



# BEST VALUE CONSTRUCTION

State of Oklahoma CAP  
John Morrison

Part One of Two



PERFORMANCE BASED STUDIES RESEARCH GROUP

[www.pbsrg.com](http://www.pbsrg.com)

# “Best Value”

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- Considering other factors than price for award
- Many “best value” procurement processes

# “Best Value”

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- Performance Information Procurement System (PIPS) is a best value process that includes concepts that force vendors to be accountable, measure their performance, and manage and minimize risk that they do not control
- PIPS is a proven methodology that anyone can do
- Groups come to ASU to license and learn PIPS because of the technology that is counterintuitive and simplistic is difficult to explain, learn and apply

# Best Value PIPS

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- Transfers risk and control to the best performing vendor
- Client identifies what they **think** they need
- Vendors compete to be the best value for the lowest price
- Final product delivery: best value vendor dictates what will be delivered and how
- Client signs contract if they are satisfied

# Differences with BV Systems

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- Best value for the lowest cost
- Takes less than 50% time and manpower
- Client doesn't have to know exactly what they want
- Shortens selection time
- BV vendor has a plan, measure deviations from plan, and controls their project
- Minimize subjectivity and decision making
- BV vendor must identify and mitigate risk that they do not control in their plan
- Contract administration is done by contractor

# Bottom Line

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- Reduce project costs
- Increase vendor profit
- Cut out waste and risk
- Based on logic instead of best practices (structure not experts)

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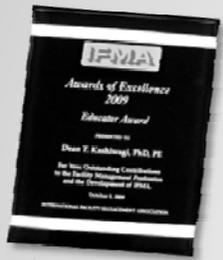
# Characteristics of Best Value PIPS

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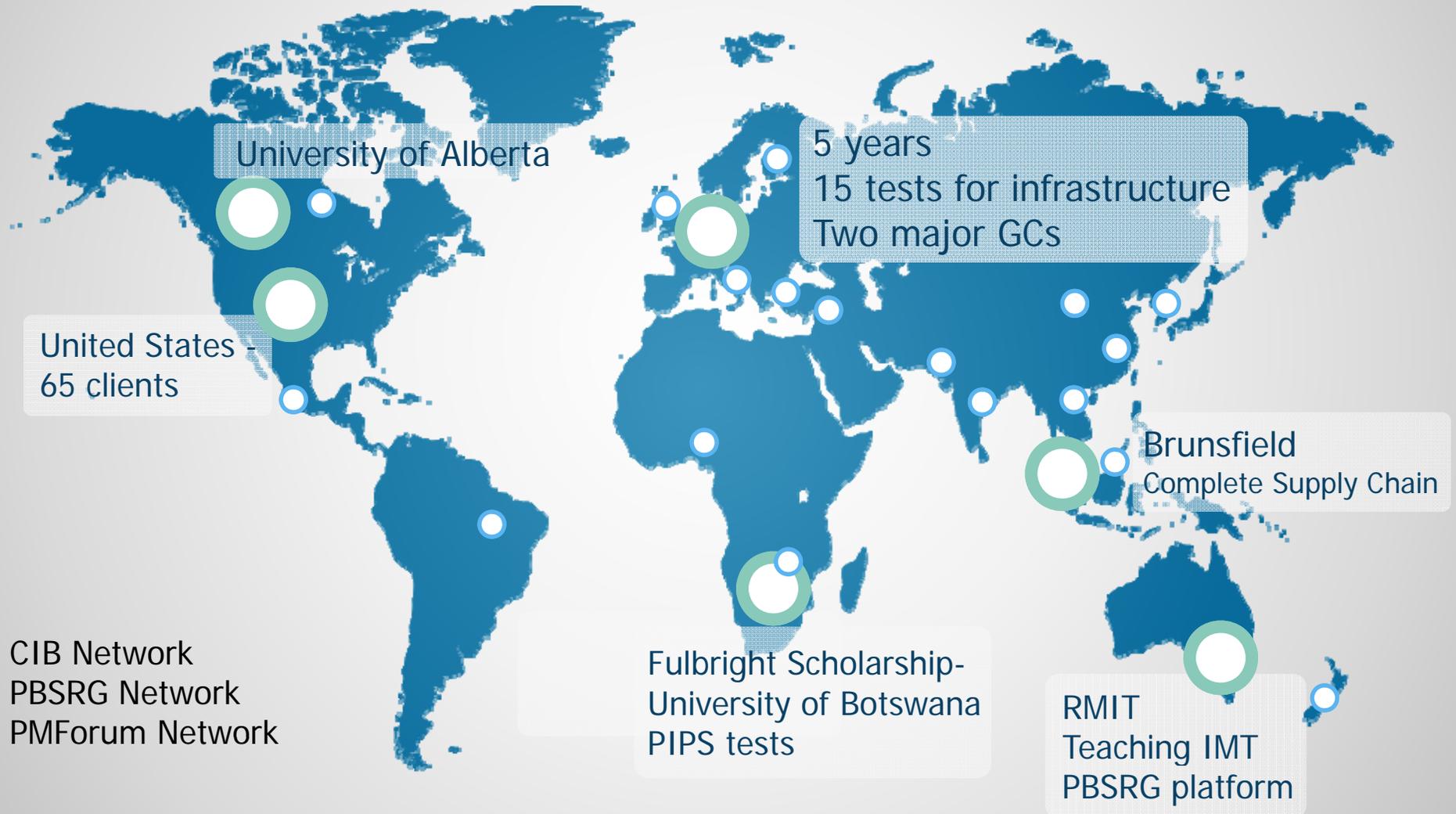
- Win/win
- Transparency
- Alignment of expertise
- Measurements
- Preplanning
- Minimization of deviations from the plan
- Minimization of importance of relationships
- Accountability
- Minimization of communication
- Increased competition
- Minimization of decision making
- Minimization of bias
- Lower costs
- Higher level of expertise
- Dominant information

# Dominant PIPS/PIRMS Test Results

- **17 Years, 1050** Projects
- **\$4.6 Billion** Services & Construction
- **\$1B** Netherlands infrastructure construction test
- **5%** Increase in Vendor profit
- **98%** Customer Satisfaction
- Minimize transactions at ASU – **\$100M (17%)**
- GSA Heartland Region (using paradigm in region processes)
- Tests ongoing in Netherlands, Canada, Malaysia, Finland and Botswana



# International Efforts & Partners



# Current Efforts

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- State of Oklahoma is using best value PIPS on service/construction combinations, IT, professional services
- State of Idaho and Alaska are procuring large IT contracts
- **WSCA has a contract with ASU**
- State of Oklahoma and State of Minnesota **changed procurement laws** to allow best value PIPS
- Users in state of Minnesota are attempting to setup a best value standard that is **self regulated**
- ASU is procuring all services outside of construction using best value PIPS; latest procurement is bookstore services
- Dutch professional procurement group **NEVI** (ISM/NIGP) is starting Dutch efforts to change procurement system to PIPS
- Brunfield (Malaysian developer/contractor) changing entire supply chain to best value PIPS

# State of Oklahoma Best Value Projects Performance

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<b>Oklahoma Best Value Project Information</b>	
# of Best-Value Procurements	20
Estimated Value of Best-Value Procurements	\$100M
Protest Success Rate (# of protest won / # of protests)	3/3
# of Different Services	13
% Where Identified Best-Value was Lowest Cost	71%
Construction Law Changed to allow Best Value PIPS	
<b>Project Performance</b>	
# of Completed Projects	8
Average Customer Satisfaction	9.5 (out of 10)
Cost Savings	\$15M
% On-time	100%
% On-budget	100%

# Different Services Procured

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- Commercial Off the Shelf (COTS) Tax Software (\$12M savings)
- Enhancement of Workforce Job Website
- Electronic Document Management for Construction Documents.
- Computer to Plate Printer (better system than specified)
- State wide light bulb and lighting fixture contract (\$100K rebate)
- Emergency hazardous Waste Removal contract (no protest)
- Construction Commissioning Services
- State Mental Health Services (\$3M/year less)
- Performance Measurement of Federal Grants
- New Construction and Renovation
- Juvenile Center and Services (overcame protest) (cancelled)

## Completed Project RMP Analysis

<b>PROJECT OVERVIEW</b>	<b>Without WRR</b>	<b>With WRR</b>	<b>With WRR &amp; RMP</b>
# of Projects	130	303	199
Awarded Cost	\$249,336,707.47	\$435,362,033.52	\$318,352,918.34
% of Projects on Time	28%	31%	38%
% of Projects on Budget	40%	47%	60%
<b>% Over Awarded Budget</b>	<b>7.02%</b>	<b>6.11%</b>	<b>4.11%</b>
% due to owner	4.77%	4.31%	3.46%
% due to contractor	0.02%	0.05%	-0.08%
% due to unforeseen	2.23%	1.75%	0.62%
<b>% Delayed</b>	<b>39.1%</b>	<b>38.77%</b>	<b>33.72%</b>
% due to owner	25.0%	28.05%	29.88%
% due to contractor	3.58%	2.44%	-1.42%
% due to unforeseen	10.52%	8.28%	4.97%



# Priority Road Investment Programme

- Ambition from Minister of Infrastructure and the Environment: 30 starts of work of road widenings and rush hour lanes and 10 openings for road users before June 2011
- Start September 2008
- May 2011:
  - 30 'shovel hits the ground'
  - 10 'cutting the tape'



# Evaluation of market approach

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- Acceleration achieved!
  - 6 contracts awarded, each in 5 months
  - Tender phase reduced by 50%
- Costs 60% lower
  - Vendors: 50% to 75% lower costs
  - Rijkswaterstaat: estimated reduction by half, development costs for the contract excluded
- May 2011: On average 1 year earlier completion date per project

*'The costs to tender are significantly lower than 'traditional' D&C'*

# Dato Gan and Brunnsfield

- Visionary developer/vendor in Malaysia
- Minimize cost by cutting risk
- **Added value: 10X**
- Supply chain (SC) thinking; all entities must understand PIPS
- Contract with PBSRG to use BV PIPS to double production in the next 3 years
- **Wants to raise the quality of life in Malaysia**

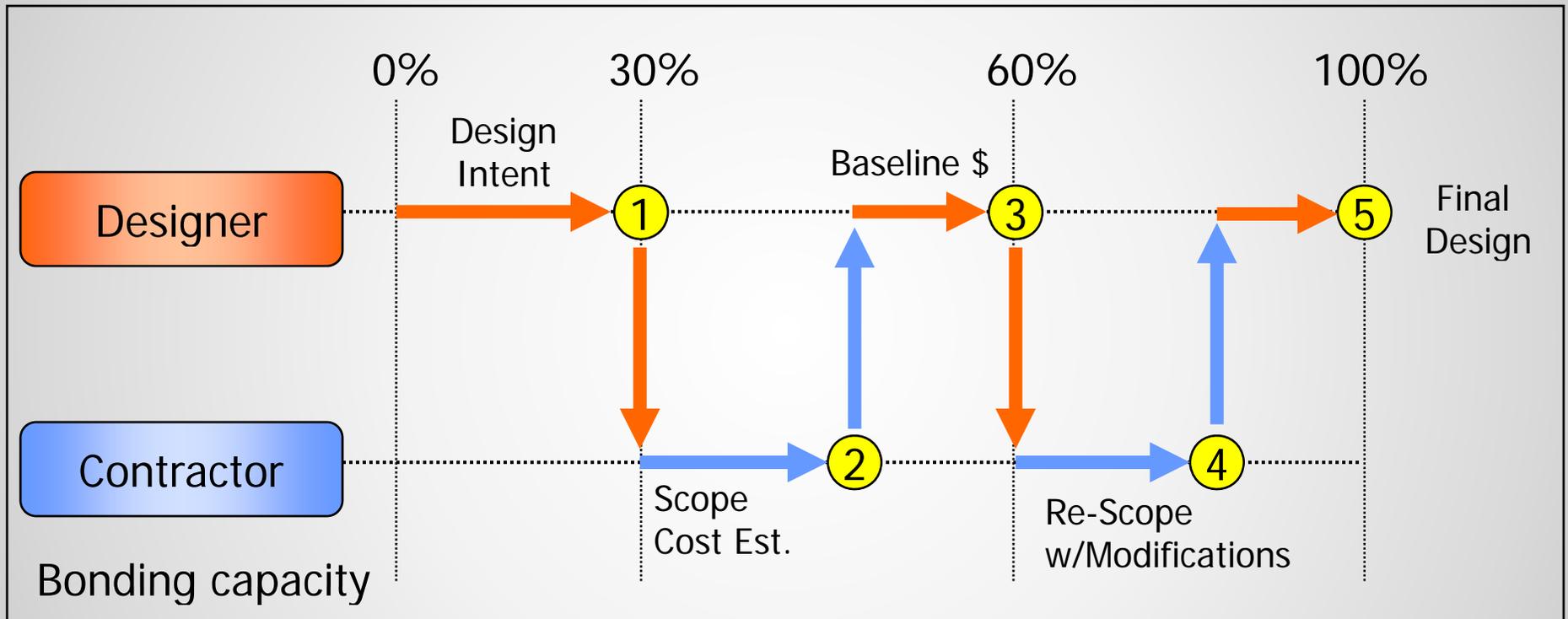




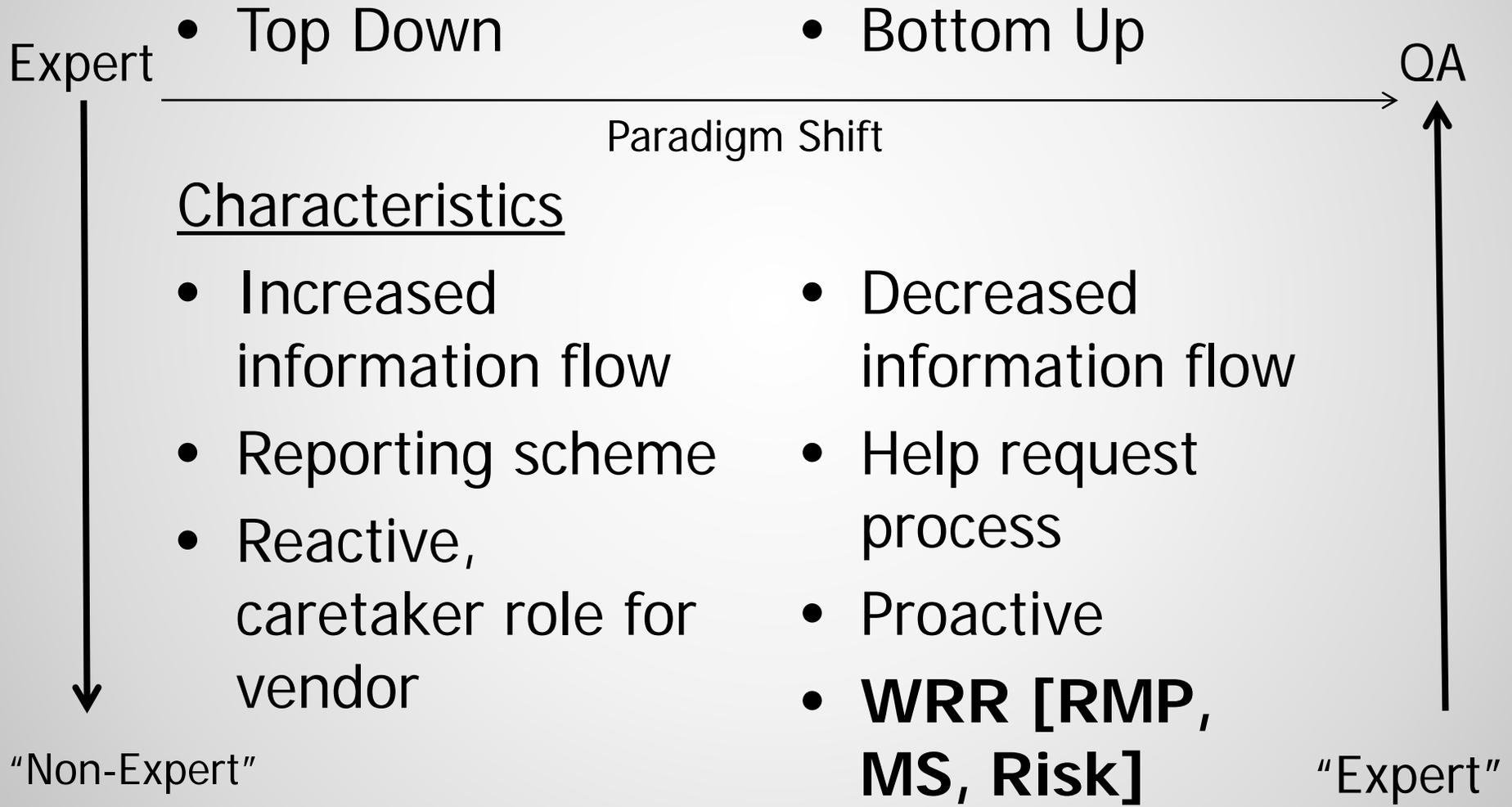




# Design Best Practices



# Information Transfer

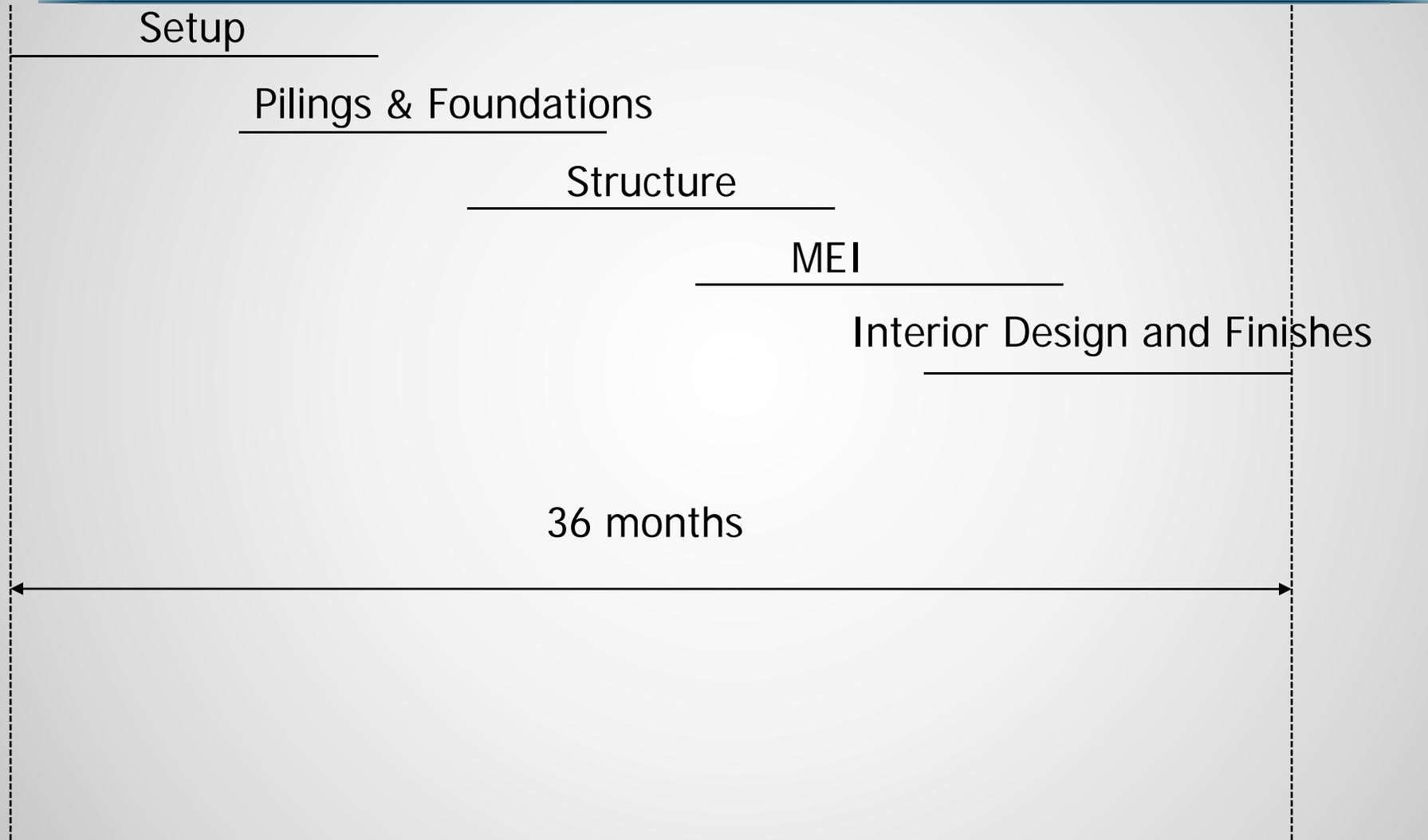


# What is risk?

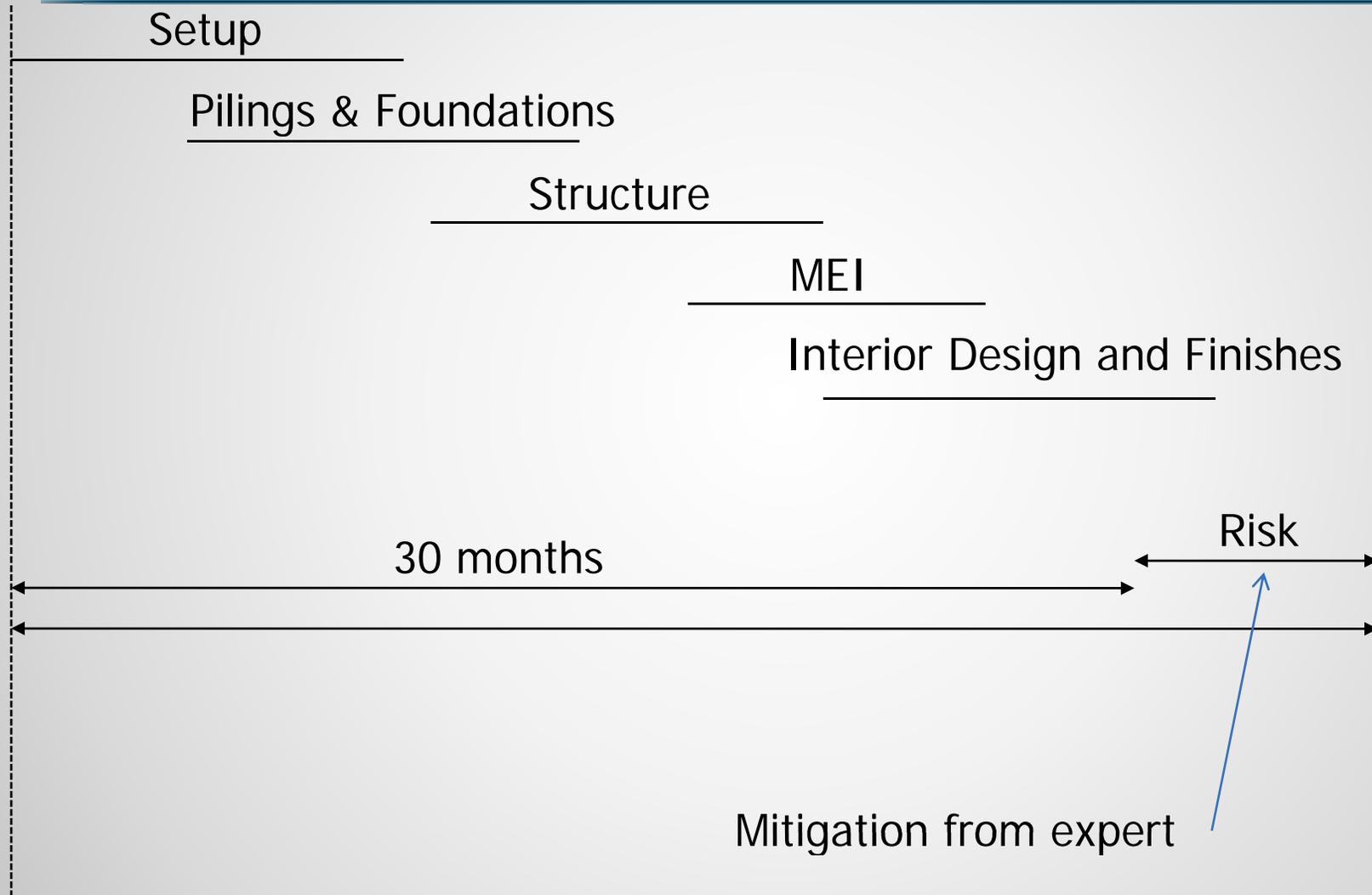
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- Risk is the inability to see the future
- Risk management is the management of the risk of not seeing
- We learn from mentors
- We learn from experts

# "Non-expert" lays out a plan



# "Expert" identifies improvements



# Conclusion: Change the paradigm

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- Move top down organization to bottom up
- Use WRR, RMP, MS as mentoring and teaching tool
- Educate all leadership (masters and PhD)
- Integrate education program, integrity program, and research center objectives

# Industry Structure (Reactive vs Proactive)

Performance	High	<u>III. Negotiated-Bid</u> Owner selects vendor Negotiates with vendor Vendor performs	<u>II. Value Based</u> Best Value (Performance and price measurements) Quality control and quality assurance
	Low	<u>IV. Unstable Market</u>	<u>I. Price Based</u> Specifications, standards and qualification based Management, direction, and control Decision making Technical expertise on client's side
		Low	High

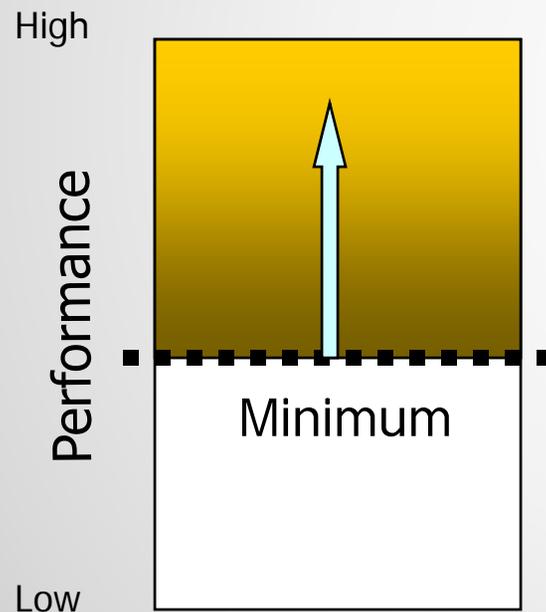
Perceived Competition

# What is causing all the confusion?

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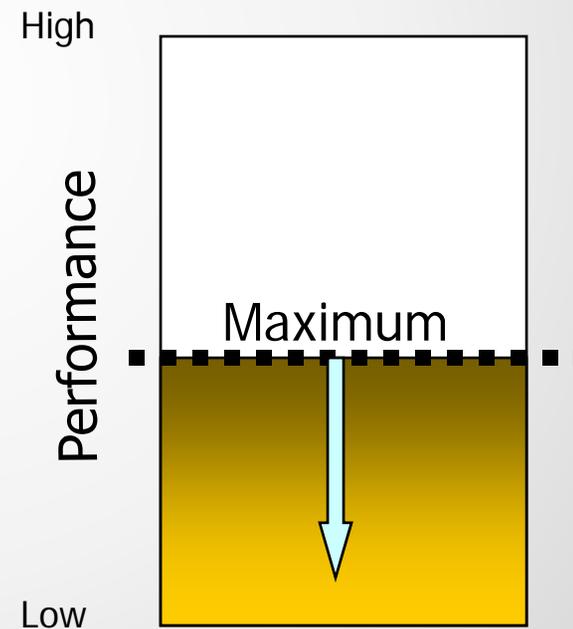
## Owners

“The lowest possible quality that I want”

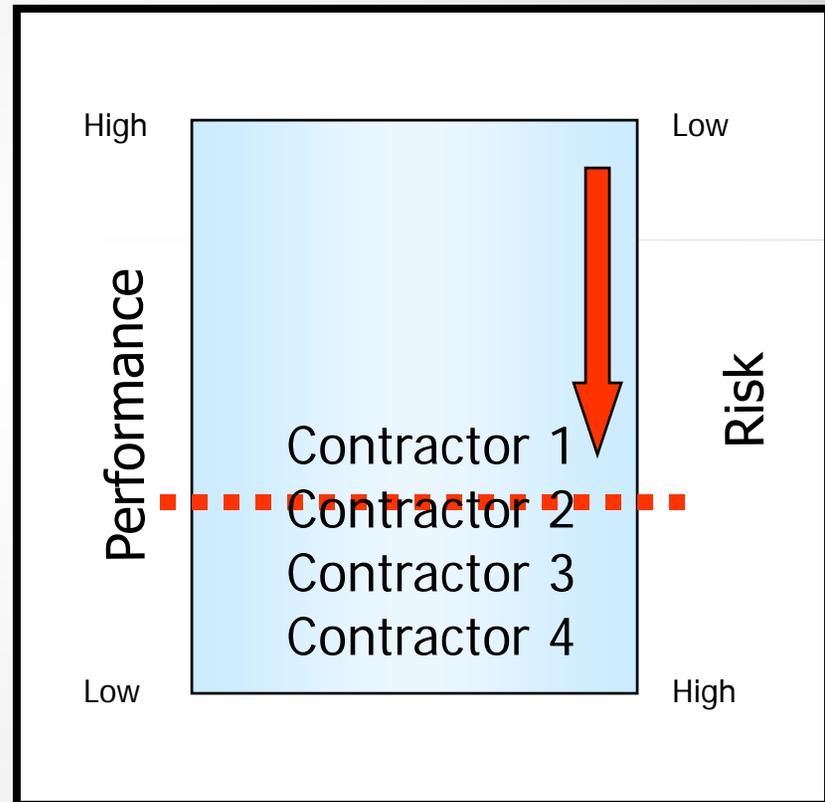
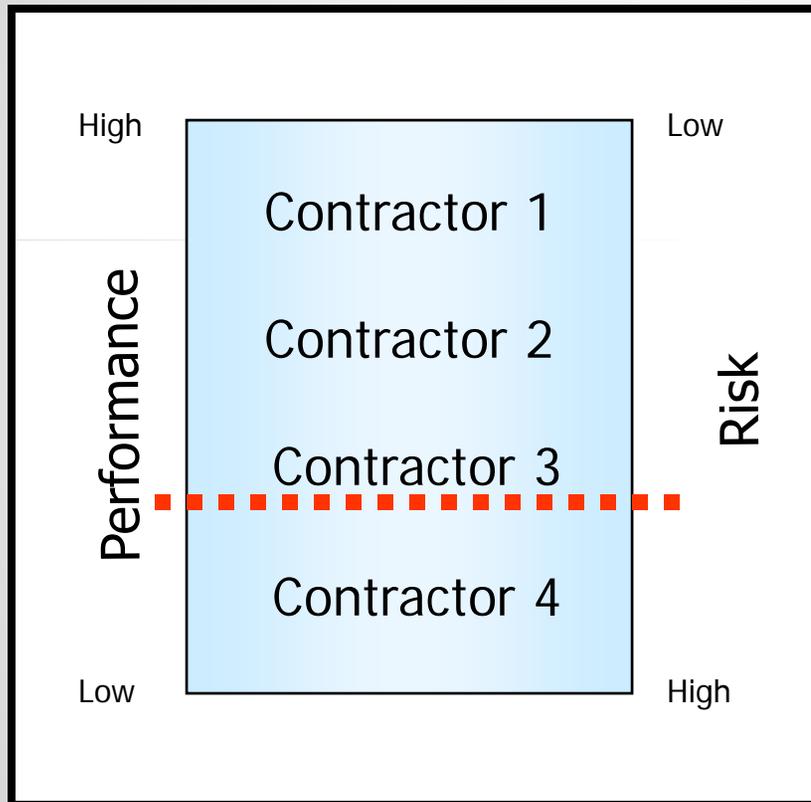


## Vendors

“The highest possible value that you will get”



# Best Value vs. Low Bid



# Industry performance and capability

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## Customers

Outsourcing  
Owner

Partnering  
Owner

Price  
Based

## Vendor X



# Best Value PIPS: Risk Management Environment

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- Change of paradigm
- Not just a way to win a project
- Not just another way to document
- Method of mentoring
- Method to minimize risk that someone cannot see
- Utilization of information (as perceived by others)

# Risk Management Environment

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- Tool is the RMP and the WRR
- Worker uses WRR and RMP (quality control and risk management)
- Leader ensures that WRR and RMP is used (quality assurance)
- Risk is minimized using everyone's "knowledge" and the "knowledge of experts"

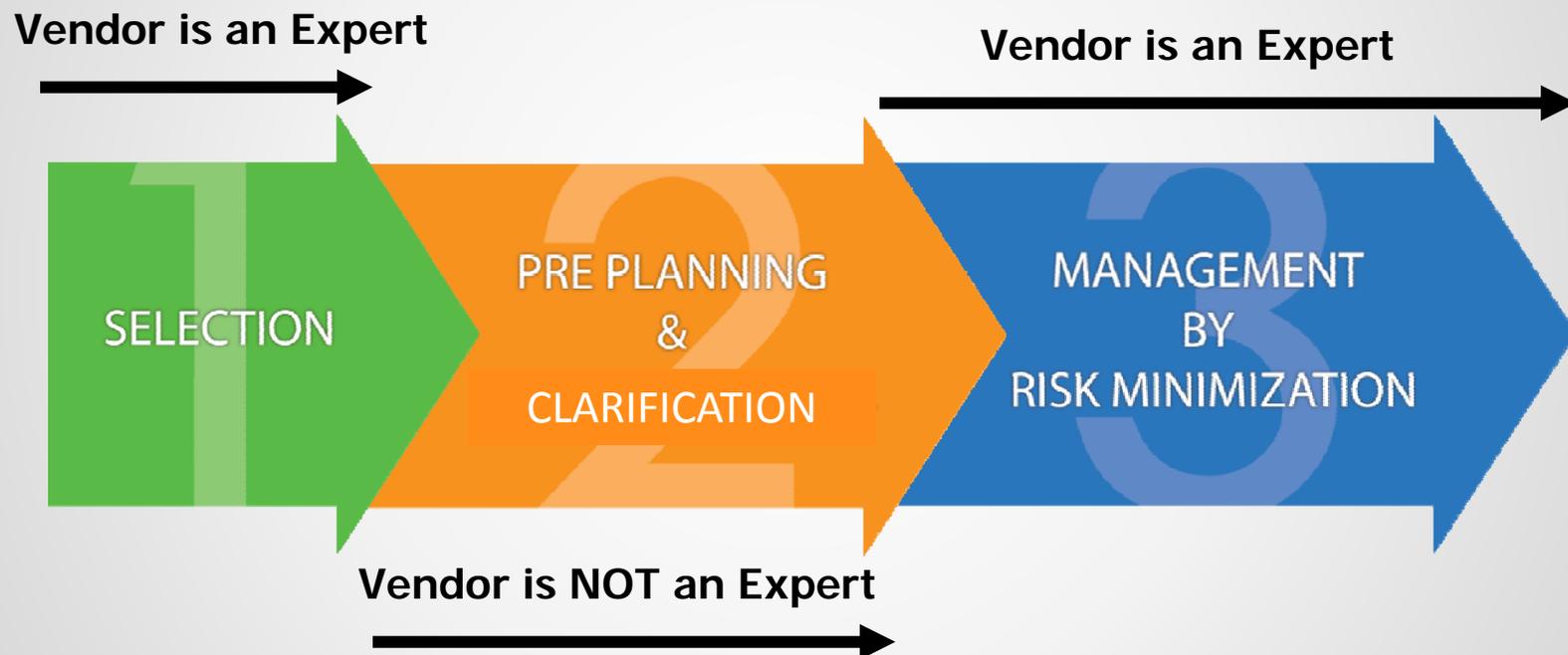
# Three Phases

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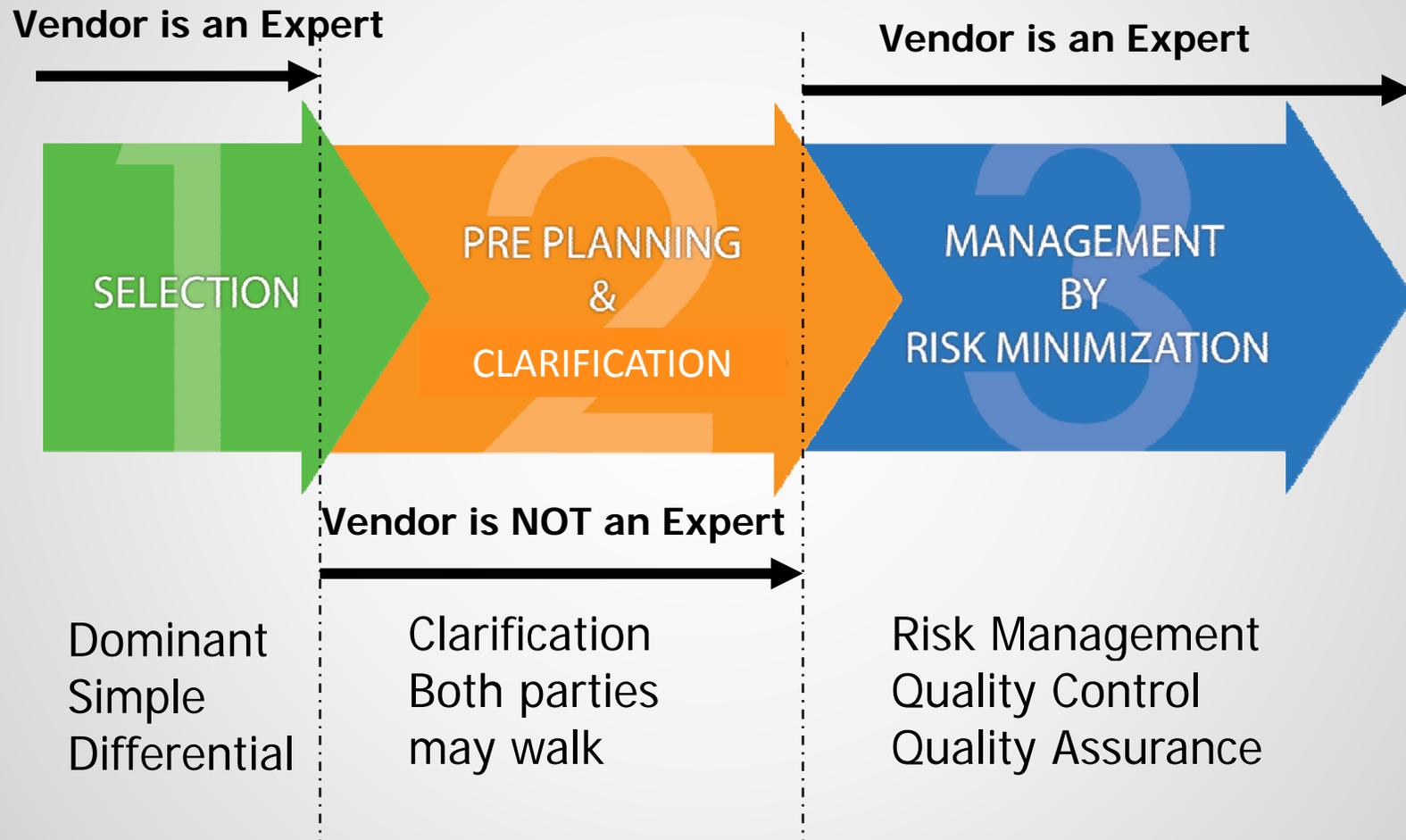


# Best Value System

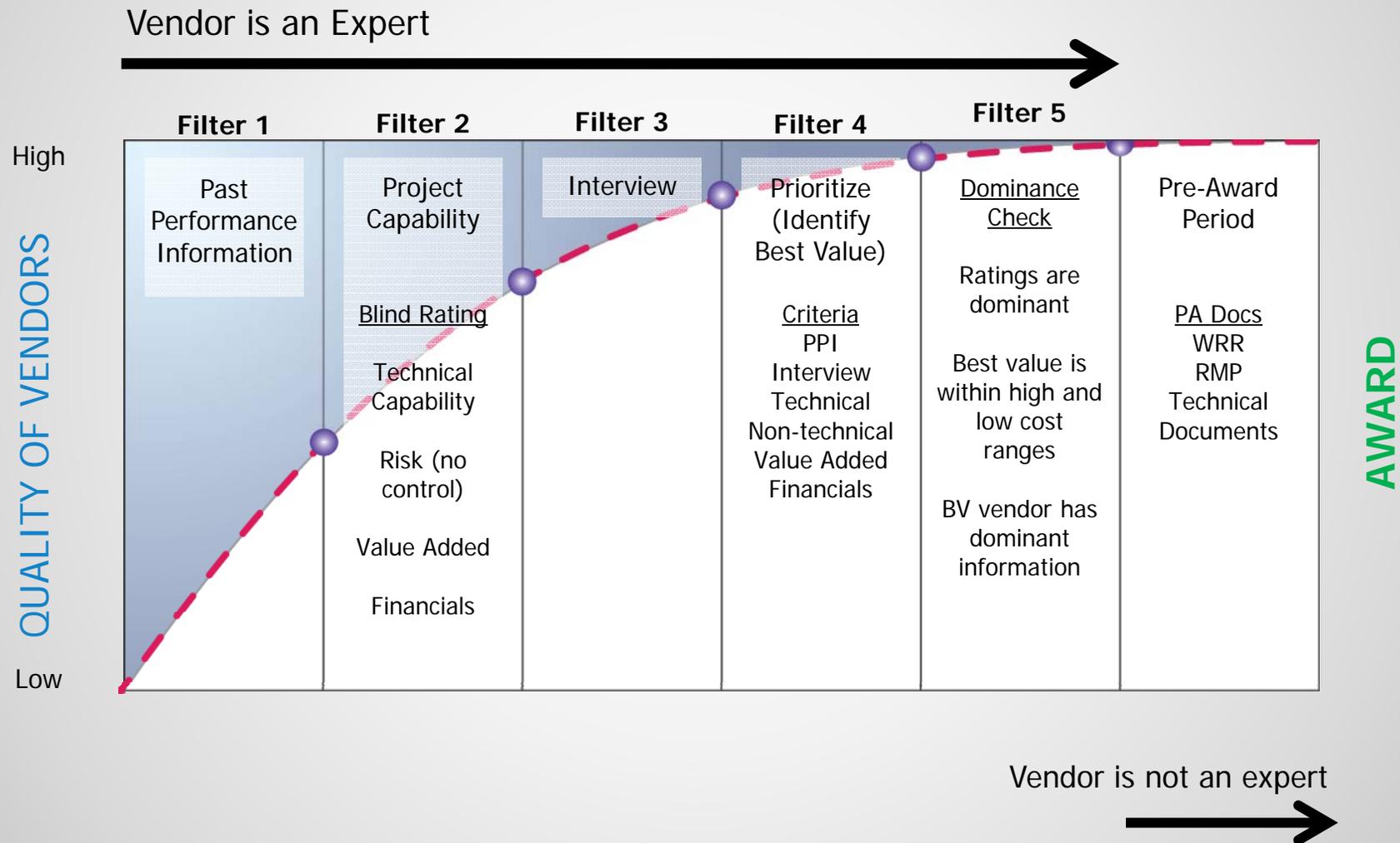
*(alignment of expertise, minimization of effort)*



# Performance Information Procurement System



# Selection Process



# Selection Criteria

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- Past Performance Information (PPI)
- Project Capability (blind review)
  - Technical capability (TC)
  - Risk that vendor does not control (Risk)
  - Value added (VA)
- Interview (if required)
- Price (cost breakout and justification could be requested)
- Milestone Schedule (not used for selection)

# Technical Capability Submittal

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- Performance statements supported by performance measurements
- Project Vision
  - Alignment of Resources
  - Cash flow
  - Selection of critical subvendors

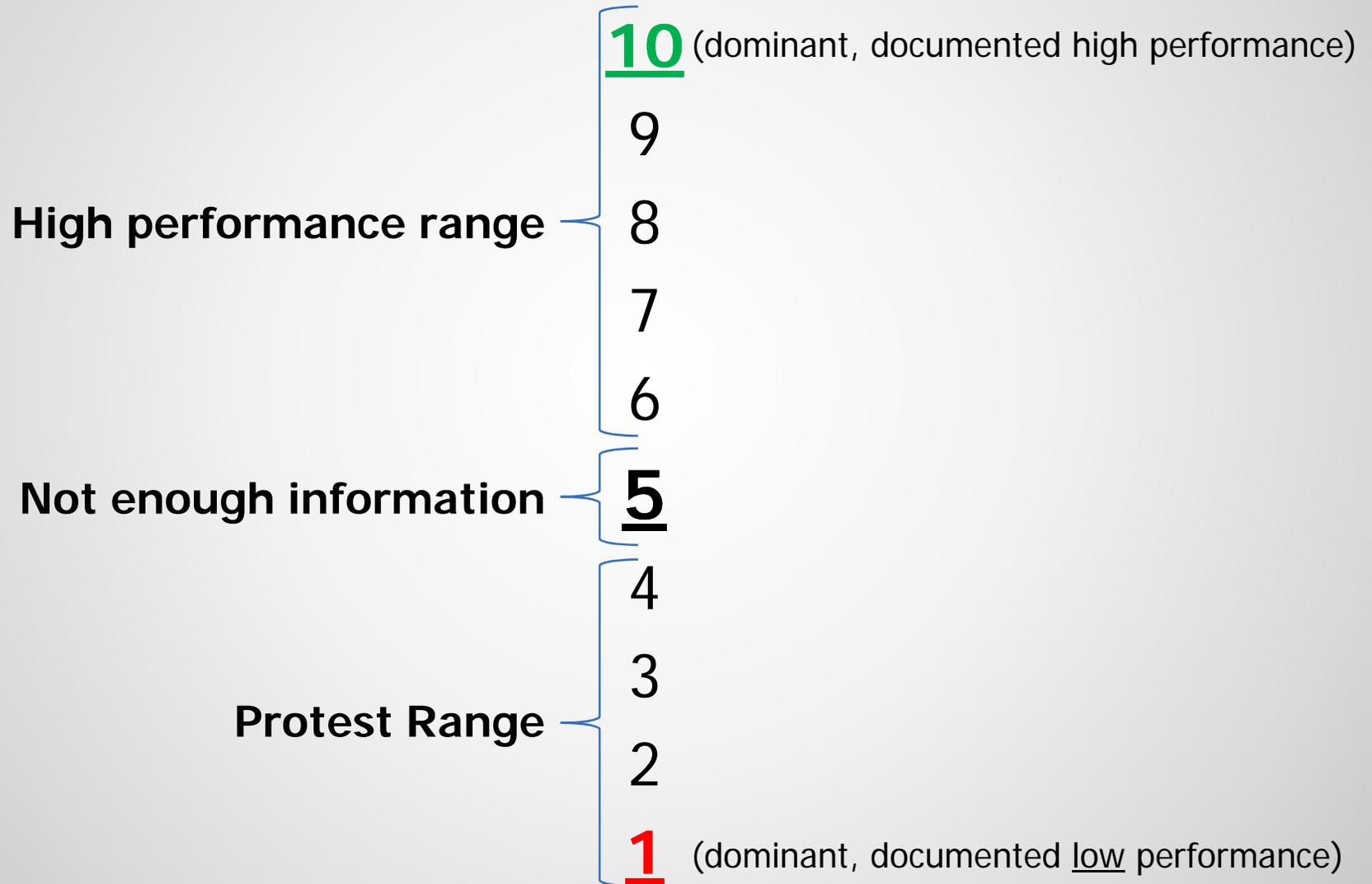
# Risk Submittal

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- Tracking all deviations on the project
- Method of minimizing contract transactions
- Mitigation of risk (including un-foreseen risk)
- Past references on where risk mitigation was utilized

# 1-10 Rating Scale

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# Blind submittal examples

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- Simple
  - Claim 1: The project manager being proposed on this project is very experienced in design-build, mechanical system type and innovative projects.
- **The what, but not the how**
  - Example 2: the mechanical subcontractor can install a system that minimizes the installation time by 20% and the system minimizes the annual energy consumption by 15%
- Supported by performance information
  - Example 1: PM record over the past 5 years, 10 mechanical oriented, innovative DB projects, \$250M average scope, customer satisfaction is 9.5/10.0, deviation rate is less than 1%
  - Example 2: Last five projects, customer satisfaction is 9.5/10, deviation rate is less than 1%, 20% earlier finish, installed system have average energy consumption 15% under average consumption, **references and data available on request.**

# Dominance Check

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- Price within preset range of next best value
- Price within budget
- Price within preset range of average price
- Price within preset range below average submittal price
- Price breakout analyzed for compliance
- Milestone schedule analyzed for compliance