RESEARCH PRODUCTIVITY

Key Areas of Focus
System-Wide - Sponsored Program Awards

In Millions of Dollars

- 103M HEERF CARES
- 3M CARES
- 3M COVID
- 8M COVID

Fiscal Year: 2007 to 2021
System-Wide - Sponsored Program Expenditures

Bar chart showing annual expenditures from 2007 to 2021 in millions of dollars. Key categories include:
- 54M HEERF CARES
- 3M CARES
- 5M COVID

Years:
- 2007: <1M
- 2008: 21M
- 2009: 37M
- 2010: 34M
- 2011: ARRA
- 2012: 34M
- 2013: 14M
- 2014: 2M
- 2015: 2M

The data suggests a significant increase in expenditures, particularly in 2021.
# Five Year Summary – Awards and Expenditures

<table>
<thead>
<tr>
<th>5-Year Summary of Awards and Expenditures</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsored Program Awards - System-Wide</td>
<td>$418,277,076</td>
<td>$454,494,987</td>
<td>$520,606,485</td>
<td>$514,992,388</td>
<td>$668,199,624</td>
</tr>
<tr>
<td>% Change</td>
<td>4%</td>
<td>9%</td>
<td>15%</td>
<td>-1%</td>
<td>30%</td>
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<tr>
<td>Sponsored Program Awards - West Lafayette</td>
<td>$406,339,524</td>
<td>$446,135,111</td>
<td>$513,091,182</td>
<td>$506,974,700</td>
<td>$609,197,112</td>
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<tr>
<td>Research Awards - System Wide</td>
<td>$409,394,773</td>
<td>$442,756,628</td>
<td>$469,610,791</td>
<td>$508,289,994</td>
<td>$556,852,127</td>
</tr>
<tr>
<td>% Change</td>
<td>1%</td>
<td>8%</td>
<td>6%</td>
<td>8%</td>
<td>10%</td>
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<tr>
<td>Research Awards - West Lafayette</td>
<td>$400,793,390</td>
<td>$437,736,336</td>
<td>$465,901,903</td>
<td>$502,728,497</td>
<td>$541,994,365</td>
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<tr>
<td>Sponsored Program Expenditures - System-Wide</td>
<td>$407,542,761</td>
<td>$402,526,516</td>
<td>$412,347,723</td>
<td>$443,549,955</td>
<td>$494,007,803</td>
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<tr>
<td>% Change</td>
<td>9%</td>
<td>-1%</td>
<td>2%</td>
<td>8%</td>
<td>11%</td>
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<tr>
<td>Sponsored Program Expenditures - West Lafayette</td>
<td>$397,787,712</td>
<td>$392,917,800</td>
<td>$404,608,954</td>
<td>$435,250,167</td>
<td>$465,375,477</td>
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<tr>
<td>Research Sponsor Expenditures - System-Wide</td>
<td>$382,311,617</td>
<td>$390,888,889</td>
<td>$402,231,036</td>
<td>$430,609,517</td>
<td>$434,484,122</td>
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<tr>
<td>% Change</td>
<td>3%</td>
<td>2%</td>
<td>3%</td>
<td>7%</td>
<td>1%</td>
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<tr>
<td>Research Sponsor Expenditures - West Lafayette</td>
<td>$373,705,675</td>
<td>$382,890,689</td>
<td>$396,674,074</td>
<td>$425,588,959</td>
<td>$429,772,831</td>
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<tr>
<td>HERD Research &amp; Development Expenditures - System-Wide</td>
<td>$636,991,000</td>
<td>$644,581,000</td>
<td>$671,615,000</td>
<td>$695,247,000</td>
<td>$687,624,000</td>
</tr>
<tr>
<td>As reported to NSF</td>
<td>3%</td>
<td>1%</td>
<td>4%</td>
<td>4%</td>
<td>-1%</td>
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<tr>
<td>HERD Research &amp; Development Expenditures - West Lafayette</td>
<td>$622,813,000</td>
<td>$631,574,000</td>
<td>$663,927,000</td>
<td>$687,144,000</td>
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<tr>
<td>As reported to NSF</td>
<td>3%</td>
<td>1%</td>
<td>5%</td>
<td>3%</td>
<td>-1%</td>
</tr>
<tr>
<td>Rank</td>
<td>37</td>
<td>39</td>
<td>40</td>
<td>41</td>
<td>not available</td>
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</tbody>
</table>

Purdue University
Research Enterprise Current Landscape

- Significant Growth – Proposals, Awards & Expenditures

- Increasing Complexity – Sponsor Mix, Purdue as project lead, new programs, new entities

- Staffing - Turnover/Retention Efforts, Enhanced Skill Sets and the New Dynamics of Remote Work

- Regulatory and Compliance Changes – Enhanced Focus on Reporting, Disclosure and Controls (Foreign Influence)

- Audit and Risk Exposure - Financial, Reputational and Partnerships
### Personnel & Organizational
- Workload and Resource Monitoring
- Post Award Reorganization (Functional Areas)
- PI Assignment (Same Pre-Award Specialist for 5 or More Proposal Submitters)

### Business Processes
- PARI Phase I
- Travel/Procurement Improvements – travel card, cost compare and airport parking
- Contract templates and NDA processing

### Systems & Tools
- Budget Spreadsheet Tool
- AIMS Enhancements
- SEEMLESS Enhancements

### Training & Communication
- Life-Cycle of Account Training
- Internal Controls Reference Document
- Continuous Feedback Surveys (SPS Units)

### Compliance
- Current & Pending & Other Support Reporting
- Foreign Gifts and Contracts (Federal Compliance)
- Export Controls Fischer Review

### Competitiveness
- Growth of Proposals, Awards, and Expenditures
- HERD - Incorporated BPR Enhancements
- Partnerships (Master Agreements, National Security, New Programs)
Research Productivity Activities Work In-Progress (current/active/future)

Personnel & Organizational
- Assess Workforce Productivity with Remote Work
- ISS – SME network
- Addressing Turnover through Job Family Structure Project

Training & Communication
- Enhanced Training Effort and Focus
- Improved Communication Methods and Channels
- Targeted Faculty Oriented Training/Information Exchange

Business Processes
- PARI Phase II
- Salary Encumbrances
- Procurement Changes (Preferred Vendors, Faculty Advisory Committee, Guidance)
- Develop Risk Matrix for Evaluating Research Opportunities and Partners

Systems & Tools
- eRA System Solution (RFP)
- Disc. Park, Centers, Institutes, Cores Credit Reporting
- Improved Intake Tools for Proposals and Contracts

Compliance
- NSPM–33 Implementation – agency harmonization or reporting requirements
- Foreign Gifts and Contracts (New State Guidelines)
- Export Control Process Changes (based on Fischer Report)

Competitiveness
- Improve AAU Metrics
- HERD Roll-up categories and AAU alignment Review
- Partnership and Opportunity Evaluation
Concerns and Considerations

- New Targets & Opportunities (Targeted Growth, PARI, Partnerships)
- Institutional Profile & Rankings (AAU, HERD)
- Staffing/Resources (KSAs, Workload Metrics/Scale to Growth)
- Efficient, Effective, Compliant
- Infrastructure/Capabilities (Facilities, Equipment, Systems)
QUESTIONS?
PURDUE APPLIED RESEARCH INSTITUTE

Hot Topics in Research Administration 3/31/22

Crystal Seibert
Agenda

What is PARI?
Why was PARI created?
How does PARI engage with Purdue?
When will steps be implemented?
PARI is the non-profit research arm of Purdue University

- PARI extends the reach and impact of Purdue’s deep research strengths and top-ranked academic programs in engineering, agriculture, science, and technology
- Through PARI, experts in science, engineering, technological innovation and policy can advance applied and translational research within three divisions
- PARI is part of an institutional commitment, through Purdue’s Next Moves, to advance the University’s competitive advantage in applied research

Purdue Applied Research Institute - Office of the Executive Vice President for Research and Partnerships
PARI Governance

Board of Managers

Mike Berghoff (BoT designee)  Theresa Carter (BoT designee)  Theresa Mayer (Vice Chair, Lead Manager)  Mitch Daniels (Chair)  Chris Ruhl (Secretary/Treasurer)

PARI Executive Director

Executive Director
National Security & Defense

Executive Director
Global Development & Innovation

Executive Director
Technology Acceleration
Three distinct divisions each target a key sponsor/customer segment with large growth potential. Divisions leverage shared infrastructure with specifics customized for sponsor engagement, market competitiveness and cost recovery.

**PARI Shared Core Infrastructure**

- National Security and Defense
- Global Development and Innovation
- Technology Acceleration
Global Development and Innovation (GDI)

GDI aims to leverage the research powers of Purdue’s faculty and students and become a leading institution in the use of science, technology, research and innovation to address the pressing needs of global development in a post-pandemic world and aims to become the international hub for development, leading the generation of new knowledge that can drive innovation and effective practice and policy to pioneer new areas in climate changes, humanitarian assistance, renewable energy, digital connectivity, cyber security, data use for evaluation and learning and evidence backed research for foreign assistance.

- John Glover, Exec Director
- Director of Strategic Operations
- Sr Research Scientist
- Executive Assistant
Purdue Applied Research Institute (PARI)

Technology Acceleration/ Digital Innovation in AgriFood Systems Laboratory (DIAL)

DIAL is rethinking the agri-food sector by creating connections across fragmented ecosystems to deliver innovation and new businesses that meet specific industry needs, and in turn, provides consumers with access to healthy, affordable, sustainable, and transparent food by developing entrepreneurs and ideas to create and fund high-value startup companies for the agri-food industry.

- Allan Gray (AG), Exec Director for DIAL
- Director of Operations and Programs
- Sr. Director Business Development
- Sr. Director Innovation & Ventures
- Fellows- direct PARI temporary hires (for up to 6 months)
- Purdue Students and Post Doc
National Security and Defense

With this initiative Purdue will lead national centers of excellence with cross-sector participation; deliver one-of-a-kind research and test facilities that are national assets and further differentiate Purdue as a leader; become a magnet for diverse and exceptional talent in NS&T research and education; narrow the talent gap by graduating students with experience and security clearances; and enhance the regional ecosystem in these areas.

- Executive Director for HAMTC
- PU personnel
- Project Managers

Active awards

- Hypersonics Advance Manufacturing Tech Center (HAMTC)
- Ground Based Strategic Deterrent (GBSD)
**Current Portfolio and Target**

- Large, complex projects with rapid deliverable requirements
  - Especially involving National Security or industry connections
- Government contracts
- Classified projects and projects with high security
- International development opportunities
PARI Processes - Current and Future

PARI is a separate legal entity
- Established as a non-profit LLC, a disregarded entity for tax purposes, and a blended component for reporting purposes
- Has Unique Tax ID number, SAM.gov registration, DUNS number and Cage Code
- Institutional information

Portfolio mixture
- More contracts, coops, teaming agreements
- Does not have to follow uniform guidance
- Will have different indirect rates from Purdue University

Operational support
- Utilizing Purdue expertise and structures
- Tailoring processes/personnel for PARI needs
  - System configurations and/or manual workarounds
Account Structure

PUR Company Code
- Purdue BA 4064
  - Utilizing for some PARI transactions (Ariba purchases, PU personnel Cost Dist., etc.)
  - Monthly JVs to PARI Co Code

ARI Company Code
- PARI BA 7xxx
- Current capabilities: vendor payments, payroll
- Future capabilities: Concur, Ariba
▪ PARI is not subject to Uniform Guidance
▪ Rates representing true costs
  • Time tracking vs effort reporting
    ○ Clockify platform
▪ Establishing rates by division
  • Defense Contract Audit Agency compliant rate for NSD
  • Negotiated Indirect Cost Rate Agreement for GDI
▪ Flat fringe rate
  • Actual charges hit PARI fringe pool
  • Flat rate is charged to accounts and contracts
PU Faculty working on a PARI project

- PU Faculty/grads/other PU appointments remain in PU and are seconded to PARI
  - Second appointment with FTE in 4064 to represent PARI effort
  - Time tracking of PARI time in Clockify

PARI Employees

- 100% PARI employees on PARI payroll
  - PARI employees may be seconded back to PU at times

- Nonpay positions set up for reporting – can report to other organization
Awards/Grants/Contracts

- Personnel support
  - PU support
  - PARI Finance
  - Program Manager
- Award set up in ARI company code
  - Mirrored account structure set up in 4064, monthly JV to ARI
  - Add’l appt set up in 4064 for PU individuals working on the project
  - Secondment agreements
  - PARI employees cost distribution to PARI award
  - Transactions booked to PARI accts
    - Reporting out of PARI
<p>| <strong>PARI Processes</strong> |
|-------------------|-------------------|
| <strong>Current State</strong> | <strong>Future State – FY23</strong> |
| SAP               | SAP               |
| - ARI company code created | - More modules to go live with Phase 2 |
| Rates             | Rates             |
| - Current contracts in NSD are fixed price | - Will have unique divisional rates |
| - Used de minimus rate for GDI proposal | - NS&amp;D will have a Defense Contract Audit Agency, DCAA compliant rate |
| - Leveraging pre-award to identify direct costs, PARI finance and FPA define indirect costs | - GDI will have a USAID compliant rate |
|                  | Negotiated Indirect Cost Rate Agreement, NICRA |
| Payroll           | Payroll           |
| - Purdue academic appointments seconded | - Will second from PARI to PU |
| - Running payroll for PARI direct staff | |
| Purchasing and AP | Purchasing and AP |
| - Able to use Ariba in interim with PU accounts | - Ariba will be available for use directly on |
| - PARI Pcards in use, manual reconciliations | PARI accts early FY23 |
| - PARI vendors and payments made out of PARI | - Pcard reconciliation |</p>
<table>
<thead>
<tr>
<th>Current State</th>
<th>Future State - FY23</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel</td>
<td>- Concur will be available for use directly on PARI accts early FY23</td>
</tr>
<tr>
<td>Interim processes involving Pcards and Anthony travel</td>
<td></td>
</tr>
<tr>
<td>IT</td>
<td>- ITaP will support PARI and engage AgIT/ECN as needed</td>
</tr>
<tr>
<td>Assets</td>
<td>- Asset module will go live end of FY22 to record depreciation, tracking</td>
</tr>
<tr>
<td>- No current PARI assets on the books</td>
<td></td>
</tr>
</tbody>
</table>
Who to Call?

For potential opportunities, reach out to Divisional Executive Director for discussion

• Team will assemble to discuss fit for PARI, proposal submission
QUESTIONS