Welcome

Please help yourself to breakfast.
Agenda

8:00 - 8:45am  Registration and Breakfast
8:45 - 8:55am  Welcome
8:55 - 9:25am  Jenn Gustetic, NASA
9:25 - 9:55am  Q&A and Discussion
9:55 - 10:00am  Closing
Making NASA More Business Friendly: An SBIR/STTR Case Study

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Grants Management Breakfast Forum
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The NASA Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs began undertaking a series of customer-centric and business-friendly initiatives in order to make SBIR/STTR a go-to program for U.S. innovators.

1. Overview of the NASA SBIR/STTR Program
2. The Challenge
3. The Opportunity
4. Lessons Learned
5. Where to Next?
The SBIR/STTR programs, established in 1982/1992, seek to strengthen the role of innovative small business concerns in Federally-funded research and development (R&D) centers in the United States (U.S.).

SBIR and STTR are highly competitive programs that encourage small businesses to explore their technological potential and provide the incentive to profit from commercialization opportunities.

SBIR/STTR is NASA’s largest small business program and provides ~$200M in awards annually for R&D and demonstration of innovative technologies that fulfil NASA needs, and have significant potential for successful commercialization.

NASA’s SBIR and STTR programs have awarded more than $3.3 billion to research-intensive U.S. small businesses.

Engineers and scientists from more than 12,000 U.S. small businesses in all 50 States, DC and Puerto Rico have participated.
The Challenge

To guide the NASA SBIR/STTR Program’s shift from a policy and process adherence mindset to an organization focused and aligned to drive mission impact and value to the customer:

- The 37-year-old program historically focused on meeting Congressional and Small Business Administration (SBA) requirements for program execution.
- The program is managed through a complex process that organically evolved and grew over time; with technology and business capabilities also growing similarly.
- In 2016, the program began to intentionally discover and consider how to better achieve its mission impact; and, two primary needs emerged:
  1. Better organizational alignment on strategic direction within NASA to focus program efforts
  2. Reframe how the program viewed its beneficiaries and develop a more customer-centric and business-friendly orientation (program’s people, process, and technology):
     - **Problem Seekers** – Employees in NASA programs and projects with R&D needs prioritized by NASA Mission Directorates and Centers
     - **Problem Solvers** – Small Business and Research Institutes with capabilities and ideas to solve NASA R&D needs, and also commercialize products creating economic growth through SBIR/STTR awards.
The Opportunity

Based on these insights, the program undertook a series of initiatives between 2016-2018 to become more business friendly

1. **Eliciting and incorporating multiple stakeholder voices and values in determining program direction**
   - Program Strategic Framework
   - Customer Emotional Journey Map and Service Blueprint

2. **Providing regular touch points in annual program processes for engagement between industry and NASA**
   - Request for Information (RFI)
   - Annual Industry Day Event

3. **Improving user experience for small businesses and NASA personnel interacting with the program through information technology systems**
   - Modernizing the program’s core legacy informational technology system, the Electronic Handbook (EHB)
New Initiatives to Incorporate Multiple Stakeholder Voices and Values

Two structured customer engagement and discovery efforts were undertaken yielding insights to guide the program’s transformation

1. **Program Strategic Framework** – Engaged “Problem Seekers” / internal stakeholders to develop an actionable vision, mission, and goals and objectives, and completed a program performance management scorecard

2. **Customer Emotional Journey Map and Services Blue Print** – Engaged “Problem Solvers” / external stakeholders and internal customer advocates to better understand the barriers faced by small businesses in doing business with the NASA SBIR/STTR Program
Development of the Program Strategic Framework was fundamentally an internal stakeholder collaboration exercise to drive alignment between strategy and execution.

**VISION**

Empower small business to deliver technological innovation that contributes to NASA’s interest, provides societal benefit, and grows the US economy.

**MISSION**

Create opportunities through SBIR/STTR awards to leverage small business knowledge and technology development.

**GOAL 1**

Synthesize and communicate the Agency’s interests that small businesses could best impact.

**GOAL 2**

Engage a diverse portfolio of small businesses and entrepreneurs.

**GOAL 3**

Create opportunities for SBIR/STTR technology transition and commercialization.

**GOAL 4**

Streamline internal processes and optimize resource usage.
This user research initiative provided a holistic view into small businesses’ overall experience in using NASA SBIR/STTR business processes, services, and tools.
New Initiatives to Increase Engagement between NASA and Industry

Multiple channels of communication and engagement were created to drive meaningful and useful dialogue among small businesses ("problem solvers"), internal stakeholders ("problem seekers") and the program.

1. **Request for Information (RFI)** – Provided a mechanism for small businesses to provide an industry perspective to inform the program’s R&D subtopic portfolio (procurements) and program policies.

2. **Annual Industry Day Event** – Provided a forum for two-way engagement and dialogue between small businesses and the program.
Prior to 2016, no actionable feedback was collected either formally or informally from Small Businesses to inform the procurement process and no structure was in place to track and process the feedback.

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<th>2017</th>
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<tr>
<td>Total Respondents</td>
<td>429</td>
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<td>Comments on Existing Subtopics</td>
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<td>New Subtopic Suggestions</td>
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<tr>
<td>Respondents Providing Programmatic Feedback</td>
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<tr>
<td>Respondents Providing Help Desk Feedback</td>
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<td>86</td>
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The program plans to continue to collect feedback every year on existing subtopics; and new subtopic and program improvement feedback will be solicited every 2-3 years.
The inaugural Industry Day event in 2016 sought to humanize and demystify the SBIR/STTR program for small businesses.

Building on the inaugural event, the annual Industry Day event continues to provide customers opportunities to engage in two-way communication, and the program an opportunity to demonstrate the importance of this R&D program to NASA’s overall mission.

“…The one-on-one sessions were the most useful part of the meeting….”

– 2017 Event Participant
The EHB is a powerful technology system which was implemented in stages starting in 2003 to manage the program’s solicitation and award business processes.

New initiatives to improve business processes through technology modernization

Though initiated as a technology effort to modernize the legacy system to address several investment and technical drivers, based on customer insights, the modernization initiative was expanded to include needed business process improvements.
Improve user experience by leveraging User-Centered Design (UCD) Methodology

Enhance EHB user experience by creating user Steering Committees that drive the changes most important to their experience using the system

Continued feedback cycle is key to our ability in addressing user experience impediments and implementing the continued process improvements the program is driving to better meet our small business and internal NASA customer needs.
Key Lessons Learned

Opportunities for transformational change in the public sector may only come once every ten years; it must be seized but there are some critical considerations to facilitate success

1. Building vertical and horizontal organizational alignment on strategic direction is essential for successfully leading and implementing transformational change

2. Engaging external customers can be challenging for the public sector/government but worthwhile and requires a mindset change

3. Embracing transformational change is the starting point; success is facilitated by investing in upfront planning, ongoing risk mitigation, and time for reflection
Where to Next?

Building on a largely outward focus on internal & external customers, the program is now working to reinforce impact by making investments to strengthen the organization

1. **Improve performance management and decision-making** by using evidence-based approaches and strengthening the program’s business intelligence / data analytics capability

2. **Redesign the organizational structure and functions** to drive desired program impact, further invest in talent, and mature business functions

3. **Refine (and redesign where necessary) dated business processes leveraging technologies** to increase efficiencies, effectiveness, and business value

4. **Inculcate an innovation culture** while strengthening the program’s team-wide strategic and business-friendly mindset

5. **Enhance program’s technology to provide more innovative business capabilities** to meet the needs of the future
Contact NASA SBIR/STTR and Let’s Innovate Together!

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