

**OCAST** >>

Oklahoma Center for the Advancement of Science and Technology

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**Business Plan**  
**Fiscal Year 2016**

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## BOARD OF DIRECTORS

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OCAST is a state agency governed by the Oklahoma Science and Technology Research and Development (OSTRaD) Board of Directors (Title 74, Section 5060.6). This 21-member board of directors consists of the secretary/executive director of the Oklahoma Department of Commerce, the chancellor of the Oklahoma State Regents for Higher Education, the secretary of agriculture, the president of the University of Oklahoma, the president of Oklahoma State University, the president of a private university, the president of a regional university, 12 members appointed by the Governor and two nonvoting legislators representing the House and the Senate. Members appointed by the governor serve with the consent of the senate and generally serve four-year terms.

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University of Central Oklahoma  
Edmond

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University of Oklahoma  
Norman

**Elise Hall**

Oklahoma House of Representatives  
Oklahoma City

**V. Burns Hargis, J.D.**

President  
Oklahoma State University  
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**Rhonda Hooper** (*Vice Chair*)

President and CEO  
Jordan Associates  
Oklahoma City

**David Humphrey**

President and CEO  
ADDvantage Technologies Group  
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**Glen D. Johnson, J.D.**

Chancellor  
State Regents for Higher Education  
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Director of Research Administration  
Oklahoma Medical Research Foundation  
Oklahoma City

**Dayal T. Meshri, Ph.D.**

President and CEO  
Advance Research Chemicals Inc.  
Catoosa

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Executive Director  
Ponca City Development Authority  
Ponca City

**Jim Reese**

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**Karl Reid, Sc.D.**

Regents Service Director  
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Oklahoma State University  
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**Steven Rhines, J.D.**

Vice President, General Counsel and Director  
of Public Affairs  
Samuel Roberts Noble Foundation  
Ardmore

**Terry L. Salmon, Ed.D.**

President and Founder  
Computer System Designers LLC  
Oklahoma City

**Deby Snodgrass**

Secretary and Executive Director  
Oklahoma Department of Commerce  
Oklahoma City

**Steadman Upham, Ph.D.**

President  
University of Tulsa  
Tulsa

**Sherri Wise**

President  
Osteopathic Founders Foundation  
Tulsa

## PURPOSE

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The Oklahoma Center for the Advancement of Science and Technology (OCAST) was established in 1987 as the state's agency for technology-based economic development (TBED). OCAST's mandate is to "expand and diversify Oklahoma's economy and provide new and higher quality jobs for Oklahomans" by encouraging ". . . the development of new products, new processes and whole new industries in Oklahoma." (O.S. 74, Sections 5060.1a and 5060.2A)

## MISSION

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To foster innovation in existing and developing businesses

- by supporting basic and applied research
- by facilitating technology transfer between research laboratories and businesses
- by providing seed capital for innovative firms in the development of new products or services
- by helping Oklahoma's small and medium-sized manufacturing firms become more competitive through increased productivity and modernization (O.S. 74, Section 5060.3)

## VISION

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OCAST funds cutting-edge science and technology through processes that are recognized nationally and internationally for demonstrating excellence, objectivity and economic impact. OCAST's vision is continued growth and vitality through facilitating collaboration between state government, universities, start-up companies and established large-scale firms to develop an entrepreneurial environment that supports technology-based economic development. OCAST's strategy includes technologies such as biosciences, information technology, sensors and electronics, advanced materials, energy and alternative fuel sources. Achieving this vision will result in continued growth of advanced technology companies in the state thereby increasing Oklahoma's global competitiveness, per capita income and quality of life.

# FISCAL YEAR 2016 GOALS AND OBJECTIVES

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The staff and management of the agency are experienced in managing through times of plenty and the cyclical times of uncertainty. In highlighting the following goals and objectives, we are keenly aware of the need to be agile and creative in adapting to change. At the same time, we must be relentless in our dedication and steadfast in our duty to our stakeholders and the goals of technology-based economic development.

OCAST continually strives to increase the impact of its programs in assisting industry and the research community to grow Oklahoma's economy through science and technology. Ongoing efforts to achieve this goal include pursuing additional funding through grants, cooperative agreements and other opportunities to realize its mission and enhance its core programs; working to achieve an OCAST appropriation sufficient to meet market demand for technology-based economic development programs and support, as defined by OCAST's advisory committees, affiliate organizations, clients, stakeholders and board; reviewing OCAST programs for potential updates, modifications and opportunities to further streamline program operations to:

- a. keep pace with the dynamic nature of research and advanced technology businesses;
- b. operate with optimal effectiveness and efficiency; and
- c. respond to new opportunities, within the context of budget and statutory constraints.

OCAST strives to maximize its impact by:

- a. conducting workshops to provide clients with information on writing more effective applications;
- b. building on existing collaborations with university technology transfer offices, non-profit research foundations and federal laboratories to advance innovation and commercialization;
- c. educating legislators and statewide elected officials to better acquaint them with OCAST clients and to inform them of the benefits of the agency's programs;
- d. benchmarking OCAST against similar programs in other states.

## **GOAL 1: INCREASE THE IMPACT OF OCAST'S PROGRAMS**

### **OBJECTIVES**

1. Review existing strategies to better educate, inform and develop consensus among stakeholders on strategically positioning Oklahoma to compete successfully in a technology-based economy.
2. Continuously review existing programs and services to ensure alignment with *OneOklahoma: A Strategic Plan for Science and Technology in Oklahoma, 2012*.
3. Expand and improve the efficiency of statewide program outreach activities by conducting technology focus groups and regional TBED collaboration events to help the agency deliver its message to potential clients.
4. Conduct the annual Oklahoma Health Research Conference. The conference is intended to expose Oklahoma's health research community to opportunities for financial and business support they might not otherwise be able to access and to provide the legislature and public a showcase of OCAST funded research.

5. Conduct the annual technology and intern showcase to present Oklahoma's most innovative technologies to an audience of potential buyers, investors and collaborators and to help illustrate to the public the impact of OCAST programs.
6. Support OCAST partner organizations in meeting their goals and objectives as stated in their respective business plans and approved by the OSTRaD Board of Directors.
7. Build on the collaboration with i2E and other partner organizations to support the OCAST initiative called the Oklahoma SBIR Collaborative Resource (OSCR) with the purpose of increasing the number and quality of Oklahoma Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) proposals and their ultimate commercialization. Expand OSCR services to support the unique needs of manufacturers pursuing SBIR and STTR funding. Through OSCR, encourage rural manufacturers' collaboration with regional universities and then help partner those regional universities with the state's research institutions.
8. Enhance OKGrants (online application and award management process), now that all OCAST programs utilize the online system, by incorporating beneficial comments and suggestions from end-users, external peer reviewers and developers.
9. Implement lessons learned from OCAST Lean Six Sigma projects into the Contract Life-Cycle Process (cradle to grave management of competitive award contracts) to streamline and improve the efficiency of all aspects of contract development, management, payment processing and monitoring.

## **GOAL 2: INCREASE PUBLIC AWARENESS OF OCAST'S IMPACT ON OKLAHOMA**

### **OBJECTIVES**

1. Fulfill a long-standing legislative directive to educate Oklahomans about the benefits of science and technology. Additionally, continue to provide lawmakers with information about OCAST programs and projects to assist them in making informed decisions.
2. Increase electronic/social media capability to reach all geographic areas of the state.
3. Continue the *Oklahoma Innovations* radio show, now in its 20th year with some 960 shows produced and aired across the state and available on the OCAST website.
4. Continue to seek opportunities to target specific geographic areas of the state where we will conduct activities to upgrade the level of media attention focusing on the value the agency brings to that specific area of the state.
5. Continue updates to the OCAST webpage to enhance public awareness of innovation. The webpage also serves as a portal for Oklahomans seeking access to OCAST programs. All webpage redesign/changes will (a) satisfy 508 compliance, (b) create an easily accessible and aesthetically pleasing website, (c) include electronic applications to simplify access to OCAST programs and provide electronic application access and (d) expand the scope of OCAST's services throughout the state.
6. Develop in-house expertise, while partnering with subject matter experts, to bolster our brand and to enhance the agency's position as the leader in technology-based economic development.
7. Seek methods to expand and improve the monthly electronic newsletter and increase readership.
8. Sponsor and conduct Oklahoma Science and Technology Month in cooperation with the state's middle school and high school level STEM teachers. The year 2015 experienced enhanced program acceptance with 1,585 Oklahoma science students recognized. The

program, initiated in 1993, is a tool used by science teachers who, for the life of the program, represent all but two counties in the state.

9. Provide marketing assistance to established OCAST programs and initiatives.
10. Continue membership in the Oklahoma Rural Action Partnership Program (RAPP) sponsored by the Oklahoma Department of Commerce. Through the RAPP involvement and other affiliations, OCAST has a presence throughout Oklahoma in the form of group presentations and special economic development programs.
11. Ensure optimal benefit of OCAST's collaboration in outside efforts to include, but not be limited to, The Journal Record Innovator of the Year Awards and workshops sponsored at both the state and federal levels.
12. Maintain positive legislative relationships by responding to legislative requests in a timely manner.

### **GOAL 3: DETERMINE PROCESS IMPROVEMENT OPPORTUNITIES THEN ANALYZE FOR BENEFIT AND IMPLEMENT AS APPROPRIATE INTO OCAST'S PROGRAMS, POLICIES AND PROCEDURES**

#### **OBJECTIVES**

1. Review and improve the staff performance evaluation process in keeping with requirements of the state Human Capital Management Division of the Office of Management and Enterprise Services (OMES) with the goal of more effectively improving employee development.
2. Promote a work environment that fosters a high performance team.
3. Continuously review processes and procedures to identify and implement efficiencies throughout the organization by building on the lessons learned through Lean Six Sigma.
4. Review services delivered via the OCAST website to improve pre- and post-contract award processes, reduce paper handling and postage costs and streamline other business transactions for staff and clients.
5. Benchmark current best practices in technology-based economic development through staff participation in national, state and local meetings and training.
6. Leverage outreach efforts through collaboration with affiliates, other government agencies and private sector organizations.
7. Comply with external audits and use every resource available to ensure the goal of zero audit findings.
8. Continuously review OCAST information technology resources and upgrade as necessary to provide staff the tools and most efficient means to serve clients.
9. Using lessons learned from OCAST's Lean Six Sigma projects, refine efforts to dovetail the Programs Division contracting activities and those of the Administration & Finance Division to reduce the time through the Contract Life-Cycle Process thereby improving the customer experience.

#### **STRATEGY**

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For Oklahoma to increase its competitive advantage and relevance in the 21st century, it is imperative to support the process of discovery and development of new ideas, new technologies and technology transfer that result in commercialization and significant economic impact for our state

and nation. OCAST's strategy is to advance research and development that help Oklahoma and its industries compete in the global economy.

### **BUILD ON PUBLIC AND PRIVATE SECTOR STRENGTHS**

- Provide leadership, information and assistance to enhance the ability of Oklahoma technology companies and researchers to compete in the global marketplace.
- Offer short-term financial incentives and capital access vehicles requiring external public and private sector co-investment, including concept and seed capital funding, to better position Oklahoma companies for success.
- Advance economic development by conducting and publicizing studies that call attention to improvements in technology policies and practices.
- Utilize OCAST's Oklahoma Sponsored Targeted Research (OSTaR) initiative to help apply industry funding to the research or technology that may best answer their innovation needs.

### **PROVIDE FUNDING BASED ON MERIT**

- Evaluate funding applications according to published procedures and criteria to ensure funds are awarded to applications with the greatest technical and commercial value.
- Utilize external peer review by recognized experts to make award determinations to promote objectivity and avoid conflicts of interest to the greatest extent possible.
- Work with standing advisory committees to continue to refine and improve OCAST's programs and external peer review process.
- Monitor and evaluate program performance on an annual basis to make certain tax dollars are spent as intended and produce measurable outcomes that maximize return on the state's investment.

### **LEVERAGE RESOURCES FOR GREATER RESULTS**

- Work with partner organizations and stakeholders to leverage their resources to extend the benefit of the state's investment.
- Build collaborations with private and public organizations to pursue federal and private foundation funding to benefit existing programs and fund new initiatives.
- Involve standing or ad hoc advisory committees in all planning efforts.
- Invest input from stakeholders and customers in changes and modifications to OCAST programs and procedures.

### **PROMOTE PUBLIC AND PRIVATE PARTNERSHIPS AND NETWORKS**

- Explore opportunities to establish protocols with other government organizations to encourage collaboration with Oklahoma's research institutions and private industry, with the goal of improving technology transfer and increasing market opportunities.
- Work to re-establish the OCAST Centers of Excellence program and improve that program's effectiveness through the incorporation of OCAST's commercialization services and investment support.
- Build on the ever-growing database of collaborative partners to help clients capitalize on resources and capabilities, both internal and external to the state. Internal state resources are always the first preference, but in the rare case when needed resources are not available in

Oklahoma, OCAST will be able to call upon its pool of external collaborators or service providers to answer those needs.

## **PROGRAMS**

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OCAST develops, implements, evaluates and modifies programs and services designed to encourage and enable Oklahoma advanced technology entrepreneurs, researchers and small businesses to accomplish research and development, technology commercialization and technology application. Clients return to OCAST programs as often as necessary for assistance. The programs in the OCAST technology pipeline include:

### **OKLAHOMA HEALTH RESEARCH**

#### **GOAL AND STRATEGIC OBJECTIVES**

The Health Research program addresses OCAST's statutory mandate of supporting basic health-related research by allocating resources according to merit and leveraging private and federal resources while fostering public and private sector collaboration.

#### **DESCRIPTION**

The Health Research program competitively awards basic research funding for one- to three-year research projects related to human health. Eligible applicants are Oklahoma universities and colleges, nonprofit research organizations and commercial enterprises. These awards enable researchers to gain expertise and produce data needed to obtain larger grants from other sources, including federal agencies and private funding organizations, and to develop patents which in the long-term can lead to commercialization. Researchers also benefit from OCAST's annual health research conference which focuses on ways to assist commercial development of new products and services resulting from health projects.

#### **PERFORMANCE MEASURES**

This program produces nationally competitive health science research. Private and federal funding attributed to health projects and the ratio of OCAST support compared to private and federal support indicate the program's effectiveness at securing capital for competitive research. The amount of intellectual property generated, licenses and royalties are an indication of the program's impact on the state's health science industry.

### **OKLAHOMA PLANT SCIENCE RESEARCH**

#### **GOAL AND STRATEGIC OBJECTIVES**

The Plant Science program addresses the statutory mandate of supporting basic and applied research in the field of plant sciences by allocating resources according to merit, promoting collaborations and leveraging federal and private resources.

#### **DESCRIPTION**

The Plant Science program competitively awards funds for basic, proof of concept and accelerated research<sup>1</sup> related to plant science for one- to two-year periods based on technical merit, commitment

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<sup>1</sup> Due to continued budget reductions, OCAST will again only be able to provide funding for basic plant science research through this program and will direct accelerated research applications to the OARS program.

of resources and, in the case of applied research, the potential for market success. Eligible applicants are Oklahoma businesses, institutions of higher education and nonprofit research institutions. The applied research awards require a minimum of one dollar matching support for each dollar awarded.

### **PERFORMANCE MEASURES**

Basic research projects – Performance measures such as the amount of private and federal funding leveraged by plant science projects, the amount of intellectual property initiated and the anticipated value of patents, licenses and royalties resulting from these basic research projects measure program success.

Proof-of-concept projects – Performance measures are the same as basic projects with the addition of a final determination of taking the project forward through some form of development. Development may include any number of forms including a follow-on accelerated research project, incorporation into a new project, licensing to another person or organization, etc.

Accelerated research projects – Performance measures include private and federal follow-on funding attributed to plant science projects, intellectual property, license royalties, jobs added, payroll of jobs added, actual and projected gross sales, sales distribution and actual and projected cost-avoidance resulting from these applied research projects.

### **INTERN PARTNERSHIPS**

#### **GOAL AND STRATEGIC OBJECTIVES**

The Intern program provides support for qualified research and development partnership projects that involve Oklahoma industry and Oklahoma institutions of higher education. It increases the pool of scientists, engineers, faculty and business entrepreneurs who can contribute to economic development in Oklahoma.

#### **DESCRIPTION**

The Intern program helps retain Oklahoma's best and brightest students by matching undergraduate students with an Oklahoma company to complete an innovative project together that benefits the student and company. To foster a successful project outcome, OCAST provides matching funding for a skilled student to support the pursuit of high tech research. The Intern program:

- Allows businesses to gain access to funding for a skilled intern to help accomplish R&D
- Students are provided with hands-on experience, outside of the classroom
- Helps develop Oklahoma's next generation of scientists and engineers
- Encourages industry-university collaboration
- Encourages students to prepare for STEM careers in Oklahoma

#### **PERFORMANCE MEASURES**

The program produces commercially viable R&D. In addition, student and faculty interns gain or maintain their interest in remaining in Oklahoma, increase desire for additional technological education and provide measurable economic progress for the state.

### **OKLAHOMA APPLIED RESEARCH SUPPORT**

#### **GOAL AND STRATEGIC OBJECTIVES**

The Oklahoma Applied Research Support (OARS) program addresses the statutory mandate of supporting applied research and technology development with significant commercial potential by

allocating resources according to merit, promoting collaborations and leveraging federal and private resources.

#### **DESCRIPTION**

OARS competitively awards funds for one- to three-year projects from any technology area based upon technical merit, potential for market success and commitment of resources. Funding for both proof-of-concept and accelerated projects is available through OARS. The program requires a minimum of one dollar matching support for each state dollar awarded. Eligible applicants are Oklahoma businesses and universities, colleges or nonprofit research organizations that have industrial partners. The program gives preference to projects involving collaboration between research institutions and private industry.

#### **PERFORMANCE MEASURES**

Proof-of-concept projects – Measures include the amount of private and federal funding leveraged, the amount of intellectual property initiated and the anticipated value of patents, licenses and royalties resulting from these basic research projects to demonstrate program success.

Performance measures also include a final determination of taking the project forward through some form of development. Development may take any of several tracks including a follow-on accelerated research project, incorporation into a new project, licensing to another person or organization, etc.

Accelerated projects – Federal and private funding attributed to OARS projects and the ratio of OARS awards to private and federal support demonstrate the program's effectiveness at securing capital. Performance measures such as the value of intellectual property, license royalties, jobs added, payroll of jobs added, actual and projected gross sales and actual sales distribution and projected cost-avoidance indicate the program's effectiveness at technology transfer and the commercial value of Oklahoma R&D projects.

#### **SMALL BUSINESS RESEARCH ASSISTANCE**

##### **GOAL AND STRATEGIC OBJECTIVES**

The Small Business Research Assistance (SBRA) program addresses the statutory mandate of supporting applied research and facilitating technology transfer involving small private for-profit businesses by leveraging federal and private resources and promoting action, encouraging strategic partnerships between firms and research institutions and promoting commercialization of new technologies.

##### **DESCRIPTION**

Through the federal Small Business Innovation Research (SBIR) program, federal agencies provide seed support for product feasibility studies and prototype development that is lacking in the private investment community. The federal Small Business Technology Transfer (STTR) program accomplishes this purpose and forges research collaborations between small firms and universities or nonprofit research institutions. Both the SBIR and STTR programs encourage transfer of technology into federal agency programs and private sector applications. OCAST's program supports these goals by providing bridge funding between Phase I and Phase II federal SBIR and STTR grants. The program provides technical assistance through the Oklahoma SBIR Collaborative Resource (OSCR) initiative to improve the quality of proposals through proposal development workshops, proposal reviews, client referrals, collaboration building and partnership with i2E's new

SBIR support services. The program offers companies guidance in accessing additional OCAST support and other resources as appropriate to their respective stage of development.

#### **PERFORMANCE MEASURES**

This program produces nationally competitive applied research, development and technology commercialization. Federal and private funding attributed to projects and the ratio of OCAST support to private and federal support indicate OCAST's effectiveness at securing capital for applied research and development. Performance measures such as the increase in federal contracts, jobs added and payroll of jobs added indicate the successful commercialization of technology by firms participating in the SBRA program.

#### **INVENTORS ASSISTANCE SERVICE**

##### **GOAL AND STRATEGIC OBJECTIVES**

OCAST contracts with Oklahoma State University to operate the Inventors Assistance Service (IAS) program through the university's New Product Development Center. The service addresses the statutory mandate to provide Oklahoma inventors with information and training on developing their invention and on issues related to patenting/licensing, marketing and manufacturing. The service offers workshops, a website, referrals and on-site business and technical consultations.

##### **DESCRIPTION**

The program assists the independent inventor in navigating the process from idea to marketplace. IAS helps inventors move toward the manufacturing, marketing and distribution of their products by providing assistance and information or referring inventors to appropriate service providers who will help them deal with specific steps in the invention process. The program provides inventors with a streamlined process to help move their innovation forward. Qualified inventors nearly ready for commercialization receive help with activities such as materials testing, market assessment, engineering resources and prototype development.

##### **PERFORMANCE MEASURES**

Performance measures are specified in statute and include the number of clients, participants in workshops, value of patents, license royalties, jobs created and number of clients progressing into other OCAST and federal programs.

#### **OKLAHOMA TECHNOLOGY COMMERCIALIZATION CENTER**

##### **GOAL AND STRATEGIC OBJECTIVES**

The Oklahoma Technology Commercialization Center (OTCC) program addresses the statutory mandate of facilitating technology transfer and commercialization and providing pre-seed and seed capital for new innovative firms. The program operates under contract with OCAST and is the product of OCAST's strategy of promoting collaborations, allocating resources according to merit, stimulating action and leveraging private resources.

##### **DESCRIPTION**

OCAST currently contracts with i2E, a private nonprofit organization, to operate the OTCC program that assists entrepreneurs, early-stage technology companies and firms seeking to commercialize new technologies. The program focuses on assessing needs, guiding clients through the commercialization process and linking them to a comprehensive network of technology sources

(including Oklahoma universities) and commercialization services. The program also provides specialized business development services, access to early-stage risk financing and help in transferring technology. OTCC also provides business development and commercialization services specifically targeted to Oklahoma's SBIR and STTR companies delivered through the Oklahoma SBIR Collaborative Resource (OSCR).

#### **PERFORMANCE MEASURES**

Performance measures include number and type of project clients, activities with all clients, amount and type of financing obtained for clients, jobs created and average wage/salary of new technology-based companies.

### **TECHNOLOGY BUSINESS FINANCE PROGRAM**

#### **GOAL AND STRATEGIC OBJECTIVES**

The Technology Business Finance Program (TBFP) was authorized in the Technology Transfer Act of 1998 to address the mandate of providing early stage capital to innovative firms and manufacturers and for leveraging private investment capital.

#### **DESCRIPTION**

This program is designed to promote promising innovation and to support efforts to commercialize in Oklahoma by providing early stage financing to start-up companies, well established firms and manufacturers. The program requires a match and includes payback provisions. OCAST contracts with i2E to operate this program.

#### **PERFORMANCE MEASURES**

Performance measures include the number of start-up firms and/or manufacturers assisted, survival rate of those organizations, amount of repayments and leveraging of other private and federal dollars. In addition, the program manager submits an economic impact analysis of the program, including such items as jobs and average annual salaries of jobs created.

### **SEED CAPITAL**

#### **GOAL AND STRATEGIC OBJECTIVES**

The Seed Capital program has been crafted to be an economic development tool with a goal of making investment in early stage companies engaged in the commercialization of promising new technologies in Oklahoma. Using the state's investment as the incentive to attract additional private sector investment for these companies as they work to commercialize their products and services is the ultimate goal.

#### **DESCRIPTION**

Through its Seed Capital program, OCAST provides funding to innovative Oklahoma companies to incentivize co-investment. The statute and the related constitutional amendment allow the state to take an equity or debt position with firms – an authority that is unique to OCAST as a state agency. Required co-investment with the private sector, as the majority investor, leverages the agency's investment.

OCAST invests through the Oklahoma Seed Capital Fund LLC a for-profit subsidiary of i2E Inc.

The Seed Capital program also includes a concept component intended to address the needs of companies requiring smaller seed capital investment for earlier-stage projects which may develop into larger seed capital investment opportunities if necessary as the company continues to grow in Oklahoma.

### **PERFORMANCE MEASURES**

Performance measures include the leverage of private investment funds, business finance impacts resulting from OCAST investment (including job growth and economic impact on the state) and expanding availability of investment capital for technology business development.

### **OKLAHOMA MANUFACTURING ALLIANCE**

#### **GOAL AND STRATEGIC OBJECTIVES**

The Oklahoma Manufacturing Alliance, an OCAST partner organization, addresses the statutory mandate of stimulating manufacturing productivity and efficiency through modernization and innovation. The Manufacturing Alliance is nationally recognized for excellence in terms of its ability to respond quickly, encourage action and leverage federal and private resources.

#### **DESCRIPTION**

The Oklahoma Alliance for Manufacturing Excellence Inc. is a private, nonprofit organization that manages the Oklahoma Manufacturing Alliance program which provides leadership and assistance to Oklahoma's small- and medium-sized manufacturers to help them become progressively more successful in their marketplace. Through a network of extension agents and applications engineers, the Oklahoma Manufacturing Alliance delivers real, hands-on resources for improving productivity, increasing sales and reducing costs. Using federal, state, local and private funds, the Oklahoma Manufacturing Alliance contracts with local organizations to field regional manufacturing extension agents who deliver to Oklahoma manufacturers services in technology application, workforce training, financing, market assessment and business relations. Applications engineers, sponsored in part through Oklahoma State University, provide technical assistance to manufacturers in rural areas where resources are limited. These locally accessible applications engineers assist with mechanical designs, plant layouts and a variety of other technical issues. OCAST provides a portion of the state funding and oversight for the system by means of an annual contract with the Oklahoma Alliance for Manufacturing Excellence Inc.

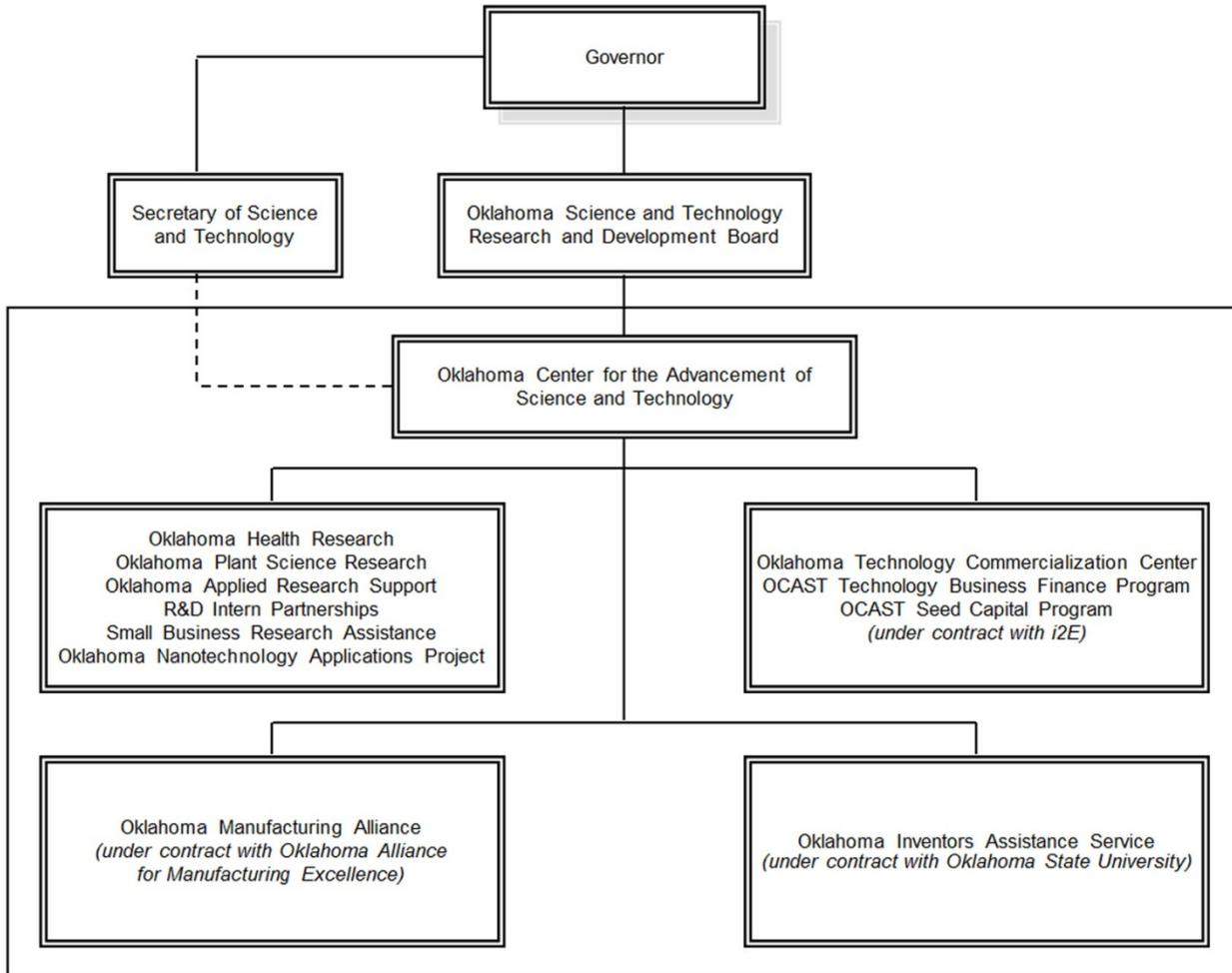
The Oklahoma Manufacturing Alliance services include an OCAST funded position to provide innovation engineering project management. This position works with manufacturers, research organizations, education and training programs and partner organizations to coordinate efforts to assist with the integration of all aspects of innovation into manufacturing operations. The role of the project manager is to plan, execute and finalize innovation projects according to strict deadlines and within budget. This includes acquiring resources and coordinating the efforts of team members and third-party contractors or consultants in order to deliver projects according to plan. The project manager will also define the project's objectives and oversee quality control throughout its life cycle.

### **PERFORMANCE MEASURES**

This program measures productivity through such measures as jobs created, cost savings, efficiency improvements, cost avoidance and capital investment.

# GOVERNANCE AND OPERATIONS

## STRUCTURE



## MANAGEMENT PHILOSOPHY AND STRUCTURE

OCAST’s management functions as a team, the success of which depends heavily upon the cooperation, contribution and commitment of each member. The teamwork concept extends to OCAST’s interactions with other agencies, organizations and stakeholders.

OCAST works closely with the business and financial sector to stimulate innovation in existing and developing Oklahoma businesses. Therefore, in accordance with statute, all staff positions are unclassified, governed and compensated in a manner that compares to similar positions in the private sector and, as listed below, are exempt from the Oklahoma Personnel Act.

Following is a list of approved positions:

**Executive Director** – Directs the administrative affairs and general management of OCAST.  
 Develops and directs implementation of strategic plans and policy related to OCAST’s mission.

Presents and communicates with governor, legislative subcommittees and legislative leadership regarding OCAST's annual budget request and any pending statutory changes relevant to OCAST. Communicates regularly with local, state and national leaders and organizations about OCAST and the importance of scientific research and the growth of knowledge-based businesses to Oklahoma's economy. The executive director is accountable to the OSTRaD Board. Unclassified / Annual salary of \$130,000 effective December 1, 2013

**Director, Administration and Finance** – Responsible for the general administration of the administration and finance division including developing appropriation requests and operating budgets; developing, implementing and administering administrative procedures for accounting, purchasing and office administration; maintaining all official records of the board and agency. The director of administration and finance is accountable to the executive director in the handling of the agency's general administrative affairs and finances including the disposition of highly confidential proprietary material submitted by applicants. Unclassified / \$70,000 - \$90,000

**Director, Programs** – Responsible for the general administration of the programs division including the development, administration, evaluation and revision of research funding programs, technology development and transfer activities and management of confidential proprietary material submitted by applicants. Directs the staffing of program operations, advisory committees, development and revision of program specifications, rules, regulations and division budget and appropriation requests. The director of programs is accountable to the executive director. Unclassified / \$70,000 - \$90,000

**Director, Government Relations and Strategic Initiatives** – At the direction of the executive director, directs the design, development and implementation of agency legislative goals and strategy for securing desired legislative and executive action and coordinates legislative activities with all OCAST divisions. Proposes and drafts legislation relevant to new OCAST programs. Serves as key strategic advisor to executive director. Coordinates with OCAST staff to identify and document OCAST programs and services requiring assistance and support of the legislature and governor. Directs special projects assigned by the executive director. Directs research studies and reporting on various topics regarding technology-based economic development. Represents agency before and organizes and facilitates OCAST communication with public officials and local, state and national organizations. Unclassified / \$70,000 - \$90,000

**Associate Director** – Responsible for designing, implementing, operating and evaluating division programs and activities, as assigned. Recommends new programs and activities related to the OCAST mission. A senior level technical strategist with a global perspective of all programs to build collaborative efforts across academia, industry and government. Supervises employees, as assigned. Responsible for the general administration of the division in the absence of the director. Associate directors are accountable to supervising directors and to the executive director for the correct disposition of highly confidential and proprietary material submitted by applicants for OCAST funding and assistance. Unclassified / \$55,000 - \$75,000

**Finance and Business Manager** – Responsible for performing accounting activities and the supervision and direction of accounting, purchasing and human resource operations including planning, reviewing and organizing the work of assigned staff; assuring availability of funds, preparing analysis of expenditures and monthly reports of operations, financial statements, schedules and financial statistical data; ensuring purchasing complies with state law, OCAST procedures and best practices; recommends and implements approved changes in purchasing

practices. Responsible for the general administration of the division in the absence of the director. Reports to director of administration and finance. Unclassified / \$55,000 - \$75,000

**Client Services Manager** – Responsible for the direct support of clients by facilitating partnerships between small businesses and federal funding agencies to promote commercialization of new technologies. Provides companies technical assistance in accessing all OCAST programs and other resources as appropriate to their respective stage of development. Unclassified / \$50,000 - \$70,000

**Programs Officer IV** – Supervises the planning, coordination or direction of a component of the agency or program(s) established to accomplish a basic goal or mission of the agency. May supervise one or more employees and/or contractors. Represents OCAST at conferences, meetings and hearings related to OCAST's administrative operations. Unclassified / \$50,000 - \$70,000

**Programs Officer III** – Under minimal supervision, plans, coordinates or directs a component of the agency or program(s) established to accomplish a basic goal or mission of the agency. May supervise one or more employees and/or contractors. Represents OCAST at conferences, meetings and hearings related to OCAST's administrative operations. Unclassified / \$45,000 - \$65,000

**Programs Officer II** – Under general supervision, plans and coordinates a component of the agency or program(s) established to accomplish a basic goal or mission of the agency. May supervise one or more employees and/or contractors. Represents OCAST at conferences, meetings and hearings related to OCAST's administrative operations. Unclassified / \$40,000 - \$60,000

**Human Resources and Business Operations Officer** – Responsible for all phases of OCAST's human resource management and development training programs; interprets and applies laws and rules concerning personnel administration and human resources matters including classification, recruitment and selection, compensation, employee benefit programs, employee transactions and records and staff development and training; conducts salary surveys; advises on FLSA, Merit Rules and agency personnel policies. Responsible for initiating agency-wide purchases and processing and maintaining purchasing documentation in the statewide accounting system. Responsible for coordination of various business operations. Unclassified / \$50,000 - \$70,000

**Accountant III** – Under minimal supervision, classifies and posts revenues and expenditures. Assures availability of funds for agency obligations and expenditures. Maintains accounting records and files documenting financial transactions. Prepares analyses of expenditures and monthly reports of operations, financial statements, schedules and financial statistical data. Works with private sector clients and vendors in resolving invoicing and payment issues. May supervise employees as assigned. Unclassified / \$45,000 - \$65,000

**Accountant II** – Performs a wide range of tasks involving the maintenance, analysis, interpretation and reporting of financial accounting data and the application of generally accepted accounting principles and theories in the management of financial accounts. Includes maintenance of highly diverse accounts, financial analysis and reporting, reconciliation of accounting data, reviewing and processing financial documents for payment and similar responsibilities. Unclassified / \$40,000 - \$60,000

**Accountant I** – Under direct supervision, classifies and posts revenues and expenditures. Assures availability of funds for agency obligations and expenditures. Maintains accounting records and files documenting financial transactions. Prepares analyses of expenditures and monthly reports of operations, financial statements, schedules, and financial statistical data. Works with private sector clients and vendors in resolving invoicing and payment issues. Unclassified / \$35,000 - \$55,000

**Assistant to the Executive Director** – Under minimal supervision, assists the executive director in managing the administrative affairs of OCAST. Serves as secretary to the board and agency liaison with the governor’s office and the secretary of state. Organizes activities and information associated with OCAST’s five-year and annual planning processes, assists with agency projects and organizes the executive director’s time, confidential files and correspondence. The assistant to the executive director is accountable to the executive director in performing all duties. Unclassified / \$35,000 - \$55,000

**Office Manager** – Performs a wide range of tasks supporting the overall administrative and information technology operations of the agency. Manages everyday tasks necessary for the efficient running of the agency and is responsible for front-desk reception duties, ordering agency office supplies and other assigned administrative and accounting duties. Position is responsible for managing the flow of internal information for the agency including incoming and outgoing mail, faxes and agency deliveries. Serves as the primary point of contact for all facility related office equipment and technology issues. Other general tasks include supporting agency personnel with communications and scheduling. Unclassified / \$35,000 - \$55,000

**Administrative Assistant II** – Under general supervision, may assist in administering the activities associated with developing, implementing, operating and evaluating programs and functions. Assists in staffing board, committees, subcommittees and conferences including preparing necessary materials and preparing minutes of meetings and setting-up and maintaining files and records; may gather and summarize information for staff or committee action. Composes and prepares program and administrative documents and correspondence. Determines when to provide information to the public regarding routine services, policies and regulations and when to refer it to a senior staff member for official action or decision. Duties may also include reading, sorting, distributing and maintaining a log of incoming and outgoing materials. May perform duties of receptionist. Unclassified / \$30,000 - \$50,000

**Administrative Assistant I** – Under direct supervision, assists in administering the activities associated with developing, implementing, operating and evaluating programs, including assisting with conferences, workshops and other events. Prepares program documents and correspondence. Assists in staffing board or program advisory committees, including preparing meeting minutes and materials and maintaining required files and records. Duties may also include reading, sorting, distributing and maintaining a log of incoming and outgoing materials. May perform the duties of receptionist. Unclassified / \$25,000 - \$45,000

**Additional positions approved but not currently in use include:**

Account Clerk	Director, Technology Information Services
Accountant IV	Program Coordinator I, II and III
Administrative Services Manager I and II	Program Manager
Assistant Director	Programs Officer I
Comptroller	Public Information and Rural Outreach
Deputy Director	Manager

### **PROFESSIONAL SERVICE CONTRACTS**

OCAST uses professional service contracts to supplement capabilities and maintain low administrative costs. Functions exist which, due to statutory or program requirements of highly specialized and diverse expertise or infrequency, are more effectively and efficiently performed by contract.

Some, though not all, specific professional services contracts can be anticipated at the outset of the fiscal year. As of the date of submission of this business plan, the staff intends to execute the following professional services contracts in FY 2016:

- Office of the State Auditor and Inspector for annual audit services, in an amount not to exceed \$50,000
- Office of Attorney General for legal services, one-half time for one year, in an amount not to exceed \$63,138
- Contract for ongoing enhancements of the electronic application system, known as OKGrants, to support the programs division processes, payment processes, data management and reporting needs in an amount not to exceed \$100,000
  - Contract with Office of Management and Enterprise Services for information technology services including personal computer support, network support and support for electronic application system not to exceed \$80,000
- Continuation of contracts with iHeart Media and Cox Radio KRMG for the weekly radio show *Oklahoma Innovations*, in an amount not to exceed a total of \$50,700
- Continue contracting with the Oklahoma Alliance for Manufacturing Excellence Inc. to operate the Oklahoma Manufacturing Alliance in an amount not to exceed \$1,269,310
- Continue contracting with Oklahoma State University to operate the Inventors Assistance Service in an amount not to exceed \$594,187, including one-time funding to establish a Tulsa presence
- Continue contracting with i2E Inc. to operate the Technology Business Finance Program in an amount not to exceed the repayments, reclaims and carryover funds currently in the program as of May 31, 2015 (\$1,757,506). Any reclaims and repayments received between June 1, 2015 and May 31, 2016 will be available in FY 2017
- Continue contracting with i2E Inc. to operate the Oklahoma Technology Commercialization Center in an amount not to exceed \$1,814,968
- Continue to contract with i2E Inc. to provide matching funds for the Economic Development Administration Technical Assistance Grant for the Tulsa Business Development Initiative in an amount not to exceed \$100,000
- Contract with i2E Inc. to manage the Oklahoma Seed Capital Fund. The management fee for the 2007-1 Series for FY 2016 is \$70,000. Effective July 1, 2014, the management fee for the 2008-2 Series is based on funds under management (total capital commitment plus retained earnings) as of July 1 of each year. The management fee will be 2.5 percent of the first \$50 million under management, plus 2 percent of any amount over \$50 million under management. This is estimated to be approximately \$600,982 for FY 2016. These management fees will come from the FY 2016 Seed Capital Fund appropriation of \$3,556,453

## **STANDING ADVISORY COMMITTEES**

OCAST receives support and assistance from the Oklahoma Health Research, Oklahoma Plant Science Research, Oklahoma Applied Research and Small Business Research Assistance advisory committees for research-related programs. Research-related standing committees must consist of representatives of the “business, higher education and research communities” (74 O.S., Section 5060.9[a]) and at least one-third of the members of each committee must be researchers. Committees are approved annually by the board. The Seed Capital Investment advisory committee is created to assist OCAST in evaluating potential investments with the Seed Capital Revolving Fund (74 O.S., Section 5060.21).

### **OKLAHOMA APPLIED RESEARCH ADVISORY COMMITTEE**

**Kenneth E. Bartels**, D.V.M., M.S.  
Oklahoma State University

**David Humphrey**  
ADDvantage Technologies Group

**E. Ann Nalley**, Ph.D.  
Cameron University

**Martha Ogilvie**, Ph.D.  
University of Oklahoma Health Sciences  
Center

**Marvin Stone**, Ph.D.  
Oklahoma State University (ret.)

**Dale Teeters**, Ph.D.  
University of Tulsa

**Monte Tull**, Ph.D. (*acting chair*)  
University of Oklahoma (ret.)

### **OKLAHOMA HEALTH RESEARCH COMMITTEE\***

**Tyrrell Conway**, Ph.D.  
University of Oklahoma

**Mary Beth Humphrey**, M.D., Ph.D. (*chair*)  
University of Oklahoma Health Sciences  
Center

**Katherine M. Kocan**, Ph.D.  
Oklahoma State University

**Jerry Malayer**, Ph.D.  
Oklahoma State University

**H. Anne Pereira**, Ph.D.  
University of Oklahoma Health Sciences  
Center

**Jamie Rhudy**, Ph.D.  
University of Tulsa

**Hal Scofield**, M.D.  
Oklahoma Medical Research Foundation

**Lijun Xia**, M.D., Ph.D.  
Oklahoma Medical Research Foundation

*\*Appointed by the governor*

### **OKLAHOMA PLANT SCIENCE RESEARCH ADVISORY COMMITTEE**

**Peter Camfield**, Ph.D.  
Oklahoma Panhandle State University

**Rodd Moesel** (*chair*)  
American Plant Products and Services Inc.

**Richard Nelson**, Ph.D.  
Samuel Roberts Noble Foundation

**Jean L. Steiner**, Ph.D.  
Grazinglands Research Laboratory

### **SEED CAPITAL INVESTMENT COMMITTEE**

**James Dickson**  
BancFirst

**David McKinney**, J.D.  
GableGotwals

**Larry Pulliam**  
Southern Oklahoma Memorial Foundation

**Sherri Wise** (*chair*)  
Osteopathic Founders Foundation

**James Wheeler**, Ph.D.  
University of Oklahoma Price College of  
Business

**SMALL BUSINESS RESEARCH ASSISTANCE COMMITTEE**

**Mike Callaway**  
CalTech Global LLC

**Dorothy Overal**  
U.S. Small Business Administration

**Rafal Farjo**, Ph.D.  
Charlesson LLC

**Trevor Snyder**, Ph.D.  
VADovations Inc.

**Terry Golding**, Ph.D. (*chair*)  
Amethyst Research Inc.

**Brien Thorstenberg**  
Tulsa Regional Chamber

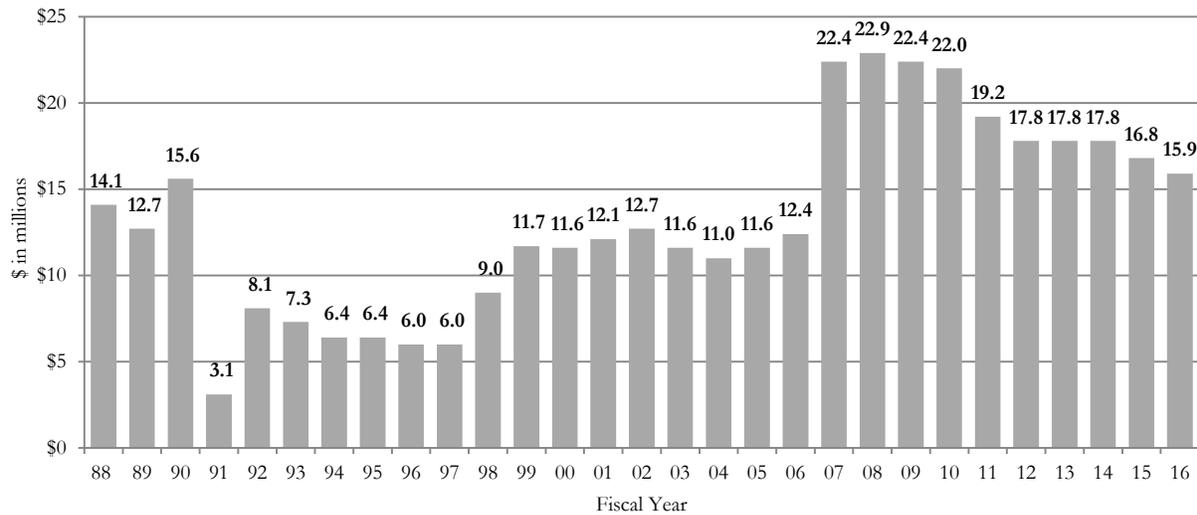
**Chuck Gray**  
Frontier Electronic Systems Inc.

**FINANCE**

OCAST's programs, activities and general operations are financed primarily through state general revenue appropriated funds. OCAST's enabling statute authorizes the use of three funds: the General Administration and Data Processing Fund, the Research Support Revolving Fund and the Seed Capital Revolving Fund. Each of the three funds is authorized to accept state general revenue appropriations, grants, gifts and donations. The Seed Capital Revolving Fund is authorized to accept loan repayments and investment proceeds. In addition, the Office of Management and Enterprise Services has approved the creation of the Technology Business Finance Program Fund, to separately account for the funds available for the Technology Business Finance Program. Each fund is authorized to finance specific activities of the agency.

House Bill 2242 appropriates \$15,970,730 to OCAST. A portion of OCAST's annual state appropriation, \$6,313,169, is transferred to the Research Support Revolving Fund for operation of OCAST award programs, and \$3,556,453 is transferred to the Seed Capital Revolving Fund for FY 2016. The revolving funds have no fiscal year limitations. All of the agency's expenditures must be confirmed by Oklahoma's Office of Management and Enterprise Services to be consistent with an annual budget work program approved by that office.

## APPROPRIATION HISTORY



## **PLANNING**

### COMPREHENSIVE PLANNING

OCAST produces an annual business plan and a five-year strategic plan. Based on 2012 and 2013 data provided by Stats America and the Oklahoma Department of Commerce, OCAST benchmarks its funding compared with similar state agencies in other states.

### **A BUSINESS-FRIENDLY ENVIRONMENT**

Oklahoma enjoys the benefits of positive growth through diversification and creation of “business friendly” programs. (See chart below.) Oklahoma enjoys a low unemployment rate bolstered in part by the energy sector and the benefits of economic diversification.

Investment capital through OCAST is key to Oklahoma job creation and many examples are cited by economic development organizations and publications.

These incentives remain part of a comprehensive effort to build a culture of innovation in Oklahoma.

Innovation-based companies within qualified technology incubators enjoy tax-free income status for up to 10 years in Oklahoma. OCAST also offers innovative business access to commercialization support structures, including seed and pre-seed funding sources through the Oklahoma Technology Commercialization Center operated by i2E.

### **OKLAHOMA’S PLACE IN THE RANKINGS**

- 1st Cost of Living
- 3rd Job Growth
- 4th Cost of Doing Business
- 6th Lowest Cost of Labor

7th	Corporate Tax Rank
10th	Top States for Doing Business
26th	Annual Earnings and Income
28th	Population (3,878,000)
29th	Per Capita Personal Income
29th	Real Gross Domestic State Product
29th	State and Local Taxes
30th	Manufacturing Employment
33rd	Granted Patents
36th	R&D Expenditures
38th	Exports
40th	Venture Capital

### **FINANCIAL PLANNING**

OCAST is required by statute to “recommend an appropriate level (of funding for OCAST’s programs) . . . that will make these programs nationally competitive with those of other states” and to “adopt . . . a threshold funding level for each of the programs . . . that is great enough to have a significant impact and carry out the intent of this act.” (74 O.S., Section 5060.22)

After the governor and legislature approve the OCAST appropriation, staff and board members develop a business plan for the application of available resources, abiding by the directives and constraints on spending articulated in the signed appropriation bills. Unless established otherwise by the board, the threshold funding levels are the FY 2016 appropriation levels shown in this plan (see Five Year Appropriation History by Program below).

### **PROGRAM AND SERVICE PLANNING**

OCAST develops and initiates new programs and services by building consensus among constituents and stakeholders, which may include standing and ad hoc program advisory committees, higher education and career-tech representatives, nonprofit organizations, businesses, other agencies and state leaders. Any new initiatives are approved by the relevant standing advisory committee prior to implementation. OCAST programs are mandated through legislation and in response to legislative intent.

When it is evident a need or opportunity should be an OCAST priority and is consistent with OCAST’s mission, staff checks relevant statutes and rules, then consults with the state Office of the Attorney General to determine whether OCAST’s general authorization covers the need/opportunity. If so, a recommendation is submitted to the OSTRaD Board for consideration and approval.

Specifications and solicitations for each new program and modification to those documents for existing programs are designed by OCAST staff working in consultation with standing and/or ad hoc advisory committees and the Office of the Attorney General. Appropriate state and national experts are frequently consulted in this phase of program design or modification. New proposed program specifications and modification to those documents for existing programs are forwarded to a number of stakeholders and clients for review and input and are posted on the OCAST website

for public comment. This feedback is addressed prior to taking the proposed specifications to the OSTRaD Board of Directors for consideration and approval.

## FIVE-YEAR APPROPRIATION HISTORY BY PROGRAM

ACTIVITIES	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
General Administration	\$687,340	\$657,310	\$687,310	\$705,000	\$818,000
Program Services and Support	1,304,000	1,482,107	1,481,774	1,314,503	1,490,000
Health Research	4,005,219	3,964,104	3,400,000	3,213,000	2,954,837
Applied Research	2,341,616	1,633,663	3,400,000	3,213,000	2,954,837
Intern Partnership Program	241,800	431,900	450,000	425,250	403,495
Plant Science Research	659,980	600,000	0	0	0
Nanotechnology Research	720,000	745,000	0	0	0
Manufacturing Extension Services	1,109,470	1,259,469	1,259,469	1,190,198	1,129,310
Technology Commercialization	2,052,728	2,158,241	2,108,241	1,822,188	1,728,968
Small Business Research Assistance	186,000	300,000	325,000	382,725	281,000
Inventors Assistance	153,641	200,000	350,000	330,750	313,830
Technology Information Services	383,300	383,300	383,300	487,000	340,000
Seed Capital Fund	3,966,355	3,996,355	3,966,355	3,748,205	3,556,453
<b>TOTAL FUNDING</b>	<u>\$17,811,449</u>	<u>\$17,811,449</u>	<u>\$17,811,449</u>	<u>\$16,831,819</u>	<u>\$15,970,730</u>
General Administration %	3.86%	3.69%	3.86%	4.2%	5.12%

# APPROPRIATION AND PROPOSED DISTRIBUTION

<b>SOURCES:</b>		
Projected FY 2015 Cash Balance available for use	\$ 5,672,488	
Reserves for Seed Capital Obligations	2	
Reserves for Technology Business Finance Program	1,757,507	
Projected FY 2015 Available Carryover - Contractors	86,000	
Grants – GE, possible FAST grant	250,000	
FY 2016 State Appropriated Revenues	15,970,730	
<b>TOTAL SOURCES</b>		<b>\$ 23,736,727</b>
<b>USES:</b>		
<b>Projected FY 2016 Expenditures</b>		
Administration	\$ 818,000	
Program Services	1,490,000	
Programs		
Health Research	3,914,935	
Applied Research	3,937,107	
Intern Partnership Program	378,623	
Plant Science Research	296,488	
Inventors Assistance	594,187	
Small Business Research Assistance	331,000	
Oklahoma Manufacturing Alliance*	1,269,310	
Technology Commercialization	1,914,968	
Technology Business Finance Program	1,757,506	
Seed Capital Program	3,556,455	
Technology Information Services	540,000	
<b>TOTAL USES</b>		<b>\$ 20,798,579</b>
<b>Estimated Cash Balance 6/30/2016</b>		<b><u>\$ 2,938,148</u></b>
Out-Year Program Obligations		
In FY 2017	\$ 4,803,286	
In FY 2018	1,407,419	
Total Out-Year Program Obligations		\$ 6,210,705
Funded by current cash balances (less \$1 million contingency funds)		\$ 1,938,148
To be funded from future appropriations		<u>4,272,557</u>