

**House Appropriations and Budget Committee
Higher Education Subcommittee
Performance Review Agency Questions**

Objective: To gather information and gain insight into agency performance and strategies used to adjust to funding reductions and maintenance levels, and to ascertain the agency's perspective on strategies, measures, performance, inputs, outcomes, programs and fiscal needs to be used to develop the FY-14 agency budget.

Please provide the following information.

1. Agency mission statement, including program goals, cost and effectiveness, program and performance measures and objectives;

Mission: Foster innovation in existing and developing businesses by supporting basic and applied research, facilitating technology transfer between research laboratories and firms and farms, providing seed capital for new innovative firms and their products, and fostering enhanced competitiveness of OK companies and small- and medium-sized manufacturing firms through productivity and modernization initiatives.

OCAST develops implements, evaluates and adapts programs and services designed to encourage and enable Oklahoma researchers, entrepreneurs, and small businesses to efficiently commercialize technologies and innovations. Clients can return to OCAST programs as often as necessary for assistance to ensure their competitiveness and sustainable growth. Key agency performance measures are jobs creation, increase in per capita income, and return on the state's investment through leveraging the state investment (appropriations to OCAST) with co-investments through private and federal funding. The programs (see attached description of OCAST programs and financial outcomes) in the OCAST technology pipeline include:

Oklahoma Health Research

Goal and Strategic Objectives

The Health 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 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 new businesses. 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 health support 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.

Performance Measures:

OCAST Awards FY12: \$4,413,695

Leverage Return - Leveraged Investments: 5.06

Leverage Return - Business Impact: 5.30

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 applied research related to plant science for one- to two-year periods based on technical merit, commitment 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

Performance measures include 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 basic research projects.

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.

Applied 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.

Performance Measures:

OCAST Awards FY12: \$793,191

Leverage Return - Leveraged Investments: 10.83

Leverage Return - Business Impact: 13.38

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

Projects funded under this program must meet five requirements: (1) an Oklahoma institution of higher education or a business must be the fiscal agent; (2) OCAST funds must be equally matched from non-state appropriated funds; (3) the research must be performed in an applied research laboratory located at a firm, a nonprofit research institute or an institution of higher education; (4) the mentor must be from industry or be an academic with a documented success record of applied research and (5) an Oklahoma business must benefit. The award may be for one or two years. The external reviewers, a majority of whom reside out-of-state, have shown a preference for programs in which at least 75 percent of the funds (OCAST plus non-state match) go directly to the interns as salary and fringe benefits. The remaining funds are used for principal investigator salary and fringe benefits as well as for supplies to run the program.

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.

Performance Measures:

OCAST Awards FY12: \$448,829

Leverage Return - Leveraged Investments: 0.00

Leverage Return - Business Impact: 30.54

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 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.

Performance Measures:

OCAST Awards FY12: \$2,878,333

Leverage Return - Leveraged Investments: 5.60

Leverage Return - Business Impact: 18.75

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 Collaboration 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.

Performance Measures:

OCAST Awards FY12: \$186,000

Leverage Return - Leveraged Investments: 18.69

Leverage Return - Business Impact: 18.69

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 Web site, 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.

Performance Measures:

OCAST Awards FY12: \$181,709

Leverage Return - Commercialization Stage Return: 3.57

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 i2E 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 Collaboration 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.

Performance Measures:

OCAST Awards FY12: \$1,992,962

Leverage Return - Commercialization Stage Return: 12.3

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 Inc. 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.

Performance Measures:

OCAST Awards FY12: \$1,459,697

Leverage Return - Commercialization Stage Return: 10.21

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. Growing innovative Oklahoma companies that attract other investment as they successfully commercialize their products and services is the ultimate goal.

Description

In general, through its Seed Capital program, OCAST seeks to provide funding to innovative Oklahoma companies. 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 leverages the agency's investment.

By statute OCAST was given multiple options as to how it could use appropriated funds to meet economic development goals for seed capital stage companies. OCAST invests in Oklahoma Seed Capital Fund, currently managed as a wholly owned subsidiary of i2E Inc. Other fund investors have included the Oklahoma Capital Investment Board (OCIB) and the Oklahoma Development Finance Authority (ODFA). OCAST is the largest contributor to the fund and is the Class A member, which includes the right to review and approve all proposed term sheets with the advice of its investment committee.

The Seed Capital fund includes a concept component intended to address the needs of companies requiring smaller seed capital investment for earlier-stage projects. Unlike TBFP, awards from the

concept fund are convertible should the client pursue larger seed capital investment at a later date.

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.

Performance Measures:

OCAST Awards FY12: \$3,996,355

Leverage Return - Commercialization Stage Return: 7.55

Oklahoma Nanotechnology Applications Project

Goal and Strategic Objectives

The Oklahoma Nanotechnology Applications Project (ONAP) is authorized by statute. This project assists qualified Oklahoma companies with application of nanotechnology through research, development and manufacturing and helps them improve current or create new cutting-edge products or processes. These awards encourage nanotechnology collaboration between industry, institutions of higher education and nonprofit research institutions.

Description

ONAP competitively awards funds for one- to three-year research and development projects with an emphasis on nanotechnology applications in product development supporting the Oklahoma manufacturing and business community. Universities must collaborate with private industry to be eligible to participate in this program.

Performance Measures

Performance measures include the number of nanotechnology applications funded, the number of manufacturers and businesses educated, the number of regional and in-state collaborations initiated and/or achieved, the number of jobs created and the average wage/salary of those jobs, the increase in gross sales and the number of manufacturers and businesses served. The private and federal dollars leveraged by ONAP will also serve as an indicator of overall performance.

Performance Measures:

OCAST Awards FY12: \$1,311,955

Leverage Return - Leveraged Investments: 0.11

Leverage Return - Business Impact: 3.22

Oklahoma Manufacturing Alliance

Goal and Strategic Objectives

The Oklahoma Manufacturing Alliance, an OCAST partner organization, addresses the statutory mandate of stimulating manufacturing productivity and modernization through lean principles and advanced technologies. 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 programs which provide 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 Manufacturing Alliance delivers real, hands-on resources for improving productivity, increasing sales and reducing costs. Using federal, state, local and private funds, the Oklahoma Alliance for Manufacturing Excellence Inc. 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.

Beginning in FY 2013 the Oklahoma Manufacturing Alliance will include an OCAST-funded position to provide innovation engineering project management. This position will work 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.

Performance Measures:

OCAST Awards FY12: \$1,409,469

Leverage Return - Commercialization Stage Return: 167.21

2. Authorized and actual FTE; FY-12 actual expenditures and FY-13 budgeted expenditures;

	FY-12 Actual	FY-13 Budgeted
Actual FTE	16.6	19.5
Total Expenditures	\$25,876,136	\$38,141,846

The last authorized FTE for OCAST, in FY-2010 was 26. There is no limit for FY-12 and FY-13.

3. Funding sources for each program;

All programs except the Technology Business Finance Program are appropriations. The Technology Business Finance Program's funding consists of repayments of financing provided to companies qualifying for the financing in prior years. All appropriations except that for Administration are transferred, as required in the session law, to a revolving fund to ensure the funds are available for the entire award period, which can be from one to three years.

4. Components of each program illustrating that it is unique, necessary and unduplicated by other agency services or programs.

OCAST programs cover the range of Technology-Based Economic Development, from basic and applied research and development, to small business development, to small business support to financial instruments for growth and sustainability. These programs move research through the process of discovery, development and commercialization. These programs are essential to Oklahoma's economic development efforts to accelerate technology, increase total economic activity, and attract outside investment to build

Oklahoma companies. No other state agency provides these technology-based economic development programs designed to create businesses in Oklahoma from the ground up.

5. What strategies would you employ in response to flat funding or a five percent reduction in appropriated funding?

The main impact of a FY-2014 appropriation would be the agency having to absorb operational increases such as benefits and office related expenditures. Due to increased efficiencies, the effect of agency programs should be minimal. However, the agency's programs have been hit hard by a reduction of funding totaling \$4,645,058 over the past four years, resulting in lower return on investment (ROI) for the state and an inability to meet award program demands.

A 5% reduction of the FY-2013 appropriations for FY-2014 would result in a loss of \$890,572 in funding for OCAST. A cut this large would result in decreased program awards which causes a decrease in ROI for the State of Oklahoma. Based on the agency's cumulative return on investment (20:1), a 5% budget reduction would result in a missed (leverage) opportunity of approximately \$18 million.

6. If applicable, how will potential federal sequestration/reduced federal funds affect the agency and programs, and what contingencies are in place?

Not Applicable. OCAST does not receive federal funds.

7. What are your personal services costs, including professional services, as a percentage of your total budget? Which positions have received salary increases in FY-12 - FY-13?

OCAST's total personal services costs, including professional services, is \$8,540,969, or 22.39% of its total FY-13 budget of \$38,141,846.

Positions which received salary increases in FY-12 or FY-13 include:

Programs Officer II
Programs Officer III
Programs Officer IV
Client Services Manager
Office Manager
Accountant II
Director of Government Relations

Director of Administration and Finance
Programs Director

Salary increases were provided to new employees after one year of service, based on performance; to retain valued employees; and to make ensure equitable treatment of employees.

8. What are your vacancy and turnover rates? What have you done with any funds accumulated from vacancies? What strategy, if any, do you utilize to retain key personnel?

OCAST's turnover rate for FY-12 was 7, or 38.9%. For FY-13 to date, the turnover rate is 2, or 11.1%. At the moment, our vacancy rate is 5%, or 1 employee, which is in the process of being filled to enable us to meet our clients' needs.

Funds accumulated from vacancies were applied to the appropriation shortage in Administration and also reallocated to fill deficits in program funding.

(Key personnel retention is addressed in the budget request in the FTE section).

9. Please provide the status of any implementation activities related to the information technology reforms enacted in the last three years regarding your agency with the Chief Information Officer in the Office of Management and Enterprise Services (OMES)?

OCAST contracted with OSF to provide our IT services in March, 2010.

10. Do you currently contract with OMES for shared services, or have you contacted or been contacted by OMES regarding their providing certain shared services to your agency that are currently accomplished in-house? Which services? Have you realized net savings?

We do not contract with OMES for shared services. We have been notified that they provide certain services, but do not believe that we would realize a net benefit from utilizing the services at this time.

11. Do you consult with other agencies to share strategies related to decreasing costs? If so, what have you shared and what costs

have decreased and what has been the impact on programs, services, etc.?

We have coordinated with the OMES to develop the eApplications system. We also were proactive in consolidation of the agency's information technology functions to the OMES prior to state consolidation initiatives in 2011. In addition, OCAST's telephone and Internet services are provided by the Oklahoma State Regents for Higher Education's OneNet system. In addition, our administration department attends state agency association meetings which include the dissemination of best practices.

12. To what extent have you explored the cost effectiveness of initiating or expanding the privatization of certain functions, service delivery or programs of your operations?

OCAST is a model for public/private collaboration through its contracts with 501 (c) (3) not-for-profit companies i2E and the Oklahoma Manufacturing Alliance. OCAST contracts its technology commercialization programs (including seed capital) to i2E, and manufacturing support to help Oklahoma companies become more competitive in their markets to the Oklahoma Manufacturing Alliance.

13. Identify specific revenue sources for each of your agency's revolving/disbursement funds and provide totals for FY-11 and FY-12. What have your carryover funds been the past two fiscal years? Please note any significant revenue trends regarding any specific funding source.

Fund/Revenue Source	FY-11	FY-12
200/Research Support Revolving Fund		
Appropriation transfer	0 *	13,157,754
Technology Business Finance Program repayments	203,000	853,479
Reimbursement for EDGE payments	7,250,578	7,044,748
Reimbursement for Industrial Extension Service	201,700	410,833
Miscellaneous refunds and reimbursements	54,077	62,354

220/Seed Capital Revolving Fund		
Appropriations	4,264,898	3,966,355

* The FY-11 appropriation bill failed to transfer the funding for awards and contractual programs to the Research Support Revolving Fund. This caused a significant amount of additional administrative work to ensure that the appropriation was paid out prior to its lapsing. Normally, the appropriation for awards and contractual programs is transferred into the Research Support Revolving Fund to ensure its availability for the future years of the multi-year awards.

Carryover was \$0 in FY-12, and is \$158,450 in FY-13. Carryover from FY-12 to FY-13 was due to the large, unusual turnover rate in Administration and Finance in FY-12.

14. What costs elements are included in your administrative program? Are certain administrative costs allocated throughout your budget?

Administration costs of the agency (Director, Executive Assistant, and Board costs) and Finance (purchasing, payroll, and accounts payable) are included in administration, and provide services for the entire agency. Staff costs of administering the programs, other than payment of invoices, are allocated to the Programs division.

15. Have you undertaken or contemplated the elimination of any programs and, if so, what do you perceive to be the impacts of such eliminations?

In FY-2005 the Oklahoma State Legislature created the Oklahoma Nanotechnology Applications Project (ONAP) to place on emphasis on research and development funding for the emerging nanotechnology science sector. No new appropriations were provided to OCAST in support of this program, therefore the Oklahoma Science and Technology Research and Development (OSTRaD) Board of Directors was forced to remove funding from the long established and highly successful Oklahoma Applied Research Support (OARS) program to fund ONAP. The ONAP program differs from OARS only in that it requires Oklahoma research institutions to partner with private industry to be eligible to participate in the program and the OARS program does

not and in the maximum award amounts for an ONAP project which is \$500,000 while the OARS award maximum is \$300,000.

During the first two years of the ONAP program the return to the state was on par with the OARS program, however as interest in nanotechnology decreased and concern for human health and safety related to nanotechnology increased plus the realization that nanotechnology is not a standalone technology, but is a component of established technology sectors the return from the ONAP program decreased drastically. In FY2012 the return on the state's investment from ONAP had dropped to little more than 3:1, whereas the OARS program remains steady at nearly 19:1.

This drop in industry's interest in nanotechnology, reduction in return to the state's economy and the fact that the OARS program can and does provide support for the use of nanotechnology, the OSTRaD Board of Directors allocated no new appropriations to the ONAP program for FY2013. This resulted in a savings in human capital needed to administer ONAP and elimination of the costs to operate the program and all without a reduction in service to OCAST's clients. Based on this OCAST staff will recommend to the OSTRaD Board that no future funding be allocated to the ONAP program.

16. Please add any other information you believe to be essential for the Legislature to know concerning your agency's budget structure, performance, inputs and outcomes.

The majority of OCAST's appropriation is transferred to the Research Support Revolving Fund each year, through language in the appropriation bill, to ensure the availability of out-year funding for the two and three-year grants awarded by OCAST. Failure to specify this transfer in the appropriation bill results in a massive increase in the administrative effort required to ensure that all of the appropriation is paid for appropriate expenses prior to its lapse date, due to the unpredictability of the timing of individual contract invoices. OCAST appreciates the continued effort of the Legislature to ensure this transfer language is included in the appropriation bill each year.