Restructuring UW for Wyoming’s Future

Edward Seidel, President, University of Wyoming

Proposal to the UW Board of Trustees
July 14, 2021
Objectives of today’s discussion

• Motivation and overview for today’s discussion
• State of Wyoming – opportunities and challenges (Alexander)
• Wyoming Innovation Partnership (WIP)
  — What is WIP? Why now?
  — What WIP will do – aspirations, pillars, and strategic initiatives – and UW Role (Shader/Allen, Farkas, Koprowski/Godby)
• Strategy and proposed 2-13 action plan for UW (Carman)
• UW Foundation: Fully Aligned with Proposed Plans (Blalock)
Motivation and Overview

Ed Seidel

UW is at an inflection point
Global and WY Job Landscape Changing

By 2030...when today's high school freshmen graduate

Automation will transform jobs
- 1/3 of tasks for 2/3 of jobs automated
- 26M (16%) of workforce will need to switch jobs

Technology adding significant new jobs; Employers demand new skills
- Technological skills, advanced IT, programming, basic digital skills (60% growth)
- Entrepreneurship and initiative taking (26% growth)
- Creativity and higher cognitive (9% growth)

Many other jobs in significant decline
- Office, mechanical, extraction, etc

Technology
- 20-50M global jobs created by 2030

Energy transition and efficiency
- 20M global jobs created by 2030
Higher education is changing

<table>
<thead>
<tr>
<th>B.S. Enrollment: growing at half the rate of last decade</th>
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<tbody>
<tr>
<td>• UW will have to compete (and brand ourselves) much more effectively to attract students</td>
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<table>
<thead>
<tr>
<th>Digital Impact</th>
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<tbody>
<tr>
<td>• Distance learning growing at 4% annually (2012-2018)</td>
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<tr>
<td>• Computing programs growing at 10% per year, faster than all other programs</td>
</tr>
<tr>
<td>• Universities cannot hire enough faculty to keep up with demand</td>
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<table>
<thead>
<tr>
<th>State budgets declining precipitously</th>
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<tbody>
<tr>
<td>• UW state budgets down more than 1/3 in decade</td>
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<table>
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<tr>
<th>Federal and non-federal R&amp;D growing rapidly, also more competitive</th>
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<tr>
<td>• Universities rapidly diversifying revenue to federal, corporate, philanthropic sources</td>
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UW MUST embrace these trends! (But hasn’t yet...)
Students and States Changing Expectations

*Demand More...*

• Students expect us to provide 21st century skills for new careers
  • More digital, inclusive, interdisciplinary, entrepreneurial...

• States expect universities to be engines for innovation and economic development
  • Help grow existing markets, grow new ones, attract companies
UW is on unsustainable path...

Incremental change not sufficient...

UW Board of Trustees has asked me to budget shortfalls and present plan for UW...

Proposing major restructuring of UW for future...
Goals of Proposed Restructuring

Position UW for future

• Enhance student experience and prepare for success of WY
  • Provide what students expect and deserve and what state needs
• Diversify and grow revenue streams
  • NSF, DOE, NIH, Commerce growing dramatically; UW not prepared
  • Corporate partnerships support students and help cover costs
• Better engine for innovation and economic development
  • UW college restructuring, new programs contribute to economy
• Cannot do it alone: Partnerships with community colleges
  • Wyoming Innovation Partnership (formerly WIN)

Respond to budget cuts

• Eliminate, consolidate programs
• Create smaller number of critical mass units with greater efficiencies
• Propose new units with sharper focus for future growth
Preview of New UW Proposed Structure

- Student success
- Program Growth
  - Revenue enhancement
  - Carnegie R1, Engaged Status
- Better Efficiencies
- Economic Impact
State of Wyoming: Key Specific Opportunities and Challenges facing WY

Vice Provost, Strategic Planning Anne Alexander
Challenges in the global & higher ed landscape are also aimed squarely at Wyoming. We can’t assume they don’t affect us. But, Wyoming has a strong heritage and foundation to build from.

- Entrepreneurial & pioneering spirit
- Fierce pride & independence
- Strong, hard-working communities
- Natural beauty and outdoor recreation
Summary of economic opportunities and challenges for Wyoming

Still recovering from the 2008 Great Recession

70% of UW grads leave Wyoming

Core economic sectors are facing disruption

7th nationally in rate of entrepreneurs, but 50th in academic and business R&D

Outdoor recreation and the rise of remote work
Wyoming is still recovering from the 2008 Great Recession

Real GDP, Indexed to 2008

Source: Moody’s Analytics

Peers include: Idaho; Montana; Nebraska; North Dakota; South Dakota; Utah; West Virginia
70%+ of UW grads leave the state; greatly lagging regional peers

Percent of graduates that remain in-state after graduation\(^1\)

<table>
<thead>
<tr>
<th>State</th>
<th>Percent of profiles</th>
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<tbody>
<tr>
<td>Utah</td>
<td>45</td>
</tr>
<tr>
<td>Nebraska</td>
<td>44</td>
</tr>
<tr>
<td>Idaho</td>
<td>42</td>
</tr>
<tr>
<td>South Dakota</td>
<td>39</td>
</tr>
<tr>
<td>Montana</td>
<td>38</td>
</tr>
<tr>
<td>North Dakota</td>
<td>31</td>
</tr>
<tr>
<td>Wyoming</td>
<td>28</td>
</tr>
<tr>
<td>West Virginia</td>
<td>19</td>
</tr>
</tbody>
</table>

1. Of all job-seekers with an online profile between 2000-2021, percentage that remain in same state as institution at which they completed their degree for all degree programs and all award levels above Associate’s.

Source: EMSI
Wyoming’s core sectors are facing disruption

**Energy**
- Nuclear, wind, & solar
- Blue & green hydrogen
- Carbon capture
- Innovation in other fuels

**Agriculture**
- Innovative food
- Farm Robotics
- Soil microbiome

**Tourism & Hospitality**
- Remote work
- Sustainable up-value tourism
Our innovation pipeline – the flywheel that drives jobs and development and keeps our students here – is weak

Idea generation / R&D

Commercialization

Start-up and company growth

Faculty, staff, students’ creations and ideas are strong – institutional support for them is weak

Anemic UW system of IP support and tech transfer support

Those 250 students leave WY after graduation
Innovation pipeline is weak

University/ Industry driven innovation

<table>
<thead>
<tr>
<th>Idea generation / R&amp;D</th>
<th>Commercialization</th>
<th>Start-up and company growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic science/engineering R&amp;D, percent of GDP 2019</td>
<td>Patents per 1 million people 36th</td>
<td>Rate of new entrepreneurs(^1) 2019 7th</td>
</tr>
<tr>
<td>Business R&amp;D as % of private industry output 2018</td>
<td>Small Business Innovation Research /Technology Transfer, per $1m GDP 2019 32nd</td>
<td>5-year business survival rate 2018 31st</td>
</tr>
</tbody>
</table>

1. Rate of 'new entrepreneurs' refers to the percent of the total number of new entrepreneurs who were not unemployed and not looking for a job as they started the new business.

Source: US Patents and Trademarks Office (USPTO), National Science Foundation (NSF), Kauffman Indicators of Entrepreneurship, Moody's Analytics, PitchBook
Wyoming’s outdoor recreation and the rise of remote work

States that Gained and Lost Movers During Coronavirus¹, Feb - July 2020, Net movers

1. Data pulled from total USPS change-of-address requests filed between Feb. 1, 2020 and July 31, 2020. To calculate the data, we took the total number of moves to each state and subtracted the total number of moves from it.

UW’s role

Must pivot the academic portfolio and deeply rethink essential learning outcomes and student success support.

Must invest in the flywheel of innovation to create opportunities for graduates to stay in Wyoming.
W I P (formerly WIN)

Wyoming Innovation Partnership

Why WIP, What is it? Why Now?

Ed Seidel
• Students come from entire state
  • Many from community colleges
  • About 6K per year
• Responsibility to prepare all for careers in this new world
• Align all Higher Ed (UW and CCs)
  • Better prepare our students
  • Stronger pipeline & enrollment
• Together we can better support WY economy
  • Develop joint programs targeted to grow key job future markets
  • Grow opportunities at home
Wyoming Innovation Partnership

- Address these trends to strengthen and grow Wyoming's economy to enable a more resilient tax base, create more better opportunities for WY students

Support from the state and Governor

<table>
<thead>
<tr>
<th>Support from the state and Governor</th>
<th>8</th>
<th>35K+</th>
<th>6K</th>
<th>55K+</th>
<th>$80M</th>
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<tbody>
<tr>
<td>Higher ed institutions</td>
<td></td>
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<tr>
<td>Students</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Employees (staff and faculty)</td>
<td></td>
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<tr>
<td>Alumni in Wyoming</td>
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<tr>
<td>In research funding</td>
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Supporting and enhancing Wyoming’s economy and workforce
Why WIP and why now?

WIP can start the “flywheel” for the Wyoming economy...

- Talent production
- Idea generation (R&D, commercialization)
- Corporate partnerships
- Support for SMBs and Entrepreneurs

...with key partners in Wyoming...

- State of Wyoming
- Industry partners
- Schools

...capitalizing on near-term federal funding

$1B+

American Rescue Plan
$126M requested for WIP; additional for UW

$80B+

Expected in the U.S. Innovation and Competition Act
Research and commercialization
### U.S. Innovation and Competition Act

**Historic Shift in Federal Funding Ecosystem**

<table>
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<tr>
<th>Major proposed authorizations</th>
<th>10 “technology focus areas” for NSF</th>
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<tbody>
<tr>
<td>$29B+ National Science Foundation Directorate for Technology and Innovation</td>
<td>1. Artificial intelligence and machine learning</td>
</tr>
<tr>
<td>$52B+ National Science Foundation Non-Applied Technology</td>
<td>2. High-performance computing, semiconductors, advanced hardware and software</td>
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<tr>
<td>$13B+ Commerce Department R&amp;D Capacity Funding</td>
<td>3. Quantum information science and technology</td>
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<tr>
<td></td>
<td>4. Robotics, automation, and advanced manufacturing</td>
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<td></td>
<td>5. Natural disaster prevention or mitigation</td>
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<td></td>
<td>6. Advanced communications technology</td>
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<tr>
<td></td>
<td>7. Biotechnology, medical tech, genomics, and synthetic biology</td>
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<tr>
<td></td>
<td>8. Data storage and management, including cybersecurity</td>
</tr>
<tr>
<td></td>
<td>9. Advanced energy and nuclear technologies</td>
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<td></td>
<td>10. Advanced materials science</td>
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</tbody>
</table>
UW will build from an incredible foundation

| Seven colleges, SER, Haub, and Honors | Partnership with NCAR Supercomputing Center |
| Tier I Engineering | Science Initiative |
| High Bay Research Facility | Growth and innovation ecosystem |
| Enzi STEM Building, Engineering Building, and Science Building | • Impact 307 |
| | • Makerspaces |
| Energy Innovation Center | AMK Ranch |
| | |
| | UW Foundation $750M+ Endowment |

Incredible alumni and business leaders, across the UW Board of Trustees, the UW Foundation Board, and the community, who are ready to be champions
WIP Supports Wyoming’s Economic Sectors

Prioritized focus for WIP / UW in the near-term

- Oil & Gas production
- Agriculture-tech
- Advanced manufacturing
- Fossil fuel innovation (carbon capture and storage, blue hydrogen)
- Renewable energy (nuclear, wind, solar, renewable natural gas, green hydrogen)
- Healthcare

New programs proposed at UW and WIP

- Entrepreneurship and building new economy
- Hospitality and tourism
- Computing / digital applications across sectors
What WIP Will Do

Specific strategic Initiatives

Ed Seidel, John Koprowski, Bryan Shader, Gabrielle Allen, Steve Farkas
What we are trying to achieve: WIP’s aspiration by 2030

Strengthen and grow Wyoming’s economy to enable a more resilient tax base, and to create more and better opportunities for Wyomingites in Wyoming

New businesses are started and supported

1K New businesses supported by WIP

New jobs are created across key industries

7-10K New jobs created across key industries

Displaced Wyomingites are reskilled and transitioned to new jobs

2K Wyomingites reskilled and transitioned to new jobs

More UW graduates stay in WY

35% College graduate retention (240 more young people staying in WY each year; current retention rate: 28%)

All WIP graduates armed with digital skills for future economy

100%

UW has increased annual R&D

$200M in additional yearly R&D spending by 2030 ($100M additional by 2025)
How we will achieve aspirations: WIP’s strategies & initiatives

1. Support and grow Wyoming’s core and promising sectors
2. Build a nationally recognized rural research & innovation system to spark new businesses and create jobs
3. Build the digital capabilities to make Wyoming more resilient & competitive
4. Provide the skills and pathways into Wyoming’s growing industries

WY Pathways to career success
- Transforming career services, experiential learning
- Technology / Health-tech, Agriculture, Energy / Manufacturing

Re-skil WY
- e.g., coal mining → advanced manufacturing

School of Computing
- WY Digital Talent Pipeline

Energy (O&G Excellence, UW Energy moonshots)
- WORTH
- Ag scale up and innovation (ag-tech)
- WY economic diversification (healthcare, advanced manufacturing)

$100M in R&D by 2025 (currently at ~80M)
- Tech-enabled R&D across UW with CC’s School of Computing
- Center for Entrepreneurship and Innovation
Opportunity for BoT and Community
Execution Plan for UW-led WIP Initiatives

UW Board of Trustees
WIP Leadership (8 presidents, Gov office, WBC, WIP)

UW Executive Committee for WIP (Board of Trustees, UWF Board, WIP leadership, Gov office, Legislature, WY business, others)

UW’s WIP Delivery Unit (Management team funded by ARP)

Six Key WIP Initiatives

Executive sponsors (~2 per initiative, all are on UW ExCo)
Owners (1 for each initiative)

Pathways to career success
Compute
Energy
Building R&D
CEI
WORTH

Key WY stakeholders to engage throughout
• Governor / Governor’s office
• UW Foundation Board
• Wyoming Business Council
• WY business and community leaders
• Policymakers / Legislature
• Economic Development Organizations / Councils

WIP Advisory Body
~15-20 members:
• WIP
• UW faculty
• Key WY stakeholders
• National leaders (e.g. National Laboratories)

Already developing statewide WIP software engineering program with Cardiff University.
Three Specific UW Initiatives that will Support WIP

Deans John Koprowski, Rob Godby
Profs Bryan Shader, Gabrielle Allen
Assistant VP Economic Development and Innovation Steve Farkas, Dean Rob Godby
UW programs that support the entire state through WIP; all from pillar groups, faculty; CCs collaborating
Why a SoC?

Do I have enough computing experience to get the job I want?

My friends at other universities know much more about computing than I do.

For our students! All disciplines, all industries, all aspects of society need computing.

I took a basic programming class as a freshman, I didn't realize I would need more.

No one advised me on taking more computing classes or getting more computing experiences.
Why a SoC?
To prepare all students for 21st century careers

- E-commerce & law
- Natural disaster response
- Architecture, Construction
- Agriculture
- Social sciences
- Health care
- Arts, Ag & marketing

HR Agent
Hi, I’m the UW HR Virtual Agent!
Why a SoC?

• “Computing”/Digital Literacy crucial tool for our all students, all research, all economy sectors
  • *UW needs a critical mass across all disciplines*!

• New data science technologies (AI/ML, blockchain) transforming every academic discipline, industry, and aspect of society

• Access to world-class professors, research, infrastructure, training critical for Wyoming

• There are strategic areas where Wyoming can lead!
Why a SoC?
For Wyoming Workforce & Economic Development

- Smart Tourism
- Smart Materials & 3D Printing
- AI for resource management

- Wildfire management
Wildfire Management & Healthy Forests

**Computing Opportunities:**

- Predictive fire models. Where to send fire fighters, stage equipment, when to evacuate.
- Research models to understand e.g. weather-fire interactions, fire-urban border behavior.
- Diverse data remote sensing, environmental data, population, wildlife, transport, etc.
- Climate & regional weather models, snowpack models to predict future wildfire risk, mitigations
- Modeling wildfire/forest management CO2 impact
- Visualization of wildfires to educate policy makers
- Multispectral sensors and image detection to quickly detect potential fires, drones to address hazard.
- Basic computing research: numerical algorithms, virtual reality visualization, data and AI.

Why a SoC?

To empower data and computational research driven by applications of Wyoming interest
Why a SoC?

To act as a force multiplier for past and current investments, and to position for partnerships and funding opportunities.
Plans Informed by Other SoCs

University of Utah

University of Montana

Clemson University

Georgia Tech University
“... create a unique and inspirational School of Computing (SoC) with national impact and global reach, providing Wyoming and the world with agile and ethical computing professionals, empowered to address societal challenges that are inherently interdisciplinary”
Initial Outcomes

World-class team of faculty (12) and research scientists (8)

Impactful research on Wyoming's Grand Challenges

Increased funding and corporate partnerships

Cutting-edge, widely accessible curricula & student experiences

A tech-savvy workforce for Wyoming

Active engagement throughout Wyoming

All-in Costs: $9.5M/year

New revenues from grants & corporate partnerships
Implementation Timeline

Phase 0: 3-6 months (1/22)
Establish mission, values, structure and metrics.

Phase 1: Years 1 and 2
- Recruit
- Develop undergrad curricula
- Establish partnerships
- Raise funds for Phase 2
- Commence operational programs!

Phase 2: Years 3-5
- Secure funding & partnerships
- Expand faculty & research staff
- Expand acad. Programs
- Catalyze research across UW
Center for entrepreneurship & Innovation (CEI)

Steve Farkas
7-14-21
Wyoming Board of Trustees Retreat
Torrington, WY
Why CEI is Needed

• Capacity:
  • UW has invested in significant educational capacity to support workforce needs in the 21st Century

• Entrepreneurship and Innovation:
  • SoC, WORTH and CEI initiatives utilize this capacity to drive innovation across state’s priority economic sectors in addition to catalyzing new business creation

• Impact
  • Focus on supporting state-wide economic development and new job creation through
    • Creation of knowledge
    • Connecting opportunity to networks
    • Execute new ideas by creating meaningful business activity that provides our graduates with opportunities in Wyoming
CEI Objectives

• The CEI serves as the coordinating entity to facilitate entrepreneurship and innovation activities across UW and Wyoming’s community colleges in collaboration with proposed UW School of Computing, WORTH, and the Wyoming Innovation Partnership (WIP)

• State-wide interdisciplinary integrator for programs that have potential for supporting the state’s priority economic sectors in addition to activating new business sectors and supporting state workforce objectives
Considerations…

- Clearly understood, efficient, and easy to engage (internal and external)
- Centralized coordination - centerpiece for student experience
  - Business Resource Network (BRN)
  - State-wide ecosystem = business success rate
- Increase innovation and economic development capacity
  - Support Tier 1, Science Initiative, TEI, School of Computing, WORTH
- Other:
  - Statewide resource for Wyoming Innovation Partnership (WIP)
  - Supports new business creation + existing business communities
  - Industry partners program
  - Activates access to capital networks
Economic Development, Innovation, and Corporate Partnerships

- Corporate Partnerships
- State-wide Economic Development Collaborations
- Center for Entrepreneurship and Innovation (CEI)
- UW Venture Fund
- Wyoming Innovation Partnership (WIP)

- Hub for Entrepreneurship Education and Research
- Interdisciplinary Innovation Hubs
- Economic Development Hub
Innovation Hubs

• State-wide network
  • UW and CC collaboration, best practices
  • Connect world-class research and talent with industry partners
  • Solve important challenges
• Drive innovation, economic development and workforce development
• IMPACT 307 + CC
  • Incubators, labs
  • Innovation enabled classrooms, co-working space, etc.
  • Destination for innovation activities
WIN Hubs in Wyoming: CEI Supports All
Entrepreneurship and Computing/Data Across all Hubs

**Educational Assets**
K-12, CCs, UW, Extension

**Partnerships to build capacity**
Wales/Wyoming, National Labs,, AI/Blockchain Consortium

**Incubators**
C&D/Tech, Entrepreneurship everywhere
Themes as appropriate

**Venture Capital**
Funds, Networks Needed

**Assets to Build on**
BRN, Impact 307 Hubs, EDA
Virtual Network, many others
Work Underway...

- Existing Interdisciplinary Framework
  - Center for Entrepreneurship Education and Research
  - Entrepreneurship Minor
  - Ellbogen 50K, Fisher Innovation Launchpad

- E2 (Entrepreneurship Essentials) in collaboration with CWC
  - State-wide collaboration to deliver entrepreneurial education

- IMPACT 307 EDA Grant
- UW Venture Fund
- ARP Funding Request

WIP Presidential Steering Group working to build on these and other assets across the state...
Proposed Investments

Faculty & Staff Support for All

• Training in entrepreneurship for all students at UW and CCs
  • Courses, seminars, etc.
  • Bootcamps and other applied learning opportunities
  • Associate degrees, Bachelor’s degrees, minors, concentrations, certificates, etc.
  • Proposed Center Director + Academic Coordinator

• Coordinated state-wide mentoring network
  • Alumni, associations, special interest groups, businesses, etc.
  • Web based mentor connection platform

• State-wide business incubators, lab spaces, and innovation learning hubs
  • UW and CC facilities retrofit and upgrades
  • Technology updates/upgrades to connect WIN partners

• Innovation workshops, student projects, business/corporate engagement

• Corporate Relations Office
Measured Outcomes

• New business starts
• Existing business growth
• Business recruitment
• New job creation - Wyoming graduate retention
• Increased access to capital
• Sponsored projects and research
  • Research Park
• New and enhanced industry partnerships
Wyoming Outdoor Recreation, Tourism & Hospitality (WORTH) Initiative
Why the WORTH Center? Supporting our #2 Economic Driver

2019 - Wyoming
Outdoor Recreation Satellite Account (ORSA)

<table>
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<tr>
<th></th>
<th>Value Added (GDP)</th>
<th>Employment</th>
<th>Compensation</th>
</tr>
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<tbody>
<tr>
<td>ORSA Total</td>
<td>Share of State</td>
<td>ORSA Total</td>
<td>Share of State</td>
</tr>
<tr>
<td>$1.7 Billion</td>
<td>4.2%</td>
<td>21,344 Jobs</td>
<td>5.2%</td>
</tr>
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</table>

5th in US (tied with ME)  2nd in US  2nd in US (tied with MT)
Vision

• An expanded, diversified and more resilient Wyoming economy
• WORTH industries thriving and growing
• Leaders and innovators nationally in applied research, professional development, and outreach to this sector
Needs that WORTH Addresses

- Lack of diverse educational products and professional development
- Lack of state-wide outreach and extension
- Lack of targeted, applied research
- Resource impacts with increased visitation and use

For WORTH related industries
Builds on a strong foundation...

- Rapidly growing BS in ORTM
- New minor in Hospitality
- New BS in Ranch Management
- Strong Cooperative Extension
- Burgeoning on-line capacity
Western hospitality writ large…from the arts, culture, history, industry, innovation, outdoor recreation, wild & working landscapes
Center for Entrepreneurship and Innovation

- State-wide entrepreneurial support
- Innovation efforts programs to increase value and activity
- Workforce development

School of Computing

- Data analytics for hospitality & tourism sectors
- Agent-based modeling of tourist travel, investment scenarios, wildlife impacts
- Interactive mapping of tourism-related urban and infrastructure growth

Wyoming Outdoor Recreation, Tourism, and Hospitality

- Data analytics for hospitality & tourism sectors
- Agent-based modeling of tourist travel, investment scenarios, wildlife impacts
- Interactive mapping of tourism-related urban and infrastructure growth
The WORTH Initiative - What will it be?

- **Professional Development**
  - Academic degrees/partners expanded – BA/BS Hospitality
  - Certificates & continuing education
  - On-line/distance learning
  - Student experiences

- **Outreach & Extension**
  - Extension agents
  - Assistance for state
  - Economic analyses
  - Student internships

- **Applied Research**
  - Applied-driven research/survey
  - Data-informed decisions
  - Graduate student research
  - Student internships

Economic Impact: Expanded ORTH Industry & Workforce
Making a difference...
Restructuring for the Future
Restructuring Academic Programs at UW

• Necessary budget cuts

• Broader thinking about UW structure
  • Synergism among disciplines within Colleges
  • Interdisciplinary programs that transcend departments/colleges
    • School of Computing
  • Efficiencies of department size
    • Reduced # of department heads
  • Program eliminations
  • Impact on Faculty & Staff
# Budget Challenge

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<th>Item</th>
<th>Budget required (annual)</th>
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<tbody>
<tr>
<td>Step Two reductions covered with one-time monies previously</td>
<td>$3,125,000</td>
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<tr>
<td>Debt service</td>
<td>$5,000,000</td>
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<tr>
<td>Required reallocations (SoC, CEI, WORTH)</td>
<td>$5,500,000</td>
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<tr>
<td><strong>Total annual required</strong></td>
<td><strong>$13,625,000</strong></td>
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## Budget challenge

<table>
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<tr>
<th>College/action</th>
<th>Estimated Savings</th>
<th>Positions</th>
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<tbody>
<tr>
<td>Total from discontinuations, reorganizations,</td>
<td>$4,097,000</td>
<td>Up to 65</td>
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<tr>
<td>reductions</td>
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<tr>
<td>Total academic cuts from across the board</td>
<td>$1,243,000</td>
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<tr>
<td><strong>Total, academic reductions</strong></td>
<td><strong>$5,340,000</strong></td>
<td></td>
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<tr>
<td>Reduction in academic admin. (dept. heads)</td>
<td></td>
<td>Up to 10</td>
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<tr>
<td><strong>Academic policy efficiencies</strong></td>
<td><strong>$750,000</strong></td>
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<tr>
<td>Employment policies</td>
<td>$1,500,000</td>
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<tr>
<td>Consolidations in auxiliaries</td>
<td>$2,153,000</td>
<td></td>
</tr>
<tr>
<td>Parking</td>
<td>$500,000</td>
<td></td>
</tr>
<tr>
<td>Non-academic reductions</td>
<td>$2,577,000</td>
<td></td>
</tr>
<tr>
<td><strong>Step Two Reallocations</strong></td>
<td><strong>$500,000</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$13,320,000</strong></td>
<td></td>
</tr>
</tbody>
</table>
Reorganizations of Colleges

• Engineering & Physical Sciences
  • Mathematics & Statistics

• Consolidation
  • Physics & Astronomy + Atmospheric Science

• Consolidation and Reduction
  • Petroleum Engineering + Geology & Geophysics

• Discontinuations and Create New Academic Unit
  • Comp. Sci. + Electrical & Computing Engineering

• Discontinuation & Reorganization
  • Chemistry + Chemical Engineering
Reorganizations of Colleges

- **Agriculture & Life Sciences**
  - *Consolidations*
    - Zoology & Physiology, Botany, & Life Sciences
      - 8 life sciences depts → 3 depts
    - Ag Economics → Economics/CoB
    - Ag Communications → COJO/CHSSA
    - Nutrition MA → Kinesiology/HS
    - Early Childhood Education → Education
Reorganizations of Colleges

• Humanities, Social Sciences, & Arts
  • Focused emphasis on the liberal arts core of the university
  • *Reorganize, Consolidate, and Rename* Department of Visual & Literary Arts
    • Consolidations
      • Creative Writing → English
    • *Reorganize and Rename*
      • Visual Arts with Theatre & Dance → New Department of Visual & Performing Arts

• Education
  • Discontinuation and Reorganization
    • CLAD
    • Maintain key graduate programs
    • Reorganize structure of college and degree programs
Program Eliminations/Suspension

<table>
<thead>
<tr>
<th>College</th>
<th>Program</th>
<th>Enrollment^1</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSSHA</td>
<td>BA German</td>
<td>1, 2, 13, 13, 10</td>
</tr>
<tr>
<td></td>
<td>BA French</td>
<td>10, 10, 13, 9, 16</td>
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<tr>
<td></td>
<td>MA Sociology</td>
<td>0, 0, 0, 3, 9</td>
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<tr>
<td></td>
<td>MA Philosophy</td>
<td>0, 0, 1, 6, 8</td>
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<tr>
<td></td>
<td>MA Political Science</td>
<td>4, 7, 8, 8, 5</td>
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<tr>
<td></td>
<td>MA International Studies</td>
<td>12, 15, 15, 16, 14</td>
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<tr>
<td>COB</td>
<td>MBA Energy</td>
<td>5, 4, 5, 7, 8</td>
</tr>
<tr>
<td></td>
<td>MBA Finance</td>
<td>3, 6, 10, 3, 0</td>
</tr>
<tr>
<td>CEPS</td>
<td>MS Architectural Engineering</td>
<td>4, 7, 5, 6, 7</td>
</tr>
<tr>
<td>EDUC</td>
<td>CLAD^2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Secondary Ed/Foreign Lang</td>
<td>10, 10, 13, 13, 17</td>
</tr>
</tbody>
</table>

2. Program elimination TBD
Degree programs slated for elimination

<table>
<thead>
<tr>
<th>College</th>
<th>Program</th>
<th>Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALS</td>
<td>MS/PhD Entomology</td>
<td>1, 1, 1, 1, 5</td>
</tr>
<tr>
<td></td>
<td>MS Family &amp; Consumer Sciences</td>
<td>4, 2, 5, 4, 3</td>
</tr>
<tr>
<td>CEPS</td>
<td>PhD Statistics</td>
<td>0, 0, 1, 2, 4</td>
</tr>
</tbody>
</table>

Programs to be suspended

- Neuroscience
- Biomedical Science
- Hydrologic Science
The New UW: More improvements to come

• Update of Strategic Plan
  • Integration with WIP/WORTH/CEI
  • Graduate School

• Application for Carnegie Community Engaged

• Pursuit of Carnegie R1

• School of Computing

• Update of University Studies Program
  • Digital literacy
  • Entrepreneurial acumen
Summary
Ed Seidel
Great ideas rediscovered…
Ready then...more ready now!

61. Action Item: In consultation with the Deans of Arts and Sciences, Business, and Engineering, the Vice President for Academic Affairs will assess alternative organizational arrangements that will strengthen the University’s presence in computing, information technology, and information management at the undergraduate and graduate level. This effort could include cross-college cooperation for a computer engineering program, the merger of Computer Science and Electrical Engineering, the creation of an inter-college School of Computer and Information Sciences, or other alternatives.

130. Action Item: The University will assess the demand and potential costs associated with an undergraduate program in tourism and hospitality.
Restructuring UW for

- Student experience and success
  - More tomorrow
- Growth of programs for 21st century themes
  - Revenue enhancement
  - Carnegie R1, Engaged Status
- Better Efficiencies
  - Critical mass
  - Continued improvement
- Economic Impact

- More Focus, Critical Mass, Efficiencies
- Better Positioned for Future Growth

Colleges
- Engineering & Physical Sciences
- Agriculture & Life Sciences
- Arts, Social Sciences & Humanities
- Health Sciences
- Business
- Education
- Law
- Honors
- School of Computing
- Grand Challenges
- WORTH
- CEI
- Extracurricular, Athletics
- Living Learning Communities
- Honors
- SER
- Haub
- Student experience lives here
- Enhancing student experience and success
- Supporting entire state with WIP

- Economic Impact
UW Foundation Report: Alignment with Proposed Plans

UW VP and Foundation President Ben Blalock
UW Fundraising Priorities

A Strategic Fundraising Partnership

UW Board of Trustees Retreat
July 2021
An unwavering commitment to making a difference and elevating the margin of excellence at UW
A Strategic Fundraising Partnership

Build on more than two decades of a significant public-private partnership

Align State of Wyoming goals, UW priorities, and donor interests

Maximize the impact of UW’s endowment

$760 million

Ensure the current total funds for appropriation ($69+ million) are spent in keeping with the donor’s intent

Put current private support dollars to use before we return to our donor base for significant additional private support

TOTAL ENDOWMENT
AS OF 6/30/21
NOTE: PRIVATE MANAGERS ARE A COUPLE OF MONTHS LAGGED IN REPORTING
Launch Presidential Excellence Initiative

A partnership between the President’s Office, the Provost, and the UW Foundation

Ensure current chairs, professorships, and faculty positions are being effectively utilized (including Wyoming Excellence Chairs)

Conduct a deep dive of current endowed positions as well as endowed faculty fellowships

Work with current donors to maximize endowed positions—and where appropriate directing positions to the highest identified use and priorities (including computing, entrepreneurship and innovation, tourism and hospitality)

- Identify opportunities to support newly reorganized UW colleges
- Focus on areas related to digital research and scholarship
- Recruit top-notch deans, faculty, and academic leaders to UW
- Increase endowed deanships, chairs, and professorships from 50 to 100
A Strategic Fundraising Partnership

Align private support programs with new visionary initiatives

- School of Computing
- Center for Entrepreneurship & Innovation
- WORTH Initiative
- Wyoming Innovation Partnership

✓ Focus on current private support initiatives and opportunities

- Tier I Engineering and Science Initiatives
- STEAM programs
- Trustees Education Initiative
- Law school facility and clinic programs
- Wyoming Athletics (UW’s national “front porch”)

- School of Energy Resources
- Blockchain
- UW Rodeo
- Priorities driven by donor commitment to UW
Invest in Student Success

- Ensure greater student success at UW by providing private funding for deserving students who want to graduate with their degree and give back
- Connect donors who have a passion for UW with student success
- Recruit and retain the best and brightest students to UW
- Evaluate current student support and scholarship funds to determine if they are being effectively used and/or if they can be used to support new visionary opportunities

$207 million

STUDENT SCHOLARSHIP ENDOWMENT
AS OF APRIL 2021
A Strategic Fundraising Partnership

PRIORITIES

✓ Leverage New and Remaining Matching Funds

NEW

$4 million
Cryptocurrency staking program
New match from state’s reserve account,
1:2 match

$10 million
Carbon Capture and Storage
New match from state’s legislative stabilization reserve account

REMAINING

$1 million
Law Clinics and Experiential Learning Programs

$1.89 million
Ag Excellence in Education and Research

$500K
Ag Professorships
END