



Oklahoma Center for the Advancement of Science and Technology

FY11 Plant Science Workshop

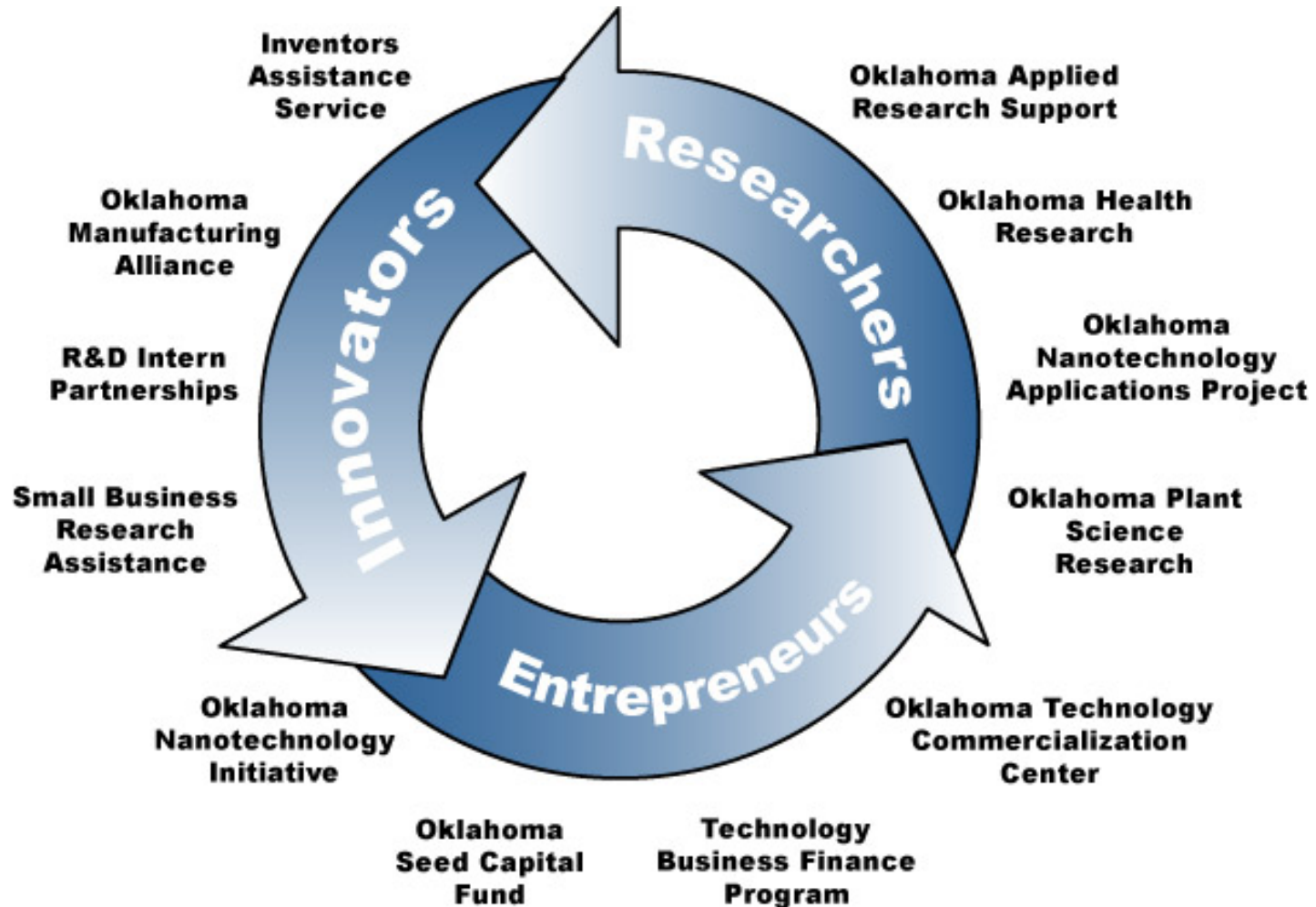
OCAST ROI

- 19.92:1 cumulative return to Oklahoma
- FY09, OCAST funded \$492,873 plant science projects. \$2,182,568 was leveraged in private, federal and business financials.
- \$15 million awarded in FY09
- 2,198 projects funded since 1987

OPSR

- FY11 marks the fifth year for Plant Science Research Program
- FY10 received 30 basic applications
 - 20 applications were approved by reviewers
 - 6 funded

Funding Programs



OPSR Program

Two Components

Basic Research

Applied Research

Proof-of-Concept

Accelerated

Basic Research Purpose

- Provides seed funding for research projects
- Enhance competitiveness of Oklahoma researchers for national and international funds;
- Further plant science and its application to benefit society; and
- Strengthen the state's biosciences industry

Eligible Organizations

- Oklahoma institutions of higher education
- Oklahoma non-profit research foundations
- Private enterprises. An enterprise is defined as a firm with its principal place of business in Oklahoma.
- Oklahoma businesses and farms

Project Eligibility

- Projects that focus upon the following are ineligible for OPSR funding:
 - Market surveys
 - Training or technical assistance for business firms

Basic Award

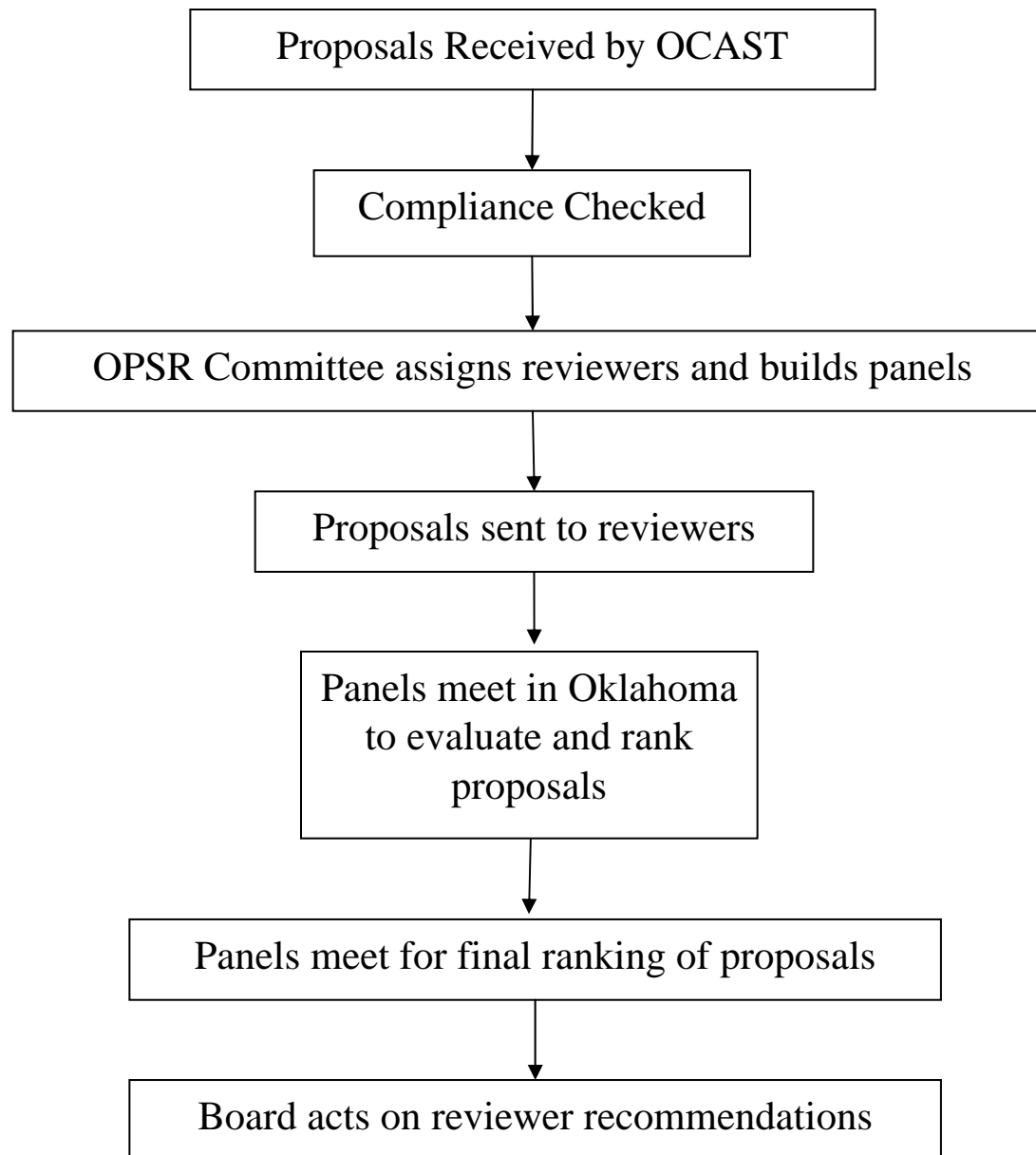
- Supports research orientated principally towards basic and developmental scientific inquiry
 - \$10,000 minimum budget for each year
 - \$50,000 maximum each year up to two years
 - No matching requirements

Comparison	Basic	Applied	
		Proof-of-Concept	Accelerated
Matching	Not Required	1:1	1:1
Yearly Award			
Minimum	\$10,000	\$10,000	\$10,000
Maximum	\$50,000	\$50,000	\$100,000
Funding Years	1-2 years	1-2 years	1-2 years
Collaboration	Not necessary	Strongly Encouraged	Strongly Encouraged
Economic Impact	Not necessary	Must lead to commercialization	Must lead to commercialization



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Review Process & Evaluation Criteria



Basic Evaluation Criteria

- Evaluate the appropriateness of the budget and technical merit. Instructions page 4.
 - Significance: Does the research address an important problem? If the aims of the application are achieved, how will scientific knowledge be advanced?
 - Approach: Are the conceptual framework, design, methods, and analysis adequately developed, well integrated, well reasoned and appropriate to the aims of the project.
 - Innovation: Is the program original and innovative?

Basic Evaluation Criteria

- Evaluate the appropriateness of the budget and technical merit. Solicitation page 4.
 - Investigators: Are the investigators appropriately trained and well-suited to carry out this work? Is the work proposed appropriate to the experience level of the principal investigator and other researchers?
 - Environment: Does the scientific environment in which the work will be done contribute to the probability of success? Does the proposed project benefit from unique features of the scientific environment, or subject populations, or employ useful collaborative arrangements?



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Standards & Requirements

Solicitation Forms

Statement of Intent
&
Application

Editable forms can be found online at:

www.ok.gov/ocast

Submission Requirements

Statement of Intent

- Deadline:
 - 5:00 P.M., September 22, 2010
- Delivery Method:
 - By mail or fax to (405) 319-8426

Intents will not be accepted by e-mail

Submission Requirements

Application

- Deadline:
 - 5:00 P.M., October 13, 2010
- Delivery Method:
 - by mail or hand delivered only

No e-mail or faxed applications

Submission Requirements

Statement of Intent or Applications will not be accepted after the deadline unless a national carrier, FedEx, UPS, etc., has guaranteed a delivery of 5 p.m. or before and you can produce confirmation.

Required Materials

Each OPSR application must include the following materials:

Number of Sets	Contents
1	Original paper application, marked “original,” with appendices attached (stapled or fastened with a binder clip in the upper left corner). Prepare required Application Page forms 1-9(b) (Items 1-23) as provided. Refer to Required Attachments pages 1-7 (Items 24-33) for instructions to prepare text sections of the application including, presentation order and headings.
1	Paper set of Application Pages: 1-9(b) (Items 1-23) staple each set in upper left corner. Include in each set Items 23 and 23A for each budget year of project.
1 CD	File containing the entire application in (PDF) format including appendices. Does not require signatures.

Required Materials

- Signatures are not required for CD. PS11-XXB First Name Last Name.pdf, where XX is the PI's two digit project number received from OCAST upon submission of the Statement of Intent (e.g., PS11-01B Jessica Vinson.pdf).
- For identification purposes, the CD must be marked by a permanent marker or printed label using the above example.

Required Materials

- 8 ½ x 11-inch white paper
- Not less than 0.5-inch margins
- Single to 1.5 spacing
- Font size not smaller than 10-pt
- Use the presentation order and headings as shown in solicitation
- Do not use
 - Binders
 - Notebooks
 - Rubber bands
 - Regular paper clips

Required Materials

- Total section text page length includes
 - Text
 - Inserted graphs
 - Charts
 - Figures
- If not applicable, acknowledge by number the number and title by:
 - “Not Applicable”

Resubmissions

- A resubmission is a *new* proposal, which includes the information below:
 - A current Statement of Intent is required
 - Indicate it is a resubmission
 - Prepare a separate appendix that includes:
 - a letter responding to the reviewers' comments from the previous review and noting all changes in the research plan,
 - a copy of the previously submitted application and
 - all reviews of that application.

Release of Information

OCAST is subject to the Open Meetings Act and the Open Records Act.

Statement of Intent, application abstracts and executive summaries from progress reports are consider public information.

HOWEVER: marketing plans, financial statements, trade secrets, research concepts, methods or products, or any other proprietary information are exempt by statute.

Additional Requirements

- Refer to the solicitation for the following:
 - IRB
 - Biographical information
 - Letters of support/recommendation
 - OCAST, previous, and other support
 - Company profile
 - Contact Information
 - Post Award Support



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Budgets

Direct Costs

- The OPSR program allows only research direct costs.
- PI's salary can be requested but only by those not considered full time. Required attachments 1.
 - Examples of allowed direct costs:
 - Research related: travel, supplies, equipment, patient care, alterations, rent, phone, and utilities
 - Examples of non-allowed direct costs:
 - Advertising, tuition and fees, lobbying costs, selling and marketing costs, first class air travel, patent and licensing fees

Indirect Costs

- OCAST does not allow indirect costs as part of the match expenses
 - Examples of Indirect Costs
 - Building & equipment depreciation, interest, operations and maintenance, overhead, administrative support



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Research Plan

Research Plan

The Research Plan is

100% Basic

of the reviewers evaluation.

Maximum 15 pages

Research Plan

1. Specific aims

- What are the broad, long-term objectives and goal of the specific research
- Accurately state what you can do within the proposed timeframe of the project

Research Plan

2. The significance of the research:
 - Briefly sketch the background
 - Evaluate existing knowledge in this area and identify the gaps that exist
 - State the importance of this research by relating its aims to longer-term objectives
 - Present related projects and demonstrate this effort does not repeat previous studies nor infringe on intellectual property rights

Research Plan

3. Preliminary and related studies:
 - Describe prior research by the investigator(s) that lead to formulating the proposal
 - Describe competence of the investigator(s) who will perform the proposed project

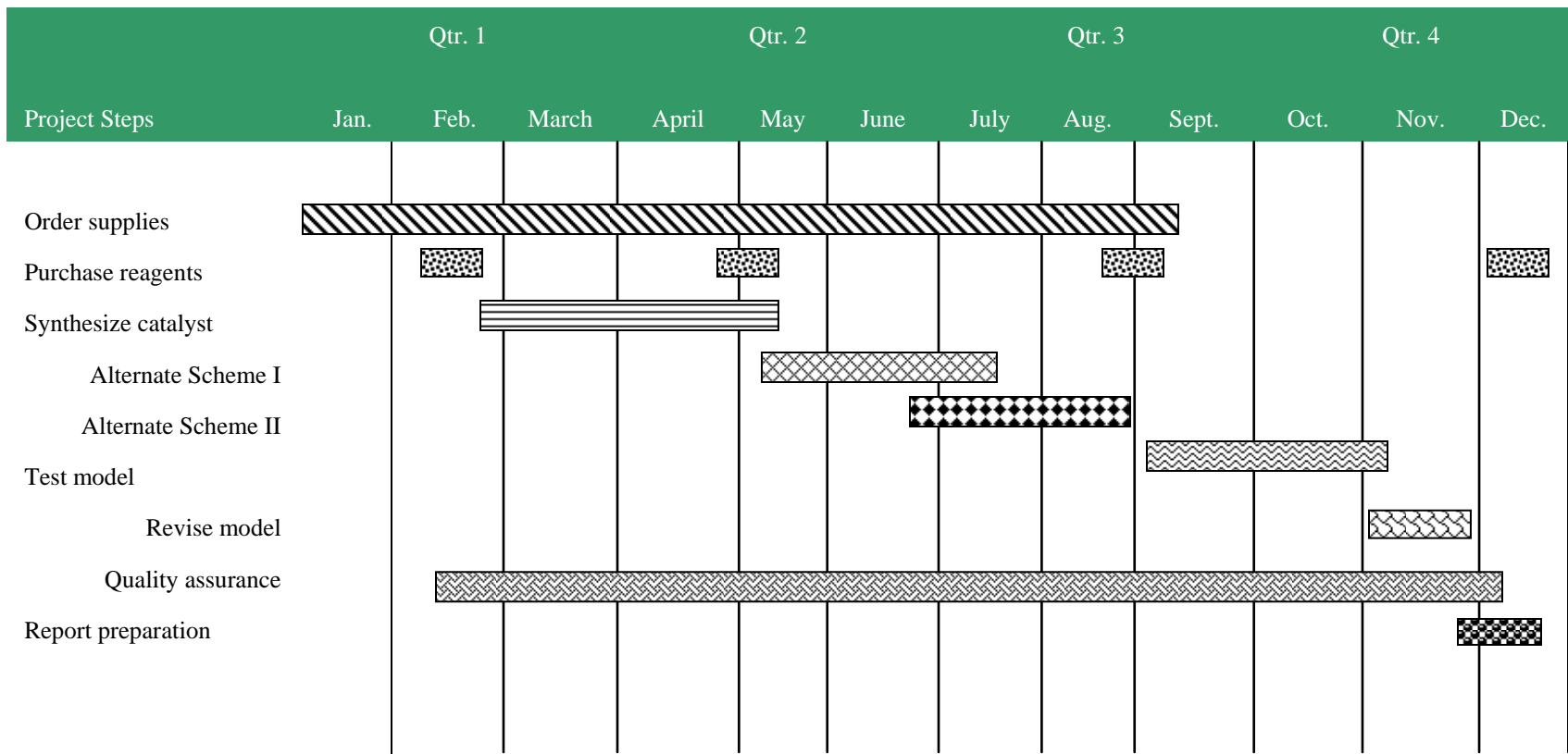
Research Plan

4. Research methodology:

- Detail the research design
- Discuss the methodologies and the means by which the data will be analyzed and interpreted.
- Note any procedures that may be dangerous to personnel and the precautions that will be used in these situations
- Include indicators of success
- Include a timetable, show research goals and the alternate path(s) if the research goal is not attained.

Research Plan

Project Development Schedule



Literature Cited

- Number the references in order of appearance, and provide the complete citations
- Each citation must include the title of the journal article or specific book chapter
- While disciplines vary in the accepted style, the citation must be sufficient for a reviewer to locate the cited information with little searching
- Suggestion: Use a referencing style suitable for your discipline



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Applied Applications

Applied Research Purpose

- Provides state matching funds for R&D projects
- Reasonable probability to enhance employment opportunities within Oklahoma
- Must have a high probability of producing new or improved commercially successful product, process or service.

Applied Awards

- *Proof-of-Concept*: supports early stage applied research & development
 - \$10,000 minimum budget for each year
 - \$50,000 maximum each year up to two years
 - One-to-one matching requirements
- *Accelerated*: supports later stage applied research & development
 - \$10,000 minimum budget for each year
 - \$100,000 maximum each year up to two years
 - One-to-one matching requirements

Matching Requirements

Comparison	Equipment as Match (in-kind)	Salary as Match <i>No state appropriated funds can be used as match</i>
Business	CANNOT use equipment & machinery as match	CAN use salary as match
Universities	CAN use equipment as match to fulfill part or the entire required match if the equipment did not originate from State-appropriated funds	CANNOT use salary as match
Non-Profits	CAN use equipment as match to fulfill part or the entire required match if the equipment did not originate from State-appropriated funds	CAN use salary as match if they do not receive monies from state appropriations

Matching Requirements

- In order to qualify for funding for an OPSR project:
 - Applicant organization must provide 50% of the total direct cost
 - Funding sources cannot be from State-appropriated money
 - Matching monies must be specifically for the OPSR project

In-kind services and indirect costs are not allowed



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Evaluation Criteria, Commercialization & Economic Impact

Applied Evaluation Criteria

- *Proof-of-concept* proposals are evaluated 30% for the potential for economic impact and 70% for the technical merit of the research and the ability to perform the research.
- *Accelerated* proposals are evaluated 50% for the economic impact and 50% for the technical merit and the ability to perform the research.

Applied Evaluation Criteria

Peer reviewers in general evaluate all applications according to the following criteria:

Technical merit of the research

Ability to perform the research

Potential for economic impact

Applied Evaluation Criteria

Technical Merit of the Research and Ability to Perform the Research

1. Creativity and inventiveness of the proposed research.
2. Degree to which state-of-the-art techniques and processes are to be used.
3. Quality of the research plan.
4. Probability of success of the research plan design.
5. Competence of investigator(s) as measured by training and research experience.

Applied Evaluation Criteria

Technical Merit of the Research and Ability to Perform the Research

6. Competence of support personnel as measured by training and research experience.
7. Adequacy of facilities.
8. Adequacy of equipment.
9. Commitment of the applicant organization(s) as evidenced by resources dedicated to the project
10. Appropriateness of budget.

Applied Evaluation Criteria

Potential for Economic Impact

1. Potential for leading to a commercially successful product, process or service within 2 years of project completion
2. Potential for leading to a commercially successful product, process or service within 5 years of project completion
3. Potential for leading to a commercially successful product, process or service within 10 years of project completion
4. Status of Intellectual Properties Agreement
5. Commitment of financial resources to successfully bring product to market

Applied Evaluation Criteria

Potential for Economic Impact

6. Availability of marketing capability to successfully bring product to market
7. National/international market growth potential
8. Potential for creating jobs in Oklahoma, considering both the probability and number
9. Potential of short-term impact (within 5 years of project completion) on the Oklahoma economy
10. Potential for creating jobs that will enhance the technology base in Oklahoma

Research Plan

The Research Plan is
70% Proof-of-Concept
50% Accelerated
of the reviewers evaluation.

Maximum 15 pages!

Commercialization Development

Strategy

4 pages maximum

- Describe in a short sentence the product, process or service to be commercialized and its end use
- Describe the customers or clients.
- Describe the domestic and global markets market size, market growth rates, number and nature of competitors
- State the competitive advantage the project offers in the targeted markets.

Commercialization Development Strategy

- Using a chart or table, describe the key steps required to commercialize the product, process or service. This plan should include a schedule of key business milestones.
- Provide summary pro forma income statements and cash flow projections

Economic Impact Statement

4 pages maximum

- Discuss the project's potential impact on Oklahoma's economy during the project and at 2, 5 and 10 years following the project.
- Carefully discuss under a separate heading for each time period items A. through G., during the project, and at 2, 5 and 10 years after completion

Economic Impact Statement

- A. Increase in scientific and technical staffing levels
- B. Increase in work force staff
- C. Productivity, profitability or cost savings
- D. Amount of capital investment in equipment and facilities at the organizations participating in the project

Economic Impact Statement

- E. The estimated gross sales, net sales, and cost avoidance
- F. If applicable, describe technology transfer plans
- G. Other sources of funding and capital attracted to Oklahoma

Intellectual Property

Relationships and Protection

- Describe the plan to protect the intellectual property
- Collaborative proposals
 - Provide a short statement describing how the intellectual property patent and licensing agreements will be effectuated
- Existing agreements
 - Provide a short statement indicating the types of agreements that have been executed between the parties

Contact Information

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OCAST Website

www.ocast.ok.gov