Using Business Development Funnels to Stimulate Increases in Research Funding:
An Update

Saundra Evans
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North Carolina Agricultural and Technical State University
Agenda

- Background/rationale
- Implementation
- Where are we now?
Background/rationale

- Environmental factors
- Institutional factors
- Faculty development needs
Environmental factors

- Federal R&D budgets have declined since 2010
- Competition for Federal grants has increased since 2010
Institutional factors

• **A&T Preeminence 2020 Strategic Plan**
  ▫ Objective = $85M/year in awards

• Institutional support is flat and may decrease

• Teaching loads have increased
$85M awards goal = linear growth trend
Classic S curve for small business growth

- Starting
- Replicating and Improving
- Stabilizing
- Present Curve
- Trajectory Paths to the Next Curve
- Dying
- Future Curve

Time

Growth
S-curve growth = more realistic
We maxed out on the old business model and had to break out a new one!

Requires intentional, deliberate strategies:

- Reorganize academic units to better motivate and support research
- Reinforce RD with strategic hires
- Diversify the funding portfolio – increase $s from private sector, foundations and more agencies
- Proactively pursue Federal funding – cannot wait passively for opportunity announcements
- Develop business development (funding opportunities) funnels
Strategy – A&T’s academic restructuring

• Challenge
  ▫ Managing change

• Benefits
  ▫ Faculty are now grouped more appropriately
  ▫ All colleges now have at least one PhD program
Strategy – Develop funding funnels

Funding Funnel Concept

Proposals → Awards

May 8 - 10, 2017 • Omni Interlocken Hotel • Broomfield, Colorado
Logic Model for Creating and Maintaining NC A&T Funding Funnels

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Outputs: Activities</th>
<th>Outputs: Deliverables</th>
<th>Outcomes: Impact</th>
</tr>
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<tbody>
<tr>
<td>DORED staff, resources, and infrastructure</td>
<td>Assisting faculty and units with strategic planning &amp; training in sponsored program dev.</td>
<td>Intentional, structured funding strategies for A&amp;T units/ofcs.</td>
<td>Increased number of competitive proposals submitted</td>
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<td>Existing incentives to participate in sponsored programs</td>
<td>Developing capability statements</td>
<td>Compelling capability statements</td>
<td>New teams, incl. internal &amp; external partners</td>
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<tr>
<td>Funding landscape</td>
<td>Establishing and maintaining relationships with sponsor POCs</td>
<td>Increased number of competitive proposals</td>
<td>Faculty create small teams and write small proposals without assistance</td>
</tr>
<tr>
<td>Existing sponsor and partner relationships</td>
<td>Using online databases/alerts</td>
<td>Increased number of people involved in sponsored programs and research</td>
<td>Increased demand for DORED svc.s</td>
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<td>University research stakeholders</td>
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<td>Increased ability to secure funding for first-time and incremental projects</td>
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Assumptions:
- Full commitment from stakeholders, particularly as we attempt to hit A&T Preeminence 2020 targets
- Will and capacity from DORED and other research staff and leadership across the campus
- Appropriate linkages between campus needs and programmatic areas
- Available professional expertise and technical support
- Budget/program commitment in deploying and continuing activities/strategies

External Factors:
- Funding opportunity landscape as it reflects the political and economic climate
- Barriers to participating or continuing to participate in research and sponsored programs that are beyond DORED’s control/purview
- Variations in funding landscape trends vis-à-vis A&T/stakeholder existing and emerging expertise areas

Logic model format source: Tina Edgerly Campbell’s NORDP 2014 preconference workshop materials
Developing funding funnels

Work with college leadership to:

• Identify core funding with a very high probability of funding and ensure submission of competitive proposals

• Identify recurring funding opportunities with the highest hit rates—anticipate these and start proposal preparation

• Identify other recurring growth opportunities—strengthen relationships with program officers

• Identify other growth opportunities—presidential initiatives, DoD IDIQ contracts, private and corporate foundations, industry
Developing funding funnels

**Work with faculty to:**

- Develop personal strategic research plans to help clarify and guide engagement
- **Template**
  - Current situation
  - Emerging or future directions
  - Professional goals
- **Endpoint**
  - Living document
  - Narrative and timeline

Gilmore, Jason. Writing the research plan for your academic job application. Retrieved from http://www.acs.org/content/acs/en/education/students/graduate/writing-the-research-plan-for-your-academic-job-application.html

Implementation at A&T

- Campus roll-out
  - Presentations to colleges and departments
  - Follow-ups with individual faculty
  - Handling the inevitable pushback

- Individual strategic research funding plans
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Example source: Tina Edgerly Campbell’s NORDP 2014 preconference workshop materials
Supportive university actions

• Strategic hires (both faculty and staff)
  ▫ New faculty orientation
  ▫ Individual consultations

• Proactively marketing business development funnels

• Customized outreach activities
  ▫ Newly reorganized colleges and departments
  ▫ Council of Associate and Assistant Deans for Research
Where are we now?

- Nearly 30 faculty with individual strategic funding plans

- Most from COE, COST, and CAES
  - Also COBE and CHHS

- Sharply increased interest and activity in sponsored programs
Award trends 2001-2016
Q&A

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Strategy – Develop funding funnels

Funding Funnel Concept

- **Proposals**
- **Awards**

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Logic Model for Creating and Maintaining NC A&T Funding Funnels

- **Inputs**
- **Outputs**
- **Outcomes**
- **Impact**
- **Long-term**

- **Assumptions**
  - Full commitment from administration and faculty in all A&T
  - Additional support from NSD and other research units and leadership areas
  - Continuous improvement in identifying and developing funding opportunities
  - Increased number of competitive proposals
  - Increased number of successful awards

- **External Factors**
  - Funding opportunities
  - Political and economic climate

- **Outputs**
  - Increased number of research awards
  - Increased number of publications

- **Outcomes**
  - Increased visibility
  - Increased research capabilities

- **Impact**
  - Increased faculty and student engagement

- **Long-term**
  - Increased research funding
  - Increased student and faculty retention

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Strategic Funding Plan Informational Template

I. Name: Click here to enter text.
   Rank/title: Click here to enter text.
   Discipline/school/college/department: Click here to enter text.
   Early/mid-career/senior? Click here to enter text.

   Example: Dr. X, Assistant Professor of Smart Materials Engineering, Mechanical Engineering Department, College of Engineering. I am an early-career faculty member looking initially for new investigator support and pilot funding, but I plan to progress rapidly toward higher-dollar projects upon scale-up.

II. Past projects (title, sponsor, total dollar amount, start and end dates): Click here to enter text.
    Current projects/interests: Click here to enter text.
    Future/emerging interests: Click here to enter text.
    Current/potential collaborations (organization name, POC, projects/investigations): Click here to enter text.

   Example: I am currently a member of the ERC working in the smart sensors subfield of advanced materials science. I have a DOD CDMRP award for $250,000 over three years (August 2013-July 2016) through which my research mentor and I are developing miniaturized sensors to detect battlefield shock. I am looking to expand in this subfield and partner with biomedical researchers and/or industrial partners to develop wearable diagnostic devices for civilians for a variety of uses (detecting onset of diabetic shock, myocardial infarctions, etc.).

III. Questions driving my research: Click here to enter text.
    Key topic areas: Click here to enter text.
    Optimal sponsors/specific programs? Click here to enter text.
    Dollar figures for support over time? Click here to enter text.
    Career goals (related to research): Click here to enter text.

   Example: I would like to know how smart sensors can interact effectively and efficiently with the body’s nervous and electrical system in order to provide ongoing data streams that can be used for a variety of purposes: health/sports/medical, transportation, safety and security, etc. Interdisciplinary key topic areas include smart materials, miniaturized power sources, secure data uplinks, etc. DOD agencies and NIH are my optimal federal sponsors; specific programs include the CDMRP, other DOD medical programs, and NIH SBIR/STTR programs.
My three-person team (including my research mentor, a postdoc, and I) will need at least $250,000/year to initiate investigations into these areas and grow research momentum over the next 4-7 years. After that, scale-up projects will require $1-5 million each for three to six 2- to 4-year projects that span the following decade.

I hope to become one of the go-to researchers in wearable sensors and smart devices in both military and civilian environments in the next 15-20 years.

IV. What specific funding opportunities are you currently interested in targeting?

Please respond here.

V. Timeline

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