Board Meeting
January 15, 2019

IDAHO STEM
ACTION CENTER

Room WW17
1:00 - 4:00 pm
Approval of Oct Board Minutes and Welcome New Board Members

- Request for Motion to Approve Minutes
STEM AC Board

**Dr. Dave Hill / Chair**
State Board of Education Member

**Dee Mooney / Vice Chair**
Executive Director, Micron Foundation

**Tom Kealey**
Director, Idaho Department of Commerce

**Jeff Rosser**
Director of Continuous Improvement, Hela Mining

**Jennifer Jackson**
Public Affairs and Strategic Initiatives, Idaho National Laboratory

**Jani Revier**
Director, Idaho Department of Labor

**Paul Casey**
Director Research and Development, Chobani

**Tim McMurtrey**
Deputy Superintendent of Operations, State Department of Education

**Von Hansen**
CEO, AlertSense Inc.
Welcome Greg Wilson
Senior Education Policy Advisor
to Governor Little
Idaho STEM AC Statutes

- **Idaho Code 67-823**: Established the Idaho STEM Action Center
- **Idaho Code 33-1633**: Computer Science Initiative
- **Idaho Code 67-824**: Established the STEM Education Fund
- **Idaho Code 33-4701**: STEM School Designation
- **Idaho Code 33-1634**: Computer Science for All
- **Idaho Code 33-523**: Established a STEM Diploma
- **Idaho Code 63-3029A**: Established STEM AC as an Idaho Education Tax Credit
As Legislated in Idaho Code
(Idaho Code §67-823, §33-1633, and §33-4701)

- Support high-quality STEM and CS professional development for educators
- Distribute grants to students, educators, and communities
- Engage industry to support STEM/CS education outcomes
- Support student STEM and CS competitions
- Support STEM and CS pilot projects
- Serve as a resource center for instructional materials and best practices
- Support traditionally underrepresented population in STEM and CS
- Identify and recognize high-quality STEM Schools
- Work well with other agencies and partners!
Idaho STEM Action Center

Connecting STEM education and industry to ensure Idaho’s long-term economic prosperity.

Engineering innovative STEM opportunities for educators, students, communities and industry to build a competitive Idaho workforce and economy.
Legislated Goals of STEM AC

- **GOAL #1**: Coordinate & facilitate implementation of STEM programs throughout Idaho
- **GOAL #2**: Align STEM education and workforce needs throughout Idaho
- **GOAL #3**: Increase awareness of STEM throughout Idaho
## Analysis by Project – FY19, $4M

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Grants</td>
<td>16%</td>
<td>$640,000</td>
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<tr>
<td>PD</td>
<td>28%</td>
<td>$1.1M</td>
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<tr>
<td>Sponsorships (Competitions, Events, P3 and Sponsorships, Mentorship, Scholarships, Externships, MakerMinded, Co-Op, STEM schools, pilot projects)</td>
<td>39%</td>
<td>$1.5M</td>
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<tr>
<td>Outreach, Promotion, and Presentations</td>
<td>5%</td>
<td>$200,000</td>
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<tr>
<td>Operating Expenses</td>
<td>12%</td>
<td>$480,000</td>
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</tbody>
</table>
FY20 Budget Recommendation:

- $2M for STEM – ongoing
- $1M for CS – one time
- Funding for Data Analyst Funding
- Increase spending authority by $1M for FY19 (supplemental)
2018 (actual)
6,328 unfilled STEM jobs
$412 million in lost personal income
$22.4 million in lost tax revenue

2024 (predicted)
~100,000 available STEM jobs
$350 million in tax revenue
$6.5 billion in personal income from Idaho's STEM economy

Actual STEM Tech Sector Growth 2004-2014
11.3% U.S.
0.4% ID

Predicted STEM Tech Sector Growth 2014-2024
8.8% U.S.
26.0% ID
GOAL #1: Coordinate & facilitate implementation of STEM programs throughout Idaho

- **Professional Development** – Next slide
- **Grants**: PK12, CS Device & Software, Camps & Out-of-School Programs, Family/Career STEM Events, and Sponsorships
- **Camp Scholarships**: STEM, CS, and Coding

- **Competitions**: Next slide
- **Awareness Events**: STEM Day at the Fair, STEM Matters Day at Capitol, STEM on the Blue, Hour of Code, and CS Education Week
Professional Development

- i-STEM Summer Institutes in six regions with SDE
- STEM Leadership Training with OSBE (Teacher and Admin)
- Early STEM Education
- Rural STEM Community Engagement
- Code.org PD with IDLA
- Dual Credit CS PD with UI
- Virtual Reality PD and Resources
- Drones PD and Resources
- Making Sense of Science
- Engineering Design Process Training
- Educurious
Student Competitions

- State, Regional/Multi-state, and National Competition Travel
- Regional Idaho Science and Engineering Fairs
- FabSLAM – 3D Fabrication Middle School Competition
- Jr. BotBall Competitions (Regional and International)
- FIRST Robotics
- Invent Idaho
- Future Cities
- VEX Robotics
- Drone Competition with CTE
- Science Bowl
- Congressional App Challenge
- Math Counts
STEM Resources NOW Available

- Focused on providing links to relevant resources
- Will include lesson plans, toolkits, and best practices
- Will allow educators to upload and share resources
- Shows up-to-date STEM job information
- [https://resources.stem.idaho.gov/](https://resources.stem.idaho.gov/)
GOAL #2: Align education and workforce needs throughout Idaho

MakerMinded Update

• A Quick Review
  o A free, online advanced manufacturing learning platform for public school students in grades 5-12.
  o Purpose is to give students foundational skills in advanced manufacturing and inspire the next generation of innovators and makers.
  o Soft Launch - Site went live October 2nd.
  o Officially launched January 2, 2019.
GOAL #2: Align education and workforce needs throughout Idaho

MakerMinded Update (cont.)

• Goals:
  o Sign up 50 schools/1000 users during first year of competition.
    ▪ To date we have 36 schools and 87 users.
  o Offer 50 student activities.
    ▪ Currently have 103 student activities and 11 PD options for teachers.
  o Directly connect students and schools to industry with at least 25 collaborative opportunities.
    ▪ Thus far, 66 manufacturers have signed up to be in our directory.
Virtual, Project-Based, Statewide Mentorship Platform

• Focused on student projects, especially related to competitions
• Industry and higher ed support for educators whose students are working on projects that could benefit from additional outside-the-classroom support
• One of the most powerful tools for retention of students (especially females) in STEM is having a strong mentor
• Available NOW! Populated with 500 teachers and 100 mentors
• https://mentorship.stem.idaho.gov/
STEM School Designation - HANDOUTS

- Team of 25 selected AdvancEd model
- Working on agreement with AdvancED detailing badging system, use of AdvancEd program/school chart, provide schools/districts external reports, and training for on-site evaluators and support team
- STEM AC will engage with schools with agreement and various level of attainment
- Support will be financial and in-person
STEM School Designation
(§33-4701)

• Selection Committee chose AdvancEd STEM School Certification Model
• The AdvancEd Model is incredibly rigorous
• Creates a similar criteria by which schools can communicate
• State, national, and international recognition
• Support for emerging STEM Schools
• STEM Diploma (Idaho code §33-523)
STEM Certified Schools Requesting MOTION to Send to OSBE Approval for Designation (§33-4701)

- Barbara Morgan STEM Academy, K-5, West Ada
- Bingham Academy, 9-12, Blackfoot
- Galileo STEM Academy, K-8, West Ada
- Temple View Elementary, P-K6, Idaho Falls
State and National STEM Initiatives

• Governor’s Executive Order on Nuclear Production and Manufacturing

• White House – 5-Year STEM Strategic Plan
# Federal STEM Strategic Plan

## Goals for American STEM Education
- Build Strong Foundations for STEM Literacy
- Increase Diversity, Equity, and Inclusion in STEM
- Prepare the STEM Workforce for the Future

<table>
<thead>
<tr>
<th>Pathways</th>
<th>Objectives</th>
<th>DOC</th>
<th>DoD</th>
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<th>NSF</th>
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<tbody>
<tr>
<td>Develop and Enrich Strategic Partnerships</td>
<td>Foster STEM Ecosystems that Unite Communities</td>
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<td>Increase Work-Based Learning and Training through Educator-Employer Partnerships</td>
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<td>Blend Successful Practices from Across the Learning Landscape</td>
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<td>Engage Students where Disciplines Converge</td>
<td>Advance Innovation and Entrepreneurship Education</td>
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<td>Make Mathematics a Magnet</td>
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<td>Encourage Transdisciplinary Learning</td>
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<td>Build Computational Literacy</td>
<td>Promote Digital Literacy and Cyber Safety</td>
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<td>Make Computational Thinking An Integral Element of All Education</td>
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<td>Expand Digital Platforms for Teaching and Learning</td>
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Required Documents STEM AC: FY18 Performance Report and Strategic Plan

- Strategic Plan – Final Copy Attached; Due annually on
- FY18 Performance Report
Computer Science Update

• Idaho is a national leader in CS! We are the 2nd state in the nation to implement all of Code.org’s nine recommendations to move CS forward!
  o To see all nine recommendations: https://code.org/files/Making_CS_Fundamental.pdf

• To view the finalized state plan or Blog/media post visit Idaho STEM Action Center’s CS Website:
  o https://stem.Idaho.gov/computerscience
STEM AC Foundation Update

<table>
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<tr>
<th>Fiscal Year</th>
<th>Total Foundation Donations Received</th>
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<tbody>
<tr>
<td>FY2018</td>
<td>$139,574</td>
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<tr>
<td>FY2019 (to date)</td>
<td>$206,812</td>
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**FY2019 Fundraising Plan Priorities In Action**

- Donor Relationship Management System Implemented
- Invitation-only grant funder relationship development
- Increasing support through new key partnerships
- Outreach on industry in-kind support opportunities
- Gratitude program development
- Event presence

**Upcoming Event Opportunities:** STEM Matters!, Idaho Tech Expo, STEM Day on the Blue
GOAL #2: Align education and workforce needs throughout Idaho

Donor Totals for FY19 = $615,000

- Micron Technology Foundation – $194K
- Idaho National Laboratory – $127K
- Laura Cunningham Foundation – $50K
- Let’s Save America Foundation – $30K
- Citizen Schools, Inc. – $25K
- Sesame Workshop – $19K
- Love Abounds Foundation – $18K
- Individual Donors – $17K
GOAL #2: Align education and workforce needs throughout Idaho

Top Donor Programs in FY19

- Educator PD: $135K
- Competitions: $93K
- INDEEDS Award: $10K
- STEM Awareness Events: $14K
Total In-Kind Donations

FY 2019

$3.1M

Includes judges, mentors, industry partnerships, and media coverage
GOAL #3: Increase awareness of STEM throughout Idaho

Updating our Data Collection Methods and Outcome Metrics

HANDOUT: Performance Report Draft

<table>
<thead>
<tr>
<th></th>
<th>FY16</th>
<th>FY17</th>
<th>FY18 (estimates)</th>
<th>FY18 (actuals)</th>
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<tbody>
<tr>
<td>Student Engagements</td>
<td>10,428</td>
<td>204,000</td>
<td>210,000</td>
<td>406,239</td>
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<tr>
<td>Educators Interactions</td>
<td>1,200</td>
<td>4,800</td>
<td>5,000</td>
<td>12,680</td>
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<tr>
<td>Community STEM Events</td>
<td>36</td>
<td>45</td>
<td>75</td>
<td>143</td>
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<tr>
<td>Cash</td>
<td>$72,000</td>
<td>$205,000</td>
<td>$500,000</td>
<td>$736,938</td>
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<tr>
<td>In-Kind (and cash equivalent)</td>
<td>Did not track</td>
<td>$662,000</td>
<td>$750,000</td>
<td>$1,742,217</td>
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</tbody>
</table>
GOAL #3: Increase awareness of STEM throughout Idaho

**Awareness Events:** Hispanic Youth Conference, SWIMA, Boise Startup Week, ITC’s Hall of Fame Gala, Idaho Math and Science Teachers

**Upcoming Events:** ISBA, SheTech, ITEA, STEM Matters at the Capitol

**Media Coverage**
Volunteer Portal
Micron Gives
A Micron Foundation of Giving for Good

Dee Mooney
Micron Foundation
Non-profit organization

- Founded
  - Founded in October 1999

- Budget
  - Annual Global Budget ~$10M

- Serving
  - Serving Micron’s site communities around the world

- Team
  - Micron Gives operates with 7 team members

Micron Confidential
Corporate Goodness Tools
Outreach & Events
People / Volunteerism
Sponsorships
In-kind Donations (products/tools)
Customer & Vendor Leverage

Foundation Tools
Cash Grants
Outreach & Events
Matching Gifts
Disaster Relief
Consultants for Good
Vision

We transform the communities where our team members live and work through our philanthropy and people.
Mission

Our grants, programs, and volunteers focus on promoting science and engineering education and addressing basic human needs.
Inspire Learning

University Relations*
- Research
- Capital campaigns and program support
- Corporate Collaboration

K-12 Support
- STEM grants
- Career Awareness
- STEM competitions
- School programs and lessons
Enriching Community

2

Basic Human Needs

Charity of Choice

Hunger

Thought Leadership

Homelessness

Safety

Stability
Matching Gifts

1:1 match
$2,000 matched per TM
$2M program cap

2019 Updates
Minimum match lowered to $5

Micron and Team Member total: CY18 | $3.6M
Volunteerism

16 hours paid time off
100,000 hours goal for CY18 met in November
150,000 volunteer hours goal set for FY19

Idaho Team Member Volunteer hours: CY18 to date: **29,763** | FY19 to date: **8,365**
GIVES
A Micron Foundation of Giving for Good
INL Update on the Governor’s Executive order on Nuclear Production and Manufacturing

Executive Order NO. 2018-07
Establishing a Policy for Nuclear Energy Production and Manufacturing in Idaho

https://prezi.com/view/bvhQ3UM2I3cclIP5Qd1Y/
Public Comment
Areas You Can Support

Messaging

- Introductions to STEM Supporters
- Mentorship Portal Recruitment
Upcoming Events

STEM Matters Day at the Capitol
January 23, 2019
10 am – 2 pm

Board Calls: February

North Idaho Science and Engineering Fair
March 1, 2019
9 am – 6 pm

Next Board Meeting:
March 14, 2019
1pm – 4pm