Agenda

Competitive intelligence overview

Analyzing the research landscape

Practice

Questions
What is competitive intelligence?
Competitive Intelligence is the ethical collection and analysis of information to inform decision making.

- Strategic
- Unbiased
- Measurable
- Actionable
- Repeatable
What products are available to you?
Capacity Analysis

Funding Landscape
Sponsor Analysis
Program Analysis

External Profile

Competitive Landscape

Literature/Research Review

Sponsors

Competitors

ASU
How can you do CI on your own?
CI Process

Planning ➔ Collection ➔ Analysis ➔ Transformation ➔ Dissemination
CI Process - Planning

Determine motivation

Create a checklist

Define the key question(s)

Understand the audience (sponsor)

Manage expectations
CI Process – Collection

- Have basic understanding of topic
- Keep in mind key question
- What information is needed?
- Engage primary and secondary sources
- Understand limitations
  - Human intelligence is valuable!
  - Beware of bias.
- Know when to STOP
CI Process – Analysis

Consider **key questions** as you examine information

- Remain **objective**

  What **methodologies or other tools** will help make sense of the data?

  Identify **patterns or themes**

  What are the **gaps**?

- **Iterative process** with collection
CI Process – Transformation

Taking information and turning it into **actionable intelligence/key findings**

How does this effect **your story** for your sponsor

What are **patterns, networks, and connections** relevant to your work
Why is this useful? What is the value of competitive intelligence?
Competitive Intelligence Value

CI is valuable when it informs **decision making**

Identifies **opportunities and weaknesses**

Improves **short- and long- term planning**

Can help **avoid surprises and reduce risks**
QUESTIONS?
Analyzing the research landscape
Key Takeaways

- How to give your proposal a competitive edge
- How to learn about your competition
- How to align your proposal to fit sponsor and program goals
Understanding what the sponsor has awarded in the past or wants to fund in the future can give your proposal a competitive edge.
Five Steps to Grow Competitiveness

Step 1: Understand the sponsor and the program

Step 2: Read the solicitation

Step 3: Watch program webinars

Step 4: Analyze previous awardees

Step 5: Talk to faculty who have submitted before
Step 1: Understand the sponsor and the program

How can I know what a sponsor wants?
Understanding the Sponsor and Program

Sponsors have specific aims and objectives. A competitive proposal will highlight how your research helps the sponsor achieve their aims.

- Strategic plans
- Budgets
- Press/Media
Strategic Plan Example

National Science Foundation

BUILDING THE FUTURE
INVESTING IN DISCOVERY
AND INNOVATION

NSF Strategic Plan for Fiscal Years (FY) 2018-2022

TABLE OF CONTENTS

I. INTRODUCTION .................................................. 1
II. MISSION .......................................................... 5
III. VISION ........................................................... 8
IV. CORE VALUES ................................................... 11
V. STRATEGIC PLANNING IN A DYNAMIC CONTEXT ............ 12
VI. STRATEGIC GOALS AND OBJECTIVES ......................... 17
VII. AGENCY PRIORITY GOAL .................................... 28
VIII. EXAMPLES OF LONG-TERM PERFORMANCE GOALS .......... 29
IX. CORE STRATEGIES ............................................. 30
X. EVIDENCE BUILDING ........................................... 33
XI. APPENDICES .................................................... 35
A.1 Stakeholder Engagement ...................................... 35
A.2 Contributing Programs ........................................ 35
IMAGE CREDITS .................................................... 45
# Budget Example

## National Science Foundation

### FY 2020 Budget Request to Congress

<table>
<thead>
<tr>
<th>NATIONAL SCIENCE FOUNDATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONVERGENCE ACCELERATORS AND NSF 10 BIG IDEAS FUNDING</td>
</tr>
<tr>
<td>FY 2020 BUDGET REQUEST TO CONGRESS</td>
</tr>
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<td>(Dollars in Millions)</td>
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<table>
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<tr>
<th>Convergence Accelerators and Big Ideas</th>
<th>FY 2018 Actual</th>
<th>FY 2019 (TBD)</th>
<th>FY 2020 Request</th>
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<tr>
<td><strong>Convergence Accelerators</strong></td>
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<td></td>
<td><strong>$90.00</strong></td>
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<td>Harnessing the Data Revolution for 21st Century Science and Engineering (HDR)</td>
<td>-</td>
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<td>The Future of Work at the Human-Technology Frontier (FW-HTF)</td>
<td>-</td>
<td>-</td>
<td>30.00</td>
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<tr>
<td><strong>Research Ideas</strong></td>
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<td><strong>$180.00</strong></td>
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<td>The Future of Work at the Human-Technology Frontier (FW-HTF)</td>
<td>-</td>
<td>-</td>
<td>30.00</td>
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<td>Navigating the New Arctic (NNA)</td>
<td>-</td>
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<td>30.00</td>
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<tr>
<td>The Quantum Leap (QL)</td>
<td>-</td>
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<td>30.00</td>
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<tr>
<td>Understanding the Rules of Life (URoL)</td>
<td>-</td>
<td>-</td>
<td>30.00</td>
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<tr>
<td>Windows on the Universe (WoU)</td>
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<td>30.00</td>
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<tr>
<td><strong>Enabling Big Ideas</strong></td>
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<td><strong>$117.50</strong></td>
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<td>Growing Convergence Research (GCR)</td>
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<tr>
<td>Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science (NSF INCLUDES)</td>
<td>17.95</td>
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<td>NSF 2026</td>
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<td>6.50</td>
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<td><strong>Total, NSF Convergence Accelerators and Big Ideas</strong></td>
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<td>-</td>
<td><strong>$357.50</strong></td>
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</table>
Project looks to horticulture value chain to improve outlook for Honduran women

$1.4 million grant to perform a gender-based analysis of the Honduran horticultural value chain
February 23, 2015

UNIVERSITY PARK, Pa. -- Impoverished families in western Honduras stand to benefit from a new project aimed at improving access to that country’s markets for high-value horticultural crops.

Researchers in Penn State’s College of Agricultural Sciences have received a nearly $1.4 million grant to perform a gender-based analysis of the Honduran horticultural value chain, with an eye toward reducing barriers to participation for women and other marginalized groups, while enhancing family income and nutrition.

The funding was awarded by the Feed the Future Innovation Lab for Collaborative Research on Horticulture, which is based at the University of California, Davis. The program is supported by the U.S. Agency for International Development as part of Feed the Future, the U.S. government’s global hunger and food security initiative.
Where can I get information about a program?

Step 1: Understand the sponsor and the program
Understanding the Sponsor and Program

Division of Social and Economic Sciences

Law & Social Sciences (LSS)

LSS Program Clarifications

- Please attend to the Law & Social Sciences Postdoctoral Fellows announcement in the solicitation. Please note that the fellowships are project-based, and that they require at least two PIs from different disciplines. PIs are to have a project upon which a postdoctoral fellow will work.

- Please note the description of conference and workshop awards. Law and Social Sciences will make awards that promote interactions among scholars from multiple disciplines and that will include younger scholars and increase the participation of members of underrepresented groups, in keeping with NSF policy.

Special Announcements

The National Science Foundation and the National Institute of Justice are pleased to announce signing of a Memorandum of Understanding that outlines a framework for cooperation and collaboration in the social, behavioral, and forensic sciences. For more information concerning the announcement of this partnership, see its Dear Colleague Letter.

CONTRACTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Phone</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark S. Hurwitz - Pgm Director</td>
<td><a href="mailto:mhurst@nsf.gov">mhurst@nsf.gov</a></td>
<td>(703) 292-7023</td>
<td>966</td>
</tr>
<tr>
<td>Kenneth Land - Program Director</td>
<td><a href="mailto:kland@nsf.gov">kland@nsf.gov</a></td>
<td>70329228760</td>
<td></td>
</tr>
<tr>
<td>Monique Moore - Pgm Specialist</td>
<td><a href="mailto:mmoore@nsf.gov">mmoore@nsf.gov</a></td>
<td>(703) 292-4951</td>
<td>995</td>
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</table>

- Program pages
- Talk to a program manager!
Understanding the Sponsor and Program

Synopsis

NSF’s Directorate for Computer and Information Science and Engineering (CISE) initiated the National Network of Big Data Regional Innovation Hubs (BD Hubs) program in FY 2015. Four BD Hubs – Midwest, Northeast, South, and West – were established to foster multi-sector collaborations among academia, industry, and government, both nationally and internationally. These BD Hubs are serving a convening and coordinating role by bringing together a wide range of Big Data stakeholders in order to connect solution owners with solution providers.

In FY 2016, the Big Data Regional Innovation Hubs: Establishing Spokes to Advance Big Data Applications (BD Spokes) solicitation began extending the BD Hub network by establishing multi-institutional and multi-sector collaborations to focus on topics of specific interest to a given region. The first set of BD Spokes was funded in FY 2016. This solicitation calls for new BD Spoke proposals to be awarded in FY 2018. Collaborating with BD Hubs, each BD Spoke will focus on a particular topic that requires Big Data approaches and solutions. The set of activities managed by a BD Spoke will promote progress towards solutions in the chosen topic area. The regional BD Hub Steering Committee will provide general guidance to each BD Spoke and will assist the BD Spoke in coordinating with the national BD Hub network, with other BD Spokes, and with the broader innovation ecosystem.

The Big Data activities of a BD Spoke will be guided by the following broad themes:

- Accelerating progress towards addressing societal grand challenges relevant to the regional and national priority areas defined by the BD Hubs (information on priority areas can be found on each Hub's website listed in the Introduction section below);
- Helping automate the Big Data lifecycle; and
- Enabling access to and spurring the use of important and valuable available data assets, including international data sets where relevant.

There are two proposal categories covered by this solicitation: SMALL and MEDIUM BD Spokes.

All (SMALL or MEDIUM) BD Spoke proposals submitted in response to this solicitation must include a Letter of Collaboration from a regional BD Hub. Proposals not including a Letter of Collaboration from a BD Hub will be returned without review. No exceptions will be made.

Related URLs

Big Data (BD) Spokes Webinar - June 8th - 3pm - Register Here!
Frequently Asked Questions (FAQs) for NSF 16-510 Big Data (BD) Spokes
What Has Been Funded (Recent Awards Made Through This Program, with Abstracts)
Map of Recent Awards Made Through This Program

Webinars

- Program pages

- Talk to a program manager!

Awards
READ THE SOLICITATION
How can I get information beyond the solicitation?
Watch program webinars

- Programs often have webinars available.
- Pay special attention to the Q&A portion!
KE TRIPS Program

funding.asu.edu

funding.asu.edu enables faculty, staff and students to find funding and develop more competitive proposals via the resources and services we promote.

ASU's Research Development manages the site, which provides resources that prepare faculty, staff and leaders to submit high-quality, highly competitive proposals. Our goal is to improve funding success and grow the research enterprise.

Sign up to receive information on new opportunities and events sent via a single weekly email.

Recent announcements

NASA new investigator

View all announcements

Events

Researcher Support Series

View all events
But I still have questions...
Analyze Previous Awardees – Gather Data

- **NSF**
- **NIH**
- **DOE**
- **NEH**
- **NEA**
- **USAID**

- **DOD** – No database, search for program and find press releases about awardees.
- **NASA** – Database isn’t the best. Search by directorate and use program pages. Program pages have a history of funding at the bottom.
- **DoEd** – Search by program. Each program typically has a link to its current awardees at the bottom of the program page.
- **Philanthropic** – Varies by foundation.
### Analyze Previous Awardees – Gather Data

- What information should be pulled from an awards database?

<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Institution</th>
<th>PI</th>
<th>Award Amount</th>
<th>State</th>
<th>Partner Institutions</th>
<th>External Partners</th>
<th>Topic</th>
<th>Number of Team Members</th>
<th>Number of Students</th>
</tr>
</thead>
</table>
Analyze Previous Awardees – Find Trends

Award Count by Year:

Anticipated v. Actual

- How does that anticipated award count differ from the actual award count? What can you realistically expect?

- What is the average number of awards?

- Is it increasing year to year? Decreasing?
Analyze Previous Awardees – Find Trends

Award Size

Allowable v. Actual

- Do they award the max amount? Less? More?
- What should you expect in terms of funding?
- How might the actual funding amount impact your budget?
Analyze Previous Awardees – Find Trends

Awardee Analysis

- Are there certain institutions that consistently perform well? What features do these institutions have? Do ASU have similar features?

- Do you have contacts at those institutions? Can you reach out and gather intel?

- How are these institutions able to consistently perform well? How can you mimic their success?
Analyze Previous Awardees – Find Trends

Geographic Analysis

- This is not always relevant! You will often see high concentrations of awards located where large, R1 institutions are.

- Focus on geographic discriminators

- Does ASU’s location offer a geographic discriminator that you can highlight in your proposals?
Analyze Previous Awardees – Find Trends

**PI Analysis**

- Does the program typically fund full/associate/assistant professors?
- What experience should a PI have based on the data? How many awards are standard? How many publications?
- What do the awardees CVs look like? How does mine compare?

Who has won in the past?
Analyze Previous Awardees – Find Trends

*Topic Analysis*

- If yes, which topics?
- Does your proposal align with the favored topics? Does it go beyond what’s been previously funded?
- If your proposal doesn’t align with favored topics, highlight how your idea can advance program goals.

Does the program favor certain topics?
Analyze Previous Awardees – Find Trends

Team Analysis

- What should you consider when forming teams?
- What is the average team size? Are teams interdisciplinary?
- How many team members are internal to the lead institution? How many are external? Who are the external partners? Industry? National labs?
- How are students involved?
What about human intelligence?

Step 5: Talk to faculty who have submitted before
Talk to faculty who have submitted before

Questions to ask might include:

- Do you have any advice for me as I apply to this program?
- Can you share the feedback you got from your review?
- If you were to apply again, what would you do the same?
- What would you change?

[https://analytics.research.asu.edu/](https://analytics.research.asu.edu/)

For Limited Submissions:


Limited.Submissions@asu.edu
Five Steps to Grow Competitiveness

Step 1: Understand the sponsor and the program

Step 2: Read the solicitation

Step 3: Watch program webinars - Q&A section is most important

Step 4: Analyze previous awardees

- Award count, Award size, Awardee institutions, Geographic discriminators, PI History, Topics, and Teaming

Step 5: Talk to faculty who have submitted before
QUESTIONS?
Let’s give it a try

NSF | DOD | NEH

IN THEORY, THERE IS NO DIFFERENCE BETWEEN THEORY AND PRACTICE. BUT IN PRACTICE, THERE IS.

YOGI BERRA
https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503447&org=GEO&from=home

<table>
<thead>
<tr>
<th>Year</th>
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<th>PI</th>
<th>Award Amount</th>
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<th>Partner Institutions</th>
<th>External Partners</th>
<th>Topic</th>
<th>Number of Team Members</th>
<th>Number of Students</th>
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## DOD MURI


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<th>Partner Institutions</th>
<th>External Partners</th>
<th>Topic</th>
<th>Number of Team Members</th>
<th>Number of Students</th>
</tr>
</thead>
</table>

## Table

- **Year**: The year the project was awarded.
- **Title**: The title of the project.
- **Institution**: The institution where the project was conducted.
- **PI**: The principal investigator.
- **Award Amount**: The amount of the award.
- **State**: The state where the project was conducted.
- **Partner Institutions**: Details on any partner institutions involved.
- **External Partners**: Any external partners involved in the project.
- **Topic**: The topic or subject of the project.
- **Number of Team Members**: The number of team members involved in the project.
- **Number of Students**: The number of students involved in the project.
<table>
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<tr>
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</table>

QUESTIONS?
Understanding what a sponsor has awarded in the past or wants to fund in the future can give your proposal a competitive edge.