OFRN Round 5 Proposal Training:
Technical Volume and Supplement

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Urban Venture Group Inc.

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OFRN Round 5 Technical Volume and Supplement

- ## Agenda
  - Proposal format requirements
  - Technical Volume components
    - Requirements and Strategies
  - Technical Supplement components
  - Proposal writing strategies and best practices
  - Questions and Discussion

- ***The goal of this session is to provide a detailed walk-through of these critical OFRN Proposal Components***

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RFP Information and Key Dates

OFRN Round 5 Timeline

You are here!

Mandatory Bidder's Conference	Volume 1 and Supplement	Notification of Selection for Final Pitch Day	Pitch Deck and Pitch Presentation Training	Volume 2 (Bus. & Cost Proposal), and 2A (Slide Deck)	Pitch Day	Awards Announced
January 20	**February 25**	**March 19**	**March 22**	**April 15**	**April 20-21**	**May 7**

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Key Program Contacts

Executive Program Director:
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Contracting Questions:
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Evaluation Criteria and Format

Merit Review Criteria Overview

- **1. Go/No-Go: Federal Alignment**
  - Alignment with federal partners
  - Identifiable Government Sponsor
  - Demonstrated relationship with Government Sponsor

- **2. Other Criteria**
  - Reasonable, realistic, supported costs.
  - Technical merit
    - Advances knowledge, state-of-the-art
    - Quality and reasonableness of approach
    - Clearly defined deliverables
    - Integration into existing platforms
    - Appropriate, feasibility demonstration
  - Cost Share (expectation 1:1, optional)
  - Alignment with Round 5
  - Commercialization strategy
  - Project team
  - Leveraging Ohio assets, aerospace
  - Follow-on funding commercialization
  - Pitch presentation
  - Schedule, budget, and SOW

Don't forget to include SEE (Student Experiential Engagement)

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General Formatting Requirements

- Non-conforming White Papers may be rejected without review.

- 8.5 x 11-inch page size

- Margins must not be less than 1 inch on all sides.

- Font: 11 point or larger

- Typeface: Arial, Helvetica, or Times New Roman

- 6 lines per inch or fewer

- PDF format

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Headers and Footers

- Header: Area of Interest

- Footer: Title and Lead Applicant

- Page Numbering

  - All pages must be numbered consecutively

  - "Page [#] of [total number of pages]"

  - e.g., "Page 2 of 7"

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Additional Formatting Requirements

- Do not include color figures that cannot be understood when photocopied in black and white.

- The first page must be the Application Information Cover Page
  - Use the template provided
  - Do not include a cover or cover letter other than the Application Information Cover Page.

> - **<u>Follow page limits explicitly!</u>**
> - Excess pages will be deleted and not reviewed.
> - "Overstuffing" is not allowed
>   - *Overstuffing: adding extra content in sections without page limits*

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Technical Volume

Key Success Criteria and Common Mistakes

3.2 Volume I: Technical Volume Components (8 pages)

- Applicant Information Page
- Executive Summary
- Table of Contents
- Glossary
- Milestone Identification
- Identification and Significance of the Problem or Opportunity
- Technical Objectives
- Federal Partner Applications

- Relationship with Future Research or Research and Development (R/R&D) Efforts
- Key Personnel
- Facilities/Equipment
- Subcontractors
- Prior, Current, or Pending Support of Similar Proposals or Awards

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3.2.1. Applicant Information Cover Page

Prime Applicant Organization Name:	
Dun and Bradstreet Number:	
Taxpayer Identification Number:	
Lead PI Name:	Lead PI Name, Email Address, Phone
Contractual Point of Contact:	Name, Email Address, Phone
Project Name:	
1. Summary description of project	
2. Descr. of Federal research requirement (s)	
3. Government POC	Name, Title, Department, Agency -- Phone, Email Address
4. University Team Members	Institution, Lead Contact Name, Email Address, DUNS Number (x2)
5. Industry Team Members	Company, Lead Contact, Email Address
6. Cost share source (Industry, Univ., Other)	Source, $N,NNN,NNN
7. Potential Follow-On Funding	List by organization and timing -- Funder, $N,NNN,NNN, Year: NNNN
8. Funding requested by calendar year	2021: $NNN,NNN; 2022: $NNN,NNN; Total Requested: $NNN,NNN
9. New jobs created by the end of 2025	NNN
10. Background IP contributed	(State what it is and who owns it)
11. Anticipated Project IP Created	(Describe what may be generated, how protected/shared)
12. Statement indicating that your firm is not debarred, suspended or proposed for debarment as the result of performance under any federal contract, grant, or cooperative agreement	
13. Prior, current, or Pending Support of Similar Proposals or Awards: (see Technical Volume instructions)	

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3.2 Technical Volume Sections

Section	Key Points	Pro-Tip
3.2.2 Executive Summary *(1 page)*	• Specify the technical problem/opportunity to be pursued • Identify the Federal Partner contact and detail their needs	• "Grant-in-Miniature" • Emphasize elements to justify OFRN Funding • The main Go/No-Go criterion is **ALIGNMENT** • More impacts, less science
3.2.3 Table of Contents	• A table of contents should be located immediately after the Executive Summary.	• Automatically generate your table of contents • Use MS-Word built-in styles • Headings are used to build contents list • Can be updated with a single click
3.2.4 Glossary	• Include a glossary of acronyms and abbreviations used in the proposal.	• Remember the reviewers are not experts in your specific subject • When in doubt, define it
3.2.5 Milestone Identification	• Include a program schedule with all key milestones identified. • If options, provide notional option start date, period of performance.	• Ensure milestones are quantifiable, measurable, and objective

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3.2 Technical Volume Sections

Section	Key Points	Pro-Tip
3.2.6 Identification & Significance of the Problem	• Specify the technical problem/opportunity that will be pursued • Identify the Federal Partner contact and detail their needs	• Focus on the need(s) of the Federal customer • Articulate the problem in their terms • Connect the problem and its significance to Partner or commercial outcomes
3.2.7 Technical Objectives	• Specific objectives of proposed work • Technical approach and methods • Potential commercial applications	• Clear, logical, and organized • Articulate distinct, discrete objectives • Each objective aligns with a Partner/Commercial need
3.2.8 Federal Partner Applications *(1-2 pages)*	• Existing/potential Fed Partner req's • Potential of project results • Gov't agency/org to benefit • Partner commitment to follow-on effort • Include agency point of contact names and telephone numbers	• Draw a line of sight to follow-on funding and commercial opportunities • Create a 'pipeline' of follow-opportunities (sequence, dependencies) • Show evidence of the partner's investment in you

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3.2 Technical Volume Sections (cont'd)

Section	Key Points	Pro Tips
3.2.9 Relationship with Future Research or R&D (R/R&D) Efforts	• State the anticipated results of the proposed approach • Specifically address further development • Discuss the significance of this effort in providing a basis for further development effort, if planned.	• Be specific about how the objectives lead to follow-on funding • Such as de-risking / demonstrating capabilities / hitting metrics / demonstrating integration with complementary technology
3.2.10 Key Personnel	• Identify all key personnel • Include educ., exp., citizenship. • Full technical resume for the PI including publications • Concise technical resumes for subcontractors and consultants (opt.) • Identify all non-U.S. citizens and their country of citizenship, visa type, role	• Don't overlook managerial and commercialization expertise; not just science/technology • Point out relationships and other expertise that will help attract follow-on resources

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3.2 Technical Volume Sections (cont'd)

Section	Key Points	Pro Tips
3.2.11 Facilities/ Equipment	• Instrumentation • Physical facilities • Justify equipment purchases • Perf. locations meet env. laws	• Point out uniquely enabling assets key to the success of your program • Explain how purchases advance success, tie to specific objectives

3.2.12 Subcontractors *(Does not count against the page limit)*	• All companies, consultants, universities are subcontractors
	  • Detail in the cost proposal
	• Partner Minimums:
	  • Two (2) Ohio univ./colleges
	  • One (1) Ohio industry partner
	• Significance of contribution from each
	• Attach signed letters of intent
	  • Expertise/function provided
	  • SOW and detailed cost proposal
	  • Unique qualifications
	• Identify subcontract foreign citizens
		• Make sure the subcontractor commitment letter specific
		• Ensure the letter matches the budget and SOW

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Section	Key Points	Pro Tip
3.2.13 Prior, Current, or Pending Support of Similar Proposals or Awards	Disclose submission of substantially similar effort to another agency. • Federal or State agency(ies) • Date of proposal submission or award • Title • Principal investigator • If received, contract number • Applicable topics for each SBIR NOTE: If not applicable, "No prior, current, or pending support for proposed work."	• A key differentiator of OFRN programs is the focus on federal partner needs and follow-on activity • One way to distinguish your OFRN project from related work you may have already submitted is to focus on understanding and validating how your innovation meets partner needs

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Keys to Success: Show a complete vision of success

- Show a holistic point of view on your project
- ***Show the connections!***

Technical Development → Demonstration → Customer/ End User Adoption

← **Critical Connection** →

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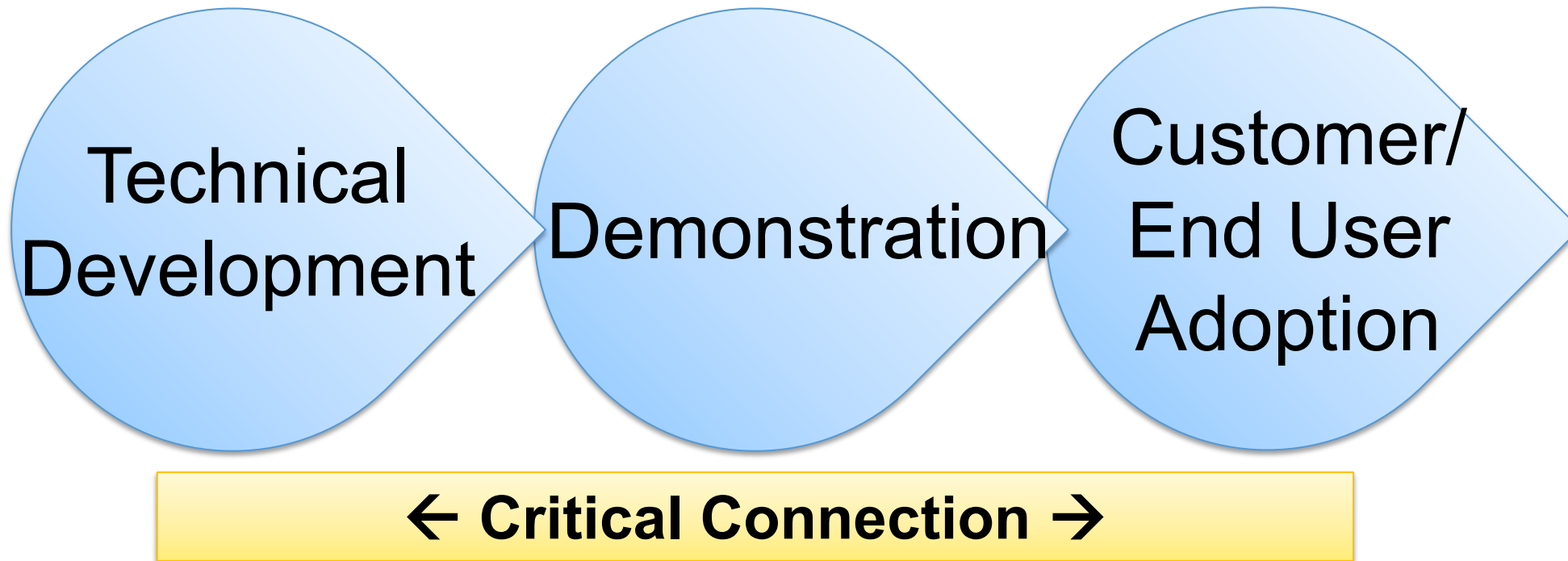
Show meaningful engagement of partners

- OFRN's ultimate goal is building an Ohio-based aero industry
  - Supporting jobs and economic impacts in Ohio
- Leverage Ohio-based assets is a key to success
- Building the right team isn't just about "checking a box"
  - Understand the full set of capabilities your team needs to build a compelling solution for the aerospace industry

R&D

Demo

Industry Impact

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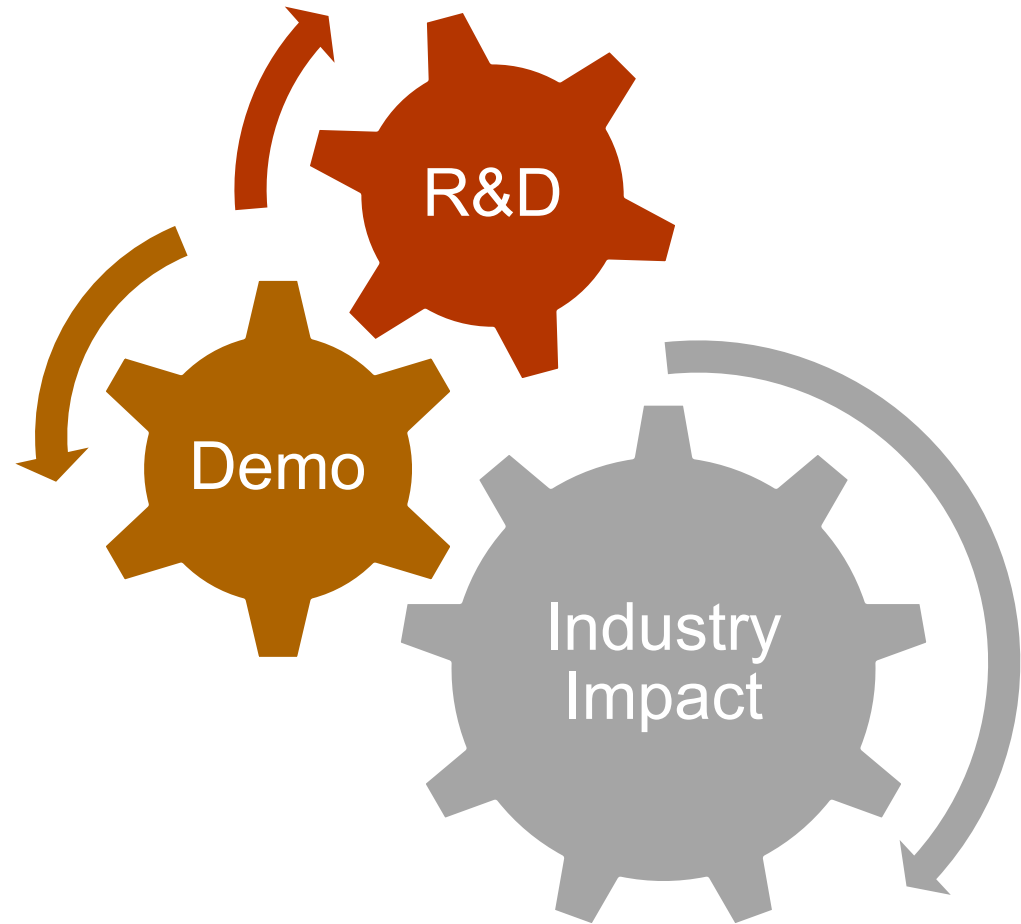
OFRN Reviews Include Federal Partners

- Representatives from the Federal Partners and from Industry are both involved in project reviews

- Overly speculative claims about potential benefits and impacts will be spotted!

- The Federal Customers will be present to validate claims about priority and importance in their organizations

- ***Don't guess or speculate – work closely with your Federal partner contact***

  - ***Deeply understand and build your program toward their needs***

  - Don't just point in a general direction, build your project plan around a **tangible, clearly articulated, intentional end goal**

Partnering – Best Practices

Requirement	Best Practices
At least two (2) Ohio colleges or universities;	• Explain the differences in the roles of each academic partner • How will each partner have a unique, specific, defined contribution • Ensure the partners can work together (get all agreements, expectations set)
At least one (1) commercial/ industry organization in Ohio	• Make sure the company's presence in Ohio is meaningful • The goal is for these firms to anchor significant activities in Ohio, leading to jobs and economic impacts
At least one (1) partner from an Ohio-based federal lab	• Show meaningful, engaged dialogue • Show how the federal partner priorities have been incorporated into your plan • Don't just "do your science and show it off at the end"!
Student Experiential Engagement (SEE)	• Be specific about why Experiential Learning will advance your project goals • Substantiate the benefits to your project • See Appendix 1 for details

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Academic Leads – Pitfalls to Avoid

- Remember, this is not an "NSF-style" proposal

- OFRN strongly considers the application and commercial context for your science/engineering

- Don't forget:
  - Appropriate, thoughtful inclusion of partners
  - Meaningful, customer-focused demonstration
  - Line-of-sight to commercial and end-user outcomes

- Explicitly translate technical goals/specifications to end user needs

- Show how your project outcomes will be meaningful to **and prompt action from your customers/end users**

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Small Business Leads – Pitfalls to Avoid

- Small businesses often are "dipping their toes in" to proposals for the first time with OFRN

- OFRN is highly competitive – simply having a "compliant" project is not enough
  - You should seek to "maximize" your program wherever possible
  - It is not enough to "meet all the minimum requirements"

- OFRN may to have more high-quality applicants than funds
  - Anticipate that not all "qualified" teams/projects will be funded

- ***Seek to Over-Achieve!***
  - Do not just "check-all-the-boxes"

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For All Applicants: Grantsmanship Matters!

- OFRN reviewers in many cases aren't regular grant reviewers
  - Present your information in the expected location, format, and style
  - Don't rely on "assumptions" and "short cuts" used in academic grants
- Save time to proofread – let a copy editor work on your narrative
  - If you're new to writing proposals, seek assistance from an expert

Tell them what you're **going to tell them**	• Start sections with a simple, short summary of the main point/purpose • Don't dive straight into the details • Don't "build up to the conclusion" – start with the main point, then expand
Tell them what you're telling them.	• Write for your audience • Act like you're teaching someone. Explain things • Don't just put your "thinking" on the page in your terms
Tell them **what you told them**	• Don't repeat the initial summary, but reinforce key conclusions/arguments • What is the take-home message? • Remind the reader why they should care about what you are saying

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Supplemental Volume

Technical Supplemental Volume (2 pages)

- Technical Volume mimics SBIR Direct to Phase II Pitch Day proposals.

- Supplemental Volume is also necessary to address OFRN-specific concerns including:

  – projected economic impacts (3.3.1)

  – technology demonstration plan (3.3.2), and

  – a budget narrative and table (3.3.3)

3.3.1 Economic Impact Metrics

- Examples include:
  - New job creation
  - Federal Follow-on funding
    - Specify Agency, BAA, etc.
  - Creation of Spin-out companies

- *Realistic and supportable.*
  - Provide basis for projections

- Only direct impacts, no secondary impacts from economic models
  - e.g., talent recruitment, enhanced recognition

Include the Following Tables:

	At Project End	By 2025
New Jobs to be Created		
Total Federal Follow-on Funding		

New Opportunities/ Investments	Amount	Type (BAA, Sponsor, etc.)	Timing of Opportunity

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Strategies around Economic Impacts

- Fact: The page limits don't provide enough space for a full commercialization narrative

- Recommendation to manage length: Pare back to "just the facts"
  - Make sure your claims are reasonable & your facts supported
  - Reviewers will recognize unrealistic impact projections
    - "Unrealistic" Example: 50 jobs created by a company with $1 million revenue

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Top-Down vs. Bottom-Up Economic Modeling

Top-Down Best Practices

- Definition: Projections based on overall market size and estimations of market penetration
  - We will capture 10% of a $100 million market, equating to **$10 million in sales**
- Focus on addressable market segment(s), not just the overall market
  - Drill down deeper than just the "UAS market"
  - What segments can you realistically target?
- Look to comparable firms in the industry
  - How long did they take to achieve their market share?

Bottom-Up Best Practices

- Definition: Projections based on summing up a defined pipeline of sales/funding opportunities
  - We have 10 x $4 million funding opportunities in the next two years, with 25% chance of winning.
  - 10 * $4MM * 0.25 = **$10 million in sales**
- Often preferred for early stage projects focused on follow-on R&D funding
- Also very effective for small businesses
  - Make sure your year-on-year growth projections are supported by appropriate sales & support personnel.
  - You can't grow 50% every year without corresponding staff growth!

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3.3.2 Demonstration Plan

- ***See Section 1.8 for detailed description***

- Be creative!

- Showcase your technology's utility
  - Goal: Connect your technical milestones to specific military and/or civilian uses

- Flights tests are encouraged
  - OFRN will schedule and coordinate
  - Where not practical, propose bench testing, modeling, or another approach

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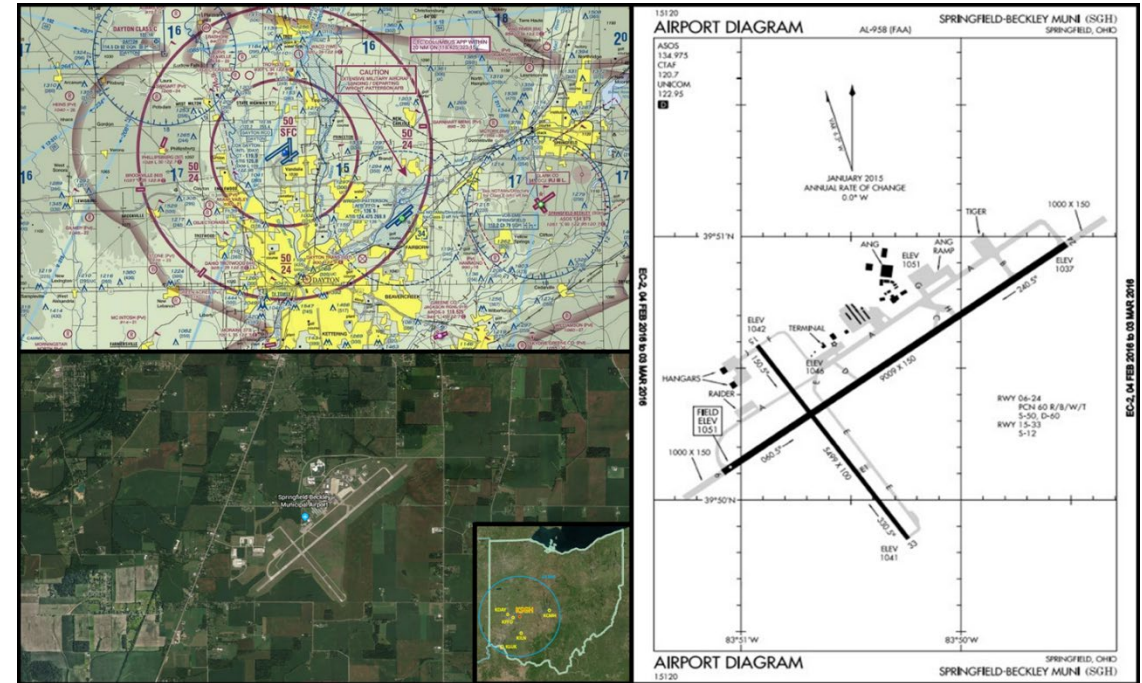
Demonstration Plan – Keys to Success

- Meaningful, compelling demonstrations are critical to OFRN success
  - OFRN projects must have a clear trajectory toward end users and commercial outcomes
- ***Translate technical specs into real-world / end use benefits***
  - *Example: Show how battery capacity and lightweight lead to longer on-station time*
- ***Focus on the end user / adopter***
  - Who is ready to engage with you now?
    - May not be the ultimate end user, but instead could be a strategic partner, e.g. a UAS maker who adopts your technology
  - In what setting will they use your product/technology?
  - Ask! Find out (from them) what will they want to see in a demonstration

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Demonstration Plan – Keys to Success (cont'd)

- Don't misinterpret the solicitation: Just because Demonstrations are not "mandatory", does not mean they are "optional" or that the aren't a high priority

- OFRN recognizes that diverse projects may be demonstrated by different means

- You ***should*** think deeply about the best way to show your progress toward customer adoption

- You ***should*** design an impactful, compelling Demonstration of the progress and potential of your technology

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3.3.3. High-Level Budget and Cost Share

- Use these tables

- Provide use of funds narrative

- Expand columns/tables as needed

- Be brief – save space for the other two sections

	OFRN Awarded Funds	Cost Share Funds
Personnel/Fringe		
Supplies		
Purchased Services		
Travel		
Other Direct Costs		
Subcontracts		
Indirect		
Total		

	Cost Share Provider #1	Cost Share Provider #2	Cost Share Provider #3	Cost Share Provider #4
Personnel/Fringe				
Supplies				
Purchased Services				
Travel				
Other Direct Costs				
Indirect				
Total				

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Budget and Cost Share Tips

- A detailed cost volume will be submitted separately
- Reminders:
  - Cost share isn't mandatory, but it's viewed very favorably
- Not all cost share sources have the same significance
  - For example, cash, to a small business, is a precious commodity
- ***Tangible, meaningful cost share is recognized and rewarded by the reviewers***
- It is allowable to update your cost volume compared to this Volume 1 submission
  - Changes that undermine the basis for your selection to advance in the process could result in a negative funding decision

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General Proposal Writing Tips and Best Practices

Write for your Audience

- Write for your reader, not for yourself

- Present background information needed to understand your message.

- Mentally keep track of what your reader needs to understand.
    - Take the time to give them a foundation

- Introduce new subjects and terms the first time you use them.

- Don't assume your reviewer knows what you know!

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General Rules for Good Proposal Writing

- Explicitly follow RFP requirements.
  - Address the merit criteria explicitly, and in order.
  - Provide a separate heading for each.
  - Follow the order of content and page limits explicitly.
- Place information where your reader expects it
  - Follow the opportunity instructions explicitly!
- Clear writing underscores your credibility
  - Convoluted writing doesn't make you look smarter.
  - Explain acronyms and avoid jargon.
  - Avoid unnecessary controversy. Don't pick fights.

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Document Formatting

- Use lots of headings and subheadings.

- Use graphical devices to illustrate complex subjects.

- Break up narrative into short, simple paragraphs.

  - One Paragraph = one idea, supported by 1-3 sentences

- Use bullets to break up long or complex lists.

- Don't right-justify (full-justify) text.

  - It might look "cleaner" from a distance, but it makes your prose harder to read.

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Make Pages Skimmable and Indexable

- Make your document **_<u>skimmable</u>_**
  - Reviewers may have dozens of proposals to review.
  - *If a reader skims only headings and bolded information, will your content still be clear and logical?*
- Make your document **_<u>indexable</u>_**
  - Reviewers may only once, if ever, read your proposal fully, front-to-back
  - More often, they will skip around, or refer back to specific sections
  - Use visual devices, headings, and other visually distinct elements to make key information easy to find
- ***Make the pages look different***

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Less Effective Document Layout Example

More Effective Document Layout Example

Thank you for attending!

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