From Seed to Harvest: Designing, Monitoring and Improving Internal Funding Programs

Kathryn Partlow, University of Nebraska - Lincoln
Daniel Campbell, Old Dominion University
David Bond, Rochester Institute of Technology
Carl Batt, Cornell University
Overview

Introduction
- Presenter Information
- Seed Funding Survey Respondents
- State of NORDP Member Institution Seed Funding

Life Cycle of Seed Funding Programs
- Design
- Implementation
- Monitoring & Evaluation

Perspectives
Seed Funding Life Cycle
Introduction
Kathy Partlow

- Evaluation
- Design
- Monitoring
- Implementation
## Presenter Information

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>Role</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>David Bond</td>
<td>Office of Sponsored Programs, Rochester Institute of Technology</td>
<td>Designed seed funding opportunity around faculty “boot camp” training to incentivize proposal writing.</td>
<td>Design</td>
</tr>
<tr>
<td>Kathy Partlow</td>
<td>College of ACES, University of Illinois, Urbana-Champaign</td>
<td>Implemented and managed seed grant program to address interdisciplinary barriers identified within the college.</td>
<td>Implement</td>
</tr>
<tr>
<td>Daniel Campbell</td>
<td>Office of Research, Old Dominion University</td>
<td>Oversees and monitors a diverse collection of intramural seed grant programs.</td>
<td>Monitor and Evaluate</td>
</tr>
<tr>
<td>Carl Batt</td>
<td>Independent Consultant at Stone Fence Collaborative; Faculty at Cornell University</td>
<td>Brings cross-institutional perspective, since he’s advised multiple institutions on seed funding programs and been a recipient of seed funding.</td>
<td>Perspectives</td>
</tr>
</tbody>
</table>
Seed Funding Survey Respondents

70 Participants

<table>
<thead>
<tr>
<th>Unit Designation</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central/Institutional Office</td>
<td>69%</td>
</tr>
<tr>
<td>Research/Academic Department</td>
<td>9%</td>
</tr>
<tr>
<td>College/Institute/School-level Office</td>
<td>20%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Institution</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>30%</td>
</tr>
<tr>
<td>Public</td>
<td>61%</td>
</tr>
<tr>
<td>Affiliated Medical School</td>
<td>16%</td>
</tr>
<tr>
<td>CTSA</td>
<td>6%</td>
</tr>
<tr>
<td>PUI</td>
<td>13%</td>
</tr>
<tr>
<td>Land Grant</td>
<td>30%</td>
</tr>
<tr>
<td>Minority Serving/HBCU</td>
<td>16%</td>
</tr>
<tr>
<td>R1</td>
<td>39%</td>
</tr>
<tr>
<td>Emerging Research</td>
<td>3%</td>
</tr>
<tr>
<td>EPScor</td>
<td>14%</td>
</tr>
<tr>
<td>Independent</td>
<td>1%</td>
</tr>
<tr>
<td>Nonprofit (non-academic)</td>
<td>6%</td>
</tr>
<tr>
<td>Other</td>
<td>9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FY16 Institution/Unit Expenditures</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under $25 million</td>
<td>26%</td>
</tr>
<tr>
<td>Between $25 and $50 million</td>
<td>11%</td>
</tr>
<tr>
<td>Between $50 and $100 million</td>
<td>10%</td>
</tr>
<tr>
<td>Between $100 and $200 million</td>
<td>9%</td>
</tr>
<tr>
<td>Between $200 and $500 million</td>
<td>21%</td>
</tr>
<tr>
<td>Over $500 million</td>
<td>23%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seed Programs Managed</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>43%</td>
</tr>
<tr>
<td>3-4</td>
<td>36%</td>
</tr>
<tr>
<td>5-9</td>
<td>14%</td>
</tr>
<tr>
<td>&gt;9</td>
<td>7%</td>
</tr>
</tbody>
</table>

*Results from NORDP Member Seed Funding Survey*
State of NORDP Member Institution Seed Funding

➤ Types of Funding Supported

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot studies and data collection</td>
<td>96%</td>
</tr>
<tr>
<td>Research priorities or targeted opportunities</td>
<td>63%</td>
</tr>
<tr>
<td>Interdisciplinary research</td>
<td>77%</td>
</tr>
<tr>
<td>Disciplines where minimal external funding is available</td>
<td>53%</td>
</tr>
<tr>
<td>Publications and conference presentations</td>
<td>33%</td>
</tr>
<tr>
<td>Travel</td>
<td>51%</td>
</tr>
<tr>
<td>Purchasing equipment or improving infrastructure</td>
<td>41%</td>
</tr>
<tr>
<td>Classroom and teaching innovation</td>
<td>14%</td>
</tr>
<tr>
<td>None</td>
<td>0%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>16%</td>
</tr>
</tbody>
</table>

➤ Other:

- Resubmissions
- External Review
- Mentoring
- Release Time
- Conferences
- Commercialization
- Bridge
- University-Community Partnerships

*Results from NORDP Member Seed Funding Survey*
### State of NORDP Member Institution Seed Funding

**How much do we spend annually?**

<table>
<thead>
<tr>
<th>Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$100,000</td>
<td>16%</td>
</tr>
<tr>
<td>$100,000 to $249,999</td>
<td>23%</td>
</tr>
<tr>
<td>$250,000 to $499,999</td>
<td>11%</td>
</tr>
<tr>
<td>$500,000 to $999,999</td>
<td>23%</td>
</tr>
<tr>
<td>$1 million to $2 million</td>
<td>14%</td>
</tr>
<tr>
<td>&gt;$2 Million</td>
<td>13%</td>
</tr>
</tbody>
</table>

*Results from NORDP Member Seed Funding Survey*
State of NORDP Member Institution Seed Funding

Where are seed programs managed?

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research seed funding programs are managed centrally by the Vice President for Research (or equivalent)</td>
<td>88%</td>
</tr>
<tr>
<td>Individual colleges manage research seed funding programs</td>
<td>44%</td>
</tr>
<tr>
<td>Schools, institutes or departments manage research seed funding programs</td>
<td>31%</td>
</tr>
<tr>
<td>We do not have any formalized research seed funding at this point</td>
<td>1%</td>
</tr>
</tbody>
</table>

How established are seed programs?

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-existent, occasional, ad hoc, or relatively new.</td>
<td>6%</td>
</tr>
<tr>
<td>Program(s) in place for fewer than five years</td>
<td>23%</td>
</tr>
<tr>
<td>Program(s) in place for five to ten years</td>
<td>33%</td>
</tr>
<tr>
<td>Program(s) in place for more than ten years</td>
<td>39%</td>
</tr>
</tbody>
</table>

*Results from NORDP Member Seed Funding Survey*
State of NORDP Member Institution Seed Funding

Level of Agreement with Each Statement

My unit/institution has **sufficient buy-in** from university leadership and faculty on seed funding programs.

My unit/institution believes that seed funding programs **make a difference** in securing external funding.

My unit/institution views seed grant programs as a **good investment**.

*Results from NORDP Member Seed Funding Survey*
Seed Funding Life Cycle

Design

David Bond

Evaluation

Design

Monitoring

Implementation
Designing Seed Funding Programs for Results

David Bond, RIT
RIT seed funding history

- Transition from PUI to emerging research institution
- Established “boot camp” for PIs
- Redesigned boot camp around seed funding rfp
  - Goal 1: Get faculty to write proposals
  - Goal 2: Get faculty to write good proposals
- Redesigned RFP and overall program to align with goals
So does it work?

181 $5K awards
$905K total investment

$20M external awards to seed-funded PIs
Did we incentivize faculty to write proposals?

Were said proposals competitive?
Issues with the RFP

- Prior to 2008, RFP very loose and not a key part of the program
- Structured RFP introduced in 2008
  - Boot camp program redesigned around RFP
  - Limited number of awards
  - Scope, budget and eligibility issues
- Redesign in 2011
  - Expanded budget, extensive proposal revision
  - Focus on tenure track
  - Support from research deans and departments
The purpose of this program is to provide seed funding for research proposals developed by participants in RIT’s 2008 Grant Writers’ Boot Camp. Proposed research may advance the body of knowledge, enhance student and faculty learning, and/or build RIT’s reputation in scientific and technical communities. Research may be basic or applied, but should hold potential for future external funding.

The primary purpose of the Research Seed Funding Program is to provide early stage or pilot funding for faculty research initiatives. Proposals may define any type of scholarly project in any academic discipline. Proposals should represent efforts to build the author’s research agenda that have strong potential to lead to future external funding.
2011 RFP Redesign

Purpose. This program provides seed funding to support researchers in efforts to develop their research agendas and position themselves for external funding.

Goals and Objectives. This section should 1) describe the research question or problem to be addressed, 2) describe how addressing this question or problem will help the applicant to establish a research agenda and enable successful applications for external funding, and 3) provide the background and context of how this project relates to any larger efforts of the applicant as applicable.

External Funding. This section should 1) describe the proposer’s current and pending support, if any, and 2) identify specific external funding programs the proposer will apply to as a result of the seed funding. This section should also describe how the scope of work will improve the proposer’s ability to win external funding.
Survey says…

➢ Motivation for seed funding
  • primarily to increase submissions and competitiveness
  • Also to support collaboration, targeted areas

➢ Convergence in RFP design
  • Pilot studies and data collection – 96%
  • Interdisciplinary research – 77%
  • Disciplines with limited funding – 53%

➢ Variation in competitiveness
Programmatic Changes

- Increased emphasis on revision, peer review by college/discipline
- Complementary support from college based SF programs
- SF program mirrors external funding processes
- Recognition events and poster sessions
- Requests to expand boot camp and SF options
Seed Funding Life Cycle

Implementation

Kathy Partlow
Timeline

Implementation Phases (Weeks)

- Preparation
- RFA Release - Deadline
- Office Review/Assign Reviewers
- Review
- Decision
- Reviewer Feedback
- Award Execution - Start Date

Weeks:
- Release RFA: 4
- Deadline: 6
- Review Panel: 1
- Notification: 2
- Award Execution - Start Date: 16
Application Process

Balancing between materials needed for review and level of burden given funding amount

**Answer Choices**

<table>
<thead>
<tr>
<th>Summary/Abstract</th>
<th>Responses 86%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Description/Narrative</td>
<td>Responses 97%</td>
</tr>
<tr>
<td>Budget</td>
<td>Responses 97%</td>
</tr>
<tr>
<td>Budget Justification</td>
<td>Responses 89%</td>
</tr>
<tr>
<td>Description of team members and expertise</td>
<td>Responses 70%</td>
</tr>
<tr>
<td>PI Biosketch/CV</td>
<td>Responses 86%</td>
</tr>
<tr>
<td>Collaborator Biosketch/CV(s)</td>
<td>Responses 59%</td>
</tr>
<tr>
<td>Current and Pending</td>
<td>Responses 51%</td>
</tr>
<tr>
<td>List of Start-Up or Gift Funding</td>
<td>Responses 11%</td>
</tr>
<tr>
<td>Letter of Support/Endorsement from Unit Head</td>
<td>Responses 51%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>Responses 26%</td>
</tr>
</tbody>
</table>

*Results from NORDP Member Seed Funding Survey*

**Other:**

- LOI
- Matching funds
- COA or COI list
- Relevance/Impact
- Plans for Submission
- Previous Reviewer Comments
Application Process

Answering questions – FAQs

- Question 2. What is interdisciplinary research?
- Question 11. How strict are the suggested limits for the summary and proposal sections?
- Question 12. What is meant by “alignment with current areas of strength” in the RFP?
- Question 16. Can faculty summer salary be included in the budget?
- Question 22. Can previous FIRE award principal investigators apply?
- Question 23. Will there be another call for FIRE proposals? If so, when?

Handling submissions

- Email vs. Online System

Reducing time dedicated to logistics
Review Process

- Screening proposals
- Selecting the reviewers

### Answer Choices

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ad hoc or informal review</td>
<td>21%</td>
</tr>
<tr>
<td>Staff review by research office/unit</td>
<td>50%</td>
</tr>
<tr>
<td>Internal peer review by faculty or other professionals</td>
<td>96%</td>
</tr>
<tr>
<td>External peer review by faculty or other professionals</td>
<td>13%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>10%</td>
</tr>
</tbody>
</table>

*Results from NORDP Member Seed Funding Survey*

- Other:
  - Unit heads
  - Research deans
  - Panel + 1 expert
Review Process

Assigning proposals
- Expertise needed to provide a fair review
- Setting expectations by detailing limitations of the review process

Question 4. What is the level of detail that should be provided in the proposal?

The faculty members of the Research Policy Committee will help the Office of Research evaluate the proposals submitted to the FIRE seed grant program. The proposal will be assigned to reviewers that may or may not have expertise in your area of research, so writing to a broad audience and clearly describing the roles and contribution of team members is crucial. It is important to make sure the proposal is written to a non-specialist reviewer. Applicants should avoid being overly technical in the description of their approach. As mentioned in Question 3, the reviewers preferred to see specific tasks listed in the Approach section.

Handling conflicts of interest
Review Process

Developing the review criteria

**Overall Assessment (25%)**

What is your overall assessment of the proposal? Does the proposal and team have a high probability of success?

Does the project align with the goals of the FIRE seed grant program? Will the funds enhance collaboration and address important interdisciplinary questions? Will the proposed tasks make the team more competitive in obtaining external funding? Will funding this proposal lead to the development of an outstanding interdisciplinary research proposal?

1. Fair: proposed work not within the scope and intent of the FIRE seed grant program; several flaws identified; not a good use of seed money; individual pieces do not fit well together
2. Good/Average: proposal aligns with goals of FIRE seed grant program, but not clear that future proposal competitiveness will be improved; evidence not compelling for funding
3. Very Good: project aligns well with the goals of the FIRE seed grant program; will provide preliminary findings for a future grant proposal; has potential to enhance collaboration
4. Excellent: well-written proposal with a great interdisciplinary team; combines good science with practical outcomes; fundable research area; high potential for future success
5. Outstanding: perfect fit for FIRE program; incorporates expertise of all members, each critical to accomplishing important research aims; very timely; exciting; could lead to high level of funding in key area; new and bold concept deserving further exploration
Review Process

- Scoring differences between reviewers

<table>
<thead>
<tr>
<th>Reviewer 1</th>
<th>Reviewer 2</th>
<th>Reviewer 3</th>
<th>Reviewer 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>88</td>
<td>86</td>
<td>95</td>
<td>84</td>
</tr>
<tr>
<td>71</td>
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</tr>
<tr>
<td>54</td>
<td>51</td>
<td>44</td>
<td>53</td>
</tr>
</tbody>
</table>

- Holding a review panel
- Transparency of the process
Funding Decisions

Funding rates

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 25% funded on average</td>
<td>23%</td>
</tr>
<tr>
<td>25 to 50% funded on average</td>
<td>44%</td>
</tr>
<tr>
<td>50 to 75% funded on average</td>
<td>16%</td>
</tr>
<tr>
<td>Over 75%</td>
<td>9%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>9%</td>
</tr>
</tbody>
</table>

*Results from NORDP Member Seed Funding Survey

Factors that contribute to decision-making

<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written internal reviews</td>
<td>69%</td>
</tr>
<tr>
<td>Written external reviews</td>
<td>16%</td>
</tr>
<tr>
<td>Rank of proposal amongst those reviewed</td>
<td>90%</td>
</tr>
<tr>
<td>Review panel meeting</td>
<td>74%</td>
</tr>
<tr>
<td>Priorities of institution/unit</td>
<td>63%</td>
</tr>
<tr>
<td>PI’s stewardship of previous internal funds</td>
<td>43%</td>
</tr>
<tr>
<td>PI’s internal and external funding track record</td>
<td>46%</td>
</tr>
<tr>
<td>Availability of start-up or gift funds to PI</td>
<td>23%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>11%</td>
</tr>
</tbody>
</table>

*Results from NORDP Member Seed Funding Survey
Reviewer Feedback

Getting written comments from reviewers

<table>
<thead>
<tr>
<th>Nominee Name</th>
<th>Internal Comments (reasoning behind ranking, not shared with PI)</th>
<th>Feedback Comments (shared with PI to improve future submissions)</th>
</tr>
</thead>
</table>

Providing reviewer comments to applicants

- Been viewed by 3 or more people
- Helps provide reason behind funding decision
- Helps improve funded proposals
- Important for early-career faculty
# Notifications

## Breaking the good and bad news

<table>
<thead>
<tr>
<th>Not Funded</th>
<th>Funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>• I regret to inform you that your proposal has not been selected for funding.</td>
<td>• I am pleased to inform you that your proposal has been selected for funding.</td>
</tr>
<tr>
<td>• Competition for these awards was keen – only approximately 25% of the submissions were selected for funding.</td>
<td>• The reviewer feedback is enclosed. Please consider reviewer comments during the course of your project.</td>
</tr>
<tr>
<td>• The review committee noted several strengths with your proposal, but it was not as good of a fit relative to other proposals received.</td>
<td>• Please make sure to acknowledge this funding in any resulting publications with the following statement:</td>
</tr>
<tr>
<td>• I hope the provided comments will help guide you in future submissions.</td>
<td></td>
</tr>
</tbody>
</table>
Notifications

- Who sends the notification?
- Who gets the notification?
  - Unfunded – PI
  - Funded – PI, team, dept. head, business manager
- Handling disappointed PIs
Seed Funding Life Cycle Monitoring & Evaluation

Dan Campbell
Monitoring

- Establish Expectations with initial call for proposals.

- Reinforce with signed agreements with faculty.

- Agreements provide a second stage of reinforcing that monitoring will take place.

- Faculty awardee, chair, and dean all sign off.
Obligations of Award Recipients

Each award recipient will be expected to:

- Devote full-time effort to the research for a continuous eight-week period during the Summer of 2018. Teaching during the eight-week period is highly discouraged. If awardees intend to work on other research projects or teach during the designated eight week period, they must provide working schedules in their proposals for approval by the Office of Research. If a recipient is required to teach during the grant period, it should not conflict with the time devoted to the summer research.

- Submit a Research Progress Report form to the Office of Research at ORIntramural@odu.edu by August 27, 2018 and for 3 years thereafter. The report form will be sent to the recipient by the Office of Research.

- If post-award travel funds are requested, please contact the Office of Research at ORIntramural@odu.edu to provide itinerary and travel details. Travel Funds are provided at the discretion of the Office of Research. Travel funds may be requested through May 1, 2019.

- Recipients are expected to acknowledge the support of the Office of Research when making publications as a result of this award. The following statement can be used: This research was supported by a Summer Research Fellowship Program Grant from the Office of Research at Old Dominion University, Norfolk, Virginia, USA.
Summer Research Fellowship Program (SRFP) Program Performance Agreement

This Agreement defines the terms of performance under the Summer Research Program. Please read this document carefully, fill in the blanks, and sign where indicated.

1. Research Project Title:

2. Parties:
   (a) Sponsor: Old Dominion University – Office of Research
   (b) Investigator: John Smith, Ph.D.

3. Performance:
   (a) Old Dominion University
      Old Dominion University hereby awards a Summer Research Fellowship Program taxable stipend in the amount of $6,000 and $1,000 for expenses as listed in the Project budget.

Please provide the name & contact information for your departmental fiscal technician:

Name:
Contact Info:

(b) Investigators

   (1) The investigators agree to perform full-time research for a continuous eight (8) week period ending before Friday, August 11, 2017.

   (2) The stipend is made for full-time research under the Summer Research Program.

   (3) The investigator agrees to submit a Research Progress Report to the Office of Research no later than Friday, August 25, 2017 via email to orintramural@odu.edu. The report form is attached. Upon completion of the investigator's Research Progress Report, a supplemental travel award of up to $500 may be requested in order to visit with representatives from federal agencies located in Washington, D.C. Interested PIs should contact orintramural@odu.edu.

   (4) The investigator agrees to submit copies of all articles and other publications made as a result of any of the research or scholarly activity performed under this award to the Office of Research for a period of three (3) years. A yearly Research Progress Report will be sent to record any updates.

   (5) The investigator agrees to pursue external funding prospects on his/her research findings.

   (6) The investigators agree to bind by the Old Dominion University Policy on Patents and Copyrights as described in the Faculty Handbook, 2004. Works produced under the Summer Research Fellowship Program are considered to be works of an employee, and ownership vests in Old Dominion University.
When to monitor?

- Summertime Project
- Time consuming process
- Communication Strategy
  - Repeat, Repeat, Repeat
- Survey - How much staff time is dedicated to monitoring?
  - Minimal (hours) – 24.29%
  - Moderate (days) – 45.71%
  - Significant (weeks) – 25.71%
  - Other – A number have dedicated FTE’s.
When to monitor?

Survey Responses - If you monitor outcomes, when do you request or require information?

- Only information received is voluntary – 2.86%
- While the project is actively receiving funding – 31.43%
- At the completion of the project – 82.86%
- 1 year after the completion of the project – 35.71%
- 2 years after the completion of the project – 18.57%
- >2 years after the completion of the project – 21.43%

Advocate for multi-year follow-up

- Some of the largest external awards or publications have been shared on final reports at 3 years out.
How to monitor?

- Initial reports completed shortly after award period ends for Summer Research Fellowship & Junior Faculty Mentoring

- Program for Undergraduate Research & Scholarship
  - Mid-year/summer in person check-in with faculty & students in labs or offices
Office of Research
Junior Faculty Research Mentoring Program
Reporting Form

Year Funded: 2017-18
Report Year: Mid-year
Mentee:
Mentor:

Please type the information and save the document in the format similar to the example below:
Campbell_JFMRP_Report_2017-18_Mid-Year

Once completed please email the document to ORintraural@odu.edu by February 28, 2018 at 5 p.m.
Please add additional sections if necessary.

Please provide an updated summary of your mentoring relationship activities during the Fall 2017 semester.

Please provide updated & detailed information regarding the agency, program & deadline for your planned/submitted competitive grant proposal worked on during the mentoring period. If you are considering more than one option please indicate.

Please provide information on any interactions with a program officer related to your planned or submitted proposal submission.

Do you have any recommendations regarding the Junior Faculty Research Mentoring Program?

Do you have any advice for other faculty considering mentoring relationships?
Call for Future Interdisciplinary Research Explorations (FIRE)
College of ACES Office of Research – Seed Grants

FIRE Proposal Progress Report

Project Title

Principal Investigator Name(s) Award Date

What you were able to accomplish with your FIRE funding? Please provide a short paragraph related to the aims of your proposal. What changes did you make? What didn’t work?

Co-Investigators: Please list team members associated with the project and indicate whether the collaboration already existed or was established due to the FIRE funding. Also, indicate if they are still a current member of the team.

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Affiliation</th>
<th>New or Existing?</th>
<th>Current Member?</th>
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Product List

Grant Submissions & External Funding: Please list any grant applications submitted or external funding (federal, industry, etc.) received that are a product of the FIRE funding. This includes submissions made by other team members on topics associated with the project. Also, indicate if preliminary results produced by the funding were included in the proposal.

<table>
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<tr>
<th>Principal Investigator</th>
<th>Title</th>
<th>Funding Agency</th>
<th>Amount Requested</th>
<th>Status</th>
<th>Preliminary Data Used?</th>
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Students Trained: Please list any students (MS or PhD) that were trained and/or received degrees as a consequence of the FIRE funding. Also, indicate the total number of undergraduates that worked on the project.

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<thead>
<tr>
<th>Name</th>
<th>Department</th>
<th>Degree Type</th>
<th>Date Earned</th>
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Number of Undergraduates Trained:

Additional Comments: If you would like to provide feedback about the FIRE seed grant program and how it can be improved, please comment below.

Page 2
Monitoring

Top 10 Responses - If you monitor outcomes, what information do you request or require?

- Proposals Submitted – 84.29%
- Paragraph summarizing accomplishments – 70%
- Publications – 70%
- Publications in review – 51.43%
- Patents/Commercial Products – 41.43%
- Conference Abstracts – 38.57%
- Team Info/Collaborations Formed – 34.29%
- Graduate students trained – 24.29%
- Comments for improving the program – 22.86%
- Undergraduate students trained – 22.86%
Tracking

- Tracking can be done in simple spreadsheet

### P Urbane Research Support System (PURS) Reports

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<th>Last Name</th>
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<th>Presentations</th>
<th>Articles</th>
<th>Conf. Pubs</th>
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### Summer 17 Report

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**NORDP**

National Organization of Research Development Professionals
Why monitor?

- Demonstrates to faculty that you are interested and supportive of their continued efforts.
- Treasure trove of stories to use in other forms of outreach & communications.
- Staying informed on external awards which faculty wouldn’t otherwise be sharing.
- Finding strong faculty presenters to use in other programming.
SECRET LIFE OF ELECTRONS

WEDNESDAY, OCTOBER 19, 2016
TRIVIA STARTS AT 6:00 P.M.
PROGRAM BEGINS AT 6:30 P.M.

ST. GEORGE BREWING COMPANY
204 Challenger Way - Hampton, VA

Science Pubs ODU is an opportunity for the community to engage with ODU researchers in an informal setting. Join us for a lively and engaging discussion; a curious mind is all that is needed!
First 20 to arrive get a beverage on us!

FEATURED ODU RESEARCHER:

BALŠA TERZIĆ, PhD
Assistant Professor
Department of Physics

Balša Terzić, PhD, is an Assistant Professor of Physics at ODU, and a member of the Center for Accelerator Science at ODU. One of a handful in the United States, the CAS was founded in 2008 with as an interdisciplinary research and teaching center for accelerator science & technology. CAS is a source of innovation in pure and applied science, with possible applications in medical, environmental, biological, energy and other fields.

Dr. Terzić completed his PhD in Applied Mathematics at Florida State University, and his BS in Mathematics and Computer Science at Liberty University. His research focuses on studying the behavior of electrons in particle accelerators, and how they can be used to explore the nature of matter. Professor Terzić’s research has been funded by the National Science Foundation, Virginia Space Grant Consortium (NASA), Jefferson Lab, ODU Office of Research and other funding agencies.

Please RSVP by October 17th at http://tinyurl.com/SciencePub-10-19-16
Why monitor?

- Inspiring student stories from hands on experiences
- Keeping current on interesting research & faculty when asked for stories from university marketing & communications
- Seeing how these programs make a difference in the careers of faculty and the lives of students
- Allows you to determine if you are getting the return on investment that you want to see
Student, prof hit it off in physics

On the beauty of physics
JOHNSON: “No other field has this sense of ‘This is how and why things are. It’s beautiful to see how the universe works.’”
TERVIĆ: “It’s the honesty of it. They’re taking you way out of stuff. There’s no human element, which can be so finicky and unpredictable.”

What they think of each other
JOHNSON: “It’s really been a key-way street. I’ve never felt as appreciated. If I have a contribution, Dr. Todd and Dr. (Goat) Kraft (a Jefferson Lab professor) are definitely willing to hear what I have to say.”
TERVIĆ: “I have an excellent experience with our undergraduates here. Erik is the latest example. He has done an outstanding job with us, and he is patient enough to put up with me.”

What would happen if a basketball collided with a bunch of ping-pong balls? Take that image down to a subatomic level, and you’ll get a feel for the research that Erik Johnson is conducting. He’s one of the first grant recipients in the university’s new Program for Undergraduate Research and Scholarship, or PURS.

Johnson is studying the scattering of photons (the mini-ping pong balls) that collide with electrons during X-rays. Narrowing their path could sharpen the images. “It’s the difference between an X-ray seeing bones or making somebody skin,” he said. The research, he said, also may allow doctors one day to watch cancerous prostate grow in real time.

His adviser, Balsa Terzić, an assistant professor of physics, said Johnson’s work will propel his own research for NASA on remote sensing of particles.

Johnson won a $10,000 PURS grant in 2015-16, when he was a senior. Now a doctoral student in physics, he has continued the work with a $10,000 award from the Virginia Space Grant Consortium. A paper co-written by Johnson, Terzić and others was just published in a physics journal.

Their geographic journeys
JOHNSON was born in Alexandria, Virginia. After he graduated from high school, he joined the Air Force in 2000. He helped build hangars in Iraq and transform an explosives range into a training base in two weeks in Afghanistan.
TERVIĆ was born in Montenegro. At 17, he went to rural Ohio for an exchange program. He stayed in the United States to escape the troubles in the Balkans.

Their academic wanderings
JOHNSON was drawn to several subjects, but as he said, “my physics scrambling was the most animated.” He plans to be a physics professor, “it’s very exciting but around with brilliant people, trying to solve problems.”
TERVIĆ also has multidisciplinary bent, with degrees in math and computer science. He worked primarily at Jefferson Lab for five years, but switched full-time to COE in 2014 to spend more time with students like Johnson.

NORDP
National Organization of Research Development Professionals

Monarch | Old Dominion University
Evaluation

- 23.19% of survey respondents have discontinued a seed funding program as a result of monitoring outcomes.

Old Dominion University – Sunsetting Programs
- Summer Experience Enhancing Collaborative Research – 5 teams of 2 faculty/yr. - $60k/year total – ended 2014
- Multidisciplinary Seed Funding Program – about 5 faculty/yr. - $250k/year total – ended 2015
- Multidisciplinary teams often did not do much beyond first extramural submission
- Time is the most important benefit that our award programs can offer, especially for faculty with heavy teaching or lab demands.
Evaluation & New Programs

- **Junior Faculty Research Mentoring Program**
  - Supported 30 researchers ($30k/year total) since 2015
  - Mentoring by a senior faculty member throughout an academic year with mentee receiving a one semester course release

- **Program for Undergraduate Research & Scholarship**
  - Supports 5 faculty & 5 students ($50k/year total); est. 2016
  - Calendar year award that provides faculty funding for summer salary, expenses, student salary, & student travel funds for conference attendance
  - Partnership with the Honors College
Evaluation

Investing in ODU Faculty and Student Research

2014-16 Office of Research Intramural Funding:
- 3 Years (2014-16)
- 4 Intramural Research Programs
- 69 ODU Faculty Researchers funded

ROI = over 11 times our “investment”

$380,521

$4,333,444

in external research funding

Outcomes:
- 1 student scholarship
- 10 books and book chapters
- 27 ODU Researchers awarded external grant funding
- 64 articles (including 5 with student co-authors)
- 131 presentations (including 2 student presenters)
The ACES Office of Research FIRE program has completed 5 calls for proposals. This report reflects the progress of FY2014 (4 yrs completed), FY2015 (3 yrs completed), and FY2016 (1 yr completed) projects.

A total of 28 projects have been funded that involve 40 junior and 70 tenured faculty from 21 outside depts. and 13 external institutions. The teams have trained 1 postdoc, 54 graduate, and 184 undergraduate students.

The FIRE Program in FY13-16 has provided $1,291,096 in funding. A total of 75 grants have been submitted by FIRE award recipients requesting over $60 million in funding. So far, 12 teams have received 13 grants (3 in each FY14, FY15, and FY16; 4 in FY17) for a total of $8,286,913 awarded by external funding agencies.
Evaluation

- New rule about former dissertation advisors not being used as faculty mentors
- Delinquent reporting – ineligible for future awards until current
- Administrative changes – gather fiscal tech info up front, agreements, minor wording changes in calls for proposals
- Reworking of RFP criteria/guidelines when hearing from a faculty perspective
Evaluation

- Responsive to change – JFRMP 2nd track added for faculty not likely to have $250k awards in their field
- Affirm faculty plans to remain at institution in call for proposals
- Campus presentations – adding to other programs
- Requirement that faculty members be in good standing
Evaluation

- Can improve every stage of the seed funding process from designing to implementation to monitoring, as well as review committee processes.

- If you are not collecting feedback you cannot improve your program.
Unexpected Results & Outcomes from Monitoring – Survey Responses

- High volume of external proposals/awards not captured by sponsored projects data – through fellowships, gifts, consultancies on other institutions' grants.

- More than one result happens frequently: publication, conference, another paper, and external grant funding are all possible with very little funding.

- Double dipping!
Unexpected Results & Outcomes from Monitoring – Survey Responses

- Doing our due diligence with monitoring and displaying the impacts of the program has been instrumental in getting buy-in for the program from both faculty and administrators.

- We discovered the program was more about developing a long-term strategy for a faculty member's development than it was about making a particular grant more competitive.

- One unanticipated outcome we discovered was that external consultants we engaged to help review and provide feedback on proposal drafts often become mentors to faculty in other aspects of their professional lives.
Seed Funding Life Cycle Perspectives

Carl Batt

Evaluation → Design → Implementation → Monitoring

NORDP
National Organization of Research Development Professionals
Seed funding: a view from two perspectives

Carl A. Batt
Cornell University
&
Stone Fence Collaborative
The conundrum-seed funding

- investment
  - people
  - programs

- short vs. long term
  - metrics out
  - indirect benefits
  - plugging holes
General observations

Seed funding vs. startup funding
- Early CAREER faculty
- Novel initiatives

Investment in BIG things
- Pilot studies, research, interdisciplinary (53%)
- Travel

Semantics
As a PI

- **Transparency**
  - process
  - outcomes

- **Independence**
  - patronage
  - use of external input

- **Lessons learned**
  - evolving systems
  - outcomes matter
As a Consultant

- Too much modeling on sponsor criteria
- Will this lead to a winning proposal?
- Catch 22-grantsmanship vs. early career investment.
moving forward

- Focused RFP-new faculty
- Anticipated outcomes benchmarked
- Make judicious decisions and live with them.
- A to Z process, not just take the money and run
Systems approach

1. Professional development plan
2. Seed funding
3. Mezzanine funding
4. Assessment
5. Non-monetary support
Discussion & Questions
## Contact Information

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>For More Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kathy Partlow</td>
<td><a href="mailto:kcpartlow@unl.edu">kcpartlow@unl.edu</a></td>
<td><a href="https://research.aces.illinois.edu/content/fire-seed-grants">https://research.aces.illinois.edu/content/fire-seed-grants</a></td>
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<td>Daniel Campbell</td>
<td><a href="mailto:DCampbel@odu.edu">DCampbel@odu.edu</a></td>
<td><a href="https://www.odu.edu/facultystaff/research/funding/opportunities/intramural-funding">https://www.odu.edu/facultystaff/research/funding/opportunities/intramural-funding</a></td>
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<td>David Bond</td>
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<tr>
<td>Carl Batt</td>
<td><a href="mailto:carlbatt@gmail.com">carlbatt@gmail.com</a></td>
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