Research and Economic Development Division

FY2023 Annual Report

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UW's knowledge enterprise and innovation capabilities have bright days ahead in FY2024 and beyond. The Research and Economic Development Division is achieving this by establishing new units, reimagining the existing ones, and strategically investing in topics relevant to Wyoming's needs and growth.
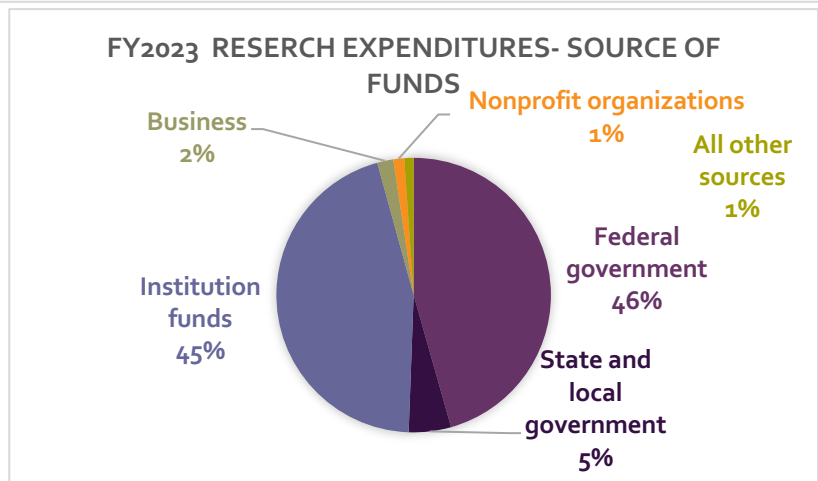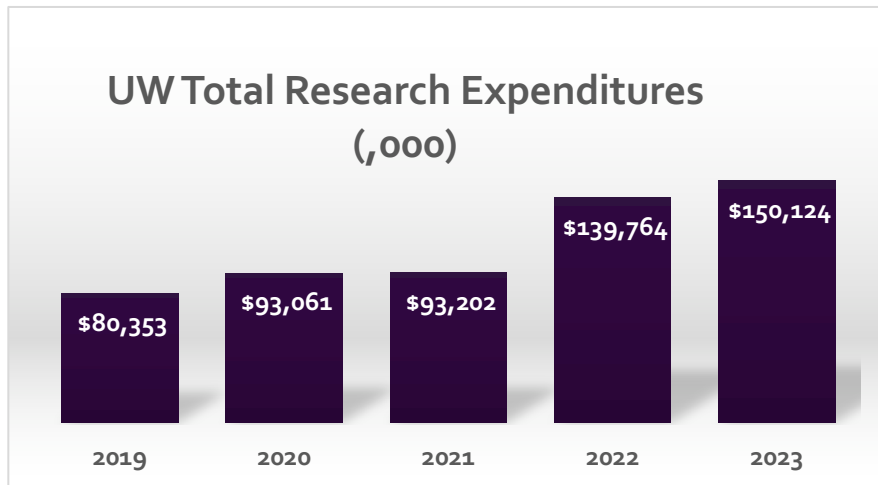
2. Summary of Accomplishments

The Research and Economic Development Division (REDD) of the University of Wyoming catalyzes expansion of UW's knowledge enterprise (research, service, and innovation), provides experiential learning opportunities for UW students, and facilitates innovation and engagement to support economic development across Wyoming. To meet these goals, REDD units function as service organizations (e.g. preaward services, research compliance, research facilities, research computing resources, etc.), as integrators of multidisciplinary research (university-wide centers and institutes), as catalysts for entrepreneurship and innovation (e.g. Center for Entrepreneurship and Innovation, Technology Transfer Office, etc.), and as technical assistance providers to businesses across the state (e.g. Small Business Development Centers, Manufacturing Works.). Highlights of REDD's activities, staffing efforts, and accomplishments are listed below.

Goal 1: Increase the breadth, size, effectiveness, and impacts of UW's knowledge enterprise.

In FY2023, REDD focused on building the infrastructure for supporting larger set of research activities, providing incentives for developing new projects, facilitating collaborations for research, and generating resources for the building blocks of Ideas to Impacts progression in a premier research university.

UW Total Research Expenditures (,000)

- 2019: $80,353
- 2020: $93,061
- 2021: $93,202
- 2022: $139,764
- 2023: $150,124

- Total research expenditures for UW continued to increase because of accurate reporting and increase research activities on the campus. In 2023, approximately 46% of these expenses were obtained through federal grants. To increase the research expenditures further, it will be necessary to increase the competitiveness of our faculty and diversity sources of funding.
- To increase opportunities for applying for grants, EPSCoR/IDeA office was established to allow efficient use of EPSCoR/IDeA opportunities for the entire campus and foster grants development activities. We will continue toward fully staff the office during FY2024. Additional four positions will be hired, making total to 6.3 positions.
- Including the staff positions under recruitment, the Preaward Services Office will be fully staffed (11 positions) by the end of 2024, providing efficient, and effective support for proposal submission and award acceptance, thereby increasing submission of grant applications to diverse sources. FY2024 has shown approximately 15-20% increase in proposal submission by UW faculty. Additional staff in the Preaward Services Office will help in support this increased demand.

FY2023 RESERCH EXPENDITURES- SOURCE OF FUNDS

- Business 2%
- Nonprofit organizations 1%
- All other sources 1%
- Federal government 46%
- State and local government 5%
- Institution funds 45%

- To initiate, establish and enhance engagement with businesses, agencies, private donors, and foundations, Office of Industry and Strategic Partnerships was established as a joint unit between Research and Economic Development Division and UW Foundation. It will be fully staffed in FY2024. The office has already received an EDA University Center program grant, aimed to advance access to and referrals between the various services and resources for entrepreneurship, small business, and broader industry, including such resources at UW. Prior to this grant, Wyoming was one of the small number of states without an EDA University Center. At the end of FY2024, we expect to staff the office with additional 3 staff members.
- Coordination and amplification of broader impacts of UW's research activities is a priority for REDD. UW was selected for the 2023 cohort of the Program to Enhance Organizational Research Impact Capacity (ORIC), joining seven other distinguished universities. This initiative is led by the Center for Advancing Research Impact in Society (ARIS). Through this year-long training, UW is developing plans for coordinating and further developing its research impacts activities across the campus.
- REDD provided seed grants through a variety of campus units: Center for Global Studies ($60,000 total), Wyoming Institute for Humanities Research ($50,000), Research Committee of Faculty Senate ($75,000), Board of Trustees Research Excellence Fund ($120,000), Science Initiative ($600,000), UW Institute at the AMK ranch ($50,000) and Vice Provost for Global Engagement ($100,000 for UW-Cardiff collaborations).
- REDD continued to decrease barriers, identify new opportunities, and streamline processes through campus-driven committees. These include process to request start-up funds from REDD (DAPP being developed), process to streamline business contracts and agreements, operations of core facilities (report being prepared), CHIPS and Science Act Committee report and SI2025 vision report (https://www.uwyo.edu/research/statistics/index.html). One tangible outcome is increased support for start-up funds in social and behavioral sciences, economics, and humanities.
- As a result of dedication of UW's innovative faculty and REDD initiatives, UW continues to increase its standing as a premier research university. In FY2022 (the latest year for which NSF rankings are available), UW climbed up to the 152nd place (from 170th place in FY2021) among 637 research universities ranked based on total research expenditures. When only non-medical research expenditures are considered, UW is ranked at 126. Among public universities, UW is ranked at 108.
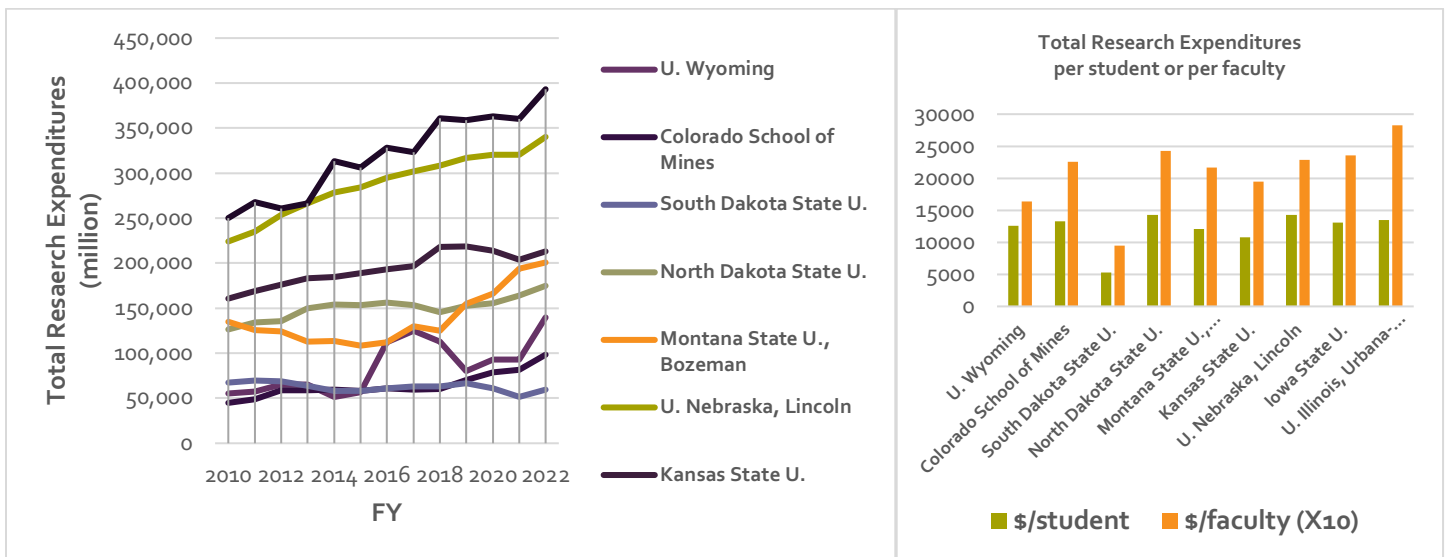
When one considers total research expenditures at UW and its peer and aspirational universities, UW shows similar expenditures per student, but lower expenditures per faculty member. Strategic investments in research development

assistance to applicants, cultural change in colleges and schools, and facilitating diversification of revenues through Industry and Strategic Partnerships Office will help increase the research expenditures per faculty.

Goal 2. Foster economic development by building a vibrant innovation support and culture at UW and by providing technical assistance across Wyoming.

- A functional and proactive technology transfer office is essential for any research university to increase IP portfolio and revenue generation through commercialization of its IP. During Fy2023, UW's Technology Transfer Office reduced in its size (departure of director and a staff member). To quickly obtain needed expertise, UW contracted technology transfer services. The contracted interim director has cleared the backlog and implemented processes. UW recently received a $6 million grant from NSF's Accelerating Research Translation (ART) program; this is a new program established because of the CHIPS and Science Act of 2022.
- The CHIPS and Science Act of 2022 created new opportunities for spurring geographically distributed innovation hubs. To prepare for these new programs, UW formed a faculty committee that made recommendations for reducing barriers and providing incentives for UW faculty to apply for these opportunities. UW has strategically partnered with institutions in other states for applying for these programs.
    o UW is coPI in the NSF Innovation Engine on Climate Resiliency that covers CO and WY (total funding $160 million over 10 years). This project had a successful NSF site visit and the awardees will be announced soon.
    o UW is coPI on two Innovation Engine planning grants- one on precision forestry with University of Montana and the other in quantum materials with Montana State University.
    o UW is leading Wyoming's participation in the EDA Tech Hub application in the nuclear energy industry, with Idaho being the lead/partner state. Various WY agencies and institutions, along with Idaho National Laboratory, ID agencies and institutions of higher education, are coming together on this application. In addition, UW is participating in another Tech Hub application on Quantum Computing (led by Elevate Quantum, a regional industrial organization for quantum industry). Both Technology Hubs were designated by EDA in the first phase of this competition, receiving planning grant funding.

Staffing Priorities for 2024

Priority 1: Fully staff the following offices

Unit	Current FTEs	FTEs when fully staffed
Preaward Services Office	8	11
Technology Transfer Office	2	6.5
EPSCoR/IDeA Office	1.3	6.3 (4 positions jointly with colleges)
Industry and Strategic Partnerships Office (UW and UW Foundation Positions)	3.7	7.2 (one position jointly with TTO)

Priority 2: Recruit leadership positions

    o Director, Center for Entrepreneurship and Innovation (being recruited)
    o Director, UW Science Institute (being recruited)
    o Director, UW Institute at the AMK Ranch
    o AVP-Research
    o AVP-Economic Development

3. REDD Highlights: Expanding Knowledge Enterprise

3	**Enhance Participation in New Opportunities** The CHIPs and Science Act Working Group to analyze authorization and appropriations acts and identify ways to help UW faculty and students to apply for the opportunities created by these acts. Activities have been implemented or initiated to address all three recommendations.
Increased Submissions Strategic help for proposal preparation, additional staff for pre-award services, and increased number of seed grants in FY2023 resulting in increased proposal submissions in the first four months of FY2024.	**>20%**
$120.4 million	**Sponsored Funds Received** Average annual funds for the research, education, or service projects received during FY19-22 were $120 million (includes COVID-related projects in FY21)
Sponsored Project Expenditures In FY2023, UW registered record expenditures on sponsored projects for research, education, or service. Average annual expenditures during FY19-22 were $98 million.	**$115.2 million**
$150.124 million	**Total Research Expenditures** Last five years, UW total expenditures have been increasing. In FY2023, it exceeded $150 million for the first time. Total expenditures include sponsored research expenditures as well as institutional investments in research.

4. REDD Highlights:
Enhancing State-wide Engagement

2262 K-12 students	**K-12 outreach** SI Road show brought active STEM learning to 2262 K-12 students through 19 events across the state.
Active Learning 44 LAMP-trained educators at UW impacted 3,653 students in 118 active learning classes.	**3653 UW students**
52	**Wyoming Research Scholars** Of 52 undergraduate students conducting research as Wyoming Research Scholars, 33 are from Wyoming. Others come from 8 different states.
New Businesses Started **SBDC** staff served **1,160** clients, receiving attribution from **54** clients starting new businesses, **39** equity infusion transactions totaling more than **$4.6** million, reporting more than **$135** million in annual sales with **$1.4** million in sales revenue growth, and supporting **1,857** jobs.	**54**
$2.1 million	**SBIR/STTR success** Wyoming SBIR/STTR Initiative helped Wyoming small businesses receive more than **$2.1** million in Phase I/II awards from various federal agencies.

5. REDD Highlights: Fostering Innovation

|	
$6 million	**Accelerating Research Translation** UW is one of 18 universities to receive a grant from NSF to build infrastructure and change culture for translating research to commercial and societal use.
Invention Disclosures Compared to Fy22 (27 disclosures), FY23 showed a major increase.	**40**
17	**Patents Granted** UW is one of the top 100 universities in number of patents issued.
Industry Research Agreements Over 770 contacts were made with industry. Many discussions are still in progress. Bolstering of the Industry and Strategic Partnerships Office will increase the number of research agreements in the future.	**5**
$28.3 million	**Industry and Foundation Support** Funds from Foundations and Industry either as gifts or grants to UW.

6. REDD Organizational Structure and Staffing

One of the major aims in FY2023 was to fully staff key offices that were understaffed for several years and thus could not provide the services at the expected levels. The current organizational structure of REDD is provided below. All charts use the following coloring convention for staffing status in those units.

Fully Staffed	Staffed close to the level projected in the FY2024 budget request
Mostly Staffed	Most positions filled; a few key positions will be recruited by the end of FY2024
In progress	Unit started or redesigned in FY2024; staff is being recruited

Chart 1. VPRED Organizational Structure
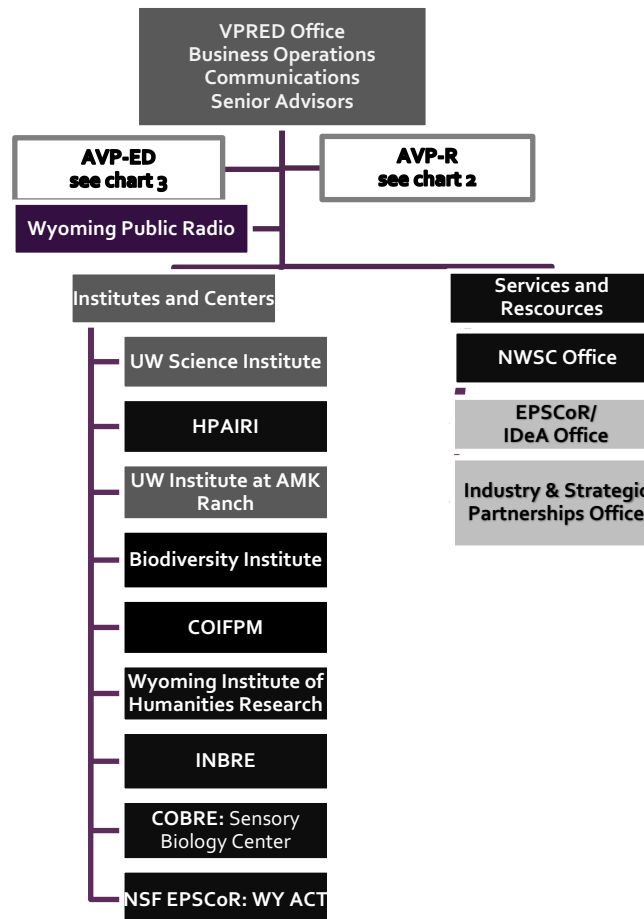
Notes:

- VPRED Office:
  - In addition to one business operation position, two key positions that need to be filled are AVP for Research and AVP for Economic Development. These positions will be realigned in their responsibilities and national search will be launched in spring 2024.
  - While the two AVP positions are being recruited, two faculty members with administrative assignments undertake special projects: AVP for Special Research Initiatives (Dr. Bryant Smalley) and Senior Advisor to VPRED (Dr. Haibo Zhang).

- UW Science Institute and UW Institute at AMK Ranch will seek Directors through campus-wide searches.
- Additional information about two new units in REDD, Industry and Strategic Partnerships Office and EPSCoR/IDeA Office, is provided later.

Chart 2. AVP-Research Organizational Structure

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                        AVP-R
   ┌────────┬────────┬────────┬────────┬────────┐
 WYNDD   WYSAC   Preaward  Research  Advanced   Core
                 Services  Compliance Research  Facilities
                                      Computing
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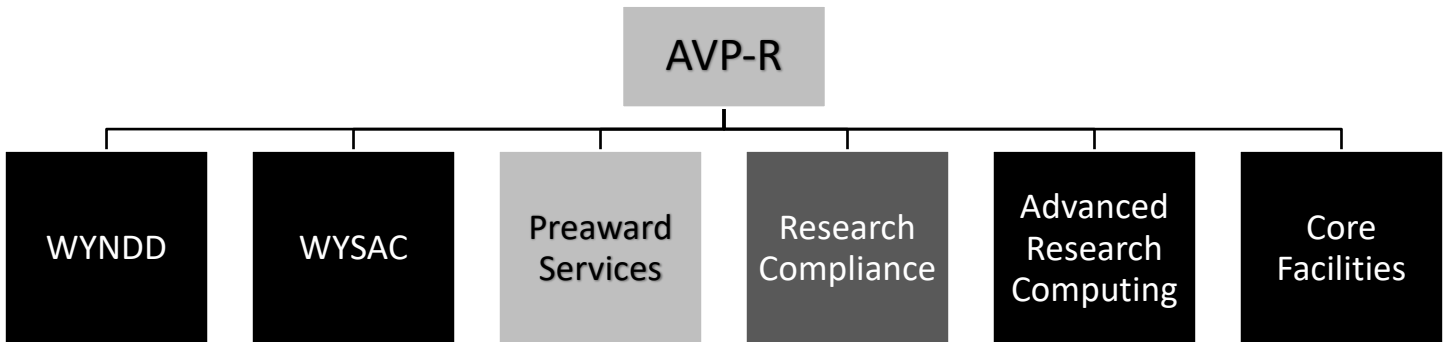
Notes:

- AVP for Research, Dr. Bryant Smalley, focused on his faculty responsibilities and thus reduced his role in REDD. Currently the AVP-Research position is vacant; realignment of some of the units between research and economic development subdivisions is being examined. National search to fill this position will begin in spring 2024.
- Research Compliance: With an additional animal research facility becoming operational and to allow proactive training and oversight of animal and human research, an additional position will be recruited in spring 2024. In addition, the Director for COI and Export Control will report to the Senior Director for Research Compliance from Spring 2024.
- See information about status of each position in Office of Preaward Services later.

Chart 2. AVP-Economic Development Organizational Structure

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                        AVP-ED
   ┌──────────┬──────────┬──────────┬──────────┐
Technology  Small      Manufacturing Impact 307  Center for
Transfer    Business    Works                    Entrepreneurship
Office      Development                           and Innovation
            Centers
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Notes:

- AVP for Economic Development, Mr. Steve Farkas, retired. Since both AVP positions are currently unoccupied, realignment of some of the units between research and economic development subdivisions is being examined. National search to fill in this position will begin in spring 2024.
- Two units, Technology Transfer Office and Center for Entrepreneurship and Innovation are being reimagined and restaffed.

7. VPRED Units

VP for Research and Economic Development oversees the multidisciplinary institutes and centers as well as creation of new research teams and development of new applications. As such, seed grants for faculty driven, strategically important projects are a priority for VPRED.

Institutes and Centers

UW Science Institute

Based on the report of the SI2025 committee (posted at https://www.uwyo.edu/research/statistics/index.html , REDD established the Science Institute to manage the UW Top Tier Science Initiative and its programs. The Science Institute catalyzes convergence of physical, social, and biological sciences, engineering, humanities, and computing to address Wyoming's needs through transformative research, engagement, and experiential learning. It is expected that the UW Science Institute will be fully operational by 2025. The Science Initiative annual report was presented to the Board of Trustees in their November meeting; the revised report is posted at https://www.uwyo.edu/research/statistics/index.html.

High Plains American Indian Research Institute (HPAIRI)

HPAIRI is an entity that tribes and scholars can access and utilize both tribally driven projects and UW-conducted research that pertains to Native American people, their lands, and resources.

- HPAIRI has continued to play a critical role in many institutional grants to UW, including WY-ACT, the NSF EPSCoR Track 1 Project, and a New Beginning for Tribal Students project.
- In FY2023, HPAIRI organized a discussion on indigenous traditional ecological knowledge (iTEK) and funding opportunities for research using iTEK.
- HPAIRI contributed to the CO-WY Innovation Engine application as well as the successful NSF site visit. HPAIRI will have an important role in organizing Native American outreach in the Innovation Engine.

INBRE

The Wyoming IDeA Networks for Biomedical Excellence (INBRE) Program is funded by the National Institutes for Health. The INBRE program funds statewide networks of higher education and research institutions in each IDeA-state and Puerto Rico to build biomedical research capacity through support for faculty research and mentoring, student participation in research, and research infrastructure enhancement at network institutions. The Wyoming INBRE works collaboratively with all community colleges in Wyoming to advance opportunities for biomedical research experiences in all institutions of higher education in Wyoming. During FY2023, INBRE provided research experiences for dozens of undergraduate students at UW and WY Community Colleges.

COBRE

Wyoming Sensory Biology Center (SBC) is a phase II (P20) Center of Biomedical Research Excellence program (COBRE) funded by the National Institute of General Medical Sciences (NIGMS) of the National Institutes of Health (NIH). The primary mission of the SBC is to foster and conduct high-quality scientific research that advances the understanding of our sensory systems and disorders related to them.

Wyoming NSF EPSCoR

The NSF EPSCoR Track 1 grant and associated programs have helped move Wyoming along the path of research and excellence by supporting the State's research endeavors. The current $20 million project, the Wyoming Anticipating Climate Transitions, or WY-ACT, addresses the ecological and socioeconomic consequences of changes in water resources. The project will substantially augment capabilities for refining and applying local- and regional-scale models collaboratively developed with stakeholders that address scenarios related to abrupt shifts in water availability. This co-production of knowledge is a unique component of this effort. A significant part of this research is performed at the AMK ranch and adjacent areas.

UW Institute at the AMK Ranch

The University of Wyoming Institute at the AMK Ranch is a cooperative effort between the University of Wyoming and the National Park Service. Headquartered on the University of Wyoming campus in Laramie, the UW Institute at the AMK Ranch promotes multidisciplinary research in the Yellowstone-Teton area of Rocky Mountains. The Institute operates a field research station at the AMK Ranch in Grand Teton National Park, open from mid-May through mid-October. Key activities and accomplishments of the AMK ranch are listed below:

- First time since the pandemic, the field station remained open for full season (June 15 through September 30), hosting researchers, courses, and conferences, including over 1200 user-nights by the UW community and an additional 700+ user-nights by scholars from around the country and world.
- The Harlow summer seminar series included 7 events with 530 in-person attendees and many more watching seminars after they were posted online. Seminars included talks by UW faculty and their collaborators on cutthroat trout, river otters, grizzly bears, ungulate migration, and science education in the parks.
- The station hosted numerous conferences and workshops, including the UW-Cardiff colloquium, a WORTH initiative State-Sports Program, an international law and wildlife policy conference led by a UW law professor, as well as events critical for our park and other regional partners, which included hosting the Rocky Mountain Cooperative Ecosystem Studies Unit annual meeting and the planning meeting for the American Society of Mammalogists. These and related events help establish the station as a hub for research in the region.
- In partnership with Grand Teton National Park, the AMK Institute awarded 11 small grants to seed new research in the region on diverse topics including sagebrush restoration, amphibian and sharp-tailed grouse populations, beavers, native bumble bees, and hydrothermal springs.
- The UW Board of Trustees Research Excellence Fund provided seed grant funding for a new interdisciplinary project studying ecological networks and ecosystem resilience in the GYE. This work, based at the AMK Ranch will generate preliminary data for extramural funding to support the work long-term.

Center of Innovation for Flow Through Porous Media (COIFPM)

COIFPM is the world leader in research, development, and practical implementation of novel breakthrough technologies for extraction of oil and gas and geo-storage of greenhouse gases. It is arguably the world's largest experimental and computational research center focused on flow through porous media problems with applications primarily in oil and gas recovery, carbon utilization and storage, and hydrogen storage. The facility provides imaging and flow capabilities at atomic, nano, micro, and macro scales. Furthermore, it establishes a massive capacity for users to conduct numerous studies in parallel. COIFPM started reporting to VPRED in FY2024.

Wyoming Institute for Humanities Research (WIHR)

The Wyoming Institute for Humanities Research strives to be an engine for producing interdisciplinary research in the humanities; a community for faculty, students, and the public; and a model of democratic education fit for our land-grant university. WIHR started reporting to VPRED from FY2024.

<u>Service and Resource Units</u>
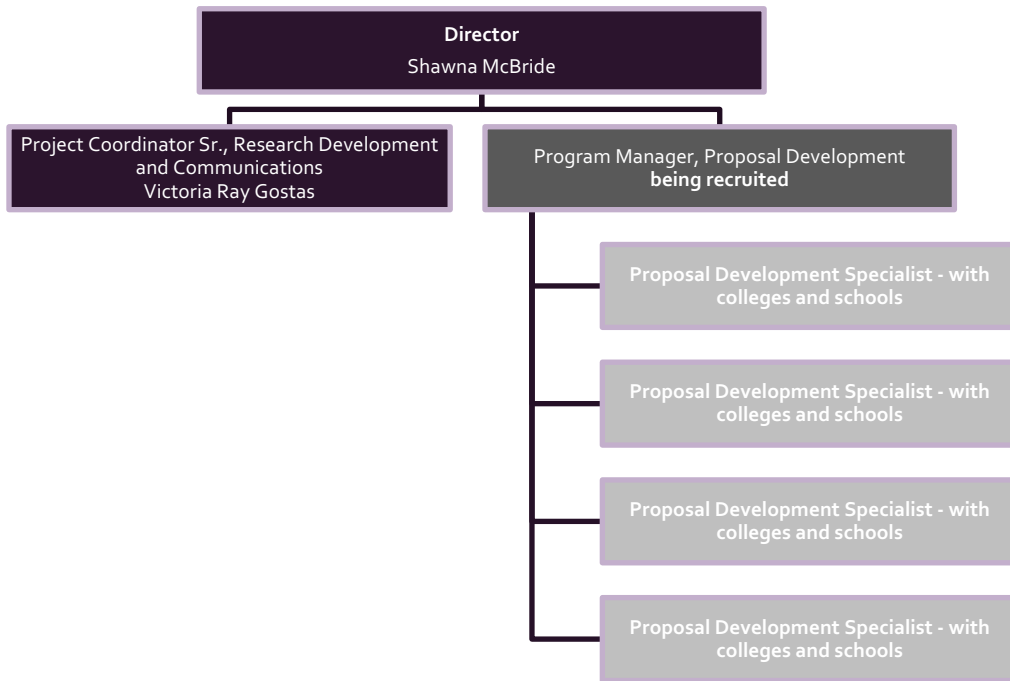
NWSC Center

The NCAR Wyoming Supercomputing Center (NWSC) represents a collaboration between NCAR and UW. Through this center, 320 million core hours of the [Derecho System](#) are available for UW-led projects in the atmospheric, earth system, geological, other NSF-supported sciences, and science areas of interest to Wyoming. In FY2023, the focus was to facilitate use of the new Derecho computer through faculty training as well as to provide opportunities for broad use (not just geoscience and atmospheric sciences) and dedicated use (Derecho Professorship). Because of these efforts, UW faculty sought allocation of more hours in 2023 than in 2022. They will use 180.93 million CPU core hours and 84,685 GPU Core hours compared to allocation of 80.52 million CPU core hours in 2022.

- Small Allocations (CPU Core hours 1.0 million or less): Thirteen small allocation research projects were approved for a total of 13.0 million CPU core hours.
- Large Allocations: Nine large allocation research projects were approved for a total of 134.68 million CPU core hours and 42,185 GPU core hours.
- Derecho Professorship Allocations: Eight Derecho Professorship allocations were approved for a total of 33.25 million CPU core hours and 42,500 GPU core hours.

EPSCoR/IDeA Office

EPSCoR, which started as the *Experimental* Program to Stimulate Competitive Research and later became the *Established* Program to Stimulate Competitive Research, was created by Congress in the 1980s to help level the playing field for states like Wyoming who historically received lower amounts of federal research funding compared to other states. EPSCoR started as an NSF program, but several other federal agencies developed EPSCoR or EPSCoR-like programs soon after, including NIH (IDeA), NASA, DOE, DOD, and USDA. The Wyoming EPSCoR/IDeA Office was initiated in July 2023 to help support and build all EPSCoR and IDeA programs in Wyoming. This office will increase opportunities for extramural funding by providing research development support, particularly for complex research proposals, and providing common services for the large institutional projects funded through EPSCoR/IDeA programs. The following is the structure for the EPSCoR/IDeA Office, including positions being recruited to fulfil these functions.

Director
Shawna McBride

Project Coordinator Sr., Research Development and Communications Victoria Ray Gostas	Program Manager, Proposal Development **being recruited**

- Proposal Development Specialist - with colleges and schools
- Proposal Development Specialist - with colleges and schools
- Proposal Development Specialist - with colleges and schools
- Proposal Development Specialist - with colleges and schools

Office of Industry and Strategic Partnerships

Until 2023, Industrial/Corporate partnerships and support from Foundations were primarily driven by individual faculty, colleges/schools, and UW Foundation staff. In FY2023, UW Foundation received $14.30 million from Foundations and $8.77 million from corporations. In addition, $5.06 million were received by UW directly (processed as grants). Compared to UW's aspirational universities, UW can do better in increasing corporate giving to UW, particularly for research.

Percentage of Corporate Investment to Total Giving and Non Gifts (Research)

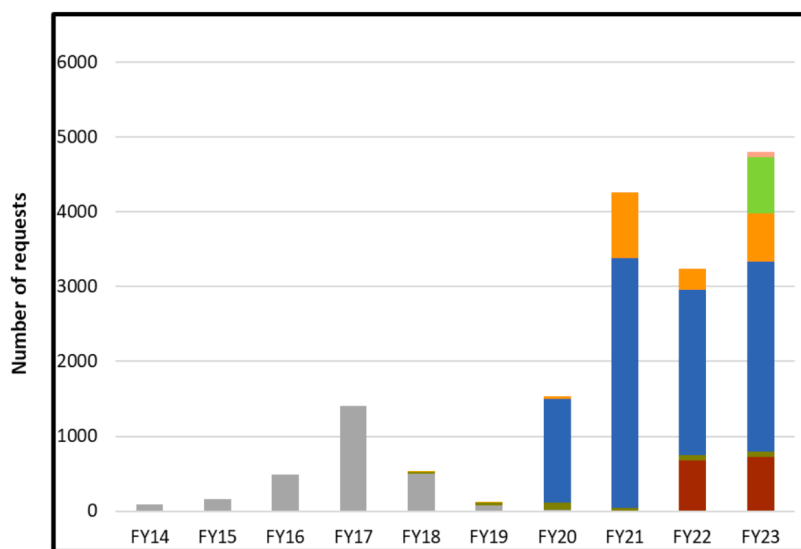| Institutions Measured	% of Gifts from Corporate of Total Gifts to the University	% of Support from Corporate for Research of Total Dollars to Research to the University
UW (FY22)	9	5
Iowa State (FY22)	8	5
Kansas State (FY21)	8	4
Colorado School of Mines	9	16
Univerity of Illinois at Urbana Champaign (FY22)	26	9
West Region FY20-FY22 AVG)*	21	15

To coordinate campus wide activities and increase industry collaborations and strategic partnerships with community colleges and local organizations, the new Industry & Strategic Partnerships (ISP) Office was established with staff contributed from REDD and UW Foundation. ISP staffing and infrastructure is being constructed to enhance UW's research and economic development interactions with corporations and small industries, local governments, non-governmental organizations, and education communities.
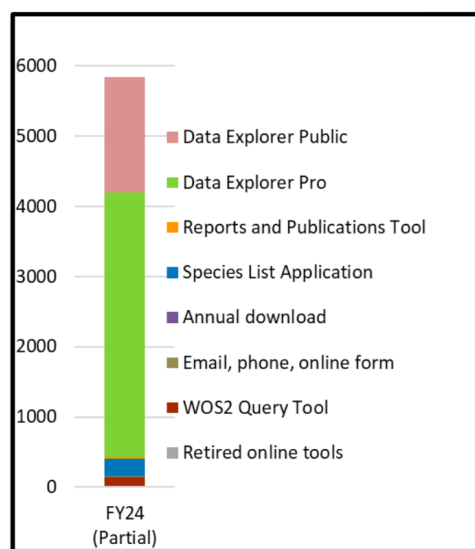
8.   AVPR Units

Wyoming Natural Diversity Database (WYNDD)

The Wyoming Natural Diversity Database (WYNDD) is a service and research unit of the University of Wyoming that maintains a comprehensive database on the distribution and ecology of rare plants, rare animals, and important plant communities in Wyoming. WYNDD distributes this information upon request under the philosophy that the best decisions regarding natural resources will be made only when everyone has access to complete and current scientific data. The demand for data from WYNDD continues to increase from Wyoming state and local agencies and industries.

WYNDD DATA REQUESTS, FY14 – FY23
BY REQUEST PATHWAY

WYNDD DATA REQUESTS, JUN – NOV 2023
BY REQUEST PATHWAY

Legend:
- Data Explorer Public
- Data Explorer Pro
- Reports and Publications Tool
- Species List Application
- Annual download
- Email, phone, online form
- WOS2 Query Tool
- Retired online tools

Wyoming Survey & Analysis Center (WYSAC)

WYSAC seeks to provide clear, accurate, and useful information to decision-makers through applied social research, scientific polling, information technology services, and rigorous program evaluation. As such, WYSAC conducts research for government agencies, educational institutions, and other entities in Wyoming and beyond. WYSAC currently employs 24 full time faculty and staff, 1 GA, and roughly 35 hourly-non-benefited research aides to accomplish our research efforts. WYSAC's total operational and research expenditures for 2023 were approximately $3,633,971 funded entirely from sponsored projects, associated Indirect Costs, and Project Residuals.

Ongoing or completed sponsored projects in 2023 represent $4,312,213 in external funding secured by our research faculty. WYSAC performed work on 95 different projects for sponsors during the year. Sponsors include 4 federal direct agencies, 36 federal passthrough, and 55 non-federal agencies. Non-federal agencies included 12 Wyoming state agencies, 3 NPOs, and 10 local governments or other organizations, with the remainder as out-of-state organizations and out-of-state state agencies.

Office of Research Integrity and Compliance

The office is committed to ensuring that all research and educational practices are carried out in a responsible, ethical, and congruent way with the University's mission. It assists UW faculty, students, and staff engaged in research in obtaining appropriate approvals for conducting research involving animals, humans, drones, etc. Its additional areas of expertise include research integrity, conflict of interest, export control, biological and radiation safety, data management, and responsible conduct of research. Key accomplishments of this office in FY2023 include:
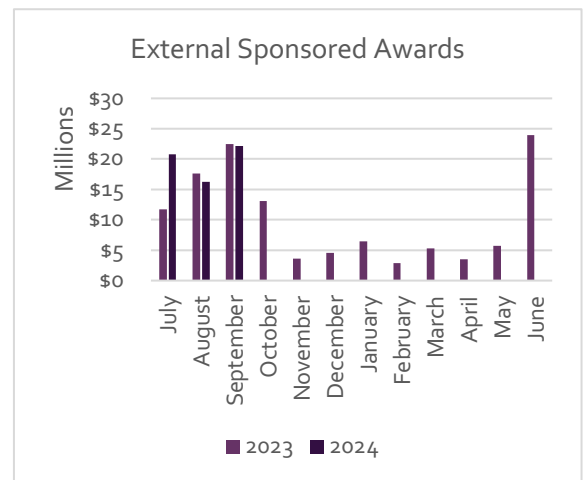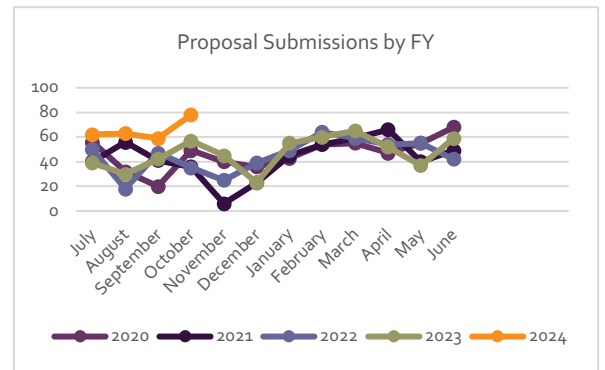
- Implementation of ROAMWyo module for animal research, including training and support for researchers and Institutional Animal Care and Use Committee (IACUC) members
- Design and testing of ROAMWyo module for human subjects research, including training and support for researchers and Institutional Review Board members; launch date January 2024
- Assisted in development of ROAMWyo module for Conflict of Interest
- Transition of Responsible Official for Federal Select Agent Program back to REDD
- Launch of ROAMWyo Outside Interest module, resulting in more than 5800 employees completing their disclosures
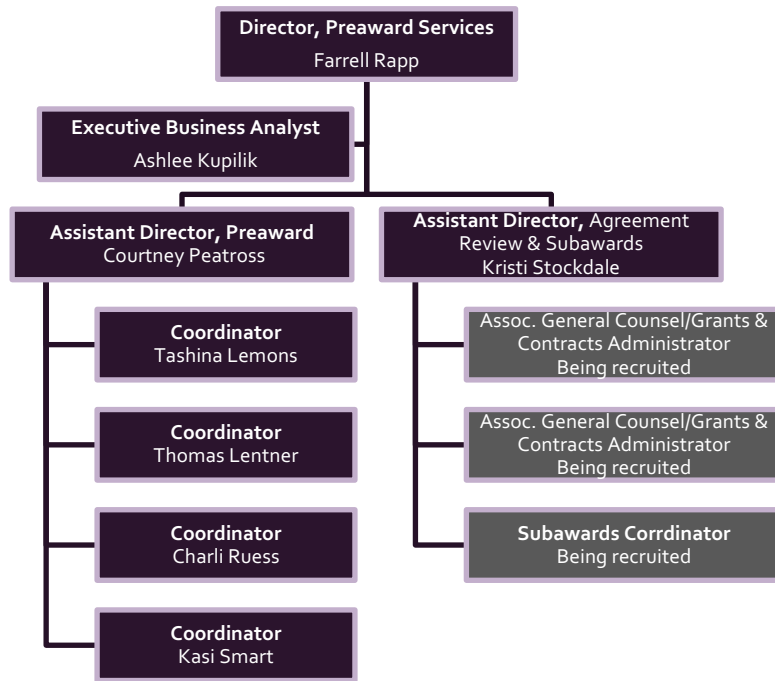
Preaward Services Office

The Preaward Services Office serves UW faculty and researchers that seek extramural grants for research, education, and other activities. The office facilitates submission of grant applications to funding sources in a timely and accurate manner. The office also serves as the authorized organizational representative for such grants and accepts awards from funding agencies. The major accomplishments of this unit include:

Proposal Submissions by FY

- Submission of 564 proposals (5% increase over FY2022). The proposal submissions have increased about 20% in the first quarter of FY2024.

- Contracts and agreements for grants totaling $120,829,542 in FY2023. UW received more awards in the first quarter of FY 2024 compared to the first quarter of FY2023.

External Sponsored Awards

In FY2023 and 2024, the focus has remained on recruitment and hiring of sufficient staff to provide services in timely manner. During this recruitment effort, 2-3 persons were contracted to provide services to the UW staff and faculty. The progress in these efforts is shown in the organizational chart of this office. Once fully staffed and trained, the priority for this office will be to improve processes to increase access to campus community through proactive training, to enhance customer service and responsiveness, and to reduce processing times for proposals and agreements.

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┌─────────────────────────────┐
│   Director, Preaward Services │
│        Farrell Rapp           │
└─────────────────────────────┘
┌─────────────────────────────┐
│  Executive Business Analyst   │
│        Ashlee Kupilik         │
└─────────────────────────────┘

┌─────────────────────────────┐   ┌─────────────────────────────┐
│ Assistant Director, Preaward  │   │ Assistant Director, Agreement │
│      Courtney Peatross        │   │      Review & Subawards       │
└─────────────────────────────┘   │       Kristi Stockdale        │
                                   └─────────────────────────────┘

┌──────────────────┐              ┌──────────────────────────────┐
│   Coordinator    │              │ Assoc. General Counsel/Grants &│
│  Tashina Lemons  │              │   Contracts Administrator     │
└──────────────────┘              │       Being recruited         │
                                  └──────────────────────────────┘
┌──────────────────┐              ┌──────────────────────────────┐
│   Coordinator    │              │ Assoc. General Counsel/Grants &│
│  Thomas Lentner  │              │   Contracts Administrator     │
└──────────────────┘              │       Being recruited         │
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│   Coordinator    │              │    Subawards Corrdinator      │
│   Charli Ruess   │              │       Being recruited         │
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│   Coordinator    │
│    Kasi Smart    │
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Advanced Research Computing Center (ARCC)

ARCC is the primary research computing facility for the University of Wyoming. ARCC provides centralized scientific computing resources, including HPC and research storage. ARCC Beartooth Cluster contains old hardware from previous Moran and Teton Clusters and can provide 130 million CPU Core Hours. This facility is often used by faculty for obtaining preliminary results for the projects that migrate to larger use on NWSC. ARCC usage has declined

over the last three years for the following reasons. First, several large users retired or left UW in 2022. They were not replaced until recently. Second, ARCC, along with the School of Computing, transitioned several large users to NWSC in 2023. Such declines are often seen in facilities that are getting outdated. In FY2024, Wyoming legislature provided $5 million for updating and upgrading the cluster. The new clusters have been purchased and will be installed by Summer 2024. This new cluster, along with recent hiring of computing and computer science faculty will increase the use of ARCC.
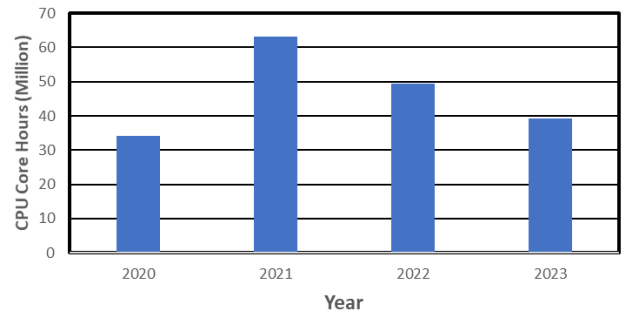
Core Facilities

REDD manages several multiuser core facilities that provide service to researchers at UW and outside in conducting specialized assays. These are essential for maintaining and enhancing the research enterprise at UW. To streamline operation of core facilities across the campus, a committee of the faculty and facility directors was convened to make recommendations, which will be implemented in FY2024 and FY2025.

9. AVPED Units

Technology Transfer Office

The Technology Transfer Office supports UW faculty and scientists in translating their research to societal use through the protection, marketing, and ultimate transfer of their intellectual property to industry. In FY2023, the Technology Transfer Office (TTO) lost staff members, including its director. To facilitate transition to a reimagined TTO, interim director role and other services were contracted. TTO has been in the process of restructuring since April 2023, creating a solid foundation for the TTO and anticipated growth of the research enterprise as the University achieves R1 status. Major accomplishments include:

One of the major accomplishments of the TTO this past year is being awarded the NSF Accelerating Research Translation grant. The University applied for and received a grant from the NSF to accelerate research translation for $6M over four years. The project will develop the Translational Research Accelerator as a unifying force, a program designed to synchronize translational research activities and build a cohesive, university-wide culture of translational research and innovation. Additionally, this project will create a market-driven, I-Corps™-style translational research engine that leverages innovation and entrepreneurship education and mentoring to create "market pull." The grant will allow UW to re-structure technology transfer to be more proactive in identifying commercialization and startup opportunities. This grant will enable the University to address key culture and infrastructure aspects of technology transfer and translational research. This will be accomplished through funding key strategic research translation projects (STRPs) and training and mentoring university faculty, pos-doctoral fellows, and graduate students. In addition, restructuring the TTO will also fulfill the staffing requirements needed to fulfill the objectives of the grant and create a core-competencies in the TTO for research translation, marketing, and commercialization.

The TTO's performance metrics below reflect the activities of the office in fiscal year 2023, showing remarkable improvements since the arrival of the contracted Director. For example, UW was recognized as one of the top 100 innovative Universities based on patents granted in 2023.

Small Business Development Center Network (SBDC and related services)

The Wyoming SBDC Network is a partnership among UW, the Wyoming Business Council, and the U.S. Small Business Administration offering business expertise and technical assistance to help Wyoming's small businesses start, grow, reinvent, or exit. Wyoming Small Business Development Center Network provides no-cost, full-service, customized small business advising for all stages of the business lifecycle, no matter the industry. In FY23 (Oct. 2022-Sep. 2023) SBDC staff served 1,160 clients, receiving attribution from 54 clients starting new businesses, 39 equity infusion transactions totaling more than $4.6 million, reporting more than $135 million in annual sales with $1.4 million in sales revenue growth, and supporting 1,857 jobs.

The SBDC Network also includes the:

- Wyoming SBIR/STTR Initiative (WSSI) provides no cost business advising and education related to the federal small business innovation research and small business technology transfer programs supporting innovative, high-growth, high-tech startups, and small businesses. During FY23 WSSI staff served 145 clients, provided ten virtual workshops/webinars, awarded 17 Wyoming Phase 0 awards totaling $85,000 to high tech small businesses, reporting more than $2.1 million in Phase I/II awards from various federal agencies.
- Market Research Center (MRC) services were provided to 247 distinct clients with 270 unique research reports for a total of 1,859 research hours during FY23.

- Wyoming Apex Accelerator (formerly PTAC) staff assist and advise Wyoming businesses that sell or want to sell their goods or services to federal, state, or local governments. These contracting opportunities resulted in serving 193 clients securing over $69.8 million in government contracts (between Sep. 2022-Aug. 2023).

Manufacturing Works

As Wyoming's Center in the National Institute of Standards and Technology (NIST)'s national manufacturing extension partnership network, Manufacturing Works assists Wyoming manufacturers, producers, and entrepreneurs in growing their revenues, increasing their productivity and performance, and strengthening their global competitiveness. Manufacturing Works tailors its services to meet the critical needs of Wyoming manufacturers, ranging from process improvement and workforce development to cybersecurity and supplier scouting. Through collaboration with a wide array of industry partners, Manufacturing Works strategically identifies and solves clients' most pressing issues, enabling them to elevate their business to the next level. Four years ago, Manufacturing Works was one of the poorest performing centers in the country. In 2023, it is one of the roughly top 20% of performing manufacturing centers in the United States. Manufacturing Works was recently awarded a score of 100 out of maximum 100 on the impact metrics.

Impact307

IMPACT 307 is a network of innovation-driven business incubators committed to growing and strengthening Wyoming's entrepreneurial community by providing resources and support for founders to thrive. Since its establishment, IMPACT307 and its predecessor has assisted in establishment of 243 Wyoming companies. In 2023, IMPACT 307 marked a significant milestone by successfully completing its 38th Start-Up Challenge. The organization showcased remarkable growth, with 10 Start-Up Challenges completed within the year alone.

The TW Foundation has honored Neil McMurry and his spirit of generosity through a $1 million gift supporting UW IMPACT 307 (formally the Wyoming Technology Business Center), a statewide network of innovation-driven business incubators committed to growing and strengthening Wyoming's entrepreneurial community by providing resources and support for founders to thrive. The gift will support the Casper Start-Up Challenge.

Center for Entrepreneurship and Innovation (CEI)

CEI fosters entrepreneurship training and culture across UW, including marketing an entrepreneurship minor for all majors, innovation-based courses, and training for students, postdocs, faculty, facilitating interaction with incubators such as Impact 307 hubs, building a pipeline of innovators. CEI planned and will pilot an innovation course through the Honors College.