Institutional, National, and International Trends in Broader Impacts (BI):

Entering the World of Broader Impacts!

MICHAEL THOMPSON, PHD “THE BROADER IMPACTS GUY”
DIRECTOR OF BROADER IMPACTS IN RESEARCH (BIR): HTTP://BIR.OU.EDU/
OFFICE OF THE VICE-PRESIDENT FOR RESEARCH (OVPR)
Overview of The Talk:

1. The international broader impacts trend
2. National trends and the broader impacts conundrum
3. Institutional trends in the context of the conundrum
4. Trends in Broader Impacts Conceptual Rigor and Practice
5. What increased buy-in begins to look like
Broader Impacts (BI) is an International Trend !!!

Research Excellence Framework
National Natural Science Foundation of China (NSFC)
Relevance
Value Creation
Responsible Research and Innovation
Broader Impacts
Societal benefit
Knowledge Mobilization
Valorisation
Societal impact
Equity in development
Significance

US Department of Education: Relevant Outcomes and Ultimate Outcomes
Compliments of the National Alliance for Broader Impacts (NABI)
Broader Impacts (BI) is an International Trend !!!

Classification of Broader Impacts-Like Names, Terms, and Phrases:
A funding agency, foundation, organization, government entity that employs a societal benefit name, term, phrase, concept requirement in some fashion.

Number of Recognized Official Countries = 195

Current percentage (%) of countries who have organizations employing BI-Like NTP’s or Societal Benefitting Like (SB-Like NTP’s) = 82.05%

<table>
<thead>
<tr>
<th>Broader Impacts-Like Names, Terms, and Phrases</th>
<th>Location</th>
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<tbody>
<tr>
<td>Valorization</td>
<td>Netherlands</td>
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<tr>
<td>Benefit to Society &amp; Economy and Value of Public Engagement</td>
<td>United Kingdom</td>
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<td>Knowledge Mobilization</td>
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<td>Equity in Development</td>
<td>India</td>
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<td>South America</td>
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<td>National Economic &amp; Social Development and Social Influence</td>
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<td>Ultimate Outcomes</td>
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<td>Responsible Research and Innovation and the Research Excellence Framework</td>
<td>European Union</td>
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The Broader Impacts in Research (BIR) Organization, Michael Thompson, Unpublished Data, January 2014-2018
Broader Impacts (BI) is an International Trend !!!

Why and How Did This Occur?

Data Collection Still in Progress

The Broader Impacts in Research (BIR) Organization, Michael Thompson, Unpublished Data, January 2014-2018
Did this idea of societal benefit happen through convergent or divergent evolution?

“Organizations and policies are not a reflection of themselves. They are a reflection of: ancient, written, oral, or unspoken history; what has been going on in a current culture; and individuals or organizations reactions and responses to past, present, and anticipated future changes”.
WE DON’T KNOW

SOME MAJOR IMPLICATIONS:

There is a historical and cultural context we are just now starting to consider and it may help to reveal the theoretical and conceptual underpinnings of broader impacts that may provide a better understanding of the BI concept and criterion.

We have just scratched the surface in really understanding broader impacts.

That Societal Benefitting Organizations (SBO’s) need to work globally to move the collective endeavor forward.

And that is exactly what is happening...
International Societal Benefit Organizations Starting To Come Together Creating One Loosely Tethered-Global Network (TGN)

Information sharing
Best practices sharing
Planning & Executing Initiatives
Writing Papers
Speaking Engagements
Conferences
Policy Advocation
Proposal Writing
Faculty Engagement
Shared Training

SBO’s will increase working together overtime
At the National Level The Development of a Broader Impacts Community is Also Being Established?

Which initially was a response to the NSF BI criterion

1. **Research performer competence** -- relates to the capability of the investigators, the technical soundness of the proposed approach, and the adequacy of the institutional resources available.

2. **Intrinsic merit of the research** -- the likelihood that the research will lead to new discoveries or fundamental advances within its field of science or engineering, or have substantial impact or have substantial impact on progress in that field or in other science and engineering fields.

3. **Utility or relevance of the research** -- the likelihood that the research can contribute to the achievement of a goal that is extrinsic or in addition to that of the research itself, and thereby serves as the basis for new or improved technology or assist in the solution of societal problems.

4. **Effect on the infrastructure of science and engineering** -- the potential of the proposed research to contribute to better understanding or improvement of the quality, distribution, or effectiveness of the nation’s scientific and engineering research, education, and manpower base.
National Science Board (NSB) and NSF Task Force on Merit Review Discussion Report:

National Science Board and National Science Foundation Staff Task Force on Merit Review Discussion Report

November 20, 1994

NSB/MR-94-15

I. Content of the Report

The merit review process is the nexus upon which the evaluation of proposals at the National Science Foundation (NSF). While almost all of the 30,000 proposals submitted to NSF annually undergo external merit review, NSF has the resources to fund only about one third of them. NSF receives over 170,000 reviews each year to help evaluate these proposals. Through the use of merit review, NSF seeks to maintain its high standards of excellence and accountability for which it is known around the world.

In 1981, the National Science Board (NSB) adopted four generic criteria for the evaluation of research proposals: (1) research performance and competence, (2) impact/magnitude of the research, (3) novelty or innovation of the research, and (4) effect of the research on the infrastructure of science and engineering. (A detailed description of these criteria may be found in Appendix A.) Because education programs had been eliminated from the budget at that time, the 1981 criteria addressed only research proposals. In the 1990s, they were adapted to our education programs in those areas.

A few, since 1981, the portfolio of programs refined and supported by NSF has expanded to include, among other things, focused education initiatives and focused center-based activities. Further, the NSF Strategic Plan (NSP 95-54) identifies the new long-range goals and core strategies, and the Government Performance and Results Act (GPRA) emphasizes the importance of linking NSF's goals and strategies to the results of its portfolio of investments in science and engineering. In light of these changes, an assessment of the appropriateness of the criteria seems warranted.

As in May 1985 meeting, the NSB noted that re-examining the criteria in light of the new strategic plan was a name of high Board interest. Subsequently, an NSF task group on review criteria, formed by the Deputy Director, found that the criteria are unevenly applied by reviewers and NSF staff in the proposal selection and award processes. “The NSB criteria are in need of clarification and should be rewritten.” The task group also recommended that options be explored for more effective application of the criteria.

In May 1996, the Board established the NSB-NSF Staff Task Force on Merit Review and charged it with examining the Board’s generic review criteria and making recommendations on revising or changing them, along with providing guidance on their use. This report presents the Task Force’s recommendations and findings. It is not intended as a final set of recommendations but as a means of stimulating discussion within and outside of the Foundation.

Members of the Task Force:

National Science Board Members:
Dr. Warren M. Washington, Chair
Dr. Shirley M. Malenfant, Vice-Chair

National Science Foundation Staff:
Dr. Mary E. Clarke
Dr. John R. Huston
Mr. Paul J. Havig

Executive Secretary:

Member, Executive Committee:

NSB requests pending U.S. Senate confirmations.

1. **Research performer competence** -- relates to the capability of the investigators, the technical soundness of the proposed approach, and the adequacy of the institutional resources available.

2. **Intrinsic merit of the research** -- the likelihood that the research will lead to new discoveries or fundamental advances within its field of science or engineering, or have substantial impact or have substantial impact on progress in that field or in other science and engineering fields.

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Effect on the infrastructure of science and engineering -- the potential of the proposed research to contribute to better understanding or improvement of the quality, distribution, or effectiveness of the nation’s scientific and engineering research, education, and manpower base.

NSF BI 1-9 Areas
NSF Broader Impacts Criteria:

NSF Sustainable Outcomes/Impacts

National Science Foundation (NSF) Merit Review Principles and Criteria

NSF use two merit review criteria for evaluating research proposals for funding: Intellectual Merit and Broader Impacts. Both criteria are to be given full consideration during the review and decision-making processes; each criterion is necessary but neither, by itself, is sufficient. Therefore, proposers must fully address both criteria.

- The Intellectual Merit criterion encompasses the potential to advance knowledge.
- The Broader Impacts criterion encompasses the potential to benefit society and contribute to achievement of specific, desired societal outcomes.

Broader Impacts may be accomplished through the:
I. the research itself,
II. activities that are directly related to specific research projects
III. activities that are supported by, but are complementary to the project.

The following questions will be asked of BOTH CRITERIA when reviewing proposals:

1. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
2. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
3. How well qualified is the individual, team, or organization to conduct the proposed activities?
4. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?

The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes. Such outcomes include, but are not limited to:

1. Full participation of women, persons with disabilities, and underrepresented minorities in STEM (specifically African Americans, Hispanics, Native Americans, Alaska Natives, and Pacific Islanders)
2. Improved STEM education and educator development at any level
3. Increased public scientific literacy and public engagement with science and technology
4. Improved well-being of individuals in society
5. Development of a diverse, globally competitive STEM workforce
6. Increased partnerships between academia, industry, and others
7. Improved national security
8. Increased economic competitiveness of the United States
9. Enhanced infrastructure for research and education

Note: Plans for data management and sharing of the products of research, including preservation, documentation, and sharing of data, samples, physical collections, curriculum materials and other related research and education products should be described in the Special Information and Supplementary Documentation section of the proposal.
History of BI*, 1997 until now...

American Competes Act
2010
Congress mandates BI and encourages IHEs to assist PIs in achieving the BI criterion and requires PIs to provide evidence of institutional (BI) resources

2011
We are keeping BI and IHEs should provide support for PIs because there is confusion about it.

2012 & 2013
Three BI Offices Developed and National Alliance for Broader Impacts (NABI)

2014
Broader Impacts in Research (BIR)

2015, 2016, 2017
Proliferation of BI offices

*Research-Based Scholarly Approach to Broader Impacts
Employing a Research-Based Scholarly Approach to Broader Impacts

**Overarching Goal**
Institutionalize a broader impacts culture

- What does broader impacts look like on a university, local, regional, global, and international scale?
- What are the conceptual/theoretical underpinnings of broader impacts and its applicable practical/methodological applications, including for NSF?
- What is a rigorous research-based definition of broader impacts not skewed by a criterion?
- How can you create and implement meaningful broader impacts professional development that helps all faculty and others be more impactful and successful in every aspect of their professional careers?
It was not until NABI that disconnected BI individuals and organizations became a national community!

Exponential growth of broader impacts offices, networks, units, and organizations focused on the National Science Foundation (NSF) BI criterion

Represents a cross-section of broader impacts individuals and organizations

National agendas could move forward

Communicate information and issues more easily

National Alliance for Broader Impacts (NABI):
A network of 600+ individuals from 210 organizations working together to build institutional capacity, advance broader impacts, and demonstrate the societal benefits of research
What is Going On Nationally With Broader Impacts?

- Current national trends and issues [I(1 – 7)] concerning NSF broader impacts

- Current recommendation [R(1 – 8)] national trends thought that would be crucial to advancing broader impacts

Trends Going On Nationally With Broader Impacts?

⚠️: I (1 – 8)

1. The BI criterion is unclear
2. Random judgements on BI are common in the merit review process
3. Relative weighting of intellectual merit and BI is not consistent; BI is used by reviewers as a tie-breaker rather than a more substantial and equally weighted criterion
4. It is unclear whether BI needs to be specifically related to the research aspects of the proposal
5. Academic culture does not reward BI activities and dissemination
6. Resources to support BI are lacking at the individual, institutional, and national levels
7. Universities, governmental representatives, and non-academic partners need better ways to understand and communicate about BI internally and externally to demonstrate research value

⚠️: R (1 – 8)

1. Develop a common BI language
2. Educate principle investigators (PIs), program officers, and reviewers about the BI criterion
3. Create a communication strategy for stakeholders at all level that will facilitate audience understanding of impacts and results of research investments
4. Professionalize the BI community to increase the support infrastructure
5. Build BI capacity with PI’s (institutions etc., beyond NSF – page 8 under additional recommendations, may need to reimagine the brand)
6. Aggregate BI results to show impacts, (create a journal)
7. Create exemplary BI, such as national awards
8. Develop cross-institutional collaborations, including with disciplinary organizations and other community engaged scholarship organizations

Based on the analysis of the assumptions and implications of these statements reveal...
The National Broader Impacts Conundrum: We are at an Impasse!

I (1 – 8) Takeaways

After reading issues (1 – 7) one cannot help to assume that broader impacts is a **NSF specific concept and “ONLY” pertains to NSF’s specific brand of research.** There are several other assumptions one would then immediately deduce from this conclusion.

One, that if you are not submitting to NSF broader impacts is not important and thus broader impacts for a university outside of getting funding is not important.

Two, broader impacts is a political pursuit conceptualized and developed to make meaning to the public.

Three, broader impacts should not be institutionally supported outside the context of getting funding and thus increased resources from the institution may not be needed if there is not a high enough Return On Investment (ROI).

R (1 – 8) Takeaways

The recommendations 1-8 suggest that one think in a different manner.

One, that broader impacts is not just something done to acquire NSF funding. In other words there is a concept of broader impacts in general as well as the NSF BI criterion concept.

Two, institutions should provide more support for broader impacts, signaling that broader impacts is fundamentally important, like other fields and practice in the academy.

Three, that nationally there should be a common language which suggests that broader impacts is has conceptual/theoretical underpinnings and is capable of revealing a unified idea of conceptual and theoretical rigor and associated practices.
An Overarching National Trend: The Broader Impacts (BI) Conundrum

Trends for How This is Approached & BI Dynamics In Each Institution
Transition to a Field of the Study, Theory, and Practice of Broader Impacts and Societal Benefit

Continue to try to convince the academy of its importance using one government agency

Past and Current Status Quo

Gaining Increased but Very Limited Attention
Transition to a Field of the Study, Theory, and Practice of Broader Impacts and Societal Benefit

As the BI Community Grows

Continue to try to convince the academy of its importance using one government agency

Increased Institutional Attention

New Status Quo

The Broader Impacts in Research (BIR) Organization, Michael Thompson, Unpublished Data, 2018
What are Individual Institutions Doing About It?

SHORT ANSWER: It Varies
Reflection of Institutions in this Conundrum...

I. Institutions who see and understand the importance of broader impacts beyond the NSF criterion endeavor. They not only have stated this but also provided infrastructure and are institutionalizing a broader impacts culture that extends well beyond a criterion. It is being integrated into every domain of the institution. (Employ Model 2)

II. Several institutions who would like to accomplish the first one but are not sure how to start. (Employ Hybrid ½ Model)

III. Some are supporting and building broader impacts infrastructure throughout all domains of research beyond NSF. (Employ Hybrid ½ Model)

IV. Many institutions are providing infrastructure for broader impacts of research as long as it only relates to getting funds from NSF. (Employ Model 1)

V. Many institutions are providing infrastructure as long as individuals are willing to build infrastructure with no financial support. (Employ Model 1)

VI. Some institutions claim that they provide broader impacts infrastructure support to get NSF funding but are not offering support at all. (Employ Model 1)

VII. Some institutions neither claim nor provide broader impacts infrastructure support. (Employ Model 1)

VIII. There are a lot of smaller institutions which have no way (severely limited resources), even if they wanted to, could provide this kind of support. (Employ Model 0)

Model Environments:

Model 0 = A Lot
Model 1 = Many
Model H = Several
Model 2 = Few
Model 3 = None

The Broader Impacts in Research (BIR) Organization, Michael Thompson, Unpublished Data, 2018

This conundrum/issue becomes more apparent as a BI organization...
Is broader impacts really more than something developed by NSF?

SHORT ANSWER: YES!
The Academy implicitly and explicitly employs a simple tradition:

Utilize a research-based conceptually/theoretically rigorous sound rationale to inform one’s scholarship, methodology, and practice in order to advance the field.

*This Has Not Been Made Explicit for Broader Impacts*
Understanding NSF Broader Impacts - The Big Problems for Faculty:

Understanding Broader Impacts

Understanding How to do NSF Broader Impacts

Nationally Information being provided and developed
Broader Impacts - The Big Problems for Faculty: what the BI community is starting to realize...

Understanding Broader Impacts ≠ Understanding How to do NSF Broader Impacts

Nationally Information being provided and developed

Lack of Conceptual/Theoretical Frameworks (thought experiment/exercise)
Frameworks Allow us to Effectively Build and Advance on the Information being Provided and Developed in the NSF Broader Impacts Domain:

- Lack of Conceptual/Theoretical Frameworks & Underpinnings
- Better understanding of, more advancement, and increase in, transformative and creative NSF BI

Part of the Why

October 10th, 2017 there were 34 BI articles, mostly about NSF..
Upcoming BI Words, Concepts, Phrases From Model ½ Hybrid and Model 2-Type Approaches In Institutions:

Scholarship of Broader Impacts (SoBI)

Impact Identity

Broader Impacts Identity

BI Professionals

BI Capacity

Origins of Broader Impacts

Research & SoBI

Narrower Impacts

Nature of Broader Impacts

Societal Proficiency

Societal Competency

Moving towards a conceptually rigorous explanation that aligns with practice...
Conceptually Understanding Broader Impacts (BI):

**NSF BI Criterion** - a principle or standard by which something may be judged or decided. A standard of judgment or criticism; a rule or principle for evaluating or testing something concerning the societal benefits associated with research and other NSF activities.

**Impact** - To have a strong effect on someone or something and/or the action of something coming into contact with another resulting in a benefit (this is assumed but not always) which can happen in an infinite amount of time. This does not have to be planned.
Broader Impacts (BI) is an International Trend !!!

Research Excellence Framework

National Natural Science Foundation of China (NSFC)

Relevance

Value Creation

Responsible Research and Innovation

Broader Impacts

Societal benefit

Knowledge Mobilization

Valorisation

Equity in development

Societal impact

Significance

US Department of Education: Relevant Outcomes and Ultimate Outcomes

Compliments of the National Alliance for Broader Impacts (NABI)
Broader Impacts (BI) is defined as encompassing the ability to benefit society and contribute to achievement of specific, desired societal outcomes (NSF 18-1).

So read, we may identify three important similarities between RRI and the criterion of broader impacts:

1. **Societally desirable**. NSF apparently has a conception of science, technology, engineering, and mathematics as working to achieve “societally relevant outcomes” — presumably outcomes “relevant” in a positive way, that is, outcomes society should desire (even if it does not). Both RRI and broader impacts seek science and innovation that serve society.

2. **Process**. There is in both criteria the idea of a process by which researchers in academia (and other research institutions) might work with industry and others to achieve societally desirable outcomes. Admittedly, the part played by process in the NSF criterion (“partnerships” and “participation”) seems far less central than in RRI (more about that below).

3. **Specific goals**. The list of societally desirable outcomes that the broader impacts criterion aims at is at least partially the same as that Europe has or might be expected to put together. For example, Europe wants its research and innovation to increase its economic competitiveness just as the US wants its research and innovation to do (See, for example, Directorate-General 2013).

**EU- Davis and Laas, 2014**

| Impact: 20 per cent of the overall results |
| Definition for the REF | ‘Impact’ is any effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia. |
| Information provided in submissions | Each submission included: Impact case studies. These four-page documents described impacts that had occurred between January 2008 and July 2013. The submitting university must have produced high quality research since 1993 that contributed to the impacts. Each submission included one case study plus an additional case study for every 10 staff. An impact template. This document explained how the submitted unit had enabled impact from its research during the period from 2008 to 2013, and its future strategy for impact. |
| Assessment criteria | Impact case studies were assessed in terms of the ‘reach and significance’ of the impacts. Impact templates were assessed in terms of how far the approach and strategy are conducive to achieving impacts. |

**England, Scotland, Wales, and Northern Ireland, 2014**

Broader Impacts (BI): Process with stakeholders/people for Achieving a specified goal that is societally beneficial in a Finite time that is measured (BICF Lexicon and SBT&P, 2014).

Is a process utilized by an entity or person to achieve a societal benefit in a finite measured amount of time. ((BICF) Lexicon, 2014 modified by Oludurotimi Adjetunji and Michael Thompson).
The Broader Impacts Conceptual Framework (BICF):

- An explicitly societal centric framework that allows for engagement from society into the institution and engagement from the institution into society

- An engagement-outcome-impact model for creating sustainable societal beneficial impacts

- A framework that is relevant for an entire institution, provides insight into how the BI community and engagement community can explicitly interact

- Provides a way to institutionalize BI and engagement, and introduces and brings together fields of study and practice - Societal Benefit Theory & Practice (SBT&P)

* Julie Risien coined this term
The Five Structures of Broader Impacts (BI):

**Professional/BI Identity:**
Is who you are, the way you think about yourself, the way you are viewed by the world, and the characteristics that define you based off of a process/es with stakeholders/people to achieve a societal benefit in a finite amount of time that is measured. Everyone has a BI identity.

**BI Identity Non-Academic definition:** Is who you are and how you plan to engage and benefit others by leaving a legacy through your research, teaching, occupation, and/or service.

Identity Development is closely tied to Career Development which embodies crystallization, specification, and implementation, (Kail and Cavanaugh, 2000), can be extrapolated to Graduate, Faculty, and etc., Development.

Basic structure for thinking, writing, and evaluating your broader impacts*
Providing a Research-Based Scholarly Definition of Broader Impacts

**Broader Impacts** – A process with people/stakeholders to achieve a societal benefit in a finite time that is measured. This can be through one’s teaching, research, service, and occupation. There can be broader impacts of almost anything. If done appropriately broader impacts can lead to sustainable positive impacts.

[3]. The Broader Impacts in Research (BIR) Organization. (2014). BI Definitions Guide: An abbreviated collection of explanations that begins to provide a common language when discussing, practicing, understanding, and better articulating the dimensions of broader impacts (BI). [Brochure], [Norman, Oklahoma], Thompson, M.
What trends can occur when an institution starts to buy-in to broader impacts?
Institutionalizing a Broader Impacts Culture: Major trends that start to occur when institutions buy-in?

- Increased discussion and acknowledgement by university administrative leadership

- Increased faculty acknowledgement that broader impacts is important outside the context of NSF. NSF is actually not considered in the conversation

- Faculty’s and graduate students increased explicit provision of their professional/BI identity in all subject areas and overall faculty performance

- Faculty begin to show having a common language when discussing broader impacts with less anxiety

- It starts to get connected with institutional community engagement, engaged scholarship initiatives, and etc. Translating to increased public engagement.

- It begins to get put into university systems that are relevant towards tenure, e.g. faculty mini vitaes, university level mechanisms that collect faculty data

- Increase in overall success with other foundations and agencies that require some type of societal benefit function

- Better quality and more relevant broader impacts sections in NSF proposals

- Overall BI IQ increases and less discussions starting with I don’t know how to do NSF broader impacts

- Increased integration of broader impacts in all University domains – use of concepts and practices

- Faculty NSF proposals become more competitive which eventually result in more awarded proposals
BIR Highlights:

The Office of the Vice President for Research (OVPR) at the University of Oklahoma (OU) seeks to continuously innovate in order to better support faculty in achieving and surpassing their goals. “Think Big and Aspire” to help others be the best they can be is a VPR motto. The Broader Impacts in Research (BIR) organization was established as part of this initiative and thus seeks to help all faculty to be more impactful and successful in their professional endeavors. To achieve this, BIR employs the research-based scholarly definition of broader impacts [1], [2], [3], [4].

For NSF proposals, BIR uses this definition to assist faculty in addressing the Five Basic Structures of Broader Impacts (BI). Through these five structures, BIR helps faculty to determine a suitable evaluation plan. These structures are also used to allow faculty to develop a way to easily write their NSF broader impacts in a clear and concise fashion.

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<tr>
<th>Meetings and Phone Calls</th>
<th>Proposal Help Through Emails</th>
<th>Faculty Submits</th>
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<tbody>
<tr>
<td>2014: 9.57%</td>
<td>2.13%</td>
<td>188</td>
</tr>
<tr>
<td>2015: 10.65%</td>
<td>4.14%</td>
<td>169</td>
</tr>
<tr>
<td>2016: 19.90%</td>
<td>8.68%</td>
<td>196</td>
</tr>
<tr>
<td>2017: 11.57%</td>
<td>35.06%</td>
<td>121</td>
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Table 1. Faculty receiving BIR BI assistance

Next in Table 2, BIR provides the awarded NSF funding rate (FR) of those who received BIR BI assistance compared to the average NSF awarded funding rate for the University (UFR), specifically the Norman and Tulsa campuses. The 2017 complete data set is not yet available. FsmpFR% = funding rate from BIR help through meetings and phone calls; SmspFR% = funding rate from proposal help through emails.

<table>
<thead>
<tr>
<th>University NSF Funding Rate</th>
<th>FsmpFR%</th>
<th>SmspFR%</th>
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<tbody>
<tr>
<td>2014</td>
<td>22.20%</td>
<td>0</td>
</tr>
<tr>
<td>2015</td>
<td>33.30%</td>
<td>28.57%</td>
</tr>
<tr>
<td>2016</td>
<td>28.21%</td>
<td>29.41%</td>
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Table 2. Percentage of faculty awarded NSF proposals who received assistance from BIR compared to the University NSF Funding Rate

Two major aims of BIR are to help faculty achieve their proposal goals and evaluate if we are successful. BIR officially started January 1st, 2014. Since that time BIR has utilized the OVPR Electronic Proposal Info-sheet (EPI) to help assess its’ efforts. Table 1 provides the percentages of faculty who received NSF BI assistance, out of the number of faculty who submitted NSF proposals (called Faculty Submits). Data for 2017 provided until October 31st.

In Figure 1 below we provide the funding rates from those who received BIR assistance through meetings and phone calls (FsmpFR%), proposal help through email (SmspFR%), the University NSF Funding Rate (UFR), and the NSF Competitive Awards Funding Rate (CAFR) and Research Grant Proposals Funding Rate (RGFPR) from the NSF Funding Profile Statistics document 2014-2016. The 2017 NSF funding profile is not yet available.

In addition, BIR also sends an email (with 15 items implemented in late 2015) to those who submit a NSF EPI. This email provides information over broader impacts for NSF proposals. The funding rates for who received this email is also included in the figure, it is labelled “TmspFR%”. Note: to show all colored bars the zeros (0s) represented in the figure have been changed to .01.

CONCLUSION: Faculty who let BIR review their NSF BI were 10.50% (in 2014), 15.84% (in 2015), and 6.87% (in 2016) more likely to obtain funding than their peers. Faculty receiving assistance also averaged a YOY higher – (4% compared to CAFR) and (6% compared to RGFPR) award funding rate.

Link to document: http://bir.ou.edu/files/bir/docs/The_BIR_Broader_Impacts_Approach_and_Return_On_Investment_or_ROI_for_Faculty_III.pdf

Faculty NSF proposals become more competitive which eventually result in more awarded proposals
Questions?