Welcome to the Michigan Tech Research Forum

University Professor, Kathleen Halvorsen

“How I Learned to Stop Worrying and Love Team Science: Lessons Learned from 25 Years of Transdisciplinary Research”
How I Learned to Stop Worrying and Love Team Science: Lessons Learned from 25 Years of Transdisciplinary Research

Kathy Halvorsen,
Michigan Tech Research Forum, February 12th, 2020
Land Acknowledgement
Goals

1) Successful multi-million dollar grantsmanship ≠ magic
2) Team science provides great strategies
3) Successful big grantsmanship = craft + science
Experiences, Challenges = Lessons Learned
(*was or preceded by RCN, workshop, or planning grant)

NSF IGERT Sustainability $3.8 million
NSF MUSES Cellulosic Ethanol* $1.8 mill
NSF WSC Great Lakes* $162K
NSF GK12 Watershed $2.5 mill
NSF CNH CHiLES* $1.5 mill
NSF RCN Pan-american bioenergy $750K
NSF PIRE BIOPIRE* $4.8 mill
NSF INFEWS FEWCON* $3.0 mill
NSF NNA RCN PCE $500K
NSF NNA POLARIS* $3.0 mill
NSF Convergence MICARES $3.7 mill
~ $25.5 mill
NSF NRT SEAMLESS proposal $3.0 mill
Lessons Learned

Relationships & Respect
Build from core relationships
Develop norms of respect across disciplines, sectors
Be sensitive to power dynamics, inequities
Bring dispersed team together in-person at remote location
Have some fun together
Mostly choose members who work well with others

Time & Energy
Invest extra time in planning and proposal development
Invest significant time in teaching and learning across disciplines and tasks
Planning/workshop/networking grants can be invaluable

Leadership & Structure
Importance of experienced, patient leadership
Develop explicit structure, subgroups, leadership

Resources & Rewards
Importance of resource equity
Incentivize sustained participation
Lessons Learned:

- Develop norms of respect across disciplines, sectors
- Importance of resource equity
Lessons Applied: Develop norms of respect across disciplines, sectors
Lessons Learned: Build from core relationships; Invest extra time in planning and proposal development; Invest significant time in teaching and learning across disciplines and tasks; Planning/workshop/networking grants can be invaluable
Lessons Applied:
Develop norms of respect across disciplines, sectors
Invest extra time in planning and proposal development;
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Lessons Learned: Bring dispersed team together in-person at remote location
Have some fun together
Mostly choose members who work well with others
Lessons Applied: Build from core relationships. Invest extra time in planning and proposal development;

Lessons Learned: Importance of experienced, patient leadership. Importance of resource equity. Incentivize sustained participation.
NSF RCN Pan-american bioenergy (PI David Shonnard)

Lessons Applied:
Build from core relationships
Importance of experienced, patient leadership
Importance of resource equity
Bring dispersed team together in-person at remote location
Have some fun together

Lessons Learned:
Be sensitive to power dynamics, inequities
Develop explicit structure, subgroups, leadership
Lessons Applied:
- Bring dispersed team together in-person at remote location
- Have some fun together
- Planning/workshop/networking grants can be invaluable
- Build from core relationships

Lessons Learned:
- Importance of experienced, patient leadership
- Develop explicit structure, subgroups, leadership
Lessons Applied:
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Lessons Learned:
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Lessons Applied:
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Lessons Applied

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Lessons Learned

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Importance of resource equity
Incentivize sustained participation
Lessons Applied Planning/workshop/networking: 
- grants can be invaluable
- Build from core relationships
- Importance of experienced, patient leadership
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Lessons Learned:
- Importance of resource equity
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Graphics credit: Jessica Brassard
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**Resources & Rewards**
Importance of resource equity
Incentivize sustained participation
Tips and Tricks Big, Complex Proposal Writing

1) Speak to the RFP
2) Edit, edit, edit
3) Make it easy to skim
4) Make key parts visible
5) Bold team member last names (in-text citations, management discussions etc)
6) Make your org structure and management obvious
7) Show how you will interact and integrate
8) Invest in high quality graphics (conceptual framework, etc)
9) Use dynamic, exciting language that creates interest
10) Clear, supremely well-written text creates impression of well-organized, capable team
Acknowledgements & Resources

NSF cross-directorate programs

VPR office staff: Research Integrity, Research Development, Sponsored Programs

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Team members
Questions?