

Thrust 5b

State EOD Activities
Kristen Landreville

UW Communication and Journalism

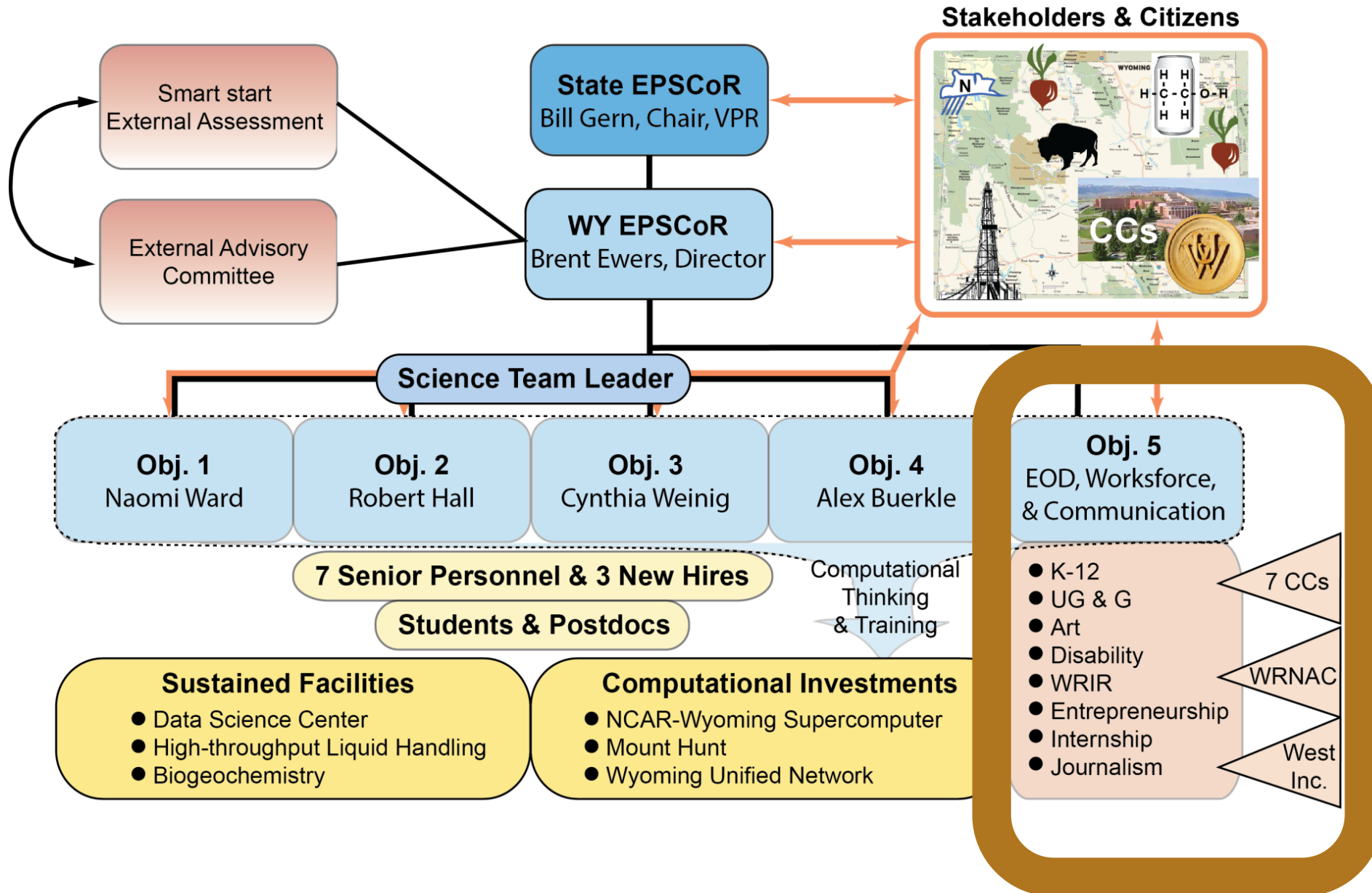
Promote science outreach, service and economic programs, and STEM participation by historically underrepresented groups



Microbiomes of Wyoming
R11 Track 1 – Award



Background of Thrust 5b State



Partners of Thrust 5b



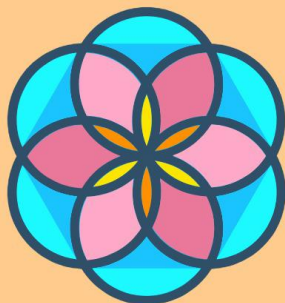
Connections

Existing:

Gallaudet University
WY Public Radio
WY Press Association

New:

WY Tribune Eagle



Collaborations

Existing:

Central Wyoming College
WY Technology Business Center
HPAIRI
WyGISC
Science Fair

New:

Other Community Colleges
Across State
West Inc.
WRNAC
Science Loves Art
Microbestiary



Resources

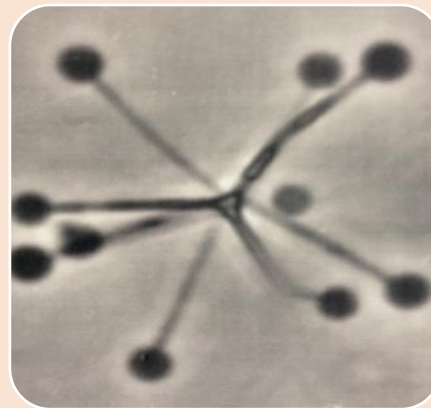
Existing:

ARCC
WyGISC
WY Unified Network
NCAR Super Computing Center

New:

Data Science Center
Data Discovery Tool

Goals of Thrust 5b



Workforce Development

Improve state workforce in data science and microbial ecology through educational activities.

Diversity

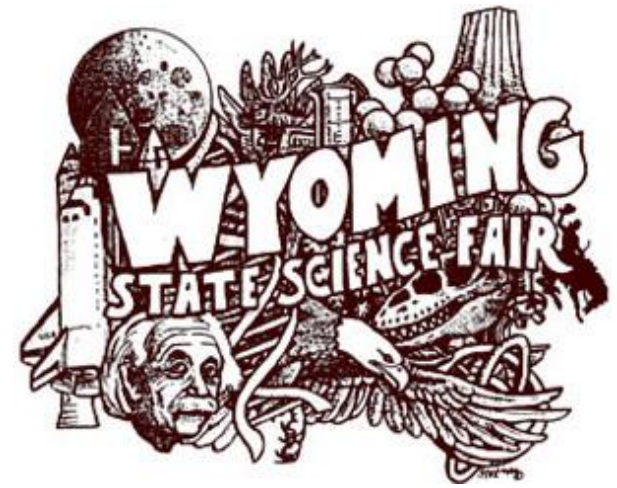
Increase number of under-represented individuals participating in project related activities.

Partnerships & Collaborations

Create and nurture partnerships across the state that will improve effectiveness of the project.

Communication & Dissemination

Communicate science to stakeholders across Wyoming through various media.



Microbestiary



Science Loves Art

Thrust 5b Activities



WYOMING
PRESS
ASSOCIATION



undergraduate
research day



Activities of Thrust 5b

Workforce Development

- **West Inc.** – Hire interns and teach statistics workshops related to sampling.
- **Wyoming Technology Business Center** – Host at least two seed grant challenges associated with science and innovation from project.
- **Community Colleges** – Connect science with student learning outcomes at CWC, and scale to other colleges across the state through field expeditions and analysis projects.
- **Undergraduate Education** – Continue to host Undergraduate Research Day, and develop new courses
- **Data Discovery Tool** – Develop and maintain web-based geosemantic search capabilities, data visualization tools, and data sharing capabilities.
- **K-12 Education Workshops and Curriculum** – Develop and disseminate grade-specific curriculum around the Data Discovery Tool.
- **K-12 Education Science Fair** – Establish incentives for students to integrate microbial ecology into science fair projects.

Activities of Thrust 5b

Diversity

- **SRAP** – Improve representation of underrepresented minorities by recruiting Hispanic/Latino and Native American students to six-week summer research program.
- **Gallaudet** – Create opportunities for two undergraduate biology students per year to join UW's Stable Isotope Facility for summer internships.
- **Wind River Reservation Tribes** – Support education and research collaboration between Wind River Reservation (WRR) tribes, schools, leaders and community members, and UW and Central Wyoming College to increase the diversity of people and paradigms in STEM education and microbiome research.

Activities of Thrust 5b

Partnerships and Collaborations

- **West Inc.** – Host interns and teach statistics workshops to individuals associated with project.
- **Wyoming Technology Business Center** – Host seed funding challenge for entrepreneurial spin offs from the project.
- **Blacktooth, Melvin,** and associated state breweries – Establish partnerships aligned with project and partner on potential entrepreneurial ventures.
- **WRNAC** – Facilitate relationships between the WRR tribes and WY EPSCoR through microbiome minigrant programs.
- **HPAIRI** – Build capacity for STEM education opportunities for Native American students.
- **Central Wyoming College** – Establish a mentorship program with Native American teens for project related fieldwork.

Activities of Thrust 5b

Communication and Dissemination

- **Communicating STEM** – Improve science journalism across Wyoming through internship program and collaboration with the Wyoming Press Association.
- **Microbestiary** – Increase the accessibility of scientific imagery and information to artists and help students explore and perhaps resolve the (apparent) dichotomy of interest and ability in science and art.
- **Science Loves Art** – Expand Wyoming public's knowledge about microbial environments and computation science in their state through art-science workshops for adults and children, art-science speakers, and exhibitions across Wyoming and kit based outreach.
- **Data Discovery Tool** – Provide accessible content to the state.
- **Internal External Communications with EPSCoR Office** – Provide ongoing communications and information about the project to stakeholders across the state through social media, traditional media, and workshops.

Thrust 5b

Metrics & Milestones

Metrics & Milestones: Summary

Workforce Development

- Internships & Workshops → Years 1 to 5
- Increase CC Programs → Years 1 to 5
- DDT & K-12 → Years 1 to 5
- UG Research Day → Years 1 to 5
- WTBC, New Startups → Years 3 and 4

Diversity

- SRAP → Years 1 to 5
- Wind River → Years 1 to 5
- Gallaudet Interns → Years 2 to 5

Communication & Dissemination

- EPSCoR → Years 1 to 5
- Science ♥ Art Work → Years 1 to 5
- Science Journalism → Years 2 to 5
- Microbestiary → Years 4 and 5

Metrics & Milestones: 4 Main Goals (Buckets)

✓ See packet for details of proposed metrics and milestones

We Need To Know:

- Are these activities sustainable?
- Are these metrics and milestones:
 - Realistic?
 - Over-ambitious?
 - Demonstrate a gap or stretch in thinking?
- What's missing?

Risk Assessment

Overview of Key Risks: See Packet for Details

Risk	Mitigation
➤ Poor Communication Between EOD and Science Leads	✓ Establish simple methods for transferring data and information. ✓ Establish and attend regular meetings
➤ Lack of Participation – Both inside and outside of project (e.g., unable to recruit participants)	✓ Seek creative partnerships to find willing participants. ✓ Communicate science foci in creative ways to appeal to diverse audiences.
➤ Losing Key Personnel	✓ Preserve and archive project data to ensure resources are available to all
➤ Technology Concerns – Unable to access DDT, trouble developing visualization	✓ Work closely with UW IT Network Security Analysts and ARCC

But, first...
Do any of the EOD
partners have any
essential
information to
add that we
missed?

Questions?

