STEM Asset Mapping Survey

Draft Summary of Findings

Oklahoma Innovation Institute

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Jan Morrison, *President and CEO, TIES*

Anne McClellan, *Senior STEM Consultant, TIES*

TIES
Teaching Institute for Excellence in STEM

Oklahoma Innovation Institute

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TIES STEM
Asset Mapping Survey™

Oklahoma Innovation Institute's (OII) STEM advocates and supporters were surveyed to determine existing assets, gaps and opportunities in STEM programming in the Tulsa region. The findings will be used to inform the development of the OII STEM Alliance Blueprint for the Tulsa Region by leveraging identifying assets, developing strategies to address gaps, and scaffolding identified opportunities in the current STEM landscape.

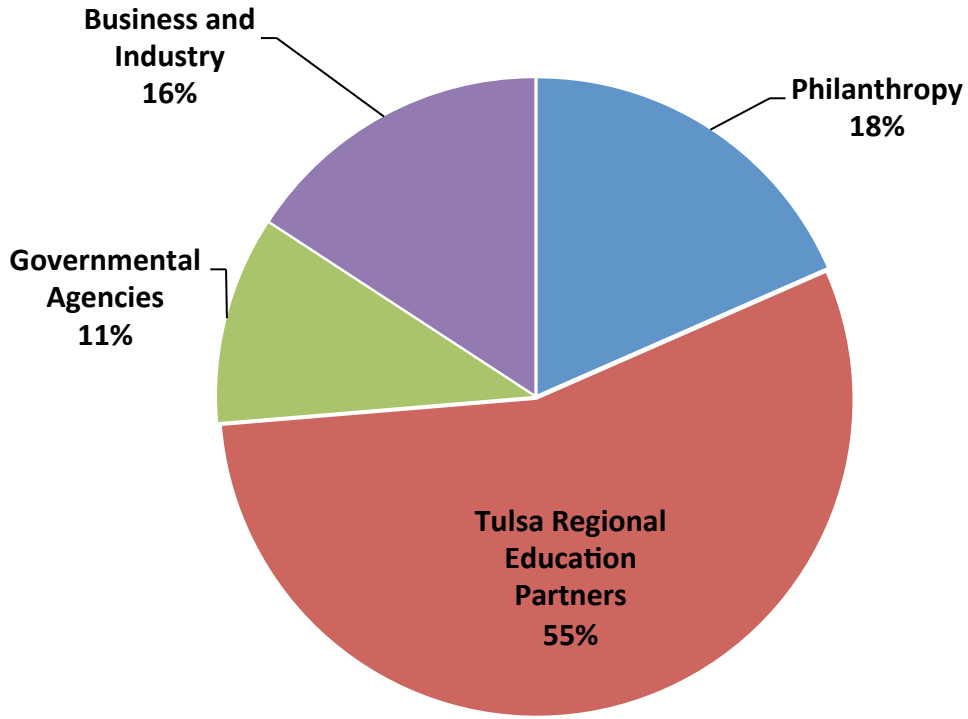
Guiding question:

- What assets and opportunities have the OII STEM Advocates and Supporters identified that may be leveraged in support of the OII STEM Alliance?

40 Organizations Responded

American Institute for the Improvement of Mathematics Learning & Instruction	Oneok Foundation	Tulsa Engineering Academy at Memorial, TPS
APSCO/OK2Grow	OSU Tulsa and Center for Health Sciences	Tulsa Engineering Foundation
Coalition for the Advancement of Science & Mathematics Education in Oklahoma	OSU Tulsa and Center for Health Sciences	Tulsa Metro Chamber
EPSCoR	Peritus Resource Group	Tulsa Public Schools
FIRST Robotics	Poe & Associates, Inc., Tulsa, Oklahoma	Tulsa Technology Center
George Kaiser Family Foundation	Ponca City Development Authority	Union Public Schools
Governor's Science & Technology Council	Project Lead the Way (PLTW)	University of Oklahoma Health Sciences Center
Hardesty Fab Lab	Charles and Lynn Schusterman Family Foundation	University of Tulsa
Hardesty Family Foundation	T.D. Williamson	Venture Technical Resources, LLC
JPMorgan Chase Foundation	Tulsa Children's Museum	Williams Companies
National Math and Science Initiative	Tulsa City/County Library	WPX Energy
Oklahoma Center for the Advancement of Science and Technology	Tulsa Community College	Tulsa Alliance for Engineering
OK State Regents for Higher Education	Tulsa Community Foundation	
Oklahoma State University	Tulsa Geoscience Center	

Participation by Sector



68% report some knowledge of the Oklahoma Innovation Institute

What support or resources have you or your organization accessed at the OII?

- **Tulsa Research Partners/ Tandy Super Computer**: *"The creative opportunities and access to the collective minds of OII are yet to be totally realized…access to the Supercomputer will not only allow us to grow our undergraduate research initiative, but will further strengthen our STEM programs and serve as a great draw for our students and the community."*

- **Entrepreneurship Center:** *"Connect as a resource for the entrepreneurial community."*

- **Best Thinking Forum:** *"The Best Thinking Forum is an excellent service and a great program bringing 'thinking' people together!"*

- **Upcoming STEM alliance planning:** *"Provides the table around which all three research universities plus TCC are already in partnership and comfortable working together. This should allow us to leverage STEM through that same partnership."*

Assets and Opportunities

What assets and opportunities have the OII STEM Advocates and Supporters identified that may be leveraged in support of the OII STEM Alliance?

- ☑ Leadership
- ☑ Organization
- ☑ Communication
- ☑ Priorities
- ☑ Innovative programming
- ☑ Education community, higher education & business/ industry partnerships
- ☑ Philanthropy & resources

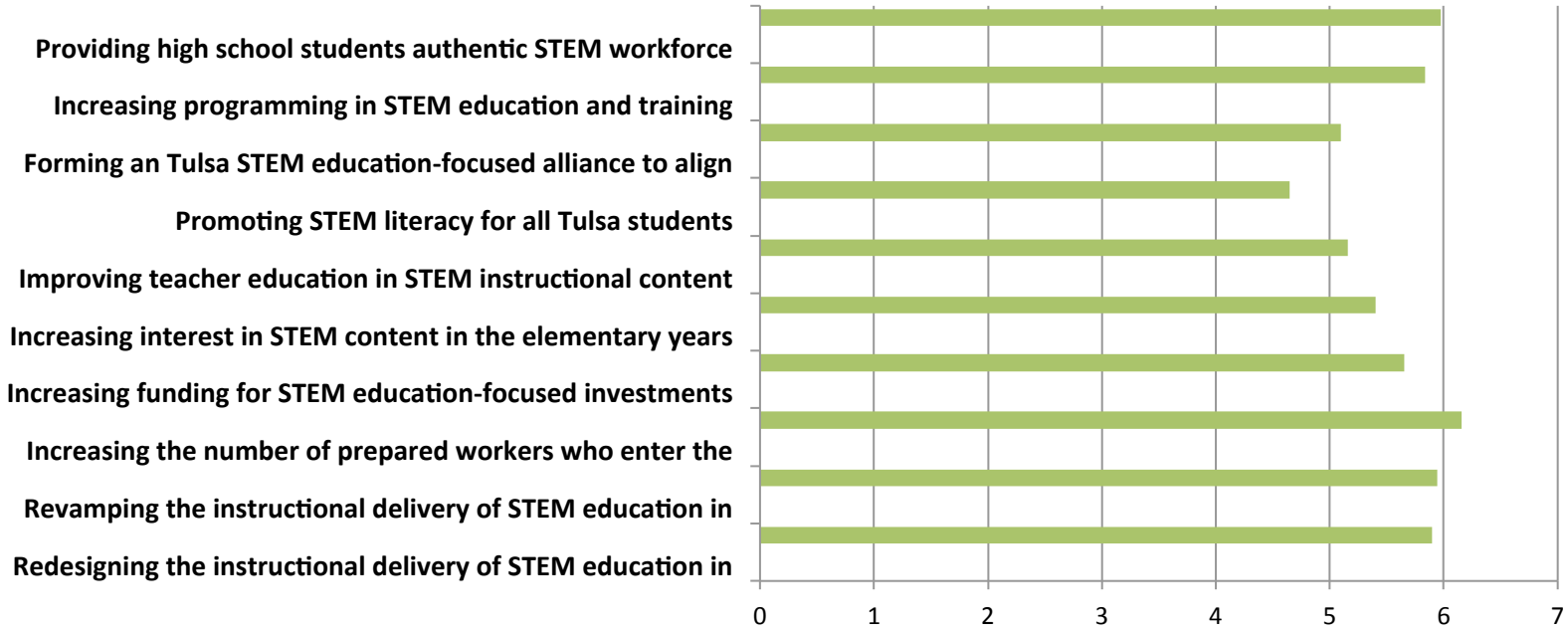
How do organizations and individuals find out what is going on in the Tulsa STEM Education community?

- *"There is no one avenue; it seems that there are multiple organizations putting out communications."*
- *"Word of mouth or stories in the media."*

How do organizations with a STEM education mission and STEM education programs with shared interests exchange ideas, information and plan together?

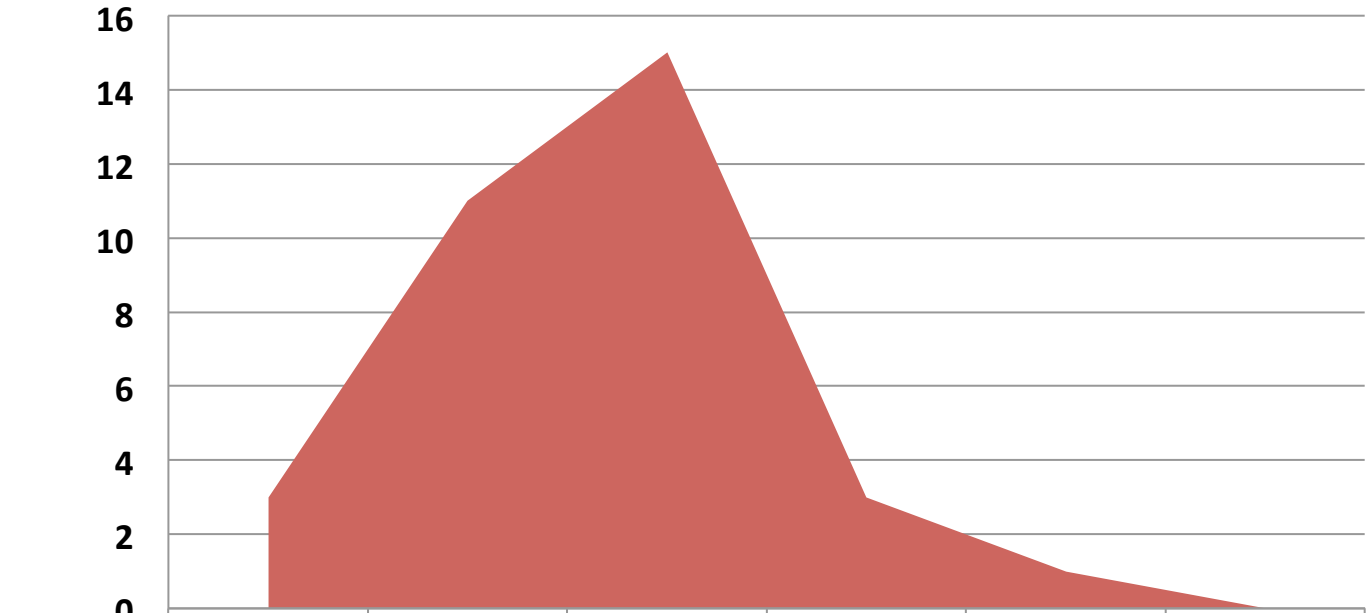
- *"It varies across networks, industry and organizations and people. I don't believe their is a central hub of activity or connectivity. It's who you know."*
- *"It varies across networks, industry and organizations and people. I don't believe their is a central hub of activity or connectivity. It's who you know."*
- *"No knowledge of how…"*

Rank the following priorities in order of importance for increasing STEM education-focused programming, professional development and investments in the Tulsa area.



*10 is the highest ranking

46% of respondents report that an investment in STEM programming and education would have the greatest impact in middle school.



	Early Childhood	Elementary	Middle School	High School	Community College	College or University
Series1	3	11	15	3	1	0

If you could transform the current STEM education-focused community relationships in any way you wished, what three things would you do?

- *"Schools throughout the region informed, on board, and participating."*
- *"Integrated STEM Curriculum."*
- *"Make Oklahoma #1 in per pupil funding for science in the secondary schools."*
- *"Promote higher salaries for STEM teachers."*
- *"Establish clear methods for measuring the outcomes of STEM initiatives and activities."*
- *"Internships for high achieving students to work in STEM related fields."*

If you could transform the current STEM education-focused community relationships in any way you wished, what three things would you do?

- *"Develop & maintain a dynamic database of events/activities offered by all STEM related organizations in Tulsa in a format that parents, youth, teachers, businesses & volunteers could access."*
- *"Increased industry involvement thus allowing us to know what they need from the STEM education community."*
- *"Have a voice at the state legislature that listens to the group's ideas."*

What "open spaces" exist in the current STEM education-focused advocacy landscape?

- *"Significant "open spaces" exist. There is a need for a consistent and strategic advocacy voice that represents all stakeholders in STEM education."*
- *"Education connectivity to business/industry is missing and is not an easy process to navigate. Intermediary roles could assist with this & help bridge the communication gap between the two areas…lack of understanding about career pathways, demand occupations, power sectors and the largest percentage of opportunities for jobs in our region. Jobs offering a sustainable wage.*
- *Are we growing talent for our region or another city? Why is this important? Are teachers able to answer the question?"*

What role would you and organization choose to playas the Oklahoma Innovation Institute roles out its STEM Alliance Strategy?

- *"…be a leader in providing STEM programming to middle and high schools students, giving students access to 21st century technology and tools, and providing exposure to engineering disciplines."*
- *"Spearhead the workforce need alignment to education."*
- *"Tulsa City-County Library would enjoy partnering in the development of a STEM Alliance Strategy. We have 25 libraries across the county, serve thousands of children every year, and offer programming that while fun for the kids, has a lot of education and skills building behind it so they're always learning while they're enjoying themselves."*
- *"Informing and mobilizing practicing engineers and their employers through the Tulsa Engineering Foundation membership network."*

What role would you and organization choose to playas the Oklahoma Innovation Institute roles out its STEM Alliance Strategy?

- *"OCAST …We are always interested in having a seat at the table during any discussions on how to further STEM education and industry growth."*
- *"…involved as possible and TEAM could be the test bed and prototype for "Redesigning the instructional delivery of STEM education in secondary schools."*
- *"We can facilitate conversations, potentially provide some level of funding for new initiatives and provide business connections etc. in the Ponca City area."*
- *"Conveners…major players in "Research is Teaching" philosophy."*
- *I think we would like to continue to partner with schools, funders and other key stakeholders to increase student college and career readiness in the knowledge based economy.*
- *"Serve on the advisory team."*

Next Steps

- Craft design principles and key design features that will serve as the basis for OII STEM Alliance Design Blueprint.
- Identify and leverage the assets identified by the OII STEM advocates and supporters.
- Identify, prioritize and build upon the opportunities in the Tulsa Region STEM landscape.
- Co-create standard operating procedures, measureable outcomes/metrics and continuous improvement processes for sustaining the OII STEM Alliance Design Blueprint.