Idaho EcosySTEM Convening

October 30, 2020

This meeting is being recorded

- This convening is being recorded to provide reference data to develop the Idaho STEM Ecosystem.
- This recording will be kept on STEM AC's internal servers.
- Public chats will be copied for note-taking purposes.
- Notes and presentations will be posted to the Ecosystem website shortly after the meeting.

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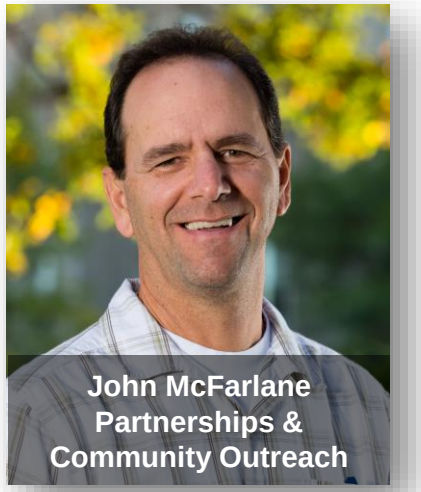
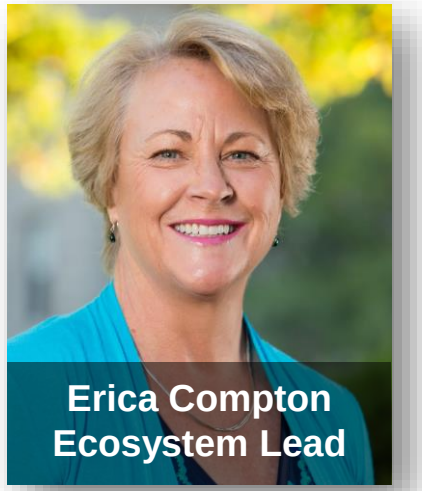
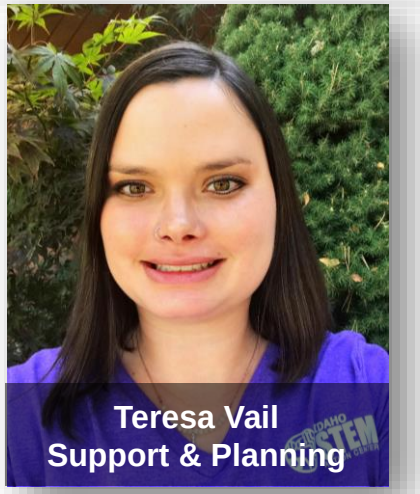
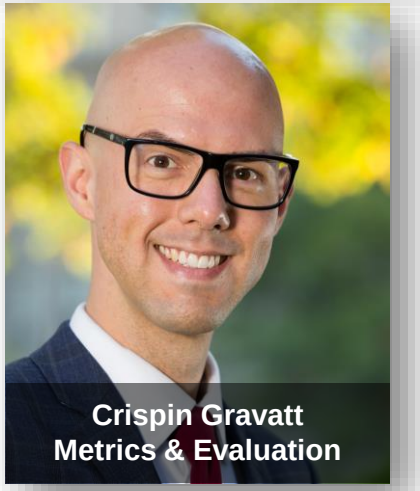
STEM AC Ecosystem Support Team

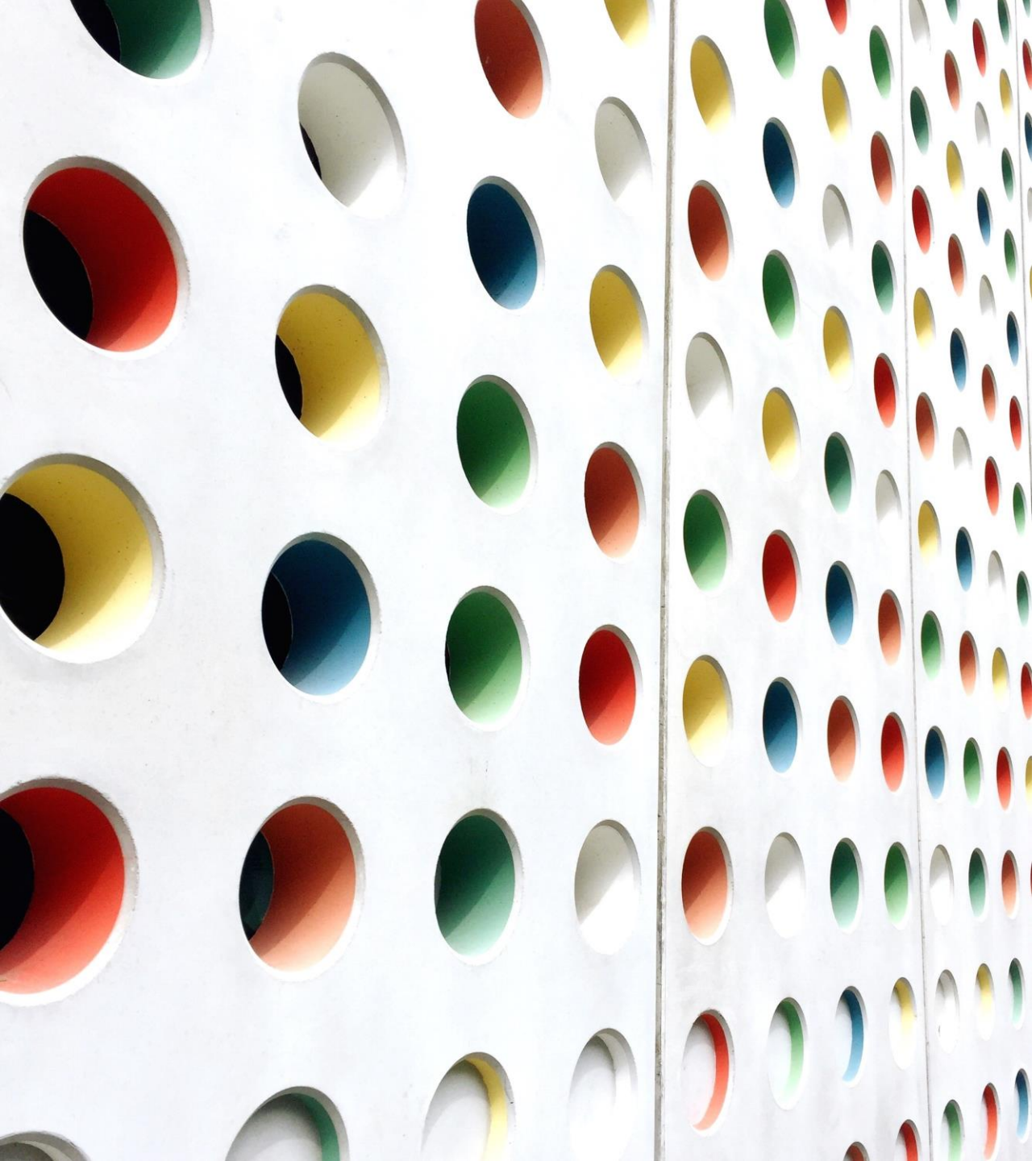








A STEM ecosystem provides the structure for cross-sector partnerships to improve STEM literacy, ensuring a strong workforce and global competitiveness for all.



Basic Zoom Tips & Controls

ECOSYSTEM PLANNING MEETINGS

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SCIENCE • TECHNOLOGY • ENGINEERING • MATH

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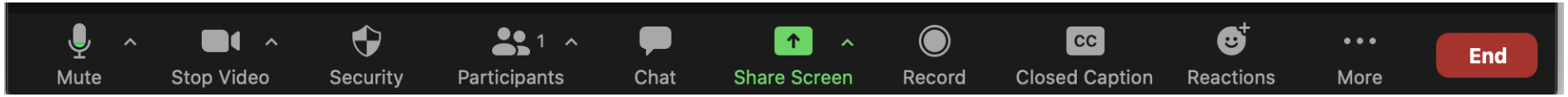
Basic Zoom Controls

The control panel will appear at the bottom of your screen.



Mute/Unmute: This allows you to mute and unmute your microphone

Start/Stop Video: This allows you to start and stop your own video.

Participants: This opens up your participants window so you can see who is in the meeting

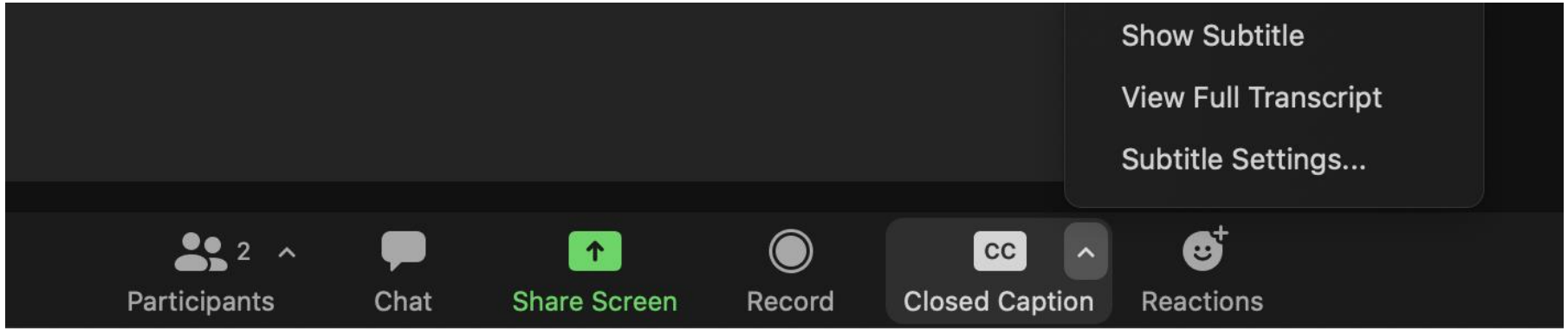
Chat: This opens up the chat feature. You can chat with the host, everyone, or send a private chat

Share Screen (Enabled for Hosts Only): Click on this icon to start sharing your screen. You will be able to choose an application or a screen you would like to share.

Note: the controls will sometimes auto-hide, so you may have to 'mouse-over' the bottom of the screen

Additional Zoom Controls

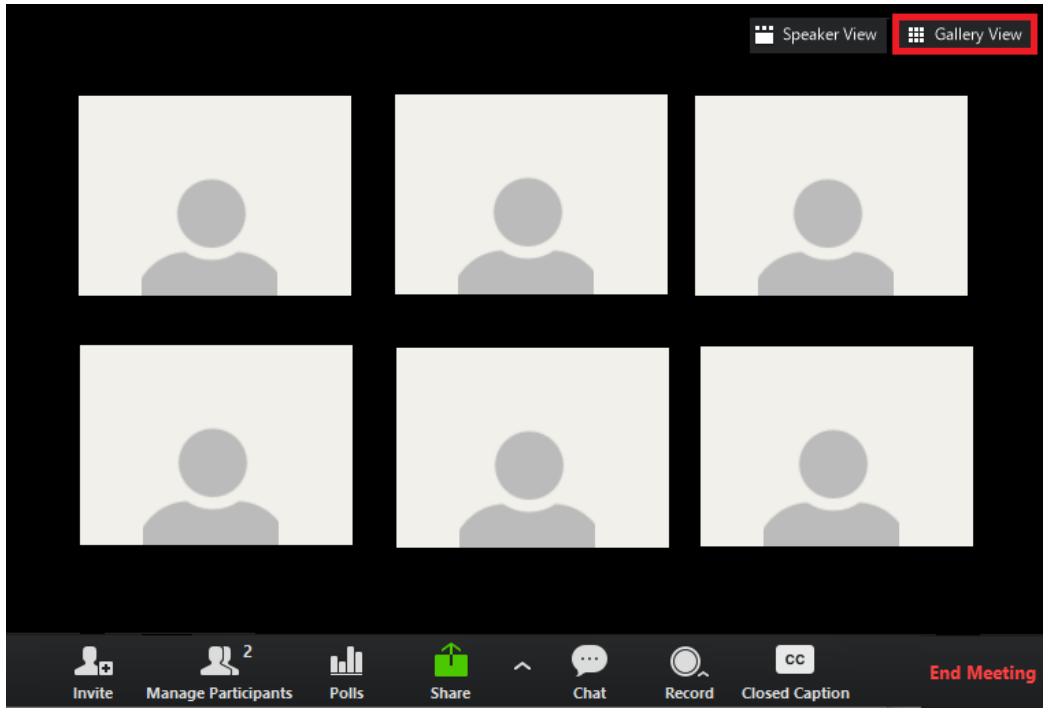
Closed Captioning: To enable, click the closed captioning icon and choose "show subtitles"



Reactions: Allows you to 'react' using emojis (ie thumbs up, happy face, clap). Any Reactions you choose will show up in your individual picture window. Reactions are different than the non-verbal feedback icons. See next slide for details.

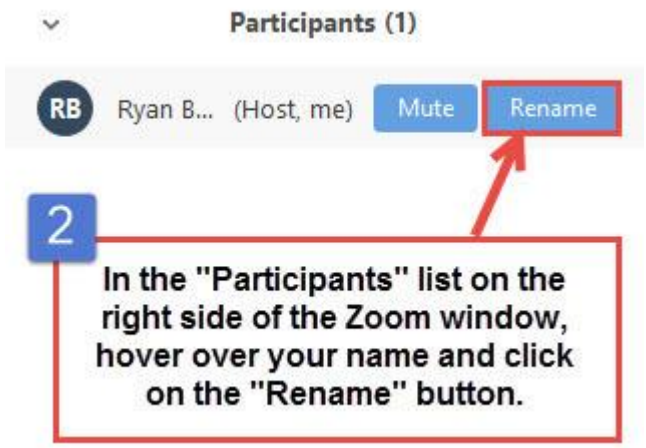
Additional Chat Controls

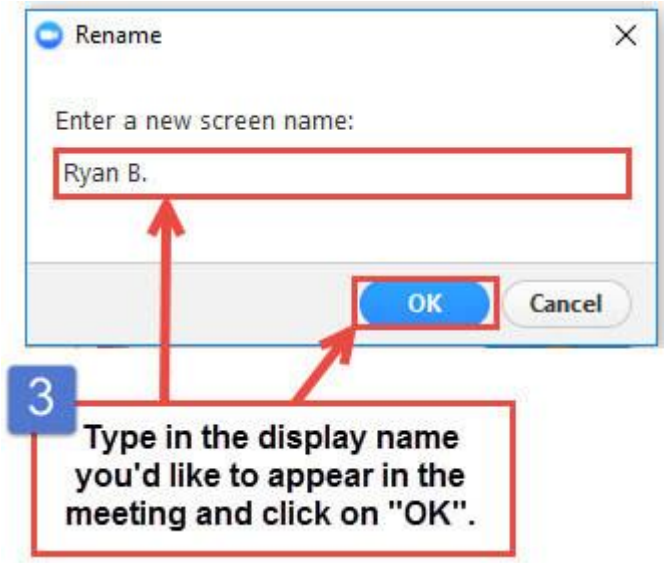
Viewing Options: In the upper right hand corner you can change the layout based on your viewing preference.



Additional Chat Controls

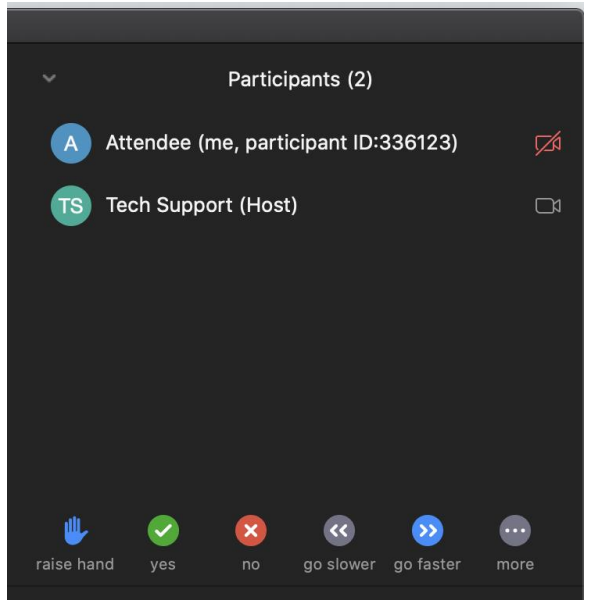
Changing Your Name In Zoom:





Zoom Nonverbal Feedback

Nonverbal Feedback: To enable, click your 'participants' button and locate the nonverbal buttons at the bottom of the breakout window.



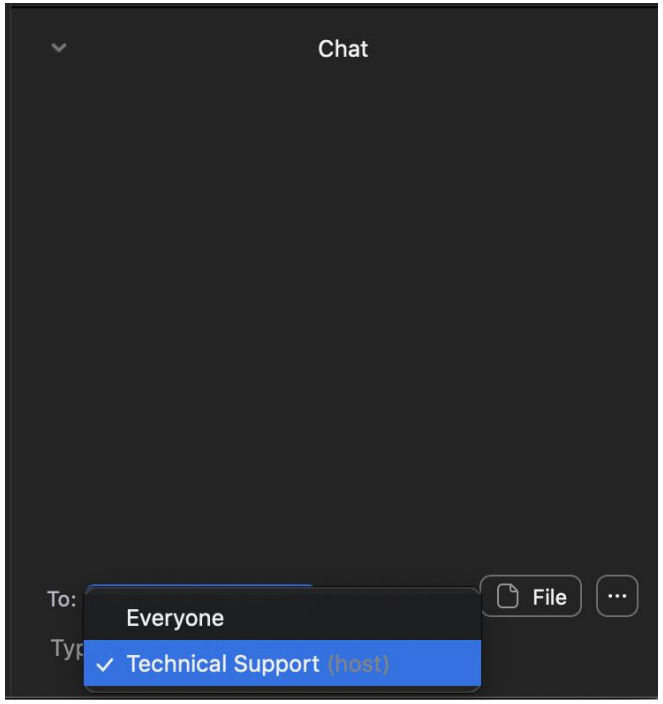
Raise Hand: Simply click the raise hand icon and our moderators will be notified. Your hand will stay raised until your question has been addressed.

Yes/No: When asked a simply question, you can click the Yes or No icons to answer.

Go Slower/Faster: During a presentation you can ask the presenter to go faster or slower based on your experience.

Additional Chat Controls

Chat Feature: Once you opened up the chat feature, you can chat with the host, everyone, or send a private chat. See below for a screenshot example.

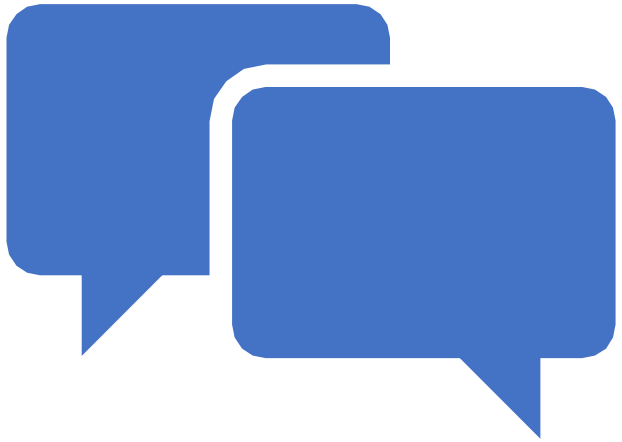


Everyone: Will broadcast your chat to everyone in the room

Host: Will only broadcast your message to the meeting host

Private: You can select an individual to chat with by selecting their name. Your chat will be sent as private and you will see a (private) next to the chat.

Onsite Technical Support During Meetings

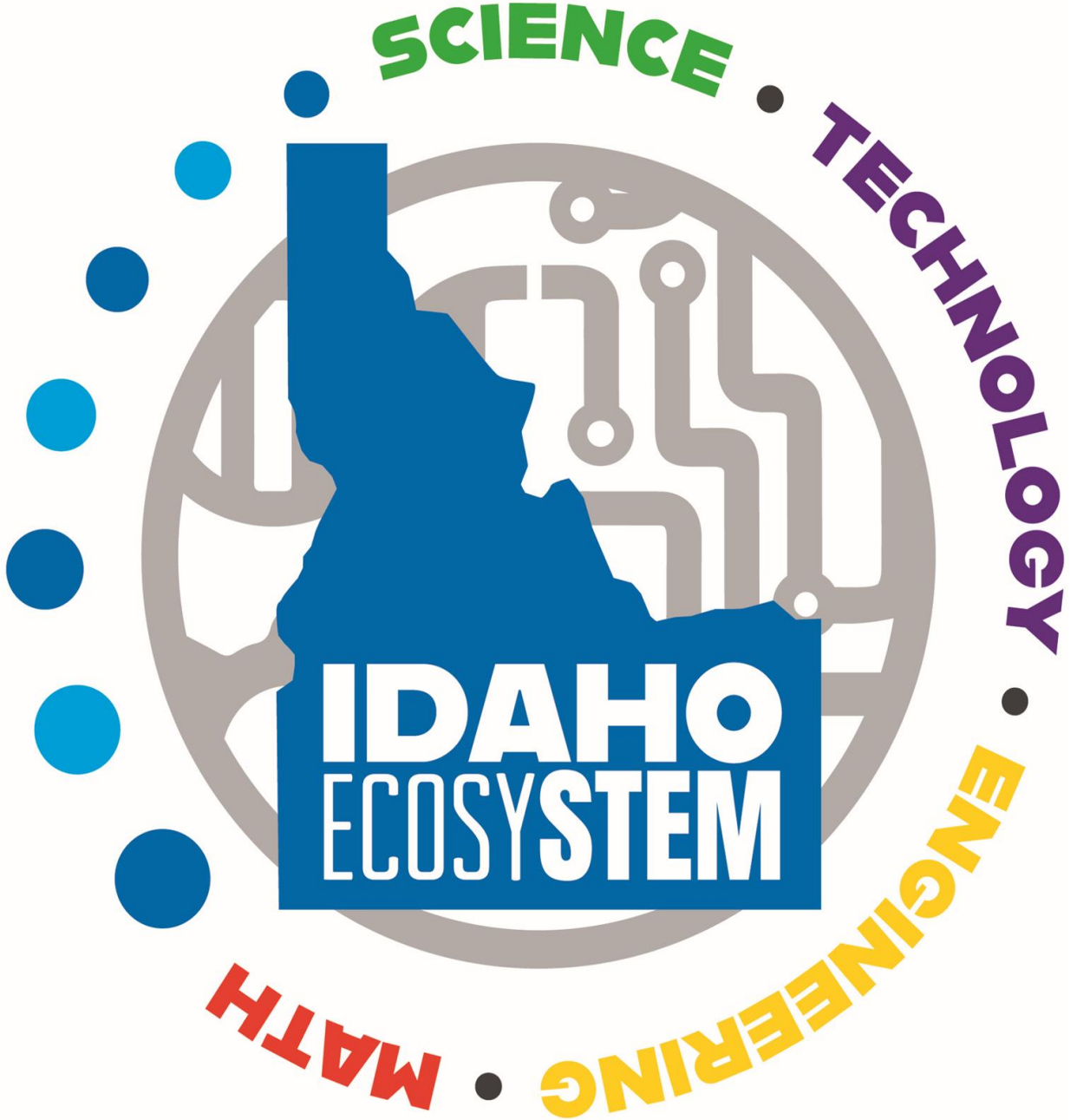


Technical support: Support moderators will be on hand during the meetings and can be accessed through the chat feature. Look for the moderators with "Tech Support" in their name. For all additional technical support questions please call **(208) 376-0464**.

For more information regarding this event please visit the STEM Ecosystem website

Meeting Norms

- We participate as equals with shared responsibility for the outcomes
- We communicate openly, honestly, and respectfully
- We listen as allies
- We stick to the agenda
- We have no hidden disagreements or questions; if we disagree, we do so with grace and tact
- We help each other learn
- We show up on time and prepared



ICE BREAKER

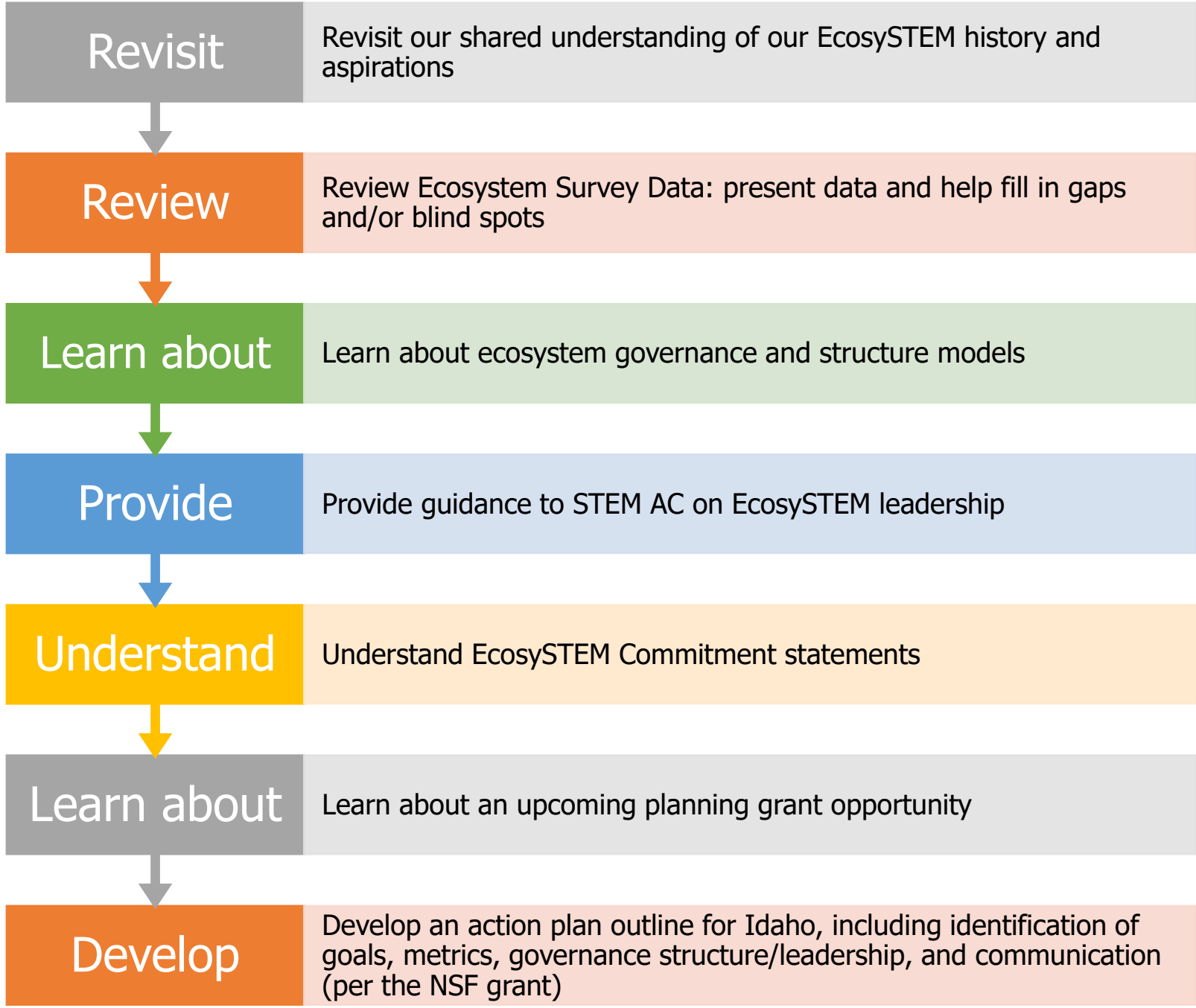
Go to Slido.com and enter code #36599

1) If 2020 was a Halloween costume, what would it be?

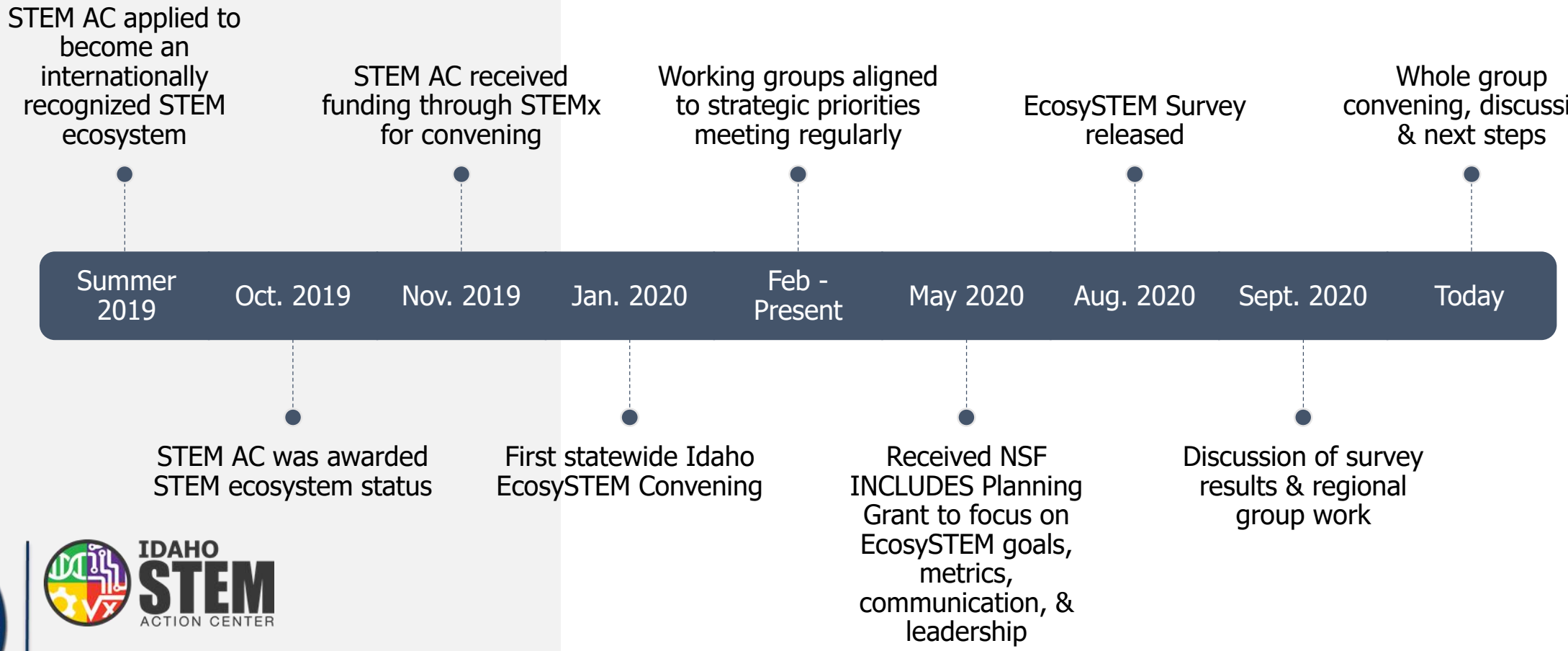
Go to Slido.com and enter code #63115

2) What is your favorite winter activity?

Intended Outcomes



Idaho EcosySTEM Timeline & Overview



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Framing the Goal of the Meeting

What you told us that you hope the Idaho STEM Ecosystem can do for you, your organization, and/or your region

- Networking with other STEM educators and professionals
- Funding for STEM opportunities
- Stronger connections between in and out of school education opportunities
- Stronger connections between PK12 education and higher education/career opportunities
- Discussion and work related to policy and governance

Think Make Create Trailer Project

Think Make Create LABS

Regional updates/bright spots

Maker Fellows

Makers + Mentors NETWORK

This Is STEM in Spanish

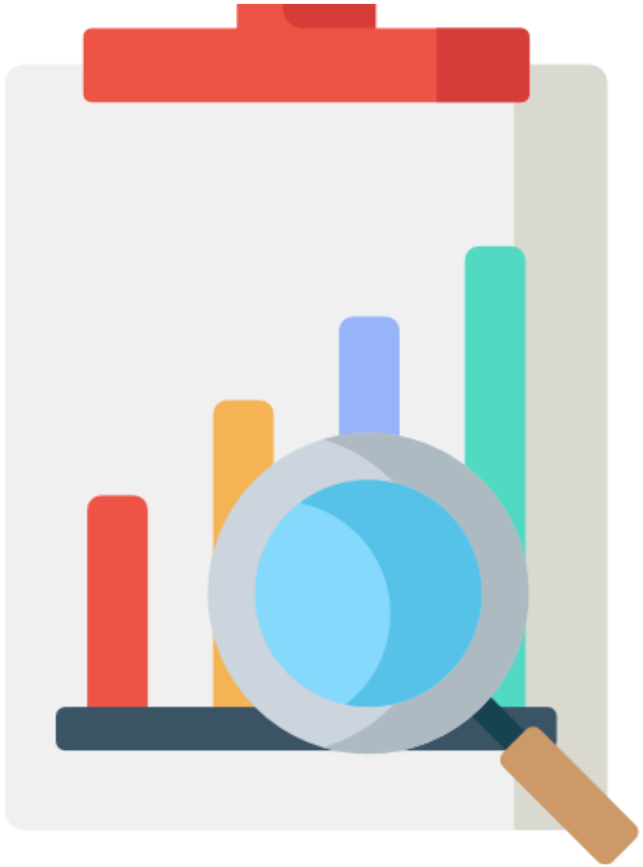
Boise Startup Week

Short Term Wins!!

What have we accomplished?

https://padlet.com/crispingravatt/cg4hbnu0jlh29uea

SURVEY DATA PRESENTATION



Statewide Quantitative

- Note: Next steps are focus groups & interviews – more info coming soon

Who gave input?

September

Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Statewide
3%	10%	42%	10%	15%	14%	6%

October

Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Statewide
3%	11%	33%	19%	17%	12%	4%

In which geographic region is your organization located?

Who gave input?

Which geographic region(s) does your organization serve?

September

Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Statewide	Other
2%	7%	21%	12%	15%	14%	36%	4%

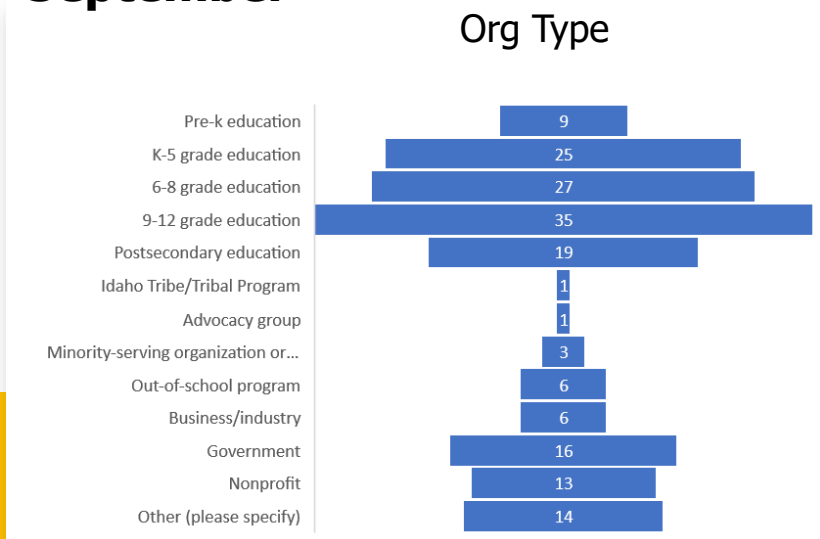
October

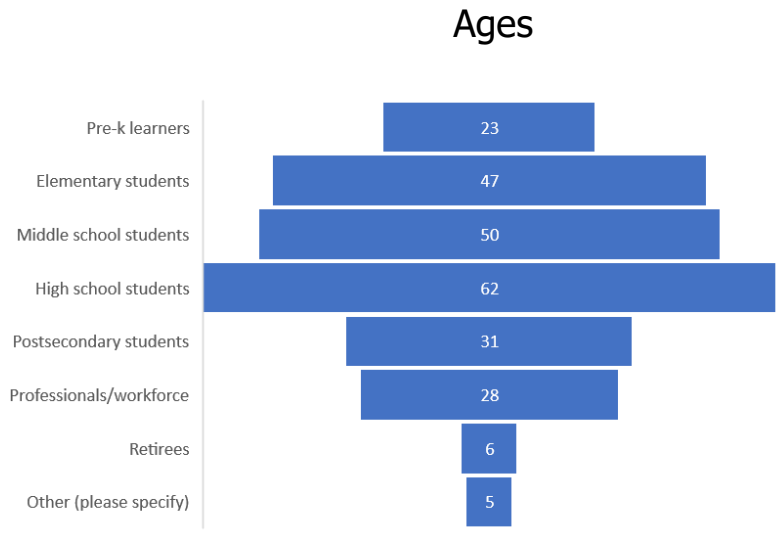
Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Statewide	Other
2%	9%	19%	18%	17%	16%	32%	6%

Who gave input?

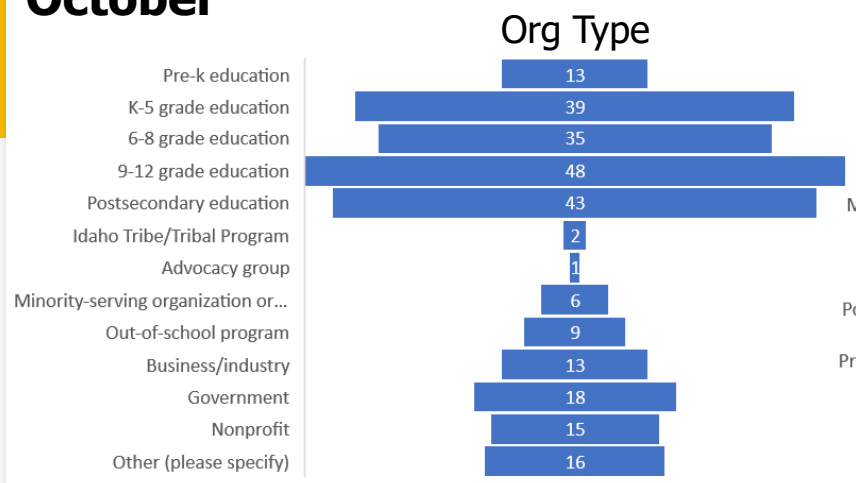
Which description best fits your organization?

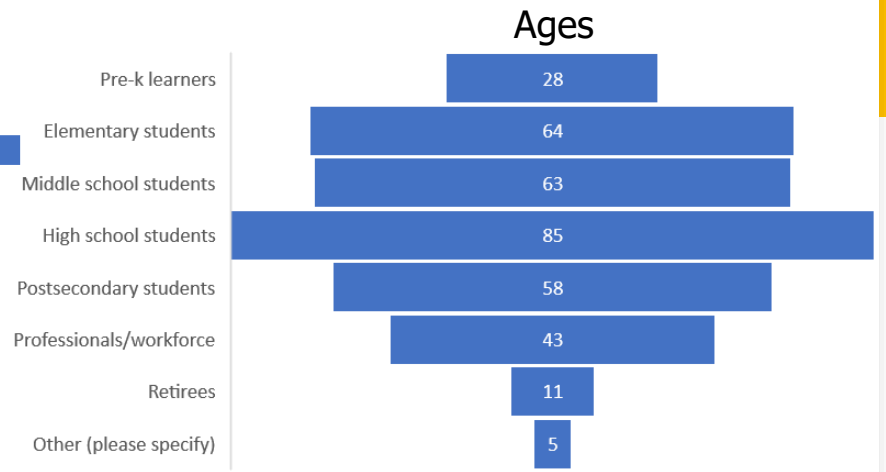
September





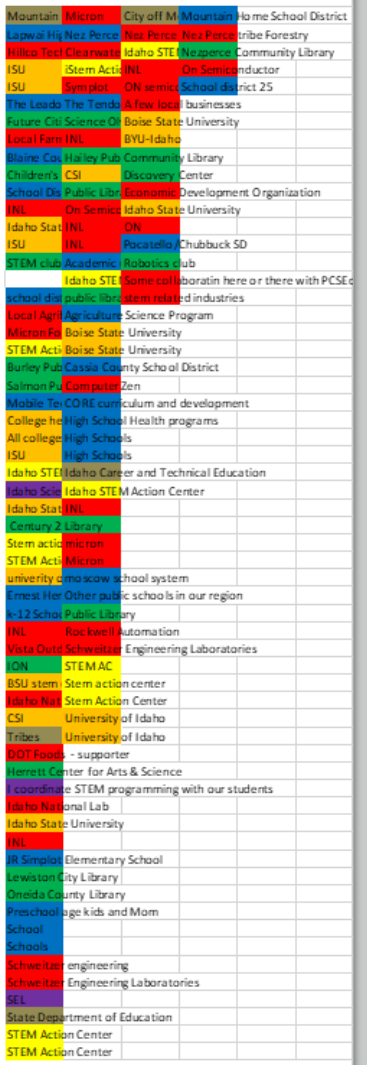
October





Strongest STEM supporters or implementers in your community

Industry	33%
Higher ed	17%
STEM AC	8%
OoS	19%
School	14%
Other	3%
Govt	5%



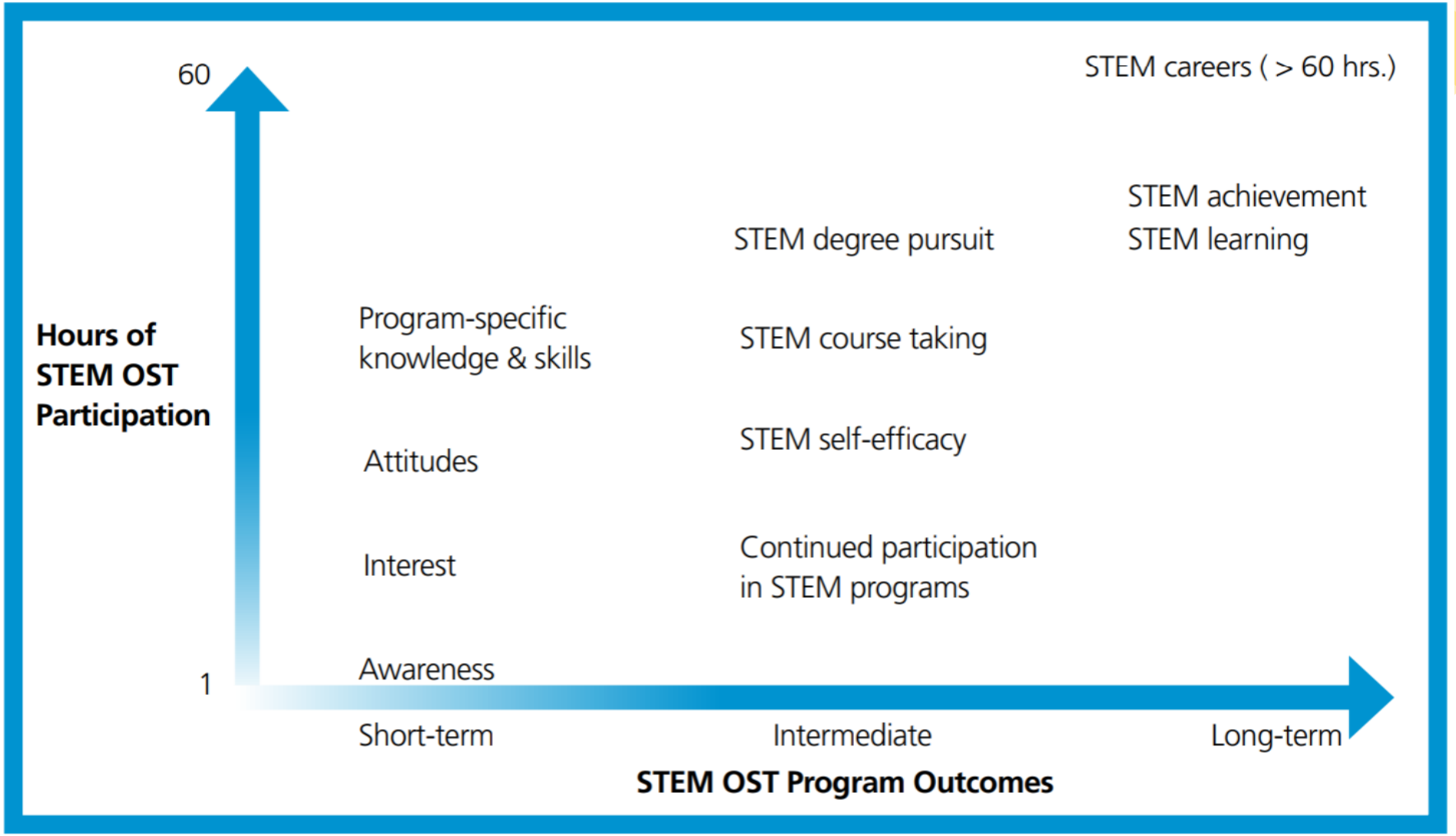


Figure 3. Relationship Between STEM OST Program Duration and Program Outcomes

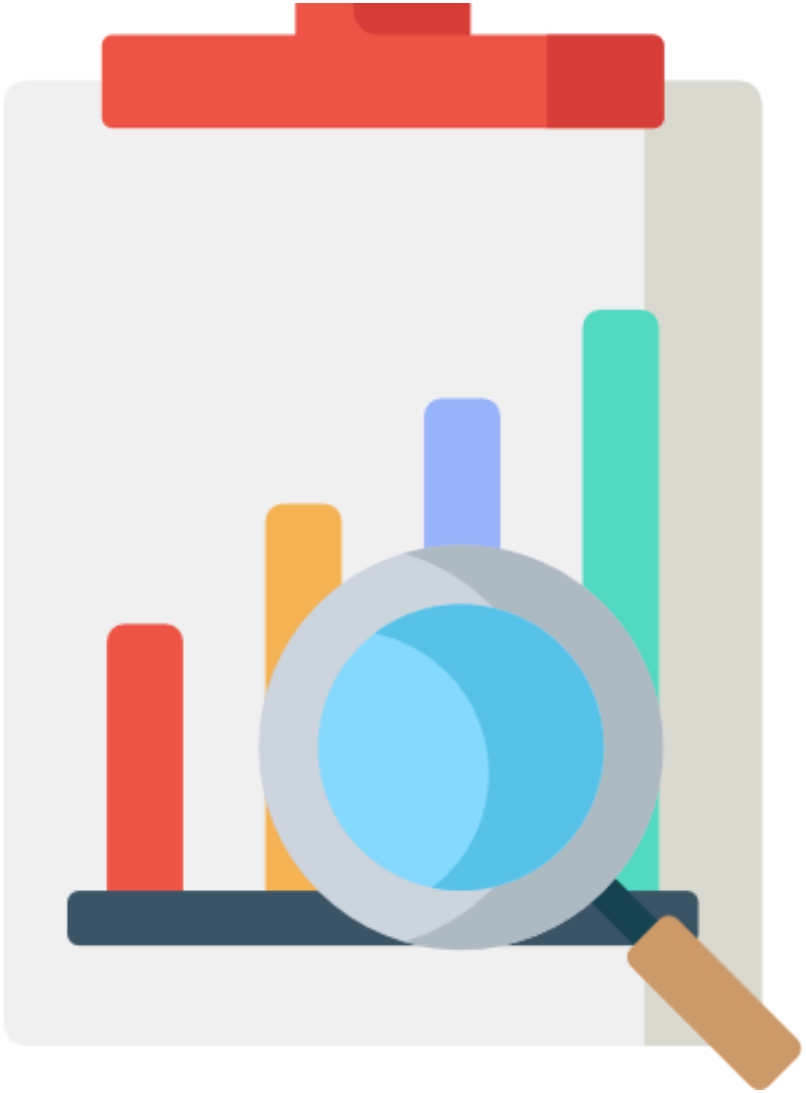
My community knows what STEM **means**.	My community shows **interest** in STEM.	My community **values** STEM skills.	STEM **careers** are available in my community.	My community understands that STEM is important to its **long-term** economic health and prosperity.
3.90	3.91	4.02	4.01	3.58
78.01% (-0.84)	78.28% (-1.91)	80.40% (-1.33)	80.13% (+0.51)	71.60% (-1.80)
0.88	0.85	0.88	0.92	0.95

My community has available **infrastructure** to support STEM opportunities .	My community has **technology** available to support STEM opportunities.	My community has **funding** available to support STEM opportunities.	My community has **human power** available to support STEM opportunities.	My community has **leadership** available to support STEM opportunities.
3.52	3.51	3.17	3.57	3.66
70.33% (-0.25)	70.20% (-0.67)	63.36% (-1.35)	71.39% (-0.73)	73.20% (-1.36)
0.98	0.94	1.06	0.92	0.90

SURVEY DATA PRESENTATION

Regional Qualitative

-Data overview of highlights from open-ended/list responses analyzed by region (1&2; 3&4; 5&6)



Defining Community

Regions 1 & 2

- Rural
- Remote
- Agricultural
- Tribal presence
- Strong connections to land
- Mixed industry, largely featuring forestry & agriculture
- Divides

Regions 3 & 4

- Statewide/regional-big, diverse population
- Specific industry focus/gov agencies
- Local-peripheral rural communities
- Hispanic populations
- Low SES populations

Regions 5 & 6

- Rural
- Remote
- Agricultural
- Hispanic/Indigenous populations
- Socioeconomic dividers create/reinforce educational divides

Resources

Regions 1 & 2

Available

- Specific programs
- Higher education networks

Missing

- Funding
- Coordination; Connection between industry & education
- Interest & awareness, especially for families

Regions 3 & 4

Available

- Volunteers
- Funding
- Training Operations
- Venues

Missing

- Ongoing funding
- Staffing
- Resources
- Leadership
- Access & inequity
- Awareness
- Training
- Time

Regions 5 & 6

Available

- Industry funding support & volunteer expertise
- University student and professional volunteers
- Clubs/extracurriculars

Missing

- Leadership
- Additional human power
- Connection & communication strategies
- Funding

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Partnering with Others

Regions 1 & 2

- Specific programs or events
- Shared resources
- Funding
- Limited/none

Regions 3 & 4

- Events
- Trainings
- Outreach & Collaborations
- Provide volunteers and/or mentors
- Share resources
- Provide funding

Regions 5 & 6

- Events
- Extracurriculars
- Funding
- Volunteers
- Limited/None

Achievements

Regions 1 & 2

- Specific programs
- Placemaking (i.e. makerspace)

Regions 3 & 4

- Connect students to learning outside the "classroom"
- Offer trainings
- Host events
- Increase interest in STEM
- Received grants/funding
- Now offer CS
- Awarding more STEM/CS degrees
- Increase outreach efforts

Regions 5 & 6

- Very successful events
- Establishing new competition teams
- ISU invests in STEM

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Measures of Success

Regions 1 & 2

- Headcount
- Surveys
- Fluency in program materials

Regions 3 & 4

- Surveys
- Participation counts
- Measure/track GO ON rates
- Number of partnerships
- Funding received
- Outreach activities
- Resources provided

Regions 5 & 6

- Headcount/Enrollment
- Surveys
- Certification/GO ON rate/other standardized metrics

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Regulatory/Policy Needs

Regions 1 & 2

Organization

- Guidance from policymakers
- Unknown

Community

- Industry guidance
- Internet access

Regions 3 & 4

Organization

- Unknown
- State rules/legislation
- School policies
- Liability
- Accreditation

Community

- Industry guidance
- Internet access

Regions 5 & 6

Organization

- Guidance from policymakers
- Unknown

Community

- Industry guidance
- Internet access

Barriers to Success

Regions 1 & 2

- Funding
- Cultural barriers
- Lack of devices/tech support

Regions 3 & 4

- Lack of funding
- Lack of equitable access
- COVID-19
- Lack of awareness/outreach needed
- Lack of time
- Policies

Regions 5 & 6

- Barriers to participation (transportation, language, registration, fees, etc.)
- Cultural attitudes toward STEM
- Geography

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Equity Approaches & Needs

Regions 1 & 2

Approach Taken

- Target demographics
- Reduce barriers to entry (free to participate, hotspots, etc.)

Supports Needed

- Funding
- Communication

Regions 3 & 4

Approach Taken

- Programs target URPs
- Programs open to all/inclusive
- Targeted outreach to URPs
- Partnerships
- None/unknown
- Use data to make decisions
- Targeted funding
- Diversity

Supports Needed

- Funding
- Training
- Diversity
- Support
- Unsure/unknown

Regions 5 & 6

Approach Taken

- Free/reduced cost programming
- Partnerships
- Population is largely underrepresented

Supports Needed

- Funding
- Communication

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Ideas for Feedback

From your input at the September meetings and educator listening sessions

Would you participate in regional meetings related to STEM education, workforce, and other STEM topics in your region?

STEM AC may be able to support regional efforts to connect partners in education, industry, government, out-of-school, and other organizations and individuals for conversations about STEM education, economy, and workforce development.

Educator Feedback

- Travel is a concern
- Interest in getting new ideas/resources for curriculum, guest speakers, etc
- Would need to be focused- specific STEM topics?
- Ensure primary education is represented

Would you utilize a directory of STEM organizations in the state of Idaho?

STEM AC may be able to create and maintain a directory of organizations and individuals dedicated to supporting STEM education in Idaho. Directory may be print or virtual, and may include primary contact names, emails, phone numbers, organization mission, and other details as available.

Educator Feedback

- Yes, especially for educators outside of Treasure Valley
- Should be online and easy to use
- List what resources could offer (field trips, mentors, kits, etc)

Should we invite parents and/or student organizations to be a part of the decision making and strategic planning groups for the Idaho STEM Ecosystem initiative?

What are the best ways they could be involved?

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Other Educator Feedback

- Need more resources and focus on early childhood and primary education
- Teaching is more time-consuming due to COVID-19 complications
- Difficulties with COVID-19 and shared classroom materials
- Should try to connect STEM and literacy
- Need for more buy-in with administrators; data i.e. student achievement
- Direct email is the best way to communicate (not through district)

Other Ideas from September Regional Meetings

- Need more rural data: awareness, knowledge, resources, programs, etc.
- Need to include resource management agencies/organizations (F&G, USFS, BLM, etc.)
- Should include indigenous ways of knowing as related to STEM
- Consider hosting an ecosystem-wide equity training
- Regional "techies" to support families
- Regular networking opportunities

STEM AC's EcosySTEM Commitment:

"Idaho STEM Action Center commits to serving as the backbone organization of the Idaho STEM EcosySTEM and through this work will bring together partners from across the state to work towards an equitable STEM education plan for PreK-20."

EcosySTEM Commitments

Commitments are **specific** and **measurable** actions taken by community partners in support of achieving the EcosySTEM aspiration. Commitments can be large or small and do not necessarily require large investments or funding. They should represent new work or be additive to existing work, such as expanding a program to a new audience or significantly growing the reach of a program.

For our EcosySTEM, a commitment may fall into one or more of these categories:

Education	Partnerships	Equity	EcosySTEM Infrastructure

Why EcosySTEM Commitments Matter

Help demonstrate our collective work for the legislative session, for grants, and to potential donors.

Please consider submitting your organizations commitment by Dec. 20th to **Erica.Compton@STEM.Idaho.gov**

Commitments will be made publicly available in January 2021 on the EcosySTEM website.

EcosySTEM Commitment Categories & Examples

Education - How will your organization support the EcosySTEM's aspiration?

- Ex 1: We will host/sponsor three camps on coding for a total of 100 girls during the summer of 2021.
- Ex 2: We will provide a total of 100 hours for employees to volunteer as mentors or guest speakers in local schools.
- Ex 3: We will increase the number of undeserved students in STEM education by 15% in 2021.

EcosySTEM Commitment Categories & Examples

Partnerships - How will your organization develop new, or enhance existing, collaborative opportunities in your community, region, or the state?

Ex 1: We will develop a partnership with a local STEM business to provide classroom mentors for 10 elementary educators.

Ex 2: We will continue to partner with five school districts to implement STEM specific initiatives, impacting over 3000 elementary students by summer 2021.

EcosySTEM Commitment Categories & Examples

Equity - How will your organization work to close the gaps that exist in STEM education and workforce development?

Ex 1: We will increase the number of undeserved students in STEM education by 15% in 2021.

Ex 2: We will offer community engagement activities for families in three rural communities in spring of 2021 that will impact 95 elementary students.

EcosySTEM Commitment Categories & Examples

EcosySTEM Infrastructure - How will your organization support the governing structure development of the Idaho STEM EcosySTEM?	
Ex 1: A representative from our organization will serve on the EcosySTEM leadership board for one year.	Ex 2: We will host an EcosySTEM convening in spring 2021.

Please consider sending us your organization's EcosySTEM commitment statement by Dec 20, 2020

Statement can be sent to Erica.Compton@STEM.Idaho.gov

Break

See you in 5 minutes!

Guiding Aspirational Statement from January Convening

- *Original statement drafted at January Convening*: The Idaho STEM Ecosystem will foster the integration of STEM in the educational experiences of all Idahoans, leading to the creation of problem-solvers and critical thinkers who will sustain and lead the Idaho economy of the future.

- *Updated with your feedback from September*: **The Idaho EcosySTEM fosters the integration of STEM experiences for Idahoans, creating problem-solvers and critical thinkers who will sustain and lead our economy.**

Strategic Priorities and the Formation of Working Groups

1

Educator Preparation, Training & Support – Focusing on finding new and better ways to prepare and support PreK-20 educators in STEM education. Building a database of available professional development opportunities for formal and informal educators in Idaho and working on developing materials to showcase the value of implementing STEM education in all disciplines.

2

Career Pathways & Exposure – Focusing on further developing clear STEM career pathways for Idaho's youth. Building a database of resources to broaden awareness and assist in career pathways and exposure. The intent is to share the database with the larger asset mapping project.

3

Outreach & Communications – Focused on external communication mechanisms. Provides guidance and insight on newsletter and website as primary mechanism for communication to partners. Provided feedback bright spots to highlight members. Reviewed and provided guidance on survey data.

4

Access and Equity – Recently completed an educator survey to develop "persona mapping" of underserved student populations. Launching survey shortly and will share out results. Our goal is to identify barriers to access and develop strategies to overcome.

Welcome TIES Leadership!!

- Ecosystem development, governance, and structure
- Leadership models, member roles and duties, etc.

Guidance: Look at the Landscape

Find your assets to build on early. Making connections that are almost there will give you something to talk about and build momentum. Also, identify the gaps that need to be addressed. This work will create longer-term changes in communities that produce thriving economies.

Guidance: Planning is Critical

Designing your bigger vision for the work is important. It might take you a while to get there, but understanding the challenges you want to solve and identifying benchmarks to get there will give you a map when things get messy.

Guidance: Systems Work

It can take a while to develop new systems that people use to share information, collaborate and track progress, but it's worth the time invested. Mechanisms to create and track the work will allow you to scale.

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Guidance:
Track Your Progress

Measurement can be tricky, especially in the beginning when things are messy, however, it can provide a historical reference of progress when new partners and funders start to notice you. Find things you can track and review metrics consistently.

Guidance: Ask for Help and Elevate Community Leaders

Recruit experts in the community to lead work groups or act as ecosystem champions. By elevating existing talent, you 'work smarter," making them look good, getting quality work done, and creating another arm of publicity to advertise the work.

Guidance: Celebrate Success

No success is too small to get excited about. Celebrate your partners, convene and communicate often. Keep your partners coming back.

WHY GOVERNANCE MATTERS

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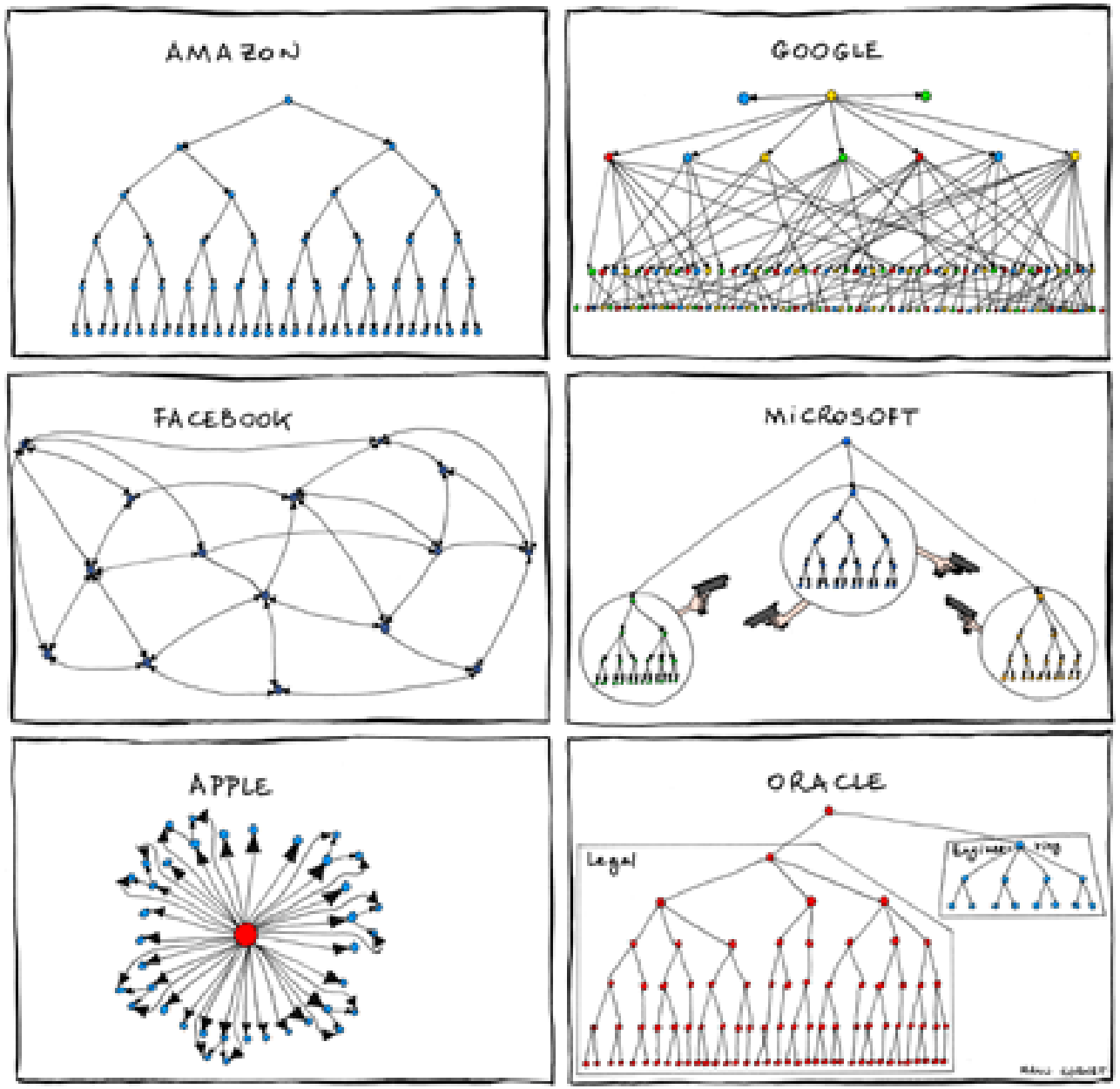
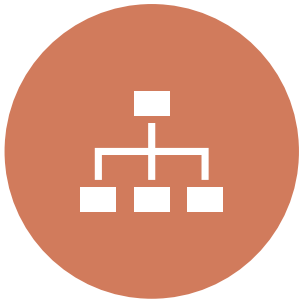


Match the structure with the culture of the community to get the work done!

Drawings available under a Creative Commons license: Credit: "Manu Cornet" www.bonkersworld.net.

Provides a clear understanding of the work, member roles and responsibilities



Provides transparency in the work (what is happening, how and why; who to communicate with and for what)

Enables action and impact in community, as well as press about the action

Creates grounding for innovation, sustainability and funding

IDAHO ECOSYSTEM

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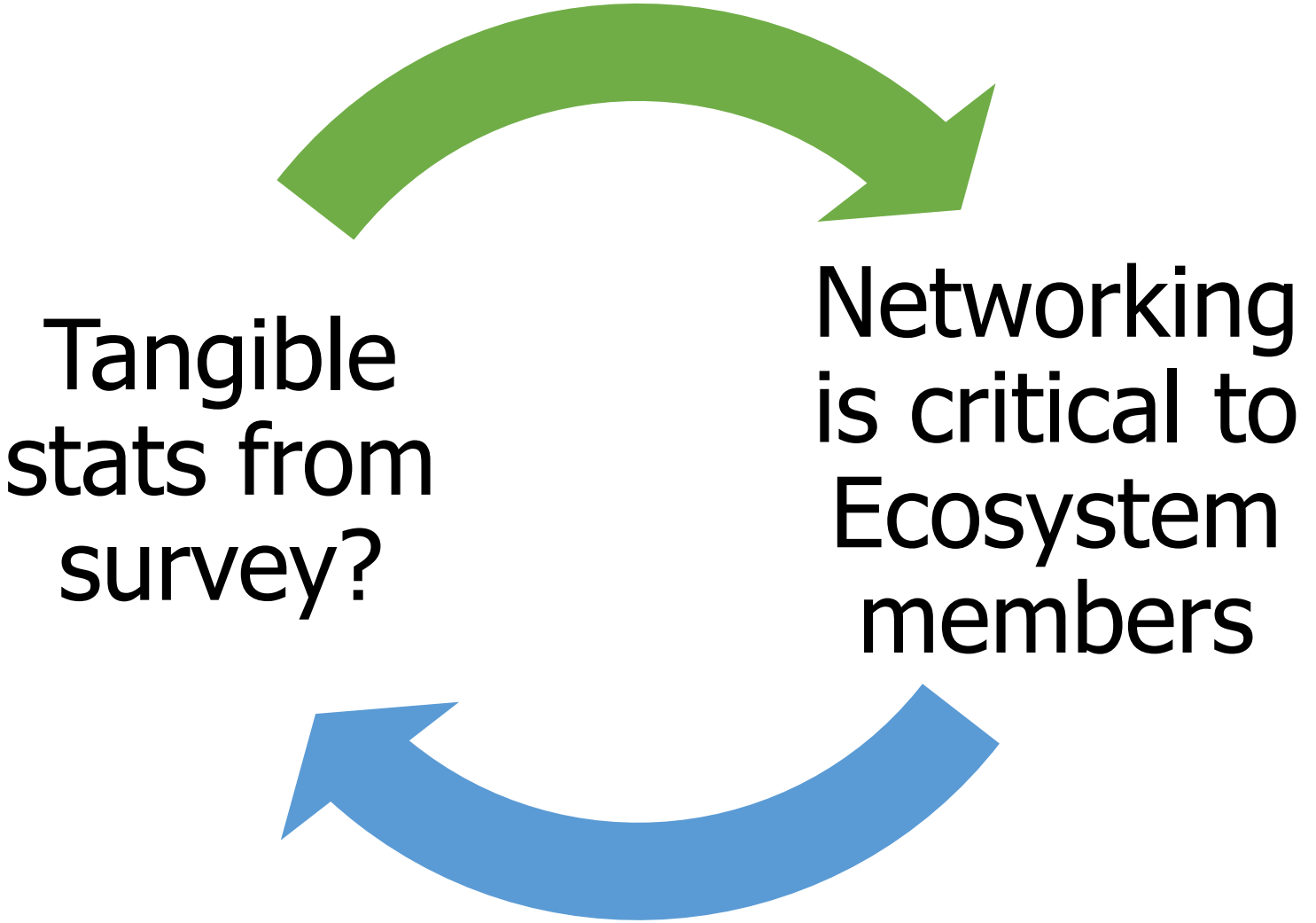
SURVEY FINDINGS TO INFORM STRUCTURE



OTHER STATEWIDE MODELS

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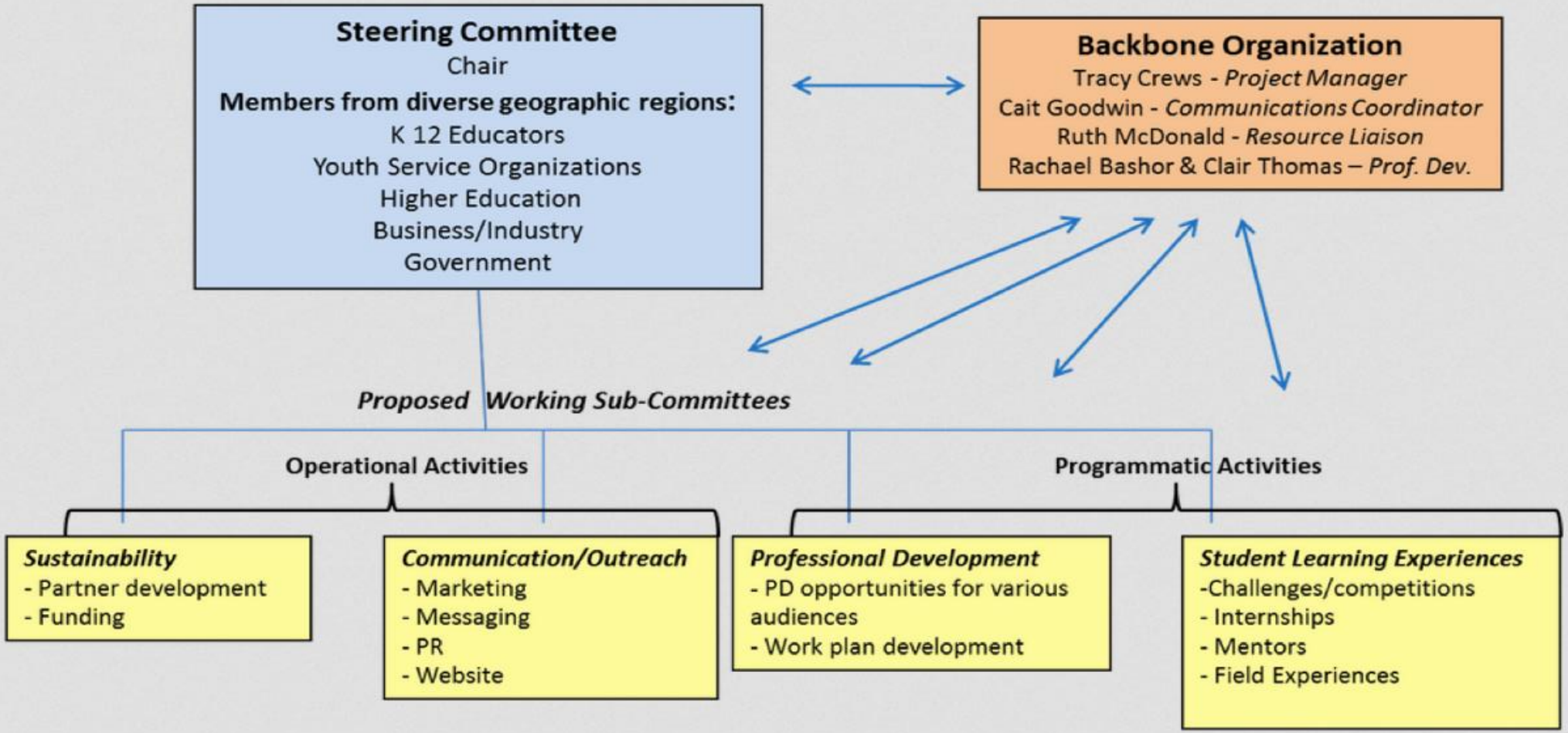
Oregon Coast Regional STEM Hub Structure



Last updated: May 27, 2014

OREGON'S STATEWIDE REGIONAL STEM HUB NETWORK

- 13 Regional STEM Hubs in Oregon organized under the Department of Education to build regional connections across K-12, families, career and technical education partners, higher education, community-based organizations, and industry

- Identify needs and assets within a regional community

- Collectively develop strategies to fill STEM Learning Gaps and create shared social and economic prosperity at the regional level

- Backbone organization provides opportunities for regional hubs to learn from each other with quarterly meetings.

- Backbone organization provides professional development to support regional leaders

PENNSYLVANIA STATEWIDE STEM ECOSYSTEM

- **Leadership Team meets every Thursday morning.**
- **A small Workgroup meets weekly, to plan the Thursday meetings and other projects.**
- **Current/immediate projects:**
  - Statewide PBS partnership
  - Data collection/needs assessment
  - Virtual conference
  - INCLUDES planning grant

- Pennsylvania has 8 "formal" and 6 informal STEM Ecosystems. Together with the PA Department of Education, we have formed the "Pennsylvania Statewide STEM Ecosystem."

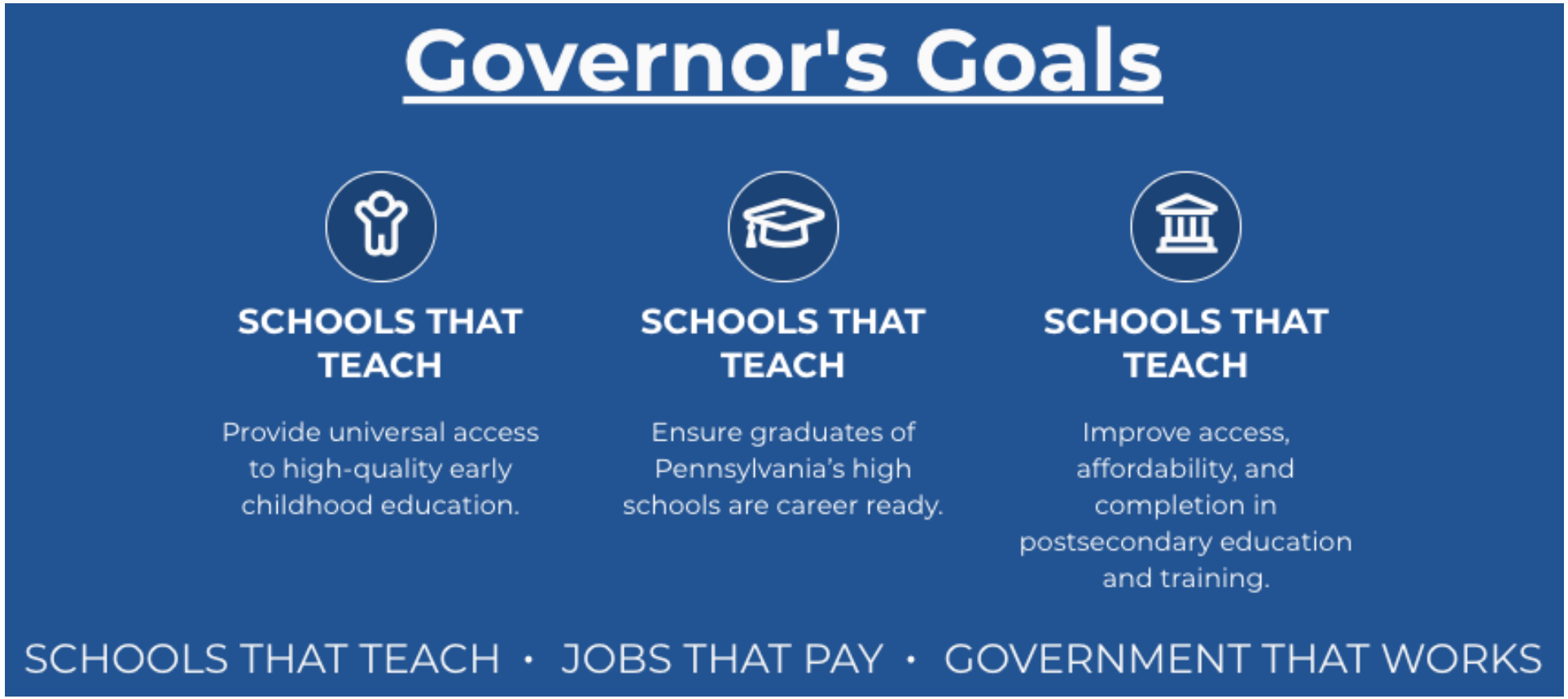
Vision: All Pennsylvanians will have access to quality STEM education and career pathways, and become tomorrow's leaders, influencers, and problem-solvers.

•

Mission: Through purposeful cooperation and collaboration, all Pennsylvania STEM Ecosystems will be aware of, will improve upon, and will provide equitable access to quality STEM education

STEM Ecosystems in Pennsylvania

"There are abundant opportunities available for careers in STEM fields, and we know that students interested in these fields deserve access to training programs and cooperatives that can help them develop needed skills and knowledge. Ecosystems bring STEM education to communities across the commonwealth, providing students from all areas with the resources and tools they need to pursue an interest in science and technology." - Secretary of Education Pedro A. Rivera



BEST PRACTICES TO CONSIDER

Other Things to Consider

Look at your Landscape – Identify assets and leaders that will help your Ecosystem build momentum. Ask for help and elevate your leaders. Work together on strategies to fill gaps and needs within the community.

Track your Progress – Mechanisms to track progress will allow you to understand what works, scale and attract funding and media.

Plan for the Larger Vision - Understand that both short-and-long-term work might be required. Systems help you get there when the vision gets foggy.

Celebrate Success – No success is too small. Get excited! This is hard work and it's important all progress and partner contributions are celebrated!

End of morning session

Reminder that we will come back together at 2pm MT/1pm PT