



THE FORMATION OF THE IDAHO STEM ECOSYSTEM

Founding ideas, vision and plans for action

January 2020 - DRAFT

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Background and Introduction

In January 2020, as hundreds of students tinkered with robots, built balancing tripods, and grew excited about STEM, Idaho Governor Brad Little stood on the fourth floor of the Capitol building and said that the future demands a STEM-literate workforce. Speaking at the annual STEM Matters! Event at the Capitol, Governor Little reiterated the importance of STEM for the future of Idaho's economy. He explained that the state is expecting gains of more than 19,000 STEM jobs by 2026 and that in 2019 alone, there were more than 7,600 unfilled STEM-related positions, resulting in significant losses in personal income to Idahoans. The number of unfilled STEM jobs has nearly doubled in the last three years.¹

Little's comments are underscored in reports from the Idaho Department of Labor, which include projections for an increased demand for STEM jobs in the next decade. The Idaho Department of Labor has already confirmed that the current need for STEM-trained workers is far greater than the existing supply.² In a statewide analysis of STEM positions in Idaho, including "help wanted ads," the Idaho Department of Labor released a report in October 2019, outlining the length of time STEM jobs remain unfilled as well as surveying the role that those jobs fill in the economy:

- Idaho has more than 82,000 core STEM and STEM-related occupations statewide – about 12 percent of total state employment.
- Half of these STEM occupations fall under the STEM-related health care subdomain; the majority of the remainder are computer science-related.
- The demand for STEM occupations is steady despite tight labor market conditions. Total number of available STEM jobs have held constant since 2015, with the STEM jobs remaining unfilled for far longer than the non-STEM positions.

¹Idaho STEM Action Center. January 2020. "Idaho's unfilled STEM double in three years."

https://stem.idaho.gov/wp-content/uploads/Press-Releases/IdahosUnfilledStemJobsRising_FINAL.pdf

² Idaho Department of Labor, "Idaho@Work." <<https://idahoatwork.com/2019/10/24/hiring-challenges-point-to-a-need-for-more-stem-workers-in-idaho/#more-10081>>

Idaho's situation with a shortage of STEM-trained workers and a leaky STEM pipeline is not unique. Numerous states are facing similar challenges and, like Idaho, have chosen a comprehensive, collaborative approach with the formation of STEM Ecosystems.

JOINING THE STEM LEARNING ECOSYSTEMS GLOBAL INITIATIVE

Idaho applied to and was officially accepted as a member of the STEM Learning Ecosystem Community of Practice in 2019, joining with 88 other STEM ecosystems from across the country and the world. The Idaho STEM Ecosystem was accepted in a highly competitive process with 70 other communities expressing interest; however, only four ecosystems were accepted into the initiative. The Idaho STEM Action Center, with a mission of addressing talent shortages and creating a stronger Idaho with STEM learning opportunities for all, coordinated Idaho's application process with the STEM Learning Ecosystems.

Now, as part the STEM Learning Ecosystems Community of Practice, Idaho is part of a group that shares strategies and resources with each other for creating and building a STEM workforce pipeline, training STEM teachers, and building the type of infrastructure that will allow for diverse partners to work together for shared goals and needs.

In its first year as a member of the STEM Learning Ecosystem Community of Practice, the Idaho STEM Ecosystem attended convenings of the global initiative to learn how other states and regions approach their work as ecosystems.

DESIGNING THE IDAHO STEM ECOSYSTEM

As a member of the STEM Learning Ecosystems Community of Practice, Idaho was able to work with the Teaching Institute for Excellence in STEM (TIES), the leaders of the initiative, to support the development and design of a STEM Learning Ecosystem in Idaho. That process began in November/December 2019 with interviews of partners, summarized in Appendix C.

The next phase of development included an in-person design studio, held on January 16, 2020, at Boise State University with 65 statewide STEM partners in attendance. The full attendance list as well as the meeting agenda are included as Appendices A and B. Overall, those who attended the January design studio represent a wide cross-section of Idaho, with representatives coming from business, post-secondary institutions, K-12 education, government, philanthropy, after-school, museums, native tribes, and from all regions of the state.

Those attending this first design studio developed aspirational/visioning statements, with a set of priorities, for the Idaho STEM Ecosystem. A total of five topical work groups were formed with notes from each group located in Appendix D. The work groups are: Communications & Public Awareness; Career Pathways & Exposure; Resource Identification & Asset Mapping; Opportunities & Access; and Educator Preparation, Training & Support.

THE ROLE OF THE IDAHO STEM ACTION CENTER

The Idaho STEM Action Center (STEM AC) completed the application to join the STEM Learning Ecosystems Community of Practice and organized the January design studio; however, leaders of the state agency have been clear in stating that their organization cannot lead the statewide STEM Ecosystem alone. STEM AC has said that they would prefer their organization serve as the “backbone” for the Idaho STEM Ecosystem, but that organizations throughout the state would be asked to guide the larger vision and work of the Ecosystem. It is recommended that for long-term success, the Ecosystem should be a collective and collaborative effort.

ASPIRATIONAL AND VISIONING STATEMENTS

Partners in attendance of the January design studio were asked to review, add, and edit aspirations identified by their colleagues during the December pre-meeting interviews. Participants spent time in small groups discussing the key aspirational statements drafted

by their discussion group They then shared this aspiration with the larger group. The following statement and supporting clauses were drafted to combine all small group aspirations as **a draft aspiration** for the Idaho STEM Ecosystem:

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.

Participants determined that the aspirational statement will only be realized with:

- System change;
- Informed collaboration supported with appropriate resources and authentic alignment;
- An intentional effort to ensure that every learner and educator has access to comprehensive career pathways with intentional connections to the needs of business, industry, and community;
- A commitment to addressing opportunity gaps between under-represented populations in STEM, depending on regional need and potentially including: race/ethnicity, location, gender, socioeconomic status, age, and ability with a strong dedication to equity;
- Elevating efficiencies;
- Creating and maintaining avenues of communication among key partners, including education and business and industry, so that collaboration continues and becomes an inherent process;
- Updating and leveraging existing networks including resources and assets;
- Ensuring that no one is isolated, and that communication is transparent for all; and
- Understanding who the engagers and coordinators are statewide and within

ORTHODOXIES AND CONSTRAINTS

Participants were asked to think about the various “constraints,” and “orthodoxies” that could prevent them from realizing their aspirations. Working first in small groups, they then shared their ideas about the various possible constraints and/or orthodoxies that might impede their work together. The participants identified several factors, including predictable ways of thinking and patterns of old behavior that could get in the way of the Idaho STEM Ecosystem realizing success.

Specific identified orthodoxies and constraints were:

Resources and Awareness

- Isolation and not knowing who to talk to about resources and opportunities.
- Resources so educators can be comfortable as facilitators, but don't have to be the expert.
- Resources – not just financial but expertise, time, etc. (listed 6 times)
- How to access STEM partners and resources.
- The belief that a resource is not available. Or that you can't find who to contact.

Equity, equality, and diversity

- Some misunderstandings related to equity, equality, and diversity.
- Little or no recognition of Idaho Tribes.
- Cultural awareness shifts.

Requirements

- State and federal requirements for standards and assessment.

Relationships, attitudes, beliefs

- Lack of transparency, silos, and lack of communication (listed more than 7 times)
- School administrative support for change within classrooms is lacking in some districts (listed more than 4 times).
- Parental attitudes and mindset that school alone educates students.
- Teacher participation, school participation, business/industry partners.
- STEM education is only for future STEM professionals.
- Higher education is not compatible with career and family opportunities in rural communities.
- Underestimating people's capacities for change.
- Traditional education is more valued than nontraditional workforce development training is only for trades.
- STEM requires a lot of "stuff".
- STEM careers are only needed in big cities.
- The economic argument for STEM is compelling, motivating, and positive to all audience members.
- Academic freedom in higher education and its associated lack of uniform standards makes alignment with K-12 impossible.
- Schools are buildings where students explicitly taught by teachers to know and do specific information and tasks.
- Kids can't handle the rigor of the new standards.
- Not looking at the inter connectivity of educational subjects.

Funding

- The cost of creating and adopting standards followed by the even larger cost of rolling out and implementing new standards and developing assessments that match the standards.
- Funding (listed more than 10 times).
- Cost of higher education.
- If you want to try something innovative, go get a federal grant. Institutional funds aren't adequate.

Professional Development

- Professional development – the time and space for all partners to understand, internalize and implement standards and difficulty in finding/attending quality PD to make change happen in the classroom (listed over 9 times).

- Teacher mindset for including STEM as a priority
- Sending 1 faculty member to PD makes the change and brings the ideas back. i.e. it's frivolous to send multiple faculty members to the same PD.

Student Preparedness

- Mismatch between job requirements and new graduate qualifications STEM (listed over 3 times).
- No programming on technology, especially in for early education.
- Pathways from non-cred to credit (bridges back and forth common goal).
- Role of career counselor is trapped in the past.
- Parents not being aware of (or do not know how to support) what is possible for their children's future passion

Infrastructure

- Transportation (listed more than 12 times).
- Broadband access (listed 11 times).
- Geographical location - rural and remote regional challenges (listed 4 times).
- Idaho has localized people groups that are isolated geographically and culturally, making connection and collaboration a challenge. (listed more than 3 times).
- Staffing, location and time / personal capacity (listed more than 5 times).
- Policy challenges such as: policy makers may not always align with the needs and desires of professional educators; climate towards issues of diversity, equity and inclusion; role of government in funding K12 and pre-school education (listed over 5 times).
- Low wages and high cost of living; need 4-year degree to get a livable wage (listed over 3 times).

Teacher Shortage

- Low unemployment makes it hard to retain high-quality educators.
- Teacher shortage for STEM / career connected subjects.
- Wages that value the work of correct educators or bring in those educators.
- Teachers can only live in one lane and not teach new topics specific to CTE.

Access

- Access (listed more than 9 times); specifically: Access to funding for non-cred students (cert. students), Access to STEM opportunities, Access to quality PD educational opportunities within a 2-hour drive; adequate internet access, low income families have even less access.

Institutional Constraints

- We consistently recreate the wheel.
- Old thinking / Mindset (listed over 5 times) ie Funding has always been distributed in this way mentality.
- Not giving all players agency in decisions and pathways.
- Idaho can depend on natural resource extraction for economic growth always has and don't need new tech sectors.
- The belief that technology is the solution to all the issues and problems.
- Don't have time or knowledge to provide STEM education, or do have STEM knowledge but educators don't
- Idaho ranks low in national education statistics and quality (listed 5 times).
- Local taxpayer support of educational initiatives.
- Schools tend to forget that some parents don't work traditional hours.
- Math and science are two separate classes in secondary school. Knowledge is divided into content areas.
- 3 years of math in high school is adequate.

- The way education has been delivered over the 150 years is the way it will continue to be delivered in the future – both “birth” to 12 and post-secondary
- Attention: Larger schools get more attention; Western Idaho gets all the attention
- What worked in education 30-50 years ago worked for me and should work for my kids.
- Community doing STEM that will lead to long-term engagement.

Participants agreed to be mindful of these orthodoxies and constraints but not to be paralyzed by them. They discussed that it is important to understand that they exist and to work around or through them.

PRIORITIES AND IDENTIFICATION OF WORK GROUPS

After discussion about the difference between goals and priorities as well as aspirations and action items, participants identified a series of what they prefer to call “ACTION ITEMS” that will help inform the work of the Idaho STEM Ecosystem. They then voted on which “ACTION ITEMS” they believed should be prioritized first. Those “ACTION ITEMS” with 10 or more votes are highlighted in yellow. They were also categorized into topics.

CAREER PATHWAYS

- Strengthen career pathways.

RESOURCE IDENTIFICATION, ALIGNMENT PROCUREMENT AND SHARING

- Sustainable, supported central repository of STEM resources across the state.
- Leverage existing resources and networks to foster collaboration among many organizations and populations.
- Identify, align and leverage existing resources.
- Build upon existing resources and networks to foster greater communication and collaboration among diverse organizations and populations.
- Identify what metrics measure success.

PreK-12 & HIGHER EDUCATION

- Establish and support cross-sector “transition” work teams to align curriculum and goals across the educational pathways.

- Share best practices, provide support for communications and resource sharing.
- Start early and enable the provision of strong early childhood education for Idaho's youngest residents.

- Reimagine education preparation and professional development programs that integrate STEM.

- Value and provide strong early childhood education.

- Reimagine teacher preparation and professional development to make education relevant and applicable to Idaho's * future needs.

- Develop teacher, administrator and school board professional development programs to provide knowledge, resources and access to STEM education to allow for implementation on all levels.

COMMUNICATIONS & PUBLIC AWARENESS

- Create an awareness campaign that promotes understanding of the importance of STEM education for ALL Idahoans, with knowledge of what the resources are and how to access them.

- Establish, align to and maintain a focus on and advocate for the one goal of equitable STEM education across Idaho.

- Youth voice empowerment – from procuring student interest, marketing STEM impacts and solving community and business challenges.

- Highlight existing bright spots and adapt promising practices for replication.
- Make STEM relevant for students, families and communities.

- Shift Idaho's perception and understanding of the value and relevance of STEM

- Support strategies that highlight existing bright spots to replicate promising practices encouraging the leveraging of existing resources and networks to foster collaboration among diverse populations.

PARTNERSHIPS

- Ensure relevancy of all partnerships, including business and industry, education, after-school.
- Work with state government to strengthen career pathways.

- Work with Idaho employers to ensure that their needs are met.

PARTNERS NEEDS

From the opening few minutes of the design studio until the end of the day, partners were frequently asked to think about their unique personal needs or the needs of their organization. This enlightened self-interest, if met, would help ensure they would remain engaged in the work of the Idaho STEM Ecosystem. They would be gaining something, thus making their investment in the work of the Idaho STEM Ecosystem worthwhile.

Participants identified what they “needed” to get out of the Idaho STEM Ecosystem in order to remain engaged in it. The table below summarizes the organization of individual, plus their unique needs.

ORGANIZATION/ INDIVIDUAL	NEED
NEZ PERCE TRIBE	<ul style="list-style-type: none"> ● Website ● Communication ● Repository ● Tool Kits ● Recognition of Idaho Tribes’ contribution to Idaho’s economy ● Brainstorm hub to generate success stories.
WTCE, CEI / JENNIFER LOPEZ	<ul style="list-style-type: none"> ● Create a program that is valid and on-topic ● Create pathways from WTCE to credit at all state colleges (junior/community/university) ● Create training opportunities for continued learning in industry that fits the needs and provides a return on investment ● Funding for non-traditional learners

MICRON FOUNDATION / MICRON	<p>“Help in more effectively assisting others to leverage what we (our program) already have in place. We spend a lot of time reminding entities of what we already have in place, and reinventing. We could be more engaged in the ecosystem if we had more players helping us with implementation.”</p>
IDLA/WILL GOODMAN	<p>“As long as the system is supporting kids and we can be of service to the group, we will be engaged.”</p>
DISCOVERY CENTER OF IDAHO / EMILY MAHON	<ul style="list-style-type: none"> ● Communication ● Regular participation in planning efforts ● Access to funding sources and support with grants, etc.
IDAHO STATE / SONIA MARTINEZ	<ul style="list-style-type: none"> ● Inclusive and equitable programs ● A role for higher education
UNIVERSITY OF IDAHO / MELINDA DAVIS	<ul style="list-style-type: none"> ● Seeing the trust built between/among organizations with egos left behind ● Near- and long-term impacts/successes with metrics that demonstrate to leadership that we are making a difference to them ● A few short-term wins
IDAHO COMMISSION ON THE ARTS / REBECCA MARTIN	<p>“STEM Action Center being our fiscal funding agent for grants and/or programs for teaching artists/mentors.”</p>
UNIVERSITY OF IDAHO / CLAIRE SPONSELLER	<p>“Opportunity to be involved with ecosystem group and represent University of Idaho while progressively changing/advancing Idaho STEM.”</p>
SCHWEITZER ENGINEERING LABORATORIES / JOHN CASSLEMAN	<ul style="list-style-type: none"> ● Inspirational stories from well-run programs that are making an impact ● Conversations around what is working and what is not ● Data ● Repeatable positive outcomes for students

ION / ANNA ALMERICO	“Inclusion of informal educators and youth voice in PD outreach efforts and within the overall ecosystem.”
CSI / JOHN HUGHES	<ul style="list-style-type: none"> ● Seeing movement, progression, change and shift ● Access
IDAHO PTV / CINDY LUNTE	Getting new people immersed into this group will be a key need.
CHOBANI / PAUL CASEY / PORTER LONG	<ul style="list-style-type: none"> ● Visible signs of how the efforts are showing results ● Seeing the collaboration in the community through schools, parents, business, etc. ● Being involved in events and activities that contribute to the advancement and betterment of my community ● Seeing progress and hearing success stories statewide ● Providing opportunities for underserved populations
ITC / JAY LARSEN	<ul style="list-style-type: none"> ● More teacher training and certified to teach CS ● Funds and programs to accomplish more teacher training ● Making CTE and academic requirements the same. Also, the math requirement for CS courses count toward high school graduation ● Program to get CTO at every high school. A student that runs for office just like student body president has a role to make sure that students in the school learn and are computing literate
COLLEGE OF SOUTHERN IDAHO / HEIDI ADAMS	“A strong sense of purpose that aligns with my institution’s and my position’s purpose. i.e. Higher Ed needs to feel integral, not an after-thought as has sometimes been the case.”
GIZMO – CDA / BARBARA MUELLER	<ul style="list-style-type: none"> ● Mentor support to expand our ideas ● Better ways to tell stories ● People to process ideas with ● More understanding of what resources are available ● Resources so we don’t keep reinventing the wheel ● Organizational support ● Money
ISU COLLEGE OF TECH / CHRIS GUTHRIE	<ul style="list-style-type: none"> ● Professional development for ecosystem leadership ● Presence in SE Idaho
CWI / KAE JENSEN	To see results – “Run the data, make the connections and report out.”

<p>BARBARA MORGAN STEM ACADEMY / RYAN WILHITE</p>	<ul style="list-style-type: none"> ● Begin with the end in mind – Career Preparation ● Input from industry partners on what they need for their workforce ● Partnerships with higher education and industry partners to bring relevance to our students’ learning ● Professional development opportunities to continuously employ best teaching/learning practices in STEM education ● Funding – “STEM partners to help us fund our learning” ● Aligned partners: K-12 – Higher Ed – Professional/Technical Careers ● Authentic alignment
<p>SDE / SHARON CATES</p>	<ul style="list-style-type: none"> ● Routes for communication ● Metrics/results ● A more robust teacher pool ● More student success ● Positive press
<p>IDAHO EPSCOR / IDAHO DIVERSITY NETWORK/ SARAH PENNEY</p>	<ul style="list-style-type: none"> ● Knowledge of other programs with similar goals and objectives – align ● Advocacy at the state level for broadening participation of URM populations ● Inclusion of diverse groups (often left out of state initiatives)
<p>SALMON PUBLIC LIBRARY/ JEFFREY STRATTER</p>	<ul style="list-style-type: none"> ● An evolution of success ● Industry support ● Feedback of impact from my community
<p>LANA BRENNEMAN</p>	<p>Seeing action take place from our planning and noting the impact on whatever scale we can</p>
<p>TEMPLE VIEW / SARAH CHILDERS</p>	<p>“I need to be involved in promoting and leading STEM PreK – 6th. I have a drive to share what we have learned by being a STEM school and promoting the next steps our state takes towards STEM education.”</p>
<p>JUSTIN TOUCHSTONE/ CTE –</p>	<p>Movement forward in solving the problems, not just talking</p>
<p>IDAHO COMMISION FOR LIBRARIES /</p>	<ul style="list-style-type: none"> ● Hearing success stories ● Progress – moving forward with goals

STEPHANIE BAILEY- WHITE	
PLT / MICHELLE YOUNGQUIST	“If it fits with our mission and what we do.”
ANONYMOUS	<ul style="list-style-type: none"> ● Advertise to the entire state regarding STEM programs on the website, inl.stem.gov
ANONYMOUS	<ul style="list-style-type: none"> ● Results ● Clear definitions of who does what ● Networking ● Positive impact <p>“Leave it better than we borrowed it”</p>
ANONYMOUS	<ul style="list-style-type: none"> ● Outcomes ● Demonstration that progress is being made ● Confirmation that employers are satisfied ● A place to plug ideas into ●

CONTRIBUTIONS

In addition to understanding what individual partners need to realize from their association with the Idaho STEM Ecosystem, it is also critical to understand and inventory what they have to contribute.

From meeting space to dollars to ideas, participants identified a wide range of resources they could contribute to the formation of the Idaho STEM Ecosystem.

The following table lists the identified contributions:

ORGANIZATION / INDIVIDUAL	CONTRIBUTIONS
NEZ PERCE TRIBE	<ul style="list-style-type: none"> ● Access to a local education fund ● Partnership with tribal education and natural resource departments ● Cost sharing for regional events with partners

WTCE, CEI / JENNIFER LOPEZ	<ul style="list-style-type: none"> ● Collaboration ● Offer certification opportunities to other higher education students (outside of CEI) ● Work with area partners to create more value in STEM events ● Host Cyber Advisory Board to understand small and large business needs training
INL	<ul style="list-style-type: none"> ● INL talent and expertise at Family STEM Nights, classroom learning ● Leadership ● Funding ● Staff for outreach ● Collaboration ● Materials
MICRON FOUNDATION/ MICRON	<ul style="list-style-type: none"> ● 25 years of STEM outreach experience in multiple schools, school districts, etc. ● Access to corporate and philanthropic resources ● Access to volunteers and advisors
IDLA / WILL GOODMAN	<p>“Statewide reach, local presence in each region through our regional pods, ability to write, host and virtually deliver content, training center in Boise, National Rural Education Affiliate for Idaho, virtual presence in all secondary districts, programming staff, PD staff, coding partner for the state.”</p>
DISCOVERY CENTER OF IDAHO / EMILY MAHON	<ul style="list-style-type: none"> ● Resources – kits/ materials / training (PD for teachers, parents, etc.) ● Space for convenings ● Talent – educators / staff ● Pie-in-the-sky collaborations with partners (i.e. exhibitions, camps, classes and programming)
IDAHO COMMISSION FOR LIBRARIES / STEPHANIE BAILEY-WHITE	<ul style="list-style-type: none"> ● Time, talent and a bit of treasure
WORKFORCE DEVELOPMENT COUNCIL	<ul style="list-style-type: none"> ● Funding (workforce development fund) ● Relationships ● Access to employers, agencies, policy makers
IDAHO STATE UNIVERSITY/ SONIA MARTINEZ	<ul style="list-style-type: none"> ● Space ● Expertise ● Faculty ● Students ● Existing programs ● Scholarships

UNIVERSITY OF IDAHO / MELINDA DAVIS	<ul style="list-style-type: none"> ● Grant leadership – writing and team forming is a real strength ● I would personally long to have UI, lead a hub, especially regional, I think I could lead if needed (UI would see this as within my job responsibility as STEM mentor) ● Expertise – faculty with great wealth of knowledge across STEM fields. That said, we'll need creative ways to engage them as funding for "outreach" is currently very limited or nonexistent. ● Projects and research – UI have a lot of STEM education projects and research efforts that should I could be leveraged and contribute to bigger collaborative efforts.
IDAHO STATE MUSEUM / EMILY CHIVERS	<ul style="list-style-type: none"> ● Space (large room for events or meetings) ● Statewide reach (state agency)
IDAHO COMMISSION ON THE ARTS / REBECCA MARTIN	<ul style="list-style-type: none"> ● We can support by including arts integration into STEM activities to help connect other students ● We can provide i-STEM PD for those teachers interested in Arts Integration through STEM ● We can support the i-STEM registration for arts teachers (can this include out of school educators?)
UNIVERSITY OF IDAHO / CLAIRE SPONSELLER	<ul style="list-style-type: none"> ● Support ● Money ● Partnerships ● Networking ● Credibility ● Communications ● Synergy
SCHWEITZER ENGINEERING LABORATORIES / JOHN CASSLEMAN	<ul style="list-style-type: none"> ● Workplace experiences ● Internships ● Career education ● STEM Education (circuits, robotics, etc.) ● Successful organizational principles ● Networking ● Funding (to sustainable effective organizations)
ION / ANNA ALMERICO	<ul style="list-style-type: none"> ● ION can communicate out – advertise and provide outreach to inform all educators ● Connections to national groups working on innovative STEM projects through networks ● Dimensions of success observers to help with quality programming of STEM in and out of school settings
SHOSHONE-BANNOCK TRIBES / JESSICA JAMES	<ul style="list-style-type: none"> ● Time for STEM projects ● Space at the hotel/event center ● Collaboration with diverse underserved populations ● Cultural diversity workshops

CSI / JOHN HUGHES	<ul style="list-style-type: none"> ● Time and commitment ● Access ● Dissemination of information ● Central hub
IDAHO PTV / CINDY LUNTE	<p>“We have connections to small rural communities throughout the state and they look to us for STEM programs. We are a trusted source.”</p>
CHOBANI / PAUL CASEY / PORTER LONG	<ul style="list-style-type: none"> ● Hosting meetings (events) to enable promote this collaboration ● Externships – teachers, bringing needs to the classroom ● Active, engaged community and state partners ● Job opportunities in STEM ● A community meeting space ● Activity sponsor for events related to our mission
CTE / JUSTIN TOUCHSTONE	<ul style="list-style-type: none"> ● Network of CTE teachers ● Professional development opportunities for CTE teachers ● Connections to administrators and superintendents ● Access to post-secondary technical colleges ● Access to governmental decision makers – workforce development council ● Connection to industry partners ● Meeting space
COLLEGE OF SOUTHERN IDAHO / HEIDI ADAMS	<ul style="list-style-type: none"> ● Meeting space and organizational efforts in Region IV ● 5-10 hours per week of time if there is strong alignment of purpose. This is my job ● I’m on the Mathematics Transition Network Steering Committee (only one here). There is much overlap and I can connect us up.
GIZMO - CDA / BARBARA MUELLER	<ul style="list-style-type: none"> ● Web resources of curriculum ● Helping with given students’ agency ● Space, equipment to share ● Experience in creating PD ● Create pathways for students ● Sharing of experience ● Willing to listen to ideas
ISU COLLEGE OF TECH / CHRIS GUTHRIE	<ul style="list-style-type: none"> ● I would be willing to help organize Ecosystem activities on our side of the state ● I could assist in engaging College of Technology programs where and when applicable ● I would participate on the communications and public awareness working group
CWI / KAE JENSEN	<ul style="list-style-type: none"> ● Facilitation (digital more than physical) ● Math support ● i-STEM resources ● College students as mentors

BARBARA MORGAN STEM ACADEMY / RYAN WILHITE	<ul style="list-style-type: none"> • A model for what authentic, integrated project-based learning can look like at an elementary level • An engagement for pre-service teachers interested in STEM education to hone their craft. • A targeted audience for entities offering enrichment opportunities in STEM. • An audience for industry to share their experience and needs with the next generation of workers. • Space to host regional STEM events.
SDE / ISTA / SHARON CATES	<ul style="list-style-type: none"> • Standards class • Website • List of superintendents, principals and curriculum directors emails /contact information • Creation of professional development • Responsibility for standards for both students and teacher preparation • Letters of support
IDAHO EPSCOR / IDAHO DIVERSITY NETWORK / SARAH PENNEY	<ul style="list-style-type: none"> • Funding and backbone support for convening of Idaho Diversity efforts • Mentor training for faculty • Research experiences via EPSCoR and GEM3 (www.idahogem3.org)
SALMON PUBLIC LIBRARY / JEFFREY STRATTER	<ul style="list-style-type: none"> • Support • Money • Partnerships • Networking • Credibility • Communications • Synergy
TEMPLE VIEW / SARAH CHILDERS	<ul style="list-style-type: none"> • I can contribute by sharing knowledge and amazing personal and teachers as resources • We learned and developed so much as a STEM school we want to help and share with others • Temple View can be a place where other educators can come and see a STEM school in action. • We want to support and collaborate with other state STEM leaders and schools as well
BOISE STATE UNIVERSITY / DONNA LLEWELLYN	<ul style="list-style-type: none"> • Space for convenings (like today) • Access to Boise State faculty and students who are passionate about STEM and access • Access to existing Boise State programming (camps, Engineering and science festival, aerospace day, etc.) • Experience with federal grant applications and project management

FIRST / LISA LALLISS-SKOGBERG	<ul style="list-style-type: none"> ● Future workforce through connections with youth ● Connection to international group for future grants
MUSEUM OF IDAHO / KAREN BAKER	<ul style="list-style-type: none"> ● Venue space ● Resources of the museum ● Help the ecosystem identify regional industry partners ● Ability to be willing to try something and learn from it. Retool and try to improve ● Time and attention ● Teacher professional development
HECLA / JEFF ROSSER	<ul style="list-style-type: none"> ● Participation of experienced technical co. staff as mentors ● Provide opportunities to host externs ● Partner in Ad Hoc. / On-going manner (\$)
PLT / MICHELLE YOUNGQUIST	<ul style="list-style-type: none"> ● Support ● Money ● Partnerships ● Networking ● Credibility ● Communications ● Synergy ● Relationships with forest sector (people) facility tours <ul style="list-style-type: none"> ○ State and federal agencies ○ Higher education ○ Industry ● PD for educators (formal/nonformal, PK-16) ● Materials and information about forests and forest products ● Access to teachers who have engaged in natural resource related PD
IDAHO COMMISSION FOR LIBRARIES / STEPHANIE BAILEY-WHITE	<p>We've been successful in creating turn-key programs that we can provide to libraries, providing all the materials that might be needed. Families hungry for resources, materials and programs. They want to help their kids and libraries are trusted institutions, especially if they have a close relationship with partners.</p>
ANONYMOUS	<ul style="list-style-type: none"> ● Thought partner for rural communities <p>A hub for the region to lend: resources; people; skills/knowledge</p>
ANONYMOUS	<p>Contribute team and energy to accomplish getting CS course required to high school graduation</p>
ANONYMOUS	<p>I can contribute time, knowledge of school systems and private sector STEM opportunities. Our organization can contribute to 6-9 grades after school opportunities if we can build a network of mentors. We can also contribute curriculum ideas.</p>

WORK GROUPS

Based on the identified priorities, the following work groups were launched:

1. OPPORTUNITIES & ACCESS
2. COMMUNICATIONS & PUBLIC AWARENESS
3. RESOURCE IDENTIFICATION/ASSET MAPPING
4. CAREER PATHWAYS & EXPOSURE
5. EDUCATOR PREPARATION, TRAINING & SUPPORT

Each of the work groups developed a plan for action, with a date set for a follow-up meeting and a person appointed to call the meeting.

OPPORTUNITIES & ACCESS WORK GROUP

The Opportunities & Access workgroup identified their main goal: break down barriers and provide equitable access to opportunities. The members discussed various barriers such as transportation, financial, cultural, etc. During these discussions, personas concept came up frequently, so Donna Llewellyn of BSU will seek support to provide the group with a workshop on how the personas are developed.

The workgroup has identified four short-term goals (1-year) that mainly deal with identifying engagers, practices, systems, learners, and personas in Idaho. There are six long-term goals (five-year) that focus on promising practices that can move the needle on equity, setting targets for improvement, and defining metrics that help define the opportunity gap and opportunity barriers. The group will reconvene in mid-late February discuss systemic way to share promising practices and to further refine the group's work flow.

COMMUNICATIONS & PUBLIC AWARENESS / COMMUNITY OUTREACH

The Communications & Public Awareness group identified two priorities for their group to accomplish together:

1. Create an awareness campaign that promotes understanding of the importance of STEM education for ALL Idahoans, with knowledge of what the resources are and how to access them.

2. Establish, align to and maintain a focus on and advocate for the one goal of equitable STEM education across Idaho.

The group discussed different ideas and mediums of communication that might be useful for the ecosystem to employ to best connect with different partner groups in the community. The group will convene before late May to discuss ideas that might require funding to draft grant proposals together.

The Communications & Public Awareness group will speak again on February 20 from 3:30 - 4:30 pm. The full transcript of notes from the meeting are listed in Appendix D.

RESOURCE IDENTIFICATION/ASSET MAPPING WORK GROUP

The Resource Identification/Asset Mapping group identified two goals: to increase communication about current resources and to create an asset map. There were discussions on how to achieve the goals, specifically with surveying for the needs/contributions to identify gaps, learning from other ecosystems who have done asset mapping, and potentially working with Idaho Workforce Development Council for the asset map if our criteria for ecosystem's search needs mesh well with the current asset map's search functions.

The group have made plans to research assets on their own and add them to an Excel spreadsheet already created by Lana Brenneman, and they will have a conference call on January 31st at 2 p.m. MT.

CAREER PATHWAYS & EXPOSURE WORK GROUP

The Career Pathways & Exposure work group discussed turning the long-term priorities into actionable tasks. Tailoring models to fit community needs and facilitating meaningful partnerships to bring career awareness were among the top priorities for the group.

The group settled on a goal of streamlining transparent information to highlight different career pathways. Hands-on experiences and a breakdown of job requirements were among tasks set for the group to outline for communities in the state. Video interviews and partnerships with local industries were means for the group to achieve some of their longer-term goals of increasing career exposure for learners and highlighting career pathways available in Idaho. This group will have a call February 5 from 2-3pm MT.

EDUCATOR PREPARATION, TRAINING & SUPPORT WORK GROUP

The Educator Preparation, Training & Support work group highlighted a major upcoming event and general observations in the topic area, including: the need to incorporate STEM standards into the state core standards and STEM as a collaborative discipline that encourages problem solving skills.

The group identified short-term goals to achieve, including the identification and collection of STEM PD opportunities, understanding of PD for the State Board of Education and the identification of best practices for STEM pedagogy and practices.

The group will reconvene on January 29 at 10am MT, organized by leaders Justin Touchstone and Logan LeCompte.

NEXT STEPS

After a final read out of all five work groups, the engaged Idaho leaders convened for a short networking reception and headed home. The Idaho STEM Action Center will be responsible for disseminating the final report and notes from the meeting, as well as scheduling a follow-up meeting of all partners.

Each Work Group independently selected a date for a follow-up call in January 2020 and February 2020. The Work Groups will be responsible for communicating their action items with the STEM Action Center.



APPENDIX A**ATTENDANCE LIST FROM JANUARY DESIGN STUDIO**

First Name	Last Name	Email	Job Title	Company	Attend ed?
Heidi	Adams	hladams@csi.edu	Associate Dean of STEM/Dept. Chair	College of Southern Idaho	Yes
Anna	Almerico	aalmerico@jannus.org	Director	Idaho Out-of-School Network	Yes
Cathy	Ammirati	cammirati@micron.com	K-12 Programs Coordinator	Micron Technology	Yes
Laurie	Anderson	lauranderson@micron.com	STEM Education Outreach Programs Manager	Micron Technology	Yes
Stephani e	Bailey-White	Stephanie.bailey-white@libraries.idaho.gov	State Librarian	Idaho Commission for Libraries	Yes
Karen	Baker	director@museumofidaho.org	Executive Director	Museum of Idaho	Yes
Gail	Ballard	gjballard@nic.edu	Assistant Dean of General Studies	North Idaho College	No
Tracie	Bent	tracie.bent@osbe.idaho.gov	Chief Planning and Policy Officer	Idaho State Board of Education	No
Yolanda	Bisbee	yobiz@uidaho.edu	Chief Diversity Officer/ED Tribal Relations	University of Idaho	No
Alanna	Brenneman	abrenneman@imd.idaho.gov	STARBASE Idaho, Business Manager	Idaho National Guard	Yes
James	Brown	jfbrown@stemedcoalition.org	Executive Director	STEM Education Coalition	Yes
Paul	Casey	paul.casey@chobani.com	Research and Development Director	Chobani	Yes

John	Cassleman	John_cassleman@selinc.com	Associate Program Manager (K-12 Ed. Outreach)	Schweitzer Engineering Laboratories	Yes
Sharon	Cates	scates@sde.idaho.gov	Science/STEM /ISAS Coordinator	Idaho State Department of Education	Yes
Sarah	Childers	chilsara@d91.k12.id.us	Principal	Temple View Elementary School	Yes
Emily	Chivers	emily.chivers@ishs.idaho.gov	Curator of Education	Idaho State Museum	Yes
Erica	Compton	erica.compton@stem.idaho.gov	Program Manger	Idaho STEM Action Center	Yes
Nick	Crabbs	nick@vynyl.com	Partner	VYNYL	No
Jon	Craig	Jon_Craig@outlook.com	Engineering Consultant	Retired	Yes
Melinda	Davis	melindadavis@uidaho.edu	Director, STEM Education	University of Idaho	Yes
Jeff	Dillon	jdillon@wilderschools.org	Superintendent	Wilder School District	Yes
Finia	Dinh	finia.dinh@stem.idaho.gov	CS Program Manager	Idaho STEM Action Center	Yes
Marybeth	Flachbart	marybeth.flachbart@educationnorthwest.org	Director	Education Northwest	No
Eric	Forsch	eric.forsch@commerce.idaho.gov	Business Retention Expansion Manager	Idaho Department of Commerce	Yes
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William	Goodman	will.goodman@idla.k12.id.us	Director of District Programs	Idaho Digital Learning Alliance	Yes
Rod	Gramer	rgramer@idahobe.org	President and CEO	Idaho Business for Education	No
Crispin	Gravatt	crispin.gravatt@stem.idaho.gov	Research and Data Analyst	Idaho STEM Action Center	Yes

Brenda	Greenhalgh	brenda.greenhalgh@inl.gov	STEM Outreach Coordinator	Idaho National Laboratory	Yes
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Jim	Heuring	jheuring@imd.idaho.gov	STARBASE Idaho, Director	Idaho National Guard	Yes
David	Hill	davehillsboe@gmail.com	Vice President	State Board of Education	Yes
John	Hughes	jhughes@csi.edu	Instructional Support Dean	College of Southern Idaho	Yes
Jessica	James	jjgrant@sbtribes.com	Tribal Youth Education Program Manager	Shoshone-Bannock Tribes	Yes
Kae	Jensen	kaejensen@cwi.edu	Dean of Math and Science	College of Western Idaho	Yes
Randy	Jensen	randyj@sd381.k12.id.us	Superintendent	American Falls School District	No - but had a sub (Chris Torgesen)
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Dave	Lent	dlent@senate.idaho.gov	Senator	Legislature	No
Lynette	Leonard	lynette.leonard@lposd.org	Librarian/Steam Specialist	Southside Elementary	No
Donna	Llewellyn	donnallewellyn@boisestate.edu	Executive Director and Professor	Boise State University	Yes

Porter	Long	porter.long@chobani.com	RD Scientist	Chobani	Yes
Jennifer	Lopez	jennifer.lopez@cei.edu	Special Projects Coordinator	WTCE, College of Eastern Idaho	Yes
Cindy	Lunte	cindy.lunte@idahoptv.org	Education Manager	Idaho Public Television	Yes
Kaitlin	Maguire	istem@stem.idaho.gov	i-STEM Coordinator, Grant Writer	Idaho STEM Action Center	Yes
Emily	Mahon	e.mahon@dcidaho.org	Education Director	Discovery Center of Idaho	Yes
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Sonia	Martinez	martsoni@isu.edu	STEM Diversity and Outreach Coordinator	Idaho State University	Yes
John	McFarlane	partnerships@stem.idaho.gov	Partnership Program Coordinator	Idaho STEM Action Center	No
Shannon	McGuire	shannon@sparkstrats.com	Chief Empowerment Officer	Spark!	No
Barbara	Mueller	info@gizmo-cda.org	Executive Director	Gizmo-Cda	Yes
Jean	Mutchie	fitzgerj@slhs.org	Community Health	St. Luke's	No
Beth	Oppenheimer	boppenheimer@idahoaeyc.org	Executive Director	Idaho AEYC	No - but had a sub
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Sunshine	Shepherd	sunshine@americanindianservices.org	AIS PREP Site Director	American Indian Services Pre Freshman Engineering Program	Yes
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Claire	Sponseller	csponseller@uidaho.edu	4-H STEM Educator	University of Idaho Extension	Yes
Jeffrey	Stratter	salmonlibrary1@gmail.com	Chief Problem Solver	Salmon Public Library	Yes
Kellie	Taylor	Kellie.Taylor@boiseschools.org	3rd Grade Teacher - STEM Specialist	Hawthorne Elementary School - Boise School District	Yes
Justin	Touchstone	justin.touchstone@cte.idaho.gov	Sr. Program Quality Manager - Eng. Tech Ed	Idaho Career & Technical Education	Yes
Teresa	Vail	vista1@stem.idaho.gov	AmeriCorps VISTA	Idaho STEM Action Center	Yes
Ryan	Wilhite	wilhite.ryan@westada.org	Principal	Barbara Morgan S.T.E.M. Academy	Yes
Greg	Wilson	Greg.Wilson@gov.idaho.gov	Senior Policy Advisor - Education focus	Office of the Governor	No
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Michelle	Youngquist	plt@idahoforests.org	Education Program Manager	ID Forest Products Commission & Project Learning Tree (PLT)	Yes

APPENDIX B

AGENDA OF JANUARY INITIAL DESIGN STUDIO

Idaho STEM Ecosystem – Design Studio

January 16, 2020

Intended Outcomes

- Develop a shared understanding of the importance of ecosystem approach to goals
- Craft shared goals, aspirations, indicators of success for Idaho STEM Ecosystem
- Identification of constraints that stand in the way of success for Idaho
- Development of outline of action plan for Idaho, including identification of priorities, work groups, general governance structure and timeline

8:00 a.m. Informal Networking and Breakfast

8:30 a.m. Welcome and Introductions

8:45 a.m. History of local initiative and connection to global organization

Overview of Idaho STEM Ecosystem

Overview of STEM Learning Ecosystems Community of Practice

Review of Summary Report for Idaho STEM Ecosystem

9:20 a.m. Aspirations, Ideas and Crafting the Vision for Idaho

10:15 a.m. Constraints and Orthodoxies

What stands in the way of your aspirations?

10:35 a.m. Break

10:45 a.m. Discussion: Ecosystems in Action

How are other ecosystems working?

What are other ecosystems achieving?

11:00 a.m. Idaho STEM Ecosystem Priorities

What do we intend to accomplish in 5 years? 1 year?

Identify goals, implementation ideas and indicators

12:30 p.m. LUNCH and TABLE DISCUSSION about Proposed Priorities

1:30 p.m. Mapping Proposed Priorities With Working Strategies

How will we accomplish our priorities?

Will we form working groups? (Or some other strategy?)

Specifically, how will we accomplish what we hope to do and by when will we accomplish it?

Examples from other ecosystems

3:00 p.m. Next Steps

Securing commitments from attendees for what they want to do, how they can help further the mission. Recap of final plan.

4:30 p.m. End of Day

4:30-6:30 Reception with appetizers and no host bar will follow immediately in Hatch Ballroom CD (Cash only bar)

APPENDIX C

EXECUTIVE SUMMARY OF PARTNER INTERVIEWS

With direction from Idaho STEM Ecosystem leadership, TIES developed a series of starting questions for key ecosystem partners to acquire a deeper understanding of some of the unique opportunities, as well as challenges, facing Idaho. This information will be used to inform the direction of the planned design work scheduled for January 16, 2020, in Boise, Idaho.

In 2019, TIES interviewed a variety of partners, with several offering additional resources and information via follow-up communications.

The summaries of those interviews are included below.

SUMMARY

ECONOMIC CHANGES

Partners said Idaho has endured significant economic shifts in the last ten years, due in large measure, to the following:

- The automation of staple industries historically central to Idaho's economy;
- The increase in the cost of living, especially housing costs, and stagnant minimum wages;
- A large increase in the growth of the tech sector in Idaho, specifically the Boise area;
- The state's emphasis on workforce development efforts;
- A move away from the support for inclusive access to education and other training opportunities; and
- A growing population, with the region attracting new people to work and live in Idaho.

HOW TO ENSURE IDAHO'S FUTURE

Partners said they believe that Idaho's economic future will be enhanced by:

- Creating stronger career pathways and training opportunities, especially in technology and adding STEM skills in seemingly unrelated fields (e.g. adding data science to psychology fields);
- Deepening connections between education and industry to reinforce skills necessary to succeed in a 22nd century economy, including stronger college and career advising;
- Investing in early childhood education, as well as teacher preparation and professional development that support problem-based learning;
- Collaboration among all partners in the state to ensure the network of all education and career pathways are well maintained and that families know how to access them; and
- Ensuring access to education and training opportunities are available for all Idaho residents, especially those in rural and remote areas of the state.

GOALS FOR IDAHO STEM ECOSYSTEM

Partners said they have hope that the Idaho STEM Ecosystem will:

- Leverage existing resources and networks to foster greater collaboration among diverse organizations and populations;

- Start early and enable the provision of strong early childhood education for Idaho's youngest residents;
- Reimagine teacher preparation and professional development programs;
- Highlight existing bright spots and replicate promising practices;
- Work with state government to strengthen career pathways; and
- Support strategies that will increase access to STEM opportunities for all populations in Idaho.

SPECIAL CHALLENGES TO ADDRESS

Partners said special challenges that can and should be addressed are:

- Remote regions in the state with no access to broadband and limited access to education and training opportunities;
- Stronger pathways to careers that pay livable wages;
- Shifts in state political climate and policy;
- Racial and ethnicity-related achievement gaps due to limited access to STEM opportunities.

ASSETS IN THE IDAHO STEM ECOSYSTEM

The following assets were mentioned by partners in the development of Idaho's STEM Ecosystem:

- The Idaho STEM Action Center is the right partner to lead the ecosystem work;
- The state's three public state universities collaborate well together and are able to lend a lens of research and equity to the work;
- Strong collaborative cross-sectors networks established that can be leveraged to scale positive impact;
- The Idaho Diversity Network has been convening diverse populations and has access and support to specific STEM opportunities and making those connections between business, industry and those communities;
- Development of an asset map (beta form) to look at college and career exploration activities;
- The teacher externship program available to expose teachers to current industries; and
- Idaho's economy overall is strong, consistently remaining one of the fastest growing states in the nation.

KEY TAKEAWAYS - QUOTABLE FROM INTERVIEWS

STRONG, SUSTAINABLE PARTNERSHIPS ARE IMPORTANT

"It's important to have **all partners in agreement** that this is an important and necessary thing to pursue. This is not a pilot where we say we're just going to try this for a year or two, but **all partners see this multidisciplinary investment as an integral part of the solution.**"

"Partnerships are pretty much critical...**No one institution in the state has the critical mass to do it alone.** That's just the bottom line."

"**Communication is key.** Making sure everybody knows what we're already doing and then the replication of these really good things are critical at this point."

"If you look at that whole network of different routes, nobody owns the process of ensuring that they (education and workforce pathways) are well defined; that they are well lit; that they are paved; that they are accessible. What do you do when you want to switch paths or switch lanes? I

think that if we don't work together, if we only worry about our own pathway, that will never change."

"We have **great universities and three public universities**, but we **don't have the critical mass to be education leaders on our own**, nor do we have access to all the communities without partners and particularly the community and industrial partners in those hard to reach areas. **Partnerships are the only way we're going to reach everyone**, so those partnerships are invaluable to us."

EQUITY AND ACCESS IS A MAJOR GAP TO ADDRESS

"There are lots of areas within Idaho that are education deserts - by definition there is **nothing within 50 miles from their home where they can get an education**. So, what are we doing to combat that?"

"**Building bridges and making connections** between potential STEM students and, you know, future workforce in the industry is critical."

"Accessibility. I know that **if you have the resources, you can definitely participate** in STEM education and get more involved. But **accessibility is a problem for many communities throughout the state.**"

"There are **inequities in different regions of the state**. We're seeing challenges in some of our communities in the northern region of the state, that tended to be more extraction-based industries for decades and decades. There's a **lack of broadband** in some of those communities that's **hampering their ability to do their best, including their ability to access resources and educational opportunities.**"

"We have very few universities in the state, so I think there needs to be a real push if we don't do a better job educating our citizens, **our economy will suffer**. We have very poor and we don't have a high percentage of our population that goes on to get a college degree. **Education is going to be an obstacle. It's an obstacle of a large part of our state.**"

"There's **evidence that experiential education is a proven route** towards retention, academic success and access **to career success**. Some students, however, don't have the privilege of being able to do such things."

"There is a tendency to create **programs that are one size fits all**. I'm finding that many native and Hispanic communities do not take part in those opportunities for a number of reasons. The biggest unmet need is access to opportunity. Partially because people are not **leveraging the connection with and listening to the needs of a community that would actually bring them to the table and keep them there.**"

EARLY CHILDHOOD EDUCATION IS AN IMPORTANT INVESTMENT FOR IDAHO'S FUTURE

"**Starting early is the key**. that's where the biggest gap lies - kids who don't have access to those resources and same opportunities as families from middle and upper classes. Those children tend to start school behind others and tend to stay behind. If we do more to **support birth through age five as a state, I think we're going to see dividends that pay off down the line**. Early childhood education and investment would be my number one priority."

“It is important that we are able to **give all kids the same opportunity - exposure to STEM activities early in their in their lives**, through their informal education. It is also critical that we have **trained educators** that know where to go for **support, resources** and for things that maybe they don't have the knowledge base or education in yet.”

CONNECTIONS BETWEEN EDUCATION AND WORKFORCE ARE CRITICAL FOR IDAHO'S FUTURE

“There are **jobs** across the spectrum that have **changed significantly** and we need to make sure that our **workforce is able to keep up.**”

“**Partnerships need to create a line of sight** between our employers, our education system, our job seekers, including transitioning adults, so that we have **clarity in what types of skills** employers are requesting.”

“**Practical experiences in the workplace through internships or talking to professionals** in the field is the most critical unmet need for our students. It is getting students excited about a profession or potential careers. A student in our state should have as many opportunities to explore those opportunities as perhaps other students (in other states) do. I think **providing more time in the school day for a career exploration** would be ideal.”

“We need to **provide opportunity; and opportunity without limits.** If you put opportunities for students to do things in front of them and provide an avenue for parents and the community to support that, there's been a lot of success in developing chances for students to do things that wouldn't fall under typical the curriculum that most students would do.”

“Part of **building and training the community**, with a greater awareness and a real re-evaluation of technology and STEM learning as a **basic connection to health and economy, is to help develop teacher professional development.** Getting teachers to understand how to integrate these types of concepts into their classrooms.”

“A lot of companies and a lot of industries that we come into contact with say, ‘I don't necessarily need a kid that knows all of our aspects of our business. We can train him in that, but **we need kids who can you can think critically, who can analyze data and understand it.**’ Kids **need to have more opportunities to solve problems and learn as they're doing.**”

KEEPING PACE WITH RELEVANT CHANGE FOR ECONOMIC VITALITY

“Jobs are starting to **change at a very rapid pace** and the automation of jobs is starting to happen at a very rapid pace. I think that's going to **change how our educational system needs to respond.** Industry has to be a tighter partner with us in the educational world.”

“**Idaho is an entrepreneurial state** and one with few regulations for industry. I think that has **brought businesses here**, like businesses from California, to begin (tech) startups because **it's cheaper and there's less regulation.**”

“The **economy is becoming more and more heavily dependent upon technology** and new technologies coming into the area. That we see for the foreseeable future and something that we're planning to address in our offerings and our support for the community and the region.”

“Idaho is **creating jobs at rates above the national averages** and seven of the top 20 fastest growing jobs in Idaho require training in the conservation related sciences. Greater efforts are needed to **recruit and train underrepresented populations.**”

“Idaho's **economy is quite strong** at the moment. When we look across different industries, we have an emerging tech sector. We've got advanced manufacturing, specifically food processing and forest products, natural resources. We've got a really strong and growing health care sector. Idaho, over the last couple of years, has remained one of the **fastest growing states in the nation.**”

“Over the last 10 or 15 years, that **landscape has changed quite a bit.** Top jobs include the tech sector, chip manufacturing, programming, cybersecurity data analysis and health care. I think that's **increased quite a bit over the last 10 years** and you can see that in our labor market data as you pull it up.”

END OF DOCUMENT

DRAFT