Strategies for Success in Research Development: Using External Consultants for Capacity Enhancement

Paul Tuttle, M.A., Hanover Research
M. S. AtKisson, Ph.D., Grant Writers’ Seminars and Workshops
Kristin Bennett, Ph.D., KB Science, LLC
WHEN CAN A CONSULTANT HELP?

Consultants can help set up research support

“Where do we even start?”

“How do we support our faculty in grant writing?”

Grant writing seminars and workshops

“Where should we go next?”

Specialized grant writing support

“I’ve never done that kind of proposal!”

Strategic analysis and planning
What is an Expert?

• Expert: having, involving, or displaying special skill or knowledge derived from training or experience. (Merriam-Webster)

• The “10,000 hour” rule.

• Outside experts bring experience, usually extraordinary experience
At the Beginning of Setting Up a Grants Enterprise

Paul Tuttle, M.A.
Hanover Research
Assessing Institutional Readiness

- Proprietary assessment instrument
- Discussions with senior administrators
  - Goals
  - Strategic plans
  - Purpose of grants capacity building
- Onsite visit
  - Learning priorities and focal points
It’s All About the Money – Or Is It?

• Current budget climate
  – Desire to increase revenue

• Grants as investments
  – Funders’ investments in institution
  – Institution’s investment in infrastructure

• Institutional goals
  – Short, mid, and long term
  – Sustainability plans
Benchmarking Institutional Infrastructure Needs

• Comparisons with similar institutions
  – History and strategic vision
  – Current grants infrastructure

• Defining infrastructure needs
  – Personnel and their skills
  – Technology
  – Institutional reorientation
Robust Data Gathering and Analysis

• Institutional need
  – Student data
  – Community context
• Comparisons across similar/”peer” institutions
• Required data reporting
  – Federal
  – Statewide
  – Other stakeholders
Institutional Leadership

• Who’s the “grants leader”?
  – Multiple roles/hats versus a dedicated position
  – Committed PIs

• Current/expected grants volume?
  – Number and amount of awards
  – Types of awards
    • Institutional capacity building
    • Community outreach and development
    • Instruction
    • Research
Regulations and Compliance

• Size doesn’t matter
  – You still have to comply with the regulations, even as a beginner in the grants world
  – Certifications and assurances
  – Fiscal stability and record-keeping

• What kinds of grants do you expect to receive?
  – Human subjects
  – Vertebrate animals
  – Biohazards
  – FCOI, etc.
Overall Goal: Helping Institutions Develop

• Fitting into the grants landscape
  – Understanding its shape
  – Defining niches, strengths, capabilities

• Starting out with best practices
  – Institutional self-analysis
  – Preparation and readiness
  – Institutional movement forward
M. S. (Peg) AtKisson, PhD

From punk to professional

2009- Associate Member
Grant Writers’ Seminars and Workshops

2007-2009 Director of Proposal Development
Tufts University (\$140M)

2004-2007 Proposal specialist
Tufts University

2001-2004 Consultant (grant development)
Tufts, ACM, Harvard, others

2000-2002 Consultant (nano tech)
Cogniscent

Ph.D. Neuroscience
Tufts University

1996 Neural Systems and Behavior
Marine Biological Laboratories

B.S. Biology, minor in Biology
Florida State University

1984

2010
Consulting and Teaching

M. S. (Peg) AtKisson, Ph.D.
Grant Writers’ Seminars and Workshops
Consulting and Teaching

• Day-long seminars on grantsmanship
• Individual consultations on proposals
• Workshops at institutions (15-30 faculty)
Grant Writing is More than Writing

• “Grantsmanship” involves:
  – learning how to “bark up the right tree”
  – knowing your audiences (funder and reviewer)
  – knowing the culture of the agency
  – Presenting information in a clear, compelling way
  – Keeping the whole package consistent
Grantsmanship Training

- Presentation of strategies and approaches
- Individualized one-on-one consultations
- Not “grant doctoring”—focusing on concepts so that skills can be applied across funders
- An outside consultant can bring a breadth of expertise and experience not typically found in one person within an institution
Consulting and Teaching

• Large proposals (center grants, etc.)
• Readiness analysis and planning
Consulting

- Center grant proposals and other large institutional proposals have elements that are not obvious to even the most successful individual investigators.
- An outside consultant can bring in the “10,000 hours” of experience on large proposals.
- An outside consultant is not part of the politics!
Consulting

• Readiness and planning for large proposals
  – Determine current capacity and infrastructure
  – Relate it to characteristics of successful grantees
  – Plan to make up deficiencies

• Writing large proposals
  – Drafting sections based on institutional input
  – Editing to bring a proposal to “one voice”

An outsider can tell the truth.
Capacity Development

• Developing Research Development
  – Approach is to work with a team identified by the institution on a large proposal
  – Provide both direct support for the proposal, and training/mentoring of university team
  – Goal is to mirror ‘teach to fish’ model used with individual faculty for a new proposal development team
Consulting and Teaching

Overall goal is to leave behind new skills and capacities at institutions
Kristin A. Bennett (Ph.D.)

From DOE Lab/HQ – Lifer to Mountain-Climbing Consultant

2008 – President KB Science, LLC

2008 – 2010 Vice President Van Scyoc Associates
1995 – 2002 Technical Staff Member Los Alamos National Lab
1994 – 1995 Postdoc GFZ- Potsdam Germany
Ph.D. Geology & Geophysics University of California- Berkeley
1988 Mechanical Engin. NSF Women in Eng. Fellowship
B.S. Mechanical Engin. Trinity University, Dartmouth College, King’s College (London)
Kristin Bennett - Consulting and Federal Relations - Specialty DOE

- **Large Proposals** – Team Development, Management, Review Enhancement
- **Individual Faculty** – Teaching and Training
- **Grant Teaching/Writing Workshops** – DOE & the DOE ‘Style’
- **Federal Relations** – Working with DOE
Learn the DOE ‘Maze’

Anticipate, Adapt, Align, Repeat
DOE vs. NSF

• DOE
  – Office of Science (SC) –one of the largest funders of Physical Sciences
  – ~ $5 Billion FY 14 (SC)
  – Mission
  – Merit Criteria
  – FOAs
  – Centers, Hubs, Etc.

The mission of the Energy Department is to ensure America’s security and prosperity by addressing its energy, environmental and nuclear challenges through transformative science and technology solutions

• NSF
  – Basic Research, Science & Engineering
  – ~ $ 7.6 Billion FY 14
  – Mission
  – Merit Criteria
  – RFPs
  – Centers of Excellence, Etc.

To promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense....
DOE
Mission

ARPA-E
Innovation, High Risk Commercialization

NNSA
Non proliferation / Nuclear Security

SCIENCE (SC)
Basic & Fundamental Research

APPLIED (EERE, OE, EM, FE, NE)
Applied R & D, D & D

The Maze
Crosscut by the 17 DOE National Laboratories; Other DOE Programs; Interagency Opportunities
Basic research to address fundamental limitations of current theories and descriptions of matter in the energy range important to everyday life—typically energies up to those required to break chemical bonds.

Basic research for fundamental new understanding on materials or systems that may revolutionize or transform today’s energy technologies.

Basic research for fundamental new understanding, usually with the goal of addressing scientific showstoppers on real-world applications in the energy technologies.

Proof of new, higher-risk concepts.

Prototyping of new technology concepts.

Explore feasibility of scale-up of demonstrated technology concepts in a “quick-hit” fashion.

Research with the goal of meeting technical milestones, with emphasis on the development, performance, cost reduction, and durability of materials and components or on efficient processes.

Scale-up research.

Small-scale and at-scale demonstration.

Cost reduction.

Manufacturing R&D.

Deployment support, leading to market adoption.

High cost-sharing with industry partners.

* ARPA-E targets technology gaps, high-risk concepts, aggressive delivery times
Have Your Tools

- **Know Your Offering & Where it Sits**
- **Understand DOE Metrics & Reports?**
  - Program Relationships
    - Strategic Plans & Quad Reviews & Basic Research Needs (BRNs) for Science Offices
    - Multi-Year Program Plans (MYPPs) for Applied Offices
    - Initiatives (i.e., ‘CEMI’- Clean Energy Manufacturing Initiative)
- **Consider a DOE Lab Collaboration/Co-PI/Student Internships**
  - Machines & Tools
  - Advance your research
  - Accelerate your student outreach
Have Your Tools

• FOAs
  – Office of Science – Rolling FOAs & the ‘White Paper’
  – Special FOA calls (Applied and Science and ARPA-E)
  – Multi-agency Calls (i.e., Terrestrial Ecosystems (TES) – DOE, USDA, NOAA, NASA)
• Become a Reviewer
  – Know your Program Manager (Call and talk to them!!)
  – Ask for a review of your White Paper
  – Send your CV to serve as a review
  – Attend a DOE Merit Review (Open) or Online Webinar
DOE Large Proposals

Large Center-like/Multi-Entity Proposal Development
(University-Industry-Government Trifecta)

- DOE ‘Institutes’ – SOTU
- DOE EFRC’s
- DOE Energy Hubs
- DOE Manufacturing DF

Management, Management, Management
DOE Tricks of the Trade

- Understand DOE vs. NSF, and how to write for a DOE mission, structure, and style.
- Know your Program Manager & your ‘Value Add’.
- Know your Federal Initiatives (i.e. CEMI, NNMI, MGI).
- Know your relevant DOE Workshop Reports.
- Know your National Lab resources.
- Find a ‘DOE Grants’ Mentor – Ask for review/support.
- Send in your White Papers (Office of Science); Talk to your Program Managers.
- Join Industry, University, Lab Partner teams.
- Join the Club (as a Reviewer, Lab Users, Workshop Attendee, IPA, Fellowship, apply & repeat).
- Consider a DOE EPSCoR Lab-State Partnership FOA
- Look for Inter-Agency FOAs and RFPs.
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