Grant-Writing Bootcamp: Networking Opportunity for Academic Women in STEMM

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What do you think of when you think of grant proposal writing?

Montana State University
Center for Faculty Excellence

MONTANA
STATE UNIVERSITY

Mountains & Minds

Learning Outcomes:

- Describe the content and structure of the MSU bootcamp
- Summarize the role of networking in the success of bootcamp
- Learn from the experience of others in room
- Outline the steps and challenges for having a bootcamp at your institution

Overview of the Workshop
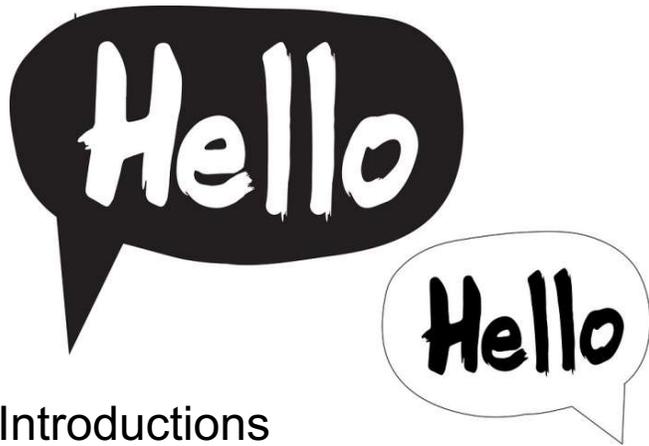
Introductions

Overview of the MSU bootcamp

BREAK

Activity

Understanding Impact

Introductions

- Name
- Department
- School

Why did you pick the card you did?

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OVERVIEW OF THE MONTANA STATE GRANT-WRITING BOOTCAMP

Academic Writing versus Grant Writing: Contrasting Perspectives

Academic Writing	Grant Writing
Scholarly pursuit:	**Sponsor goals:**
Individual passion	*Service attitude*
Past oriented:	**Future oriented:**
Work that has been done	*Work that should be done*
Theme-centered:	**Project-centered:**
Theory and thesis	*Objectives and activities*
Expository rhetoric:	**Persuasive rhetoric:**
Explaining to reader	*"Selling" the reader*
Impersonal tone:	**Personal tone:**
Objective, dispassionate	*Conveys excitement*
Individualistic:	**Team-focused:**
Primarily a solo activity	*Feedback needed*
Few length constraints:	**Strict length constraints:**
Verbosity rewarded	*Brevity rewarded*
Specialized terminology:	**Accessible language:**
"Insider jargon"	*Easily understood*

R. Porter (2007) Why Academics Have a Hard Time Writing Good Grant Proposals. The Journal of Research Administration. Volume XXXVIII, Number 2, 37.

Why design a bootcamp?

Everyone needs grant-writing support!

Women

Men

Less institutional startup resources (Sege et al. 2015)

Less credit for their contributions in team-based science collaborations (Torres 2016)

Often face more service obligations so they have less time for research activities (Misra et al. 2011)

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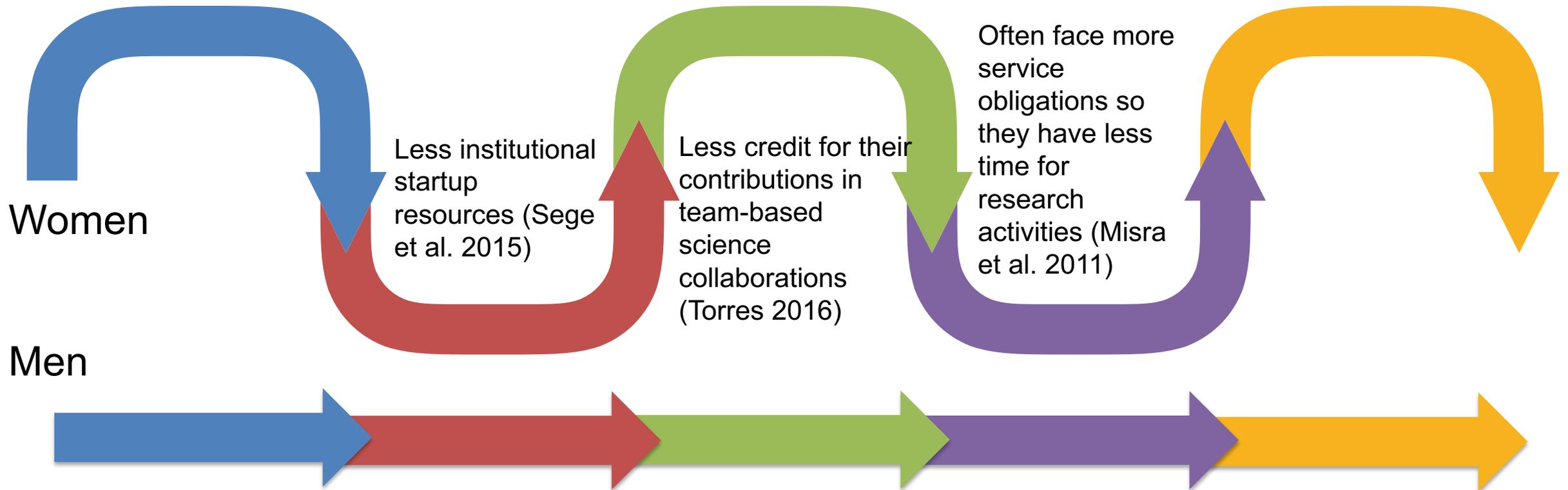
Why design a bootcamp?

- Women in STEM submit fewer proposals (Goldstein et al. 2016)
  - At MSU: since 2010, 26.2% of the grants were awarded to women when the overall percentage of women faculty ranged from 32.2% (in 2010) to 37.3% (in 2014)
  - 21% of grants that were funded at MSU in fiscal year 2014 had a woman faculty listed as PI

- Often receive less funding than men (Boyle et al. 2015)
  - At MSU: on average, women received ¼ of what men received

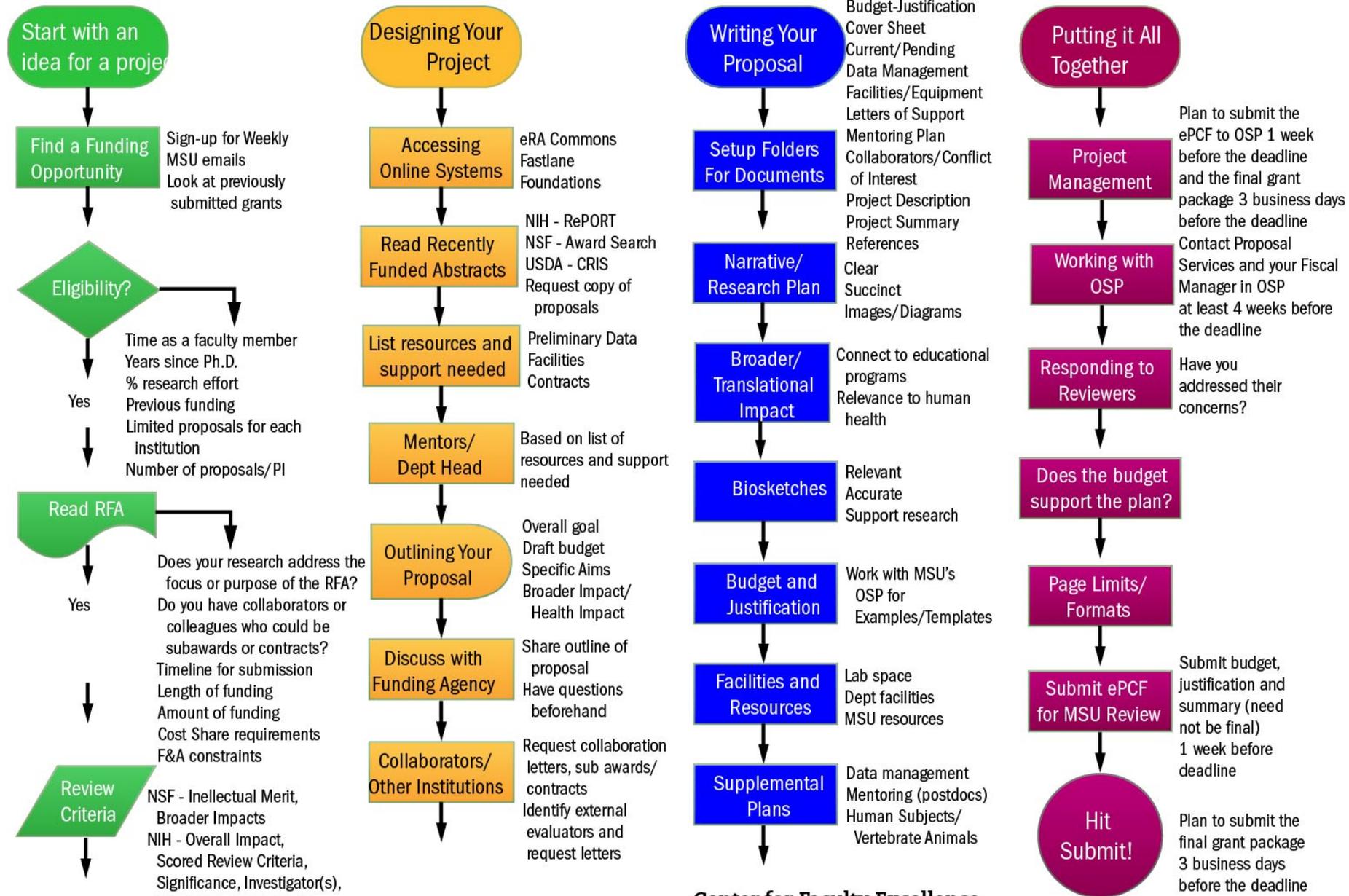# 6-week Grant Writing Bootcamp Intervention Designed to:
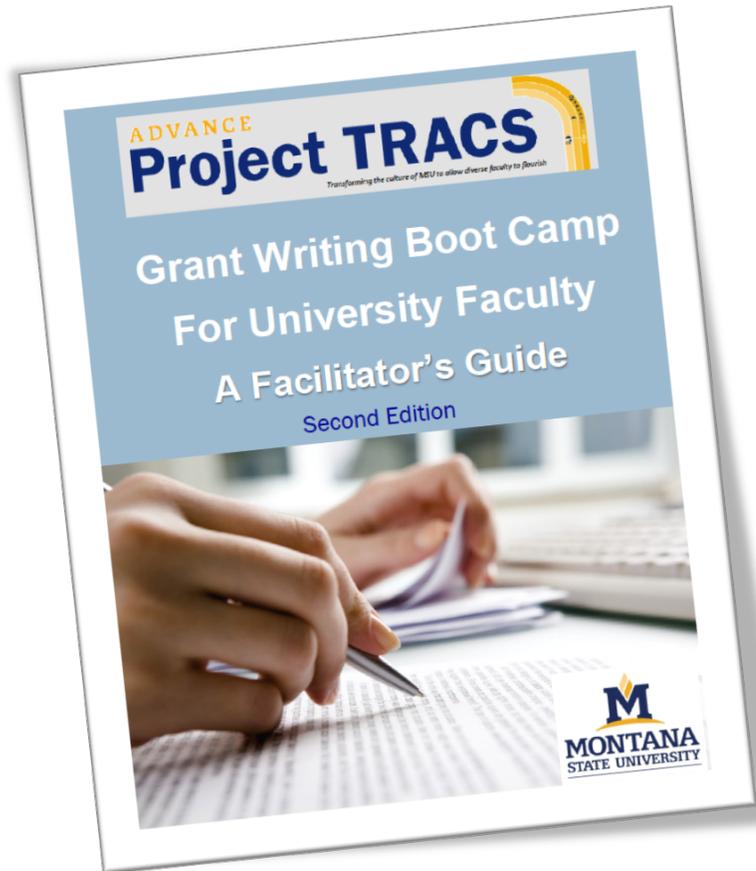
1. enhance **autonomy** of faculty to take creative approaches with topics, methods, and funding sources

2. enhance **competence** of the faculty with tools and templates for navigating the grant paperwork and submission process

3. enhance **relatedness** of the faculty by creating small groups of similarly situated people and connections to senior science mentors
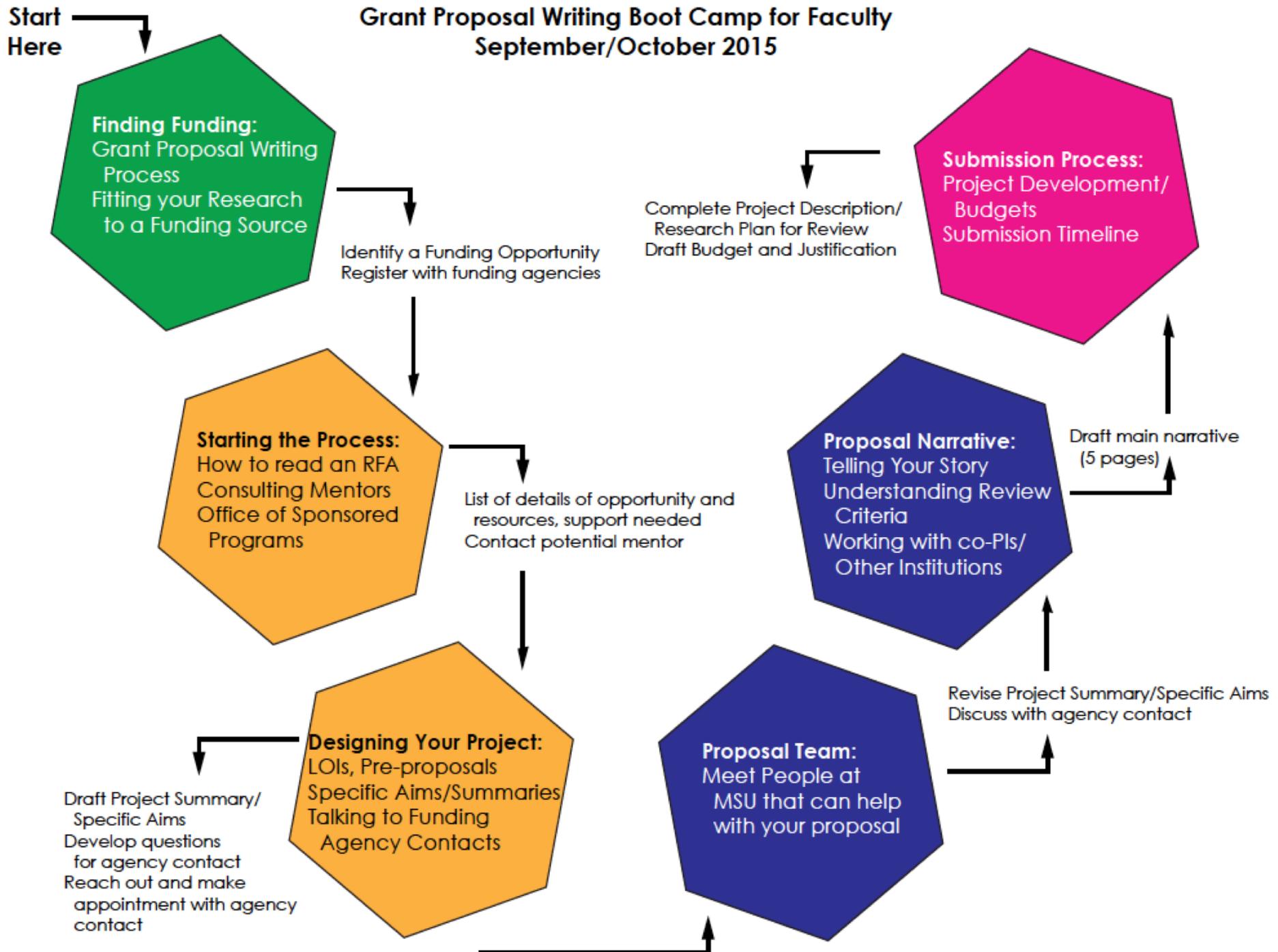
Overview of Boot Camp

- **Objectives**
  - Introduce participants to the overall grant submission process
  - Provide time for peer feedback on parts of the proposal
  - Make connections to peers and area experts at MSU for mentoring opportunities
  - Help participants understand the MSU Office of Sponsored Programs procedures and services
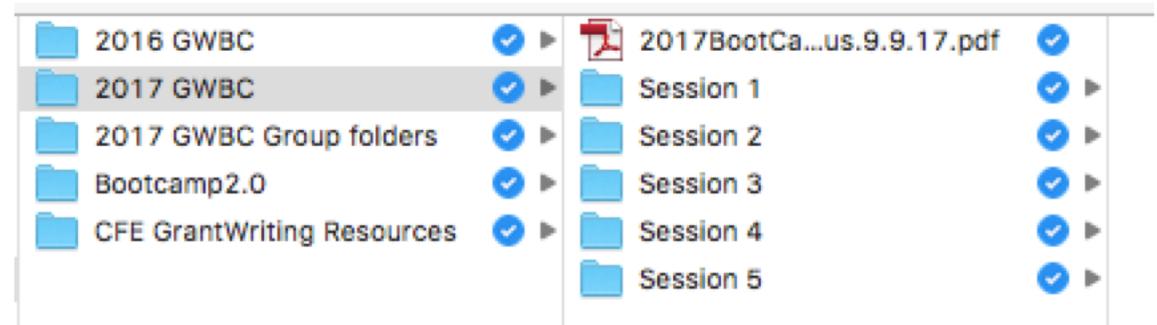
Overview of the Grant Proposal Writing Process

Start with an idea for a project

Find a Funding Opportunity
- Sign-up for Weekly MSU emails
- Look at previously submitted grants

Eligibility? — Yes
- Time as a faculty member
- Years since Ph.D.
- % research effort
- Previous funding
- Limited proposals for each institution
- Number of proposals/PI

Read RFA — Yes
- Does your research address the focus or purpose of the RFA?
- Do you have collaborators or colleagues who could be subawards or contracts?
- Timeline for submission
- Length of funding
- Amount of funding
- Cost Share requirements
- F&A constraints

Review Criteria
- NSF - Inellectual Merit, Broader Impacts
- NIH - Overall Impact, Scored Review Criteria, Significance, Investigator(s), Innovation, Approach & Environment.

Designing Your Project

Accessing Online Systems
- eRA Commons
- Fastlane
- Foundations

Read Recently Funded Abstracts
- NIH - RePORT
- NSF - Award Search
- USDA - CRIS
- Request copy of proposals

List resources and support needed
- Preliminary Data
- Facilities
- Contracts

Mentors/ Dept Head
- Based on list of resources and support needed

Outlining Your Proposal
- Overall goal
- Draft budget
- Specific Aims
- Broader Impact/ Health Impact

Discuss with Funding Agency
- Share outline of proposal
- Have questions beforehand

Collaborators/ Other Institutions
- Request collaboration letters, sub awards/ contracts
- Identify external evaluators and request letters

Writing Your Proposal

Biosketches
Budget-Justification
Cover Sheet
Current/Pending
Data Management
Facilities/Equipment
Letters of Support
Mentoring Plan
Collaborators/Conflict of Interest
Project Description
Project Summary
References

Setup Folders For Documents

Narrative/ Research Plan
- Clear
- Succinct
- Images/Diagrams

Broader/ Translational Impact
- Connect to educational programs
- Relevance to human health

Biosketches
- Relevant
- Accurate
- Support research

Budget and Justification
- Work with MSU's OSP for Examples/Templates

Facilities and Resources
- Lab space
- Dept facilities
- MSU resources

Supplemental Plans
- Data management
- Mentoring (postdocs)
- Human Subjects/ Vertebrate Animals

Putting it All Together

Project Management
- Plan to submit the ePCF to OSP 1 week before the deadline and the final grant package 3 business days before the deadline

Working with OSP
- Contact Proposal Services and your Fiscal Manager in OSP at least 4 weeks before the deadline

Responding to Reviewers
- Have you addressed their concerns?

Does the budget support the plan?

Page Limits/ Formats

Submit ePCF for MSU Review
- Submit budget, justification and summary (need not be final) 1 week before deadline

Hit Submit!
- Plan to submit the final grant package 3 business days before the deadline

Start Here

Grant Proposal Writing Boot Camp for Faculty
September/October 2015

Finding Funding:
Grant Proposal Writing Process
Fitting your Research to a Funding Source

Identify a Funding Opportunity
Register with funding agencies

Complete Project Description/
Research Plan for Review
Draft Budget and Justification

Submission Process:
Project Development/
Budgets
Submission Timeline

Starting the Process:
How to read an RFA
Consulting Mentors
Office of Sponsored Programs

List of details of opportunity and resources, support needed
Contact potential mentor

Proposal Narrative:
Telling Your Story
Understanding Review Criteria
Working with co-PIs/
Other Institutions

Draft main narrative
(5 pages)

Revise Project Summary/Specific Aims
Discuss with agency contact

Designing Your Project:
LOIs, Pre-proposals
Specific Aims/Summaries
Talking to Funding Agency Contacts

Proposal Team:
Meet People at MSU that can help with your proposal

Draft Project Summary/
Specific Aims
Develop questions for agency contact
Reach out and make appointment with agency contact

Session Framework

- Presentations/discussion around topic
- Activities that incorporate topic
- Groups/Partnerships
  - Giving feedback on parts of the proposal
  - Developing the first paragraph/summary
  - Use a shared drive
- In-Class Work
- Out-of-Class Work
- Materials on shared drive

Writing Your Story – Session 5

Time	Subject
9:30 – 9:40 AM	Homework Follow-up
9:40 – 10:40 AM	Understanding the Review Process
10:40 – 10:45 AM	Break
10:45 – 11:00 AM	Graphical Abstracts
11:00 AM – 11:45 AM	Telling your Story
11:15 AM – 12:00 PM	Group Exercise
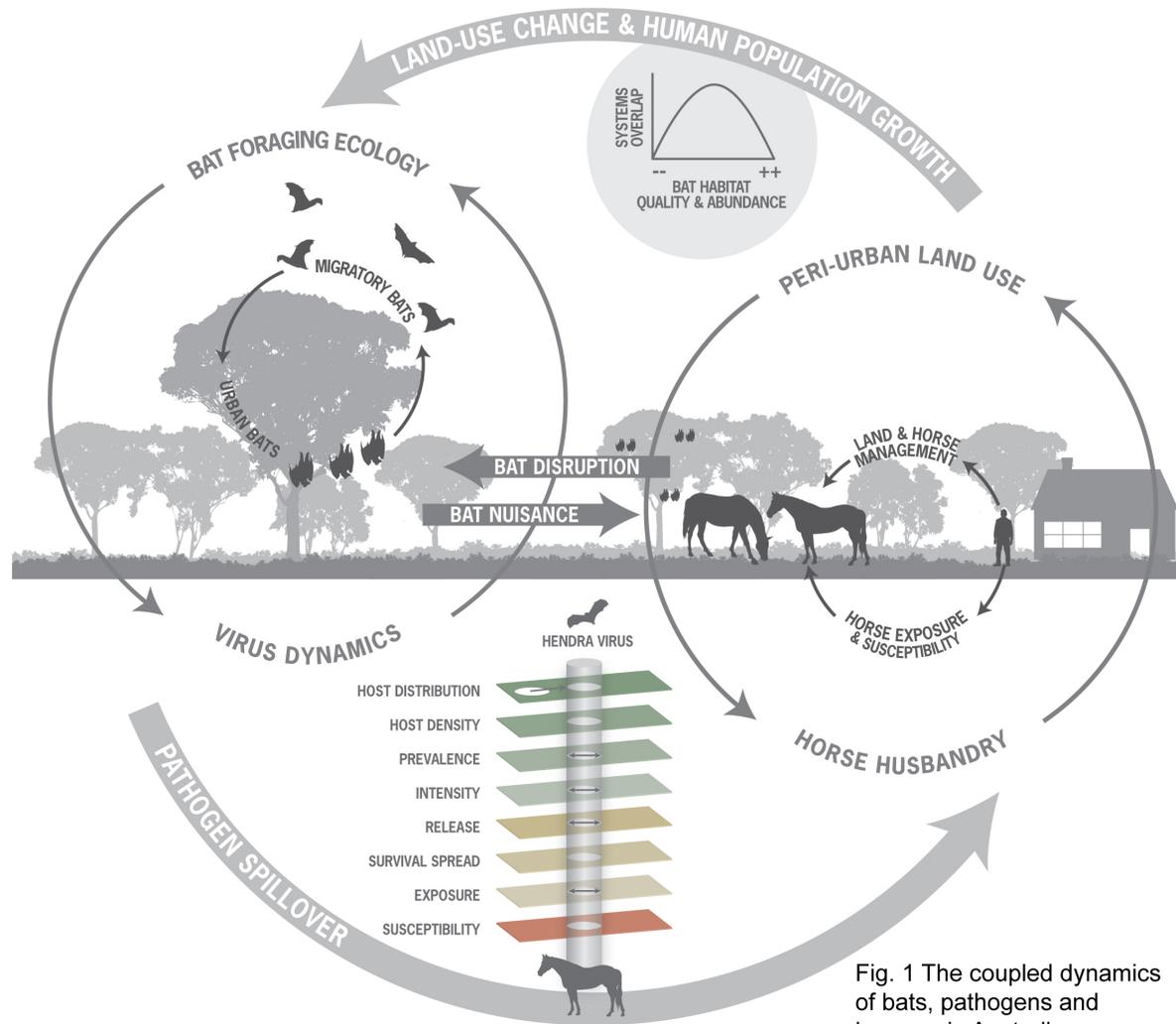
Fig. 1 The coupled dynamics of bats, pathogens and humans in Australia

Raina Plowright,– NSF Dynamics of Coupled Natural and Human Systems Grant

We propose to examine the role of bats as vectors for the transmission of Hendra virus, which can be fatal to horses and humans, at multiple spatial scales across the Australian landscape. We will focus on three phenomena: changes in the moment of bats as forests are fragmented and converted to exurban development, the flow of virus and its transmission through bat populations as the diets and foraging patterns of bats change, and how the transmission of disease to livestock and humans can be mitigated by changes in human behavior.

Recruitment

Fill out an application providing:
- Funding opportunity
- Sessions they will be able to attend
- Grant writing experience

Women in STEM and those who can attend all sessions are given priority

Grant-Writing Bootcamp
Fridays – September 15th through October 13th

New to the grant-writing process?

The Center for faculty Excellence is offering a Grant-Writing Bootcamp this fall. Go through the process from beginning to end while working on your own grant proposal, including feedback from peers and experts.

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01 Starting The Process
02 Designing Your Project
03 Writing Your Story
04 Assembling Your Team
05 Submitting Your Proposal
Electronic Proposal Clearance Form (ePCF)
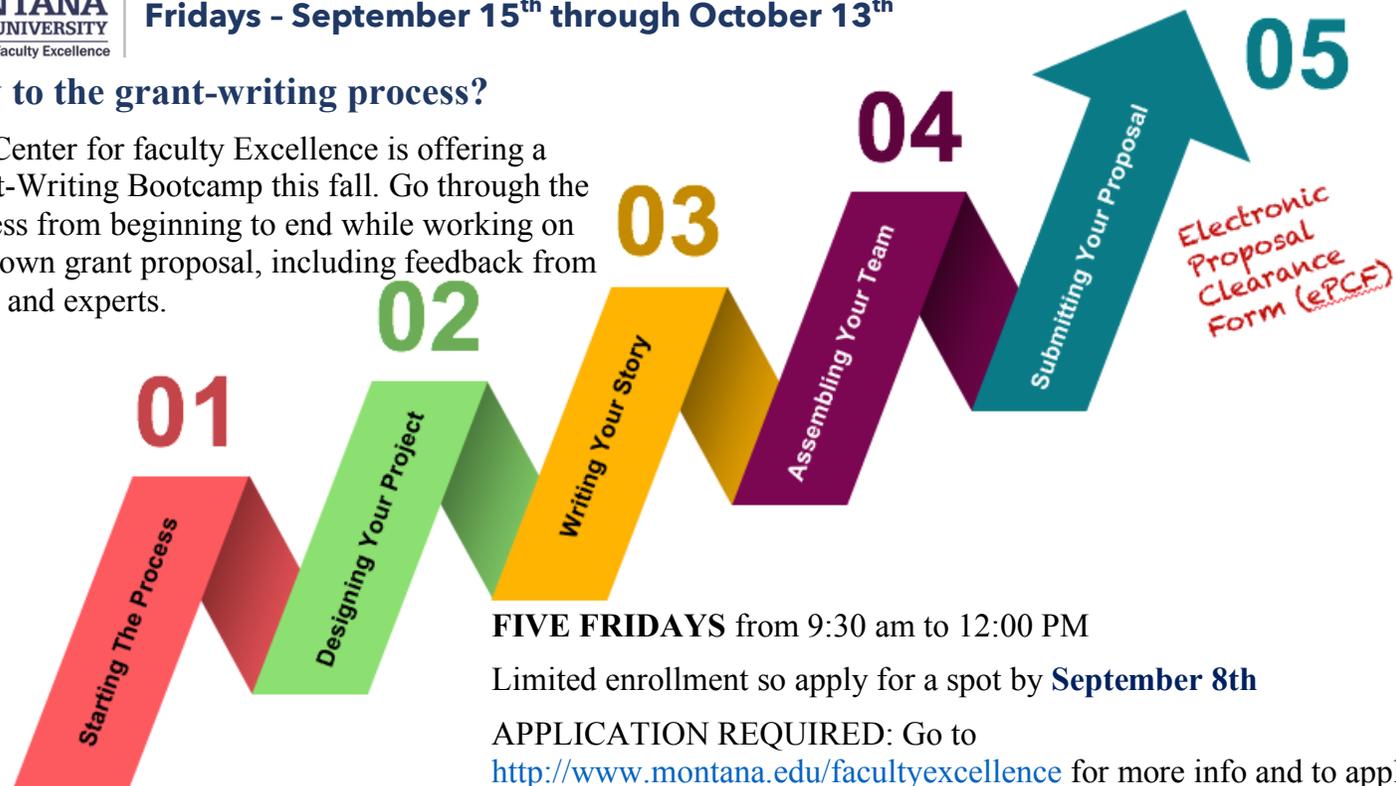
FIVE FRIDAYS from 9:30 am to 12:00 PM

Limited enrollment so apply for a spot by **September 8th**

APPLICATION REQUIRED: Go to http://www.montana.edu/facultyexcellence for more info and to apply

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Networking

- Peers
- Grant-Successful Faculty
- MSU Grant Support Resources

Research Network at MSU

MSU Research Network: Resources for Investigators
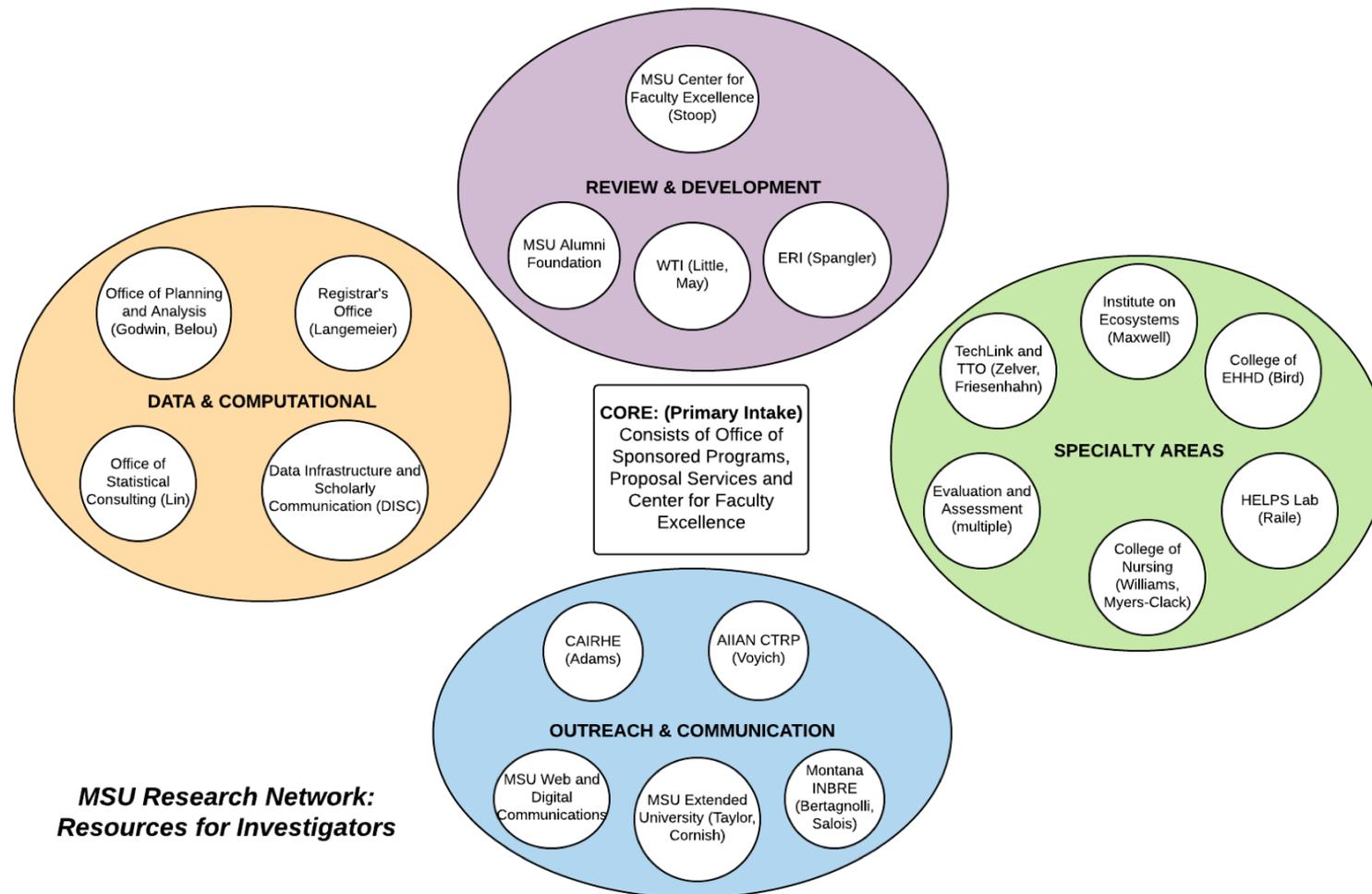
Evaluations and Feedback

What do you need?

- Facilitator
- Advisory Team
- Grant-Successful Faculty who are willing to be mentors
- Materials for each session
- Ways for people to collaborate – document sharing
- Budget for facilitator, materials, and refreshments - ~$7 K
- Evaluations and/or a way to gather feedback
- **Faculty from different departments with a grant proposal to work on**

BREAK

ACTIVITY

Implementing Bootcamp

- **What similar grant-writing support activities are already ongoing?**

- **What are the challenges to starting a bootcamp?**

- **What are some ideas for overcoming those challenges?**

UNDERSTANDING THE IMPACT

Study of the Impact

3 bootcamps over 18 months

20 women STEM

~43 participants
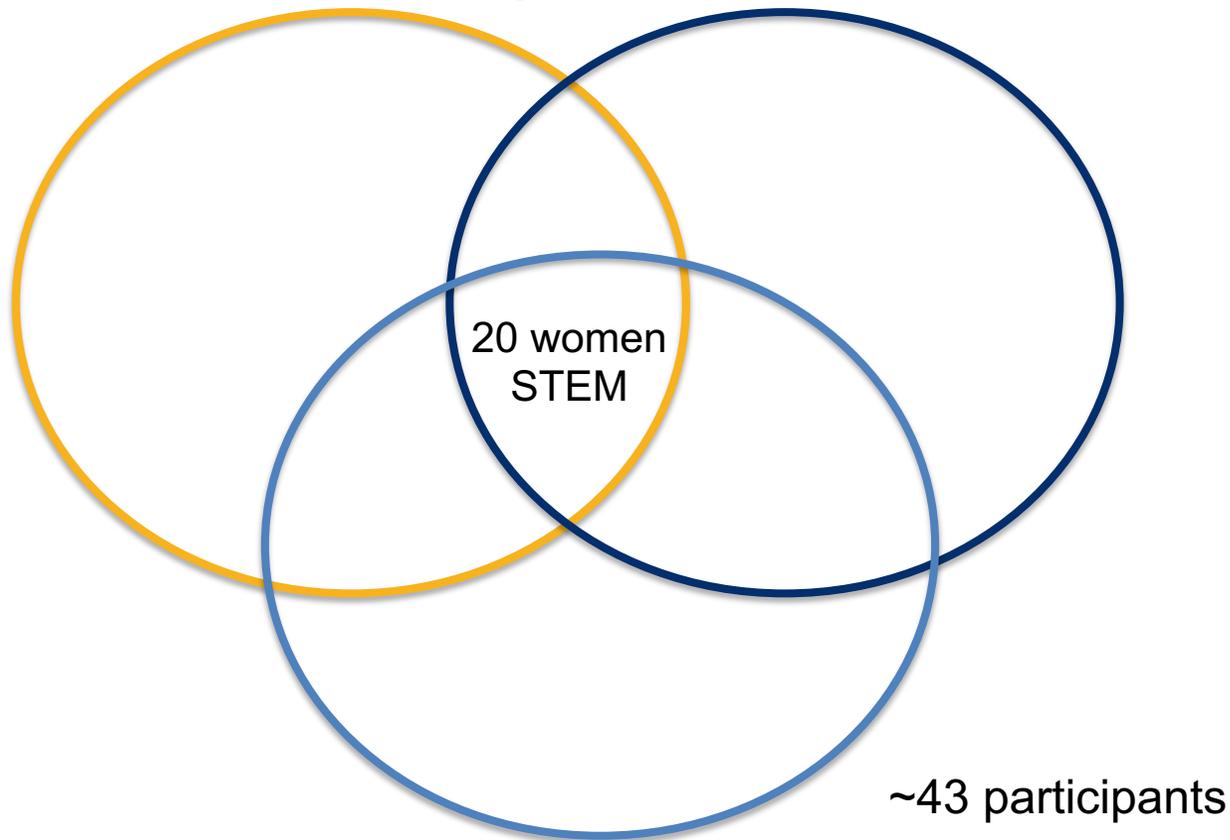
Assessment Tools
- Self-reported general evaluation and psychological-need satisfaction of bootcamp by survey at the end of bootcamp
- Grant activity – looked one-year before bootcamp and one-year after bootcamp
- Comparison sample matched by gender, rank, and STEM field category

Self-Reported Surveys

The participants rated two items:

(1) "I think Bootcamp will have a positive impact on my career advancement" and

(2) "I would recommend Bootcamp to my colleagues"

not at all true   very true

| 1 | 7 |

Mean = 6.18

Self-Reported Surveys

Assessment using one-sample t-tests showed high levels of:

1) Autonomy: "I feel free to express my ideas and opinions in Bootcamp"

Strongly Disagree   Strongly Agree

| 1 | | 7 |

Mean = 6.4

2) Competence: "The Bootcamp increased my confidence in my ability to do well at grant writing"

Strongly Disagree   Strongly Agree

| 1 | | 7 |

Mean = 6.0

3) Relatedness: "I really like the people I worked with in Bootcamp"

Strongly Disagree   Strongly Agree
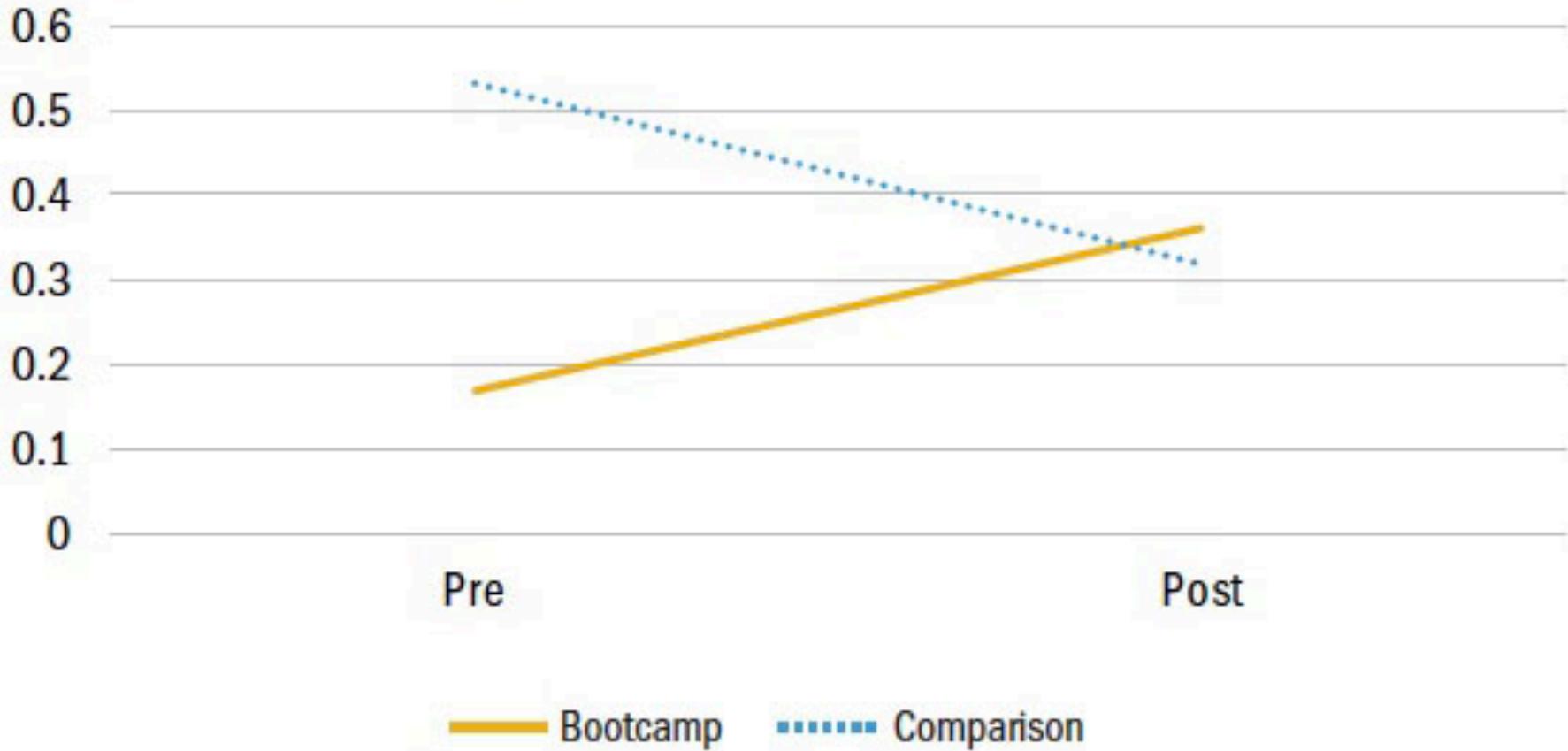
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Mean = 6.1

Success Rate

Number of Submission
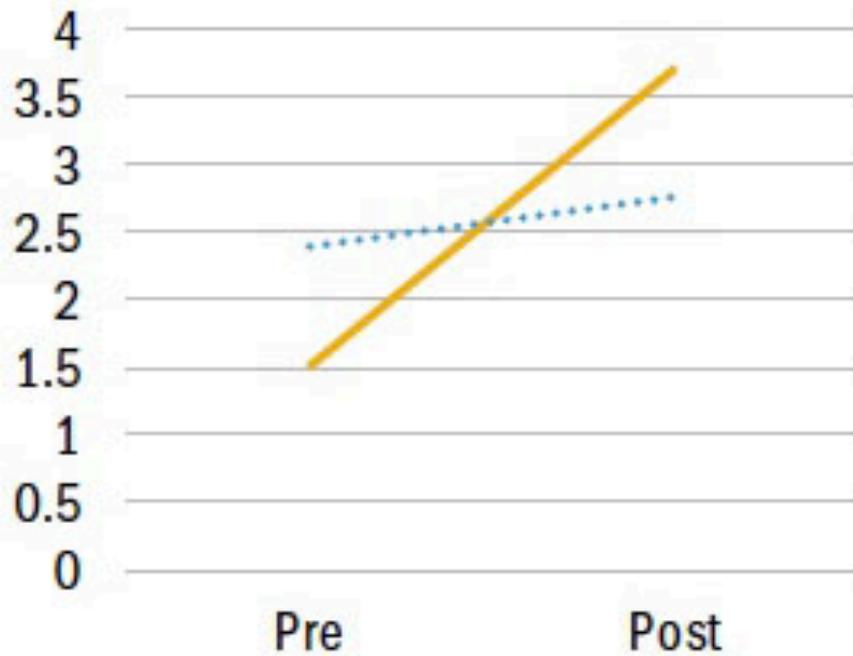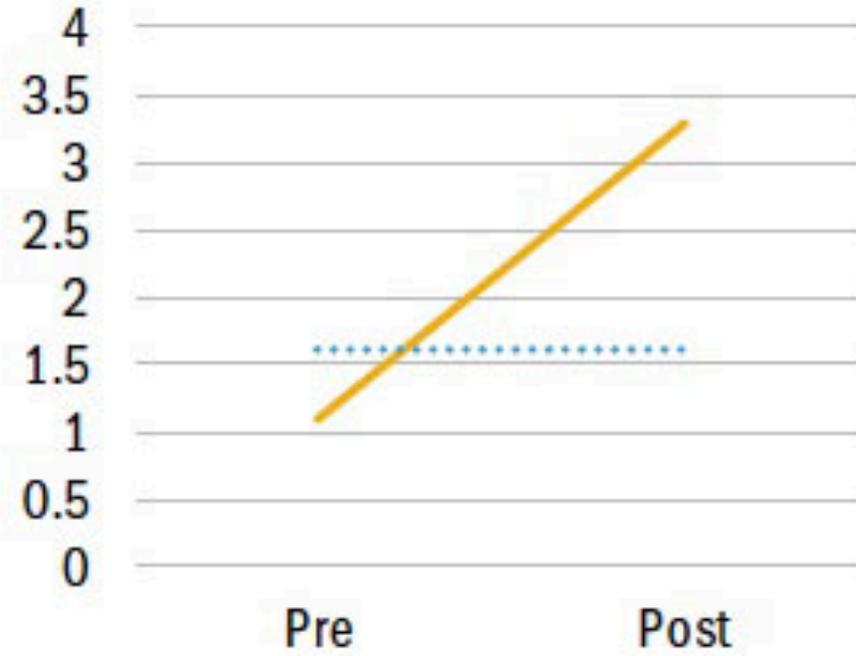
Funding Success
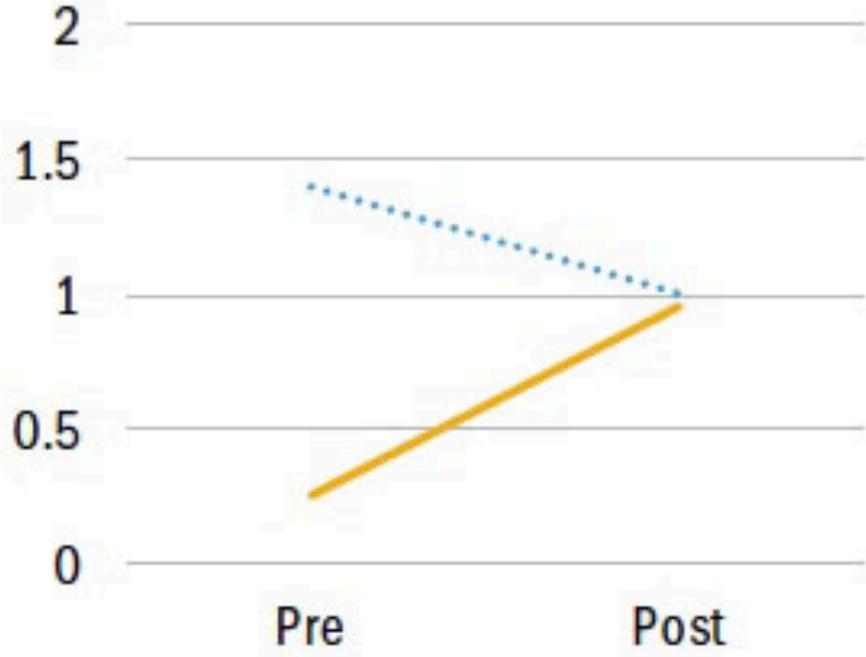
Smith, J.L., Stoop, C. D., Young, M., Belou. R., Held, S. (2017). Grant-Writing Bootcamp: An Intervention to Enhance the Research Capacity of Academic Women in STEM. BioScience. 67 (7): 638-645.

Networking/Connectedness

- We saw that there was an increase in multiple PI grant submissions

- We had anecdotal evidence of connecting with other participants

http://www.montana.edu/news/16808/msu-wins-grant-to-increase-awareness-of-federal-agricultural-programs

THANK YOU!