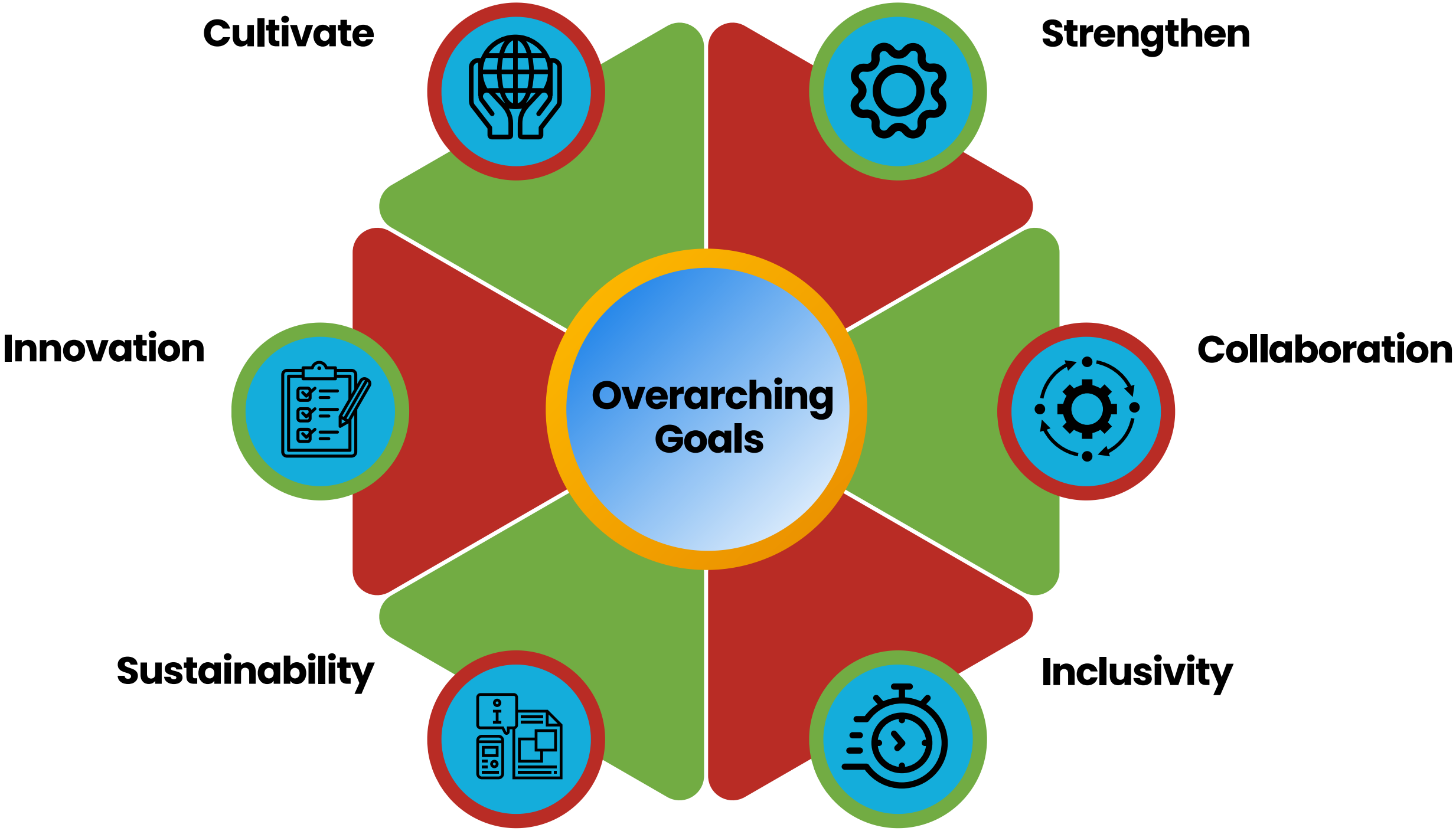




STEM Learning Ecosystem Planning Incentives Report

23 Recipients





Primary Objective

Cultivating Regional STEM Learning Ecosystems for the entire state of Alabama, strengthening STEM Learning resulting in a thriving local economy for all Alabamians

HIGHLIGHTS

Region 1

Hudson Alpha

Lead by: Kelly East

Anchor: HudsonAlpha Institute for Biotechnology

Hosted a Summit structured on the following:

Breakout 1: Envision a future in which there is a thriving STEM learning ecosystem in our region (don't worry now about how we get there). What would be different compared to today (for students, educators, industries, etc)? What outcomes are you interested in seeing achieved around STEM learning in our region? Why do those outcomes matter?

Breakout 2: What are the current barriers to STEM learning in our region? What are some of the current gaps in STEM learning in our region? What do you see as the underlying reason or cause of these identified barriers and gaps?

Breakout 3: Reflect on the report outs from breakouts 1 and 2. What connections between stakeholders should be developed or strengthened? What are some ideas to address identified barriers and gaps? What are other tangible or intangible actions that would help us achieve our vision?

Breakout 4: What are potential structures for a STEM learning ecosystem in our region (how would connections be made and work get done)? What are some potential leadership structures for a STEM learning ecosystem in our region? What other organization/individuals were not represented today that should be included in future North Alabama STEM learning ecosystem conversations?
o should be included in future work.

Region 1

Techelon

Lead by: Scott Ross

Anchor: Techelon Solutions LLC

Techelon Solutions and its partner stakeholders have collaborated during the planning stages of ecosystem establishment by spotlighting and connecting STEM initiatives, successes, and areas of need across regional STEM learning ecosystems and the Alabama STEM Ecosystem. We've accomplish this by creating a pilot season of the Incubate Talent podcast and network of STEM ecosystems who connect the next generation workforce of STEM students and teachers by spotlighting the amazing stories, opportunities, and areas of need in your communities and industries through digital means.

Region 1

North Alabama Boys and Girls Club

Lead by: Angela O'Neil

Anchor: Boys & Girls Clubs of North Alabama

Key factors for their ecosystem based on data collected:

- Early career exploration
- Diverse career experiences
- Parent engagement and education about STEM careers
- Engagement of STEM professionals as role models

HIGHLIGHTS

Region 1

North Central Alabama (NCAL)

Lead by: Aubry Lovell

Anchor: Wallace State Community College

Partnerships: NCAL has fostered partnerships among educational institutions, businesses, nonprofits, and government agencies to enhance STEM education and workforce development. These partnerships have facilitated resource sharing, networking, and collaborative projects.

Program Development: NCAL has developed and supported various STEM programs aimed at students of all ages, from elementary school to college. These programs often include hands-on activities, mentorship opportunities, and real-world problem-solving experiences to engage students and inspire their interest in STEM fields.

Teacher Professional Development: NCAL has provided professional development opportunities for local STEM educators to enhance their teaching skills and incorporate innovative instructional strategies and technologies into their classrooms. This focus on teacher training helps to improve the quality of STEM education across the region.

Community Engagement: NCASE has actively engaged with the local community to raise awareness about the importance of STEM education and its relevance to the regional economy. Through outreach events, workshops, and presentations, NCAL has worked to involve parents, community leaders, and other stakeholders in supporting STEM initiatives.

Region 2

CREATE STEM Learning Ecosystem

Lead by: Sherita Hayes

Anchor: Oxford City Schools

The CREATE initiative had strong partnerships with industry leaders, local government, economic development agencies, and educational institutions from its conception. Since the announcement of the STEM Ecosystem planning grant, Oxford City Schools has continued its work with these partners by bringing them together with classroom teachers and district administrators. We have worked to broaden our stakeholder list to include representation from community organizations, libraries, museums, parks and gardens, and organizations that provide after-school and informal learning opportunities to students. This work has been done through large-group, small-group, and individual meetings since the award of the SLEPI grant. This report will highlight how the work done for the CREATE STEM Learning Ecosystem aligns with key design principles from the Alabama STEM Ecosystem.

HIGHLIGHTS

Region 2

SAFE

Lead by: Margaret Morton

Anchor: SAFE/Earth

The SAFE/ EARTH STEM Ecosystem has been underdevelopment for over 25 years (See attached graphic) Currently, the work funded by SLEPI has focused on developing a mentoring movement across the state and across the ages.

On April 11, 2024, a state-wide convening was held in Montgomery at Trentholm University with over 70 registrants from across the state participating. The Summit goals were to provide information regarding mentoring opportunities and programming across the age-span and to learn from existing efforts regarding the principles of mentorship. In addition, opportunities were presented to engage mentors as volunteers through the state office on Volunteer Services that included Americorps, Vista, etc.

Preliminary surveys of participants indicate a desire to expand existing mentorship opportunities under the umbrella of Mentoring Matters.

Region 2

Gadsden City Schools

Lead by: Lana Bellew

Anchor: Gadsden City Schools

Hosted a stakeholder meeting and sent multiple stakeholders, including those from other local organizations, to the National STEM Festival in Washington.

Part of the Gadsden City Schools STEM FEST, an event dedicated to celebrating innovation and education in the fields of Science, Technology, Engineering, and Mathematics (STEM). STEM FEST aims to inspire the next generation of leaders and problem solvers by showcasing the exciting opportunities in the area.

Region 3

ALAGO STEM

Lead by: Whitney Tucker

Anchor: ALAGO

In concluding the planning phase of the Sipsey Basin – Corridor XSTEM Learning Ecosystem, the excitement and anticipation that has swept across our region is palpable. This initiative has sparked a collective vision of what can be achieved, bringing together educators, industry leaders, and community stakeholders in a shared commitment to transform STEM education. The potential for this ecosystem to become a transformative force in our communities is clear and inspiring. We are on the brink of launching a groundbreaking endeavor that promises not only to enhance educational opportunities but to fundamentally reshape the future of our region. Let's carry this momentum forward, embracing the promise of innovation, collaboration, and growth. Together, we are building a brighter, more innovative future for all.

HIGHLIGHTS

Region 3

Tuscaloosa City Schools/UA

Lead by: Shandra Hart

Anchor: Saban Center

We met with stakeholders and collected information to get an idea of what our stakeholders are thinking in the way of STEM and a STEM Ecosystem. This will also help us to form our next steps in the design phase. We had a large amount of positive feedback from the meeting from inside and outside of TCS. We also collected names of organizations or people that would potentially be interested in being involved in our ecosystem.

Region 3

AlaWest STEM Learning Ecosystem

Lead by: Hannah Millwood

Anchor: University of West Alabama

- Our IMC department drafted a plan for the sustainability of a website/communication hub for communicating with the public and stakeholders on STEM events that pertain to them.
- We are in the creating/testing phase of a survey in Qualtrics that will allow us to see the best mode of communication for each of our partners so that information about the events gets to those people in the best way for them.
- Attended a STEM workshop at the University of Alabama sponsored by the City of Tuscaloosa School Board, University of Alabama, and the Saban Center pertaining to partnerships for our Work Force Development Region.
- Held Stakeholder meetings with different Work Force Region 3, State, and Federal entities.

Region 3

RAISE

Lead by: Anthony Sanders

Anchor: Greensboro Middle School

The planning work for the Rural Alliance in STEM Education (RAISE) Ecosystem began with initial meetings of the leadership team, including Greensboro Middle School teachers and leaders, Hale County Superintendent Michael Ryans, and University of Alabama Professor Joni Lakin.

We have built relationships between partnerships in the Rural Alliance in STEM Education (RAISE) Ecosystem. All four Greensboro Schools hosted a Community STEM Festival with UA collaborators and partners from across the region providing engaging STEM experiences for students of all ages. At least 300 people attended with around 20 booths and exhibits, including representatives from UA, UWA, NASA, Women in Defense, Adah International and the McWane Science Center.

HIGHLIGHTS

Region 4

McWane Center

Lead by: Amy Templeton

Anchor: McWane Science Center

McWane Science Center is pleased to serve as an anchor for the Central Six STEM Learning Ecosystem. This group will address issues and opportunities in the Alabama Works Region 4, known as the “Central Six” because it includes the six counties in the center of the state: Blount, Chilton, Jefferson, Shelby, St. Clair, and Walker Counties. Together, this group will identify key challenges and opportunities that exist in our region, and outline solutions that will encourage STEM literacy, STEM career awareness, innovation, entrepreneurship, and workforce readiness among our young citizens.

Region 4

CAMP

Lead by: Michelle Hayes

Anchor: College Admissions

Made Possible

CAMP has begun assembling a diverse group of stakeholders, each contributing unique resources and expertise to the ecosystem:

- Educational Institutions and Centers: Entities like the McWane Center, Huntsville Space and Rocket Center, and educational institutions such as Miles College and Stillman College are involved, providing hands-on STEM experiences and academic support.
- Community and Educational Leaders: Figures such as Dr. Rosianna Gray, Mr. Paul Morton, and Mrs. Selina Dickinson are instrumental in shaping and promoting the ecosystem's initiatives.
- Community Resource Centers: Organizations like Tuscaloosa One Place and Sylacauga Family Resource Center play crucial roles in supporting local families and integrating STEM education into community services.
- Innovative Hubs: Arsenal Place and the Dauphin Island Sea Lab contribute to the ecosystem by fostering innovation in technology and marine science education.

Region 4

Lawson State Community College

Lead by: Shawanda Thomas

Anchor: Lawson State Community College

Engaging with partners who have a similar desire to cultivate STEM opportunities in Alabama for the next generation was energizing. The program lead, Dr. Shawanda Thomas, visited several schools, such as Bessemer City High School and the Alabama Aerospace and Aviation High School to discuss STEM opportunities that could potentially evolve from a Lawson State STEM Learning Ecosystem. Dr. Thomas also traveled to the Argonne National Laboratory in Illinois to attend a workshop which led to partnering with the BETO BRIDGES Program. Additionally, a meeting was organized with STEM majors at Lawson State Community College to collect STEM Learning Ecosystem ideas and to determine potential partnerships with stakeholders at their high schools. Some of those STEM majors soon after participated in Chalkville Elementary's STEM Day which solidified another partnership. The ecosystem lead also met with Spire's president to discuss internship opportunities for STEM majors. Lawson State has a long-standing relationship with great partners in Region 4, and this ultimately helped to secure partnerships for the STEM Learning Ecosystem.

Region 5

I-STEM

Lead by: Mary Lou Ewald

Anchor: Auburn University Foundation

The planning involved multiple stakeholders from different Alabama workforce regions, focusing on enhancing informal STEM education across Alabama. The core group included representatives from Auburn University, Southern Research, The University of Alabama, East Alabama Works, Dauphin Island Sea Lab, and the HudsonAlpha Institute for Biotechnology.

Region 5

I-85

Lead by: Charisse Stokes

Anchor: TechMGM

I-85 is working to achieve success, by creating networks of interdependent stakeholders who are aligned in their missions to educate and guide Alabama's students into the STEM workforce. These networks require collaboration among partners in an intentional ecosystem approach to develop STEM education and career opportunities. We have had meetings across the ecosystem for accessibility of all stakeholders. These meetings have engaged stakeholders and solidified our working groups.

Region 5

Alabama Expanded Learning Alliance

Lead by: Felicia Simpson

Anchor: ALEA

The Alabama Expanded Learning Alliance has intensified its endeavors in STEM and underscored the significance of partnership collaboration to showcase their role in advancing STEM education via the STEM Learning Ecosystem Planning Initiative. These ecosystems support learners' journey from initial curiosity in STEM topics to fostering a scientific identity and, in some cases, pursuing STEM careers. ALEA remains committed to uniting museums, libraries, schools, businesses, industries, and diverse community organizations offering tailored programs and environments conducive to lifelong learning.

HIGHLIGHTS

Region 5

East Alabama STEM Connector

("The Connector")

Lead by: Jessica Gilpin

Anchor:

I-STEM Center at Auburn University

The East Alabama STEM Connector ("The Connector" for short) will advance STEM Education and workforce development in the region by increasing connectivity between individual Auburn units, the university as a whole, and the rapidly growing East Alabama population and economic base. Developing this ecosystem will be at the foundation of the new I-STEM Center at Auburn University, which has garnered support from the Provost, the VP for Outreach, the dean of the Samuel Ginn College of Engineering, and the dean of the College of Sciences and Mathematics (COSAM).

Region 5

Dallas County

Lead by: Astrid Craig

Anchor: Dallas County System of Services

Main focus has been on participation recruitment. Committee Subgroups and Responsibilities

- **Public Relations (PR) Group:** The committee will ensure accurate messaging about STEM updates and information is provided to the public.
- **STEM Youth Council:** This work group will guarantee that youth voices are incorporated into the process and ensure they are interested are accurately reflected.
- **STEM Workforce/Vocational/Business Development Work group:** The work group collaborates with local employers and volunteers to gain insights from vocational STEM careers within the region.
- **School STEM Work group:** The work group will work with local school to streamline STEM opportunities for STEM opportunities.
- **Community-Based STEM Work group:** The work group focuses on ensuring community involvement in STEM initiatives.

Region 6

Region 6 STEM Ecosystem

Lead by: Kate Killebrew

Anchor: The ATTA/Hudson Alpha Wiregrass

The George Joseph and Susie Ezzell Atta Memorial Library Inc., (DBA: The ATTA) and HudsonAlpha Wiregrass are working collaboratively to achieve the goals of the SLEPI. We have begun growing relationships and fostering collaboration among STEM stakeholders throughout Region 6. Southeast Alabama is rich in STEM workforce opportunities, including bioscience, precision agriculture, engineering, aviation, and advanced manufacturing. Numerous instances of collaboration exist between industry entities and educational institutions. However, more ongoing, intentional conversations and connections are needed between educators and local industries. Region 6 students, educators, and community members would benefit from deeper relationships built across sectors and across STEM domains.

HIGHLIGHTS

Region 7

Region 7 STEM Ecosystem

Lead by: Lindsey Coker

Anchor: STEAMCamp for Kids

VISION

“To see K-12 students across Region 7, zip code to zip code, participating in rich STEM and workforce development opportunities that will have a positive impact on their lives and our communities.”

MISSION

“Fostering collaboration among businesses, K-12 schools, higher education institutions, government entities, out-of-school time providers and philanthropic organizations across Southwest Alabama towards a common vision.”

Region 7

Gulf State STEM +M

Lead by: Racheal Banks


Anchor: ST. Luke’s Episcopal School

Throughout the planning stage a concerted effort has been made to ensure the seven pillars of a successful ecosystem are front of mind. Creating partnerships, setting up a system for sustainability, aligned teaching and learning, investing in workforce development, and measuring outcomes were all components embraced by Region 7’s partners and potential partners. The feedback indicated that a systematic approach is the only manner in which we can facilitate true collaboration and strive for change in our region.

St. Luke’s vision is to change how students experience the world through STEM and demonstrates our commitment to exposing students and families to career opportunities within STEM disciplines. Our curriculum and workforce development goals go hand-in-hand with the learning ecosystem. When reflecting upon the short and long-term goals indicated on our application, we are thrilled to be well on the way of making an impact in our community through STEM.

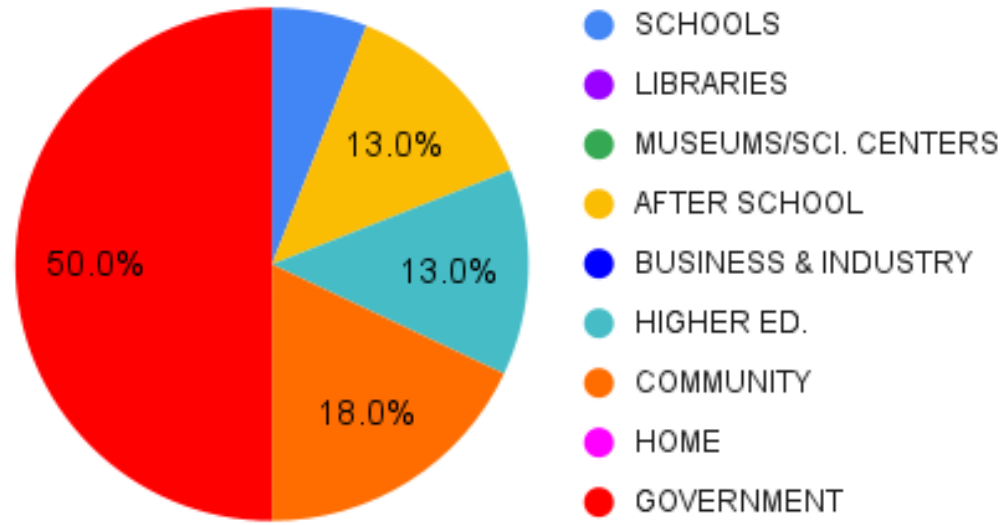
NEXT STEPS

- RFA for Design Studio Incentives released on June 3rd ; Recipients announced on June 26th
- Design Studio Execution begins August 12th or possibly sooner
- **On Statewide level:**
Working towards STEM Days/Family Nights in other communities that did not receive Planning Incentives

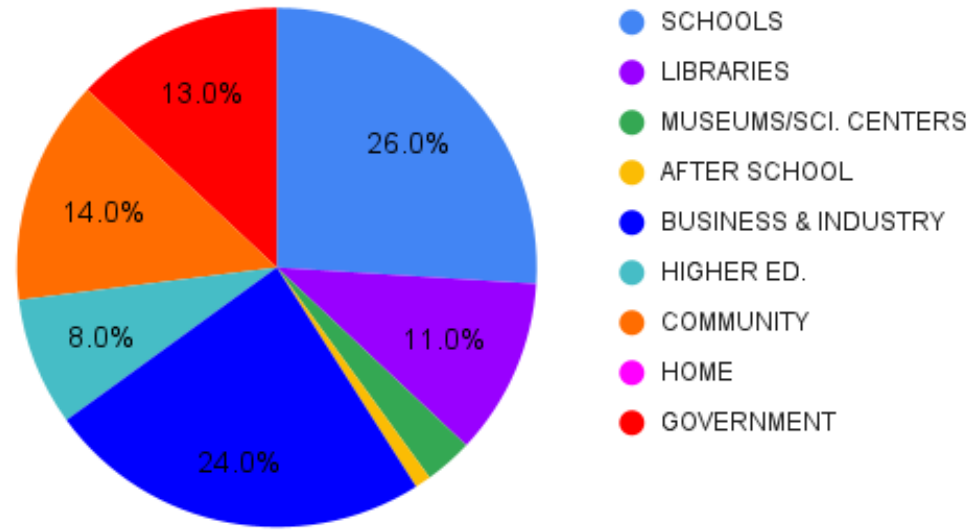


**CURRENT
STAKEHOLDER
PARTICIPATION
ACROSS
SLEPI RECIPIENTS**

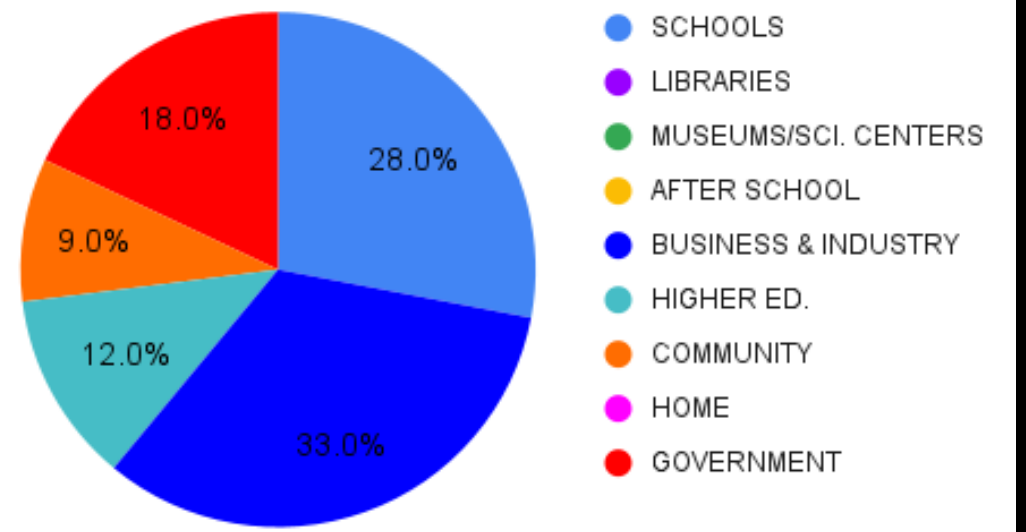
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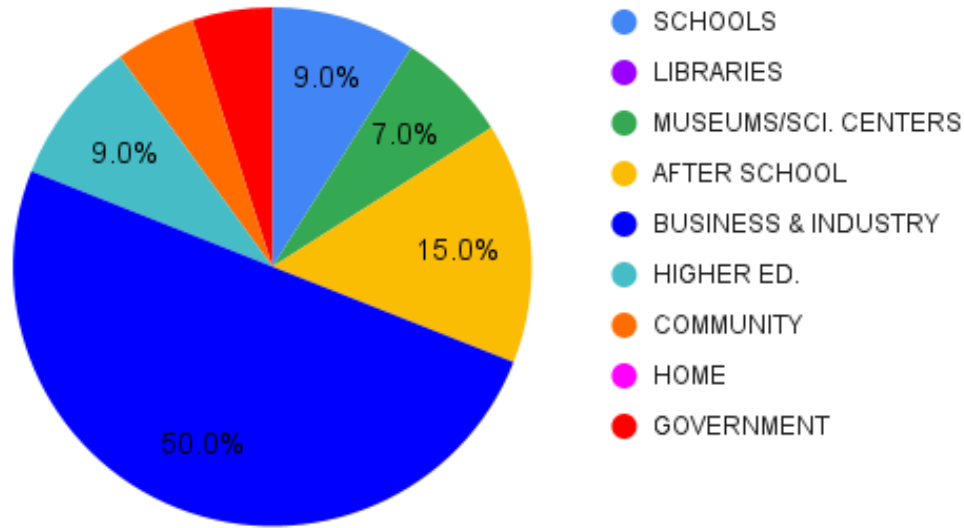
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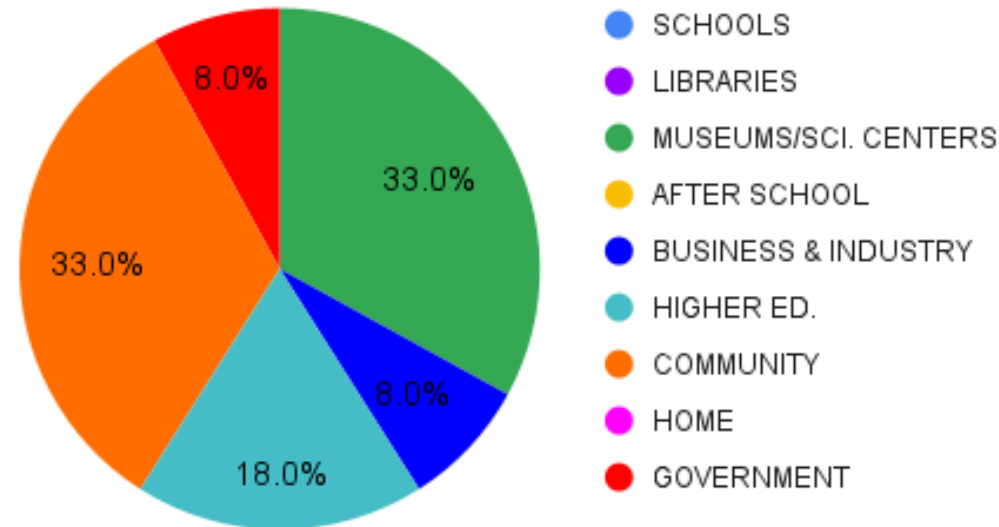
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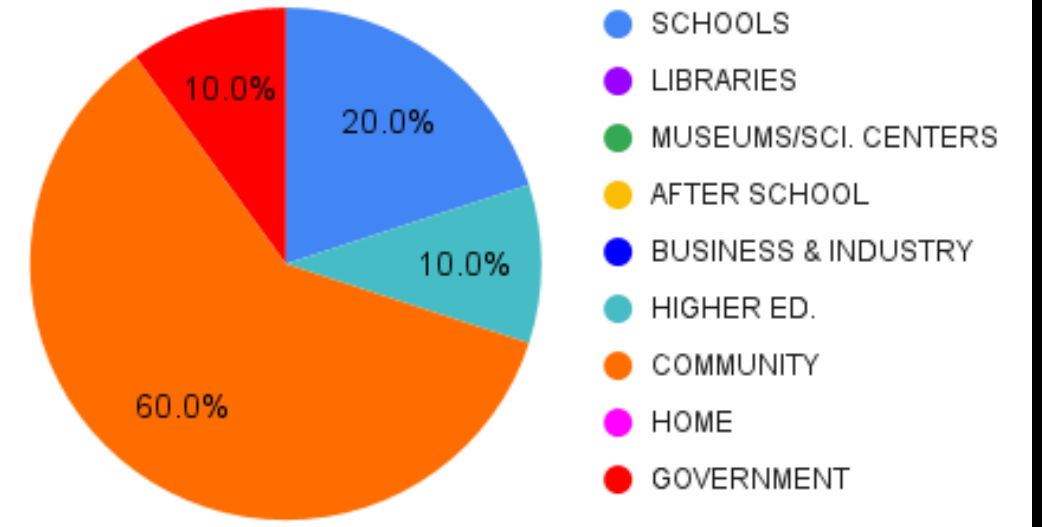
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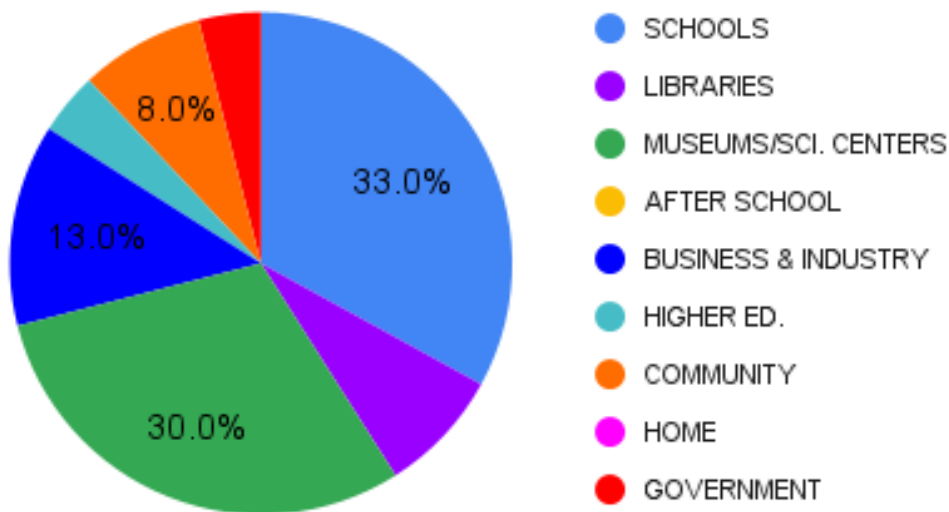
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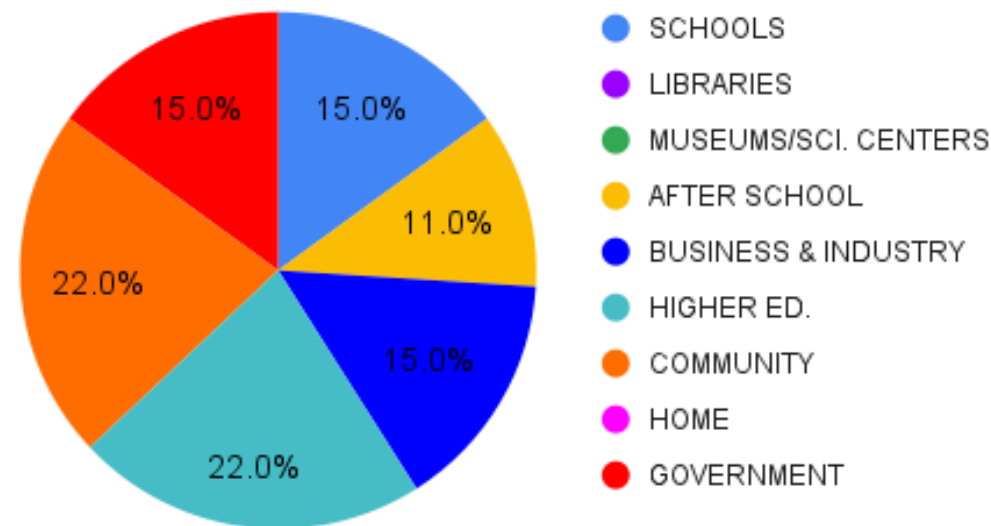
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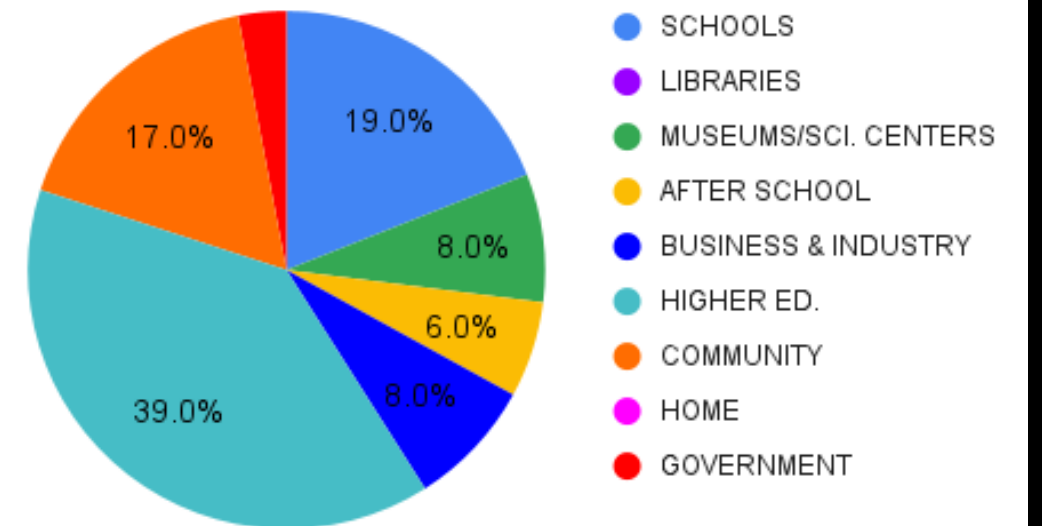
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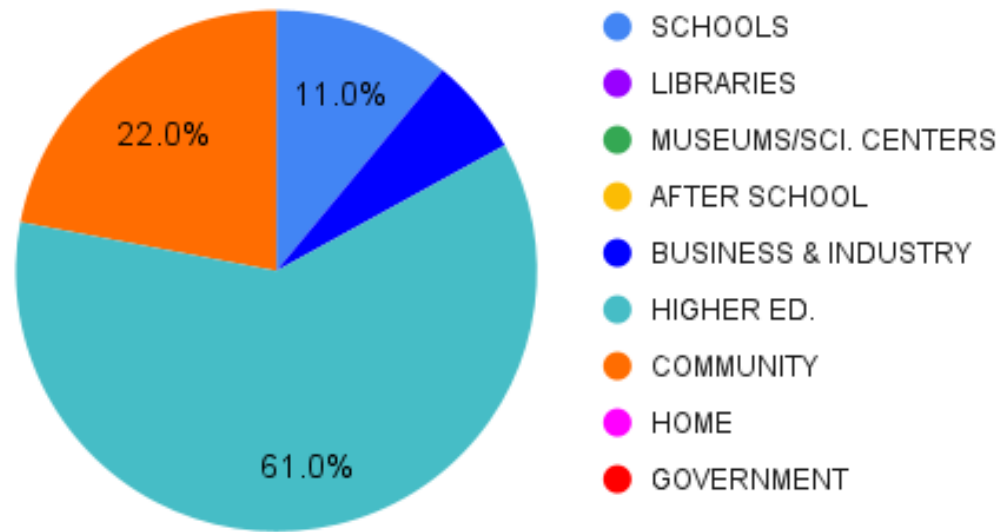
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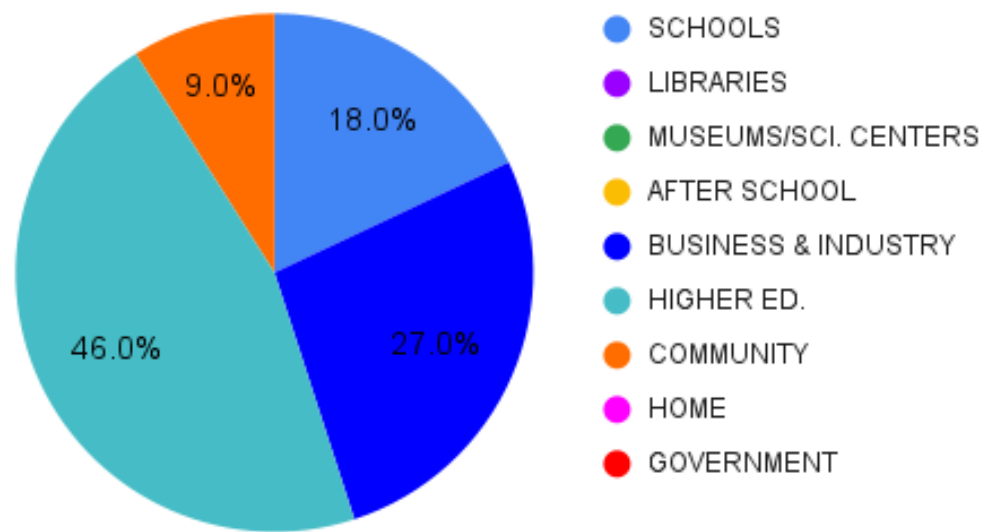
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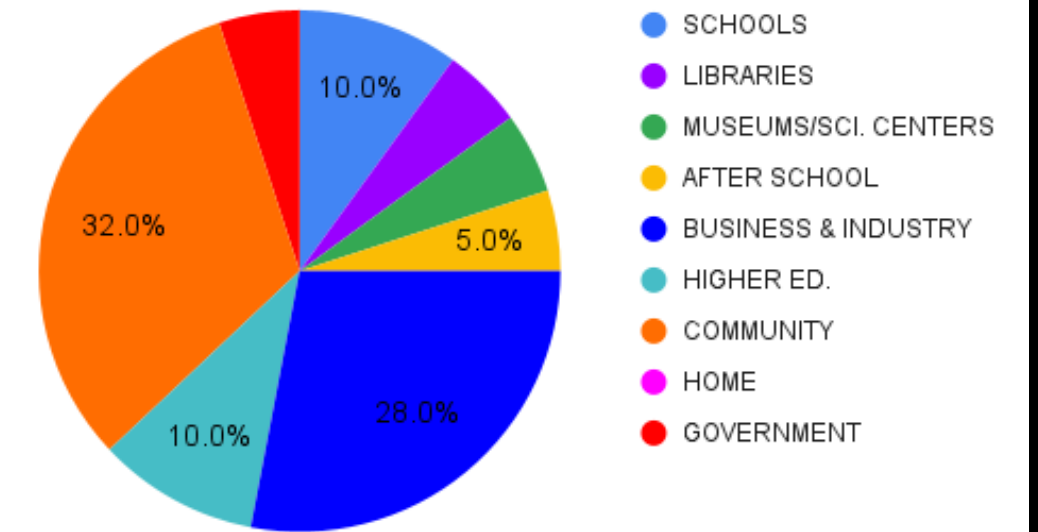
I-STEM at AU STAKEHOLDER %



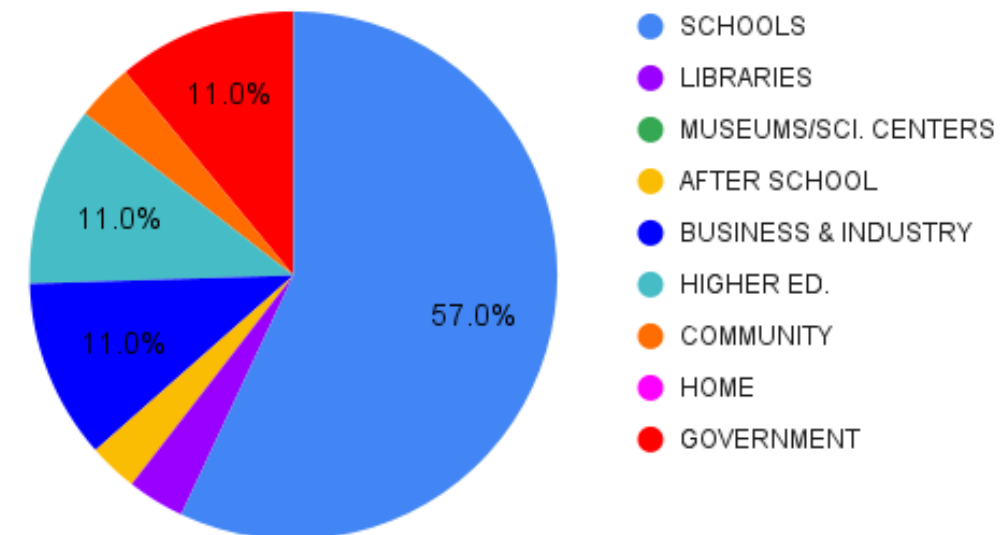
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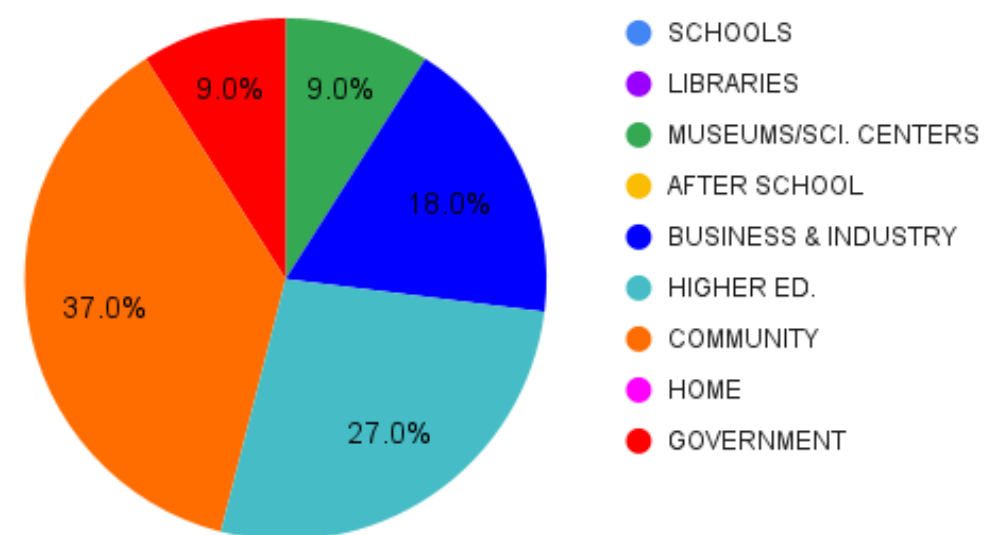
MCWANE SC STAKEHOLDER %



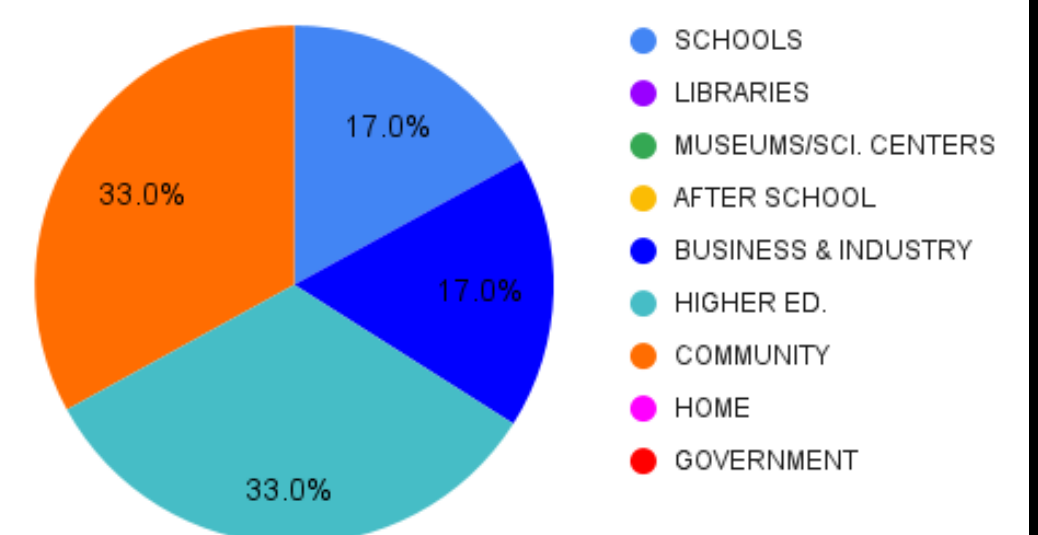
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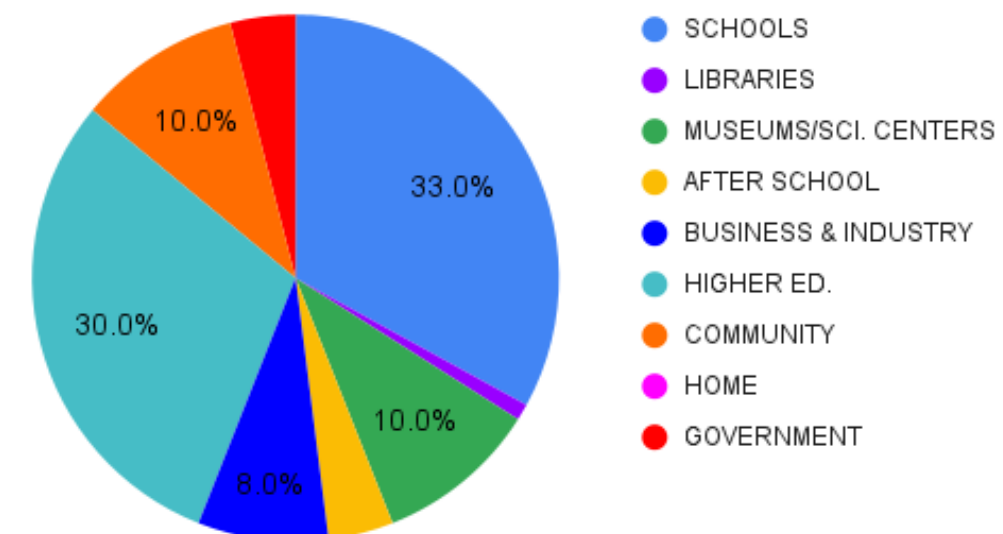
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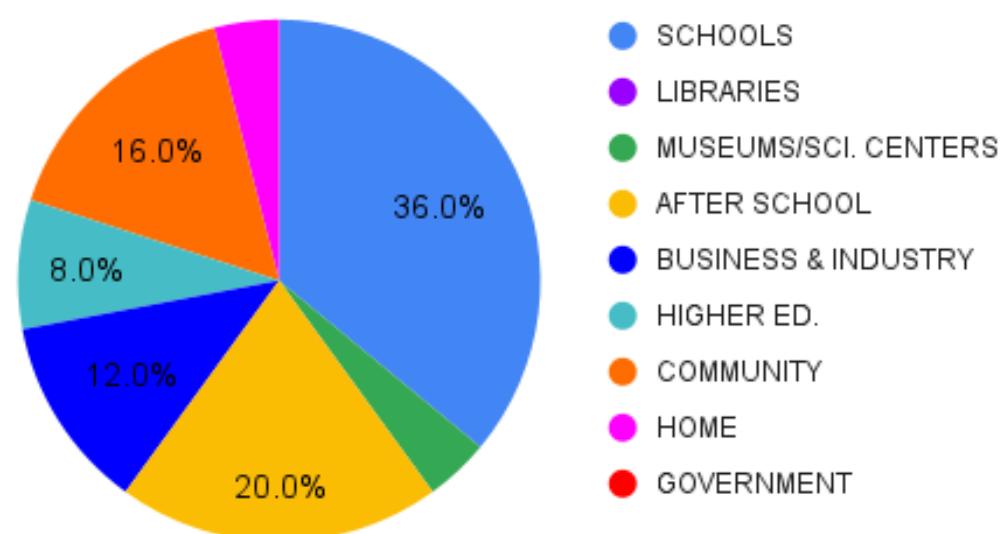
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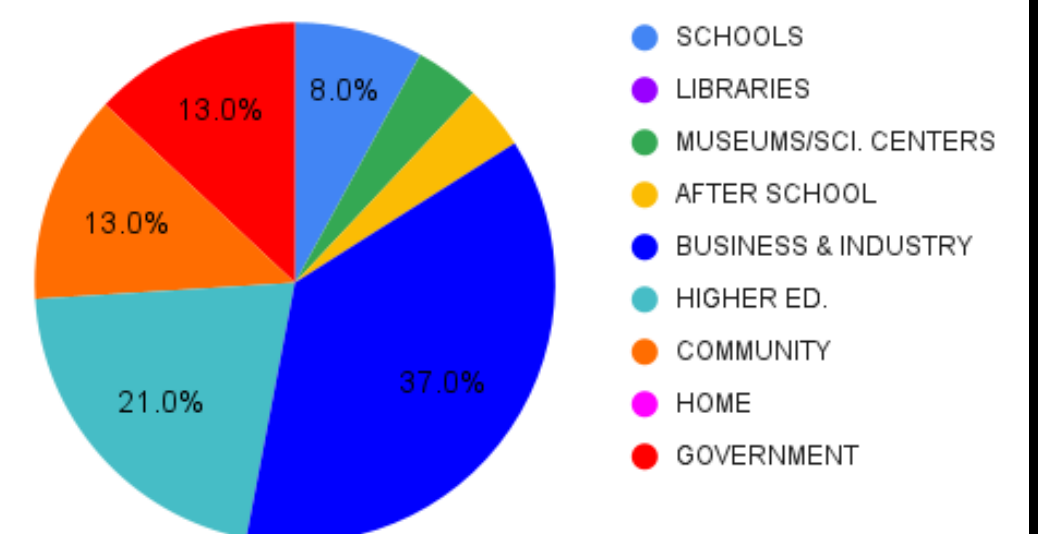
TCS, SABAN CENTER, UA STAKEHOLDER %



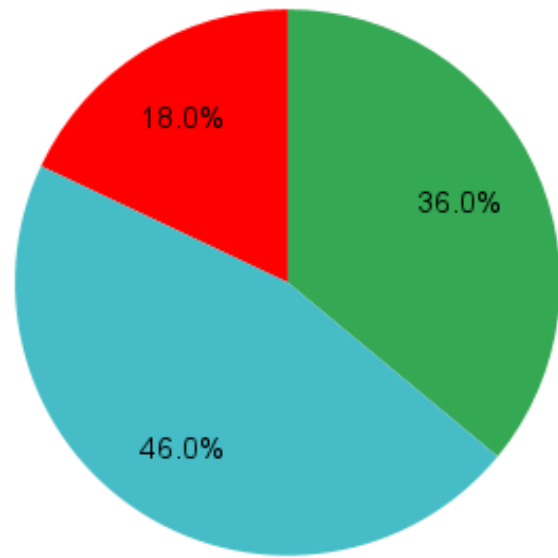
STEAMCamp STAKEHOLDER %



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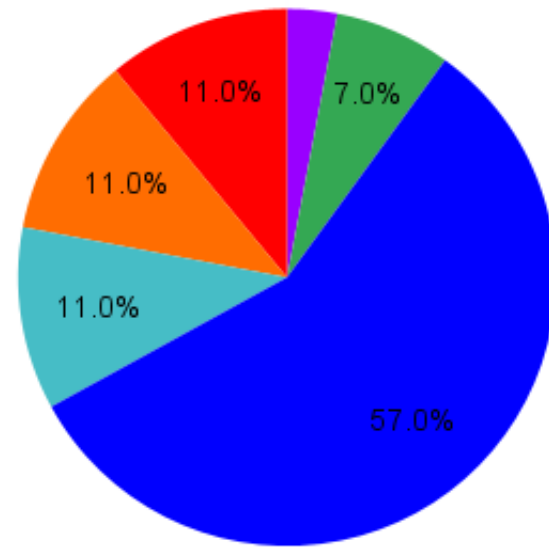


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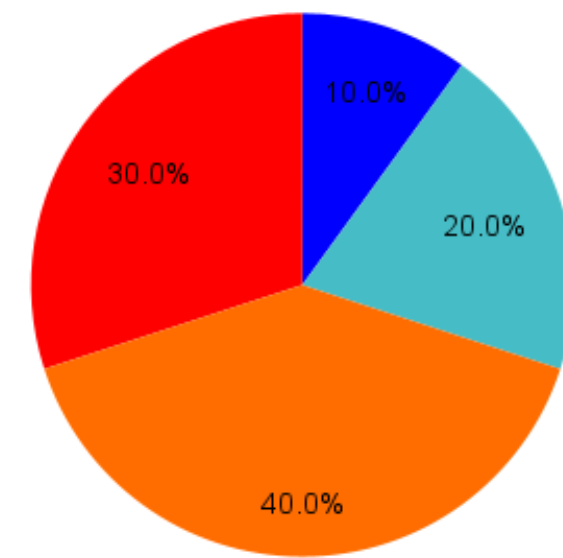
- SCHOOLS
- LIBRARIES
- MUSEUMS/SCI. CENTERS
- AFTER SCHOOL
- BUSINESS & INDUSTRY
- HIGHER ED.
- COMMUNITY
- HOME
- GOVERNMENT

OCS STAKEHOLDER %



- SCHOOLS
- LIBRARIES
- MUSEUMS/SCI. CENTERS
- AFTER SCHOOL
- BUSINESS & INDUSTRY
- HIGHER ED.
- COMMUNITY
- HOME
- GOVERNMENT

SAFE STAKEHOLDER %



- SCHOOLS
- LIBRARIES
- MUSEUMS/SCI. CENTERS
- AFTER SCHOOL
- BUSINESS & INDUSTRY
- HIGHER ED.
- COMMUNITY
- HOME
- GOVERNMENT

