

Oklahoma Center for the Advancement of Science and Technology

OCAST: An Investment in Oklahoma's STEM Future

Senate Budget Hearing January 22, 2018 Michael Carolina, Executive Director

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Since 1987, the state's agency and engine for technology development, technology transfer and technology commercialization

OCAST Mission

Diversify and Grow Oklahoma's Economy



"Leverage" or Return on Investment (ROI)

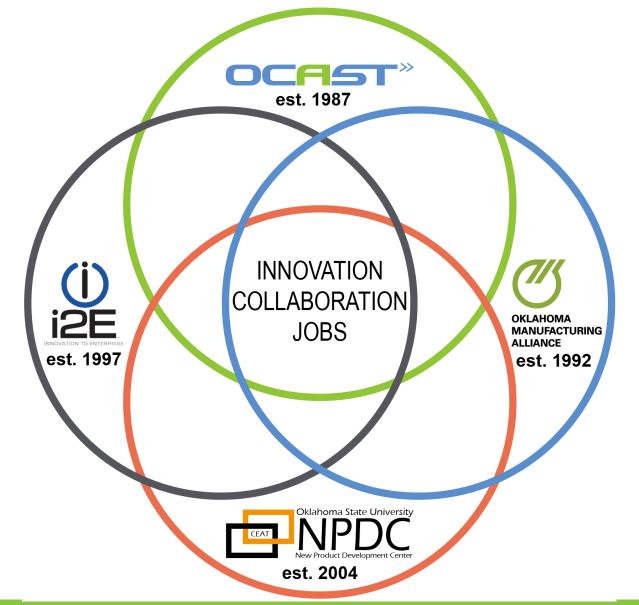
Cumulative ROI (1987-2017):22:1ROI for 2017:29:1

Total economic impact:

\$6.5B



Oklahoma's Innovation Model





Key Performance Indicators

- 15,658 jobs created/retained
- \$52,000 average salary for technology jobs
- Entrepreneurial activity increasing (Forbes, Kauffman, Kiplinger, etc.)
- Manufacturing growth (2.1% in region vs. 1.5% national, last 12 months) *



Supporting Oklahoma Industries

- Agriculture
- Aerospace and defense
- Bioscience and biotechnology
- Energy
- Manufacturing
- Information Technology



OCAST: Helping to Secure Oklahoma's Technology Future



Achieving Our Mission (Diversification and Growth)

- In 1987, 1 in 11 jobs directly tied to the energy industry.
- Today, 1 in 27 jobs directly tied to the energy industry.
- We are more diversified and resilient today, but we still have a lot of work to do.



2019 Appropriation Request

\$19,500,000



FY 2019 Priorities

- Increase funding for qualified (peer reviewed) research projects from 50% to 75%.
- Increase investment in technology startups.
- Increase innovation and technical assistance to manufacturing.
- Leverage university assistance to support innovation and commercialization.



Focus Technologies

- Data analytics and security
- Unmanned systems
- Sensor and imaging systems
- IOT (Internet of Things)
- 3-D printing
- Wearable technologies
- Robotics/machine learning/Artificial Intelligence
- Broadband mobility/software defined networks
- Energy systems and storage

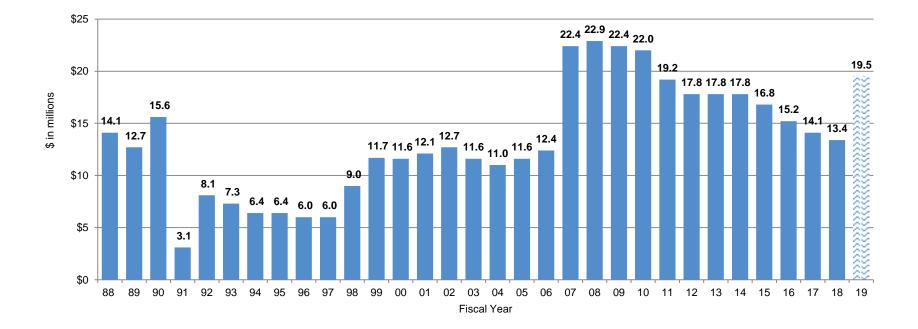


- New technologies
- New markets
- New businesses
- New public-private collaborations
- New talent/skills
- New high-paying jobs!

Research. Innovation. Creativity. Entrepreneurship.



Appropriation History





OCAST 5 Year Appropriation History

					Amount Requested for	FY2017 Return on Investment
ACTIVITIES	FY 2015	FY 2016	FY2017	FY2018	FY2019	by Program
General Administration	\$705,000	\$810,000	\$725,000	718,500	718,500	
Program Services and Support	1,314,503	1,122,670	1,243,305	1,264,564	1,264,564	
Health Research	3,213,000	3,067,447	2,711,804	2,528,406	3,148,478	28:1
Applied Research	3,213,000	2,952,380	2,669,410	2,528,407	3,148,479	44:1
Intern Partnership Program	425,250	403,495	403,985	403,985	403,985	132:1
Plant Science Research	0	0	0	0	0	9:1
Nanotechnology Commercial	0	0	0	0	0	5:1
Industrial Extension Services	1,190,198	1,050,258	997,745	949,155	949,155	
Technology Commercialization	1,822,188	1,607,940	1,527,543	1,453,152	1,453,152	
Small Business Research Assistance	382,725	281,000	100,000	80,000	80,000	24:1
Inventors Assistance	330,750	291,862	331,528	301,113	301,113	
Technology Information Services	487,000	279,610	295,589	242,574	242,574	
Seed Capital Fund	3,748,205	3,398,151	3,104,231	2,953,036	4,290,000	
Center of Excellence Program	-	-	-	0	3,500,000	
TOTAL FUNDING	<u>\$16,831,819</u>	<u>\$15,264,813</u>	<u>\$14,110,140</u>	<u>13,422,892</u>	<u>19,500,000</u>	
General Administration %	4.19%	5.31%	5.14%	5.35%	3.68%	



95% of State Appropriation Goes to Programmatic Activity



Keys to Building Oklahoma's Innovation Economy

- Strategic investment
- Small business development
- Science and technology capacity
- STEM excellence
- Talent development and retention
- Public/private collaboration



Questions?

