process areas, and they cover behavioral skills and project and program management skills. NTT DATA offers both career development programs and technical programs to employees, and we reinforce these training options by setting mandatory employee training goals.

Additional training that increases the abilities of our employees include:

Career Development Programs. NTT DATA has made significant investments in employee professional development, for example, we offer a tuition assistance program. We also offer seminars and webinars led by our own industry-recognized experts as well as training from external vendors. Most of this training is coordinated by an internal learning management system. These resources help our employees improve skills and stay current on industry trends.

Technical Programs. NTT DATA's technical programs vary according to the needs of our clients. For example, we offer structured certification programs in key areas of project delivery and management. Also, NTT DATA maintains a Learning and Certification Institute that offers development programs and exams designed to certify employee skills in key business areas. Examples include:

- **NTT DATA Technology Partner Training.** NTT DATA maintains partnerships and alliances with other technology companies, among them Oracle, EMC, VMware, Citrix, Microsoft, and IBM. Based on these relationships, we are frequently able to make discounted training available to our staff. In some cases, when demand for training is strong, we will host these training programs ourselves. (In other cases, we send employees off site for training.)
- **Project-Specific Training.** We provide engagement-specific training so that our delivery personnel have the technical skills and industry understanding necessary to perform efficiently.
- **Domain-Based Programs.** NTT DATA provides access to internal SharePoint sites (communities of practice) and online forums that enable our personnel to share information related to the specific industries in which we supply services. We also offer additional training in specific industries without a formal certification program.
- **Development Goals.** At NTT DATA, learning is an important part of every employee's development strategy. All employees—whether technical or managerial—are assigned a minimum number of training hours each year. Completion of this requirement is an important factor in our annual evaluations of NTT DATA employee performance. We expect our employees to challenge themselves and build new skills.

C.20.10 Overall Approach and Methodologies

NTT DATA has built credibility in transition by delivering predictable and measurable client-centric outcomes. The basis of which is a proven framework gleaned from a long history of successful, global outsourcing engagements across industry verticals using best-in-class methodologies, framework, and team members and well-defined practices for managing people, processes, and technology simultaneously.

Our transition approach is based on a mature methodology with proven project management principles, yet it has the flexibility to integrate with the State of Oklahoma's current operational mode and aligned to future state framework. The following graphic depicts NTT DATA's transition approach.



Figure 56: Transition Approach

A clear roadmap coordinates the actions of many teams into the desired outcome.

Due diligence is performed to finalize solution design prior to concluding contract negotiations. Vital business or IT information that was not previously available is provided and remaining assumptions are validated. Typically, due diligence takes 1 to 2 weeks and is contingent on obtaining the necessary knowledge that is outstanding and validating any remaining assumptions from either the State of Oklahoma or NTT DATA. Upon selection, NTT DATA looks forward to the alignment workshop with the State of Oklahoma to set the foundation and groundworks for the transition.

Following the alignment workshop with the State, the NTT DATA Transition Manager hosts an internal solution review meeting prior to project start-up to discuss the final solution and contractual agreements with the proposal and solution teams. The meeting affords the transition manager and service area leads the opportunity to ask clarifying questions and for the solution team to pass on artifacts for the detailed design and planning.

Next, the Transition Manager facilitates a kick-off project initiation and planning meeting with the attendance of key stakeholders from both organizations to include any third-party advisors or providers. The group reviews the project timeline, highlighting major project milestones and discusses the State of Oklahoma or incumbent resource availability and time commitments necessary to perform discovery and knowledge transfer as well as other transition execution, management, and control activities.

Governance for this effort is finalized with the State where applicable at project start-up to provide oversight, direction, and decision-making for issues or risks that have a direct effect on network managed services transition project. As always, our governance model consists of stakeholders from both organizations who will actively participate in the best interests of the project, the business relationship, and the organizations.

Detailed schedules, work activities, and other project artifacts required to deliver a successful transition are finalized in preparation for execution, control, and measurement. The contract deliverables are reviewed, and acceptance criteria are defined. Gaps, both contractual and/or operational, are documented. Risks and issues are identified, analyzed, and the appropriate mitigation responses are established.

Knowledge acquisition, discussed in detail in proposal **Section C.20.1**, is an integral part of discovery and begins with gathering the State of Oklahoma's existing service delivery documentation and artifacts for review and foundational operational planning. Knowledge transfer is performed with the State's and/or incumbent service provider's SMEs to capture relevant knowledge and data for analysis and planning. Outputs from the discovery process are used to document the current state of the business and current mode of operation (CMO) support and the IT landscape prior to finalizing the steady-state design. Upon completion of discovery, process gaps are captured for future analysis.

C.21 Exit Strategy and Plan

Transition upon Termination of Agreement

Initialization of an Exit Plan

In the event that the State provides NTT DATA with a termination notice, we will provide the State (and any service partner designated by the State) with relevant information and agreed-upon assistance during the exit period. Our responsibility will be to hand over knowledge and hand off operational responsibility to the State or to its designated partner in a timely manner so as not to negatively impact service delivery. This will include, governance, financials, technology, security, documentation transfer, works in progress, and human resources. During this exit period, we will work with the State (or designated third party(s)) to continue delivering

quality service while fostering a seamless transition of services to soon be outside our scope. All system stakeholders will remain motivated for change by working with the incoming contractor to identify beneficial planned system updates and creating messaging around those improvements showing how they will help all end users and OMES management.

Our efforts will be guided by an exit plan that describes all tasks, roles, and responsibilities for each party in order to maintain cross-organizational alignment, and also includes a schedule for the transfer of activities. We will use all reasonable efforts to maintain this plan and keep it current (at a minimum each year). As part of this plan, we also will transfer knowledge relevant to service delivery. Examples of knowledge we will transfer include information on ticket history, operations manuals, the knowledge base, technical specifications, and processes used for measuring services.

Exit Guidelines

Our standard practices for an exit transition are designed to provide a transparent, seamless, orderly, and uninterrupted change of service providers. When the time arrives for an exit transition, we will manage and support it as a critical project with clearly defined objectives, activities, tasks, schedule, and milestones. Through these activities, we will:

- Enable the State or the next service provider to take full ownership of some or all in-scope services “as-is.”
- Support the new service provider’s reasonable requests to assess the environment and processes.
- Provide best practices and lessons learned to influence the provider integration.

We also will support risk management reviews and actions to avoid disruption of service delivery during the exit transition. By establishing mutually agreed-upon roles and responsibilities, we will collaborate with the State to deliver a successful transition without surprises for the State’s stakeholders or any reduction in our high-quality service throughout the transition.

Return of Property

Before we begin the exit period, we will reach agreement with the State on a set of deliverables. Our provision of these deliverables will be formalized through a delivery tracking sheet or a project schedule.

As part of our exit transition, we will seek to hand over all information provided by the State that we used in delivering services. This will include documented standards and procedures that our team will update for the State. Other deliverables will include:

- **Equipment.** We will create a list of equipment provided to us by the State for use in service delivery so that we can return it as part of an exit transition.
- **Tools.** We will return all software licenses, accounts, and tools made available to us by the State for use in service delivery. We will work with the incoming provider to establish a plan to either transfer ownership of any new tools that our team brought into the environment or remove them.
- **Reporting and Dashboards.** We will hand over administration of reports and dashboards within the DOSO
- **Open Tickets.** Our team will continue to work tickets in support of SLAs throughout the exit period. We will establish a plan for the subsequent provider to assume ownership of all tickets as services go live.

- **Other Items and Information.** We also will return or transfer all other information and items provided to us by the State.
- **Knowledge Base.** The ServiceNow-based knowledge repository will already be owned by the State. We will provide the subsequent provider access to it.

Training and Documentation

We will work with the State during the exit period to provide relevant knowledge to the State or to designated partner. To support this work, we will make a SME available to answer questions for each area of service. The duration of this training will be agreed upon before the start of the exit period.

We are aware of the importance of good documentation in service delivery. Throughout the steady state period of this engagement, we will keep documentation up to date as we provide operational support. During the exit period, we will share this documentation with the new service provider or with the State as part of the knowledge transfer process.

Management Processes

Throughout the exit period, we will meet regularly with the State and any appointed new service provider to monitor the progress of all planned transition activities. These meetings will cover the transition project plan and any issues that arise with potential to impact the transition. Project team participants will include:

- Our team's delivery lead or transition manager
- The State service delivery manager or transition manager
- A service delivery manager or transition manager from the State's new client (if necessary)

Acceptance Procedures

While our handover will not officially be complete until the new provider goes live, we will set an earlier milestone to track completion of the knowledge handover. Per this milestone, our responsibility for the handover will be complete once knowledge has been fully transferred and disposition for equipment and tools has been resolved. After this point, activities will continue until go live, but these activities will not require dedicated transition management or SMEs from our team.

After the knowledge handover, we will continue delivering high quality services through our steady state team. Once the new provider has fully trained its staff, implemented its tools, validated its solution, and gained approval from the State, we will execute the tasks required on our side to shift the services to the new provider.

Organization, Roles, and Responsibilities

Figure 57 summarizes the roles and responsibilities we foresee for our team in an exit transition. If the State wishes, we can develop recommended roles and responsibilities for the subsequent provider and the State during our discovery process.

Figure 57. These are the roles and responsibilities we foresee for an exit transition.

NTT DATA Role	Responsibility
Transition Manager	Our transition manager will be responsible for leading our team's exit transition activities.
SMEs from all service towers	Individuals in these roles will provide knowledge transfer to new provider.

Since most of the ticket history information, documentation, and reports needed for knowledge transfer will already be in the State's instance of ServiceNow, it is likely that only minimal additional documentation will be needed during the exit period as shown in **Figure 58**.

Figure 58. Sample Exit Transition Documentation

Document	Purpose	Description
State Documented Standards and Procedures	Define and manage the processes and technical knowledge to manage service delivery	This is a State-owned document that will be managed by our team until the exit period.
Asset Inventory Reports	Maintain accurate inventories of spare and deployed hardware and software assets. Also, track assets to manage refresh, security compliance, and amortization.	Our team will use electronic means to manage inventories using NTT DATA supplied tools. Detailed asset reports will be delivered to the State during the transition period.

C.22 Customer References

C.22.1 Georgia Technology Authority (GTA) End User Computer Services

Contact Person	Name: Dean Johnson Current Employer: Georgia Technology Authority Telephone number: 404-307-5352 Mailing address: 47 Trinitiy Avenue SW, Atlanta, GA 30334 E-mail address: Dean.Johnson@gta.ga.gov
Client Background	The Georgia Technology Authority (GTA) currently manages the delivery of IT infrastructure services to 86 Executive Branch agencies and managed network services to more than 1,200 state and local government entities. IT infrastructure services encompass mainframes, servers, service desk, end user computing, disaster recovery and security. Managed network services include the State's wide and local area networks, voice, cable and wiring, and conferencing services.
Contract Date/Period	July 2009 - Present

The services NTT DATA currently provides to the State of Georgia through the Georgia Technology Authority include:

- Onsite end-user computing services
- Device as a Service consumption model
- Field tech support services
- An L2 service desk for end user computing services
- IT security, including anti-virus and anti-malware services for end user computing devices
- Full asset lifecycle management for end user computing devices
- Lease or purchase options for end user computing devices
- Configuration management for end user computing devices, including image management

NTT DATA Experience Relevance & Outcomes

- 41,000 devices
- 37,000 end users
- 100% SLA compliance for problem/incident handling
- Improving the customer experience while reducing operations and maintenance costs for the State of Georgia.
- **Innovations:** shift service desk contacts "left" to lower-cost forms of support, including self-service options - significantly improving the time needed to resolve service tickets

- Asset management and compliance services for software licenses
- Ongoing software support and software distribution
- Remote management services
- Project management services

We also provide an array of cross functional services, including service and product catalog management; service level management; problem, event, and incident management; business relationship management; technology planning; service asset and configuration management; and CSI.

C.22.2 Texas Department of Transportation (TxDOT) Managed IT Outsourced Services

Contact Person	Name: Casie Jordan, Director, Strategy and Portfolio Manager Current Employer: Texas Department of Transportation Telephone number: (512)302--2367 Mailing address: 3712 Jackson Avenue E-mail address: Cassie.Jordan@txdot.gov
Client Background	The Texas Department of Transportation, in cooperation with local and regional officials, is responsible for planning, designing, building, operating, and maintaining the state's transportation system to deliver a safe, reliable, and integrated transportation system that enables the movement of people and goods. This involves the state's entire transportation system, including its rail lines, inland and water ports, airports, waterways, and pipelines. The Agency is comprised of 32 divisions, consisting of 13,000 employees and 344 facilities across the state.
Contract Date/Period	June 1, 2013 – 2015 – December 31, 2019. The agency has already exercised the first of two 1-year options to extend the contract.

In mid-2013, NTT DATA transitioned into our role as the primary provider of IT services at TxDOT by rebadging 270 state workers from TxDOT to NTT DATA. We now maintain and manage the agency's IT systems with a team of close to 290 IT professionals. Our work for TxDOT is guided by a service level agreement (SLA) that sets specific benchmarks for performance and financial incentives to meet them and disincentives when they are not met. These benchmarks are growing more aggressive over time; a level of service that would have earned NTT DATA a bonus for strong performance in Year 1 of this engagement would represent poor performance in Year 5. An important reason TxDOT chose NTT DATA was because the agency sought help modernizing its IT systems. Using a distinctive application management outsourcing framework, NTT DATA has helped TxDOT identify immediate and longer-term optimization opportunities through continuous measurement, analysis, and optimization of its entire application and technology portfolio. In doing so, we have aligned our support activities to

NTT DATA Experience Relevance & Outcomes

- Up to 350 FTEs
- 15,000 end users supported
- 36 Divisions, 17 Agencies, and 335 locations supported
- 28% cost savings for the Agency
- Improved customer satisfaction from 42% to 75%
- 40% increase in ticket handling while reducing staff by 24%
- Recognized by the Agency with a "Gold-level Journey Towards Excellence" Award
- Freed up millions of dollars for TxDOT to invest in NTT DATA-led transformation projects that improved the overall IT enterprise.

the agency's business goals, reduced the total cost of ownership, and helped TxDOT address new needs as they emerge. An important dynamic in this engagement has been TxDOT's commitment to invest the cost savings we have produced into transformation projects that have further improved the agency's ability to serve the public and operate more efficiently. Activities we perform include:

- Dynamic Workplace Services
- 15,000 End-user support
- Service desk
- Desktop engineering, asset management, software distribution, and package build
- Field services: laptops, iPads, iPhones – 344 locations throughout Texas
- Depot services
- Data center technologies
- Mainframe support
- SCCM
- Database management
- Applications services
- Application management
- Cross functional services
- Incident, problem, change, and knowledge management using ServiceNow
- ServiceNow platform development and administration services

Transforming IT at TxDOT, our efforts in this engagement have been successful in several different ways. In our first two years, for example, we helped TxDOT drive down IT operating costs by 28 percent, from \$40.8 million in FY 2013 to \$29.2 million in FY 2015. We have sustained this 28% cost reduction, saving the agency about \$22 million over its first four years. Based in part on this savings, the agency has been able to fund multi-million dollar transformation projects. We have also improved customer service through our end user and service desk support by several different measures. For example:

- During the first four years of this engagement, we improved customer satisfaction from a score of 42% to 75%.
- We are handling 40 percent more tickets than before with 24 percent less staff. We are also consistently resolving more than 60 percent of tickets during the initial call.
- We reduced the average time needed to resolve an issue from an average of 37 days (when we assumed responsibility for providing IT services in mid-2013) to just 10.7 days in March 2015.

TxDOT has recognized us for our efforts to help transform the organization. In 2015, the agency honored NTT DATA with a gold-level Journey Toward Excellence Award, created to recognize teams at TxDOT for their efforts in developing or improving products, processes, or services by using quality management processes and principles. Usually, the agency's highway engineering teams are honored with the award; this was the first time a non-engineering organization was ever recognized with a Journey Toward Excellence award.

EUC. In providing end user computing services and help desk services, we support about 13,000 devices at about 335 different physical locations across Texas. We refresh each of these end user devices as part of a 4-year cycle, replacing about 25% of them each year. We also provide break/fix support in the field for these devices. TxDOT turned to NTT DATA for help in driving down IT operational costs and gradually modernizing its approach to IT. We have been successful here, driving down costs by using commercial best practices in order to free up revenue for TxDOT to reinvest in a series of modernization efforts.

Service Desk. By applying our “shift left” methodology, we eliminated a backlog of ~2,000 trouble tickets within the first year of the contract. We centralized multiple service desks that struggled with low quality and ineffective issue resolution. By instituting several operational, process, and logistical improvements, we reduced average issue resolution time by 71%. Currently, we handle 40% more tickets with 24% less staff and consistently resolve more than 60% of tickets during the initial call. Incident resolution at the service desk level increased from 43% to more than 70%, and we established a single point of contact for end-user support.

Device Management. We support a technology landscape that includes more than 800 applications; 25 different operating systems; 255 databases; 35 languages; and more than 30,000 devices (including desktops, tablets, VoIP telephones, and mobile devices). We successfully deployed 7,500 laptops after we introduced a centralized depot model for client hardware preparation and deployment. As a result, we improved time to deploy and consistency of the delivery process. In addition, TxDOT benefitted from improved secure mobility for end users through our delivery of 7,500 laptop refreshes, deployment of 3,000 iPhones and iPads in 12 months, and installation of Cisco AnyConnect VPN.

C.22.3 Reference 3: MedStar Health

Contact Person	Name: Ed Fisher, Chief Technical Officer Current Employer: MedStar Health Telephone number: 410-772-6989 Mailing address: 10980 Grantchester Way, Columbia, MD 21044 E-mail address: Edward.L.Fisher@MedStar.net
Client Background	MedStar Health, a non-profit healthcare organization provides quality healthcare for people in Maryland, Virginia, and Washington, D.C. through its 30,000 associates and 5,400 affiliated physicians. It operates more than 120 entities, including ten hospitals. MedStar has comprehensive services including primary, urgent and subacute care, medical education and research. MedStar also operate nursing homes, senior housing, adult day care, rehabilitation and ambulatory centers, as well as maintain MedStar Physician Partners, a comprehensive physician network in Maryland and the Washington, D.C., region. 30,000 associates and 5,400 affiliated physicians.
Contract Date/Period	January 2009-January 2020

NTT DATA performed these relevant services:

- Dynamic Workplace Services

- Service desk, 38,000 end user support
- Desktop engineering, asset management, software distribution, and package build
- Field services: laptops, iPads, iPhones
- Depot Services
- Cross functional services
 - Enterprise architecture
 - Incident, problem, change, and knowledge management using ServiceNow
 - ServiceNow platform development and administration services
- Data Center Services
 - Network services/ Telephony
 - Server management, AD, Citrix, VMware, storage, backup, DR
 - Messaging
 - Database management
- Security
 - Security services
 - Security engineering

NTT DATA Experience Relevance & Outcomes

- 38,000 end users supported
- Reduced unplanned outages
- Transformed datacenter technologies to 80% virtualized environment
- High focus on root cause analysis
- Client views NTT DATA as a supplier with Integrity

C.23 Value Add

Workspace-as-a-service offering

The goal for modern workplaces is to make device management easier and faster while being more secure in order to maximize end user experience and productivity. We have many methods to achieve these goals including classic configuration management, modern

Managed Virtual Workspace Services

End-to-end managed services from virtualization experts



NTT DATA will remotely manage your on premise, third-party hosted, or public cloud hosted virtual desktop and application infrastructure

- ✓ Our highly experienced, certified engineers will manage your virtualization solution
- ✓ All leading platforms supported: Citrix, VMWare, Microsoft, AWS Workspaces, Azure
- ✓ Vendor agnostic, practice-based approach for partnership value and collaborative thought leadership
- ✓ End-to-end support from the physical layer to the virtual desktop
- ✓ Engineering | Operations | Delivery Management | Service Management | NOC

lightweight management and even Virtual Desktop Infrastructure (VDI). VDI, in a general sense, is the ultimate method to decouple applications and user data from the endpoint device. This abstraction allows for a wide variety of endpoint devices such as Windows, Apple, Linux, Raspberry PI, iOS, Android or even BYOD. Refresh and replacement of the devices is faster and less complex because all the applications and data reside in a secure data center that is centrally managed. Applications often perform better in the data center because they have proximity to any backend dependencies. User are free to work from office, home, hotel or wherever they have a business need because no data or corporate apps reside on the endpoint which sometimes gets lost or stolen. It is easier to keep VDI systems up to date in the data center so they are less likely to be compromised with attacks like Ransomware which typically target well known (and unpatched) vulnerabilities. If they do get compromised, they are disposable or temporary so they can

simply be rebooted and they return to their previous golden state. If there is a sudden need for growth, new virtual workspace servers can be provisioned rapidly. VDI has many advantages but it can be complex. At NTT DATA, we have a team of experts that provide end-to-end support across the entire VDI stack with certified resources specialized in both Citrix and VMware Horizon. We are a leader in provision of application and desktop virtualization solutions, responsible for millions of managed sessions to more than a hundred complex clients. Our team can provide a complete holistic VDI solution on-premise, in the cloud or a hybrid combination of both. We also offer remote support for client-owned infrastructure. Our offering is vendor agnostic, practice-based approach optimizing value and collaborative thought leadership. We differentiate our offerings in the marketplace by bringing a user-centric and analytics data-driven approach to every client engagement. We do not

Workspace-as-a-Service

Hosted desktops and applications delivered from NTT DATA's cloud



Your images, operating systems, and applications delivered securely from NTT DATA facilities and managed by our virtualization experts

- ✓ Right-sized resource delivery delivered from Citrix, VMWare, Microsoft platforms
- ✓ Vendor agnostic, practice-based approach for partnership value and collaborative thought leadership
- ✓ Architecture designed for fault-tolerant high availability and to allow end-user device mobility and flexibility
- ✓ Rapid expansion and user provisioning
- ✓ Includes virtual infrastructure, managed services, end-user-analytics

rely on one particular technology or delivery model. Through the use of analytics, we review how workplace services are currently consumed, what applications are actually running, how often they are launched, how often is the application in the foreground with focus versus being minimized, how much memory/cpu/network resources are consumed, etc. This helps us better understand how to manage workloads and assess any transformational requirements. Across our client base, NTT DATA has picked up many virtualization projects that have stalled or failed. We consider the need for analytics a key aspect of our ability to deliver. Anyone can install the Citrix software but the true value is the ability to match a specific user type with the right delivery model to maximize the end user experience.

NTT DATA has a strong offering in this space, both operational and transformational to ensure we maintain our clients' goals of flexibility, agility and security. We would welcome the opportunity to discuss options further with the State of Oklahoma.

Tech Bar/ Kiosks

For mobile workers with multiple devices — a laptop, a smartphone and maybe even a tablet — chances are there is a need for these devices to work together and allow easily access to key applications. When it comes to configuring these devices, which would be best? Call the service desk and work through a complex series of steps over the telephone? Or meet face-to-face with a technical support expert, who specializes in mobile technology, to quickly resolve technology issues? Like a growing number of users, the popular option has become the real-time, face-to-face option. The traditional service desk can be highly effective in supporting desktop devices, applications and connectivity issues. But users increasingly want an in-person support option that is similar to what they receive for their personally owned devices. And many mobile devices lack remote diagnostics, which means the traditional service desk is not always able to provide adequate support for handheld devices.

That is why more and more IT organizations are rolling out walk-up service centers. In fact, Gartner estimates that 50 percent of large enterprises will offer walk-up services within the next three years.

Walk-up service centers promise to offload traditional service desks, significantly improve user satisfaction and, ultimately, increase employee productivity. But to get the most from walk-up service centers, they need to be implemented carefully in order to operate them effectively and measure the right results.

What are IT Walk-Up Service Centers?

IT walk-up service centers are on-campus, in-person facilities where employees can stop by to get help with their IT equipment. Walk-up service centers specialize in supporting technology devices the end user carries — smartphones, tablets and laptops. Inside the walk-up service center, technical experts offer on-demand or by-appointment support for issues like hardware repairs, technology refreshes and software upgrades. Employees can choose to wait for their devices, or drop them off for later pickup

Disposal Service for State Owned Devices

We understand the state retains devices which are outside of their lease arrangements with current



OEMs. Our solution provides the ability to support ad-hoc OMES requirements to remove these devices from the work environment, identify any residual/disposal value, perform data wipes and either resell or perform destruction services as needed. These services include the same chain of custody tracking as listed in C.11 and will generate certificates which will be submitted to the state as a proof record. In support of our understanding that no magnetic media devices are able to be included in the resale of any devices, our processes include ensuring no devices leave the state without having hard drives removed/wiped/ physically destroyed, or even retained per State of Oklahoma requirements. In all cases, our team will also update the Asset Tracking Database with the updated disposition of the devices within the database.

D. Section Four – EITA Compliance (E.13.4)

D.1 Dell Precision 5820

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Name of Product/Version

Dell Precision Tower 5820

Product Description

Dell Precision Workstation that comes pre-installed with Windows® operating system.

Date

August 24, 2018

Contact information

Susan Samok (susan.samok@federal.dell.com)

Notes

This hardware product serves as an end-client device and includes computer processors, memory, storage, etc. The hardware product comes pre-installed with the Windows® operating system. The VPAT® for Windows® is available from [Microsoft Accessibility](#). VPATs® for Dell bundled software as well as Dell product support documentation and support services can be provided upon request. Also, since EN 301 549 conformance is not being reported, we have removed references to its criteria in WCAG 2.0 tables to make the conformance report more compact.

Evaluation Methods Used

This hardware product was evaluated for accessibility standards conformance using established best practices and manual inspection tools such as a Pressure/Force Meter, Color Contrast Analyzer, Sound Meter, etc.

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Applicable Standards/Guidelines

This report covers the degree of conformance for the following accessibility standard/guidelines:

Standard/Guideline	Included In Report
Web Content Accessibility Guidelines 2.0, at http://www.w3.org/TR/2008/REC-WCAG20-20081211/	Level A: No Level AA: No Level AAA: No
Revised Section 508 standards as published by the U.S. Access Board in the Federal Register on January 18, 2017 Corrections to the ICT Final Rule as published by the US Access Board in the Federal Register on January 22, 2018	Yes (except Chapter 5)
EN 301 549 Accessibility requirements suitable for public procurement of ICT products and services in Europe, - V1.1.2 (2015-04) at http://mandate.376-standards.eu/standard	No

Terms

The terms used in the Conformance Level information are defined as follows:

- **Supports:** The functionality of the product has at least one method that meets the criterion without known defects or meets with equivalent facilitation.
- **Supports with Exceptions:** Some functionality of the product does not meet the criterion.
- **Does Not Support:** The majority of product functionality does not meet the criterion.
- **Not Applicable:** The criterion is not relevant to the product.
- **Not Evaluated:** The product has not been evaluated against the criterion. This can be used only in WCAG 2.0 Level AAA.

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WCAG 2.0 Report

Tables 1 and 2 also document conformance with:

- **EN 301 549:** Chapter 9 - Web, Chapter 10 - Non-Web documents, Section 11.2.1- Non-Web Software (excluding closed functionality), and Section 11.2.2 - Non-Web Software (closed functionality). NOTE: Since EN 301 549 conformance is not being reported, we have removed references to its criteria in WCAG 2.0 tables to make the conformance report more compact.
- **Revised Section 508:** Chapter 5 – 501.1 Scope, 504.2 Content Creation or Editing, and Chapter 6 – 602.3 Electronic Support Documentation.

Note: When reporting on conformance with the WCAG 2.0 Success Criteria, they are scoped for full pages, complete processes, and accessibility-supported ways of using technology as documented in the [WCAG 2.0 Conformance Requirements](#).

Table 1: Success Criteria, Level A

Notes: Table has been removed as this Accessibility Conformance Report does not include reporting of conformance to WCAG 2.0.

Table 2: Success Criteria, Level AA

Notes: Table has been removed as this Accessibility Conformance Report does not include reporting of conformance to WCAG 2.0.

Table 3: Success Criteria, Level AAA

Notes: This table has been removed as this Accessibility Conformance Report does not include reporting of conformance to WCAG 2.0 Level AAA.

2017 Section 508 Report

Notes: This section includes reporting on Section 508 Chapters 3, 5, and 6.

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Chapter 3: Functional Performance Criteria (FPC)

Notes: This table documents instances of equivalent facilitation in the product. Rows without equivalent facilitation are marked 'informative only.'

Criteria	Conformance Level	Remarks and Explanations
302.1 Without Vision	Supports	Windows® provides a method to adjust timing of sleep settings (timed response, 407.5). The Windows® OS provides equivalent facilitation for the power button visual status indicator by playing an audio notification sound on startup and supporting user settings for audio notifications including system sleep and power down (409.1). While this computer does not include audio description processing technology, Windows® OS settings for audio description can be adjusted by the user (414.1.2, 415.1.2). See VPAT® for Windows® OS from Microsoft.
302.2 With Limited Vision	Supports	Windows® provides a method to adjust timing of sleep settings (timed response, 407.5). See VPAT® for Windows® OS from Microsoft.
302.3 Without Perception of Color	Supports	Informative only
302.4 Without Hearing	Supports	While this computer does not include a closed caption decoder, and video display is not its primary purpose, the Windows® OS provides closed caption settings including display settings (413.1.1, 413.1.2). See VPAT® for Windows® OS from Microsoft. Also, third party Windows® compatible media players provide closed caption controls (415.1.1).
302.5 With Limited Hearing	Supports	While this computer does not include a closed caption decoder, and video display is not its primary purpose, the Windows® OS provides closed caption settings including display settings (413.1.1, 413.1.2). See VPAT® for Windows® OS from Microsoft. Also, third party Windows® compatible media players provide closed caption controls (415.1.1).
302.6 Without Speech	Supports	Informative only
302.7 With Limited Manipulation	Supports	Windows® allows the user to adjust the key repeat rate to 2 seconds (407.4). Windows® provides a method to adjust timing of sleep settings (timed response, 407.5). See VPAT® for Windows® OS from Microsoft.
302.8 With Limited Reach and Strength	Supports	Windows® allows the user to adjust the key repeat rate to 2 seconds (407.4). Windows® provides a method to adjust timing of sleep settings (timed response, 407.5). See VPAT® for Windows® OS from Microsoft.

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Criteria	Conformance Level	Remarks and Explanations
302.9 With Limited Language, Cognitive, and Learning Abilities	Supports	Windows® provides a method to adjust timing of sleep settings (timed response, 407.5). See VPAT® for Windows® OS from Microsoft.

Chapter 4: Hardware

Notes: Conformance to the applicable criteria of Chapter 4 for this hardware product are reported below.

Criteria	Conformance Level	Remarks and Explanations
402 Closed Functionality	Heading cell – no response required	Heading cell – no response required
402.1 General	Heading cell – no response required	Heading cell – no response required
402.2 Speech-Output Enabled	Heading cell – no response required	Heading cell – no response required
402.2.1 Information Displayed On-Screen	Not applicable	This criterion is not applicable because this hardware product includes no closed functionality.
402.2.2 Transactional Outputs	Not applicable	This criterion is not applicable because this hardware product includes no closed functionality.
402.2.3 Speech Delivery Type and Coordination	Not applicable	This criterion is not applicable because this hardware product includes no closed functionality.
402.2.4 User Control	Not applicable	This criterion is not applicable because this hardware product includes no closed functionality.
402.2.5 Braille Instructions	Not applicable	This criterion is not applicable because this hardware product includes no closed functionality.
402.3 Volume	Heading cell – no response required	Heading cell – no response required
402.3.1 Private Listening	Not applicable	This criterion is not applicable because this hardware product includes no closed functionality.
402.3.2 Non-private Listening	Not applicable	This criterion is not applicable because this hardware product includes no closed functionality.

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Criteria	Conformance Level	Remarks and Explanations
402.4 Characters on Display Screens	Not applicable	This criterion is not applicable because this hardware product includes no closed functionality.
402.5 Characters on Variable Message Signs	Not applicable	This criterion is not applicable because this hardware product includes no closed functionality.
403 Biometrics	Heading cell – no response required	Heading cell – no response required
403.1 General	Supports	This notebook personal computer includes a biometric option – a fingerprint reader option for sign-in – but users can also choose to use a password, PIN or picture to sign into Windows® instead of using the fingerprint reader.
404 Preservation of Information Provided for Accessibility	Heading cell – no response required	Heading cell – no response required
404.1 General	Supports	This notebook does not remove non-proprietary information provided for accessibility.
405 Privacy	Heading cell – no response required	Heading cell – no response required
405.1 General	Supports	This notebook computer includes no closed functionality, and includes a method for private listening (via headphone jack) of text-to-speech or other output.
406 Standard Connections	Heading cell – no response required	Heading cell – no response required
406.1 General	Supports	This notebook computer's connections include industry standard non-proprietary formats.
407 Operable Parts	Heading cell – no response required	Heading cell – no response required
407.2 Contrast	Supports	Operable parts (e.g. keys and power button) have sufficient contrast. The power button is illuminated when the power is on.
407.3 Input Controls	Heading cell – no response required	Heading cell – no response required
407.3.1 Tactilely Discernible	Supports	All keys latches, buttons, and controls are tactilely discernible without activation, and operable by touch.

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Criteria	Conformance Level	Remarks and Explanations
407.3.2 Alphabetic Keys	Supports	The built-in alphabetic keyboard has keys that are arranged in a QWERTY keyboard layout and the "F" and "J" keys are tactilely distinct from the other keys.
407.3.3 Numeric Keys	Not applicable	Apart from the standard QWERTY alphanumeric keyboard, a numeric keypad is not provided in this product.
407.4 Key Repeat	Supports	The notebook product supports, and does not interfere with, the key repeat settings the user sets in the Windows® OS. The key repeat can be adjusted to 2 seconds (see VPAT® for Windows® OS from Microsoft).
407.5 Timed Response	Supports	The only timed response is the sleep settings found in the Windows® OS, which the user can adjust to meet their needs (see VPAT® for Windows® OS from Microsoft).
407.6 Operation	Supports	The product can be used with one hand and tight grasping, pinching, or twisting of the wrist is not required. The force required to activate operable parts shall be 5 pounds (22.2 N) maximum.
407.7 Tickets, Fare Cards, and Keycards	Not applicable	No functionality requiring tickets, fare cards, or keycards are included in this product.
407.8 Reach Height and Depth	Heading cell – no response required	Heading cell – no response required
407.8.1 Vertical Reference Plane	Not applicable	This product is not designed to be stationary.
407.8.1.1 Vertical Plane for Side Reach	Not applicable	This product is not designed to be stationary.
407.8.1.2 Vertical Plane for Forward Reach	Not applicable	This product is not designed to be stationary.
407.8.2 Side Reach	Not applicable	This product is not designed to be stationary.
407.8.2.1 Unobstructed Side Reach	Not applicable	This product is not designed to be stationary.
407.8.2.2 Obstructed Side Reach	Not applicable	This product is not designed to be stationary.
407.8.3 Forward Reach	Not applicable	This product is not designed to be stationary.
407.8.3.1 Unobstructed Forward Reach	Not applicable	This product is not designed to be stationary.
407.8.3.2 Obstructed Forward Reach	Not applicable	This product is not designed to be stationary.

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Criteria	Conformance Level	Remarks and Explanations
407.8.3.2.1 Operable Part Height for ICT with Obstructed Forward Reach	Not applicable	This product is not designed to be stationary.
407.8.3.2.2 Knee and Toe Space under ICT with Obstructed Forward Reach	Not applicable	This product is not designed to be stationary.
408 Display Screens	Heading cell – no response required	Heading cell – no response required
408.2 Visibility	Not applicable	This product is not designed to be stationary.
408.3 Flashing	Not applicable	This product does not emit lights in flashes.
409 Status Indicators	Heading cell – no response required	Heading cell – no response required
409.1 General	Supports	The only status indicator on this product is the Power button which is illuminated when the device is turned on, and not illuminated when the device is turned off. The powered on status of the device is also communicated via the Windows® OS which plays an audio notification sound on startup. Windows® also supports playing sounds for certain notifications (see VPAT® for Windows® OS from Microsoft).
410 Color Coding	Heading cell – no response required	Heading cell – no response required
410.1 General	Not applicable	This product does not use color coding to convey information, indicate an action, prompt a response, or distinguish a visual element.
411 Audible Signals	Heading cell – no response required	Heading cell – no response required
411.1 General	Not applicable	This product does not use audible signals or cues to convey information, indicate an action, prompt a response.
412 ICT with Two-Way Voice Communication	Heading cell – no response required	Heading cell – no response required
412.2 Volume Gain	Heading cell – no response required	Heading cell – no response required
412.2.1 Volume Gain for Wireline Telephones	Not applicable	This product does not include two-way communication functionality.
412.2.2 Volume Gain for Non-Wireline ICT	Not applicable	This product does not include two-way communication functionality.
412.3 Interference Reduction and Magnetic Coupling	Heading cell – no response required	Heading cell – no response required

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Criteria	Conformance Level	Remarks and Explanations
412.3.1 Wireless Handsets	Not applicable	This product does not include a wireless handset.
412.3.2 Wireline Handsets	Not applicable	This product does not include a wireline handset.
412.4 Digital Encoding of Speech	Not applicable	This product does not include digital speech capabilities.
412.5 Real-Time Text Functionality	Reserved for future	Reserved for future
412.6 Caller ID	Not applicable	This product does not include caller ID functionality.
412.7 Video Communication	Not applicable	This product does not include real-time video communication functionality.
412.8 Legacy TTY Support	Heading cell – no response required	Heading cell – no response required
412.8.1 TTY Connectability	Not applicable	This product does not include TTY functionality.
412.8.2 Voice and Hearing Carry Over	Not applicable	This product does not include TTY functionality.
412.8.3 Signal Compatibility	Not applicable	This product does not include TTY functionality.
412.8.4 Voice Mail and Other Messaging Systems	Not applicable	This product does not include voice mail, auto-attendant, interactive voice response, and caller identification systems.
413 Closed Caption Processing Technologies	Heading cell – no response required	Heading cell – no response required
413.1.1 Decoding and Display of Closed Captions	Supports	This notebook personal computer does not include a closed caption decoder and video display is not its primary purpose. However, closed caption settings can be adjusted in the Windows® OS (see VPAT® for Windows® OS from Microsoft). In addition, controls for activating/deactivating captions are available in numerous Windows® compatible media players.

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Criteria	Conformance Level	Remarks and Explanations
413.1.2 Pass-Through of Closed Caption Data	Supports	This notebook personal computer does not include a closed caption decoder and video display is not its primary purpose. However, closed caption settings can be adjusted in the Windows® OS (see VPAT® for Windows® OS from Microsoft). In addition, controls for activating/deactivating captions are available in numerous Windows® compatible media players.
414 Audio Description Processing Technologies	Heading cell – no response required	Heading cell – no response required
414.1.1 Digital Television Tuners	Not applicable	This notebook computer does not include a digital TV tuner.
414.1.2 Other ICT	Supports	This notebook personal computer does not include audio description processing technology, but audio description settings can be adjusted in the Windows® OS (see VPAT® for Windows® OS from Microsoft).
415 User Controls for Captions and Audio Descriptions	Heading cell – no response required	Heading cell – no response required
415.1.1 Caption Controls	Supports	This notebook personal computer does not include a closed caption decoder and video display is not its primary purpose. However, closed caption settings can be adjusted in the Windows® OS (see VPAT® for Windows® OS from Microsoft). In addition, controls for activating/deactivating captions are available in numerous Windows® compatible media players.
415.1.2 Audio Description Controls	Not applicable	This notebook personal computer does not include audio description processing capability and does not include operable parts for program selection. However, audio description settings can be adjusted in the Windows® OS (see VPAT® for Windows® OS from Microsoft).

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Chapter 5: Software

Notes: Table has been removed as this Accessibility Conformance Report does not include reporting of conformance to Section 508 Chapter 5.

Chapter 6: Support Documentation and Services

Notes: VPATs® for support documentation and support services can be provided separately upon request.

Criteria	Conformance Level	Remarks and Explanations
601.1 Scope	Heading cell – no response required	Heading cell – no response required
602 Support Documentation	Heading cell – no response required	Heading cell – no response required
602.2 Accessibility and Compatibility Features	Not applicable	As indicated in the "Notes" section, VPATs® for electronic support documentation can be provided separately upon request.
602.3 Electronic Support Documentation	Not applicable	As indicated in the "Notes" section, VPATs® for electronic support documentation can be provided separately upon request.
602.4 Alternate Formats for Non-Electronic Support Documentation	Not applicable	As indicated in the "Notes" section, VPATs® for electronic support documentation can be provided separately upon request.
603 Support Services	Heading cell – no response required	Heading cell – no response required
603.2 Information on Accessibility and Compatibility Features	Not applicable	As indicated in the "Notes" section, VPATs® for support services can be provided separately upon request.
603.3 Accommodation of Communication Needs	Not applicable	As indicated in the "Notes" section, VPATs® for support services can be provided separately upon request.

EN 301 549 Report

Notes: This Accessibility Conformance Report does not include reporting of conformance to EN 301 549.

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Chapter 4: [4.2 Functional Performance Statements \(FPS\)](#)

Notes: This table has been removed as this Accessibility Conformance Report does not include reporting of conformance to EN 301 549.

Chapter 5: [Generic Requirements](#)

Notes: This table has been removed as this Accessibility Conformance Report does not include reporting of conformance to EN 301 549.

Chapter 6: [ICT with Two-Way Voice Communication](#)

Notes: This table has been removed as this Accessibility Conformance Report does not include reporting of conformance to EN 301 549.

Chapter 7: [ICT with Video Capabilities](#)

Notes: This table has been removed as this Accessibility Conformance Report does not include reporting of conformance to EN 301 549.

Chapter 8: [Hardware](#)

Notes: This table has been removed as this Accessibility Conformance Report does not include reporting of conformance to EN 301 549.

Chapter 9: [Web](#) (see WCAG 2.0 section)

Notes: This table has been removed as this Accessibility Conformance Report does not include reporting of conformance to EN 301 549.

Chapter 10: [Non-web Documents](#)

Notes: This table has been removed as this Accessibility Conformance Report does not include reporting of conformance to EN 301 549.

Chapter 11: [Software](#)

Notes: This table has been removed as this Accessibility Conformance Report does not include reporting of conformance to EN 301 549.

¹Voluntary Product Accessibility Template" and "VPAT" are registered service marks of the Information Technology Industry Council (ITI)

Dell Accessibility Conformance Report

VPAT® Version 2.1 – March 2018

Chapter 12: Documentation and Support Services

Notes: This table has been removed as this Accessibility Conformance Report does not include reporting of conformance to EN 301 549.

Chapter 13: ICT Providing Relay or Emergency Service Access

Notes: This table has been removed as this Accessibility Conformance Report does not include reporting of conformance to EN 301 549.

Legal Disclaimer (Dell)

This VPAT® is for information purposes only. The information contained in this VPAT® represents Dell Technologies' view regarding matters discussed herein as of the date of publication. Because of changing market conditions, this VPAT® is not a commitment on the part of Dell, and Dell cannot guarantee the accuracy of any information presented after the date of publication. Dell makes no warranties, express or implied.

E202.2 Legacy ICT. Any component or portion of existing ICT that complies with an earlier standard issued pursuant to Section 508 of the Rehabilitation Act of 1973, as amended (as republished in Appendix D), and that has not been altered on or after January 18, 2018, shall not be required to be modified to conform to the Revised 508 Standards.

Dell defers to www.microsoft.com for Windows® and Windows® application VPATS®. Dell defers third party applications that could be placed on this product to the third party supplier.

¹Voluntary Product Accessibility Template" and "VPAT" are registered service marks of the Information Technology Industry Council (ITI)

D.2 Dell Latitude 5500

Dell Accessibility Conformance Report

VPAT® Version 2.1 – March 2018

Name of Product/Version: Dell Latitude 5500

Product Description: Dell commercial notebook

Date: April 2019

Contact information: Susan Samok / susan_samok@federal.dell.com

Notes:

This hardware product serves as an end-client device and includes computer processors, memory, storage, etc. The hardware product comes pre-installed with the Windows 10 operating system. The VPAT® for Windows would have to be provided by Microsoft.

Dell.com/support has a standalone VPAT.

Evaluation Methods Used: This hardware product was evaluated for accessibility standards conformance using established best practices and manual inspection tools such as a Pressure/Force Meter, Color Contrast Analyzer, Sound Meter, etc.

Applicable Standards/Guidelines

This report covers the degree of conformance for the following accessibility standard/guidelines:

Standard/Guideline	Included In Report

"Voluntary Product Accessibility Template" and "VPAT" are registered service marks of the Information Technology Industry Council (ITI).

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Web Content Accessibility Guidelines 2.0, at http://www.w3.org/TR/2008/REC-WCAG20-20081211/	Level A (No) Level AA (No) Level AAA (No)
Revised Section 508 standards as published by the U.S. Access Board in the Federal Register on January 18, 2017 Corrections to the ICT Final Rule as published by the US Access Board in the Federal Register on January 22, 2018	{Yes }
EN 301 549: Accessibility requirements suitable for public procurement of ICT products and services in Europe, - V1.1.2 (2015-04) at http://mandate376.standards.eu/standard	{No }

Terms

The terms used in the Conformance Level information are defined as follows:

- **Supports:** The functionality of the product has at least one method that meets the criterion without known defects or meets with equivalent facilitation.
- **Supports with Exceptions:** Some functionality of the product does not meet the criterion.
- **Does Not Support:** The majority of product functionality does not meet the criterion.
- **Not Applicable:** The criterion is not relevant to the product.
- **Not Evaluated:** The product has not been evaluated against the criterion. This can be used only in WCAG 2.0 Level AAA.

WCAG 2.0 Report

Tables 1 and 2 also document conformance with:

- EN 301 549: Chapter 9 - Web, Chapter 10 - Non-Web documents, Section 11.2.1- Non-Web Software (excluding closed functionality), and Section 11.2.2 - Non-Web Software (closed functionality).
- Revised Section 508: Chapter 5 – 501.1 Scope, 504.2 Content Creation or Editing, and Chapter 6 – 602.3 Electronic Support Documentation.

Note: When reporting on conformance with the WCAG 2.0 Success Criteria, they are scoped for full pages, complete processes, and accessibility-supported ways of using technology as documented in the [WCAG 2.0 Conformance Requirements](#).

Table 1: Success Criteria, Level A

Notes: This is HW only VPAT, Windows OS was present on the notebook, and Dell defers to Microsoft for Windows 10 VPAT

Table 2: Success Criteria, Level AA

Notes: This is HW only VPAT, Windows OS was present on the notebook, and Dell defers to Microsoft for Windows 10 VPAT

Table 3: Success Criteria, Level AAA

Notes: WCAG AAA is not a mandate of Section 508, this table has been removed

2017 Section 508 Report

Notes:

Chapter 3: Functional Performance Criteria (FPC)

Notes:

Criteria	Conformance Level	Remarks and Explanations
302.1 Without Vision	Supports	User does not need vision to operate this product
302.2 With Limited Vision	Supports	User does not need vision to operate this product
302.3 Without Perception of Color	Supports	Color is not the only means to convey information

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Criteria	Conformance Level	Remarks and Explanations
302.4 Without Hearing	Supports	User hearing is not required
302.5 With Limited Hearing	Supports	User hearing is not required
302.6 Without Speech	Supports	User speech is not required to operate the product
302.7 With Limited Manipulation	Supports	Product provides at least one mode of operation that does not require fine motor control or simultaneous manual operations. If the keyboard is considered small, the unit will host a USB external keyboard.
302.8 With Limited Reach and Strength	Supports	Placement of the product is up to the end user, this product is intended to be mobile
302.9 With Limited Language, Cognitive, and Learning Abilities	Supports	Usage of this type of equipment can be used with limited language and cognitive/learning capabilities, it would be up to the end user to determine the expected tasks needed to meet their requirements. This statement is made with the understanding the end user has a basic understanding of a mobile computer

Chapter 4: Hardware

Notes:

Criteria	Conformance Level	Remarks and Explanations
402 Closed Functionality	Heading cell – no response required	Heading cell – no response required
402.1 General	Heading cell – no response required	Heading cell – no response required
402.2 Speech-Output Enabled	Heading cell – no response required	Heading cell – no response required
402.2.1 Information Displayed On-Screen	Not Applicable	This product is not defined as closed functionality
402.2.2 Transactional Outputs	Not Applicable	This product is not defined as closed functionality
402.2.3 Speech Delivery Type and Coordination	Not Applicable	This product is not defined as closed functionality

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Criteria	Conformance Level	Remarks and Explanations
402.2.4 User Control	Not Applicable	This product is not defined as closed functionality
402.2.5 Braille Instructions	Not Applicable	This product is not defined as closed functionality
402.3 Volume	Heading cell – no response required	Heading cell – no response required
402.3.1 Private Listening	Not Applicable	This product is not defined as closed functionality
402.3.2 Non-private Listening	Not Applicable	This product is not defined as closed functionality
402.4 Characters on Display Screens	Not Applicable	This product is not defined as closed functionality
402.5 Characters on Variable Message Signs	Not Applicable	This product is not defined as closed functionality
403 Biometrics	Heading cell – no response required	Heading cell – no response required
403.1 General	Supports	The product reviewed did not have Biometrics in the HW.
404 Preservation of Information Provided for Accessibility	Heading cell – no response required	Heading cell – no response required
404.1 General	Supports	This product should not interfere with Accessibility Information. It will be dependent on the OS for Accessibility Technologies compatibility.
405 Privacy	Heading cell – no response required	Heading cell – no response required
405.1 General	Supports	The product provides the same degree of privacy of input and output shall be provided to all individuals
406 Standard Connections	Heading cell – no response required	Heading cell – no response required
406.1 General	Supports	Industry Standard ports are used
407 Operable Parts	Heading cell – no response required	Heading cell – no response required
407.2 Contrast	Supports	Keys and controls are light on dark
407.3 Input Controls	Heading cell – no response required	Heading cell – no response required
407.3.1 Tactilely Discernible	Supports	Controls are tactilely discernible
407.3.2 Alphabetic Keys	Supports	Keys are arranged in a QWERTY-based keyboard layout and the "F" and "J" keys shall be tactilely distinct from the other

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Criteria	Conformance Level	Remarks and Explanations
		keys
407.3.3 Numeric Keys	Supports	Apart from the standard QWERTY alphanumeric keyboard, a numeric keypad is provided in this product, and has a raised bar on the 5 key.
407.4 Key Repeat	Not Applicable	The notebook product HW does not have key repeat. The OS may have a key repeat setting. Dell defers to Microsoft for Windows OS.
407.5 Timed Response	Supports	The notebook HW does not have any timed responses. This VPAT does not cover if the OS has a time out due to power saving.
407.6 Operation	Supports	The product can be used with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds (22.2 N) maximum.
407.7 Tickets, Fare Cards, and Keycards	Not Applicable	The unit reviewed did not have tickets, fare cards or key cards, that were reviewed with this product.
407.8 Reach Height and Depth	Heading cell -- no response required	Heading cell -- no response required
407.8.1 Vertical Reference Plane	Supports	This product is not designed to be stationary. Placement is owned by the end user.
407.8.1.1 Vertical Plane for Side Reach	Supports	This product is not designed to be stationary. Placement is owned by the end user.
407.8.1.2 Vertical Plane for Forward Reach	Supports	This product is not designed to be stationary. Placement is owned by the end user.
407.8.2 Side Reach	Supports	This product is not designed to be stationary. Placement is owned by the end user.
407.8.2.1 Unobstructed Side Reach	Supports	This product is not designed to be

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Criteria	Conformance Level	Remarks and Explanations
		stationary, Placement is owned by the end user
407.8.2.2 Obstructed Side Reach	Supports	This product is not designed to be stationary, Placement is owned by the end user
407.8.3 Forward Reach	Supports	This product is not designed to be stationary, Placement is owned by the end user
407.8.3.1 Unobstructed Forward Reach	Supports	This product is not designed to be stationary, Placement is owned by the end user
407.8.3.2 Obstructed Forward Reach	Supports	This product is not designed to be stationary, Placement is owned by the end user
407.8.3.2.1 Operable Part Height for ICT with Obstructed Forward Reach	Supports	This product is not designed to be stationary, Placement is owned by the end user
407.8.3.2.2 Knee and Toe Space under ICT with Obstructed Forward Reach	Supports	This product is not designed to be stationary, Placement is owned by the end user
408 Display Screens	Heading cell – no response required	Heading cell – no response required
408.2 Visibility	Supports	This product is not designed to be stationary, Placement is owned by the end user
408.3 Flashing	Not Applicable	This product does not emit lights in flashes.
409 Status Indicators	Heading cell – no response required	Heading cell – no response required
409.1 General	Not Applicable	There are no status indicators within the HW.
410 Color Coding	Heading cell – no response required	Heading cell – no response required
410.1 General	Supports	color coding is not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual

Criteria	Conformance Level	Remarks and Explanations
411 Audible Signals	Heading cell – no response required	Heading cell – no response required
411.1 General	Supports	audible signals or cues are not used as the only means of conveying information, indicating an action, or prompting a response
412 ICT with Two-Way Voice Communication	Heading cell – no response required	Heading cell – no response required
412.2 Volume Gain	Heading cell – no response required	Heading cell – no response required
412.2.1 Volume Gain for Wireline Telephones	Not Applicable	This product does not provide two way communication
412.2.2 Volume Gain for Non-Wireline ICT	Not Applicable	This product does not provide two way communication
412.3 Interference Reduction and Magnetic Coupling	Heading cell – no response required	Heading cell – no response required
412.3.1 Wireless Handsets	Not Applicable	This product does not provide two way communication
412.3.2 Wireline Handsets	Not Applicable	This product does not provide two way communication
412.4 Digital Encoding of Speech	Not Applicable	This product does not include digital speech capabilities.
412.5 Real-Time Text Functionality	Reserved for future	Reserved for future
412.6 Caller ID	Not Applicable	This product does not include caller ID functionality.
412.7 Video Communication	Not Applicable	This product does not include real-time video communication functionality.
412.8 Legacy TTY Support	Heading cell – no response required	Heading cell – no response required
412.8.1 TTY Connectability	Not Applicable	This product does not include TTY functionality.
412.8.2 Voice and Hearing Carry Over	Not Applicable	This product does not include TTY functionality.
412.8.3 Signal Compatibility	Not Applicable	This product does not include TTY functionality.
412.8.4 Voice Mail and Other Messaging Systems	Not Applicable	This product does not include voice mail, auto-attendant, interactive voice response, and caller identification systems.

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Criteria	Conformance Level	Remarks and Explanations
413 Closed Caption Processing Technologies	Heading cell – no response required	Heading cell – no response required
413.1.1 Decoding and Display of Closed Captions	Not Applicable	This notebook personal computer does not include a closed caption decoder and video display is not its primary purpose.
413.1.2 Pass-Through of Closed Caption Data	Not Applicable	This notebook personal computer does not include a closed caption decoder and video display is not its primary purpose. However, the Windows OS does permit CC to pass through, Dell defers to Microsoft.
414 Audio Description Processing Technologies	Heading cell – no response required	Heading cell – no response required
414.1.1 Digital Television Tuners	Not Applicable	This product does not have a digital TV tuner
414.1.2 Other ICT	Supports	This notebook personal computer does not include audio description processing technology. Dell defers to Microsoft for Windows OS review
415 User Controls for Captions and Audio Descriptions	Heading cell – no response required	Heading cell – no response required
415.1.1 Caption Controls	Not Applicable	This notebook personal computer does not include a closed caption decoder and video display is not its primary purpose. However, the Windows OS does permit CC to pass through, Dell defers to Microsoft.
415.1.2 Audio Description Controls	Not Applicable	This notebook personal computer does not include audio description processing technology. Dell defers to Microsoft for Windows OS review

Chapter 5: Software

Notes: This is a HW VPAT, the OS in the Computer was Windows 10 which is supported through Microsoft, Dell Defers to Microsoft for OS VPAT

Chapter 6: Support Documentation and Services

Notes:

Criteria	Conformance Level	Remarks and Explanations
601.1 Scope	Heading cell – no response required	Heading cell – no response required
602 Support Documentation	Heading cell – no response required	Heading cell – no response required
602.2 Accessibility and Compatibility Features	Does not support	Documentation does not list and explain how to use the accessibility and compatibility features
602.3 Electronic Support Documentation	See WCAG 2.0 section	See information in WCAG section
602.4 Alternate Formats for Non-Electronic Support Documentation	Supports with exceptions	It has been stated that Dell will supply documentation in alternate formats however these may not be readily available
603 Support Services	Heading cell – no response required	Heading cell – no response required
603.2 Information on Accessibility and Compatibility Features	Does not support	ICT support services does not include information on the accessibility and compatibility features
603.3 Accommodation of Communication Needs	Supports	Dell provides a TTY line, chat line, phone line and email to customers to assist with communication needs

EN 301 549 Report

Notes: This is not a mandate of Section 508, therefore the tables have been removed

Legal Disclaimer (Company)

This VPAT is for information purposes only. The information contained in this VPAT represents Dell Technologies view regarding matters discussed herein as of the date of publication. Because of changing market conditions, this VPAT is not a commitment on the part of Dell, and Dell cannot guarantee the accuracy of any information presented after the date of publication. Dell makes no warranties, express or implied.

E202.2 Legacy ICT. Any component or portion of existing ICT that complies with an earlier standard issued pursuant to Section 508 of the Rehabilitation Act of 1973, as amended (as republished in Appendix D), and that has not been altered on or after January 18, 2018, shall not be required to be modified to conform to the Revised 508 Standards.

Dell defers to www.microsoft.com for Windows and Windows application VPATS

Dell defers to Google for Chrome VPATs

Dell defers third party applications that could be placed on this product to the third party suppliers.

D.3 Dell Latitude 7200

Dell Accessibility Conformance Report

VPAT® Version 2.1 – March 2018

Name of Product/Version: Dell Latitude 7200 2-in-1

Product Description: Dell commercial convertible notebook

Date: April 2019

Contact information: Susan Samok / susan_samok@federal.dell.com

Notes:

This hardware product serves as an end-client device and includes computer processors, memory, storage, etc. The hardware product comes pre-installed with the Windows 10 operating system. The VPAT® for Windows 10 would have to be provided by Microsoft.

Dell.com/support has a standalone VPAT.

Evaluation Methods Used: This hardware product was evaluated for accessibility standards conformance using established best practices and manual inspection tools such as a Pressure/Force Meter, Color Contrast Analyzer, Sound Meter, etc.

Applicable Standards/Guidelines

This report covers the degree of conformance for the following accessibility standard/guidelines:

Standard/Guideline	Included In Report

"Voluntary Product Accessibility Template" and "VPAT" are registered service marks of the Information Technology Industry Council (ITI)

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Web Content Accessibility Guidelines 2.0, at http://www.w3.org/TR/2008/REC-WCAG20-20081211/	Level A (No) Level AA (No) Level AAA (No)
Revised Section 508 standards as published by the U.S. Access Board in the Federal Register on January 18, 2017 Corrections to the ICT Final Rule as published by the US Access Board in the Federal Register on January 22, 2018	{Yes }
EN 301 549: Accessibility requirements suitable for public procurement of ICT products and services in Europe, - V1.1.2 (2015-04) at http://mandate376.standards.eu/standard	{No }

Terms

The terms used in the Conformance Level information are defined as follows:

- **Supports:** The functionality of the product has at least one method that meets the criterion without known defects or meets with equivalent facilitation.
- **Supports with Exceptions:** Some functionality of the product does not meet the criterion.
- **Does Not Support:** The majority of product functionality does not meet the criterion.
- **Not Applicable:** The criterion is not relevant to the product.
- **Not Evaluated:** The product has not been evaluated against the criterion. This can be used only in WCAG 2.0 Level AAA.

WCAG 2.0 Report

Tables 1 and 2 also document conformance with:

- EN 301 549: Chapter 9 - Web, Chapter 10 - Non-Web documents, Section 11.2.1- Non-Web Software (excluding closed functionality), and Section 11.2.2 - Non-Web Software (closed functionality).
- Revised Section 508: Chapter 5 – 501.1 Scope, 504.2 Content Creation or Editing, and Chapter 6 – 602.3 Electronic Support Documentation.

Note: When reporting on conformance with the WCAG 2.0 Success Criteria, they are scoped for full pages, complete processes, and accessibility-supported ways of using technology as documented in the [WCAG 2.0 Conformance Requirements](#).

Table 1: Success Criteria, Level A

Notes: This is HW only VPAT, Chrome OS was present on the notebook, and Dell defers to Google for Chrome VPAT

Table 2: Success Criteria, Level AA

Notes: This is HW only VPAT, Chrome OS was present on the notebook, and Dell defers to Google for Chrome VPAT

Table 3: Success Criteria, Level AAA

Notes: WCAG AAA is not a mandate of Section 508, this table has been removed

2017 Section 508 Report

Notes:

Chapter 3: Functional Performance Criteria (FPC)

Notes:

Criteria	Conformance Level	Remarks and Explanations
302.1 Without Vision	Supports	User does not need vision to operate this product
302.2 With Limited Vision	Supports	User does not need vision to operate this product
302.3 Without Perception of Color	Supports	Color is not the only means to convey information

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Criteria	Conformance Level	Remarks and Explanations
302.4 Without Hearing	Supports	User hearing is not required
302.5 With Limited Hearing	Supports	User hearing is not required
302.6 Without Speech	Supports	User speech is not required to operate the product
302.7 With Limited Manipulation	Supports	Product provides at least one mode of operation that does not require fine motor control or simultaneous manual operations. If the keyboard is considered small, the unit will host a USB external keyboard.
302.8 With Limited Reach and Strength	Supports	Placement of the product is up to the end user, this product is intended to be mobile
302.9 With Limited Language, Cognitive, and Learning Abilities	Supports	Usage of this type of equipment can be used with limited language and cognitive/learning capabilities, it would be up to the end user to determine the expected tasks needed to meet their requirements. This statement is made with the understanding the end user has a basic understanding of a mobile computer

Chapter 4: Hardware

Notes:

Criteria	Conformance Level	Remarks and Explanations
402 Closed Functionality	Heading cell – no response required	Heading cell – no response required
402.1 General	Heading cell – no response required	Heading cell – no response required
402.2 Speech-Output Enabled	Heading cell – no response required	Heading cell – no response required
402.2.1 Information Displayed On-Screen	Not Applicable	This product is not defined as closed functionality
402.2.2 Transactional Outputs	Not Applicable	This product is not defined as closed functionality
402.2.3 Speech Delivery Type and Coordination	Not Applicable	This product is not defined as closed functionality

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Criteria	Conformance Level	Remarks and Explanations
402.2.4 User Control	Not Applicable	This product is not defined as closed functionality
402.2.5 Braille Instructions	Not Applicable	This product is not defined as closed functionality
402.3 Volume	Heading cell – no response required	Heading cell – no response required
402.3.1 Private Listening	Not Applicable	This product is not defined as closed functionality
402.3.2 Non-private Listening	Not Applicable	This product is not defined as closed functionality
402.4 Characters on Display Screens	Not Applicable	This product is not defined as closed functionality
402.5 Characters on Variable Message Signs	Not Applicable	This product is not defined as closed functionality
403 Biometrics	Heading cell – no response required	Heading cell – no response required
403.1 General	Supports	The product reviewed did not have Biometrics in the HW. The OS provide options but they are optional (i.e. facial recognition, finger print) Dell defers to Microsoft for the OS VPAT
404 Preservation of Information Provided for Accessibility	Heading cell – no response required	Heading cell – no response required
404.1 General	Supports	This HW product should not interfere with Accessibility Information. It will be dependent on the OS for Accessibility Technologies compatibility. Dell defers to Microsoft for this review
405 Privacy	Heading cell – no response required	Heading cell – no response required
405.1 General	Supports	The product provides the same degree of privacy of input and output shall be provided to all individuals
406 Standard Connections	Heading cell – no response required	Heading cell – no response required
406.1 General	Supports	Industry Standard ports are used
407 Operable Parts	Heading cell – no response required	Heading cell – no response required
407.2 Contrast	Supports	This is a tablet, the OS will host high contrast settings that are available within

Criteria	Conformance Level	Remarks and Explanations
		the Windows OS. The controls for volume, and power are tactilely discernible, if contrast of the icons is not sufficient
407.3 Input Controls	Heading cell – no response required	Heading cell – no response required
407.3.1 Tactilely Discernible	Supports	Controls on the tablet are tactilely discernible
407.3.2 Alphabetic Keys	Supports	The computer has only an online keyboard, It is QWERTY, but being on line does not have any raised items on the F and J. The screen reader does work, with the on line keyboard to identify the keys. The unit will host the Dell Mobility keyboard as an external keyboard which is QWERTY and has raised bars on F and J. The unit will host an external keyboard through the USB port.
407.3.3 Numeric Keys	Not Applicable	The online keyboard has a key that will pull up a standalone keyboard. The mobility keyboard that can be purchased does not have a separate keyboard, it only has the numbers at the top of the QWERTY keyboard. The unit will host an external keyboard/pad of the user's choosing
407.4 Key Repeat	Not Applicable	The notebook product HW does not have key repeat. The OS may have a key repeat setting, Dell defers to Microsoft for Windows 10 review
407.5 Timed Response	Supports	The notebook HW does not have any timed responses. This VPAT does not cover if the OS has a time out due to power saving.
407.6 Operation	Supports	The product can be used with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force

Criteria	Conformance Level	Remarks and Explanations
		required to activate operable parts shall be 5 pounds (22.2 N) maximum.
407.7 Tickets, Fare Cards, and Keycards	Not Applicable	The unit reviewed did not have tickets, fare cards or key cards, that were reviewed with this product
407.8 Reach Height and Depth	Heading cell – no response required	Heading cell – no response required
407.8.1 Vertical Reference Plane	Supports	This product is not designed to be stationary, Placement is owned by the end user
407.8.1.1 Vertical Plane for Side Reach	Supports	This product is not designed to be stationary, Placement is owned by the end user
407.8.1.2 Vertical Plane for Forward Reach	Supports	This product is not designed to be stationary, Placement is owned by the end user
407.8.2 Side Reach	Supports	This product is not designed to be stationary, Placement is owned by the end user
407.8.2.1 Unobstructed Side Reach	Supports	This product is not designed to be stationary, Placement is owned by the end user
407.8.2.2 Obstructed Side Reach	Supports	This product is not designed to be stationary, Placement is owned by the end user
407.8.3 Forward Reach	Supports	This product is not designed to be stationary, Placement is owned by the end user
407.8.3.1 Unobstructed Forward Reach	Supports	This product is not designed to be stationary, Placement is owned by the end user
407.8.3.2 Obstructed Forward Reach	Supports	This product is not designed to be stationary, Placement is owned by the end user
407.8.3.2.1 Operable Part Height for ICT with Obstructed Forward Reach	Supports	This product is not designed to be

Criteria	Conformance Level	Remarks and Explanations
		stationary, Placement is owned by the end user
407.8.3.2.2 Knee and Toe Space under ICT with Obstructed Forward Reach	Supports	This product is not designed to be stationary, Placement is owned by the end user
408 Display Screens	Heading cell – no response required	Heading cell – no response required
408.2 Visibility	Supports	This product is not designed to be stationary, Placement is owned by the end user
408.3 Flashing	Not Applicable	This product does not emit lights in flashes.
409 Status Indicators	Heading cell – no response required	Heading cell – no response required
409.1 General	Not applicable	There are no status indicators on this product.
410 Color Coding	Heading cell – no response required	Heading cell – no response required
410.1 General	Supports	color coding is not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.
411 Audible Signals	Heading cell – no response required	Heading cell – no response required
411.1 General	Supports	audible signals or cues are not used as the only means of conveying information, indicating an action, or prompting a response
412 ICT with Two-Way Voice Communication	Heading cell – no response required	Heading cell – no response required
412.2 Volume Gain	Heading cell – no response required	Heading cell – no response required
412.2.1 Volume Gain for Wireline Telephones	Not Applicable	This product does not provide two way communication through the HW
412.2.2 Volume Gain for Non-Wireline ICT	Not Applicable	This product does not provide two way communication through the HW
412.3 Interference Reduction and Magnetic Coupling	Heading cell – no response required	Heading cell – no response required
412.3.1 Wireless Handsets	Not Applicable	This product does not provide two way communication through the HW

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Criteria	Conformance Level	Remarks and Explanations
412.3.2 Wireline Handsets	Not Applicable	This product does not provide two way communication
412.4 Digital Encoding of Speech	Not Applicable	This product does not include digital speech capabilities.
412.5 Real-Time Text Functionality	Reserved for future	Reserved for future
412.6 Caller ID	Not Applicable	This product does not include caller ID functionality.
412.7 Video Communication	Not Applicable	This product does not include real-time video communication functionality.
412.8 Legacy TTY Support	Heading cell -- no response required	Heading cell -- no response required
412.8.1 TTY Connectability	Not Applicable	This product does not include TTY functionality.
412.8.2 Voice and Hearing Carry Over	Not Applicable	This product does not include TTY functionality.
412.8.3 Signal Compatibility	Not Applicable	This product does not include TTY functionality.
412.8.4 Voice Mail and Other Messaging Systems	Not Applicable	This product does not include voice mail, auto-attendant, interactive voice response, and caller identification systems.
413 Closed Caption Processing Technologies	Heading cell -- no response required	Heading cell -- no response required
413.1.1 Decoding and Display of Closed Captions	Not Applicable	This notebook personal computer does not include a closed caption decoder and video display is not its primary purpose.
413.1.2 Pass-Through of Closed Caption Data	Not Applicable	This notebook personal computer does not include a closed caption decoder and video display is not its primary purpose. However, the Windows OS does permit CC to pass through, Dell defers to Microsoft.
414 Audio Description Processing Technologies	Heading cell -- no response required	Heading cell -- no response required
414.1.1 Digital Television Tuners	Not Applicable	This product does not have a digital TV tuner
414.1.2 Other ICT	Supports	This notebook personal computer does not include audio description processing technology. Dell defers to Microsoft for

Criteria	Conformance Level	Remarks and Explanations
		Windows 10 OS review
415 User Controls for Captions and Audio Descriptions	Heading cell – no response required	Heading cell – no response required
415.1.1 Caption Controls	Not Applicable	This notebook personal computer does not include a closed caption decoder and video display is not its primary purpose. However, the Windows OS does permit CC to pass through, Dell defers to Microsoft.
415.1.2 Audio Description Controls	Not Applicable	This notebook personal computer does not include audio description processing technology. Dell defers to Microsoft for Windows OS review

Chapter 5: Software

Notes: This is a HW VPAT, the OS in the Computer was Chrome, which is supported through Google, Dell Defers to Google for OS VPAT

Chapter 6: Support Documentation and Services

Notes:

Criteria	Conformance Level	Remarks and Explanations
601.1 Scope	Heading cell – no response required	Heading cell – no response required
602 Support Documentation	Heading cell – no response required	Heading cell – no response required
602.2 Accessibility and Compatibility Features	Does not support	Documentation does not list and explain how to use the accessibility and compatibility features
602.3 Electronic Support Documentation	See WCAG 2.0 section	See information in WCAG section
602.4 Alternate Formats for Non-Electronic Support Documentation	Supports with exceptions	It has been stated that Dell will supply documentation in alternate formats however these may not be readily available
603 Support Services	Heading cell – no response required	Heading cell – no response required
603.2 Information on Accessibility and Compatibility Features	Does not support	ICT support services does not include information on the accessibility and compatibility features

Criteria	Conformance Level	Remarks and Explanations
503.3 Accommodation of Communication Needs	Supports	Dell provides a TTY line, chat line, phone line and email to customers to assist with communication needs.

EN 301 549 Report

Notes: This is not a mandate of Section 508, therefore the tables have been removed

Legal Disclaimer (Company)

This VPAT is for information purposes only. The information contained in this VPAT represents Dell Technologies view regarding matters discussed herein as of the date of publication. Because of changing market conditions, this VPAT is not a commitment on the part of Dell, and Dell cannot guarantee the accuracy of any information presented after the date of publication. Dell makes no warranties, express or implied.

E202.2 Legacy ICT. Any component or portion of existing ICT that complies with an earlier standard issued pursuant to Section 508 of the Rehabilitation Act of 1973, as amended (as republished in Appendix D), and that has not been altered on or after January 18, 2018, shall not be required to be modified to conform to the Revised 508 Standards.

Dell defers to www.microsoft.com for Windows and Windows application VPATS

Dell defers to Google for Chrome VPATs

Dell defers third party applications that could be placed on this product to the third party suppliers.

D.4 Dell OptiPlex 7070 Micro Form Factor

Dell Accessibility Conformance Report

VPAT® Version 2.1 – March 2018

Name of Product/Version: Dell OptiPlex 7070, 5070, 3070, Micro Form Factor

Product Description: Micro Form Factor Desktop Computer

Date: May 22, 2019

Contact information: Susan Samok

Notes: This is a HW only VPAT

Evaluation Methods Used: Pressure Meter, Sound Meter, Assistive Technology applications,

Applicable Standards/Guidelines

This report covers the degree of conformance for the following accessibility standard/guidelines:

Standard/Guideline	Included In Report
Web Content Accessibility Guidelines 2.0, at http://www.w3.org/TR/2008/REC-WCAG20-20081211/	Level A (No) Level AA (No) Level AAA (No)
Revised Section 508 standards as published by the U.S. Access Board in the Federal Register on January 18, 2017	(Yes)
Corrections to the K.T. Final Rule as published by the US Access Board in the Federal Register on January 22, 2018	
EN 301 549 Accessibility requirements suitable for public procurement of ICT	(No)

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products and services in Europe, - V1.1.2 (2015-04) at http://mandate.376.standards.eu/standard	

Terms

The terms used in the Conformance Level information are defined as follows:

- **Supports:** The functionality of the product has at least one method that meets the criterion without known defects or meets with equivalent facilitation.
- **Supports with Exceptions:** Some functionality of the product does not meet the criterion.
- **Does Not Support:** The majority of product functionality does not meet the criterion.
- **Not Applicable:** The criterion is not relevant to the product.
- **Not Evaluated:** The product has not been evaluated against the criterion. This can be used only in WCAG 2.0 Level AAA.

WCAG 2.0 Report

Tables 1 and 2 also document conformance with:

- EN 301 549: Chapter 9 - Web, Chapter 10 - Non-Web documents, Section 11.2.1- Non-Web Software (excluding closed functionality), and Section 11.2.2 - Non-Web Software (closed functionality).
- Revised Section 508: Chapter 5 – 501.1 Scope, 504.2 Content Creation or Editing, and Chapter 6 – 602.3 Electronic Support Documentation.

Note: When reporting on conformance with the WCAG 2.0 Success Criteria, they are scoped for full pages, complete processes, and accessibility-supported ways of using technology as documented in the [WCAG 2.0 Conformance Requirements](#).

Table 1: Success Criteria, Level A

Notes: This is a HW only VPAT

Table 2: Success Criteria, Level AA

Notes: This is a HW Only VPAT

Table 3: Success Criteria, Level AAA

Notes: This is a HW Only VPAT

2017 Section 508 Report

Notes:

Chapter 3: Functional Performance Criteria (FPC)

Notes:

Criteria	Conformance Level	Remarks and Explanations
302.1 Without Vision	Supports	User does not need vision to operate this product
302.2 With Limited Vision	Supports	User does not need vision to operate this product
302.3 Without Perception of Color	Supports	Color is not the only means to convey information
302.4 Without Hearing	Supports	User hearing is not required
302.5 With Limited Hearing	Supports	User hearing is not required
302.6 Without Speech	Supports	User speech is not required to operate the product
302.7 With Limited Manipulation	Supports	Product provides at least one mode of operation that does not require fine motor control or simultaneous manual operations.
302.8 With Limited Reach and Strength	Supports	Placement of the product is up to the end

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Criteria	Conformance Level	Remarks and Explanations
302.9 With Limited Language, Cognitive, and Learning Abilities	Supports	user, this product Usage of this type of equipment can be used with limited language and cognitive/learning capabilities, it would be up to the end user to determine the expected tasks

Chapter 4: Hardware

Notes:

Criteria	Conformance Level	Remarks and Explanations
402 Closed Functionality	Heading cell – no response required	Heading cell – no response required
402.1 General	Heading cell – no response required	Heading cell – no response required
402.2 Speech-Output Enabled	Heading cell – no response required	Heading cell – no response required
402.2.1 Information Displayed On-Screen	Not Applicable	This product is not defined as closed functionality
402.2.2 Transactional Outputs	Not Applicable	This product is not defined as closed functionality
402.2.3 Speech Delivery Type and Coordination	Not Applicable	This product is not defined as closed functionality
402.2.4 User Control	Not Applicable	This product is not defined as closed functionality
402.2.5 Braille Instructions	Not Applicable	This product is not defined as closed functionality
402.3 Volume	Heading cell – no response required	Heading cell – no response required
402.3.1 Private Listening	Not Applicable	This product is not defined as closed functionality
402.3.2 Non-private Listening	Not Applicable	This product is not defined as closed functionality
402.4 Characters on Display Screens	Not Applicable	This product is not defined as closed functionality
402.5 Characters on Variable Message Signs	Not Applicable	This product is not defined as closed functionality

Criteria	Conformance Level	Remarks and Explanations
403 Biometrics	Heading cell – no response required	Heading cell – no response required
403.1 General	Not Applicable	The product reviewed did not have Biometrics in the HW
404 Preservation of Information Provided for Accessibility	Heading cell – no response required	Heading cell – no response required
404.1 General	Supports	This product should not interfere with Accessibility Information
405 Privacy	Heading cell – no response required	Heading cell – no response required
405.1 General	Supports	The product provides the same degree of privacy of input and output shall be provided to all individuals
406 Standard Connections	Heading cell – no response required	Heading cell – no response required
406.1 General	Supports	Industry Standard ports are used
407 Operable Parts	Heading cell – no response required	Heading cell – no response required
407.2 Contrast	Supports	Controls with lights, or icons are light on dark. This product will host an external keyboard, but does not have a keyboard
407.3 Input Controls	Heading cell – no response required	Heading cell – no response required
407.3.1 Tactilely Discernible	Supports	Controls are tactilely discernible
407.3.2 Alphabetic Keys	Not Applicable	This product does not have a keyboard, it will support an external keyboard
407.3.3 Numeric Keys	Not Applicable	This product does not have a keyboard, it will support an external keyboard
407.4 Key Repeat	Not Applicable	This product hosting a Windows OS can control key repeat through the OS. Dell defers to Microsoft.com for Microsoft VPAT reviews
407.5 Timed Response	Supports	The only timed response would be the sleep mode of the computer, via the Windows OS, however the enduser can set this to the time they want to indicate, one option is never. If the enduser does not indicate never, then the unit will enter sleep with no warning, based on no actions taking place. Dell defers to Microsoft.com

Criteria	Conformance Level	Remarks and Explanations
		for their review of the Windows OS
407.6 Operation	Supports	The product can be used with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds (22.2 N) maximum.
407.7 Tickets, Fare Cards, and Keycards	Not Applicable	The unit reviewed did not have tickerts, fare cards or key cards
407.8 Reach Height and Depth	Heading cell -- no response required	Heading cell -- no response required
407.8.1 Vertical Reference Plane	Supports	The end user set up will determine this compliance
407.8.1.1 Vertical Plane for Side Reach	Supports	The end user set up will determine this compliance
407.8.1.2 Vertical Plane for Forward Reach	Supports	The end user set up will determine this compliance
407.8.2 Side Reach	Supports	The end user set up will determine this compliance
407.8.2.1 Unobstructed Side Reach	Supports	The end user set up will determine this compliance
407.8.2.2 Obstructed Side Reach	Supports	The end user set up will determine this compliance
407.8.3 Forward Reach	Supports	The end user set up will determine this compliance
407.8.3.1 Unobstructed Forward Reach	Supports	The end user set up will determine this compliance
407.8.3.2 Obstructed Forward Reach	Supports	The end user set up will determine this compliance
407.8.3.2.1 Operable Part Height for ICT with Obstructed Forward Reach	Supports	The end user set up will determine this compliance
407.8.3.2.2 Knee and Toe Space under ICT with Obstructed Forward Reach	Supports	The end user set up will determine this compliance
408 Display Screens	Heading cell -- no response required	Heading cell -- no response required
408.2 Visibility	Not Applicable	This product does not come with a display, it can support an external display and

Criteria	Conformance Level	Remarks and Explanations
		placement would be owned by the end user
408.3 Flashing	Not Applicable	This product does not come with a display, it can support an external display and placement would be owned by the end user
409 Status Indicators	Heading cell – no response required	Heading cell – no response required
409.1 General	Supports with exceptions	The Power button is the only control on the unit reviewed. They have lights when on/playing when on, and no light when off. The status when on, could be said to meet based on sound of fans and unit running at start up but based on placement and noise level this is not a clear message of the status therefore supports with exception was indicated
410 Color Coding	Heading cell – no response required	Heading cell – no response required
410.1 General	Supports	color coding is not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.
411 Audible Signals	Heading cell – no response required	Heading cell – no response required
411.1 General	Supports	audible signals or cues are not be used as the only means of conveying information, indicating an action, or prompting a response
412 ICT with Two-Way Voice Communication	Heading cell – no response required	Heading cell – no response required
412.2 Volume Gain	Heading cell – no response required	Heading cell – no response required
412.2.1 Volume Gain for Wireline Telephones	Not Applicable	This product does not provide two way communication
412.2.2 Volume Gain for Non-Wireline ICT	Not Applicable	This product does not provide two way communication
412.3 Interference Reduction and Magnetic Coupling	Heading cell – no response required	Heading cell – no response required

Criteria	Conformance Level	Remarks and Explanations
412.3.1 Wireless Handsets	Not Applicable	This product does not provide two way communication
412.3.2 Wireline Handsets	Not Applicable	This product does not provide two way communication
412.4 Digital Encoding of Speech	Not Applicable	This product does not provide two way communication
412.5 Real-Time Text Functionality	Reserved for future	Reserved for future
412.6 Caller ID	Not Applicable	This product does not provide two way communication
412.7 Video Communication	Not Applicable	This product does not provide two way communication
412.8 Legacy TTY Support	Heading cell – no response required	Heading cell – no response required
412.8.1 TTY Connectability	Not Applicable	This product does not provide two way communication
412.8.2 Voice and Hearing Carry Over	Not Applicable	This product does not provide two way communication
412.8.3 Signal Compatibility	Not Applicable	This product does not provide two way communication
412.8.4 Voice Mail and Other Messaging Systems	Not Applicable	This product does not provide two way communication
413 Closed Caption Processing Technologies	Heading cell – no response required	Heading cell – no response required
413.1.1 Decoding and Display of Closed Captions	Not Applicable	This product does not have closed captioning decoding capability it will stream video with closed captioning capability
413.1.2 Pass-Through of Closed Caption Data	Supports	This product can pass through closed caption video, but does not have any closed caption decoding
414 Audio Description Processing Technologies	Heading cell – no response required	Heading cell – no response required
414.1.1 Digital Television Tuners	Not Applicable	This product does not have a TV Tuner
414.1.2 Other ICT	Not Applicable	This product does not have audio description controls. Audio Description option is within the Window OS, however Dell defers to Microsoft for review of

Criteria	Conformance Level	Remarks and Explanations
415 User Controls for Captions and Audio Descriptions	Heading cell – no response required	Heading cell – no response required
415.1.1 Caption Controls	Supports with exceptions	The Microsoft windows OS has some settings for Closed Captioning, and Audio Description, the product HW does not have closed caption settings, Dell defers to Microsoft.com for the review of the OS
415.1.2 Audio Description Controls	Supports with exceptions	This product does not have audio description controls, The windows OS does have audio description controls in ease of access Dell defers to Microsoft.com

Chapter 5: Software

Notes: This is a HW only VPAT

Chapter 6: Support Documentation and Services

Notes:

Criteria	Conformance Level	Remarks and Explanations
601.1 Scope	Heading cell – no response required	Heading cell – no response required
602 Support Documentation	Heading cell – no response required	Heading cell – no response required
602.2 Accessibility and Compatibility Features	Does not support	Documentation does not list and explain how to use the accessibility and compatibility features
602.3 Electronic Support Documentation	See WCAG 2.0 section	See information in WCAG section
602.4 Alternate Formats for Non-Electronic Support Documentation	Supports with exceptions	It has been stated that Dell will supply documentation in alternate formats however these may not be readily available
603 Support Services	Heading cell – no response required	Heading cell – no response required
603.2 Information on Accessibility and Compatibility Features	Does not support	ICT support services does not include information on the accessibility and compatibility features

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Criteria	Conformance Level	Remarks and Explanations
503.3 Accommodation of Communication Needs	Supports	Dell provides a TTY line, chat line, phone line and email to customers to assist with communication needs

EN 301 549 Report

Notes: Not a mandate of Section 508

Legal Disclaimer (DELL)

This VPAT is for information purposes only. The information contained in this VPAT represents Dell Technologies view regarding matters discussed herein as of the date of publication. Because of changing market conditions, this VPPAT is not a commitment on the part of Dell, and Dell cannot guarantee the accuracy of any information presented after the date of publication. Dell makes no warranties, express or implied

E202.2 Legacy ICT. Any component or portion of existing ICT that complies with an earlier standard issued pursuant to Section 508 of the Rehabilitation Act of 1973, as amended (as republished in Appendix D), and that has not been altered on or after January 18, 2018, shall not be required to be modified to conform to the Revised 508 Standards.

Dell defers to www.microsoft.com for Windows and Windows application VPATS

Dell defers third party applications that could be placed on this product to the third party supplier

D.5 Dell OptiPlex 7070 SFF

Dell Accessibility Conformance Report

VPAT® Version 2.1 – March 2018

Name of Product/Version: Dell OptiPlex 7070, 5070, 3070, Slim Form Factor (SFF)

Product Description: Slim Tower Desktop Computer

Date: May 21, 2019

Contact information: Susan Samok

Notes: This is a HW only VPAT

Evaluation Methods Used: Pressure Meter, Sound Meter, Assistive Technology applications,

Applicable Standards/Guidelines

This report covers the degree of conformance for the following accessibility standard/guidelines:

Standard/Guideline	Included In Report
Web Content Accessibility Guidelines 2.0, at http://www.w3.org/TR/2008/REC-WCAG20-20081211/	Level A (No) Level AA (No) Level AAA (No)
Revised Section 508 standards as published by the U.S. Access Board in the Federal Register on January 18, 2017	(Yes)
Corrections to the ICT Final Rule as published by the US Access Board in the Federal Register on January 22, 2018	
EN 301 549 Accessibility requirements suitable for public procurement of ICT	(No)

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products and services in Europe, - V1.1.2 (2015-04) at http://mandate376.standards.eu/standard	

Terms

The terms used in the Conformance Level information are defined as follows:

- **Supports:** The functionality of the product has at least one method that meets the criterion without known defects or meets with equivalent facilitation.
- **Supports with Exceptions:** Some functionality of the product does not meet the criterion.
- **Does Not Support:** The majority of product functionality does not meet the criterion.
- **Not Applicable:** The criterion is not relevant to the product.
- **Not Evaluated:** The product has not been evaluated against the criterion. This can be used only in WCAG 2.0 Level AAA.

WCAG 2.0 Report

Tables 1 and 2 also document conformance with:

- EN 301 549: Chapter 9 - Web, Chapter 10 - Non-Web documents, Section 11.2.1- Non-Web Software (excluding closed functionality), and Section 11.2.2 - Non-Web Software (closed functionality).
- Revised Section 508: Chapter 5 – 501.1 Scope, 504.2 Content Creation or Editing, and Chapter 6 – 602.3 Electronic Support Documentation.

Note: When reporting on conformance with the WCAG 2.0 Success Criteria, they are scoped for full pages, complete processes, and accessibility-supported ways of using technology as documented in the [WCAG 2.0 Conformance Requirements](#).

Table 1: Success Criteria, Level A

Notes: HW VPAT Only – Table removed

Table 2: Success Criteria, Level AA

Notes: HW VPAT Only – Table removed

Table 3: Success Criteria, Level AAA

Notes: HW VPAT Only – Table removed

2017 Section 508 Report

Notes:

Chapter 3: Functional Performance Criteria (FPC)

Notes:

Criteria	Conformance Level	Remarks and Explanations
302.1 Without Vision	Supports	User does not need vision to operate this product
302.2 With Limited Vision	Supports	User does not need vision to operate this product
302.3 Without Perception of Color	Supports	Color is not the only means to convey information
302.4 Without Hearing	Supports	User hearing is not required
302.5 With Limited Hearing	Supports	User hearing is not required
302.6 Without Speech	Supports	User speech is not required to operate the product
302.7 With Limited Manipulation	Supports	Product provides at least one mode of operation that does not require fine motor control or simultaneous manual operations.
302.8 With Limited Reach and Strength	Supports	Placement of the product is up to the end

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Criteria	Conformance Level	Remarks and Explanations
302.9 With Limited Language, Cognitive, and Learning Abilities	Supports	user, this product Usage of this type of equipment can be used with limited language and cognitive/learning capabilities, it would be up to the end user to determine the expected tasks

Chapter 4: Hardware

Notes:

Criteria	Conformance Level	Remarks and Explanations
402 Closed Functionality	Heading cell – no response required	Heading cell – no response required
402.1 General	Heading cell – no response required	Heading cell – no response required
402.2 Speech-Output Enabled	Heading cell – no response required	Heading cell – no response required
402.2.1 Information Displayed On-Screen	Not Applicable	This product is not defined as closed functionality
402.2.2 Transactional Outputs	Not Applicable	This product is not defined as closed functionality
402.2.3 Speech Delivery Type and Coordination	Not Applicable	This product is not defined as closed functionality
402.2.4 User Control	Not Applicable	This product is not defined as closed functionality
402.2.5 Braille Instructions	Not Applicable	This product is not defined as closed functionality
402.3 Volume	Heading cell – no response required	Heading cell – no response required
402.3.1 Private Listening	Not Applicable	This product is not defined as closed functionality
402.3.2 Non-private Listening	Not Applicable	This product is not defined as closed functionality
402.4 Characters on Display Screens	Not Applicable	This product is not defined as closed functionality
402.5 Characters on Variable Message Signs	Not Applicable	This product is not defined as closed functionality

Criteria	Conformance Level	Remarks and Explanations
403 Biometrics	Heading cell – no response required	Heading cell – no response required
403.1 General	Not Applicable	The product reviewed did not have Biometrics in the HW
404 Preservation of Information Provided for Accessibility	Heading cell – no response required	Heading cell – no response required
404.1 General	Supports	This product should not interfere with Accessibility Information
405 Privacy	Heading cell – no response required	Heading cell – no response required
405.1 General	Supports	The product provides the same degree of privacy of input and output shall be provided to all individuals
406 Standard Connections	Heading cell – no response required	Heading cell – no response required
406.1 General	Supports	Industry Standard ports are used
407 Operable Parts	Heading cell – no response required	Heading cell – no response required
407.2 Contrast	Supports	Controls with lights, or icons are light on dark. This product will host an external keyboard, but does not have a keyboard
407.3 Input Controls	Heading cell – no response required	Heading cell – no response required
407.3.1 Tactilely Discernible	Supports	Controls are tactilely discernible
407.3.2 Alphabetic Keys	Not Applicable	This product does not have a keyboard, it will support an external keyboard
407.3.3 Numeric Keys	Not Applicable	This product does not have a keyboard, it will support an external keyboard
407.4 Key Repeat	Not Applicable	This product hosting a Windows OS can control key repeat through the OS. Dell defers to Microsoft.com for Microsoft VPAT reviews
407.5 Timed Response	Supports	The only timed response would be the sleep mode of the computer, via the Windows OS, however the enduser can set this to the time they want to indicate, one option is never. If the enduser does not indicate never, then the unit will enter sleep with no warning, based on no actions taking place. Dell defers to Microsoft.com

Criteria	Conformance Level	Remarks and Explanations
		for their review of the Windows OS
407.6 Operation	Supports	The product can be used with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds (22.2 N) maximum.
407.7 Tickets, Fare Cards, and Keycards	Not Applicable	The unit reviewed did not have tickerts, fare cards or key cards
407.8 Reach Height and Depth	Heading cell -- no response required	Heading cell -- no response required
407.8.1 Vertical Reference Plane	Supports	The end user set up will determine this compliance
407.8.1.1 Vertical Plane for Side Reach	Supports	The end user set up will determine this compliance
407.8.1.2 Vertical Plane for Forward Reach	Supports	The end user set up will determine this compliance
407.8.2 Side Reach	Supports	The end user set up will determine this compliance
407.8.2.1 Unobstructed Side Reach	Supports	The end user set up will determine this compliance
407.8.2.2 Obstructed Side Reach	Supports	The end user set up will determine this compliance
407.8.3 Forward Reach	Supports	The end user set up will determine this compliance
407.8.3.1 Unobstructed Forward Reach	Supports	The end user set up will determine this compliance
407.8.3.2 Obstructed Forward Reach	Supports	The end user set up will determine this compliance
407.8.3.2.1 Operable Part Height for ICT with Obstructed Forward Reach	Supports	The end user set up will determine this compliance
407.8.3.2.2 Knee and Toe Space under ICT with Obstructed Forward Reach	Supports	The end user set up will determine this compliance
408 Display Screens	Heading cell -- no response required	Heading cell -- no response required
408.2 Visibility	Not Applicable	This product does not come with a display, it can support an external display and

Criteria	Conformance Level	Remarks and Explanations
		placement would be owned by the end user
408.3 Flashing	Not Applicable	This product does not come with a display, it can support an external display and placement would be owned by the end user
409 Status Indicators	Heading cell – no response required	Heading cell – no response required
409.1 General	Supports with exceptions	The Power button and ODD eject button are the only control on the unit reviewed. They have lights when on/playing when on, and no light when off. The status when on, could be said to meets based on sound of fans and unit running but based on placement and noise level this is not a clear message of the status do supports with exception was indicated
410 Color Coding	Heading cell – no response required	Heading cell – no response required
410.1 General	Supports	color coding is not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.
411 Audible Signals	Heading cell – no response required	Heading cell – no response required
411.1 General	Supports	audible signals or cues are not be used as the only means of conveying information, indicating an action, or prompting a response
412 ICT with Two-Way Voice Communication	Heading cell – no response required	Heading cell – no response required
412.2 Volume Gain	Heading cell – no response required	Heading cell – no response required
412.2.1 Volume Gain for Wireline Telephones	Not Applicable	This product does not provide two way communication
412.2.2 Volume Gain for Non-Wireline ICT	Not Applicable	This product does not provide two way communication
412.3 Interference Reduction and Magnetic Coupling	Heading cell – no response required	Heading cell – no response required

Criteria	Conformance Level	Remarks and Explanations
412.3.1 Wireless Handsets	Not Applicable	This product does not provide two way communication
412.3.2 Wireline Handsets	Not Applicable	This product does not provide two way communication
412.4 Digital Encoding of Speech	Not Applicable	This product does not provide two way communication
412.5 Real-Time Text Functionality	Reserved for future	Reserved for future
412.6 Caller ID	Not Applicable	This product does not provide two way communication
412.7 Video Communication	Not Applicable	This product does not provide two way communication
412.8 Legacy TTY Support	Heading cell – no response required	Heading cell – no response required
412.8.1 TTY Connectability	Not Applicable	This product does not provide two way communication
412.8.2 Voice and Hearing Carry Over	Not Applicable	This product does not provide two way communication
412.8.3 Signal Compatibility	Not Applicable	This product does not provide two way communication
412.8.4 Voice Mail and Other Messaging Systems	Not Applicable	This product does not provide two way communication
413 Closed Caption Processing Technologies	Heading cell – no response required	Heading cell – no response required
413.1.1 Decoding and Display of Closed Captions	Not Applicable	This product does not have closed captioning decoding capability it will stream video with closed captioning capability
413.1.2 Pass-Through of Closed Caption Data	Supports	This product can pass through closed caption video, but does not have any closed caption decoding
414 Audio Description Processing Technologies	Heading cell – no response required	Heading cell – no response required
414.1.1 Digital Television Tuners	Not Applicable	This product does not have a TV Tuner
414.1.2 Other ICT	Not Applicable	This product does not have audio description controls
415 User Controls for Captions and Audio Descriptions	Heading cell – no response required	Heading cell – no response required
415.1.1 Caption Controls	Supports with exceptions	The Microsoft windows OS has some

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Criteria	Conformance Level	Remarks and Explanations
		settings for Closed Captioning, the product HW does not have closed caption settings, Dell defers to Microsoft.com
415.1.2 Audio Description Controls	Supports with exceptions	This product does not have audio description controls, The windows OS does have audio description controls in ease of access Dell defers to Microsoft.com

Chapter 5: Software

Notes: HW VPAT Only Table Removed

Chapter 6: Support Documentation and Services

Notes:

Criteria	Conformance Level	Remarks and Explanations
601.1 Scope	Heading cell -- no response required	Heading cell -- no response required
602 Support Documentation	Heading cell -- no response required	Heading cell -- no response required
602.2 Accessibility and Compatibility Features	Does not support	Documentation does not list and explain how to use the accessibility and compatibility features
602.3 Electronic Support Documentation	See WCAG 2.0 section	See information in WCAG section
602.4 Alternate Formats for Non-Electronic Support Documentation	Supports with exceptions	It has been stated that Dell will supply documentation in alternate formats however these may not be readily available
603 Support Services	Heading cell -- no response required	Heading cell -- no response required
603.2 Information on Accessibility and Compatibility Features	Does not support	ICT support services does not include information on the accessibility and compatibility features
603.3 Accommodation of Communication Needs	Supports	Dell provides a TTY line, chat line, phone line and email to customers to assist with communication needs

EN 301 549 Report

Notes: Not a mandate of section 508 – Table Removed

Legal Disclaimer (DELL)

This VPAT is for information purposes only. The information contained in this VPAT represents Dell Technologies view regarding matters discussed herein as of the date of publication. Because of changing market conditions, this VPPAT is not a commitment on the part of Dell, and Dell cannot guarantee the accuracy of any information presented after the date of publication. Dell makes no warranties, express or implied.

E202.2 Legacy ICT: Any component or portion of existing ICT that complies with an earlier standard issued pursuant to Section 508 of the Rehabilitation Act of 1973, as amended (as republished in Appendix D), and that has not been altered on or after January 18, 2018, shall not be required to be modified to conform to the Revised 508 Standards.

Dell defers to www.microsoft.com for Windows and Windows application VPATS.

Dell defers third party applications that could be placed on this product to the third party supplier.

D.6 Dell Precision 7740

Dell Accessibility Conformance Report

VPAT® Version 2.1 – March 2018

Name of Product/Version: Dell Precision 7740

Product Description: Dell Mobile Workstation Computer

Date: June 22, 2019

Contact information: Susan Samok

Notes: This is a HW VPAT only

This device contained Dell Touchpad, Dell Power Manager, Dell Digital Delivery, Dell Command Update, Dell Premier Color, Dell Precision Optimizer. These apps have separate VPATs, and can be requested if needed.

Dell.com/support has a standalone VPAT

Evaluation Methods Used: Pressure Meter, Screen Reader, Color Contrast, Sound Meter, Magnifier

Applicable Standards/Guidelines

This report covers the degree of conformance for the following accessibility standard/guidelines:

Standard/Guideline	Included In Report

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Web Content Accessibility Guidelines 2.0, at http://www.w3.org/TR/2008/REC-WCAG20-20081211/	Level A (No) Level AA (No) Level AAA (No)
Revised Section 508 standards as published by the U.S. Access Board in the Federal Register on January 18, 2017 Corrections to the ICT Final Rule as published by the US Access Board in the Federal Register on January 22, 2018	{Yes}
EN 301 549: Accessibility requirements suitable for public procurement of ICT products and services in Europe, - V1.1.2 (2015-04) at http://mandate376.standards.eu/standard	{No }

Terms

The terms used in the Conformance Level information are defined as follows:

- **Supports:** The functionality of the product has at least one method that meets the criterion without known defects or meets with equivalent facilitation.
- **Supports with Exceptions:** Some functionality of the product does not meet the criterion.
- **Does Not Support:** The majority of product functionality does not meet the criterion.
- **Not Applicable:** The criterion is not relevant to the product.
- **Not Evaluated:** The product has not been evaluated against the criterion. This can be used only in WCAG 2.0 Level AAA.

WCAG 2.0 Report

Tables 1 and 2 also document conformance with:

- EN 301 549: Chapter 9 - Web, Chapter 10 - Non-Web documents, Section 11.2.1- Non-Web Software (excluding closed functionality), and Section 11.2.2 - Non-Web Software (closed functionality).
- Revised Section 508: Chapter 5 – 501.1 Scope, 504.2 Content Creation or Editing, and Chapter 6 – 602.3 Electronic Support Documentation.

Note: When reporting on conformance with the WCAG 2.0 Success Criteria, they are scoped for full pages, complete processes, and accessibility-supported ways of using technology as documented in the [WCAG 2.0 Conformance Requirements](#).

Table 1: Success Criteria, Level A

Notes: This is HW and not SW, WCAG is out of scope for HW

Table 2: Success Criteria, Level AA

Notes: This is HW and not SW, WCAG is out of scope for HW

Table 3: Success Criteria, Level AAA

Notes: This is HW and not SW, WCAG is out of scope for HW

2017 Section 508 Report

Notes:

Chapter 3: Functional Performance Criteria (FPC)

Notes:

Criteria	Conformance Level	Remarks and Explanations
302.1 Without Vision	Supports	User does not need vision to operate this product
302.2 With Limited Vision	Supports	User does not need vision to operate this product
302.3 Without Perception of Color	Supports	Color is not the only means to convey information

Page 3 of 11

Criteria	Conformance Level	Remarks and Explanations
302.4 Without Hearing	Supports	User hearing is not required
302.5 With Limited Hearing	Supports	User hearing is not required
302.6 Without Speech	Supports	User speech is not required to operate the product
302.7 With Limited Manipulation	Supports	Product provides at least one mode of operation that does not require fine motor control or simultaneous manual operations.
302.8 With Limited Reach and Strength	Supports	Placement of the product is up to the end user, this product
302.9 With Limited Language, Cognitive, and Learning Abilities	Supports	Usage of this type of equipment can be used with limited language and cognitive/learning capabilities, it would be up to the end user to determine the expected tasks

Chapter 4: Hardware

Notes:

Criteria	Conformance Level	Remarks and Explanations
402 Closed Functionality	Heading cell – no response required	Heading cell – no response required
402.1 General	Heading cell – no response required	Heading cell – no response required
402.2 Speech-Output Enabled	Heading cell – no response required	Heading cell – no response required
402.2.1 Information Displayed On-Screen	Not Applicable	This is a portable computer and not in scope of closed functionality
402.2.2 Transactional Outputs	Not Applicable	This is a portable computer and not in scope of closed functionality
402.2.3 Speech Delivery Type and Coordination	Not Applicable	This is a portable computer and not in scope of closed functionality
402.2.4 User Control	Not Applicable	This is a portable computer and not in scope of closed functionality
402.2.5 Braille Instructions	Not Applicable	This is a portable computer and not in scope of closed functionality

Criteria	Conformance Level	Remarks and Explanations
402.3 Volume	Heading cell – no response required	Heading cell – no response required
402.3.1 Private Listening	Not Applicable	This is a portable computer and not in scope of closed functionality, it does have a headphone jack for private listening
402.3.2 Non-private Listening	Not Applicable	This is a portable computer and not in scope of closed functionality
402.4 Characters on Display Screens	Not Applicable	This is a portable computer and not in scope of closed functionality
402.5 Characters on Variable Message Signs	Not Applicable	This is a portable computer and not in scope of closed functionality
403 Biometrics	Heading cell – no response required	Heading cell – no response required
403.1 General	Supports	Biometrics/ Fingerprint reader was present on the sample that was reviewed, but is not mandatory for the operation of the hardware. The Windows OS may have Biometrics, but Dell defers to Microsoft VPAT, and these are optional items
404 Preservation of Information Provided for Accessibility	Heading cell – no response required	Heading cell – no response required
404.1 General	Supports	This product does not interfere with accessibility features set by the end user
405 Privacy	Heading cell – no response required	Heading cell – no response required
405.1 General	Supports	This product as it is designed has volume mixer through Windows OS, and an industry standard headphone jack
406 Standard Connections	Heading cell – no response required	Heading cell – no response required
406.1 General	Supports	This is a portable computer and has industry standard ports
407 Operable Parts	Heading cell – no response required	Heading cell – no response required
407.2 Contrast	Supports	Keys and power button (light is on when operating) are light on dark contrast
407.3 Input Controls	Heading cell – no response required	Heading cell – no response required
407.3.1 Tactilely Discernible	Supports	All keys latches, buttons, and controls are tactilely discernible, and discernible

Criteria	Conformance Level	Remarks and Explanations
		through touch
407.3.2 Alphabetic Keys	Supports	The laptop key board has raised bards on the J and F keys
407.3.3 Numeric Keys	Supports	The keyboard has a numeric keyboard layout there is a raised bar on the 5 key.
407.4 Key Repeat	Supports	Key repeat is not present on the unit hardware, however, the Windows OS also has a control for Key Repeat , Dell defers to Microsoft for the review of the windows key repeat
407.5 Timed Response	Supports	The only timed response would be the sleep mode of the computer, via the Windows OS, however the enduser can set this to the time they want to indicate, one option is never. If the enduser does not indicate never, then the unit will enter sleep with no warning, based on no actions taking place. Dell defers to Microsoft.com for their review of the Windows OS
407.6 Operation	Supports	The product can be used with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds (22.2 N) maximum.
407.7 Tickets, Fare Cards, and Keycards	Not applicable	This unit reviewed did not have a smart card reader. It does have a memory card reader and the slot is tactilely discernible
407.8 Reach Height and Depth	Heading cell – no response required	Heading cell – no response required
407.8.1 Vertical Reference Plane	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.1.1 Vertical Plane for Side Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.1.2 Vertical Plane for Forward Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.2 Side Reach	Supports	Placement of the unit is dependent on the

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Criteria	Conformance Level	Remarks and Explanations
		end user, this is a mobile computer
407.8.2.1 Unobstructed Side Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.2.2 Obstructed Side Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.3 Forward Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.3.1 Unobstructed Forward Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.3.2 Obstructed Forward Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.3.2.1 Operable Part Height for ICT with Obstructed Forward Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.3.2.2 Knee and Toe Space under ICT with Obstructed Forward Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
408 Display Screens	Heading cell – no response required	Heading cell – no response required
408.2 Visibility	Supports	The Computer can allot for the screen to be visible from a point located 40 inches above the floor space. It would be the ownership of the end user to place this unit where it could accommodate this request
408.3 Flashing	Supports	This product does not have flashing
409 Status Indicators	Heading cell – no response required	Heading cell – no response required
409.1 General	Supports with exceptions	The Power button is the only control on the unit reviewed. It has lights when on/playing when on, and no light when off. The status when on, could be said to meets based on sound of fans and unit running but based on placement and noise level this is not a clear message of the status so supports with exception was indicated.
410 Color Coding	Heading cell – no response required	Heading cell – no response required

Criteria	Conformance Level	Remarks and Explanations
410.1 General	Supports	Color is not the only means of supplying information
411 Audible Signals	Heading cell – no response required	Heading cell – no response required
411.1 General	Supports	audible signals or cues are not be used as the only means of conveying information, indicating an action, or prompting a response
412 ICT with Two-Way Voice Communication	Heading cell – no response required	Heading cell – no response required
412.2 Volume Gain	Heading cell – no response required	Heading cell – no response required
412.2.1 Volume Gain for Wireline Telephones	Not Applicable	This product does not provide two way communication
412.2.2 Volume Gain for Non-Wireline ICT	Not Applicable	This product does not provide two way communication
412.3 Interference Reduction and Magnetic Coupling	Heading cell – no response required	Heading cell – no response required
412.3.1 Wireless Handsets	Not Applicable	This product does not provide two way communication
412.3.2 Wireline Handsets	Not Applicable	This product does not provide two way communication
412.4 Digital Encoding of Speech	Not Applicable	This product does not provide two way communication
412.5 Real-Time Text Functionality	Reserved for future	Reserved for future
412.6 Caller ID	Not Applicable	This product does not provide two way communication
412.7 Video Communication	Not Applicable	This product does not provide two way communication
412.8 Legacy TTY Support	Heading cell – no response required	Heading cell – no response required
412.8.1 TTY Connectability	Not Applicable	This product does not provide two way communication
412.8.2 Voice and Hearing Carry Over	Not Applicable	This product does not provide two way communication
412.8.3 Signal Compatibility	Not Applicable	This product does not provide two way communication
412.8.4 Voice Mail and Other Messaging Systems	Not Applicable	This product does not provide two way communication

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Criteria	Conformance Level	Remarks and Explanations
413 Closed Caption Processing Technologies	Heading cell – no response required	Heading cell – no response required
413.1.1 Decoding and Display of Closed Captions	Not Applicable	This product does not have closed captioning decoding capability it will stream video with closed captioning capability
413.1.2 Pass-Through of Closed Caption Data	Supports	This product can pass through closed caption video, but does not have any closed caption decoding
414 Audio Description Processing Technologies	Heading cell – no response required	Heading cell – no response required
414.1.1 Digital Television Tuners	Not Applicable	This product does not have a TV Tuner
414.1.2 Other ICT	Not Applicable	This product does not have audio description controls. The Windows OS has Audio Description controls, but Dell defers to Microsoft VPAT
415 User Controls for Captions and Audio Descriptions	Heading cell – no response required	Heading cell – no response required
415.1.1 Caption Controls	Not Applicable	The Microsoft windows OS has some settings for Closed Captioning, the product HW does not have closed caption settings, Dell defers to Microsoft.com
415.1.2 Audio Description Controls	Not Applicable	This product does not have audio description controls, The windows OS does have audio description controls in ease of access Dell defers to Microsoft.com

Chapter 5: Software

Notes: Table was removed because this is HW only

Chapter 6: Support Documentation and Services

Notes:

Criteria	Conformance Level	Remarks and Explanations
601.1 Scope	Heading cell – no response required	Heading cell – no response required
602 Support Documentation	Heading cell – no response required	Heading cell – no response required

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Criteria	Conformance Level	Remarks and Explanations
602.2 Accessibility and Compatibility Features	Does not support	Documentation does not list and explain how to use the accessibility and compatibility features
602.3 Electronic Support Documentation	See WCAG 2.0 section	See information in WCAG section
602.4 Alternate Formats for Non-Electronic Support Documentation	Supports with exceptions	It has been stated that Dell will supply documentation in alternate formats however these may not be readily available
603 Support Services	Heading cell – no response required	Heading cell – no response required
603.2 Information on Accessibility and Compatibility Features	Does not support	ICT support services does not include information on the accessibility and compatibility features
603.3 Accommodation of Communication Needs	Supports	Dell provides a TTY line, chat line, phone line and email to customers to assist with communication needs

EN 301 549 Report

Notes: Removed not a mandate of Section 508

Legal Disclaimer (Company)

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E202.2 Legacy ICT. Any component or portion of existing ICT that complies with an earlier standard issued pursuant to Section 508 of the Rehabilitation Act of 1973, as amended (as republished in Appendix D), and that has not been altered on or after January 18, 2018, shall not be required to be modified to conform to the Revised 508 Standards.

Dell defers to www.microsoft.com for Windows and Windows application VPATS

Dell defers third party applications or OS's that could be placed on this product to the third party supplier

D.7 Dell Rugged 5424 Notebook

Dell Accessibility Conformance Report

VPAT® Version 2.1 – March 2018

Name of Product/Version: Dell Rugged 5424

Product Description: The Latitude Rugged family has been trained and tested for some of the world's toughest jobs and most hazardous environments. Built smart and durable to ensure you never have to slow down.

Date: November 14, 2018

Contact information: Susan Samok / susan_samok@federal.dell.com

Notes: This is a HW VPAT only

This device contained Dell Power Manager, Dell Digital Delivery, Dell Command Update, Dell Free Fall Data Protection. These apps have separate VPATs, and can be requested if needed.

Evaluation Methods Used: Pressure Meter, Screen Reader, Color Contrast, Sound Meter,

Applicable Standards/Guidelines

This report covers the degree of conformance for the following accessibility standard/guidelines:

Standard/Guideline	Included In Report
Web Content Accessibility Guidelines 2.0, at http://www.w3.org/TR/2008/REC-WCAG20-20081211/	Level A (No) Level AA (No)

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	Level AAA (No)
Revised Section 508 standards as published by the U.S. Access Board in the Federal Register on January 18, 2017	{Yes}
Corrections to the ICT Final Rule as published by the US Access Board in the Federal Register on January 22, 2018	
EN 301 549 Accessibility requirements suitable for public procurement of ICT products and services in Europe, - V1.1.2 (2015-04) at http://mandate.376.standards.eu/standard	{No }

Terms

The terms used in the Conformance Level information are defined as follows:

- **Supports:** The functionality of the product has at least one method that meets the criterion without known defects or meets with equivalent facilitation.
- **Supports with Exceptions:** Some functionality of the product does not meet the criterion.
- **Does Not Support:** The majority of product functionality does not meet the criterion.
- **Not Applicable:** The criterion is not relevant to the product.
- **Not Evaluated:** The product has not been evaluated against the criterion. This can be used only in WCAG 2.0 Level AAA.

WCAG 2.0 Report

Tables 1 and 2 also document conformance with:

- EN 301 549: Chapter 9 - Web, Chapter 10 - Non-Web documents, Section 11.2.1- Non-Web Software (excluding closed functionality), and Section 11.2.2 - Non-Web Software (closed functionality).
- Revised Section 508: Chapter 5 – 501.1 Scope, 504.2 Content Creation or Editing, and Chapter 6 – 602.3 Electronic Support Documentation.

Note: When reporting on conformance with the WCAG 2.0 Success Criteria, they are scoped for full pages, complete processes, and accessibility-supported ways of using technology as documented in the [WCAG 2.0 Conformance Requirements](#).

Table 1: Success Criteria, Level A

Notes: Hardware Only Reviewed, See Microsoft.com for VPATS associated to Windows

Criteria	Conformance Level	Remarks and Explanations
1.1.1 Non-text Content (Level A) Also applies to: EN 301 549 Criteria 9.2.1 (Web) 10.2.1 (non-web document) 11.2.1.1 (Software) 11.2.2.1 (Closed Functionality Software) 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Closed: Authoring Tool:	Web: Electronic Docs: Software: Closed: Authoring Tool:
1.2.1 Audio-only and Video-only (Prerecorded) (Level A) Also applies to: EN 301 549 Criteria 9.2.2 (Web) 10.2.2 (non-web document) 11.2.1.2 (Software) 11.2.2.2.1 and 11.2.2.2.2 (Closed Software) 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Closed: Authoring Tool:	Web: Electronic Docs: Software: Closed: Authoring Tool:
1.2.2 Captions (Prerecorded) (Level A) Also applies to: EN 301 549 Criteria	Web: Electronic Docs: Software:	Web: Electronic Docs: Software:

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Criteria	Conformance Level	Remarks and Explanations
9.2.3 (Web) 10.2.3 (non-web document) 11.2.1.3 (Software) 11.2.2.3 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Authoring Tool:	Authoring Tool:
<u>1.2.3 Audio Description or Media Alternative (Prerecorded)</u> (Level A) Also applies to: EN 301 549 Criteria 9.2.4 (Web) 10.2.4 (non-web document) 11.2.1.4 (Software) 11.2.2.4 (Closed Software) 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Closed: Authoring Tool:	Web: Electronic Docs: Software: Closed: Authoring Tool:
<u>1.3.1 Info and Relationships</u> (Level A) Also applies to: EN 301 549 Criteria 9.2.7 (Web) 10.2.7 (non-web document) 11.2.1.7 (Software) 11.2.2.7 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs)	Web: Electronic Docs: Software: Closed: Authoring Tool:	Web: Electronic Docs: Software: Closed: Authoring Tool:

Criteria	Conformance Level	Remarks and Explanations
12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)		
<u>1.3.2 Meaningful Sequence</u> (Level A) Also applies to: EN 301 549 Criteria 9.2.8 (Web) 10.2.8 (non-web document) 11.2.1.8 (Software) 11.2.2.8 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:
<u>1.3.3 Sensory Characteristics</u> (Level A) Also applies to: EN 301 549 Criteria 9.2.9 (Web) 10.2.9 (non-web document) 11.2.1.9 (Software) 11.2.2.9 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:
<u>1.4.1 Use of Color</u> (Level A)	Web:	Web:

Criteria	Conformance Level	Remarks and Explanations
Also applies to: EN 301 549 Criteria 9.2.10 (Web) 10.2.10 (non-web document) 11.2.1.10 (Software) 11.2.2.10 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Electronic Docs: Software: Authoring Tool:	Electronic Docs: Software: Authoring Tool:
<u>1.4.2 Audio Control</u> (Level A) Also applies to: EN 301 549 Criteria 9.2.11 (Web) 10.2.11 (non-web document) 11.2.1.11 (Software) 11.2.2.11 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:
<u>2.1.1 Keyboard</u> (Level A) Also applies to: EN 301 549 Criteria 9.2.15 (Web) 10.2.15 (non-web document) 11.2.1.15 (Software) 11.2.2.15 (Closed Software)	Web: Electronic Docs: Software: Closed: Authoring Tool:	Web: Electronic Docs: Software: Closed: Authoring Tool:

Criteria	Conformance Level	Remarks and Explanations
11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)		
<u>2.1.2 No Keyboard Trap</u> (Level A) Also applies to: EN 301 549 Criteria 9.2.16 (Web) 10.2.16 (non-web document) 11.2.1.16 (Software) 11.2.2.16 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:
<u>2.2.1 Timing Adjustable</u> (Level A) Also applies to: EN 301 549 Criteria 9.2.17 (Web) 10.2.17 (non-web document) 11.2.1.17 (Software) 11.2.2.17 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:

Criteria	Conformance Level	Remarks and Explanations
602.3 (Support Docs) <u>2.2.2 Pause, Stop, Hide</u> (Level A) Also applies to: EN 301 549 Criteria 9.2.18 (Web) 10.2.18 (non-web document) 11.2.1.18 (Software) 11.2.2.18 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:
<u>2.3.1 Three Flashes or Below Threshold</u> (Level A) Also applies to: EN 301 549 Criteria 9.2.19 (Web) 10.2.19 (non-web document) 11.2.1.19 (Software) 11.2.2.19 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:
<u>2.4.1 Bypass Blocks</u> (Level A) Also applies to: EN 301 549 Criteria 9.2.20 (Web) 10.2.20 (non-web document) – Does not apply	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:

Criteria	Conformance Level	Remarks and Explanations
11.2.1.20 (Software) – Does not apply 11.2.2.20 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) – Does not apply to non-web software 504.2 (Authoring Tool) 602.3 (Support Docs) – Does not apply to non-web docs		
2.4.2 Page Titled (Level A) Also applies to: EN 301 549 Criteria 9.2.21 (Web) 10.2.21 (non-web document) 11.2.1.21 (Software) – Does not apply 11.2.2.21 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:
2.4.3 Focus Order (Level A) Also applies to: EN 301 549 Criteria 9.2.22 (Web) 10.2.22 (non-web document) 11.2.1.22 (Software) 11.2.2.22 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:

Criteria	Conformance Level	Remarks and Explanations
501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)		
2.4.4 Link Purpose (In Context) (Level A) Also applies to: EN 301 549 Criteria 9.2.23 (Web) 10.2.23 (non-web document) 11.2.1.23 (Software) 11.2.2.23 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:
3.1.1 Language of Page (Level A) Also applies to: EN 301 549 Criteria 9.2.27 (Web) 10.2.27 (non-web document) 11.2.1.27 (Software) 11.2.2.27 (Closed Software) 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Closed: Authoring Tool:	Web: Electronic Docs: Software: Closed: Authoring Tool:
3.2.1 On Focus (Level A) Also applies to: EN 301 549 Criteria	Web: Electronic Docs: Software:	Web: Electronic Docs: Software:

Criteria	Conformance Level	Remarks and Explanations
9.2.29 (Web) 10.2.29 (non-web document) 11.2.1.29 (Software) 11.2.2.29 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Authoring Tool:	Authoring Tool:
3.2.2 On Input (Level A) Also applies to: EN 301 549 Criteria 9.2.30 (Web) 10.2.30 (non-web document) 11.2.1.30 (Software) 11.2.2.30 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:
3.3.1 Error Identification (Level A) Also applies to: EN 301 549 Criteria 9.2.33 (Web) 10.2.33 (non-web document) 11.2.1.33 (Software) 11.2.2.33 (Closed Software) 11.6.2 (Authoring Tool) 12.1.2 (Product Docs)	Web: Electronic Docs: Software: Closed: Authoring Tool:	Web: Electronic Docs: Software: Closed: Authoring Tool:

Criteria	Conformance Level	Remarks and Explanations
12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)		
<u>3.3.2 Labels or Instructions</u> (Level A) Also applies to: EN 301 549 Criteria 9.2.34 (Web) 10.2.34 (non-web document) 11.2.1.34 (Software) 11.2.2.34 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:
<u>4.1.1 Parsing</u> (Level A) Also applies to: EN 301 549 Criteria 9.2.37 (Web) 10.2.37 (non-web document) 11.2.1.37 (Software) 11.2.2.37 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Closed: Authoring Tool:	Web: Electronic Docs: Software: Closed: Authoring Tool:
<u>4.1.2 Name, Role, Value</u> (Level A)	Web:	Web:

Criteria	Conformance Level	Remarks and Explanations
Also applies to: EN 301 549 Criteria 9.2.38 (Web) 10.2.38 (non-web document) 11.2.1.38 (Software) 11.2.2.38 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Electronic Docs: Software: Closed: Authoring Tool:	Electronic Docs: Software: Closed: Authoring Tool:

Table 2: Success Criteria, Level AA

Notes: Hardware Only Reviewed; See Microsoft.com for VPATS associated to Windows

Criteria	Conformance Level	Remarks and Explanations
<u>1.2.4 Captions (Live)</u> (Level AA) Also applies to: EN 301 549 Criteria 9.2.5 (Web) 10.2.5 (non-web document) 11.2.1.5 (Software) 11.2.2.5 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:
<u>1.2.5 Audio Description (Prerecorded)</u> (Level AA)	Web:	Web:

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Criteria	Conformance Level	Remarks and Explanations
Also applies to: EN 301 549 Criteria 9.2.6 (Web) 10.2.6 (non-web document) 11.2.1.6 (Software) 11.2.2.6 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Electronic Docs: Software: Authoring Tool:	Electronic Docs: Software: Authoring Tool:
<u>1.4.3 Contrast (Minimum)</u> (Level AA) Also applies to: EN 301 549 Criteria 9.2.12 (Web) 10.2.12 (non-web document) 11.2.1.12 (Software) 11.2.2.12 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:
<u>1.4.4 Resize text</u> (Level AA) Also applies to: EN 301 549 Criteria 9.2.13 (Web) 10.2.13 (non-web document) 11.2.1.13 (Software) 11.2.2.13 (Closed Software)	Web: Electronic Docs: Software: Closed: Authoring Tool:	Web: Electronic Docs: Software: Closed: Authoring Tool:

Criteria	Conformance Level	Remarks and Explanations
11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)		
<u>1.4.5 Images of Text</u> (Level AA) Also applies to: EN 301 549 Criteria 9.2.14 (Web) 10.2.14 (non-web document) 11.2.1.14 (Software) 11.2.2.14 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Closed: Authoring Tool:	Web: Electronic Docs: Software: Closed: Authoring Tool:
<u>2.4.5 Multiple Ways</u> (Level AA) Also applies to: EN 301 549 Criteria 9.2.24 (Web) 10.2.24 (non-web document) – Does not apply 11.2.1.24 (Software) – Does not apply 11.2.2.24 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) – Does not apply to non-web software 504.2 (Authoring Tool)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:

Criteria	Conformance Level	Remarks and Explanations
602.3 (Support Docs) – Does not apply to non-web docs		
2.4.6 Headings and Labels (Level AA) Also applies to: EN 301 549 Criteria 9.2.25 (Web) 10.2.25 (non-web document) 11.2.1.25 (Software) 11.2.2.25 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:
2.4.7 Focus Visible (Level AA) Also applies to: EN 301 549 Criteria 9.2.26 (Web) 10.2.26 (non-web document) 11.2.1.26 (Software) 11.2.2.26 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:
3.1.2 Language of Parts (Level AA) Also applies to: EN 301 549 Criteria 9.2.28 (Web) 10.2.28 (non-web document)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:

Criteria	Conformance Level	Remarks and Explanations
11.2.1.28 (Software) – Does not apply 11.2.2.28 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)		
3.2.3 Consistent Navigation (Level AA) Also applies to: EN 301 549 Criteria 9.2.31 (Web) 10.2.31 (non-web document) – Does not apply 11.2.1.31 (Software) – Does not apply 11.2.2.31 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) – Does not apply to non-web software 504.2 (Authoring Tool) 602.3 (Support Docs) – Does not apply to non-web docs	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:
3.2.4 Consistent Identification (Level AA) Also applies to: EN 301 549 Criteria 9.2.32 (Web) 10.2.32 (non-web document) – Does not apply 11.2.1.32 (Software) – Does not apply 11.2.2.32 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:

Criteria	Conformance Level	Remarks and Explanations
501 (Web)(Software) – Does not apply to non-web software 504.2 (Authoring Tool) 602.3 (Support Docs) – Does not apply to non-web docs		
3.3.3 Error Suggestion (Level AA) Also applies to: EN 301 549 Criteria 9.2.35 (Web) 10.2.35 (non-web document) 11.2.1.35 (Software) 11.2.2.35 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:
3.3.4 Error Prevention (Legal, Financial, Data) (Level AA) Also applies to: EN 301 549 Criteria 9.2.36 (Web) 10.2.36 (non-web document) 11.2.1.36 (Software) 11.2.2.36 (Closed Software) – Does not apply 11.6.2 (Authoring Tool) 12.1.2 (Product Docs) 12.2.4 (Support Docs) 2017 Section 508 501 (Web)(Software) 504.2 (Authoring Tool) 602.3 (Support Docs)	Web: Electronic Docs: Software: Authoring Tool:	Web: Electronic Docs: Software: Authoring Tool:

Table 3: Success Criteria, Level AAA

Notes: Hardware Only Reviewed, See Microsoft.com for VPATS associated to Windows

Criteria	Conformance Level	Remarks and Explanations
<u>1.2.6 Sign Language (Prerecorded)</u> (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
<u>1.2.7 Extended Audio Description (Prerecorded)</u> (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
<u>1.2.8 Media Alternative (Prerecorded)</u> (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
<u>1.2.9 Audio-only (Live)</u> (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
<u>1.4.6 Contrast Enhanced</u> (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
<u>1.4.7 Low or No Background Audio</u> (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
<u>1.4.8 Visual Presentation</u> (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
<u>1.4.9 Images of Text (No Exception) Control</u> (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply	Web:	Web:

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Criteria	Conformance Level	Remarks and Explanations
2017 Section 508 – Does not apply		
2.1.3 Keyboard (No Exception) (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
2.2.3 No Timing (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
2.2.4 Interruptions (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
2.2.5 Re-authenticating (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
2.3.2 Three Flashes (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
2.4.8 Location (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
2.4.9 Link Purpose (Link Only) (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
2.4.10 Section Headings (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
3.1.3 Unusual Words (Level AAA) Also applies to:	Web:	Web:

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Criteria	Conformance Level	Remarks and Explanations
EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply		
3.1.4 Abbreviations (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
3.1.5 Reading Level (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
3.1.6 Pronunciation (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
3.2.5 Change on Request (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
3.3.5 Help (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:
3.3.6 Error Prevention (All) (Level AAA) Also applies to: EN 301 549 Criteria – Does not apply 2017 Section 508 – Does not apply	Web:	Web:

2017 Section 508 Report

Notes:

Chapter 3: Functional Performance Criteria (FPC)

Notes:

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Criteria	Conformance Level	Remarks and Explanations
302.1 Without Vision	Supports	User does not need vision to operate this product
302.2 With Limited Vision	Supports	User does not need vision to operate this product
302.3 Without Perception of Color	Supports	Color is not the only means to convey information. The Power button when on has a green light, because it is a light, as well as color it is deemed to support
302.4 Without Hearing	Supports	User hearing is not required
302.5 With Limited Hearing	Supports	User hearing is not required
302.6 Without Speech	Supports	User speech is not required to operate the product
302.7 With Limited Manipulation	Supports with exceptions	Product provides at least one mode of operation that does not require fine motor control or simultaneous manual operations. Note usage of the stylus pen may be deemed as needing fine motor skills, but it is an option and not mandated for use of the computer. The removal of harddrives/external drives mandates that a lever be pushed over and a small tab pulled. Because there are multiple hard drives that appear to be available daily operation could mandate that these be removed as part of operation, and this resulted in our indicating supports with exceptions
302.8 With Limited Reach and Strength	Supports	Placement of the product is up to the end user, this product. This product is intended to be mobile
302.9 With Limited Language, Cognitive, and Learning Abilities	Supports	Usage of this type of equipment can be used with limited language and cognitive/learning capabilities, it would be up to the end user to determine the expected tasks

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Chapter 4: Hardware

Notes:

Criteria	Conformance Level	Remarks and Explanations
402 Closed Functionality	Heading cell – no response required	Heading cell – no response required
402.1 General	Heading cell – no response required	Heading cell – no response required
402.2 Speech-Output Enabled	Heading cell – no response required	Heading cell – no response required
402.2.1 Information Displayed On-Screen	Not Applicable	This is a portable computer and not in scope of closed functionality
402.2.2 Transactional Outputs	Not Applicable	This is a portable computer and not in scope of closed functionality
402.2.3 Speech Delivery Type and Coordination	Not Applicable	This is a portable computer and not in scope of closed functionality
402.2.4 User Control	Not Applicable	This is a portable computer and not in scope of closed functionality
402.2.5 Braille Instructions	Not Applicable	This is a portable computer and not in scope of closed functionality
402.3 Volume	Heading cell – no response required	Heading cell – no response required
402.3.1 Private Listening	Not Applicable	This is a portable computer and not in scope of closed functionality, it does have a headphone jack for private listening
402.3.2 Non-private Listening	Not Applicable	This is a portable computer and not in scope of closed functionality
402.4 Characters on Display Screens	Not Applicable	This is a portable computer and not in scope of closed functionality
402.5 Characters on Variable Message Signs	Not Applicable	This is a portable computer and not in scope of closed functionality
403 Biometrics	Heading cell – no response required	Heading cell – no response required
403.1 General	Supports	Biometrics is present on this machine but it is not mandatory for the products usage
404 Preservation of Information Provided for Accessibility	Heading cell – no response required	Heading cell – no response required
404.1 General	Supports	This product does not interfere with accessibility features set by the end user
405 Privacy	Heading cell – no response required	Heading cell – no response required

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Criteria	Conformance Level	Remarks and Explanations
405.1 General	Supports	This product as it is designed has volume mixer through Windows OS, and an industry standard headphone jack. The same level of privacy is provided for all end users
406 Standard Connections	Heading cell – no response required	Heading cell – no response required
406.1 General	Supports	This is a portable computer and has industry standard ports
407 Operable Parts	Heading cell – no response required	Heading cell – no response required
407.2 Contrast	Supports	Keys and power button (light is on when operating) are light on dark contrast. The icons over the latch doors have contrast, but may be deemed as not enough contrast, since they cover ports we do not deem them as a key or control
407.3 Input Controls	Heading cell – no response required	Heading cell – no response required
407.3.1 Tactilely Discernible	Supports	All keys latches, buttons, and controls are tactilely discernible, and discernible through touch
407.3.2 Alphabetic Keys	Supports	The laptop key board has raised bards on the J and F keys
407.3.3 Numeric Keys	Supports with exceptions	The keyboard has numbers in an ascending mode, but only 10 keys, but the number 5 key is not tactilely distinct. The user should be able to navigate the keyboard however, using Navigator, which announces the numbers as they are pressed, and through the tactilely distinct delete and escape keys just above the number row.
407.4 Key Repeat	Supports	Key repeat is not present on the unit hardware, however, the Windows OS also has a control for Key Repeat, Dell defers to Microsoft for the review of the windows key repeat

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Criteria	Conformance Level	Remarks and Explanations
407.5 Timed Response	Supports	The only timed response would be the sleep mode of the computer, via the Windows OS, however the enduser can set this to the time they want to indicate, one option is never. If the enduser does not indicate never, then the unit will enter sleep with no warning, based on no actions taking place. Dell defers to Microsoft.com for their review of the Windows OS
407.6 Operation	Supports with exceptions	The product can be turned on, and the unlock lever, and keyboard can be used without tight grasping, pinching, or twisting of the wrist. This product however does have several levers covering ports that have locks on them, as well as removable drives, and a stylus that may require fine motor skills.
407.7 Tickets, Fare Cards, and Keycards	Not applicable	This unit does have a smart card reader that is tactilely discernable
407.8 Reach Height and Depth	Heading cell -- no response required	Heading cell -- no response required
407.8.1 Vertical Reference Plane	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.1.1 Vertical Plane for Side Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.1.2 Vertical Plane for Forward Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.2 Side Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.2.1 Unobstructed Side Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.2.2 Obstructed Side Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.3 Forward Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.3.1 Unobstructed Forward Reach	Supports	Placement of the unit is dependent on the

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Criteria	Conformance Level	Remarks and Explanations
		end user, this is a mobile computer
407.8.3.2 Obstructed Forward Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.3.2.1 Operable Part Height for ICT with Obstructed Forward Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.3.2.2 Knee and Toe Space under ICT with Obstructed Forward Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
408 Display Screens	Heading cell – no response required	Heading cell – no response required
408.2 Visibility	Supports	The Computer can allot for the screen to be visible from a point located 40 inches above the floor space. It would be the ownership of the end user to place this unit where it could accommodate this request
408.3 Flashing	Supports	This product does not have flashing
409 Status Indicators	Heading cell – no response required	Heading cell – no response required
409.1 General	Does not support	The Power button is the only control on the unit reviewed. It has lights when on, and no light when off. There is no sound, and touch does not provide a status
410 Color Coding	Heading cell – no response required	Heading cell – no response required
410.1 General	Supports	Color is not the only means of supplying information. The power button has a green light when on, but since it is a light as well as color it has been reviewed as supports.
411 Audible Signals	Heading cell – no response required	Heading cell – no response required
411.1 General	Supports	audible signals or cues are not be used as the only means of conveying information, indicating an action, or prompting a response
412 ICT with Two-Way Voice Communication	Heading cell – no response required	Heading cell – no response required
412.2 Volume Gain	Heading cell – no response required	Heading cell – no response required
412.2.1 Volume Gain for Wireline Telephones	Not Applicable	This product does not provide two way

Criteria	Conformance Level	Remarks and Explanations
		communication
412.2.2 Volume Gain for Non-Wireline ICT	Not Applicable	This product does not provide two way communication
412.3 Interference Reduction and Magnetic Coupling	Heading cell – no response required	Heading cell – no response required
412.3.1 Wireless Handsets	Not Applicable	This product does not provide two way communication
412.3.2 Wireline Handsets	Not Applicable	This product does not provide two way communication
412.4 Digital Encoding of Speech	Not Applicable	This product does not provide two way communication
412.5 Real-Time Text Functionality	Reserved for future	Reserved for future
412.6 Caller ID	Not Applicable	This product does not provide two way communication
412.7 Video Communication	Not Applicable	This product does not provide two way communication
412.8 Legacy TTY Support	Heading cell – no response required	Heading cell – no response required
412.8.1 TTY Connectability	Not Applicable	This product does not provide two way communication
412.8.2 Voice and Hearing Carry Over	Not Applicable	This product does not provide two way communication
412.8.3 Signal Compatibility	Not Applicable	This product does not provide two way communication
412.8.4 Voice Mail and Other Messaging Systems	Not Applicable	This product does not provide two way communication
413 Closed Caption Processing Technologies	Heading cell – no response required	Heading cell – no response required
413.1.1 Decoding and Display of Closed Captions	Not Applicable	This product does not have closed captioning decoding capability it will stream video with closed captioning capability
413.1.2 Pass-Through of Closed Caption Data	Supports	This product can pass through closed caption video, but does not have any closed caption decoding
414 Audio Description Processing Technologies	Heading cell – no response required	Heading cell – no response required
414.1.1 Digital Television Tuners	Not Applicable	This product does not have a TV Tuner

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Criteria	Conformance Level	Remarks and Explanations
414.1.2 Other ICT	Not Applicable	This product does not have audio description controls. Windows OS has settings for audio description, Dell defers to Microsoft.com
415 User Controls for Captions and Audio Descriptions	Heading cell – no response required	Heading cell – no response required
415.1.1 Caption Controls	Not Applicable	The Microsoft windows OS has some settings for Closed Captioning, the product HW does not have closed caption settings, Dell defers to Microsoft.com
415.1.2 Audio Description Controls	Not Applicable	This product does not have audio description controls, The windows OS does have audio description controls in ease of access Dell defers to Microsoft.com

Chapter 5: Software

Notes: This is viewed as HW and therefore the tables associated to SW have been removed

Chapter 6: Support Documentation and Services

Notes:

Criteria	Conformance Level	Remarks and Explanations
601.1 Scope	Heading cell – no response required	Heading cell – no response required
602 Support Documentation	Heading cell – no response required	Heading cell – no response required
602.2 Accessibility and Compatibility Features	Does not support	Documentation does not list and explain how to use the accessibility and compatibility features
602.3 Electronic Support Documentation	See WCAG 2.0 section	See information in WCAG section
602.4 Alternate Formats for Non-Electronic Support Documentation	Supports with exceptions	It has been stated that Dell will supply documentation in alternate formats however these may not be readily available
603 Support Services	Heading cell – no response required	Heading cell – no response required
603.2 Information on Accessibility and Compatibility Features	Does not support	ICT support services does not include

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Criteria	Conformance Level	Remarks and Explanations
		information on the accessibility and compatibility features
603.3 Accommodation of Communication Needs	Supports	Dell provides a TTY line, chat line, phone line and email to customers to assist with communication needs

EN 301 549 Report

Notes: EN 301 549 is not a mandate of Section 508 and the tables have been removed

Legal Disclaimer (Company)

This VPAT is for information purposes only. The information contained in this VPAT represents Dell Technologies view regarding matters discussed herein as of the date of publication. Because of changing market conditions, this VPAT is not a commitment on the part of Dell, and Dell cannot guarantee the accuracy of any information presented after the date of publication. Dell makes no warranties, express or implied.

E202.2 Legacy ICT: Any component or portion of existing ICT that complies with an earlier standard issued pursuant to Section 508 of the Rehabilitation Act of 1973, as amended (as republished in Appendix D), and that has not been altered on or after January 18, 2018, shall not be required to be modified to conform to the Revised 508 Standards.

Dell defers to www.microsoft.com for Windows and Windows application VPATS

Dell defers third party applications that could be placed on this product to the third party supplier

D.8 Dell Rugged Extreme 7212 Tablet

Dell Accessibility Conformance Report

VPAT® Version 2.1 – March 2018

Name of Product/Version: Dell Rugged 7212 Tablet

Product Description: The Latitude Rugged family has been trained and tested for some of the world's toughest jobs and most hazardous environments. Built smart and durable to ensure you never have to slow down.

Date: November 14, 2018

Contact information: Susan Samok / susan_samok@federal.dell.com

Notes: This is a HW VPAT only

This device contained Dell Power Manager, Dell Digital Delivery, Dell Command Update, Dell Free Fall Data Protection. These apps have separate VPATs, and can be requested if needed.

Evaluation Methods Used: Pressure Meter, Screen Reader, Color Contrast, Sound Meter,

Applicable Standards/Guidelines

This report covers the degree of conformance for the following accessibility standard/guidelines:

Standard/Guideline	Included In Report
Web Content Accessibility Guidelines 2.0, at http://www.w3.org/TR/2008/REC-WCAG20-20081211/	Level A (No) Level AA (No)

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	Level AAA (No)
Revised Section 508 standards as published by the U.S. Access Board in the Federal Register on January 18, 2017	(Yes)
Corrections to the ICT Final Rule as published by the US Access Board in the Federal Register on January 22, 2018	
EN 301 549 Accessibility requirements suitable for public procurement of ICT products and services in Europe, - V1.1.2 (2015-04) at http://mandate.376.standards.eu/standard	(No)

Terms

The terms used in the Conformance Level information are defined as follows:

- **Supports:** The functionality of the product has at least one method that meets the criterion without known defects or meets with equivalent facilitation.
- **Supports with Exceptions:** Some functionality of the product does not meet the criterion.
- **Does Not Support:** The majority of product functionality does not meet the criterion.
- **Not Applicable:** The criterion is not relevant to the product.
- **Not Evaluated:** The product has not been evaluated against the criterion. This can be used only in WCAG 2.0 Level AAA.

WCAG 2.0 Report

Tables 1 and 2 also document conformance with:

- EN 301 549: Chapter 9 - Web, Chapter 10 - Non-Web documents, Section 11.2.1- Non-Web Software (excluding closed functionality), and Section 11.2.2 - Non-Web Software (closed functionality).
- Revised Section 508: Chapter 5 – 501.1 Scope, 504.2 Content Creation or Editing, and Chapter 6 – 602.3 Electronic Support Documentation.

Note: When reporting on conformance with the WCAG 2.0 Success Criteria, they are scoped for full pages, complete processes, and accessibility-supported ways of using technology as documented in the [WCAG 2.0 Conformance Requirements](#).

Table 1: Success Criteria, Level A

Notes: Hardware Only Reviewed, See Microsoft.com for VPATS associated to Windows

Table 2: Success Criteria, Level AA

Notes: Hardware Only Reviewed, See Microsoft.com for VPATS associated to Windows

Table 3: Success Criteria, Level AAA

Notes: Hardware Only Reviewed, See Microsoft.com for VPATS associated to Windows

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Notes:

Chapter 3: Functional Performance Criteria (FPC)

Notes:

Criteria	Conformance Level	Remarks and Explanations
302.1 Without Vision	Supports	User does not need vision to operate this product, the user will be dependent on the OS to host assistive technologies. Dell defers to the OS manufacturer
302.2 With Limited Vision	Supports	User does not need vision to operate this product, the user will be dependent on the OS to host assistive technologies. Dell defers to the OS manufacturer
302.3 Without Perception of Color	Supports	Color is not the only means to convey information.

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Criteria	Conformance Level	Remarks and Explanations
302.4 Without Hearing	Supports	User hearing is not required
302.5 With Limited Hearing	Supports	User hearing is not required
302.6 Without Speech	Supports	User speech is not required to operate the product
302.7 With Limited Manipulation	Supports with exceptions	Product provides at least one mode of operation that does not require fine motor control or simultaneous manual operations. Note usage of the stylus pen may be deemed as needing fine motor skills, but it is an option and not mandated for use of the computer. Levers and covers on the tablet may be deemed as need for fine motor skills. The Smart Card Reader has a force >5 lbs
302.8 With Limited Reach and Strength	Supports	Placement of the product is up to the end user, this product. This product is intended to be mobile
302.9 With Limited Language, Cognitive, and Learning Abilities	Supports	Usage of this type of equipment can be used with limited language and cognitive/learning capabilities, it would be up to the end user to determine the expected tasks. The assumption has been made that the end user would be familiar with the function of a computer

Chapter 4: Hardware

Notes:

Criteria	Conformance Level	Remarks and Explanations
402 Closed Functionality	Heading cell – no response required	Heading cell – no response required
402.1 General	Heading cell – no response required	Heading cell – no response required
402.2 Speech-Output Enabled	Heading cell – no response required	Heading cell – no response required
402.2.1 Information Displayed On-Screen	Not Applicable	This is a portable computer and not in

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Criteria	Conformance Level	Remarks and Explanations
		scope of closed functionality
402.2.2 Transactional Outputs	Not Applicable	This is a portable computer and not in scope of closed functionality
402.2.3 Speech Delivery Type and Coordination	Not Applicable	This is a portable computer and not in scope of closed functionality
402.2.4 User Control	Not Applicable	This is a portable computer and not in scope of closed functionality
402.2.5 Braille Instructions	Not Applicable	This is a portable computer and not in scope of closed functionality
402.3 Volume	Heading cell -- no response required	Heading cell -- no response required
402.3.1 Private Listening	Not Applicable	This is a portable computer and not in scope of closed functionality, it does have a headphone jack for private listening
402.3.2 Non-private Listening	Not Applicable	This is a portable computer and not in scope of closed functionality.
402.4 Characters on Display Screens	Not Applicable	This is a portable computer and not in scope of closed functionality
402.5 Characters on Variable Message Signs	Not Applicable	This is a portable computer and not in scope of closed functionality
403 Biometrics	Heading cell -- no response required	Heading cell -- no response required
403.1 General	Supports	Biometrics is present on this machine but it is not mandatory for the products usage
404 Preservation of Information Provided for Accessibility	Heading cell -- no response required	Heading cell -- no response required
404.1 General	Supports	This product does not interfere with accessibility features set by the end user
405 Privacy	Heading cell -- no response required	Heading cell -- no response required
405.1 General	Supports	This product as it is designed has volume mixer through Windows OS, and an industry standard headphone jack. The same level of privacy is provided for all end users
406 Standard Connections	Heading cell -- no response required	Heading cell -- no response required
406.1 General	Supports	This is a portable computer and has industry standard ports

Criteria	Conformance Level	Remarks and Explanations
407 Operable Parts	Heading cell – no response required	Heading cell – no response required
407.2 Contrast	Supports	Keys and power button (light is on when operating) are light on dark contrast. The icons over the latch doors have contrast but may be deemed as not enough contrast, since they cover ports we do not deem them as a key or control
407.3 Input Controls	Heading cell – no response required	Heading cell – no response required
407.3.1 Tactilely Discernible	Supports	All keys latches, buttons, and controls are tactilely discernible, and discernible through touch
407.3.2 Alphabetic Keys	Not applicable	This is a Tablet and the keyboard is on screen only. The unit can host an external keyboard
407.3.3 Numeric Keys	Not Applicable	This is a Tablet and the keyboard is on screen only. The unit can host an external keyboard.
407.4 Key Repeat	Supports	Key repeat is not present on the unit hardware, however, the Windows OS also has a control for Key Repeat, Dell defers to Microsoft for the review of the windows key repeat
407.5 Timed Response	Supports	The only timed response would be the sleep mode of the computer, via the Windows OS, however the enduser can set this to the time they want to indicate, one option is never. If the enduser does not indicate never, then the unit will enter sleep with no warning, based on no actions taking place. Dell defers to Microsoft.com for their review of the Windows OS
407.6 Operation	Supports with exceptions	This product does have several levers covering ports that have locks on them, as well as removable drives, and a stylus that may require fine motor skills.

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Criteria	Conformance Level	Remarks and Explanations
407.7 Tickets, Fare Cards, and Keycards	Supports	This unit does have a smart card reader that is tactilely discernable
407.8 Reach Height and Depth	Heading cell – no response required	Heading cell – no response required
407.8.1 Vertical Reference Plane	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.1.1 Vertical Plane for Side Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.1.2 Vertical Plane for Forward Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.2 Side Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.2.1 Unobstructed Side Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.2.2 Obstructed Side Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.3 Forward Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.3.1 Unobstructed Forward Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.3.2 Obstructed Forward Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.3.2.1 Operable Part Height for ICT with Obstructed Forward Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
407.8.3.2.2 Knee and Toe Space under ICT with Obstructed Forward Reach	Supports	Placement of the unit is dependent on the end user, this is a mobile computer
408 Display Screens	Heading cell – no response required	Heading cell – no response required
408.2 Visibility	Supports	The Computer can allot for the screen to be visible from a point located 40 inches above the floor space. It would be the ownership of the end user to place this unit where it could accommodate this request
408.3 Flashing	Supports	This product does not have flashing
409 Status Indicators	Heading cell – no response required	Heading cell – no response required

Criteria	Conformance Level	Remarks and Explanations
409.1 General	Does not support	The Power button is the only control on the unit reviewed. It has lights when on, and no light when off. There is no sound, and touch does not provide a status
410 Color Coding	Heading cell – no response required	Heading cell – no response required
410.1 General	Supports	Color is not the only means of supplying information.
411 Audible Signals	Heading cell – no response required	Heading cell – no response required
411.1 General	Supports	audible signals or cues are not be used as the only means of conveying information, indicating an action, or prompting a response
412 ICT with Two-Way Voice Communication	Heading cell – no response required	Heading cell – no response required
412.2 Volume Gain	Heading cell – no response required	Heading cell – no response required
412.2.1 Volume Gain for Wireline Telephones	Not Applicable	This product does not provide two way communication
412.2.2 Volume Gain for Non-Wireline ICT	Not Applicable	This product does not provide two way communication
412.3 Interference Reduction and Magnetic Coupling	Heading cell – no response required	Heading cell – no response required
412.3.1 Wireless Handsets	Not Applicable	This product does not provide two way communication
412.3.2 Wireline Handsets	Not Applicable	This product does not provide two way communication
412.4 Digital Encoding of Speech	Not Applicable	This product does not provide two way communication
412.5 Real-Time Text Functionality	Reserved for future	Reserved for future
412.6 Caller ID	Not Applicable	This product does not provide two way communication
412.7 Video Communication	Not Applicable	This product does not provide two way communication
412.8 Legacy TTY Support	Heading cell – no response required	Heading cell – no response required
412.8.1 TTY Connectability	Not Applicable	This product does not provide two way communication
412.8.2 Voice and Hearing Carry Over	Not Applicable	This product does not provide two way

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Criteria	Conformance Level	Remarks and Explanations
		communication
412.8.3 Signal Compatibility	Not Applicable	This product does not provide two way communication
412.8.4 Voice Mail and Other Messaging Systems	Not Applicable	This product does not provide two way communication
413 Closed Caption Processing Technologies	Heading cell – no response required	Heading cell – no response required
413.1.1 Decoding and Display of Closed Captions	Not Applicable	This product does not have closed captioning decoding capability it will stream video with closed captioning capability
413.1.2 Pass-Through of Closed Caption Data	Supports	This product can pass through closed caption video, but does not have any closed caption decoding
414 Audio Description Processing Technologies	Heading cell – no response required	Heading cell – no response required
414.1.1 Digital Television Tuners	Not Applicable	This product does not have a TV Tuner
414.1.2 Other ICT	Not Applicable	This product does not have audio description controls. Windows OS has settings for audio description, Dell defers to Microsoft.com
415 User Controls for Captions and Audio Descriptions	Heading cell – no response required	Heading cell – no response required
415.1.1 Caption Controls	Not Applicable	The Microsoft windows OS has some settings for Closed Captioning, the product HW does not have closed caption settings, Dell defers to Microsoft.com
415.1.2 Audio Description Controls	Not Applicable	This product does not have audio description controls, The windows OS does have audio description controls in ease of access Dell defers to Microsoft.com

Chapter 5: Software

Notes: This is viewed as HW and therefore the tables associated to SW have been removed

Chapter 6: Support Documentation and Services

Notes:

Criteria	Conformance Level	Remarks and Explanations
601.1 Scope	Heading cell -- no response required	Heading cell -- no response required
602 Support Documentation	Heading cell -- no response required	Heading cell -- no response required
602.2 Accessibility and Compatibility Features	Does not support	Documentation does not list and explain how to use the accessibility and compatibility features
602.3 Electronic Support Documentation	See WCAG 2.0 section	See information in WCAG section
602.4 Alternate Formats for Non-Electronic Support Documentation	Supports with exceptions	It has been stated that Dell will supply documentation in alternate formats however these may not be readily available
603 Support Services	Heading cell -- no response required	Heading cell -- no response required
603.2 Information on Accessibility and Compatibility Features	Does not support	ICT support services does not include information on the accessibility and compatibility features
603.3 Accommodation of Communication Needs	Supports	Dell provides a TTY line, chat line, phone line and email to customers to assist with communication needs

EN 301 549 Report

Notes: EN 301 549 is not a mandate of Section 508 and the tables have been removed

Legal Disclaimer (Company)

This VPAT is for information purposes only. The information contained in this VPAT represents Dell Technologies view regarding matters discussed herein as of the date of publication. Because of changing market conditions, this VPAT is not a commitment on the

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part of Dell, and Dell cannot guarantee the accuracy of any information presented after the date of publication. Dell makes no warranties, express or implied.

E202.2 Legacy ICT. Any component or portion of existing ICT that complies with an earlier standard issued pursuant to Section 508 of the Rehabilitation Act of 1973, as amended (as republished in Appendix D), and that has not been altered on or after January 18, 2018, shall not be required to be modified to conform to the Revised 508 Standards.

Dell defers to www.microsoft.com for Windows and Windows application VPATS

Dell defers third party applications that could be placed on this product to the third party supplier

D.9 iMac

Apple Accessibility Conformance Report Based on Voluntary Product Accessibility Template® (VPAT®)

Name of Product:

iMac (Retina 4K, 21.5-inch, 2019)
iMac (Retina 5K, 27-inch, 2019)

Product Description:

21-inch all-in-one desktop, 27-inch all-in-one desktop
(Please refer to the macOS VPAT for operating system information.)

Date:

March 19, 2019

Contact information: accessibility@apple.com

Terms

The terms used in the Conformance Level information are defined as follows:

- **Supports:** The functionality of the product has at least one method that meets the criteria without known defects or meets with equivalent facilitation.
- **Supports with Exceptions:** Some functionality of the product does not meet the criteria.
- **Does Not Support:** Majority of functionality of the product does not meet the criteria.
- **Not Applicable:** The criteria are not relevant to the product.
- **Not Evaluated:** The product has not been evaluated against the criteria. This can be used only with WCAG 2.0 Level AAA.

WCAG 2.0 Report -

Table 1: Conformance Criteria, Level A - See VPAT for macOS operating system

Refer to macOS v.10.14 Mojave VPAT

Table 2: Conformance Criteria, Level AA - See VPAT for macOS operating system

Refer to macOS v.10.14 Mojave VPAT

2019 Section 508 Report -

Chapter 3: Functional Performance Criteria -

Criteria	Conformance Level	Remarks and Explanations
302.1 Without Vision. Where a visual mode of operation is provided, ICT shall provide at least one mode of operation that does not require user vision.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. macOS includes built-in support for over 100 USB and wireless refreshable braille displays that start instantly when connected. There is also support for over 30 braille tables supporting a wide range of languages. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat
302.2 With Limited Vision. Where a visual mode of operation is provided, ICT shall provide at least one mode of operation that enables users to make use of limited vision.	Supports	macOS includes many features to assist users with low vision, including but not limited to: VoiceOver, VoiceOver cursor zoom, a scalable mouse cursor, and Zoom—a built-in screen magnification feature. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat

Criteria	Conformance Level	Remarks and Explanations
302.3 Without Perception of Color. Where a visual mode of operation is provided, ICT shall provide at least one visual mode of operation that does not require user perception of color.	Supports with exceptions	macOS uses color to convey information. In many cases, when color is used, it provides an alternative information display that does not rely on color. For example, color controls are used in the title bar of macOS windows that allow a user to close, minimize or maximize a window. While color indicates each control's function, each control also has a unique symbol and position that indicates its function without relying on color information. But, there are some visual elements that do not include an alternative information display. macOS also provides system-level control of display characteristics that cannot be overridden by applications, including options to: • Switch the display from color to grayscale. • Invert light and dark colors displayed on the screen. • Differentiate certain elements without color. • Increase contrast of elements on the screen. • Reduce the transparency of elements on the screen. All of these features are accessed through System Preferences for Accessibility and can be used together in different combinations to suit the user's needs. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat
302.4 Without Hearing. Where an audible mode of operation is provided, ICT shall provide at least one mode of operation that does not require user hearing.	Supports	macOS includes many features to assist users without hearing, including but not limited to: Flash screen, Notifications, Type to Siri, and FaceTime. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat

Criteria	Conformance Level	Remarks and Explanations
302.5 With Limited Hearing. Where an audible mode of operation is provided, ICT shall provide at least one mode of operation that enables users to make use of limited hearing.	Supports	Volume can be controlled at the system level. External speakers can be attached if necessary for further amplification. macOS also supports Mono Audio to combine the left and right stereo channels into a mono signal played through both left and right speakers and headphones so all of the audio program can be heard more easily. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat
302.6 Without Speech. Where speech is used for input, control, or operation, ICT shall provide at least one mode of operation that does not require user speech.	Supports	Siri supports a Type to Siri mode to request web searches, send messages, track down documents, set reminders, or turn on accessibility settings. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat
302.7 With Limited Manipulation. Where a manual mode of operation is provided, ICT shall provide at least one mode of operation that does not require fine motor control or simultaneous manual operations.	Supports	macOS includes many features to assist users with limited manipulation, including but not limited to: Sticky Keys, Slow Keys, Dictation, Switch Control, the Accessibility Keyboard, Adjustable Keyboard repeat delay, and Tracking speed. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat
302.8 With Limited Reach and Strength. Where a manual mode of operation is provided, ICT shall provide at least one mode of operation that is operable with limited reach and limited strength.	Supports	macOS includes many features to assist users with limited manipulation, including but not limited to: Sticky Keys, Slow Keys, Dictation, Switch Control, the Accessibility Keyboard, Adjustable Keyboard repeat delay, and Tracking speed. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat

Criteria	Conformance Level	Remarks and Explanations
302.9 With Limited Language, Cognitive, and Learning Abilities. ICT shall provide features making its use by individuals with limited cognitive, language, and learning abilities simpler and easier.	Supports	macOS includes many features to assist users with limited language, cognitive and learning abilities, including but not limited to: Text to Speech, Simple Finder, Word Completion, Safari Reader, and Dictionary. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat

Chapter 4: Hardware -

Criteria	Conformance Level	Remarks and Explanations
402 Closed Functionality		
402.1 General		
402.2 Speech-Output Enabled		
402.2.1 Information Displayed On-Screen. Speech output shall be provided for all information displayed on-screen.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. macOS includes built-in support for over 100 USB and wireless refreshable braille displays so they start instantly when you connect them. macOS also includes support for over 30 braille tables supporting a wide range of languages. Information about VoiceOver is available from http://www.apple.com/accessibility/osx/voiceover/

Criteria	Conformance Level	Remarks and Explanations
402.2.2 Transactional Outputs. Where transactional outputs are provided, the speech output shall audibly provide all information necessary to verify a transaction.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. macOS includes built-in support for over 100 USB and wireless refreshable braille displays so they start instantly when you connect them. macOS also includes support for over 30 braille tables supporting a wide range of languages. Information about VoiceOver is available from http://www.apple.com/accessibility/osx/voiceover/.
402.2.3 Speech Delivery Type and Coordination. Speech output shall be delivered through a mechanism that is readily available to all users, including, but not limited to, an industry standard connector or a telephone handset. Speech shall be recorded or digitized human, or synthesized. Speech output shall be coordinated with information displayed on the screen.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. macOS includes built-in support for over 100 USB and wireless refreshable braille displays so they start instantly when you connect them. macOS also includes support for over 30 braille tables supporting a wide range of languages. Information about VoiceOver is available from http://www.apple.com/accessibility/osx/voiceover/.
402.2.4 User Control. Speech output for any single function shall be automatically interrupted when a transaction is selected. Speech output shall be capable of being repeated and paused.	Supports	VoiceOver supports audio ducking to allow screen reader information to interrupt other audio. There are keyboard commands and trackpad gestures available to repeat and pause speech output.
402.2.5 Braille Instructions. Where speech output is required by 402.2, braille instructions for initiating the speech mode of operation shall be provided. Braille shall be contracted and shall conform to 36 CFR part 1191, Appendix D, Section 703.3.1.	Supports	Apple provides information on supported braille displays through the Apple Knowledge base at http://www.apple.com/support .
402.3 Volume		

Criteria	Conformance Level	Remarks and Explanations
402.3.1 Private Listening. Where ICT provides private listening, it shall provide a mode of operation for controlling the volume. Where ICT delivers output by an audio transducer typically held up to the ear, a means for effective magnetic wireless coupling to hearing technologies shall be provided.	Supports	Volume can be controlled at the system level. External speakers can be attached if necessary for further amplification.
402.3.2 Non-private Listening. Where ICT provides non-private listening, incremental volume control shall be provided with output amplification up to a level of at least 85 dB. A function shall be provided to automatically reset the volume to the default level after every use.	Not applicable	
402.4 Characters on Display Screens. At least one mode of characters displayed on the screen shall be in a sans serif font. Where ICT does not provide a screen enlargement feature, characters shall be 3/16 inch (4.8 mm) high minimum based on the uppercase letter "I". Characters shall contrast with their background with either light characters on a dark background or dark characters on a light background.	Supports	Standard font is sans serif. Displays provide screen enlargement feature. Characters contrast with their background with dark characters on a light background. More information is available at https://www.apple.com/accessibility/mac/vision/
402.5 Characters on Variable Message Signs. Characters on variable message signs shall conform to section 703.7 Variable Message Signs of ICC A117.1-2009 (incorporated by reference, see 702.6.1).	Not applicable	
403 Biometrics		
403.1 General. Where provided, biometrics shall not be the only means for user identification or control.	Supports	Where 3rd party biometrics are used to authenticate, users can alternatively authenticate using a password.

Criteria	Conformance Level	Remarks and Explanations
404 Preservation of Information Provided for Accessibility		
404.1 General. ICT that transmits or converts information or communication shall not remove non-proprietary information provided for accessibility or shall restore it upon delivery.	Supports	Accessibility structure, markup, and descriptions are preserved when converting documents, spreadsheets, presentations, and images into different formats.
405 Privacy		
405.1 General. The same degree of privacy of input and output shall be provided to all individuals. When speech output required by 402.2 is enabled, the screen shall not blank automatically.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. VoiceOver has a screen curtain option available to those who would like additional privacy. More information is available at https://www.apple.com/accessibility/mac/vision/
406 Standard Connections		
406.1 General. Where data connections used for input and output are provided, at least one of each type of connection shall conform to industry standard non-proprietary formats.	Supports with exceptions	All ports and connectors are compliant with publicly available industry standards, including but not limited to: USB 3, Thunderbolt 3(USB-C), ethernet port, SDXC card slot, and headphone jack More information on product technical specifications at https://www.apple.com/imac/specs/ *
407 Operable Parts		
407.2 Contrast. Where provided, keys and controls shall contrast visually from background surfaces. Characters and symbols shall contrast visually from background surfaces with either light characters or symbols on a dark background or dark characters or symbols on a light background.	Supports	Keys and controls have visual contrast with dark characters on light background. (Applies if customer is using Apple Magic Keyboard, Apple Magic Keyboard with Numeric Keypad, or Apple Wired Keyboard with Numeric Keypad that ships with iMac.) https://www.apple.com/accessibility/mac/vision
407.3 Input Controls		

Criteria	Conformance Level	Remarks and Explanations
407.3.1 Tactilely Discernible. Input controls shall be operable by touch and tactilely discernible without activation.	Supports	
407.3.2 Alphabetic Keys. Where provided, individual alphabetic keys shall be arranged in a QWERTY-based keyboard layout and the "F" and "J" keys shall be tactilely distinct from the other keys.	Supports	Keyboard keys (F and J) have discernible nubs to assist users in Keyboard orientation.
407.3.3 Numeric Keys. Where provided, numeric keys shall be arranged in a 12-key ascending or descending keypad layout. The number five key shall be tactilely distinct from the other keys. Where the ICT provides an alphabetic overlay on numeric keys, the relationships between letters and digits shall conform to ITU-T Recommendation E.161 (incorporated by reference, see 702.7.1).	Supports with exceptions	For the Magic Keyboard with Numeric Keypad and Apple Wired Keyboard with Numeric Keypad, there are 2 sets of numbers- "the number pad" has a discernible nub on the 5. **For Magic Keyboard, there is no discernible nub on the 5.
407.4 Key Repeat. Where a keyboard with key repeat is provided, the delay before the key repeat feature is activated shall be fixed at, or adjustable to, 2 seconds minimum.	Supports	Key repeat can be configured at the system level. Go to system preferences, select Keyboard and the Key Repeat speed can be adjusted on a slider.

Criteria	Conformance Level	Remarks and Explanations
407.5 Timed Response. Where a timed response is required, the user shall be alerted visually, as well as by touch or sound, and shall be given the opportunity to indicate that more time is needed.	Supports with exceptions	There are limited controls over time limits throughout macOS. macOS provides settings to turn the display off after a range of time frames including "Never". More information on these settings is available from https://support.apple.com/en-us/HT202826 macOS also provides settings on when to start a screen saver and allows for a screen saver which can act as a warning that the computer will go in sleep mode. More information on screen saver settings is available from https://support.apple.com/en-us/HT204379 The timing of Bluetooth pairing sessions is limited by the Bluetooth specification and bluetooth devices, not macOS.
407.6 Operation. At least one mode of operation shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds (22.2 N) maximum.	Supports with minor exceptions	1. Sticky Keys, Mouse Keys and Slow Keys can be used for one-hand operation of the iMac. 2. Multi-touch trackpad gestures can all be accomplished in alternate, acceptable ways. More information is available at https://www.apple.com/accessibility/mac/physical-and-motor-skills/
407.7 Tickets, Fare Cards, and Keycards. Where tickets, fare cards, or keycards are provided, they shall have an orientation that is tactilely discernible if orientation is important to further use of the ticket, fare card, or keycard.	Not applicable	
407.8 Reach Height and Depth	Not applicable	Not applicable
408 Display Screens		
408.2 Visibility. Where stationary ICT provides one or more display screens, at least one of each type of display screen shall be visible from a point located 40 inches (1015 mm) above the floor space where the display screen is viewed.	Not applicable	

Criteria	Conformance Level	Remarks and Explanations
408.3 Flashing. Where ICT emits lights in flashes, there shall be no more than three flashes in any one-second period.	Supports	Note: Safari and WebKit use web standards such as HTML and CSS to display web pages. Web content authors are responsible for ensuring their own implementations of flashing content.
409 Status Indicators		
409.1 General. Where provided, status indicators shall be discernible visually and by touch or sound.	Supports	Status indicators are visually discernible and VoiceOver provides spoken output for the status when that key is pressed such as caps lock and screen brightness. MacOS provides a setting to produce sound with increasing/decreasing volume.
410 Color Coding		
410.1 General. Where provided, color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports with exceptions	VoiceOver, the built-in screen reader, provides sound and text for conveying the meaning of color. macOS uses color to convey information. In many cases, when color is used, it provides an alternative information display that does not rely on color. For example, color controls are used in the title bar of macOS windows that allow a user to close, minimize or maximize a window. While color indicates each control's function, each control also has a unique symbol and positional placement that indicates its function without relying on color information. But, there are some elements that do not include an alternative visual option. macOS also provides system-level control of display characteristics that cannot be overridden by applications, including options to: - Switch the display from color to grayscale. - Invert light and dark colors displayed on the screen. - Differentiate certain elements without color. - Increase contrast of elements on the screen. - Reduce the transparency of elements on the screen. All of these features are accessed through the Accessibility system preference and can be used together in different combinations to suit the user's needs. More information is available at https://www.apple.com/accessibility/mac/vision/

Criteria	Conformance Level	Remarks and Explanations
411 Audible Signals		
411.1 General. Where provided, audible signals or cues shall not be used as the only means of conveying information, indicating an action, or prompting a response	Supports	macOS includes a variety of Accessibility features to augment audible signals: Flash Screen - macOS provides a visual indication of alert sounds via the Flash Screen feature. When a Mac application attempts to play a system beep alert, macOS instead flashes the screen. Notifications - Applications can notify the user of important information using the notification system built into macOS. Notifications all appear in the upper right of the screen making them easy to notice. Dock Notification - The icons of running applications that need attention visually jump up and down in the Dock, providing visual notification in addition to an audible beep or flash. More information is available at https://www.apple.com/accessibility/mac/hearing/
412 ICT with Two-Way Voice Communication		
412.2 Volume Gain		
412.2.1 Volume Gain for Wireline Telephones. Volume gain conforming to 47 CFR 68.317 shall be provided on analog and digital wireline telephones.	Not applicable	
412.2.2 Volume Gain for Non-Wireline ICT. A method for increasing volume shall be provided for non-wireline ICT.	Not applicable	
412.3 Interference Reduction and Magnetic Coupling		

Criteria	Conformance Level	Remarks and Explanations
412.3.1 Wireless Handsets. ICT in the form of wireless handsets shall conform to ANSI/IEEE C63.19-2011 (incorporated by reference, see 702.5.1).	Not applicable	
412.3.2 Wireline Handsets. ICT in the form of wireline handsets, including cordless handsets, shall conform to TIA-1083-B (incorporated by reference, see 702.5.1).	Not applicable	
412.4 Digital Encoding of Speech. ICT in IP-based networks shall transmit and receive speech that is digitally encoded in the manner specified by ITU-T Recommendation G.722.2 (incorporated by reference, see 702.7.2) or IETF RFC 6716 (incorporated by reference, see 702.8.1).	Not applicable	
412.5 Real-Time Text Functionality	Not applicable	
412.6 Caller ID. Where provided, caller identification and similar telecommunications functions shall be visible and audible.	Not applicable	
412.7 Video Communication. Where ICT provides real-time video functionality, the quality of the video shall be sufficient to support communication using sign language.	Supports	More information on product technical specifications at https://www.apple.com/ibec/specs/
413 Closed Caption Processing Technologies		
413.1.1 Decoding and Display of Closed Captions. Players and displays shall decode closed caption data and support display of captions.	Supports	macOS supports display of closed-captioned audio and video text descriptions in industry-standard formats. More information is available at https://www.apple.com/accessibility/mac/hearing/

Criteria	Conformance Level	Remarks and Explanations
413.1.2 Pass-Through of Closed Caption Data. Cabling and ancillary equipment shall pass through caption data.	Supports	macOS supports pass-through of closed-captioned audio and video text descriptions in industry-standard formats. More information is available at https://www.apple.com/accessibility/mac/hearing/ .
414 Audio Description Processing Technologies		
414.1.1 Digital Television Tuners. Digital television tuners shall provide audio description processing that conforms to ATSC A/53 Digital Television Standard, Part 5 (2014) (incorporated by reference, see 702.2.1). Digital television tuners shall provide processing of audio description when encoded as a Visually Impaired (VI) associated audio service that is provided as a complete program mix containing audio description according to the ATSC A/53 standard.	Not applicable	
414.1.2 Other ICT. ICT other than digital television tuners shall provide audio description processing.	Supports	macOS supports pass-through of closed-captioned audio and video text descriptions in industry-standard formats. More information is available at https://www.apple.com/accessibility/mac/hearing/ .
415 User Controls for Captions and Audio Descriptions		

Criteria	Conformance Level	Remarks and Explanations
415.1.1 Where ICT provides operable parts for volume control, ICT shall also provide operable parts for caption selection.	Supports	macOS supports pass-through of closed-captioned audio and video text descriptions in industry-standard formats. In the default media player provided by the AV Media Playback API, there are controls for selecting the captions alongside volume adjustment. This is also true of the media players in QuickTime and iTunes, as well as in the default media player provided by WebKit. Third-party developers can implement their own custom media players, where they choose whether or not to support selection of captions. More information is available at https://www.apple.com/accessibility/mac/hearing/.
415.1.2 Audio Description Controls. Where ICT provides operable parts for program selection, ICT shall also provide operable parts for the selection of audio description.	Supports	In the default media player provided by the AV Media Playback API, there are controls for selecting the audio descriptions alongside volume adjustment. This is also true of the media players in QuickTime and iTunes, as well as in the default media player provided by WebKit.

Chapter 5: Software -

See VPAT for macOS operating system.

Chapter 6: Support Documentation and Services -

Criteria	Conformance Level	Remarks and Explanations
601.1 Scope		
602 Support Documentation		
602.2 Accessibility and Compatibility Features. Documentation shall list and explain how to use the accessibility and compatibility features required by Chapters 4 and 5. Documentation shall include accessibility features that are built-in and accessibility features that provide compatibility with assistive technology.	Supports	Mac product documentation is available online in an accessible format in accessible HTML format through; • Apple Support at https://www.apple.com/support • macOS new release page at https://www.apple.com/macOS • iMac product page at https://www.apple.com/imac/ • Accessibility product page at https://www.apple.com/accessibility/mac/ Every Mac includes a built-in, interactive VoiceOver tutorial, interactive keyboard learning utility (called Keyboard Practice), and contextual menu system for VoiceOver. macOS help content is also available through the macOS Help menu as well as online through Apple Support. The Switch Control and Accessibility Keyboard guide and the Voice Over guide are delivered as online manual in accessible HTML from https://support.apple.com/en_US/manuals/macOS. The Voice Over guide is available electronic .brf braille at no charge. Charges may apply for embossed braille. VPATs for Apple products are available at https://support.apple.com/accessibility/vpat.

Criteria	Conformance Level	Remarks and Explanations
602.3 Electronic Support Documentation. Documentation in electronic format, including Web-based self-service support, shall conform to Level A and Level AA Success Criteria and Conformance Requirements in WCAG 2.0 (incorporated by reference, see 702.10.1).	Supports	The electronic web-based product documentation for macOS conforms to both Level A and Level AA Success Criteria and Conformance Requirements in WCAG 2.0.
602.4 Alternate Formats for Non-Electronic Support Documentation. Where support documentation is only provided in non-electronic formats, alternate formats usable by individuals with disabilities shall be provided upon request.	Supports	Product documentation for macOS is available in embossed braille via third party provider.
603 Support Services		
603.2 Information on Accessibility and Compatibility Features. ICT support services shall include information on the accessibility and compatibility features required by 602.2.	Supports	Apple Support provides advisors with information on accessibility and compatibility features for Macs and macOS. This information is also documented in the product documentation.
603.3 Accommodation of Communication Needs. Support services shall be provided directly to the user or through a referral to a point of contact. Such ICT support services shall accommodate the communication needs of individuals with disabilities.	Supports	Support via the Internet is available on the Apple Support page at http://www.apple.com/support For additional information on the many service and support options offered by Apple visit www.apple.com/support .

Legal Disclaimer:

Some features described in this document are not available in all areas, may be subject to additional fees or payments, and may be dependent on your network service plan.

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D.10 MacBook Air

Apple Accessibility Conformance Report Based on Voluntary Product Accessibility Template® (VPAT®)

Name of Product:

MacBook Air (Retina, 13-inch, 2018)

Product Description:

13.3-inch Notebook

(Please refer to the macOS VPAT for operating system information.)

Date:

November 7th, 2018

Contact information: accessibility@apple.com

Terms

The terms used in the Conformance Level information are defined as follows:

- **Supports:** The functionality of the product has at least one method that meets the criteria without known defects or meets with equivalent facilitation.
- **Supports with Exceptions:** Some functionality of the product does not meet the criteria.
- **Does Not Support:** Majority of functionality of the product does not meet the criteria.
- **Not Applicable:** The criteria are not relevant to the product.
- **Not Evaluated:** The product has not been evaluated against the criteria. This can be used only with WCAG 2.0 Level AAA.

WCAG 2.0 Report -

Table 1: Conformance Criteria, Level A -

Refer to macOS v.10.14 Mojave VPAT

Table 2: Conformance Criteria, Level AA -

Refer to macOS v.10.14 Mojave VPAT

2017 Section 508 Report -

Chapter 3: Functional Performance Criteria -

Criteria	Conformance Level	Remarks and Explanations
302.1 Without Vision. Where a visual mode of operation is provided, ICT shall provide at least one mode of operation that does not require user vision.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. macOS includes built-in support for over 100 USB and wireless refreshable braille displays that start instantly when connected. There is also support for over 30 braille tables supporting a wide range of languages. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat
302.2 With Limited Vision. Where a visual mode of operation is provided, ICT shall provide at least one mode of operation that enables users to make use of limited vision.	Supports	macOS includes many features to assist users with low vision, including but not limited to: VoiceOver, VoiceOver cursor zoom, a scalable mouse cursor, and Zoom—a built-in screen magnification feature. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat

Criteria	Conformance Level	Remarks and Explanations
302.3 Without Perception of Color. Where a visual mode of operation is provided, ICT shall provide at least one visual mode of operation that does not require user perception of color.	Supports with exceptions	macOS uses color to convey information. In many cases, when color is used, it provides an alternative information display that does not rely on color. For example, color controls are used in the title bar of macOS windows that allow a user to close, minimize or maximize a window. While color indicates each control's function, each control also has a unique symbol and position that indicates its function without relying on color information. But, there are some visual elements that do not include an alternative information display. macOS also provides system-level control of display characteristics that cannot be overridden by applications, including options to: • Switch the display from color to grayscale. • Invert light and dark colors displayed on the screen. • Differentiate certain elements without color. • Increase contrast of elements on the screen. • Reduce the transparency of elements on the screen. All of these features are accessed through System Preferences for Accessibility and can be used together in different combinations to suit the user's needs. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat
302.4 Without Hearing. Where an audible mode of operation is provided, ICT shall provide at least one mode of operation that does not require user hearing.	Supports	macOS includes many features to assist users without hearing, including but not limited to: Flash screen, Notifications, Type to Siri, and FaceTime. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat

Criteria	Conformance Level	Remarks and Explanations
302.5 With Limited Hearing. Where an audible mode of operation is provided, ICT shall provide at least one mode of operation that enables users to make use of limited hearing.	Supports	Volume can be controlled at the system level. External speakers can be attached if necessary for further amplification. macOS also supports Mono Audio to combine the left and right stereo channels into a mono signal played through both left and right speakers and headphones so all of the audio program can be heard more easily. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat
302.6 Without Speech. Where speech is used for input, control, or operation, ICT shall provide at least one mode of operation that does not require user speech.	Supports	Siri supports a Type to Siri mode to request web searches, send messages, track down documents, set reminders, or turn on accessibility settings. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat
302.7 With Limited Manipulation. Where a manual mode of operation is provided, ICT shall provide at least one mode of operation that does not require fine motor control or simultaneous manual operations.	Supports	macOS includes many features to assist users with limited manipulation, including but not limited to: Sticky Keys, Slow Keys, Dictation, Switch Control, the Accessibility Keyboard, Adjustable Keyboard repeat delay, and Tracking speed. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat
302.8 With Limited Reach and Strength. Where a manual mode of operation is provided, ICT shall provide at least one mode of operation that is operable with limited reach and limited strength.	Supports	macOS includes many features to assist users with limited manipulation, including but not limited to: Sticky Keys, Slow Keys, Dictation, Switch Control, the Accessibility Keyboard, Adjustable Keyboard repeat delay, and Tracking speed. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat

Criteria	Conformance Level	Remarks and Explanations
302.9 With Limited Language, Cognitive, and Learning Abilities. ICT shall provide features making its use by individuals with limited cognitive, language, and learning abilities simpler and easier.	Supports	macOS includes many features to assist users with limited language, cognitive and learning abilities, including but not limited to: Text to Speech, Simple Finder, Word Completion, Safari Reader, and Dictionary. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat

Chapter 4: Hardware -

Criteria	Conformance Level	Remarks and Explanations
402 Closed Functionality		
402.1 General		
402.2 Speech-Output Enabled		
402.2.1 Information Displayed On-Screen. Speech output shall be provided for all information displayed on-screen.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. macOS includes built-in support for over 100 USB and wireless refreshable braille displays so they start instantly when you connect them. macOS also includes support for over 30 braille tables supporting a wide range of languages. Information about VoiceOver is available from http://www.apple.com/accessibility/osx/voiceover/

Criteria	Conformance Level	Remarks and Explanations
402.2.2 Transactional Outputs. Where transactional outputs are provided, the speech output shall audibly provide all information necessary to verify a transaction.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. macOS includes built-in support for over 100 USB and wireless refreshable braille displays so they start instantly when you connect them. macOS also includes support for over 30 braille tables supporting a wide range of languages. Information about VoiceOver is available from http://www.apple.com/accessibility/osx/voiceover/
402.2.3 Speech Delivery Type and Coordination. Speech output shall be delivered through a mechanism that is readily available to all users, including, but not limited to, an industry standard connector or a telephone handset. Speech shall be recorded or digitized human, or synthesized. Speech output shall be coordinated with information displayed on the screen.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. macOS includes built-in support for over 100 USB and wireless refreshable braille displays so they start instantly when you connect them. macOS also includes support for over 30 braille tables supporting a wide range of languages. Information about VoiceOver is available from http://www.apple.com/accessibility/osx/voiceover/
402.2.4 User Control. Speech output for any single function shall be automatically interrupted when a transaction is selected. Speech output shall be capable of being repeated and paused.	Supports	VoiceOver supports audio ducking to allow screen reader information to interrupt other audio. There are keyboard commands and trackpad gestures available to repeat and pause speech output.
402.2.5 Braille Instructions. Where speech output is required by 402.2, braille instructions for initiating the speech mode of operation shall be provided. Braille shall be contracted and shall conform to 36 CFR part 1191, Appendix D, Section 703.3.1.	Supports	Apple provides information on supported braille displays through the Apple Knowledge base at http://www.apple.com/support .

Criteria	Conformance Level	Remarks and Explanations
402.3 Volume		
402.3.1 Private Listening. Where ICT provides private listening, it shall provide a mode of operation for controlling the volume. Where ICT delivers output by an audio transducer typically held up to the ear, a means for effective magnetic wireless coupling to hearing technologies shall be provided.	Supports	Volume can be controlled at the system level. External speakers can be attached if necessary for further amplification.
402.3.2 Non-private Listening. Where ICT provides non-private listening, incremental volume control shall be provided with output amplification up to a level of at least 65 dB. A function shall be provided to automatically reset the volume to the default level after every use.	Not applicable	
402.4 Characters on Display Screens. At least one mode of characters displayed on the screen shall be in a sans serif font. Where ICT does not provide a screen enlargement feature, characters shall be 3/16 inch (4.8 mm) high minimum based on the uppercase letter "I". Characters shall contrast with their background with either light characters on a dark background or dark characters on a light background.	Supports	Standard font is sans serif. Displays provide screen enlargement feature. Characters contrast with their background with dark characters on a light background. More information is available at https://www.apple.com/accessibility/mac/vision/
402.5 Characters on Variable Message Signs. Characters on variable message signs shall conform to section 703.7 Variable Message Signs of ICC A117.1-2009 (incorporated by reference, see 702.6.1).	Not applicable	
403 Biometrics		

Criteria	Conformance Level	Remarks and Explanations
403.1 General. Where provided, biometrics shall not be the only means for user identification or control.	Supports	Users can authenticate using a password, ie. Touch ID is not required.
404 Preservation of Information Provided for Accessibility		
404.1 General. ICT that transmits or converts information or communication shall not remove non-proprietary information provided for accessibility or shall restore it upon delivery.	Supports	Accessibility structure, markup, and descriptions are preserved when converting documents, spreadsheets, presentations, and images into different formats.
405 Privacy		
405.1 General. The same degree of privacy of input and output shall be provided to all individuals. When speech output required by 402.2 is enabled, the screen shall not blank automatically.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. VoiceOver has a screen curtain option available to those who would like additional privacy. More information is available at https://www.apple.com/accessibility/mac/vision/
406 Standard Connections :		
406.1 General. Where data connections used for input and output are provided, at least one of each type of connection shall conform to industry standard non-proprietary formats.	Supports with exceptions	All ports and connectors are compliant with publicly available industry standards, including but not limited to: Thunderbolt (USB-C) and the headphone jack. More information on product technical specifications at https://www.apple.com/macbook-air/specs/
407 Operable Parts		

Criteria	Conformance Level	Remarks and Explanations
407.2 Contrast. Where provided, keys and controls shall contrast visually from background surfaces. Characters and symbols shall contrast visually from background surfaces with either light characters or symbols on a dark background or dark characters or symbols on a light background.	Supports	Keys and controls have visual contrast with light characters on dark background. More information is available at https://www.apple.com/accessibility/mac/vision/
407.3 Input Controls:		
407.3.1 Tactilely Discernible. Input controls shall be operable by touch and tactilely discernible without activation.	Supports	Keyboard keys (F and J) have discernible nubs to assist users in Keyboard orientation.
407.3.2 Alphabetic Keys. Where provided, individual alphabetic keys shall be arranged in a QWERTY-based keyboard layout and the "F" and "J" keys shall be tactilely distinct from the other keys.	Supports	Keyboard keys (F and J) have discernible nubs to assist users in Keyboard orientation.
407.3.3 Numeric Keys. Where provided, numeric keys shall be arranged in a 12-key ascending or descending keypad layout. The number five key shall be tactilely distinct from the other keys. Where the ICT provides an alphabetic overlay on numeric keys, the relationships between letters and digits shall conform to ITU-T Recommendation E.161 (incorporated by reference, see 702.7.1).	Not applicable	
407.4 Key Repeat. Where a keyboard with key repeat is provided, the delay before the key repeat feature is activated shall be fixed at, or adjustable to, 2 seconds minimum.	Supports	Key repeat can be configured at the system level. Go to system preferences, select Keyboard and the Key Repeat speed can be adjusted on a slider.

Criteria	Conformance Level	Remarks and Explanations
407.5 Timed Response. Where a timed response is required, the user shall be alerted visually, as well as by touch or sound, and shall be given the opportunity to indicate that more time is needed.	Supports with exceptions	There are limited controls over time limits throughout macOS. macOS provides settings to turn the display off after a range of time frames including "Never". More information on these settings is available from https://support.apple.com/en-us/HT202824 macOS also provides settings on when to start a screen saver and allows for a screen saver which can act as a warning that the computer will go in sleep mode. More information on screen saver settings is available from https://support.apple.com/en-us/HT204379
407.8 Operation. At least one mode of operation shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds (22.2 N) maximum.	Supports with minor exceptions	1. Sticky Keys, Mouse Keys and Slow Keys can be used for one-hand operation of the MacBook Air. 2. Multi-touch trackpad gestures can all be accomplished in alternate, acceptable ways. More information is available at https://www.apple.com/accessibility/mac/physical-and-motor-skills/
407.7 Tickets, Fare Cards, and Keycards. Where tickets, fare cards, or keycards are provided, they shall have an orientation that is tactilely discernible if orientation is important to further use of the ticket, fare card, or keycard.	Not applicable	
407.8 Reach Height and Depth	Not applicable	Not applicable
408 Display Screens		
408.2 Visibility. Where stationary ICT provides one or more display screens, at least one of each type of display screen shall be visible from a point located 40 inches (1015 mm) above the floor space where the display screen is viewed.	Not applicable	
408.3 Flashing. Where ICT emits lights in flashes, there shall be no more than three flashes in any one-second period.	Supports	Note: Safari and WebKit use web standards such as HTML and CSS to display web pages. Web content authors are responsible for ensuring their own implementations of flashing content.

Criteria	Conformance Level	Remarks and Explanations
409 Status Indicators		
409.1 General. Where provided, status indicators shall be discernible visually and by touch or sound.	Supports	Status indicators are visually discernible and VoiceOver provides spoken output for the status when that key is pressed such as caps lock and screen brightness. MacOS provides a setting to produce sound with increasing/decreasing volume.
410 Color Coding		
410.1 General. Where provided, color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports with exceptions	VoiceOver, the built-in screen reader, provides sound and text for conveying the meaning of color. macOS uses color to convey information. In many cases, when color is used, it provides an alternative information display that does not rely on color. For example, color controls are used in the title bar of macOS windows that allow a user to close, minimize or maximize a window. While color indicates each control's function, each control also has a unique symbol and positional placement that indicates its function without relying on color information. But, there are some elements that do not include an alternative visual option. macOS also provides system-level control of display characteristics that cannot be overridden by applications, including options to: - Switch the display from color to grayscale. - Invert light and dark colors displayed on the screen. - Differentiate certain elements without color. - Increase contrast of elements on the screen. - Reduce the transparency of elements on the screen. All of these features are accessed through the Accessibility system preference and can be used together in different combinations to suit the user's needs. More information is available at https://www.apple.com/accessibility/mac/vision/
411 Audible Signals		

Criteria	Conformance Level	Remarks and Explanations
411.1 General. Where provided, audible signals or cues shall not be used as the only means of conveying information, indicating an action, or prompting a response	Supports	macOS includes a variety of Accessibility features to augment audible signals: Flash Screen - macOS provides a visual indication of alert sounds via the Flash Screen feature. When a Mac application attempts to play a system beep alert, macOS instead flashes the screen. Notifications - Applications can notify the user of important information using the notification system built into macOS. Notifications all appear in the upper right of the screen making them easy to notice. Dock Notification - The icons of running applications that need attention visually jump up and down in the Dock, providing visual notification in addition to an audible beep or flash. More information is available at https://www.apple.com/accessibility/mac/hearing/
412 ICT with Two-Way Voice Communication		
412.2 Volume Gain		
412.2.1 Volume Gain for Wireline Telephones. Volume gain conforming to 47 CFR 68.317 shall be provided on analog and digital wireline telephones.	Not applicable	
412.2.2 Volume Gain for Non-Wireline ICT. A method for increasing volume shall be provided for non-wireline ICT.	Not applicable	
412.3 Interference Reduction and Magnetic Coupling		

Criteria	Conformance Level	Remarks and Explanations
412.3.1 Wireless Handsets. ICT in the form of wireless handsets shall conform to ANSI/IEEE C63.19-2011 (incorporated by reference, see 702.5.1).	Not applicable	
412.3.2 Wireline Handsets. ICT in the form of wireline handsets, including cordless handsets, shall conform to TIA-1083-B (incorporated by reference, see 702.5.1).	Not applicable	
412.4 Digital Encoding of Speech. ICT in IP-based networks shall transmit and receive speech that is digitally encoded in the manner specified by ITU-T Recommendation G.722.2 (incorporated by reference, see 702.7.2) or IETF RFC 6716 (incorporated by reference, see 702.8.1).	Not applicable	
412.5 Real-Time Text Functionality	Not applicable	
412.6 Caller ID. Where provided, caller identification and similar telecommunications functions shall be visible and audible.	Not applicable	
412.7 Video Communication. Where ICT provides real-time video functionality, the quality of the video shall be sufficient to support communication using sign language.	Supports	More information on product technical specifications at https://www.apple.com/macbook-air/specs/
413 Closed Caption Processing Technologies		
413.1.1 Decoding and Display of Closed Captions. Players and displays shall decode closed caption data and support display of captions.	Supports	macOS supports display of closed-captioned audio and video text descriptions in industry-standard formats. More information is available at https://www.apple.com/accessibility/mac/hearing/

Criteria	Conformance Level	Remarks and Explanations
413.1.2 Pass-Through of Closed Caption Data. Cabling and ancillary equipment shall pass through caption data.	Supports	macOS supports pass-through of closed-captioned audio and video text descriptions in industry-standard formats. More information is available at https://www.apple.com/accessibility/mac/hearing/
414 Audio Description Processing Technologies		
414.1.1 Digital Television Tuners. Digital television tuners shall provide audio description processing that conforms to ATSC A/53 Digital Television Standard, Part 5 (2014) (incorporated by reference, see 702.2.1). Digital television tuners shall provide processing of audio description when encoded as a Visually Impaired (VI) associated audio service that is provided as a complete program mix containing audio description according to the ATSC A/53 standard.	Not applicable	
414.1.2 Other ICT. ICT other than digital television tuners shall provide audio description processing.	Supports	macOS supports pass-through of closed-captioned audio and video text descriptions in industry-standard formats. More information is available at https://www.apple.com/accessibility/mac/hearing/
415 User Controls for Captions and Audio Descriptions		

Criteria	Conformance Level	Remarks and Explanations
415.1.1 Where ICT provides operable parts for volume control, ICT shall also provide operable parts for caption selection.	Supports	macOS supports pass-through of closed-captioned audio and video text descriptions in industry-standard formats. In the default media player provided by the AV Media Playback API, there are controls for selecting the captions alongside volume adjustment. This is also true of the media players in QuickTime and iTunes, as well as in the default media player provided by WebKit. Third-party developers can implement their own custom media players, where they choose whether or not to support selection of captions. More information is available at https://www.apple.com/accessibility/mac/hearing/.
415.1.2 Audio Description Controls. Where ICT provides operable parts for program selection, ICT shall also provide operable parts for the selection of audio description.	Supports	In the default media player provided by the AV Media Playback API, there are controls for selecting the audio descriptions alongside volume adjustment. This is also true of the media players in QuickTime and iTunes, as well as in the default media player provided by WebKit.

Chapter 5: Software -

Refer to macOS v.10.14 Mojave VPAT

Chapter 6: Support Documentation and Services -

Criteria	Conformance Level	Remarks and Explanations
601.1 Scope		
602 Support Documentation		
602.2 Accessibility and Compatibility Features. Documentation shall list and explain how to use the accessibility and compatibility features required by Chapters 4 and 5. Documentation shall include accessibility features that are built-in and accessibility features that provide compatibility with assistive technology.	Supports	Mac product documentation is available online in an accessible format in accessible HTML format through; • Apple Support at https://www.apple.com/support • macOS new release page at https://www.apple.com/macOS • MacBook Air product page at https://www.apple.com/macbook-air/ • Accessibility product page at https://www.apple.com/accessibility/mac/ Every Mac includes a built-in, interactive VoiceOver tutorial, interactive keyboard learning utility (called Keyboard Practice), and contextual menu system for VoiceOver. macOS help content is also available through the macOS Help menu as well as online through Apple Support. The Switch Control and Accessibility Keyboard guide and the Voice Over guide are delivered as online manual in accessible HTML from https://support.apple.com/en_US/manuals/macOS. The Voice Over guide is available electronic .brf braille at no charge. Charges may apply for embossed braille. VPATs for Apple products are available at https://support.apple.com/accessibility/vpat.

Criteria	Conformance Level	Remarks and Explanations
602.3 Electronic Support Documentation. Documentation in electronic format, including Web-based self-service support, shall conform to Level A and Level AA Success Criteria and Conformance Requirements in WCAG 2.0 (incorporated by reference, see 702.10.1).	Supports	The electronic web-based product documentation for macOS conforms to both Level A and Level AA Success Criteria and Conformance Requirements in WCAG 2.0.
602.4 Alternate Formats for Non-Electronic Support Documentation. Where support documentation is only provided in non-electronic formats, alternate formats usable by individuals with disabilities shall be provided upon request.	Supports	Product documentation for macOS is available in embossed braille via third party provider.
603 Support Services		
603.2 Information on Accessibility and Compatibility Features. ICT support services shall include information on the accessibility and compatibility features required by 602.2.	Supports	Apple Support provides advisors with information on accessibility and compatibility features for Macs and macOS. This information is also documented in the product documentation.
603.3 Accommodation of Communication Needs. Support services shall be provided directly to the user or through a referral to a point of contact. Such ICT support services shall accommodate the communication needs of individuals with disabilities.	Supports	Support via the Internet is available through the Apple Knowledge base at http://www.apple.com/support . For additional information on the many service and support options offered by Apple visit www.apple.com/support .

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D.11 MacBook Pro

Apple Accessibility Conformance Report Based on Voluntary Product Accessibility Template® (VPAT®)

Name of Product:

iMac Pro

Product Description:

Professional desktop computer with integrated 27-inch Retina 5K display
(Please refer to the macOS VPAT for operating system information.)

Date: September 2017

Contact information: accessibility@apple.com

Terms

The terms used in the Conformance Level information are defined as follows:

- **Supports:** The functionality of the product has at least one method that meets the criteria without known defects or meets with equivalent facilitation.
- **Supports with Exceptions:** Some functionality of the product does not meet the criteria.
- **Does Not Support:** Majority of functionality of the product does not meet the criteria.
- **Not Applicable:** The criteria are not relevant to the product.
- **Not Evaluated:** The product has not been evaluated against the criteria. This can be used only with WCAG 2.0 Level AAA.

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WCAG 2.0 Report -

Table 1: Conformance Criteria, Level A - For WCAG requirements, see VPAT for MacOS Mojave at <https://support.apple.com/accessibility/vpat>.

Table 2: Conformance Criteria, Level AA - For WCAG requirements, see VPAT for MacOS Mojave at <https://support.apple.com/accessibility/vpat>.

2017 Section 508 Report

Chapter 3: Functional Performance Criteria

Criteria	Conformance Level	Remarks and Explanations
302.1 Without Vision. Where a visual mode of operation is provided, ICT shall provide at least one mode of operation that does not require user vision.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. macOS includes built-in support for over 100 USB and wireless refreshable braille displays that start instantly when connected. There is also support for over 30 braille tables supporting a wide range of languages. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat
302.2 With Limited Vision. Where a visual mode of operation is provided, ICT shall provide at least one mode of operation that enables users to make use of limited vision.	Supports	macOS includes many features to assist users with low vision, including but not limited to: VoiceOver, VoiceOver cursor zoom, a scalable mouse cursor, and Zoom—a built-in screen magnification feature. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat

Criteria	Conformance Level	Remarks and Explanations
302.3 Without Perception of Color. Where a visual mode of operation is provided, ICT shall provide at least one visual mode of operation that does not require user perception of color.	Supports with exceptions	macOS uses color to convey information. In many cases, when color is used, it provides an alternative information display that does not rely on color. For example, color controls are used in the title bar of macOS windows that allow a user to close, minimize or maximize a window. While color indicates each control's function, each control also has a unique symbol and position that indicates its function without relying on color information. But, there are some visual elements that do not include an alternative information display. macOS also provides system-level control of display characteristics that cannot be overridden by applications, including options to: • Switch the display from color to grayscale. • Invert light and dark colors displayed on the screen. • Differentiate certain elements without color. • Increase contrast of elements on the screen. • Reduce the transparency of elements on the screen. All of these features are accessed through System Preferences for Accessibility and can be used together in different combinations to suit the user's needs. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat.
302.4 Without Hearing. Where an audible mode of operation is provided, ICT shall provide at least one mode of operation that does not require user hearing.	Supports	macOS includes many features to assist users without hearing, including but not limited to: Flash screen, Notifications, Type to Siri, and FaceTime. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat.

Criteria	Conformance Level	Remarks and Explanations
302.5 With Limited Hearing. Where an audible mode of operation is provided, ICT shall provide at least one mode of operation that enables users to make use of limited hearing.	Supports	Volume can be controlled at the system level. External speakers can be attached if necessary for further amplification. macOS also supports Mono Audio to combine the left and right stereo channels into a mono signal played through both left and right speakers and headphones so all of the audio program can be heard more easily. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat.
302.6 Without Speech. Where speech is used for input, control, or operation, ICT shall provide at least one mode of operation that does not require user speech.	Supports	Siri supports a Type to Siri mode to request web searches, send messages, track down documents, set reminders, or turn on accessibility settings. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat.
302.7 With Limited Manipulation. Where a manual mode of operation is provided, ICT shall provide at least one mode of operation that does not require fine motor control or simultaneous manual operations.	Supports	macOS includes many features to assist users with limited manipulation, including but not limited to: Sticky Keys, Slow Keys, Dictation, Switch Control, the Accessibility Keyboard, Adjustable Keyboard repeat delay, and Tracking speed. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat.

Criteria	Conformance Level	Remarks and Explanations
302.8 With Limited Reach and Strength. Where a manual mode of operation is provided, ICT shall provide at least one mode of operation that is operable with limited reach and limited strength.	Supports	macOS includes many features to assist users with limited manipulation, including but not limited to: Sticky Keys, Slow Keys, Dictation, Switch Control, the Accessibility Keyboard, Adjustable Keyboard repeat delay, and Tracking speed. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat
302.9 With Limited Language, Cognitive, and Learning Abilities. ICT shall provide features making its use by individuals with limited cognitive, language, and learning abilities simpler and easier.	Supports	macOS includes many features to assist users with limited language, cognitive and learning abilities, including but not limited to: Text to Speech, Simple Finder, Word Completion, Safari Reader, and Dictionary. For more information on the accessibility features of macOS, please see the macOS VPAT at https://support.apple.com/accessibility/vpat

Chapter 4: Hardware

Criteria	Conformance Level	Remarks and Explanations
402 Closed Functionality		
402.1 General		
402.2 Speech-Output Enabled		
402.2.1 Information Displayed On-Screen, Speech output shall be provided for all information displayed on-screen.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. macOS includes built-in support for over 100 USB and wireless refreshable braille displays so they start instantly when you connect them. macOS also includes support for over 30 braille tables supporting a wide range of languages. Information about VoiceOver is available from http://www.apple.com/accessibility/osx/voiceover/
402.2.2 Transactional Outputs. Where transactional outputs are provided, the speech output shall audibly provide all information necessary to verify a transaction.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. macOS includes built-in support for over 100 USB and wireless refreshable braille displays so they start instantly when you connect them. macOS also includes support for over 30 braille tables supporting a wide range of languages. Information about VoiceOver is available from http://www.apple.com/accessibility/osx/voiceover/

Criteria	Conformance Level	Remarks and Explanations
402.2.3 Speech Delivery Type and Coordination. Speech output shall be delivered through a mechanism that is readily available to all users, including, but not limited to, an industry standard connector or a telephone handset. Speech shall be recorded or digitized human, or synthesized. Speech output shall be coordinated with information displayed on the screen.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. macOS includes built-in support for over 100 USB and wireless refreshable braille displays so they start instantly when you connect them, macOS also includes support for over 30 braille tables supporting a wide range of languages. Information about VoiceOver is available from http://www.apple.com/accessibility/osx/voiceover/
402.2.4 User Control. Speech output for any single function shall be automatically interrupted when a transaction is selected. Speech output shall be capable of being repeated and paused.	Supports	VoiceOver supports audio ducking to allow screen reader information to interrupt other audio. There are keyboard commands and trackpad gestures available to repeat and pause speech output.
402.2.5 Braille Instructions. Where speech output is required by 402.2, braille instructions for initiating the speech mode of operation shall be provided. Braille shall be contracted and shall conform to 36 CFR part 1191, Appendix D, Section 703.3.1.	Supports	Apple provides information on supported braille displays through the Apple Knowledge base at http://www.apple.com/support .
402.3 Volume		
402.3.1 Private Listening. Where ICT provides private listening, it shall provide a mode of operation for controlling the volume. Where ICT delivers output by an audio transducer typically held up to the ear, a means for effective magnetic wireless coupling to hearing technologies shall be provided.	Supports	Volume can be controlled at the system level. External speakers can be attached if necessary for further amplification.

Criteria	Conformance Level	Remarks and Explanations
402.3.2 Non-private Listening. Where ICT provides non-private listening, incremental volume control shall be provided with output amplification up to a level of at least 65 dB. A function shall be provided to automatically reset the volume to the default level after every use.	Not applicable	
402.4 Characters on Display Screens. At least one mode of characters displayed on the screen shall be in a sans serif font. Where ICT does not provide a screen enlargement feature, characters shall be 3/16 inch (4.8 mm) high minimum based on the uppercase letter "I". Characters shall contrast with their background with either light characters on a dark background or dark characters on a light background.	Supports	Standard font is sans serif. Displays provide screen enlargement feature. Characters contrast with their background with dark characters on a light background. More information is available at https://www.apple.com/accessibility/mac/vision/
402.5 Characters on Variable Message Signs. Characters on variable message signs shall conform to section 703.7 Variable Message Signs of ICC A117.1-2009 (incorporated by reference, see 702.6.1).	Not applicable	
403 Biometrics		
403.1 General. Where provided, biometrics shall not be the only means for user identification or control.	Supports	Where 3rd party biometrics are used to authenticate, users can alternatively authenticate using a password.
404 Preservation of Information Provided for Accessibility		
404.1 General. ICT that transmits or converts information or communication shall not remove non-proprietary information provided for accessibility or shall restore it upon delivery.	Supports	Accessibility structure, markup, and descriptions are preserved when converting documents, spreadsheets, presentations, and images into different formats.
405 Privacy		

Criteria	Conformance Level	Remarks and Explanations
405.1 General. The same degree of privacy of input and output shall be provided to all individuals. When speech output required by 402.2 is enabled, the screen shall not blank automatically.	Supports	macOS includes a built-in screen reader called VoiceOver for the blind and visually impaired and includes accessible applications and utilities. VoiceOver has a screen curtain option available to those who would like additional privacy. More information is available at https://www.apple.com/accessibility/mac/vision/
406 Standard Connections		
406.1 General. Where data connections used for input and output are provided, at least one of each type of connection shall conform to industry standard non-proprietary formats.	Supports	All ports and connectors are compliant with publicly available industry standards, including but not limited to: 10Gb (NBase-T) Ethernet port, USB 3, Thunderbolt 3, 3.5mm headphone jack and SDXC UHS-II card slot. More information on product technical specifications at https://www.apple.com/imac-pro/specs
407 Operable Parts		
407.2 Contrast. Where provided, keys and controls shall contrast visually from background surfaces. Characters and symbols shall contrast visually from background surfaces with either light characters or symbols on a dark background or dark characters or symbols on a light background.	Supports	iMac Pro included a Space Grey version of the Apple Magic Keyboard with Numeric Keypad and the Apple Magic Mouse. The keyboard provides high-contrast (white on black) key caps. The mouse features a multi-touch surface across the entire top surface. More information is available at https://www.apple.com/accessibility/mac/vision/
407.3 Input Controls		
407.3.1 Tactilely Discernible. Input controls shall be operable by touch and tactilely discernible without activation.	Supports	

Criteria	Conformance Level	Remarks and Explanations
407.3.2 Alphabetic Keys. Where provided, individual alphabetic keys shall be arranged in a QWERTY-based keyboard layout and the "F" and "J" keys shall be tactilely distinct from the other keys.	Supports	Keyboard keys ("F" and "J") have discernible nubs to assist users in QWERTY Keyboard orientation.
407.3.3 Numeric Keys. Where provided, numeric keys shall be arranged in a 12-key ascending or descending keypad layout. The number five key shall be tactilely distinct from the other keys. Where the ICT provides an alphabetic overlay on numeric keys, the relationships between letters and digits shall conform to ITU-T Recommendation E.161 (incorporated by reference, see 702.7.1).	Supports	The "5" key on the numeric keypad has a nub for location assistance.
407.4 Key Repeat. Where a keyboard with key repeat is provided, the delay before the key repeat feature is activated shall be fixed at, or adjustable to, 2 seconds minimum.	Supports	Key repeat can be configured at the system level. Go to system preferences, select Keyboard and the Key Repeat speed can be adjusted on a slider. More information is available from https://www.apple.com/accessibility/mac/ .

Criteria	Conformance Level	Remarks and Explanations
407.5 Timed Response. Where a timed response is required, the user shall be alerted visually, as well as by touch or sound, and shall be given the opportunity to indicate that more time is needed.	Supports with exceptions	There are limited controls over time limits throughout macOS. macOS provides settings to turn the display off after a range of time frames including "Never". More information on these settings is available from https://support.apple.com/en-us/HT202824 macOS also provides settings on when to start a screen saver and allows for a screen saver which can act as a warning that the computer will go in sleep mode. More information on screen saver settings is available from https://support.apple.com/en-us/HT204379 The timing of Bluetooth pairing sessions is limited by the Bluetooth specification and bluetooth devices, not macOS.
407.6 Operation. At least one mode of operation shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate operable parts shall be 5 pounds (22.2 N) maximum.	Supports	1. Sticky Keys, Mouse Keys and Slow Keys can be used for one-hand operation of the iMac Pro. 2. Multi-touch mouse gestures can all be accomplished in alternate ways. More information is available at https://www.apple.com/accessibility/mac/physical-and-motor-skills/
407.7 Tickets, Fare Cards, and Keycards. Where tickets, fare cards, or keycards are provided, they shall have an orientation that is tactilely discernible if orientation is important to further use of the ticket, fare card, or keycard.	Not applicable	
407.8 Reach Height and Depth	Not applicable	Not applicable
408 Display Screens		

Criteria	Conformance Level	Remarks and Explanations
408.2 Visibility. Where stationary ICT provides one or more display screens, at least one of each type of display screen shall be visible from a point located 40 inches (1015 mm) above the floor space where the display screen is viewed.	Not applicable	
408.3 Flashing. Where ICT emits lights in flashes, there shall be no more than three flashes in any one-second period.	Supports	Safari and WebKit use web standards such as HTML and CSS to display web pages. Web content authors are responsible for ensuring their own implementations of flashing content.
409 Status Indicators		
409.1 General. Where provided, status indicators shall be discernible visually and by touch or sound.	Supports	Status indicators are visually discernible and the VoiceOver Utility provides spoken output for the status when that key is pressed such as caps lock and screen brightness. MacOS provides a setting to produce sound with increasing/decreasing volume. More information is available from https://www.apple.com/accessibility/mac/
410 Color Coding		

Criteria	Conformance Level	Remarks and Explanations
410.1 General. Where provided, color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.	Supports with exceptions	VoiceOver, the built-in screen reader, provides sound and text for conveying the meaning of color. macOS uses color to convey information. In many cases, when color is used, it provides an alternative information display that does not rely on color. For example, color controls are used in the title bar of macOS windows that allow a user to close, minimize or maximize a window. While color indicates each control's function, each control also has a unique symbol and positional placement that indicates its function without relying on color information. But, there are some elements that do not include an alternative visual option. macOS also provides system-level control of display characteristics that cannot be overridden by applications, including options to: - Switch the display from color to grayscale. - Invert light and dark colors displayed on the screen. - Differentiate certain elements without color. - Increase contrast of elements on the screen. - Reduce the transparency of elements on the screen. All of these features are accessed through the Accessibility system preference and can be used together in different combinations to suit the user's needs. More information is available from https://www.apple.com/accessibility/mac/
411 Audible Signals		

Criteria	Conformance Level	Remarks and Explanations
411.1 General. Where provided, audible signals or cues shall not be used as the only means of conveying information, indicating an action, or prompting a response	Supports	macOS includes a variety of Accessibility features to augment audible signals: Flash Screen - macOS provides a visual indication of alert sounds via the Flash Screen feature. When a Mac application attempts to play a system beep alert, macOS instead flashes the screen. Notifications - Applications can notify the user of important information using the notification system built into macOS. Notifications all appear in the upper right of the screen making them easy to notice. Dock Notification - The icons of running applications that need attention visually jump up and down in the Dock, providing visual notification in addition to an audible beep or flash. More information is available at https://www.apple.com/accessibility/mac/hearing/
412 ICT with Two-Way Voice Communication		
412.2 Volume Gain		
412.2.1 Volume Gain for Wireline Telephones. Volume gain conforming to 47 CFR 68.317 shall be provided on analog and digital wireline telephones.	Not applicable	
412.2.2 Volume Gain for Non-Wireline ICT. A method for increasing volume shall be provided for non-wireline ICT.	Not applicable	
412.3 Interference Reduction and Magnetic Coupling		

Criteria	Conformance Level	Remarks and Explanations
412.3.1 Wireless Handsets. ICT in the form of wireless handsets shall conform to ANSI/IEEE C63.19-2011 (incorporated by reference, see 702.5.1).	Not applicable	
412.3.2 Wireline Handsets. ICT in the form of wireline handsets, including cordless handsets, shall conform to TIA-1083-B (incorporated by reference, see 702.5.1).	Not applicable	
412.4 Digital Encoding of Speech. ICT in IP-based networks shall transmit and receive speech that is digitally encoded in the manner specified by ITU-T Recommendation G.722.2 (incorporated by reference, see 702.7.2) or IETF RFC 6716 (incorporated by reference, see 702.8.1).	Not applicable	
412.5 Real-Time Text Functionality	Not applicable	
412.6 Caller ID. Where provided, caller identification and similar telecommunications functions shall be visible and audible.	Not applicable	

Criteria	Conformance Level	Remarks and Explanations
412.7 Video Communication. Where ICT provides real-time video functionality, the quality of the video shall be sufficient to support communication using sign language.	Supports	iMac Pro provides a 1080p FaceTime HD camera for video conferencing use and can be used with the FaceTime feature of macOS or third-party video communication software. While the quality of the video is adaptive and will depend on the network connection between parties, a high-quality and high frame rate signal is encoded and in most use-cases shall be sufficient to support delivery and recognition of sign language. More information on FaceTime can be found at https://support.apple.com/guide/facetime/welcome/mac More information on product technical specifications at https://www.apple.com/imac-pro/specs
413 Closed Caption Processing Technologies		
413.1.1 Decoding and Display of Closed Captions. Players and displays shall decode closed caption data and support display of captions.	Supports	macOS supports display of closed-captioned audio and video text descriptions in industry-standard formats. More information is available at https://www.apple.com/accessibility/mac/hearing/
413.1.2 Pass-Through of Closed Caption Data. Cabling and ancillary equipment shall pass through caption data.	Supports	macOS supports pass-through of closed-captioned audio and video text descriptions in industry-standard formats. More information is available at https://www.apple.com/accessibility/mac/hearing/
414 Audio Description Processing Technologies		

Criteria	Conformance Level	Remarks and Explanations
414.1.1 Digital Television Tuners. Digital television tuners shall provide audio description processing that conforms to ATSC A/53 Digital Television Standard, Part 5 (2014) (incorporated by reference, see 702.2.1). Digital television tuners shall provide processing of audio description when encoded as a Visually Impaired (VI) associated audio service that is provided as a complete program mix containing audio description according to the ATSC A/53 standard.	Not applicable	
414.1.2 Other ICT. ICT other than digital television tuners shall provide audio description processing.	Supports	macOS supports pass-through of closed-captioned audio and video text descriptions in industry-standard formats. More information is available at https://www.apple.com/accessibility/mac/hearing/
415 User Controls for Captions and Audio Descriptions		
415.1.1 Where ICT provides operable parts for volume control, ICT shall also provide operable parts for caption selection.	Supports	macOS supports pass-through of closed-captioned audio and video text descriptions in industry-standard formats. In the default media player provided by the AV Media Playback API, there are controls for selecting the captions alongside volume adjustment. This is also true of the media players in QuickTime and iTunes, as well as in the default media player provided by WebKit. Third-party developers can implement their own custom media players, where they choose whether or not to support selection of captions. More information is available at https://www.apple.com/accessibility/mac/hearing/

Criteria	Conformance Level	Remarks and Explanations
415.1.2 Audio Description Controls. Where ICT provides operable parts for program selection, ICT shall also provide operable parts for the selection of audio description.	Supports	In the default media player provided by the AV Media Playback API, there are controls for selecting the audio descriptions alongside volume adjustment. This is also true of the media players in QuickTime and iTunes, as well as in the default media player provided by WebKit.

Chapter 5: Software

See VPAT for macOS operating system.

Chapter 6: Support Documentation and Services

Criteria	Conformance Level	Remarks and Explanations
601.1 Scope		
602 Support Documentation		

Criteria	Conformance Level	Remarks and Explanations
602.2 Accessibility and Compatibility Features. Documentation shall list and explain how to use the accessibility and compatibility features required by Chapters 4 and 5. Documentation shall include accessibility features that are built-in and accessibility features that provide compatibility with assistive technology.	Supports	Mac product documentation is available online in an accessible format in accessible HTML format through; • Apple Support at https://www.apple.com/support • macOS new release page at https://www.apple.com/macOS • iMac Pro product page at https://www.apple.com/imac-pro • Accessibility product page at https://www.apple.com/accessibility/mac/ Every Mac includes a built-in, interactive VoiceOver tutorial, interactive keyboard learning utility (called Keyboard Practice), and contextual menu system for VoiceOver; macOS help content is also available through the macOS Help menu as well as online through Apple Support. The Switch Control and Accessibility Keyboard guide and the Voice Over guide are delivered as online manual in accessible HTML from https://support.apple.com/en_US/manuals/macOS. The Voice Over guide is available electronic .brf braille at no charge. Charges may apply for embossed braille. VPATs for Apple products are available at https://support.apple.com/accessibility/vpat.
602.3 Electronic Support Documentation. Documentation in electronic format, including Web-based self-service support, shall conform to Level A and Level AA Success Criteria and Conformance Requirements in WCAG 2.0 (incorporated by reference, see 702.10.1).	Supports	The electronic web-based product documentation for macOS conforms to both Level A and Level AA Success Criteria and Conformance Requirements in WCAG 2.0.

Criteria	Conformance Level	Remarks and Explanations
602.4 Alternate Formats for Non-Electronic Support Documentation. Where support documentation is only provided in non-electronic formats, alternate formats usable by individuals with disabilities shall be provided upon request.	Supports	Product documentation for macOS is available in embossed braille via third party provider.
603 Support Services		
603.2 Information on Accessibility and Compatibility Features. ICT support services shall include information on the accessibility and compatibility features required by 602.2.	Supports	Apple Support provides advisors with information on accessibility and compatibility features for Macs and macOS. This information is also documented in the product documentation.
603.3 Accommodation of Communication Needs. Support services shall be provided directly to the user or through a referral to a point of contact. Such ICT support services shall accommodate the communication needs of individuals with disabilities.	Supports	Support via the Internet is available on the Apple Support page at http://www.apple.com/support For additional information on the many service and support options offered by Apple visit www.apple.com/support .

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E. Section Five – Hosted Security Questionnaire (E.13.5)

Please note Hosted Security Questionnaire assumption in Appendix C. Our Hosted Security Questionnaire is included in this submission as a separate file: 'NTT DATA Solicitation #0900000383 Hosted Security Questionnaire.xlsx'

F. Section Six – Bidder Agreements (E.13.6)

NTT DATA does not require any new software licenses, maintenance, service agreements, or any other similar applicable agreements. NTT DATA will leverage existing OMES licenses for Cherwell and Altiris or SCCM as part of our solution.

Appendix A – Workman's Compensation Insurance Certification

ACORD		CERTIFICATE OF LIABILITY INSURANCE		7/1/2020		DATE (MM/DD/YYYY) 3/1/2019															
THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER. IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).																					
PRODUCER LOCKTON COMPANIES 2100 ROSS AVENUE, SUITE 1400 DALLAS TX 75201 214-969-6700				CONTACT NAME: _____ PHONE (A/C, No, Ext): _____ FAX (A/C, No): _____ E-MAIL: _____ ADDRESS: _____																	
INSURED NTT Data International L.L.C. NTT Data, Inc. NTT DATA Services International Holdings, B.V. "BV1" Attn: Letitia McKenzie 7850 Legacy Drive, Suite 900 Plano TX 75024				INSURER(S) AFFORDING COVERAGE <table border="1"> <thead> <tr> <th>INSURER</th> <th>NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A: The Phoenix Insurance Company</td> <td>25623</td> </tr> <tr> <td>INSURER B: Travelers Indemnity Company of America</td> <td>25666</td> </tr> <tr> <td>INSURER C: The Travelers Indemnity Company</td> <td>25658</td> </tr> <tr> <td>INSURER D: National Union Fire Ins Co Pitts, PA</td> <td>19445</td> </tr> <tr> <td>INSURER E: Illinois National Insurance Company</td> <td>23817</td> </tr> <tr> <td>INSURER F: Travelers Property Casualty Co of America</td> <td>25674</td> </tr> </tbody> </table>				INSURER	NAIC #	INSURER A: The Phoenix Insurance Company	25623	INSURER B: Travelers Indemnity Company of America	25666	INSURER C: The Travelers Indemnity Company	25658	INSURER D: National Union Fire Ins Co Pitts, PA	19445	INSURER E: Illinois National Insurance Company	23817	INSURER F: Travelers Property Casualty Co of America	25674
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COVERAGES ** CERTIFICATE NUMBER: 15925121 REVISION NUMBER: XXXXXXXX																					
THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.																					
INSUR LTR	TYPE OF INSURANCE	ADOL	ISUR	POLICY NUMBER	POLICY EFF. (MM/DD/YYYY)	POLICY EXP. (MM/DD/YYYY)	LIMITS														
A	☒ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☒ OCCUR ☐ GEN'L AGGREGATE LIMIT APPLIES PER: ☐ POLICY ☐ PRO-JECT ☐ LOC ☐ OTHER	N	N	HN 660 6N030306 19	7/1/2019	7/1/2020	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (E&O coverage) \$ 1,000,000 MED EXP (Any one person) \$ 15,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMPROP ASS \$ 2,000,000														
B	☒ AUTOMOBILE LIABILITY ☒ ANY AUTO ☐ OWNED AUTOS ONLY ☐ SCHEDULED AUTOS ☒ HIRED AUTOS ONLY ☒ NON-OWNED AUTOS ONLY	N	N	HBI CAP 13668701 19	7/1/2019	7/1/2020	COMBINED SINGLE LIMIT (E&O coverage) \$ 1,000,000 BODILY INJURY (Per person) \$ XXXXXXXX BODILY INJURY (Per accident) \$ XXXXXXXX PROPERTY DAMAGE (Per accident) \$ XXXXXXXX														
F	☒ UMBRELLA LIAB ☒ EXCESS LIAB ☐ DED ☐ RETENTION \$	N	N	CUP 13668749 19 13	7/1/2019	7/1/2020	EACH OCCURRENCE \$ 25,000,000 AGGREGATE \$ 25,000,000 \$ XXXXXXXX														
C	☒ WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/OWNER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N	N/A	UBI 5N963631 19 B K (AOS) UBI 5N963182 19 B K (AOS) MA, WA	7/1/2019 7/1/2019	7/1/2020 7/1/2020	☒ PER STATUTE ☐ NON-TER EL EACH ACCIDENT \$ 1,000,000 EL DISEASE - EA EMPLOYEE \$ 1,000,000 EL DISEASE - POLICY LIMIT \$ 1,000,000														
D	☒ CRIME ☒ PROF. E&O CYBER	N	N	01-464-70-R2 01-468-1962	7/1/2019 7/1/2019	7/1/2020 7/1/2020	\$10,000,000 PER OCCURRENCE \$15,000,000 PER CLAIM														
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)																					
CERTIFICATE HOLDER 15925121 For Proposal Purposes Only				CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE 																	

ACORD 25 (2016/03)

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Appendix B – Supplier/Payee Form or W-8BEN

NTT DATA is not submitting any Supplier/Payee forms or W-8BEN.

Appendix C – Assumptions

This proposal is based on a series of assumptions. Although the assumptions provided by OMES, either in the RFP or in the questions and answers, are not repeated here, they are included by default. Our hope is that by sharing these assumptions with OMES, we can help build a common understanding of what it will take to make this engagement a success. We welcome the opportunity to review and discuss these assumptions further.

- 1) **Statement of Work.** This proposal is submitted by NTT DATA based on our understanding that, prior to the commencement of services, OMES and NTT DATA will mutually develop and agree upon a detailed statement of work that defines the scope of services as part of a final contract.
- 2) **Acceptance Criteria and Review.** We will mutually define, agree upon, and document detailed acceptance criteria for deliverables and the acceptance process and period in advance of this project.
- 3) **Governance.** OMES will designate a point of contact (POC) who will serve as the focal point for communications with the NTT DATA team regarding this engagement. This individual will assist with completion of tasks including but not limited to acceptance of deliverables, internal business unit alignment and resolution of financial matters.
- 4) **Building and Remote Access.** OMES will provide administrative support to accommodate building access and coordination of facilities as reasonably requested. NTT DATA may perform work offsite. Also, NTT DATA and OMES will discuss and mutually agree upon responsibilities for providing remote access equipment, software, and access for offsite personnel.
- 5) **Working Hours.** Core business hours are 8:00 a.m. to 5:00 p.m. Central Time Monday through Friday, except official holidays recognized by OMES. If necessary, OMES will provide after-hours access to client facilities for assigned NTT DATA personnel. Also, in order to accommodate travel schedules, assigned NTT DATA personnel may work hours and days other than those defined as core business hours.
- 6) **Excused Event/Savings Clause.** NTT DATA will not be responsible for any delay or failure to meet milestones, and such failure will not be subject to a claim of default or termination to the extent such failure is due to force majeure events, acts or omissions of a party other than NTT DATA and our subcontractors (if any), or errors or defects in systems and resources of OK OMES or third parties. In the event that such a delay or failure is caused by OMES or its agents, NTT DATA will be paid reasonable, documented, and auditable charges directly resulting from such delay or failure, including, without limitation, those costs incurred by NTT DATA for root cause analysis requested by OMES.
- 7) **Devices.**
 - There are 32,000 total in-scope devices:
 - 20,000 devices to be supported with management
 - 12,000 devices to be supported without management
 - Devices under management will have all of the following characteristics:
 - Able to be supported via a single centralized management platform (e.g., SCCM or Altiris)
 - Able to be accessed via a centralized domain

- Asset tagged in the CMDB
- For devices in the field (connecting to the OMES network via an option like VPN), OMES will modify their management platform to perform internet discovery outside of their firewalls
- NTT DATA install a base image, base applications, and any standard agency applications. Agency specific applications will be configured by agency resources, as needed
- Include peripheral support
- Devices purchased without management
 - Due to inability to access devices without management, troubleshooting to determine HW vs other issue will be assigned to WSS (OMES Level 2). Next business day hardware support will be dispatched via OEM.
 - After determination of HW issue, NTT DATA will support the end user in accessing support by OEM warranty support direct from the vendor at the hardware level, meaning hardware only support via Dell next business day SKU on the hardware
- There are 20,000 peripherals estimated in solution. All peripherals will be direct shipped to the requesting end user and will not require asset tagging
- Devices to be deployed without installation will be shipped to the end user from the deployment center after imaging, if required, and asset tagging
- Mobile phone devices are not part of asset management scope
- 8) **Single Centralized Management Platform.** In order to bring the best value and lowest risk to OMES and the State of Oklahoma, our solution assumes the leveraging of the existing SCCM or Altiris toolset.
- 9) **Staging.** To facilitate the requirement for *C.6.2. Staging – The Supplier will load an agency specific image on the device prior to shipment to the end user. The device will be configured to login with the end user's account by default, and the machine will already be joined to the agency's domain.* NTT DATA assumes the State of Oklahoma will extend their network to our configuration center, allowing access to the SCCM Distribution Point server, as well as AD access to join devices to required domains.
- 10) **Pilot.** The NTT DATA solution leverages best practices and proven processes that allow for a pilot to be completed in one month rather than the six-month initially proposed. Due to the cost savings and customer benefits of this, we have solutioned a one-month pilot program. We have included an optional price for the six-month pilot.
- 11) **Desktop Engineering.** Desktop engineering functions include image management, patching, software distribution and a single centralized management platform (e.g., SCCM or Altiris, for managing devices via the OMES network) in the scope and pricing of this opportunity.
- 12) **Service Desk Contact.** Service desk contacts do not exceed 6500 per month.
- 13) **PII.** Removal of desktop and laptop hard drives removes all PII electronic media, allowing the carcass to be returned to OEM.
- 14) **Cascading and Non-Cascading.** Users receiving a new device, or users leaving, will return devices for proper wiping and imaging. Devices will be returned between users and may not be cascaded without proper wiping and imaging.

15) **OMES' Commitment and Responsibilities.** Completion of the proposed scope of work will depend on the full commitment and participation of assigned OMES personnel. Moreover, the performance of NTT DATA and our subcontractors will rely on certain responsibilities being managed and fulfilled by OMES. Delays in performance of these responsibilities may result in additional cost or delay the completion of this project. In this engagement, OMES will be responsible for the following items:

- Identify stakeholders and participants for various project related activities.
- Sponsor all organizational change management and communications activities.
- Manage all external stakeholders, including any third-party entities that will be interfacing with OMES' systems.
- Allow NTT DATA access to manage all in scope end user devices via a single centralized management platform (e.g., SCCM or Altiris) provided by the State of Oklahoma.
- Provide required access and licensing (including resolver licenses) to leverage GFE toolsets such as MobileIron, Intune, SCCM, Altiris, Cherwell etc. Cherwell access includes manipulation via the web.
- Extend network connectivity for NTT DATA personnel and toolsets supporting this opportunity.
- Retain ownership, definition/maintenance and administration of the service management platform ITSM processes for incident, request, change, problem and knowledge management. NTT DATA service desk agents will assist and collaborate with the OMES service management team on executing these processes.
- The nature of the tools (only access to employee names and business addresses) and that no data from state applications or data related to customers of the state will be stored or accessed by our tools. Tools are merely used by NTT DATA and its partners to execute the provisioning and repair of systems used by state employees. We are assuming that all tools used by NTT DATA would be hosted within the confines of the state security boundaries via Azure and AWS cloud services. NTT DATA is not directly hosting any system outside of this security realm.

Appendix D – Completed Solicitation

The attached solicitation contains our answers to E.11 and E.12