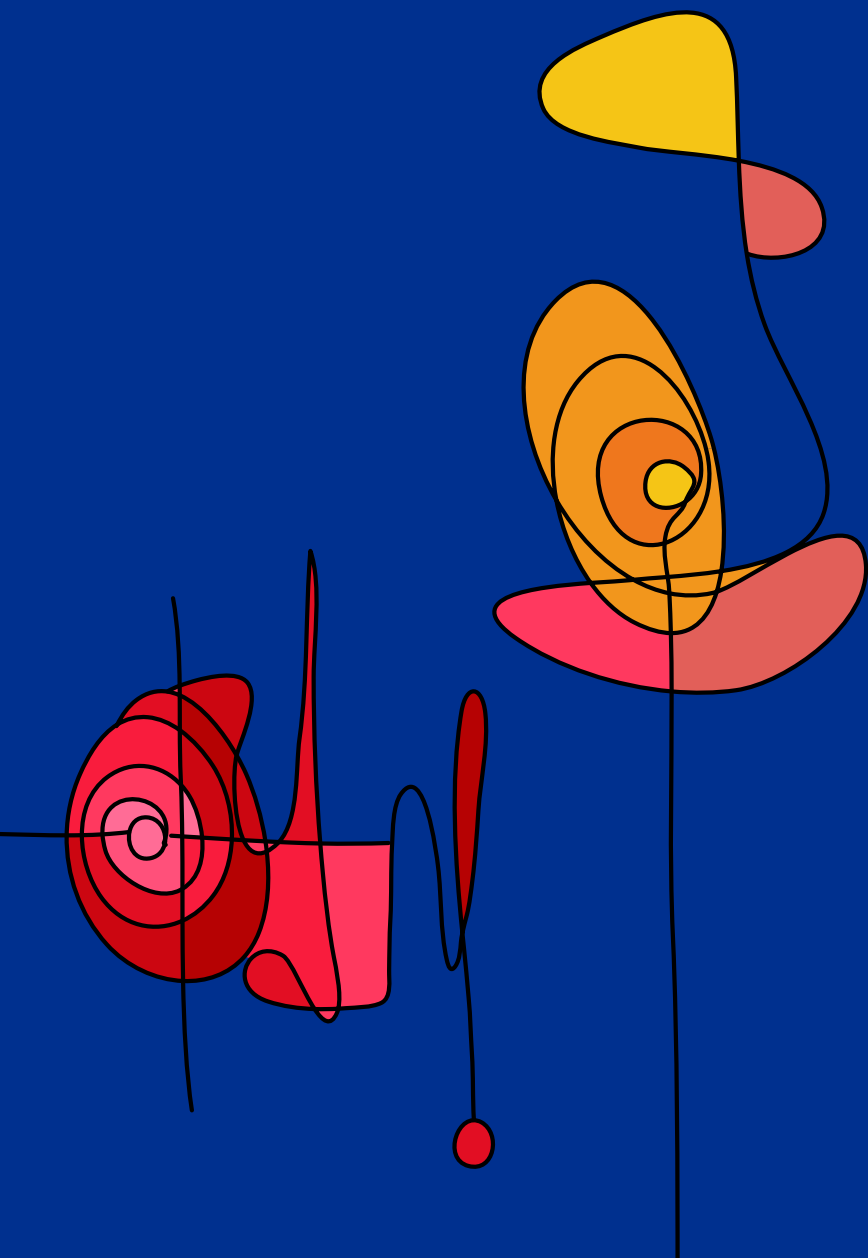




AFWERX



Designed & Illustrated by  
**gapingvoid**<sup>®</sup>  
The Culture Design Group





AFWERX

# Air Force Innovation Handbook

Designed & Illustrated by  
**gapingvoid**<sup>®</sup>  
The Culture Design Group

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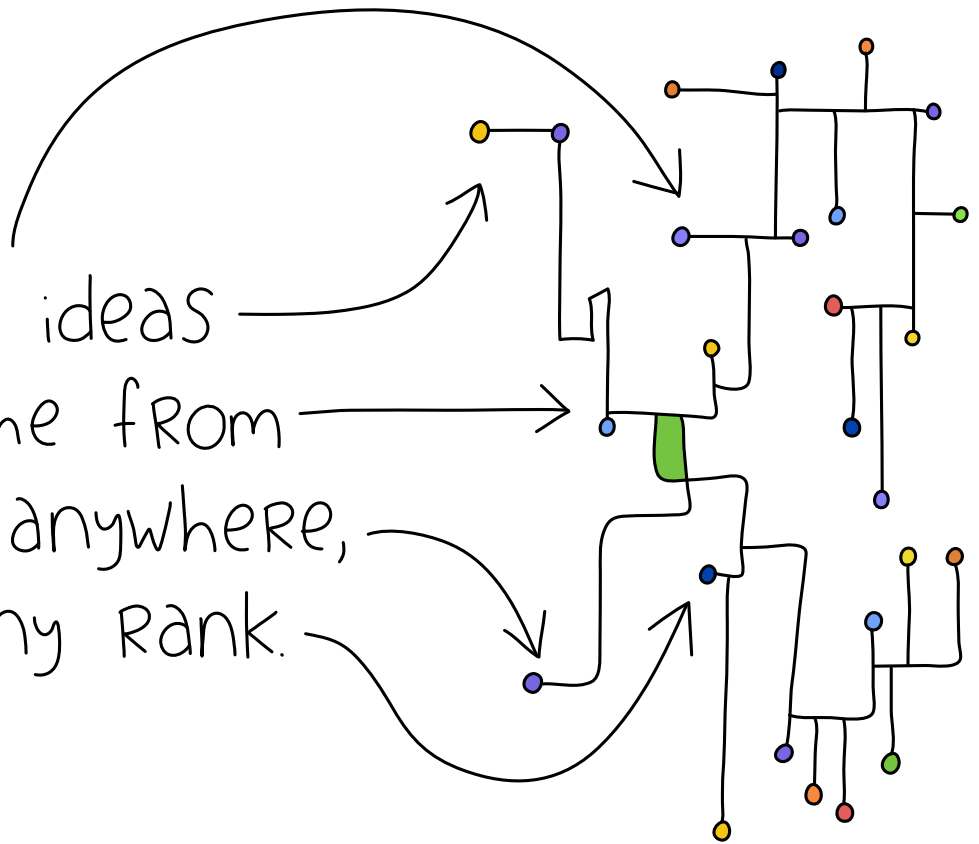
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# THINK BIG

great ideas  
can come from  
anybody, anywhere,  
from any rank.





# Why innovation?

In an era of great power competition, our squadrons, more than ever, are the heartbeat of the Air Force. To foster innovation at the level of command that makes the greatest impact, our leaders want us to tackle the most pressing readiness and national-security challenges. We ask that you aggressively collaborate with each other and higher headquarters along the way.

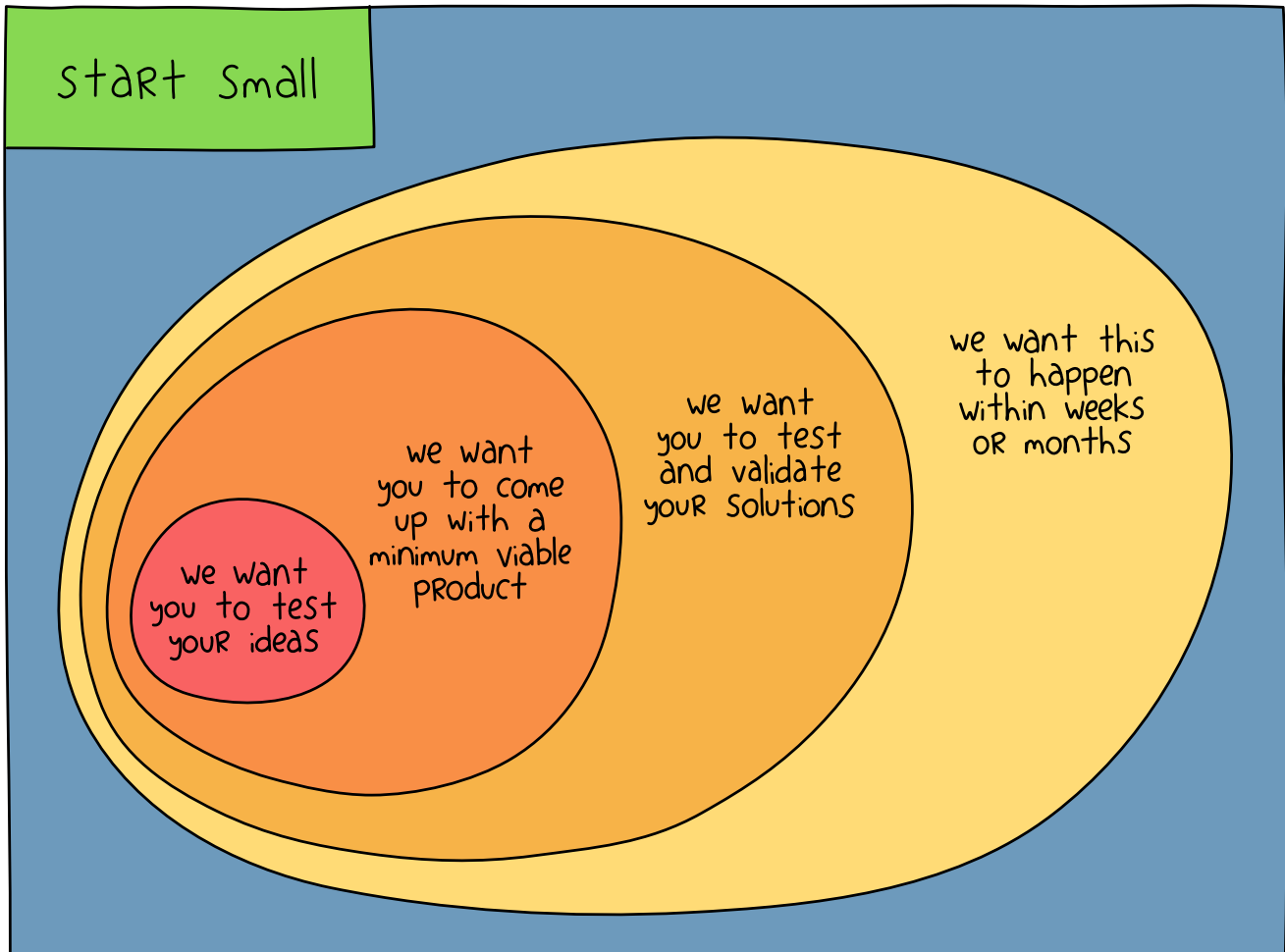
We must continue to **THINK BIG, start small, and Scale Fast!**

## **THINK BIG.**

Cultivating innovation at the edge not only resolves local challenges but also leads to revolutionary concepts and capabilities that will shape our future. This kind of innovation happens when any Airman, at any level, can drive capability development, organizational problem-solving, and policy or process changes. We create this environment when leaders are willing to squint with their ears, units and higher headquarters adopt a learning culture, and everyone embraces experimenting and failing productively until we succeed.

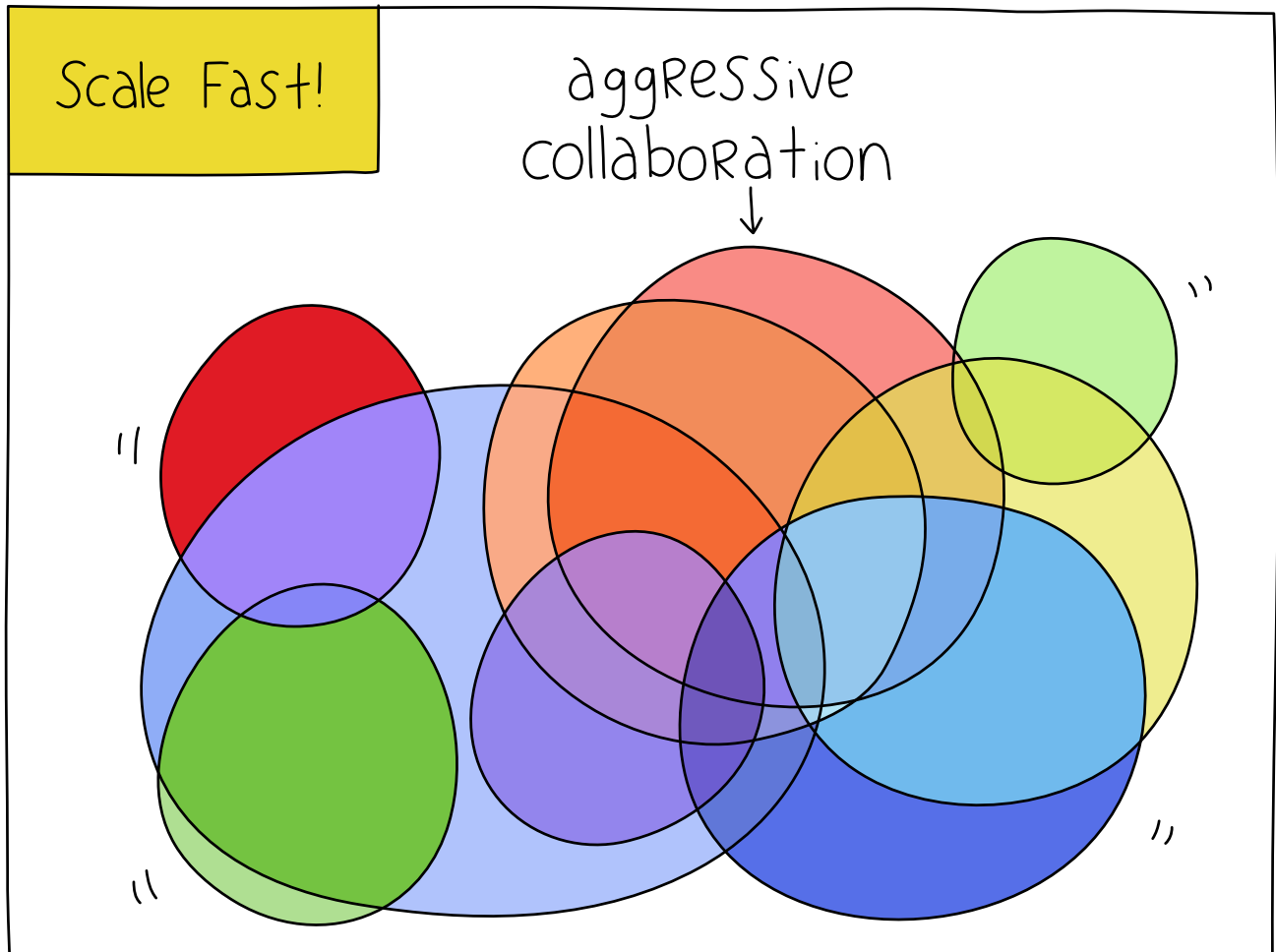
**start small.**

You have a problem that you face in your unit. We want to see you test out these ideas, and your Squadron Commanders have the funds to make it happen. We want you to come up with a minimum viable product. We want you to test and validate solutions at your unit. We want this to happen in weeks and months to increase both readiness and national security in our mission.



## Scale Fast!

Over this past year, you and your squadrons have done a superb job learning, sharing, and connecting. We recognize cross-functional teams—across squadrons, wings, higher headquarters, and beyond—were a major contributor to innovation successes. To facilitate this kind of teaming, we expect MAJCOMs and Headquarters to identify the right ideas to grow, and bring these capabilities to scale for the warfighter within weeks and months.



We need your ideas, lessons, and feedback via the Airmen Powered by Innovation Platform. Please populate the virtual platform (<https://usaf.ideascalegov.com>) as you move forward. Specifically, check out the FY20 SIF campaign for SIF Ideas, the Open Call for ideas at anytime!

For more information, you can reach AFWERX at [support@afwerx.af.mil](mailto:support@afwerx.af.mil), who will help you work through any innovation problems or questions you might have!



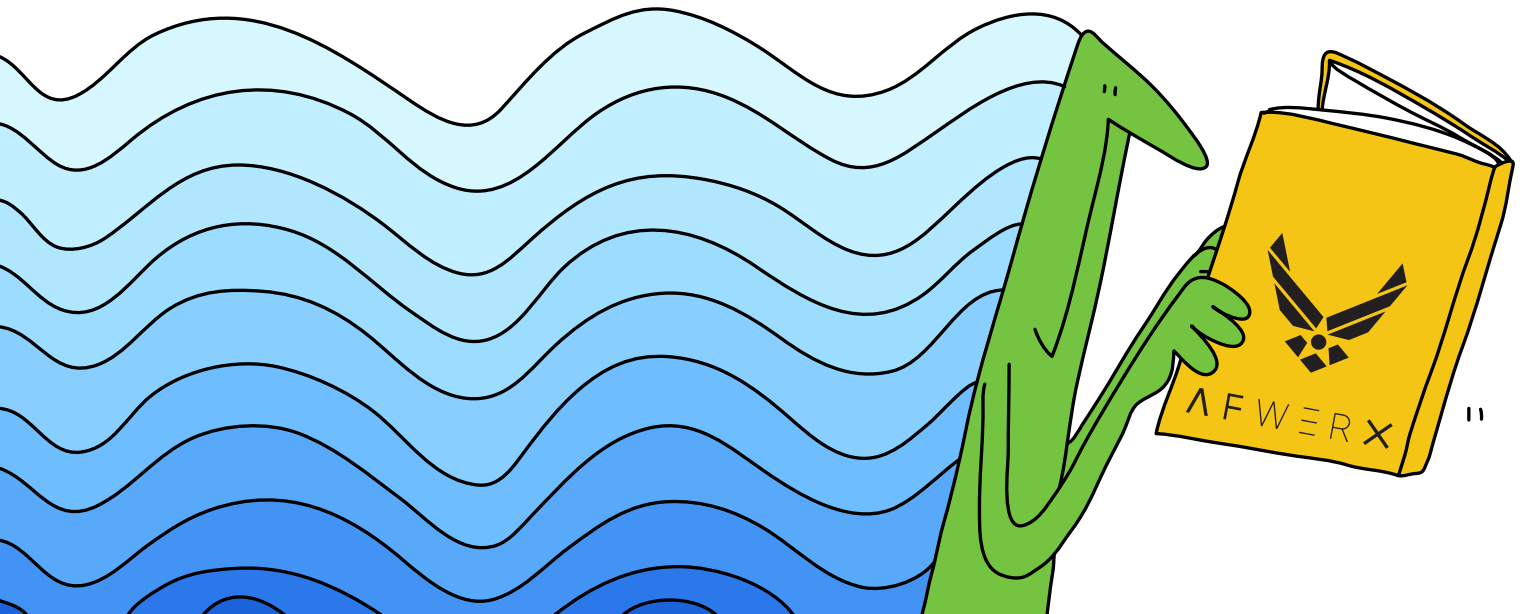
Part One

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# Innovation in the Air Force

# OVERVIEW

of the innovation handbook



# Overview of the Innovation Handbook

The Innovation Handbook is intended to provide a framework for Airmen to develop and evaluate innovative ideas, describe how to move those ideas into execution, to learn how to tap into a broader network of innovators, and, ultimately, to prepare the innovative ideas to be taken to scale. The handbook provides guidance on how to use Squadron Innovation Funds, describes how Spark Cells are built and leverage contracting pathways.

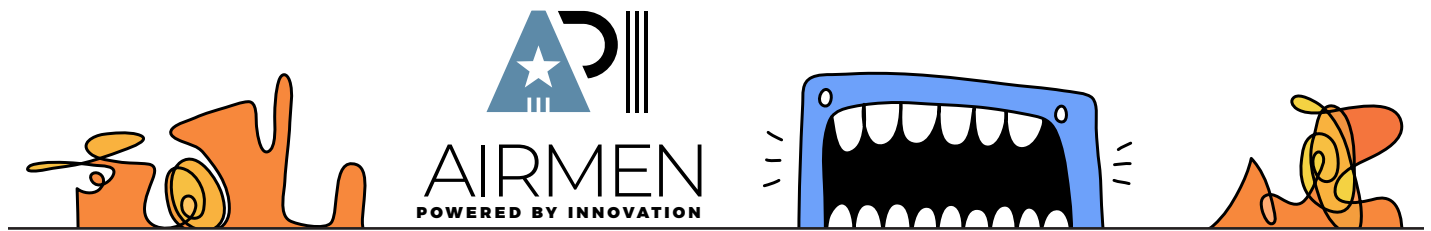
The Handbook is not intended to be the final word on how to scale innovative ideas in the Air Force, this is a draft because we are always learning from ourselves and from each other on what works. This is intended to help provide quick reference to some techniques and practices that are associated with solving problems that matter for the warfighter. As well as a central place to guide Airmen to resources (SIF, SBIR, Airmen Powered by Innovation, Spark Cells) that can help you execute on your ideas.

We need your contributions in order to make the core aspects of innovation easier to understand, adopt, support, and execute effectively. Ultimately, this process will make your own work more impactful and will improve the effectiveness of our Air Force

AFWERX will continue to run alongside this growing community and support the development of solutions. As part of the process, we will create more tools for Airmen and foster greater collaboration. We aim to make the work you do every day for your mission, more successful. And we seek to enlist more Airmen into this movement so our warfighters have the best resources they need to defend our great nation.

To contribute to this draft, please reach out to [support@afwerx.af.mil](mailto:support@afwerx.af.mil)

# GETTING (NEW) STUFF DONE



## Understanding the ecosystem

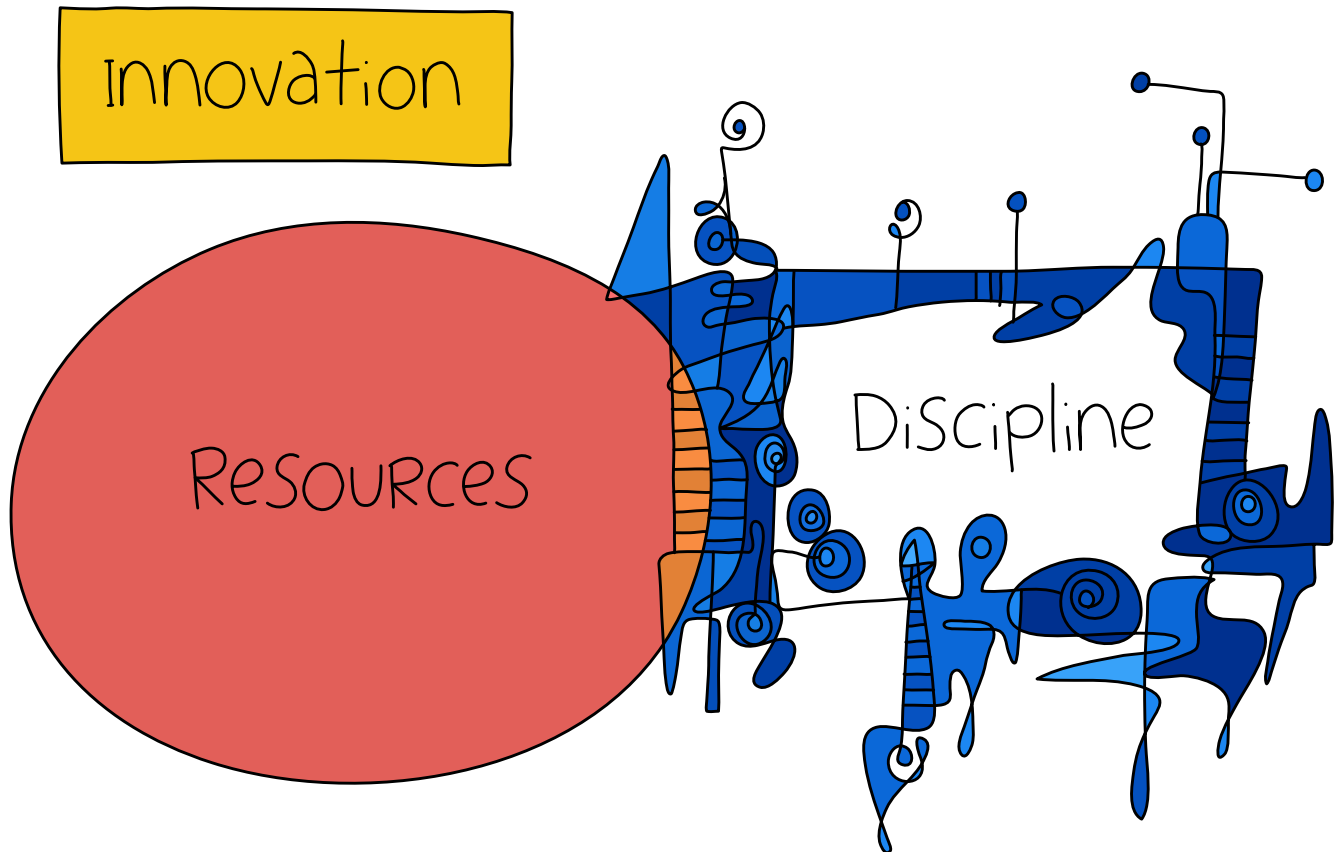
Before diving into how we might approach getting new stuff done through an innovation lens, let's reflect on the broader investment that the Air Force is making around innovation.

SIF is part of a large ecosystem for innovation.

We believe a systematic approach to innovation requires resources and discipline. Without resources, we can't leverage the best ideas or transform them into production-ready solutions for the warfighter. Without discipline, spending money on innovation is just a waste of time and energy.



# INNOVATION = RESOURCES + DISCIPLINE



Taking risks is essential to innovation. Most projects do not work out the way they are intended; especially when addressing more difficult challenges. Taking risks is not the same as being careless. Taking risks is valuable only when it is combined with an effort to learn from the experience.

Learning from failure is critical to the innovation process; and as long as we are gaining from our efforts and sharing the results we can improve together.

## On taking risks (It's ok to fail. Really!)

**“I have not failed  
10,000 times -  
I've successfully  
found 10,000  
ways that will not  
work.”**

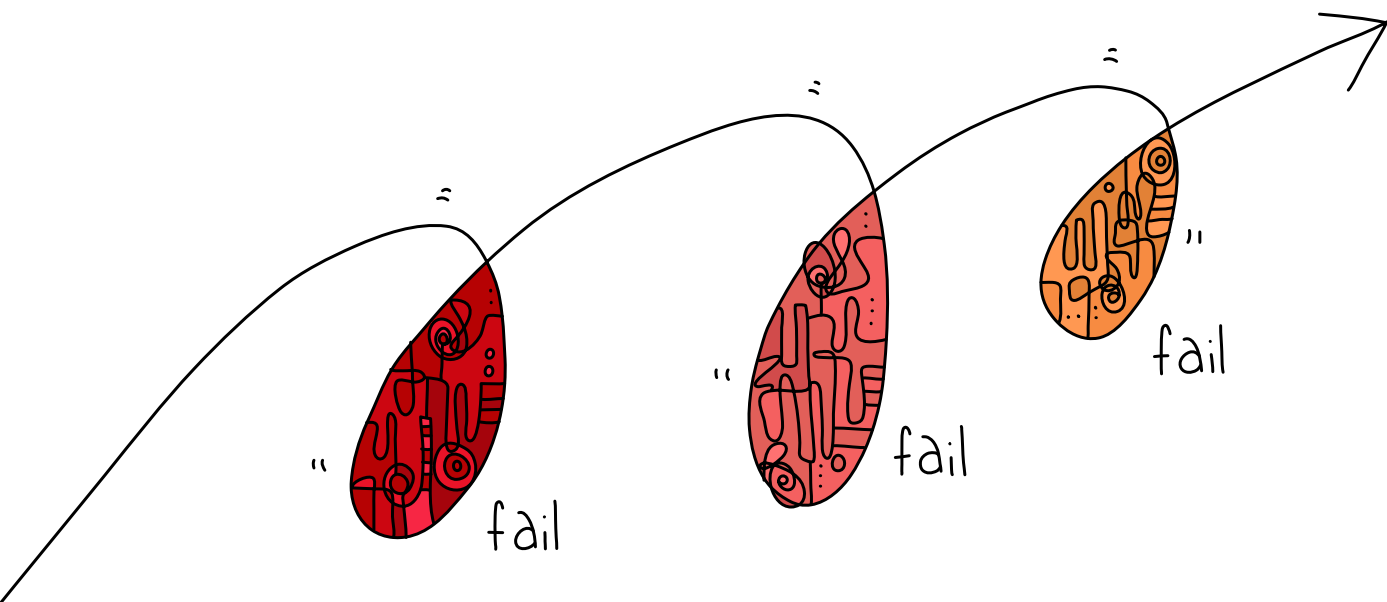
*- Thomas Edison*

Taking risks is essential to innovation. Most projects do not work out the way they are intended; especially when addressing more difficult challenges. Taking risks is not the same as being careless. Taking risks is valuable only when it is combined with an effort to learn from the experience.

Learning from failure is critical to the innovation process; and as long as we are gaining from our efforts and sharing the results we can improve together.

And, to that end, you shouldn't face these challenges alone or take risks without a support structure. Part of the goal of the SIF program is to help Airmen connect with resources that can make it easier to try new things.

learning from failure  
is essential to progress



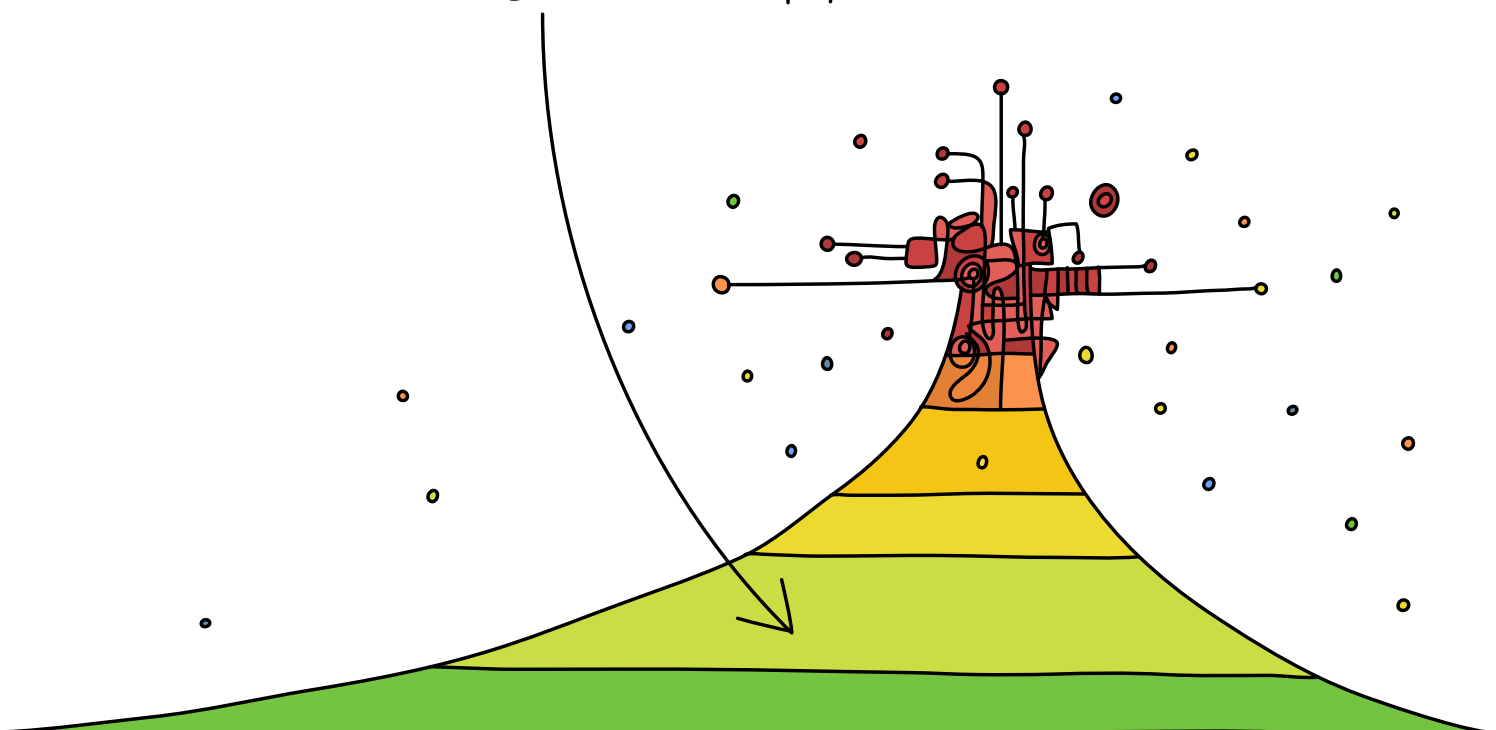
# Leveraging AFWERX as a resource

So where can you go to find help? Although there are many people who can help, **it is AFWERX's job to be there for you** as you're trying to bring new innovative ideas to the Air Force, whether or not it's SIF-related.

If you ever run into any blockers during the innovation process, email us at [support@afwerx.af.mil](mailto:support@afwerx.af.mil).

Having trouble with legal on a new idea you want to try? Send us a message. Looking for potential early adopters for your proposed solution? Drop us a line. Want to get a deeper understanding of what funding options exist for your idea? Let us know! Did you know that the DoD and the Air Force have a community of innovation minded folks? To join this community, go here. Anyone with a .mil email can join in!

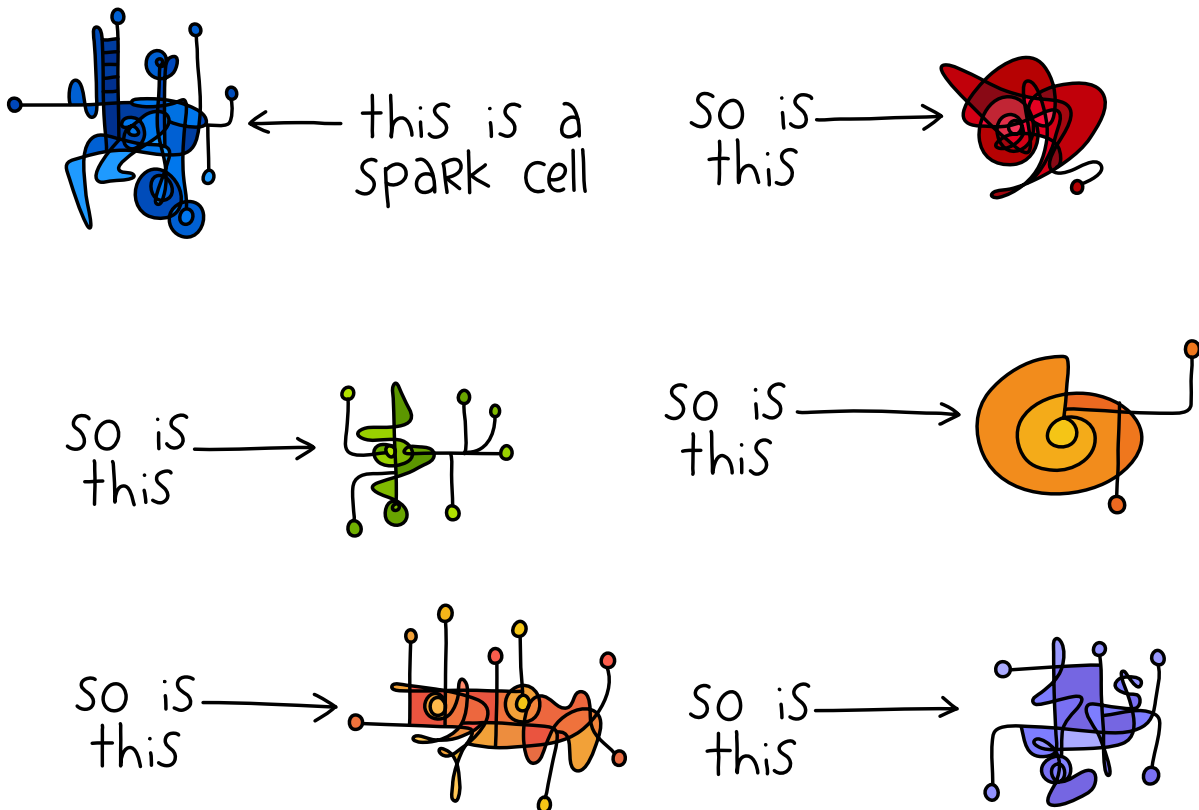
Risk taking and innovation  
REQUIRES a good support structure



# Spark Cells

To help connect Airmen, AFWERX also operates a program called Spark, which has a decentralized network of “Spark Cells” on Air Force bases around the world. Each Spark Cell operates semi-autonomously in pursuit of locally generated ideas and projects. Through the Airmen Powered by Innovation platform (usaf.ideascale.gov.com), any Airman intrapreneur can leverage the people and resources across the ecosystem and organically integrate a diverse group of stakeholders in pursuit of any one project. As local projects prove successful, the AFWERX network enables rapid communication and scaling across the enterprise.

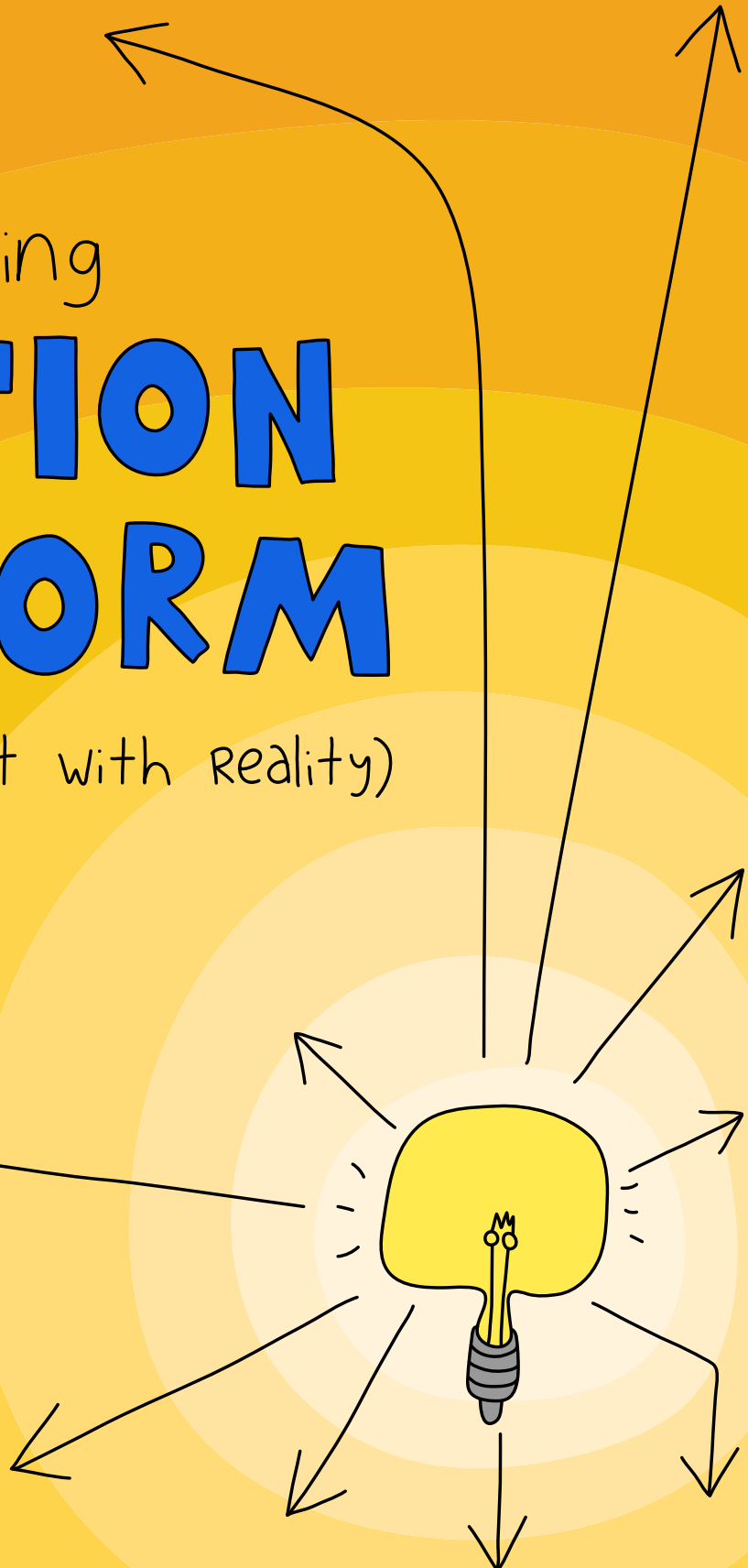
There are also MAJCOM level representatives that are working with AFWERX to help the best ideas scale, please reach out to our team to get you connected to them. If you need any other support, reach out to [support@afwerx.af.mil](mailto:support@afwerx.af.mil). Part Three of this handbook explains more about the Spark Cells.



leveraging

# IDEATION PLATFORM

(i.e. making ideas hit with reality)



**AIRMEN**  
POWERED BY INNOVATION

# Leveraging the Airmen Powered by Innovation Platform

If you are looking for inspiration or have an idea that you're looking to try out, visit the FY20 SIF Campaign site (<https://usaf.ideascalegov.com/>).

Once you have decided to work on an innovation project, we want you to submit those details here, so we can help you make the project happen, connect you to others who might be working on similar initiatives, and to help track progress. We have a group of folks working with this data on the backend as well who will help get you support from your MAJCOM's and across the AF at the Program Offices.

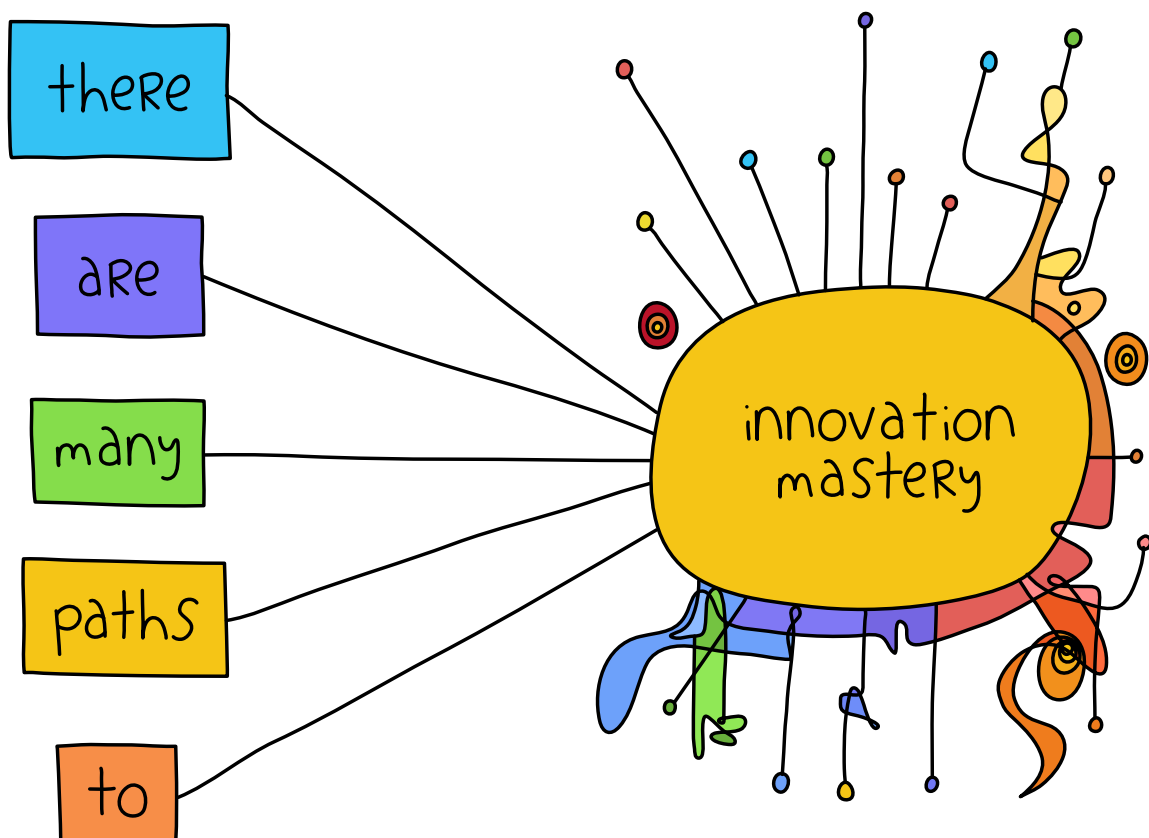
Continuous Process Improvement (or CPI) is also part of our robust innovation ecosystem the Air Force is building. It is the AF's long-term goal to have Innovation and Improvement skills embedded in the way all Airmen think and act. Our newest Airmen will know the basics and be able to participate in improvement efforts productively. As Airmen progress throughout their careers, they will develop increasing depth and a breadth of skills going beyond participation to facilitating problem-solving efforts of increasing complexity throughout end-to-end business and operations mission areas in ways that propel the Air Force into a long-term, upward spiral of accomplishment and performance.

To attain this end-state, the AF embarked on an effort to jumpstart capabilities by standing up an "internal consultancy" work force consisting of three different skill levels of Improvement and Innovation mastery: Green Belt (GB), Black Belt (BB), and Master Black Belt (MBB). These certifications are attained by completing the coursework and mastering a body of knowledge associated with each level of certification, and completing a prescribed set of projects to show that the Airman not only knows the material, but also has mastered application of the knowledge. The cornerstone of the Air Force's CPI mindset is an eight-step problem solving model. Use of the standard model provides context for issues and recommendations for leadership decision making and execution that transcends the transient nature of our workforce.

When applied properly and consistently, CPI methodologies and tools help ensure problems that are solved, remain solved. The Air Force advocates using this standardized eight-step framework as the umbrella for Airmen (and certified practitioners) to facilitate improvement efforts using a host of tools that help identify root cause issues to be addressed. Airmen use this approach to document the problem, context and logic of their solution. Below are two examples of our standard eight-step approach for improving processes.

This first eight-step is what we call the worksheet. It's easy to carry with you and fill out as you go about understanding and capturing what you wish to innovate or improve upon.

This second eight-step is what we call the rubric. It provides the logic to be applied in each of the eight steps and lists the types of tools ideal for use in each step. As you can see Innovation and Improvement are simply complementary approaches in improving the work we do and in improving our Air Force. To get easy-to-read versions of the two documents above or for more help or information on CPI please contact our CPI professionals in our Air Force CPI office at [usaf.pentagon.saf-mg.mbx.mgm-workflow@mail.mil](mailto:usaf.pentagon.saf-mg.mbx.mgm-workflow@mail.mil).





**Team Lead:**  
**Team Members:**  
**Black Belt Mentor:**  
**Black Belt Candidate:**

1. Clarify & Validate the Problem

2. Break down the Problem & Identify Performance Gaps

3. Set Improvement Target(s)

**Approval Information/Signatures:**

**Start Date:**                  **End: Date:**

4. Conduct Cause Analysis

5. Develop Countermeasures & Implementation Plan

**PROCESS IMPROVEMENT EFFORT TITLE**

**Alignment - Goal:**

**Objective:**

6. See Countermeasures Through

7. Confirm Results & Process Change

8. Standardize Successful Processes

# Resources outside of AFWERX

Once you are ready to start scaling, you will need to identify funding that works at scale. There are many avenues to additional funding to refine your concept, test it at multiple locations, and eventually adopt it within the AF as a whole. Here are some of the avenues available:

- SBIR/STTR Open Topics program (see pg 130)
- NSIN Prototyping Resources
- Defense Innovation Unit
- Rapid Capabilities Office(s)
- Federally Funded Research Corporations
- Air Force Research Lab

# USAF Practical Problem Solving Model & Related Toolsets

**OODA** - Observe, Orient, Decide, Act  
**PDCA** - Plan, Do, Check, Act  
**DMAIC** - Define, Measure, Analyze, Improve, Control  
**DDRFSI** - Discovery, Design, Relevance, Feasibility, Sustainability, Impact

**NOTES:**  
 - Tools listed are non-inclusive and can be used in multiple steps;  
 use as required  
 - Adjust block positions as needed to allow all 8-steps to fit on A3 Size paper

## 1. Clarify & Validate the Problem

O O D A  
 P D C A  
 D M A I C  
 D D R F S I

- Does this problem, when solved, help meet identified needs?
  - Is it aligned to the organization's prioritized strategy as well as higher echelon strategy or to our AF five priorities?
  - Does it help satisfy customer needs (VOC)?
- Will this problem, when solved, address key issues identified in the Discovery phase or by using SWOT analysis?
- Has this problem been identified and directed by a Value Stream Map at the appropriate level?
  - What does "Future State" need?
  - What resources have been identified to address the issue?
- What opportunities were identified or observed by the process or problem area "walk"? (Includes administrative flows that are hard to "walk")
  - Will addressing or improving these issues deliver results related to #a or #b?
  - Will addressing or improving this problem deliver the future state from #c?

**TOOLS:** SA&D, SecAF & CSAF five-priorities memo (31 July 2017), Voice of Customer, VSM, Go & See, Pain Point observations, SWOT

## 5. Develop Countermeasures (CM) & Implementation Plan

O O D A  
 P D C A  
 D M A I C  
 D D R F S I

- Develop and design potential countermeasure features
  - Tools and philosophies from Lean, Toc, 6 Sigma, and BPR (as appropriate)
  - Use empirical data to judge the relevance, value, and effectiveness of countermeasures to the needs of the customer and verify they will use it
  - Test the feasibility of implementing the countermeasures
- Select the most practical and effective countermeasures
- Develop an Implementation Plan/Project Management Plan
- Build consensus with others by involving all stakeholders appropriately
  - Provide leadership with the body of data to decide if the organization can sustain the effort and scale if applicable
- Prioritization of countermeasures for implementation
- Develop "straw man" action plan for Vector Check

**TOOLS: (Design)** 6S & Visual Mgt, Standard Work, Cell Design, Variation Reduction, Error Proofing, Quick Changeover, TPM; **(Tradeoff Analysis)** Force Field Analysis, PICK Chart, Financial Payoff Analysis (Hard/Soft Savings/Cost Avoidance), EVM **(2d/3d Order Effects)** DOTmLPF-P analysis **(Level of Effort)** Just do it, Kaizen Burst, RIE, BPR, Project **(Project Management Plan)** Resource Plan, Management Plan, Communication Plan, Change Management Plan, Risk Management Plan, Stakeholder Management Plan, Procurement Plan, Critical Path, Project Schedule (Gantt chart) with OPR/OCR/POC, RACI/RASCI Chart

## 2. Break down the Problem & Identify Performance Gaps

O O D A  
 P D C A  
 D M A I C  
 D D R F S I

- Does the problem require more analysis or does leadership have enough information to execute a solution?
  - Is this simply a leadership directive?
- If more data is needed, how do we measure performance now?
  - What are the KPIs? What is the performance gap?
- Does other "non-existent" data need to be gathered?
- What does the data indicate are the potential root causes?
- Does the data review indicate a bottleneck or constraint?

**TOOLS:** KPI/Metrics, Performance Gap Analysis, Lessons Learned Analysis, Bottleneck Analysis, Pareto Chart, VSM/Process Maps, Run/Bar/Pie charts

## 6. See Countermeasures Through

O O D A  
 P D C A  
 D M A I C  
 D D R F S I

- Is there an Action Plan for each Countermeasure?
- When is the completion date?
- Develop the team and workforce
  - What training or education is needed? By Whom? Best method?
- Monitor and Control Implementation
  - Control Scope
  - Control Schedule
  - Control Costs
  - Control Quality

**TOOLS:** Action/Implementation Plans, Timelines, Gantt chart, Quality Assurance Surveillance Plan, Project Budget

## 3. Set Improvements Target(s)

O O D A  
 P D C A  
 D M A I C  
 D D R F S I

- Is the improvement target measurable? Is it specific? Is it challenging?
- Is the target "Outout Oriented"?
  - What is the desired output?
  - Should be "things to achieve"; should avoid "things to do".
  - Will be addressed by Action Plans (Step 5)
- The desired target should:
  - Do what? By how much? By when?
- If it is a Process Problem, what is the future state?
  - How will it be realized?

**TOOLS:** Ideal State, Future State Mapping, B-SMART

## 7. Confirm Results & Process Change

O O D A  
 P D C A  
 D M A I C  
 D D R F S I

- How are we performing relative to the Observe phase (Steps 1 & 2)?
- Monitor overall effectiveness of the countermeasures to determine impact against desired outcome(s)
- How are we performing relative to Step 3?
- How are we performing relative to Resource Payoff projections?
- If we are not meeting targets, do we need to return to Step 4?
  - Most problem solving "breakdowns" occur relative to improper root cause identification

**TOOLS:** KPI/Metrics, Resource Breakdown Structure, Performance Management, Audit

## 4. Conduct Cause Analysis

O O D A  
 P D C A  
 D M A I C  
 D D R F S I

- What analysis tools are necessary?
  - Who'll need to be involved in root cause analysis?
  - 10 heads are better than one
  - Remember to address "cultural" issues related to problem
- What is (are) the root cause(s) according to the tools?
- How will the root cause be addressed?
- Will addressing these address the performance gap?
- Can the problem be turned on or off by addressing the root cause?
- For each potential root cause does it make sense if the 5 Whys are worked in reverse?
  - Working in reverse, say "therefore" between each of the "whys"
- Is there data supporting the true root causes?

**TOOLS:** 5 Whys, Brainstorming (Idea platform), Pareto Chart, Affinity, Fishbone, Control Charts, Histogram, Run Chart, Process Map, Scatter Diagram, FMEA, Interrelationship Graph

## 8. Standardize Successful Processes

O O D A  
 P D C A  
 D M A I C  
 D D R F S I

- What's needed to Standardize Improvements or Scale?
  - Tech Order changes?
  - Air Force Instruction changes?
- How should improvements and lessons learned be communicated?
  - Process Model Library updated
  - Key meetings?
  - Idea platform community discussion
- Were there other opportunities or problems identified by the Problem Solving Process?
  - Restart OODA Loop?

**TOOLS:** Checkpoint/Standardization Table, Standard Work/AFI/policy changes, Network diagram, Precedence Diagram, Process Model, Performance Management Update

# Junior Force Warfighter Operations in RX (JFWORX)<sup>1</sup>

**Materials & Manufacturing Directorate (AFRL/RX) created JFWORX to:**

- Develop time-critical materiel solutions for operational customers' needs
- Grow Junior Force expertise – CGO and civilian equivalent
- Increase AFRL/RX customer–centric focus
- Create rapid technology solutions and offer AFRL SME support

## **Examples of JFWORX FIELDDED PROJECTS**

### **C-130 Milk Stool**

**Problem:** Current wooden milk stool weighs 85 lbs and only one loadmaster is available to position it

**Process:** Completely redesign stool to cut weight

**Performance:** Final weight is 32.4 lbs and saves the DoD \$2.4 million per year

### **C-5 Tire Change Tool**

**Problem:** Five Airmen currently used to change tires on a C-5

**Process:** Design and prototype a tool to reduce the manpower needed

**Performance:** Only two Airmen now able to perform a tire change

### **Waterproof Medical Supply Bag**

**Problem:** Medical supplies damaged during personnel recovery

**Process:** Rapidly prototype waterproof medical supply bag – partner with industry to manufacture

**Performance:** Idea generation to operational testing in under 5 months

<sup>1</sup> JFWORX is provided as an example.

## **Assault Zone Lighting**

**Problem:** Portable lighting to mark temporary airfields. Top 5 JSOC Capability Gap

**Process:** Partnered with customer and industry to rapidly produce a rugged runway lighting system in under 4 months

**Performance:** Field tested and transitioned. Adding wireless capability

## **PROJECTS IN DEVELOPMENT**

### **Hydrazine C-130 Modular Weapons Storage**

Assist in transitioning airmen-invented rifle rack to fielded use

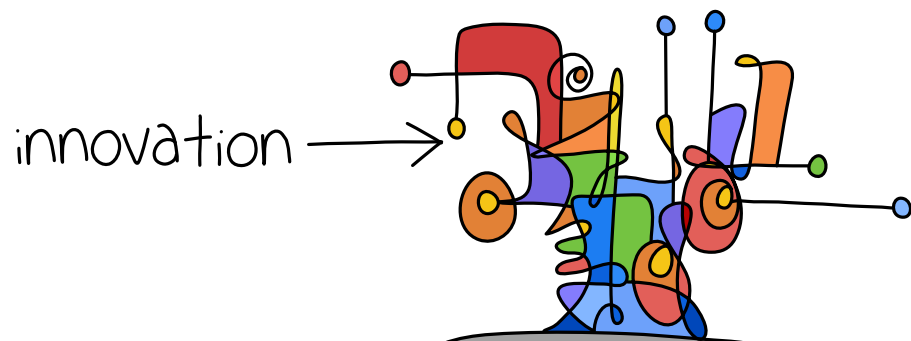
### **Detection System**

Develop a hydrazine monitoring system to assist the Guardian Angels in their astronaut recovery mission

### **Mass Rescue Raft**

Assisting US Coast Guard to develop high capacity, ultra-lightweight life raft for use in sea-based mass rescue operations

DOD Organizations interested in working with the JWORX team can contact the AFRL/RX communications team at [AFRL.RX.CorpComm@us.af.mil](mailto:AFRL.RX.CorpComm@us.af.mil).



innovation →

} needs to be  
disciplined

Part Two

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# The Four Phases of Innovation

Now that we've identified some of the resources that are part of the Air Force Innovation ecosystem, we turn to the discipline of innovation. As Peter Newell and Brian Miller observed: "systematic innovation means connecting invention to adoption via a disciplined framework."

In this part, we lay out a four-phased approach to disciplined innovation:

## **Phase 1**

**Identify, prioritize, get buy-in**

## **Phase 2**

**Get tactical**

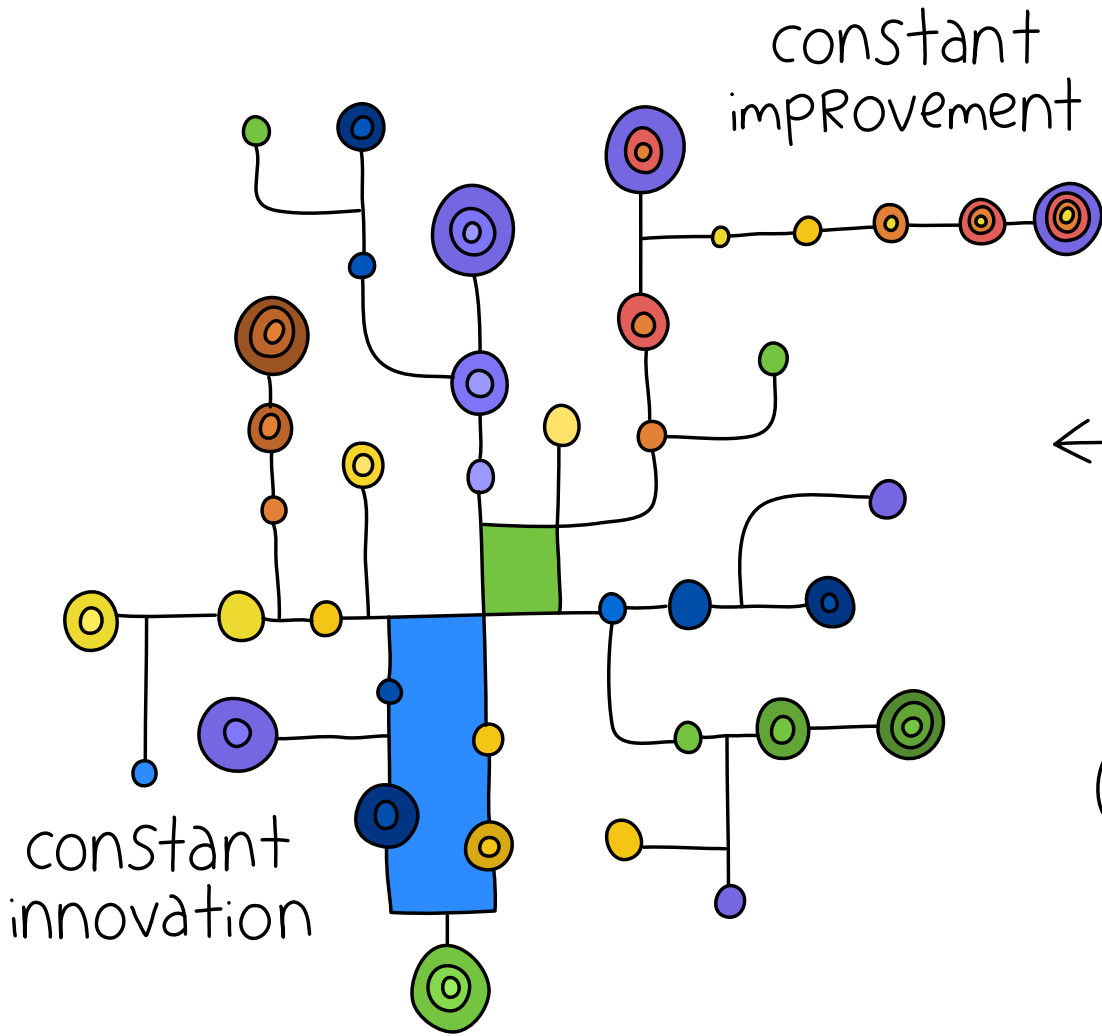
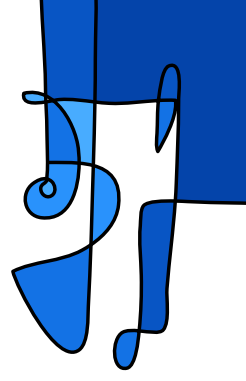
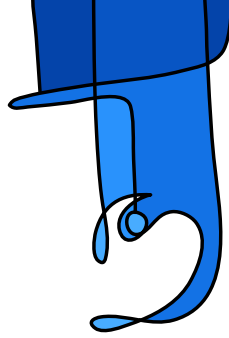
## **Phase 3**

**Find the right solutions and show success**

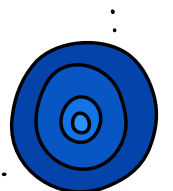
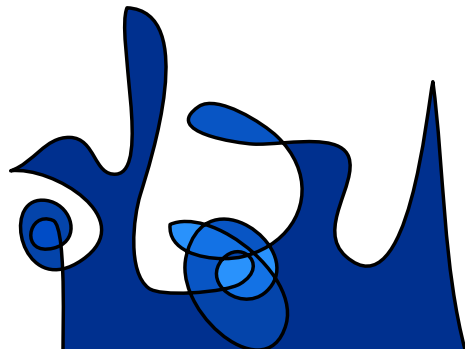
## **Phase 4**

**Prepare for scale**





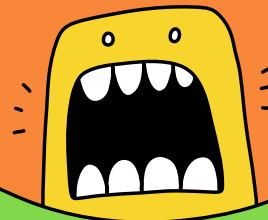
our plan  
since  
1947  
(and before)



stop fantasizing  
about finding  
a solution.

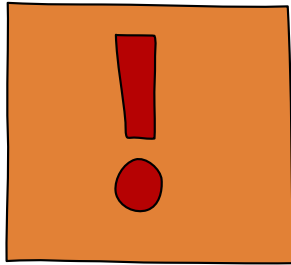


start thinking  
about the actual  
problem.

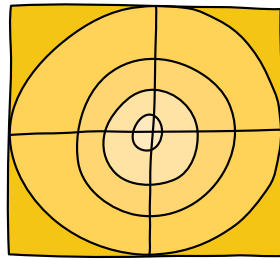


# PHASE ONE:

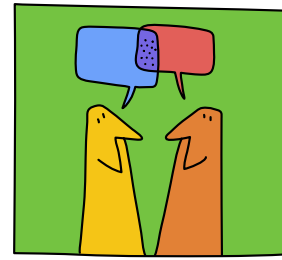
identify



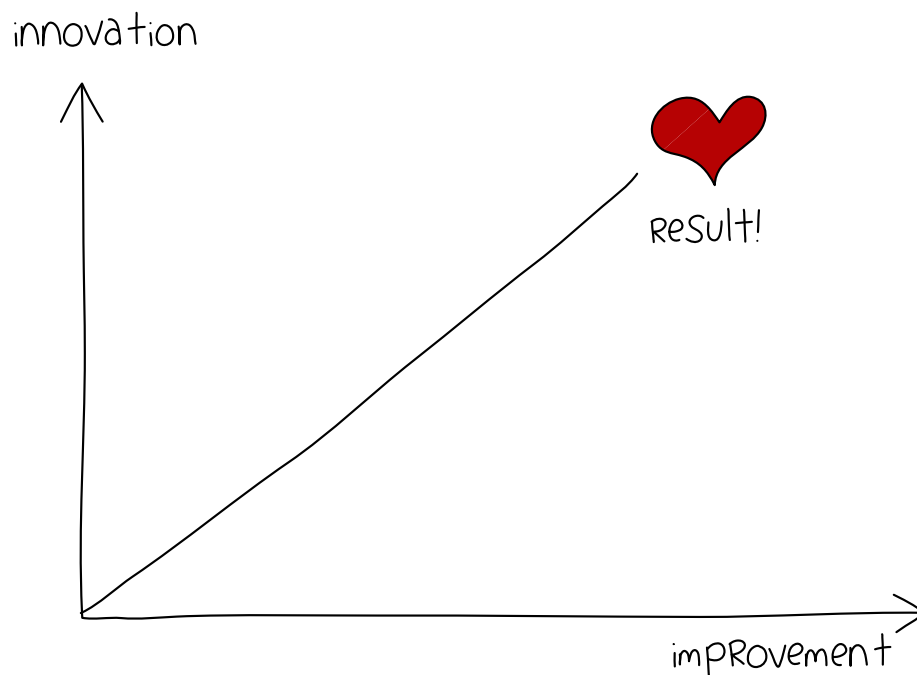
pRIORitize



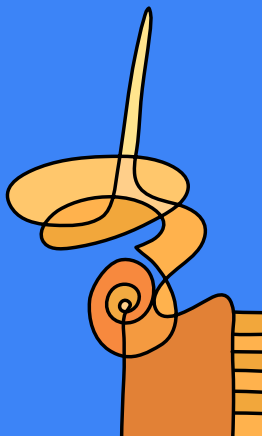
get buy-in



All successful innovative efforts start with a problem and an idea on how to solve that problem. As we will see, though, innovation and creative problem solving is a discipline that uses specific techniques to identify problems, prioritize them, evaluate the most likely routes to solve those problems, and build the support necessary to start testing the solutions. This chapter lays out some of the key techniques that innovative organizations use to develop their solutions.



successful  
entrepreneurs  
and intrapreneurs  
aim high



# What is innovation?

Peter Drucker, in his 1985 work “Innovation and Entrepreneurship,” argued that innovation is a discipline:

***Successful entrepreneurs do not wait until “the Muse kisses them” and gives them a “bright idea”; they go to work. Altogether, they do not look for the “biggie,” the innovation that will “revolutionize the industry,” create a “billion-dollar business,” or “make one rich overnight.” Those entrepreneurs who start out with the idea that they’ll make it big—and in a hurry—can be guaranteed failure. They are almost bound to do the wrong things. An innovation that looks very big may turn out to be nothing but technical virtuosity; and innovations with modest intellectual pretensions, a McDonald’s, for instance, may turn into gigantic, highly profitable businesses. The same applies to non business, public-service innovations.***

***Successful entrepreneurs, whatever their individual motivation—be it money, power, curiosity, or the desire for fame and recognition—try to create value and to make a contribution. Still, successful entrepreneurs aim high. They are not content simply to improve on what already exists, or to modify it. They try to create new and different values and new and different satisfactions, to convert a “material” into a “resource,” or to combine existing resources in a new and more productive configuration.”***

Innovation and Improvement, then, isn’t about advanced technologies or revolutionary new approaches. It’s about applying technology, methods, or processes to solve problems facing airmen in the accomplishment of their mission. It’s about finding ways to make a contribution and aiming high.

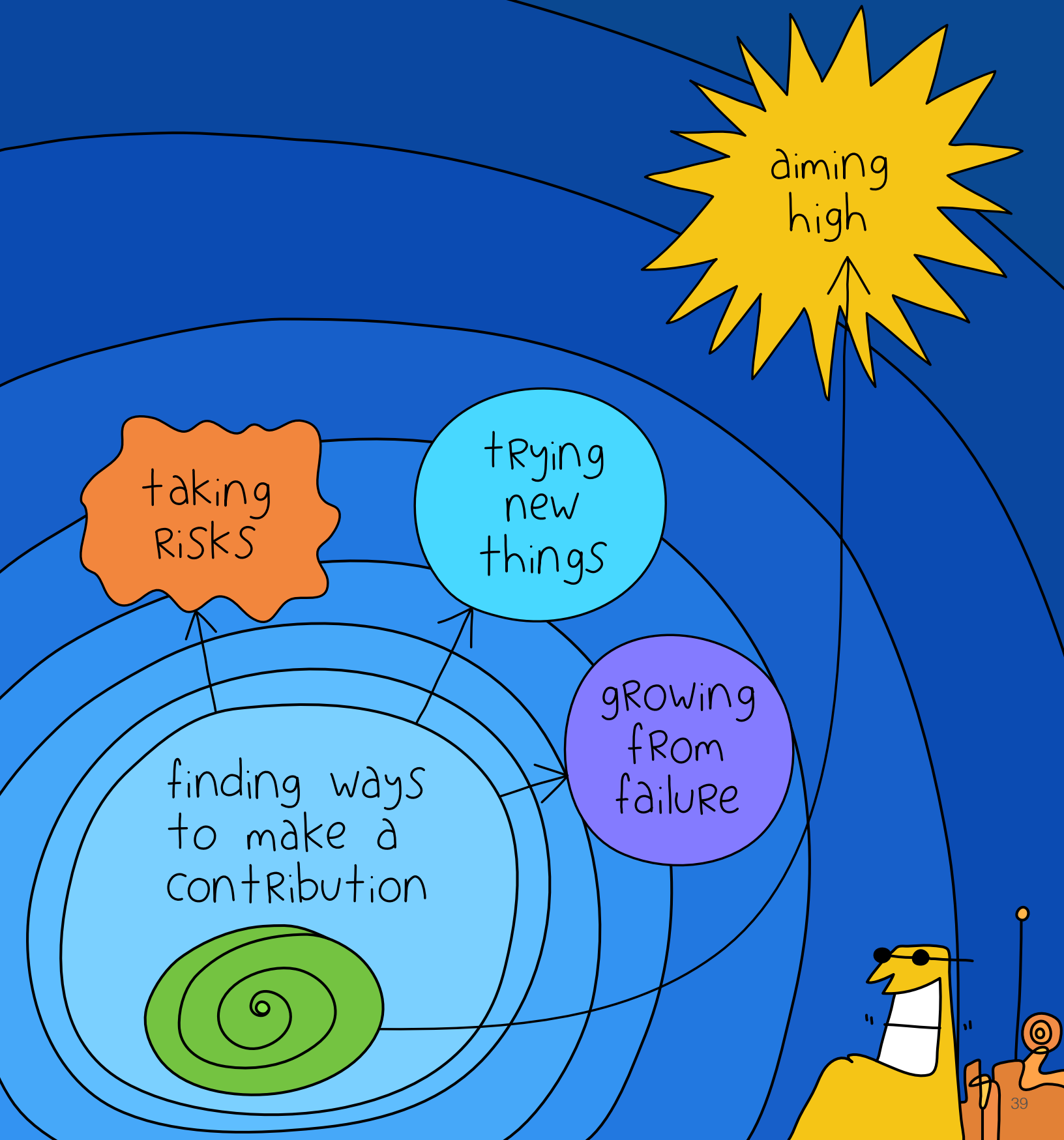
To learn about some examples of innovative practices within the Air Force, consider some recent vignettes from the 480th ISR Wing, captured and published on the AFWERX website.

## SIF innovation highlights

One SIF project funded out of McGuire AFB was a smart toolbox that enabled maintenance crews to quickly do inventory and track where all their tools were on a plane. The squadron teams performed market research and identified a potential solution. The presentation was made to the innovation liaison, a captain, and the \$60K pilot request was approved on the spot!

An intelligence officer stationed in Texas wanted to provide an app, Headspace, to his entire wing. Headspace is a wellness platform that promotes mental health support through meditation and mindfulness. This active duty captain used SIF to draw a contract for 100 accounts.

# how to innovate



# Identify the right problem

If innovation and improvement is about solving problems facing airmen in the accomplishment of their mission, the first effort should be to clearly understand and define the processes of problem definition and prioritization. This is also the first step in our eight-step approach for CPI.

Problem identification should begin by focusing on which solutions will deliver the most significant, positive impact to users. Focusing on the user will allow you to develop solutions that are impactful, adoptable, and sustainable.

When creating a good problem definition, follow these four steps:

## **1. Establish the Need for a Solution.**

The first step is to identify the basic need and desired outcomes. Consider how the end user would benefit from a particular solution.

## **2. Justify the Need.**

Ensure it is consistent with organizational mission and strategy. Indicate clear, measurable benefits to the organization when the problem is solved.

## **3. Contextualize the Problem.**

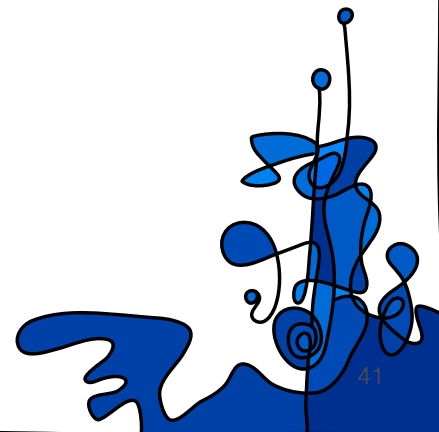
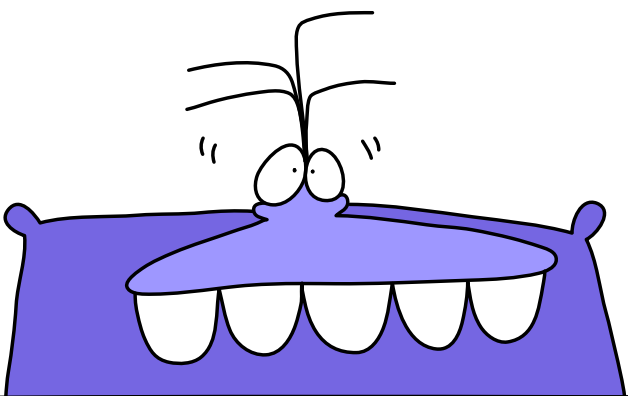
Even if a solution is novel, the problem probably is not. Understanding what solutions have been attempted before and how and why those solutions have not solved the problem can help you avoid repeating mistakes. You should also see whether there are others trying to solve the same or similar problems. Using the search feature in the Airmen Powered by Innovation platform ([usaf.ideascale.gov/](https://usaf.ideascale.gov/)) will show others that have proposed similar ideas. They might serve as a resource for you in tackling your problem.

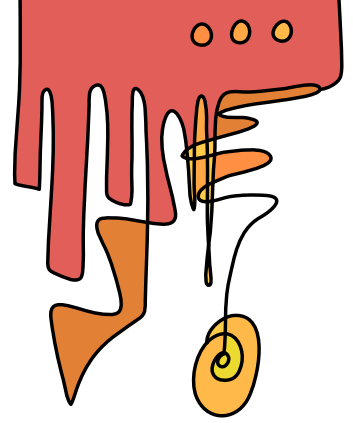


#### 4. Write the Problem-Definition Statement.

Finally, you should write out a problem statement that takes the following form: “We are looking for X in order to achieve Z as measured by W.” This form aligns the problem with the organizational benefit, and can serve as a starting point for your future work.

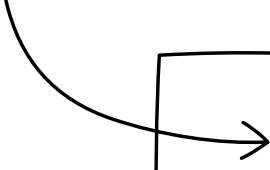
**YOU CAN'T SOLVE  
THE PROBLEM  
TILL YOU KNOW  
WHAT IT IS**



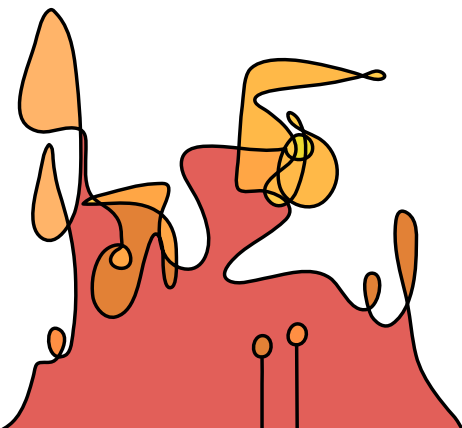


"what is uRgent is  
seldom important,  
and what is important  
is seldom uRgent."

-Dwight D. Eisenhower



	uRgent	not uRgent
important	1. do	2. plan
not important	3. delegate	4. don't do



# Prioritize and select your problem

Because there are an infinite number of problems in the world, choosing which to focus on requires prioritization. President Eisenhower is credited with one of the more enduring prioritization frameworks, called the “Eisenhower Decision Principle,” which organizes problems based on their urgency and importance.

By choosing problems that are both urgent and important, you can avoid wasting time, energy, and limited resources on less valuable efforts.

Another useful framework, advanced by Don Reinertsen, is to focus on measuring the “cost of delay” for solving the problem and then focusing on what solution will solve the problem the fastest.

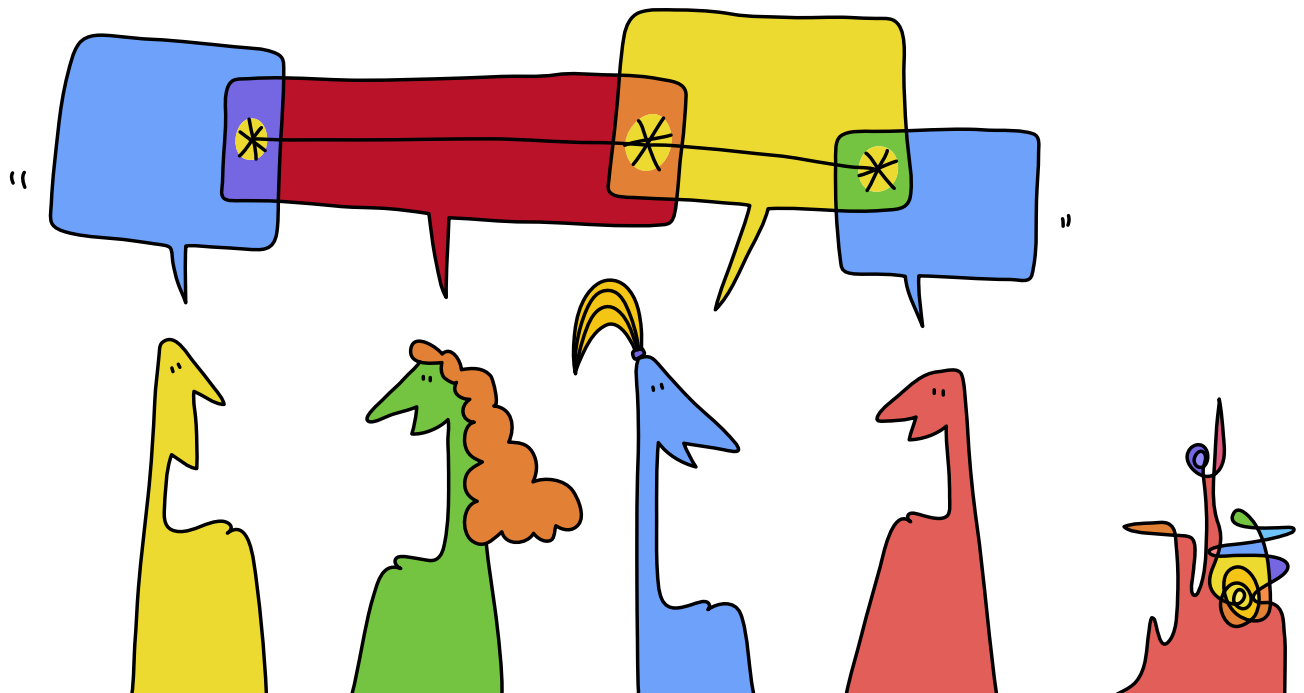
Regardless of how you choose to prioritize problems or their potential solutions, focus on making sure that you are intentional about your solution. If you have found a better way to solve your problem, pursue the better way even if you have spent a lot of time developing the solution. Similarly, if there is a more important problem to be solved, pursue the more important problem. Do not fall prey to the “sunk-cost fallacy;” make sure that you are working to deliver the most significant, positive impact to users. Remember, innovation and improvement is about finding ways to contribute and aiming **high**.

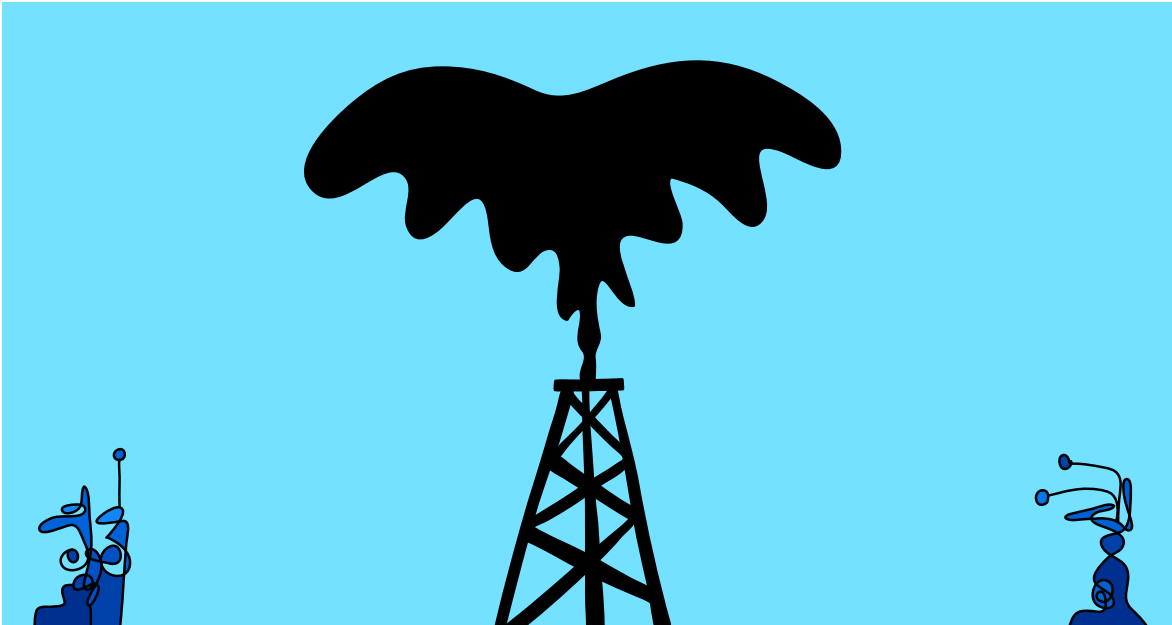
	URGENT	NOT URGENT
IMPORTANT	1. Do	2. Plan
NOT IMPORTANT	3. Delegate	4. Don't do

## Research and collaboration

Successful innovation requires partnership to scale, but there is no reason to wait to get started! You should seek out opportunities to work with individuals and teams who are thinking about the same challenges. By leveraging existing research and finding potential collaborators, you can gain ground much faster than if you go it alone. The very design of the SIF program means that there are likely dozens—or even hundreds—of people who want to tackle the same problems you’re considering. The Air Force has a central place to share ideas and work on these projects on the Airmen Powered by Innovation platform ([usaf.ideascale.gov.com](https://usaf.ideascale.gov.com)). As of April 2020, there were over 4,400 ideas on this platform, and more than 40,000 Airmen! Please go here to search and see what others are working on. You can send them a message or find them in the global directory.

innovation only happens  
with collaboration and  
stakeholder involvement





## How well-defined problems lead to breakthrough solutions

### THE SUBARCTIC OIL PROBLEM

More than 20 years after the 1989 Exxon Valdez oil spill, cleanup teams operating in subarctic waters still struggled because oil becomes so viscous at low temperatures that it was difficult to pump from barges to onshore collection stations.

#### How the problem was defined

In its search for a solution, the Oil Spill Recovery Institute framed the problem as one of “materials viscosity” rather than “oil cleanup” and used language that was not specific to the petroleum industry. The goal was to attract novel suggestions from many fields.

#### The winner

A chemist in the cement industry was awarded \$20,000 for proposing a modification of commercially available construction equipment that would vibrate the frozen oil, keeping it fluid.

## THE ALS RESEARCH PROBLEM

By the late 2000s, researchers trying to develop a cure or treatment for amyotrophic lateral sclerosis (ALS, or Lou Gehrig's Disease) had not made much progress. One major obstacle was the inability to detect and track the progression of the disease accurately and quickly. Because researchers could not know precisely what stage ALS sufferers had reached, they greatly increased the pool of participants in clinical trials and lengthened their studies, which drove up costs so much that few treatments were developed and evaluated.

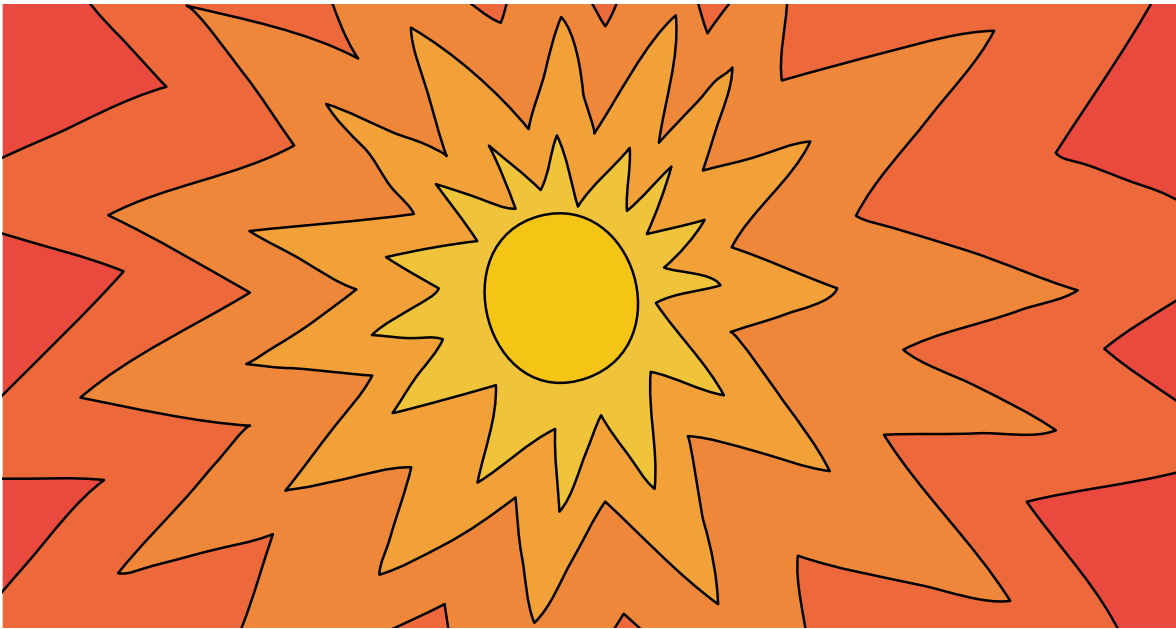
### How the problem was defined

Instead of framing its initiative as a search for a cure, Prize4Life, a nonprofit organization, focused on making ALS research feasible and effective. The solution it sought was a biomarker that would enable faster and more accurate detection and measurement of the progression of the disease.

### The winner

In 2011, a researcher from Beth Israel Hospital in Boston was paid \$1 million for a noninvasive, painless, and low-cost approach, which detects ALS and assesses its progression by measuring changes in an electrical current traveling through muscle. This biomarker lowers the cost of ALS research by providing accurate and timely data that allow researchers to conduct shorter studies with fewer patients.





## **THE SOLAR FLARE PROBLEM**

In 2009 NASA decided it needed a better way to forecast solar flares in order to protect astronauts and satellites in space and power grids on Earth. The model it had been using for the past 30 years predicted whether radiation from a solar flare would reach Earth with only a four-hour lead time and no more than 50% accuracy.

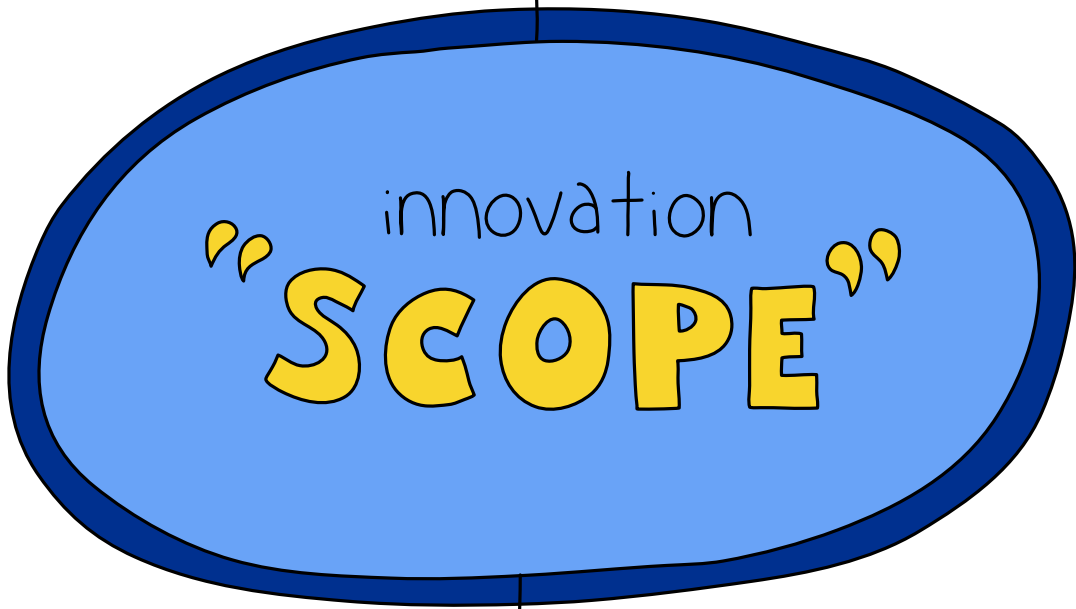
### **How the problem was defined**

NASA did not ask potential solvers simply to find a better way to predict solar flares; instead, it pitched the problem as a data challenge, calling on experts with analytic backgrounds to use one of the agency's greatest assets - 30 years of space weather data - to develop a forecasting model. This data-driven approach not only invited solvers from various fields but also enabled NASA to provide instant feedback, using its archived data, on the accuracy of proposed models.

### **The winner**

A semi-retired radio-frequency engineer living in rural New Hampshire used data analysis and original predictive algorithms to develop a forecasting model that provided an eight-hour lead time and 85% accuracy. He was awarded \$30,000 for this solution.

what to include ✓



what to exclude ✗



# Why scope is critical to define

Once you have identified, defined, and prioritized your problem, you need to “scope” your problem and solution to force decisions about what to include, but also what to exclude in developing the solution. One of the biggest long-term risks to any effort is “scope creep”: the addition of features, attributes, or requirements that complicate the original goal of the effort. Investing time upfront to establish the appropriate boundaries can help mitigate unplanned scope creep. Think about how you can develop a flexible-enough scope to cover unexpected developments and insights, while still avoiding scope creep and how you can avoid defining every possible feature and functionality before you even begin?

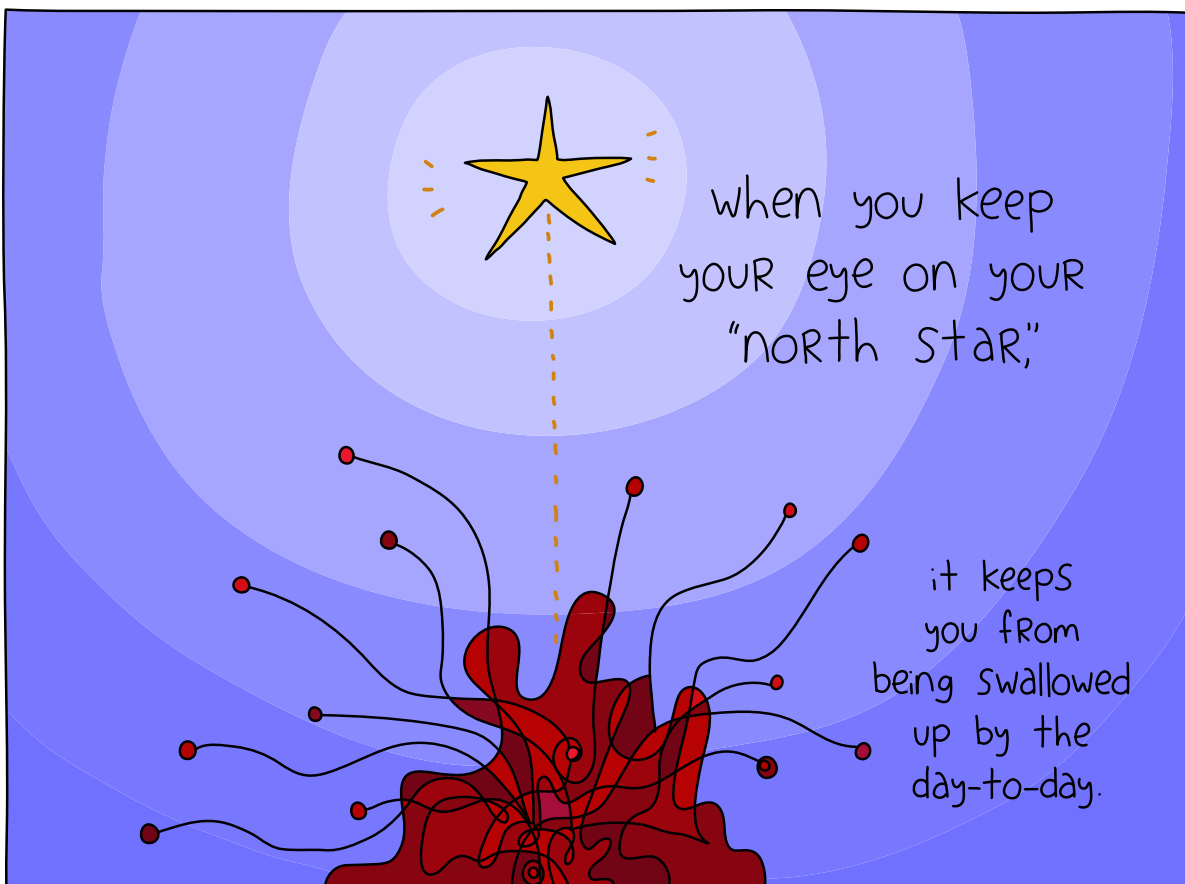
To address this tension and to help clearly define and manage scope, you should formulate a “product vision.” Understanding the entire scope of the problem or in the case of a process to be improved, encompass steps one through four of our eight-step CPI approach.

# Establishing a product vision

A product vision serves as a “North Star” to ensure alignment without overly prescribing the path and describe the motivation behind the effort. A good product vision establishes the fundamental difference that results from the solution. The product vision should answer what is (and is not) important in the delivery of the solution.

When shaping a product vision, there is no single way to do it: but as a rule, stay ruthlessly focused on solving the problem from a user’s perspective to help focus on what is really important and what is just “nice to have.”

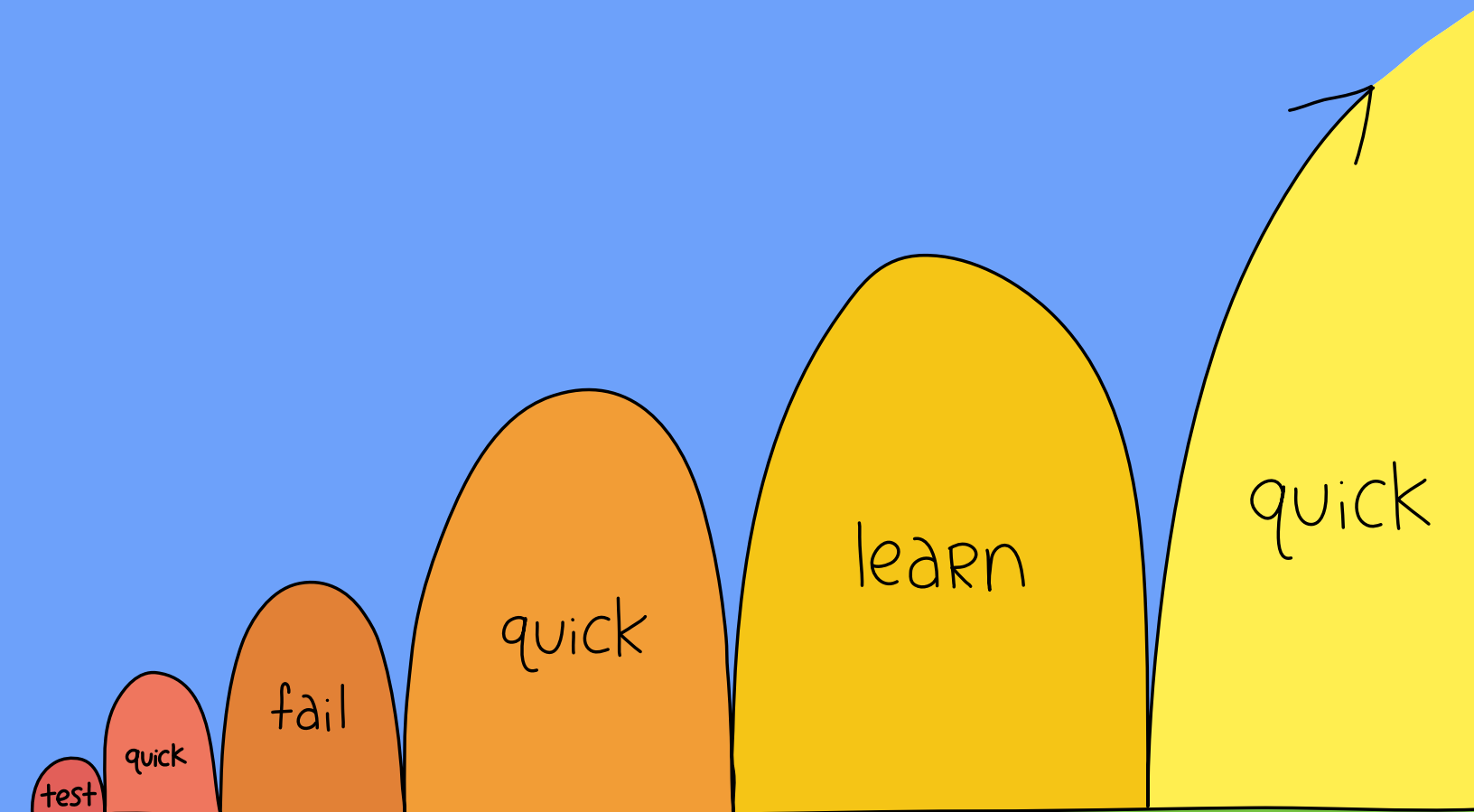
When developing a product vision, two frameworks worth considering are Amazon’s “Press Release” approach and Geoffrey Moore’s “Elevator Pitch” template. Both approaches are iterative, in that they need to be refined until they describe a problem that is worth solving, and the solution will actually address the problem in a way that users will value.



## **An example “Elevator pitch“ for better inventory management**

Our CommFlight spends 100 hours a month printing inventory sheets, tracking down, and reading tiny serial numbers on IT assets to accomplish a simple inventory. The solution is RFID tagging all the laptops and installing scanners at key places so that they can complete their inventory in 8-12 hours. Unlike the alternative barcoding system, our solution allows for inventory to be completed more quickly because the RFID technology can scan every IT asset in a room or area at once!

# Developing initial hypotheses, message, and value proposition



# What is in MVP?

A minimum viable product (MVP) is a new product released with minimally sufficient features to satisfy the needs of early adopters. The goal is to identify the minimum features required by your customers. Releasing an MVP version provides you and your team the opportunity to quickly gather feedback and learn from users to refine the next iteration. You and your team will continually design, test, and develop features based on feedback and learnings from your product users.

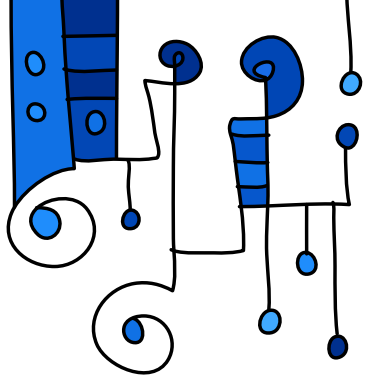
An MVP has three key characteristics:

- It has enough value that people are willing to use it or buy it initially
- It demonstrates enough future benefit to retain early adopters
- It provides a feedback loop to guide future development

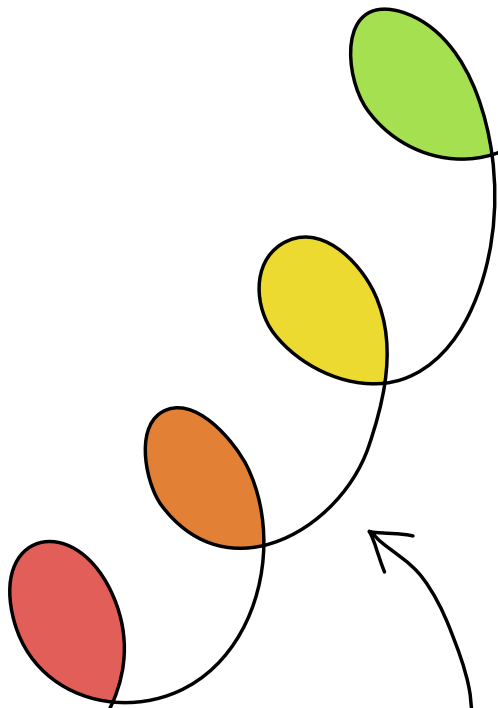
An MVP creates an opportunity to test a product with everyday users (e.g., conduct usability testing) to evaluate its performance and solicit direct feedback. Conduct MVP testing on a small percentage of your users. Compare these test results to your base users' feedback (A/B testing). MVPs are most effective when the product owner and team members are open to incorporating the feedback users provide. When leveraged appropriately, MVPs can:

- Significantly reduce the product's cost and the time needed for refinement
- Validate your product, features, service, and/or idea
- Decrease the team's learning curve

Again, innovation and improvement align and complement each other as the Air Force evaluates proposed countermeasures to continually improve processes in step five of our eight-step CPI approach.



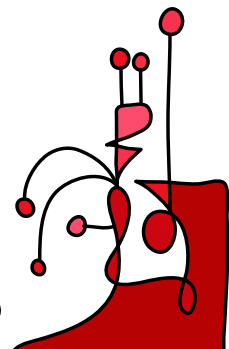
enough  
future  
benefit



feedback loop  
(guiding future development)

**M.V.P.**

critical mass  
(enough people)

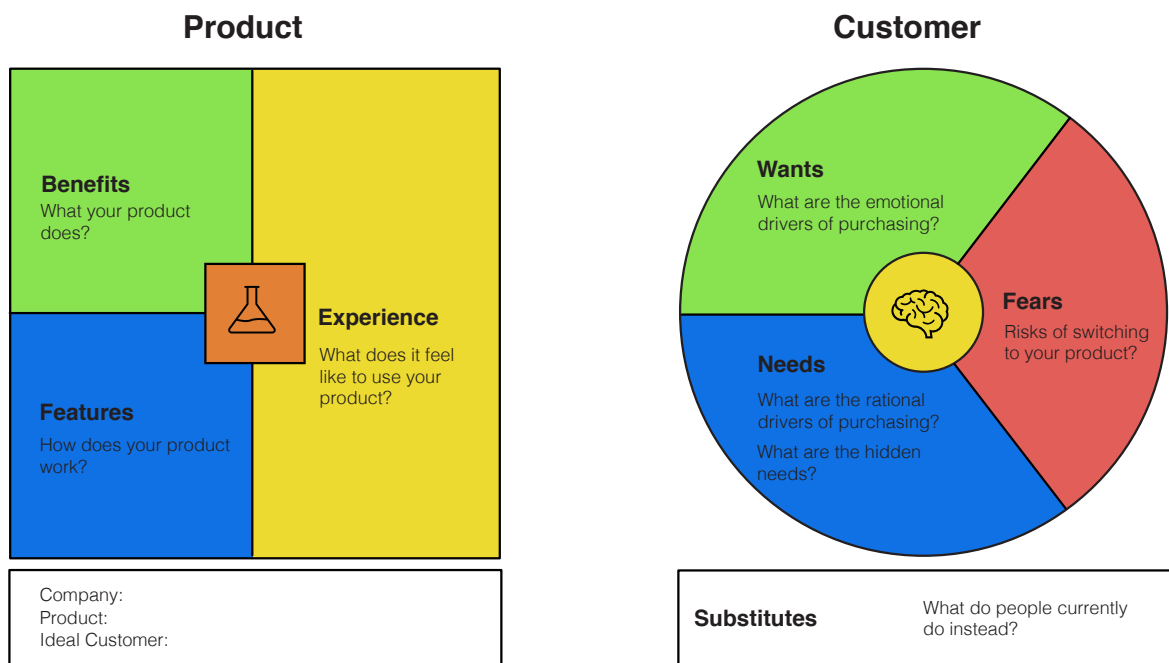


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# Writing a strong value proposition

One way to ensure that you've written a strong value proposition is to use a "value proposition canvas." Below is a sample value-proposition canvas (there are others out there if you look for them) you can use to help make sure that you've done enough homework to have confidence in your solution's approach:

## Value proposition canvas



by Peter J Thomson, at Value Proposition Canvas Template

As you can see from the canvas above, answering questions about both the nature of the solution and the expectations of the user will help make sure that you can quickly evaluate whether your proposed solution will address your desired users' needs.

# Aligning to mission

Once you have an idea of what your MVP should look like and a strong value proposition, you will still want to do a landscape review to make sure that the environment will support your proposition.

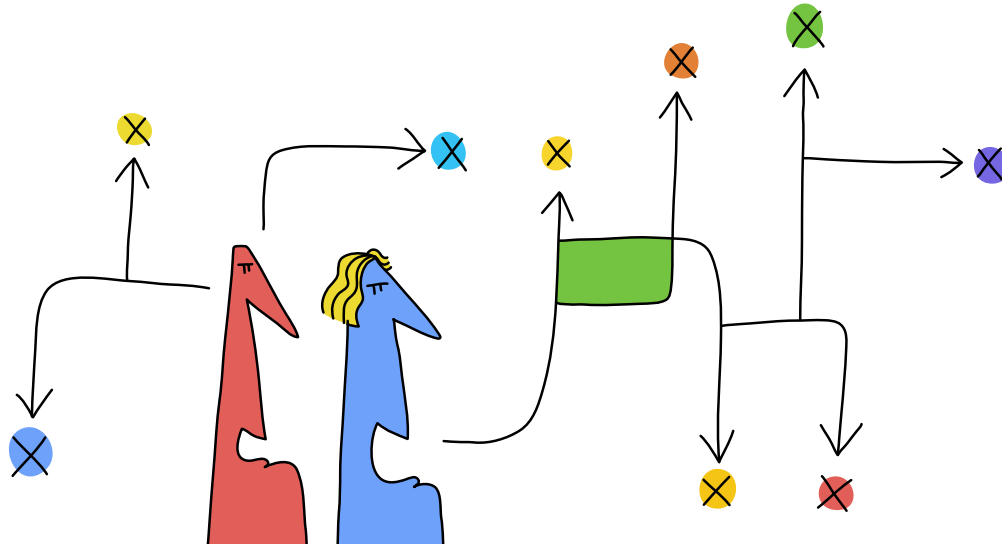
As with the value-proposition canvas, you may want to use the Mission Model Canvas to identify the key components of a successful effort. Early on, you may not have all of the pieces you need, but you should be thinking about which partners, stakeholders, beneficiaries, and resources you will need to be effective.

The Mission Model Canvas				
Key Partners	Key Activities	Value Propositions	Buy-in & Support	Beneficiaries
	Key Resources		Deployment	
Mission budget / Cost			Mission achievement / Impact Factors	



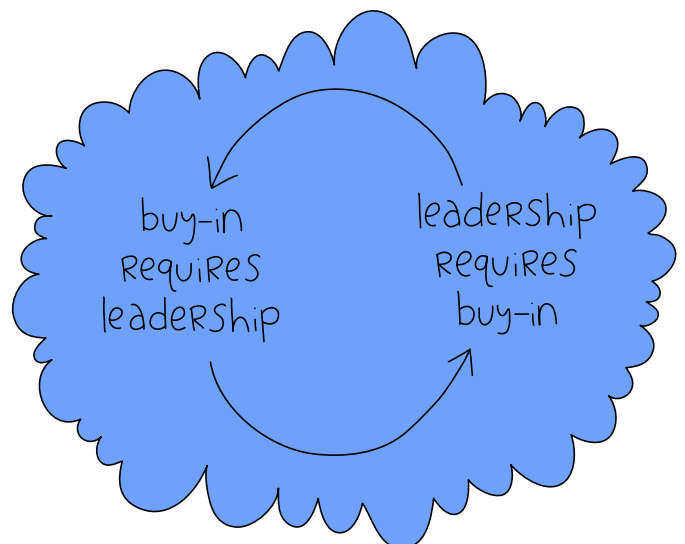
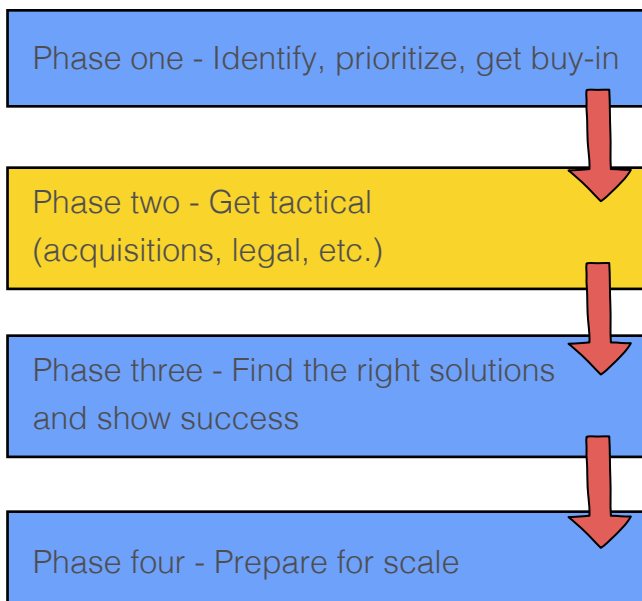
# PHASE TWO:

get tactical



Execution of innovative and improvement ideas is a team sport.

Although your solution likely go through multiple revisions over time, the absolutely best way to test your ideas is to put them into action and measuring how it goes. You will need to assemble a core team to support the proper execution. Additionally, you will need to work to gain leadership buy-in for your ideas. This could be as simple as regular briefings to leadership or inviting them to your innovation meetings.

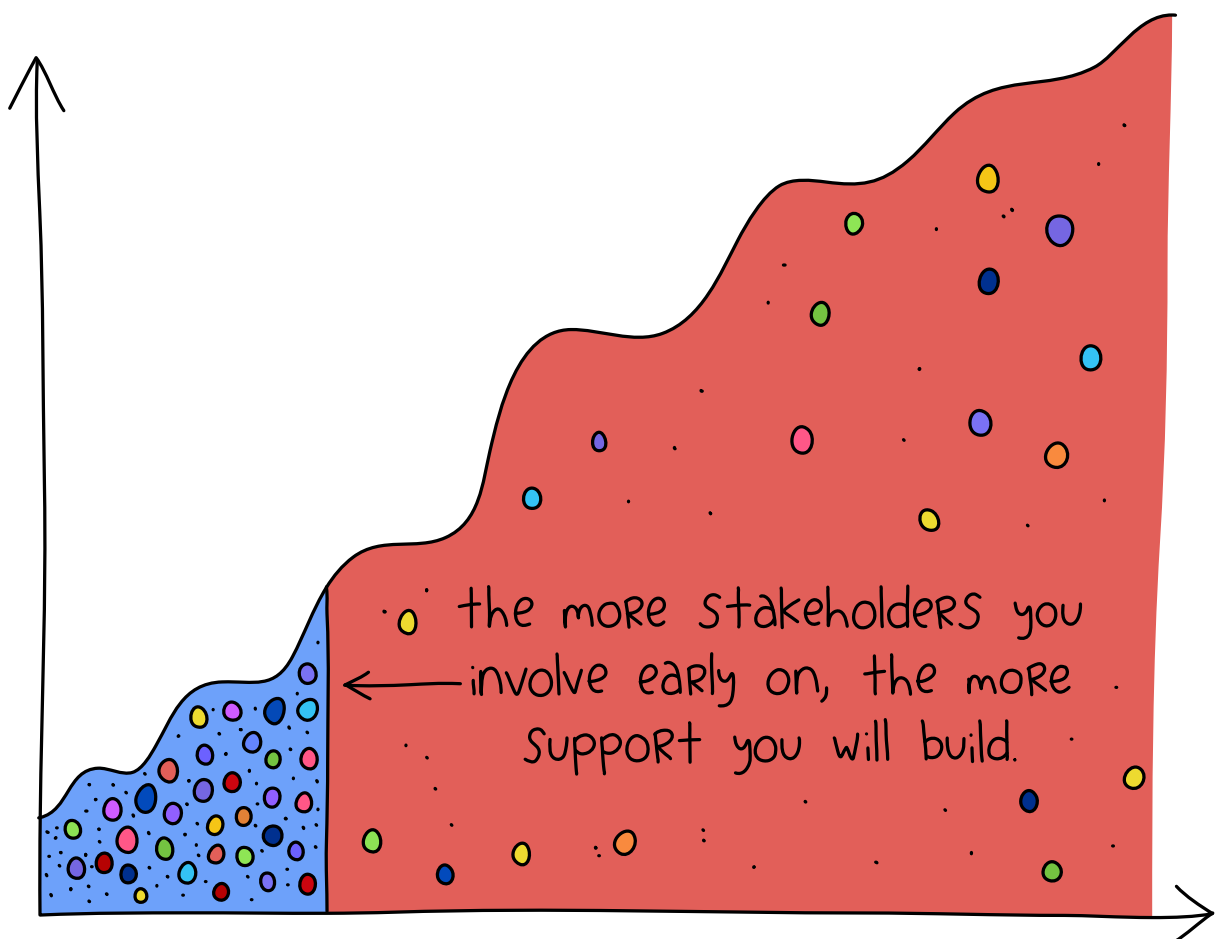


# Mapping your stakeholders

To successfully navigate the various stakeholders in government procurement, it is vital to spend time understanding how they do their work and why they do it the way that they do. One way to help organize your own approach is to create a composite description (an “archetype”), for each relevant stakeholder.

The sooner you can start to fill in the blanks on the archetype, the better, because you will want to start working with them early on.

Although involving too many stakeholders can be complex, if you can work with them early on, it will help build support for your work, identify potential opportunities or roadblocks specific to their roles, and reduce the need to make larger changes later by making smaller pivots earlier.



# Information for stakeholder archetypes

Who are they?

What do they do?

What are their driving philosophies?

What are their behaviors?

What are their motivations/needs/goals?

# How to develop an Innovation Acquisition Strategy

In government, getting things done typically (though not always) requires procurement so understanding how to work with the various offices involved is important for the project's success.

## Involve your purchasing official

Under law, only government purchase card holders or contracting officers may purchase things on behalf of the government. So, you will need to work with a purchasing official if you want to buy something.

As you are considering your approach, plan to start working with the appropriate contracting officer as soon as practicable. Obviously, there will be things you will need to do before you are ready to buy (including market research, securing the funding, etc.), but eventually you are going to need to make sure that your contracting officer has a clear understanding of the problem you are trying to solve, the types of providers for the solution (i.e., market research), and a reasonable timeframe in which to procure the solution. Plan to start working with your purchasing official early on to avoid frustration when you are ready to buy.

involving your  
purchasing  
official

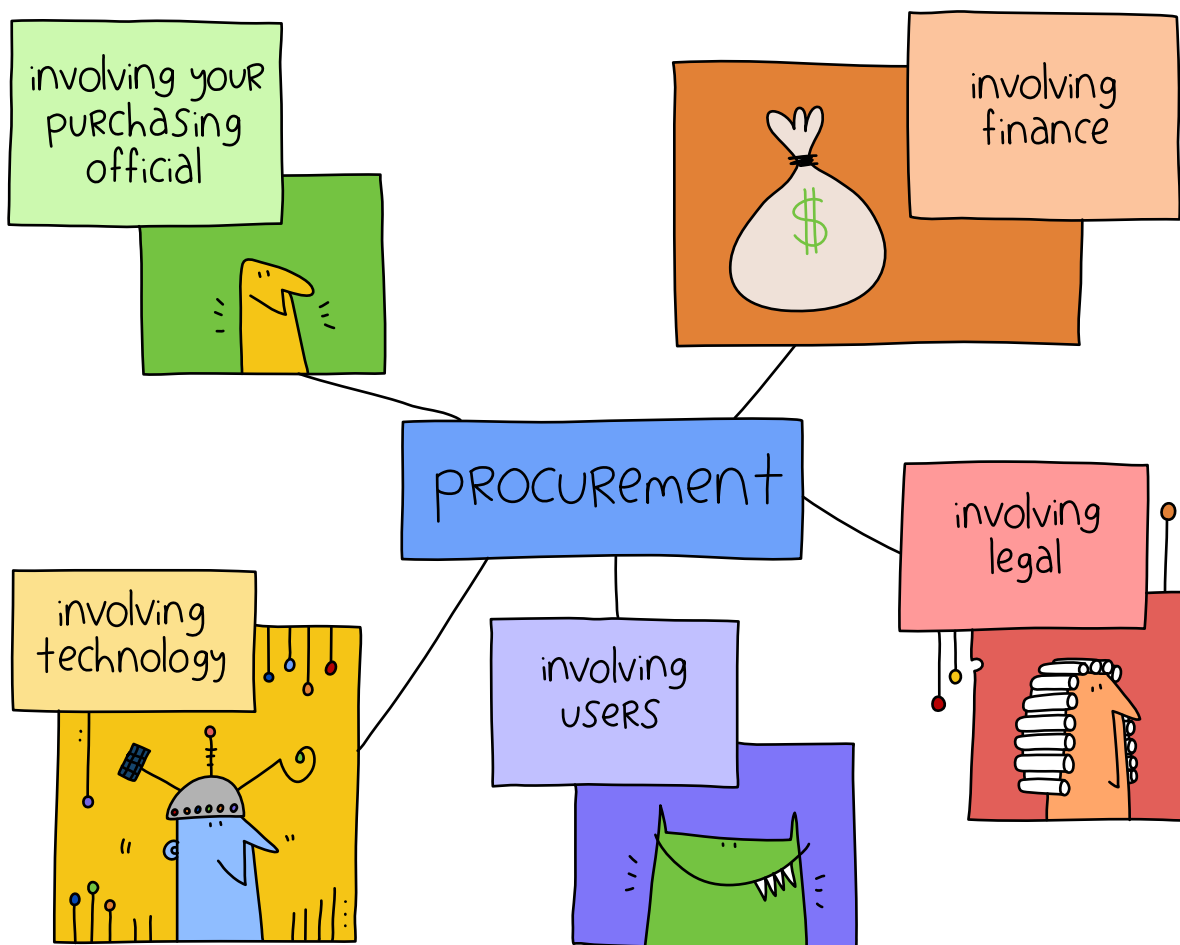


# Procurement

When working with your contracting officer, think on at least two timescales: the near term and long term. Although you should not let the long-term view prevent you from getting started, you should keep in mind the effects of scale.

As procurements grow in size and cost, they become progressively harder to get done quickly. Accordingly, you will need to build time into your schedule for procurement. You may want to consider how you can make procurement less burdensome for the contracting officer and industry. In other words, you want to keep the challenges of scale in procurement in mind as you move forward.

It is best to start working with the procurement office as soon as possible to ensure that the government is able to take advantage of the proper procurement method at the right time:

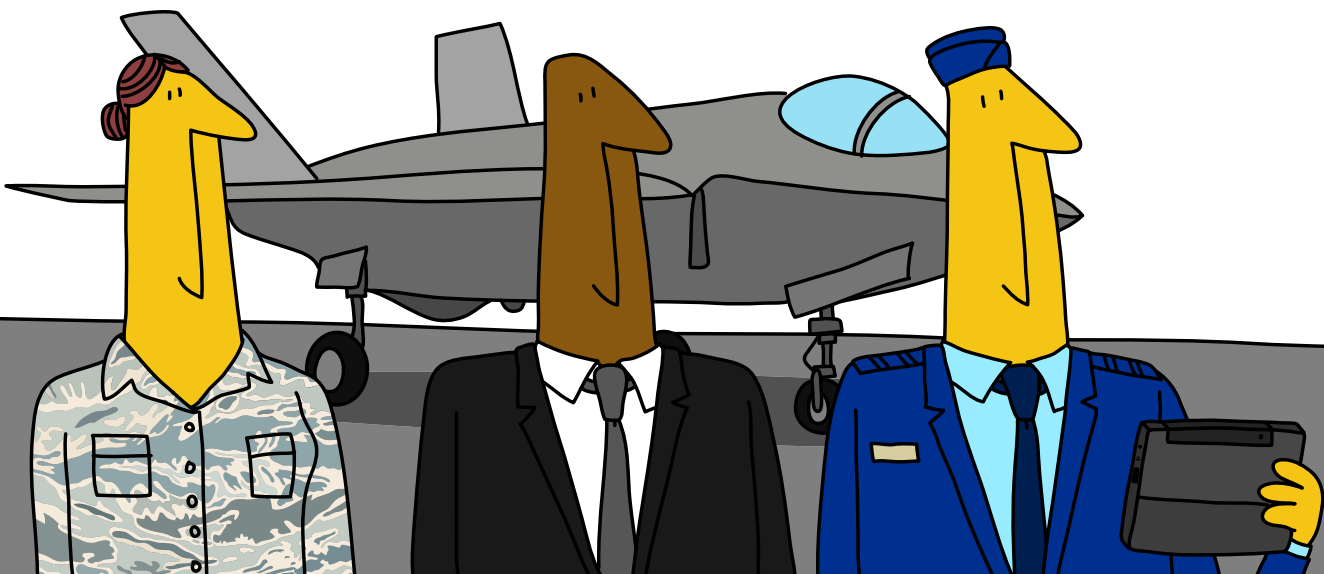


- Micro-purchasing. For small procurements (typically under \$10,000), a government purchase-card (“GPC”) holder can buy directly from a supplier without competition or extensive documentation. The purchasing official will need to ensure that the prices are appropriate and that certain paperwork is properly handled. In general, though, a micro-purchase is a fast, and extremely streamlined, way to buy. References and excerpts on GPC Purchases are in the Appendix. Government Purchase Card (GPC)
- Simplified Acquisition (FAR Part 13). For procurement under \$250,000, contracting officers can use “simplified acquisition” procedures to acquire supplies and services, including construction, research and development, and commercial items.
- Challenges. Under the America COMPETES Act, an agency has the authority to establish ambitious prize competitions (up to a \$50 million prize without Congressional approval) that will “stimulate innovation that has the potential to advance the mission of the respective agency.”
- SBIR/STTR Open Topics program. The Small Business Innovation Research (SBIR), Small Business Technology Transfer (STTR) program encourages domestic small businesses to complete federal research/research and development (R/R&D) with the goal of creating potentially saleable products and services. Through a competitive, awards-based program, SBIR helps small businesses explore their technological potential and provides the incentive to profit from commercialization. By including qualified small businesses in the nation’s R&D arena, SBIR stimulates high-tech innovation and fosters a spirit of entrepreneurialism.
- Other transaction authorities (OTA). OTA allows the government, in certain circumstances, to enter into flexible business arrangements to acquire research and development activities to advance new technologies, and prototypes or models to evaluate technical or manufacturing feasibility or military utility of new or existing technology.

- Broad Agency Announcements (BAA). BAAs are typically used to invite proposals for basic and applied research and development to advance or evaluate cutting-edge technologies in a specific problem area. Proposals submitted in response to BAAs may or may not lead to contracts.
- Commercial Solutions Offering (CSO). A CSO is similar to a BAA, but a CSO can be used to acquire innovative commercial items, technologies, or services that directly meet program requirements, whereas BAAs are restricted to basic and applied research. The CSO program may also be used to acquire R&D solutions from component development through operational systems development.

There are numerous organizations that are available to provide expertise on best practices associated with procurement of innovative solutions. For more information and other innovative acquisition methods, check out the Contracting Cone resource published by Defense Acquisition University.

contracting, legal,  
and purchasing officials  
are your friends!





# Commercial Solutions Opening (CSO)

## What is a CSO and Why Would I Use It?

A Commercial Solutions Opening (CSO) is for when you have a problem but don't quite know how to solve it. CSOs let companies come to you with what they think the solution is to your problem. Instead of you spending your off-duty time trying to solve a problem you are facing, CSOs let commercial industry compete to solve your problem for you. CSOs allow commercial industry to rapidly respond to your problem statement with a simplified "pitch" that is much leaner than traditional contract proposals. You are empowered to maintain ownership of your problem throughout the entire process and, as the expert on your problem, will help to evaluate the solutions industry brings to you. You will likely see a wide variety of solutions proposed to your problem statement, increasing your knowledge of the existing commercial solution space. You are under no obligation to fund any of the proposals that you receive. Once you greenlight a solution to your problem statement, you immediately begin partnering with your vendor to deliver that solution. Typical end-to-end turnaround times from problem statement to vendor partnering are as fast as 2 months.

## Ok I'm In. How Do I Use a CSO?

You need to develop your problem statement. It helps industry to solve your problem if they understand your organization's mission, so include a description of that too. We have attached several examples of good problem statements below. Partner with your contracting office. Take your problem statement and mission description to your contracting office and see if a CSO is the right solution for you. Even if a CSO isn't the perfect fit, there are many different contracting avenues that can potentially meet your needs.

## Stakeholders (Who):

- Innovation Leaders  
(target audience for this guide)
- End Users
- Subject Matter Experts
- Contracting Professionals
- Finance Professionals
- Legal
- Public Affairs

# CSO Supporting Documentation (In Appendix)

*AFPD 1-Page Contract Deviation*

*Approval of Unusual Contract Financing for CSOs*

*CSO Policy Memo 18-C-03*

*Commercial Solutions Opening (FA4484-20-S-C001) (V6)*

*CSO Talking Paper*

*JB MDL CSO Lessons Learned 20190710 (Crosstalk)*

*Problem Statement Example - AOI 001 - JBMDL 87th Air Base Wing*



## **Link to CSO example solicitation**

*Air Force Operational Commercial Solutions Opening Facility/Location (<https://beta.sam.gov/opp/b974b476568f408999364c5ceb60ba58/view>)*

## **News Media**

Innovation challenge accepted! JB MDL hosts first-ever base-level Pitch Day event  
Joint Base MDL accepted former Secretary of the Air Force Heather Wilson and Air Force Chief of Staff Gen. David L. Goldfein's innovation challenge to 'Think Big, Start Small, and Scale Fast' with its first-ever Joint Base MDL Pitch Day event. Ten small businesses pitched their innovative technology to Joint Base MDL leaders and five of them walked away with a one-page contract in hand and an initial payment in the bank.

<https://www.jbmdl.jb.mil/News/Article-Display/Article/1898557/innovation-challenge-accepted-jb-mdl-hosts-first-ever-base-level-pitch-day-event/>

Joint Base MDL Pitch Day Delivers Results!

At the Joint Base MDL Pitch Day on June 10, 2019, the 87th Contracting Squadron awarded five one-page contracts for innovative products and services. While the Pitch Day event was a huge success, the goal was to deliver technology to increase readiness and lethality across the joint base. Many of these products have been delivered and Airmen are already testing them on the flight line and in their work centers. Companies who participated in Joint Base MDL Pitch Day, including those who were unsuccessful, are finding new opportunities to provide their technologies to Department of Defense customers.

# Involving finance overview

One of the important ground rules of the SIF program is that all purchases made with Squadron Innovation Funds must meet Operations and Maintenance (O&M) funding rules at a minimum. Additionally, SIF funds should not be used to fill unmet needs that should be funded with other funding sources.

O&M funds are appropriated to cover expenses such as civilian salaries, travel, minor construction projects, operating military forces, training and education, depot maintenance, stock funds, and base operations support. They are available for just one year and are funded annually. O&M funds are what are primarily used to support the SIF program.

Another funding source, Research, Development, Test and Evaluation (“RDT&E”) funds are appropriated to cover efforts performed by contractors and government activities required for the Research and Development (R&D) of equipment, material, computer application software, and its Test and Evaluation (T&E) to include Initial Operational Test and Evaluation (IOT&E) and Live-Fire Test and Evaluation (LFT&E). RDT&E funds are available for a two-year period and are funded incrementally.

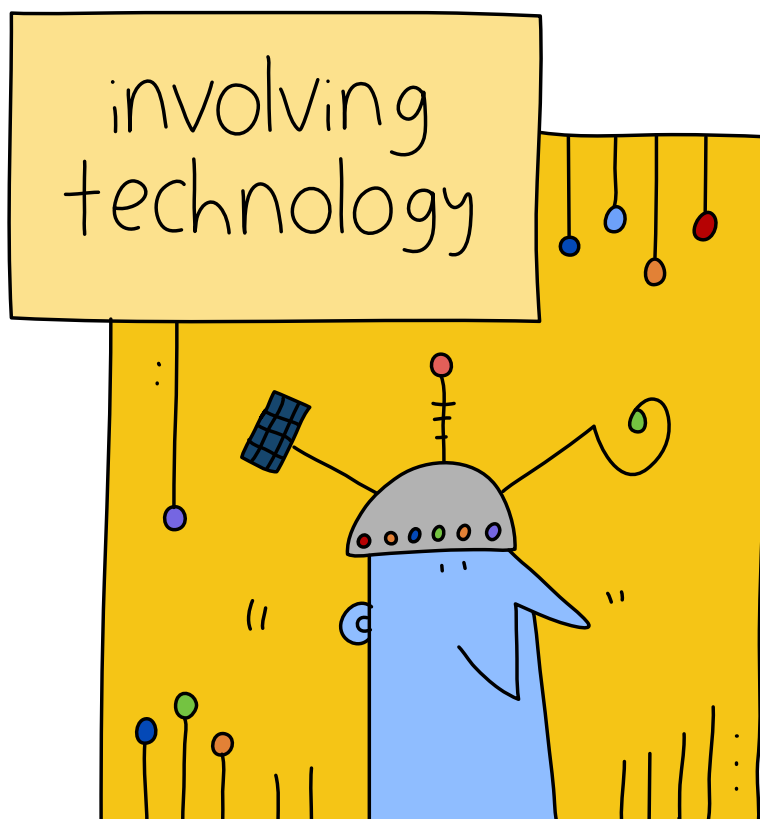
As you are considering future phases of scaling your idea, you will need to work closely with your comptroller and FM team to ensure that you can have the right funding source applied to your project.

# Involving technology

When it comes to new technology or non-governmental computers the best avenue is to test your idea off the NIPR Network. Your ability to work with your comm flight will be crucial in getting approval for exceptions for commercial internet and non-standard computing equipment.

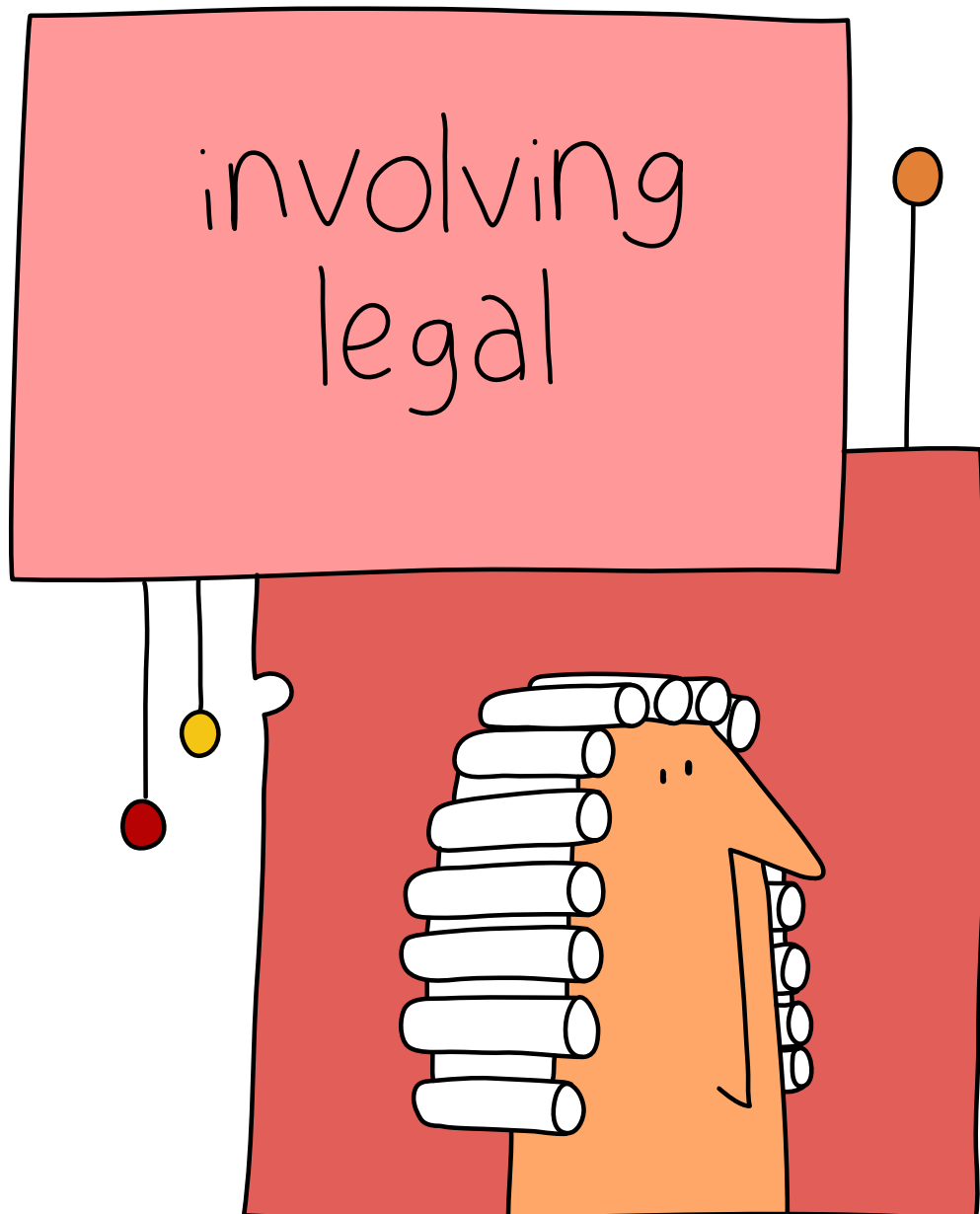
As a basic Rule of Thumb for software or computer hardware that was not purchased through AFWAY or approved by your comm flight: use it to test your ideas, run your 3D printer or write code, but do not attempt to connect it to the AF network! Use a commercial internet connection (approved by comm) or ask them to get you a cellular WiFi hotspot.

If you need to connect to the network or need to access data that is sensitive, plan to work with you comm flight and CISO and CIO representatives to get proper approvals and ensure security controls are applied. Check out the Makerspace and IT Infrastructure guide for a Spark Cell.



# Involving legal

Although it is unlikely that there will be many legal issues presented during the early phases of solution development, check in early with the Office of General Counsel (“OGC”) to ensure compliance with applicable law, regulations, and policies. As you continue to develop and test your solution, you will want to regularly engage your legal reps.



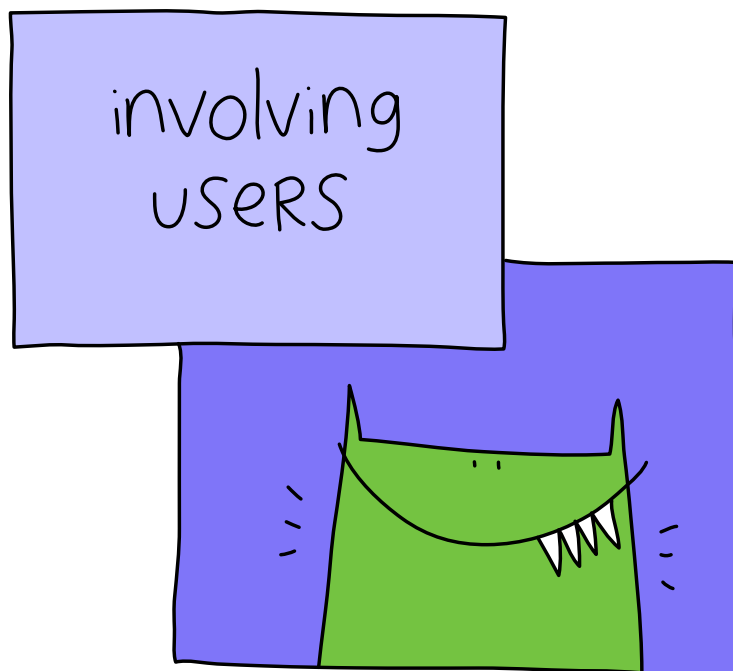
# Involving users

Finally, although it may seem obvious, make sure to involve your users. Steve Blank, one of the leading voices on entrepreneurship, has said that the key to startup success is to “Get Out of the Building.” By that, he means, that successful startups focus on engaging end users and customers early and often. But, don’t always try and pitch your solution; instead, focus on listening to the users and understanding their needs.

A key part of improving processes involves getting out and walking and observing the process in action. It’s important to go see, ask questions and to show respect to those performing the work when observing the process. The goal of this walk is to understand the behavior of the process and of the process performers. On your end-to-end walk of the process you are really seeking to understand two key things:

1. What does our customer want? (Voice of our customer or VoC)
2. What does our process deliver? (Voice of our process or VoP)

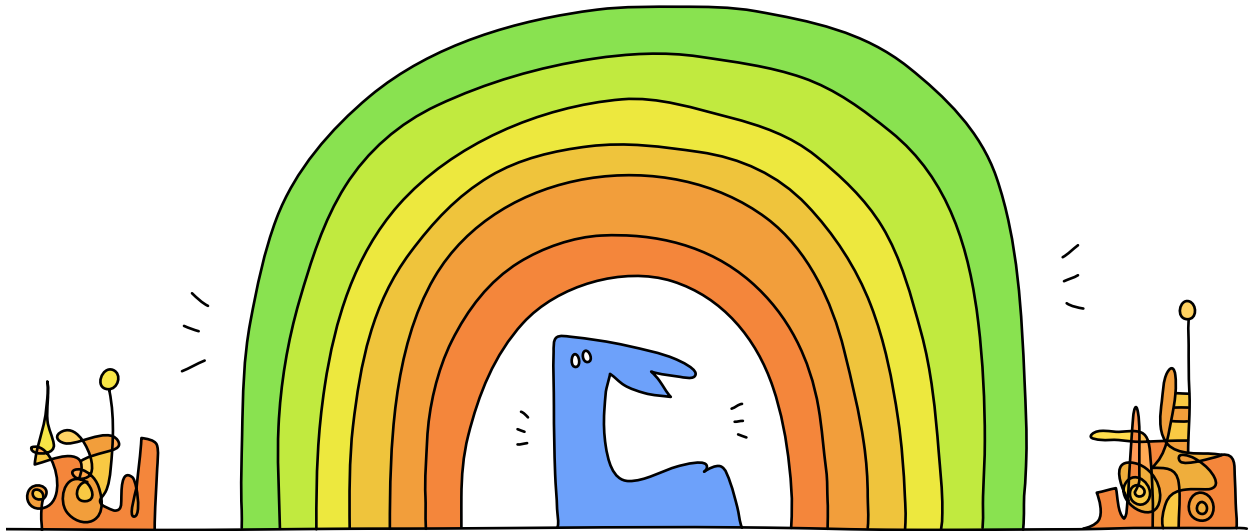
Once we understand VoC and VoP we can understand the delta between the two and begin using our eight-step approach for improving processes.



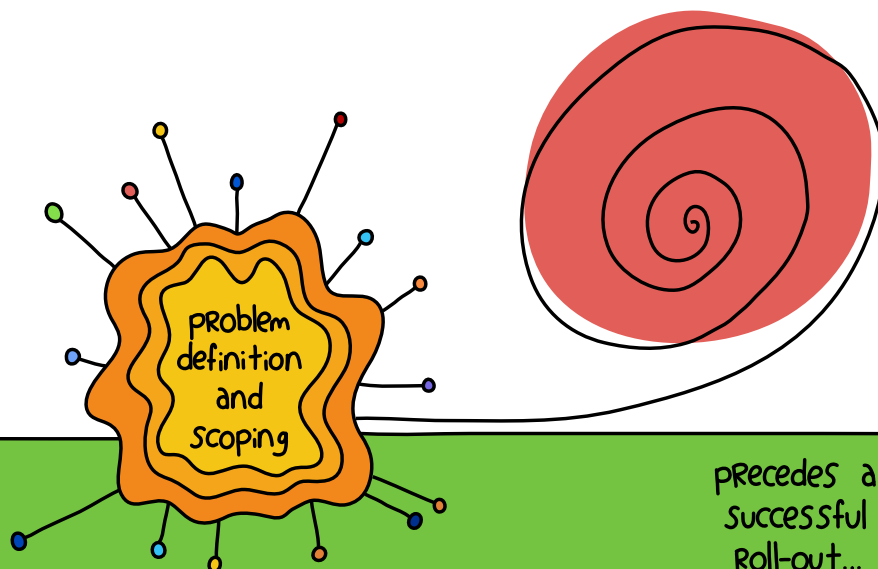
# PHASE THREE:

## PROTOTYPING

find the Right solution  
and show success

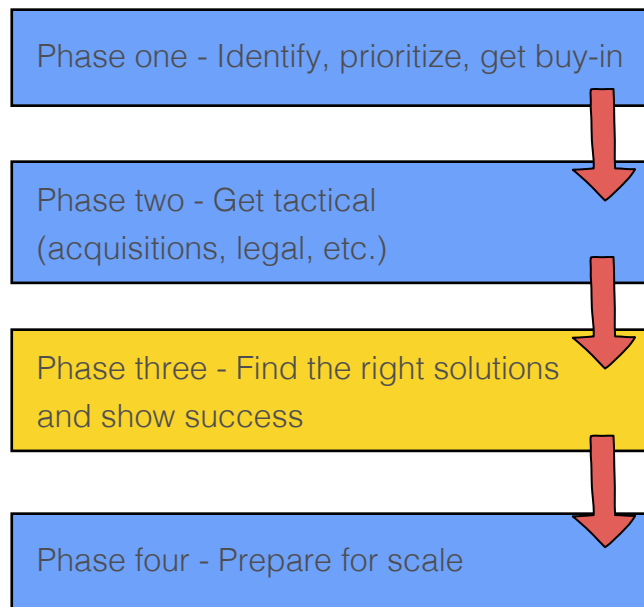


After you have identified the proposed solution and engaged your core team, it is time to find the right industry partners to help you deliver it. Successful delivery requires market research and a solid roll-out strategy. It also requires that you track and measure your progress. In this chapter, we cover the steps you will need to take to bring your idea to end users, as well as the methods to begin to share and scale your solution.

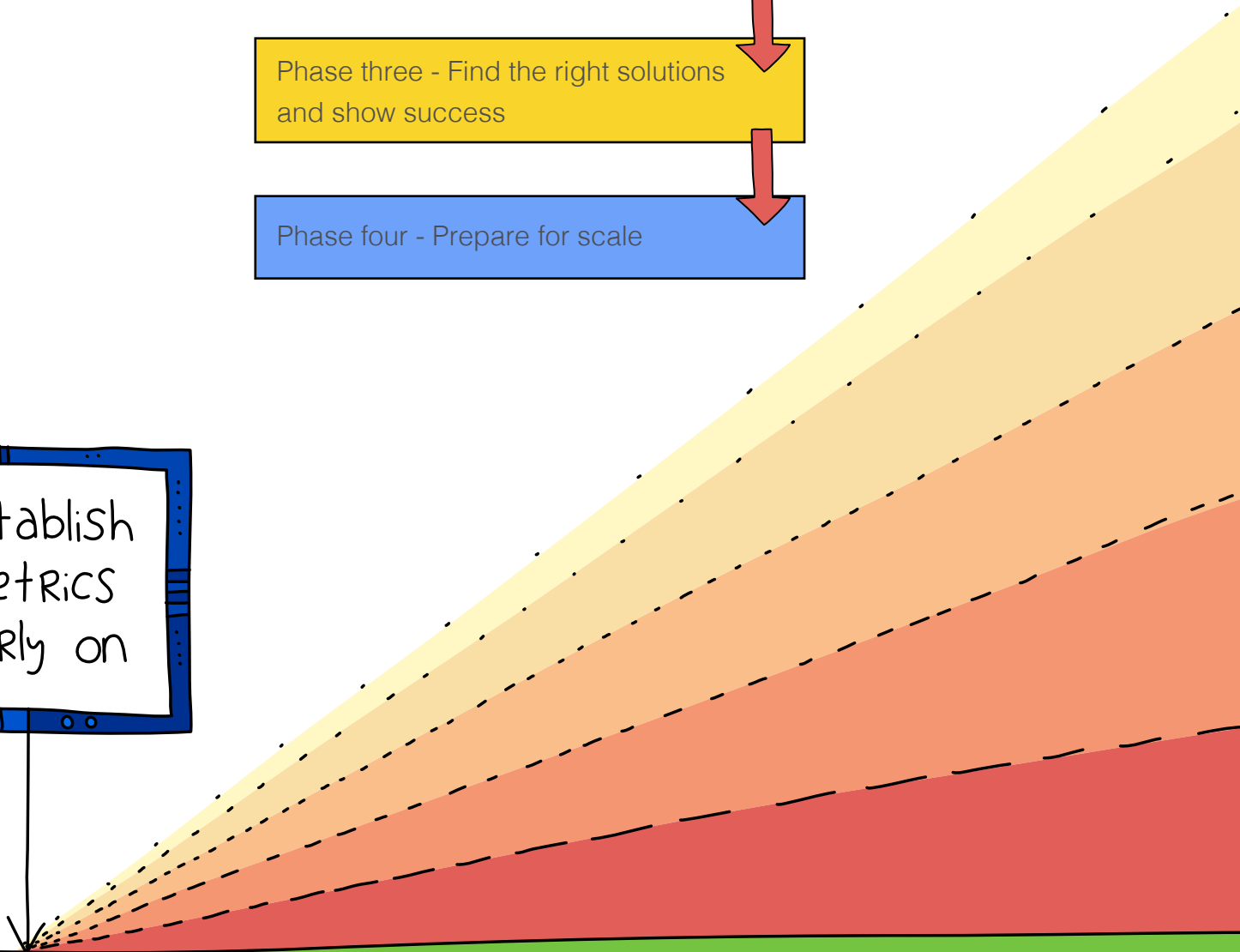




Early on, you will need to establish metrics and goals early on so that you can determine whether your solution is working for your users. Make sure that your metrics are reality-based. Your goal should not be to prove how great your idea is, rather to validate that you have found an effective solution to a common problem.



establish  
metrics  
early on



# Conducting effective market research as part of an innovative acquisition

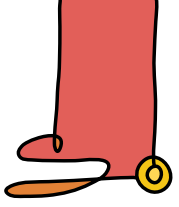
Market research is the continuous process of collecting and analyzing data on products, services, business practices, and vendor capabilities to satisfy agency needs. Simply put, it is learning about your environment to make informed decisions about the acquisition of goods and services.

Although market research is treated like a “chore” in many government procurements, it should be the foundation for building an effective solicitation and a successful contract, and it is critical to the success of technological innovation.

In addition to the legal requirements for conducting market research as part of an acquisition, it will:

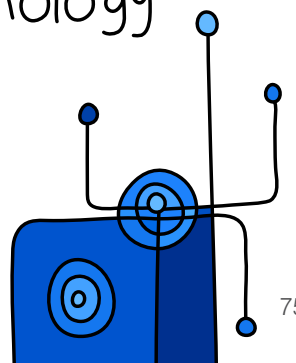
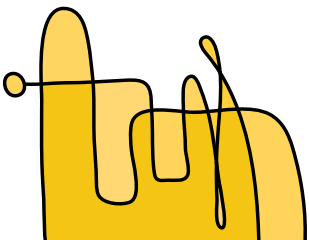
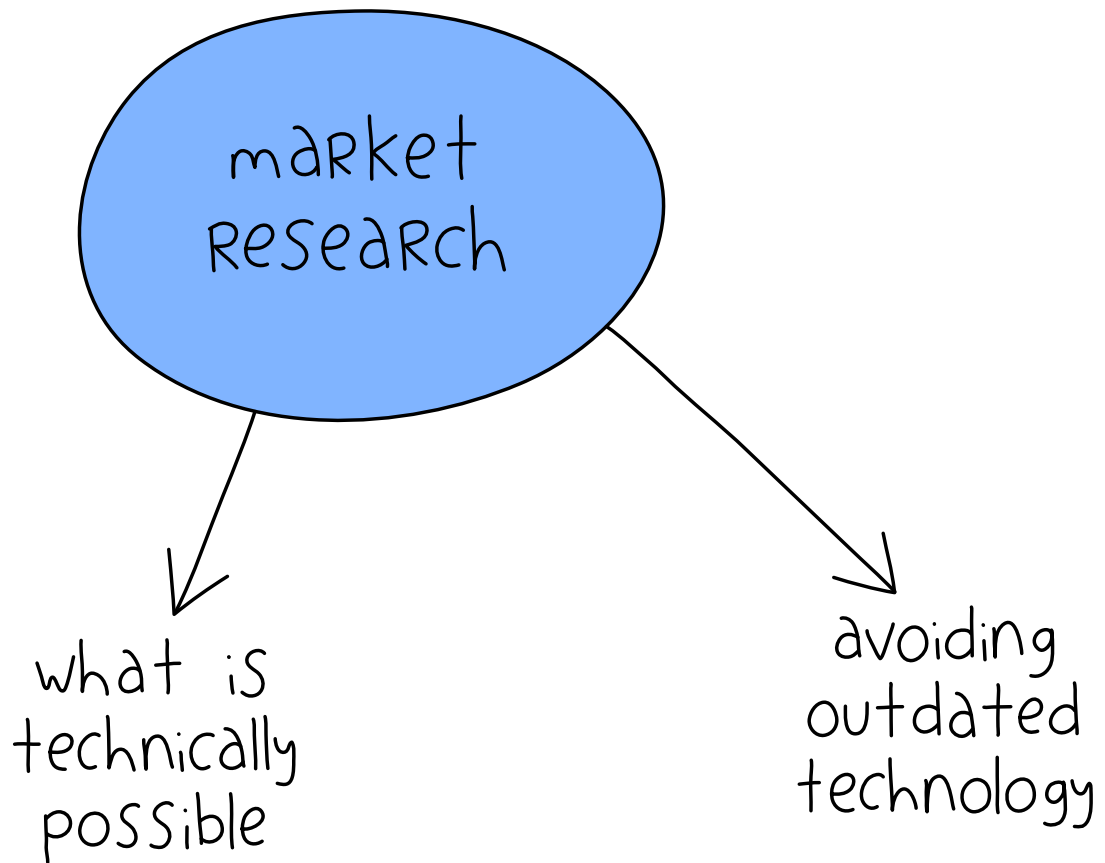
**1. Illustrate the art of the possible.** Without proper market research, you might not know what is technologically possible. Teams may think “X” is a great solution without realizing that “Y” — an even better solution — exists. As a result, you may improperly draft requirements, or risk using outdated technology before you even start your project.

**2. Let the perfect collaborator know you exist.** Most innovative technology vendors are not looking on sites like [FedBizOpps.gov](https://www.fedbizopps.gov) ([FBO.gov](https://www.fbo.gov)) and responding to traditional market research tools, like Requests for Information (RFIs). Therefore, they might not even know that you have requirements they could help solve.



When doing your market research you may find a company or brand that seems to solve your problem pretty well, however there is rarely only one company or brand of equipment will work. Competition is good for innovation: you do not know what is out there until you go through the process to get bids. Also, do not assume you need to hire a contractor to deliver a complete solution. If you can purchase the parts/hardware or “things” you need (through the appropriate means) there is a good chance a team of smart Airmen can figure out how to make it all work together.

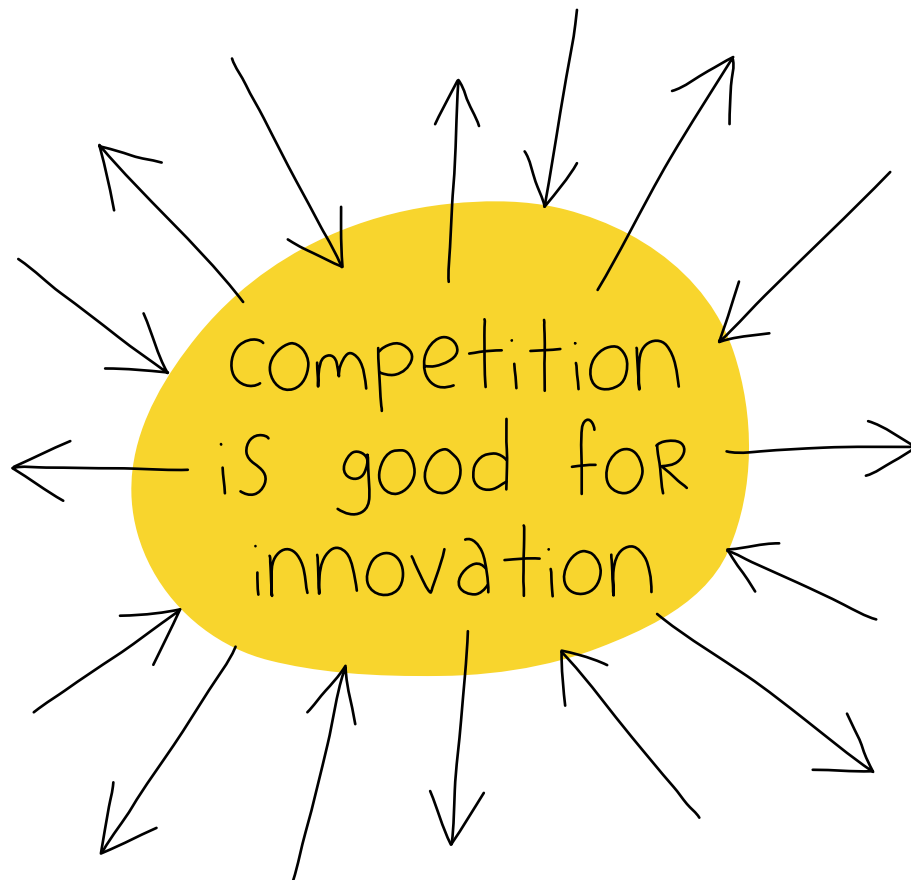
the art of the possible:



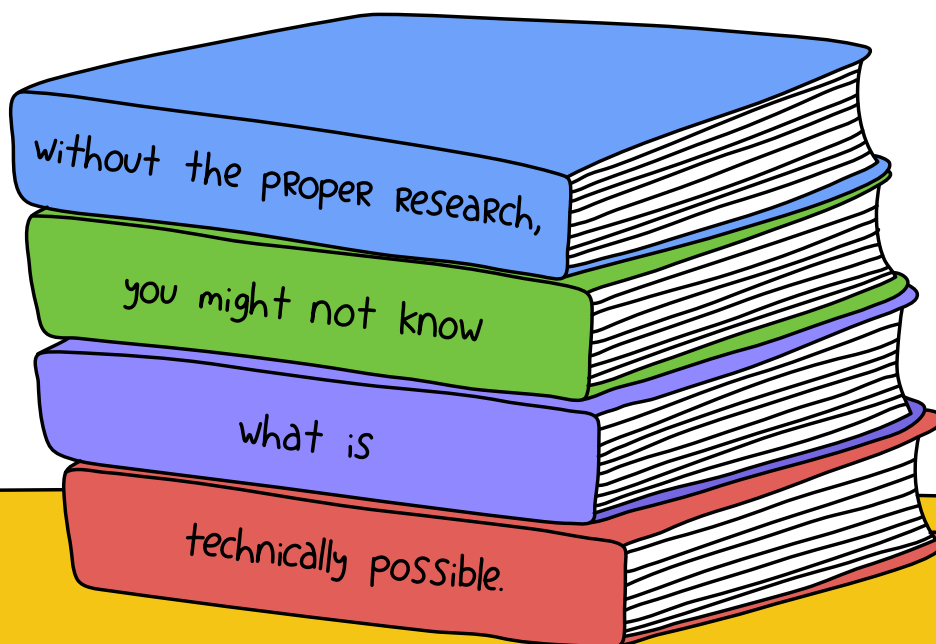
# Techniques for innovative market research

There are numerous techniques to conduct market research. Traditional methods include sending out as Sources Sought notices and Requests for Information. There are also myriad “innovative” techniques to conducting market research that can help make your acquisition more effective. Connect with AFWERX to learn about the latest tools, we have available for you to conduct market research across a broad range of companies ([support@afwerx.af.mil](mailto:support@afwerx.af.mil) and include “Market Research Opportunities” as your subject line).

Also, learn about Spark Colliders.

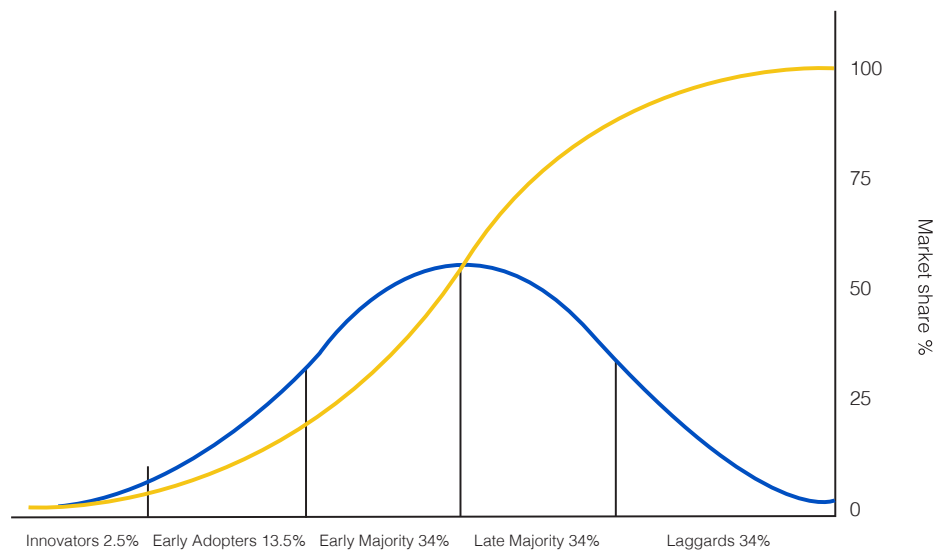


Traditional methods	Innovative methods
<p><b>Investigation and discovery.</b></p> <p>Looking at other procurements, search engines, industry compilations (e.g., Gartner “Magic Quadrant”)</p>	<p><b>Accelerators and Venture Capital (VC) firms.</b></p> <p>Communicating with accelerators and VCs can help predict where new capabilities may exist.</p>
<p><b>Sources Sought / Requests for Information.</b></p> <p>Written requests to industry seeking feedback on draft requirements or acquisition strategy.</p>	<p><b>Publishing in trade-specific publications.</b></p> <p>Most industries have trade-specific publications (e.g., Techcrunch or Wired for the technology sector) that may be a good source of communicating directly with potential industry partners.</p>
<p><b>In-person meetings or trade shows.</b></p> <p>By attending conferences, trade shows, or scheduling one-on-one meetings, you can gain deeper insights into particular companies’ capabilities.</p>	<p><b>Tech tourism.</b></p> <p>Travel to tech hubs and, in each city, visit a handful of emerging technology companies at their offices to see how they operate.</p>
<p><b>Industry Days.</b></p> <p>By hosting public events inviting industry to learn more about government’s requirements.</p>	<p><b>Reverse industry days.</b></p> <p>Flipping the script, reverse industry days invite industry to identify and track opportunities, pricing, preparing proposals, and various contract performance considerations to help the government shape its acquisition strategy.</p>



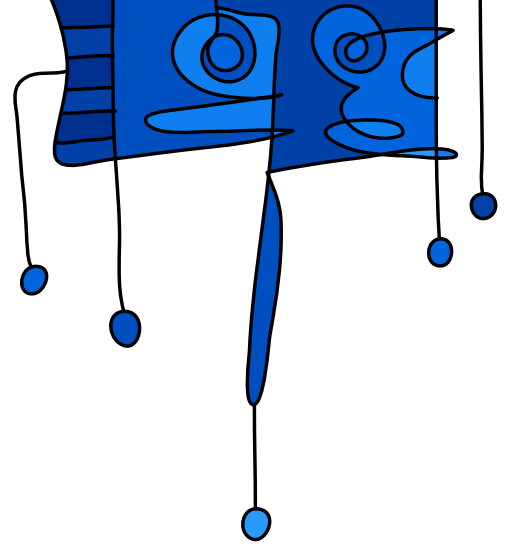
# Have a solid “roll-out” strategy

Successful innovations do not happen overnight. They require adoption over time and, to achieve adoption over time, you need to have a strategy. Nearly all changes follow an “innovation diffusion” curve, as seen in the figure below:

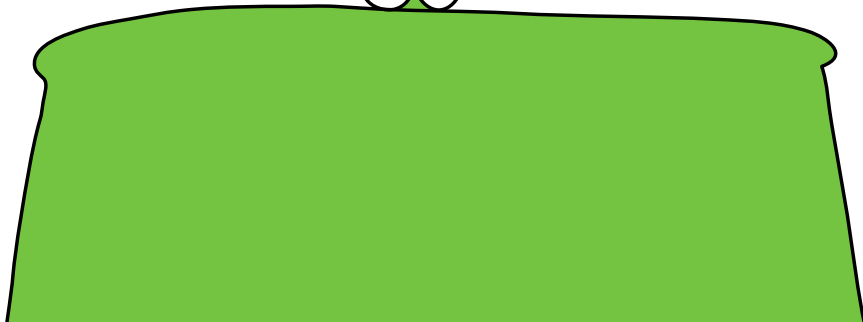
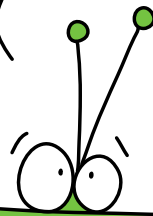
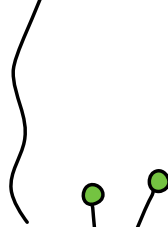
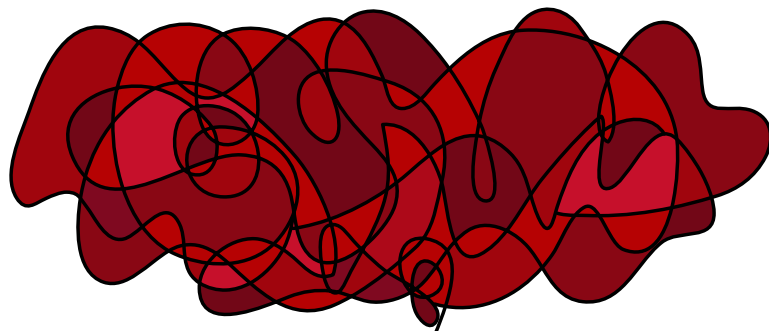


By recognizing that adoption over time relies on early adopters, part of your strategy needs to include efforts to gain feedback, information, and support from those individuals. During the early-adoption phase, you can adjust your innovative product or service to improve your solution.

Your strategy needs to acknowledge that rolling out to a broader group of users requires different approaches to increase awareness; overcome inertia, doubt, and uncertainty; and promote adoption. Universal adoption of your idea is achievable by thinking and mapping a plan to make the idea stick and then spread.



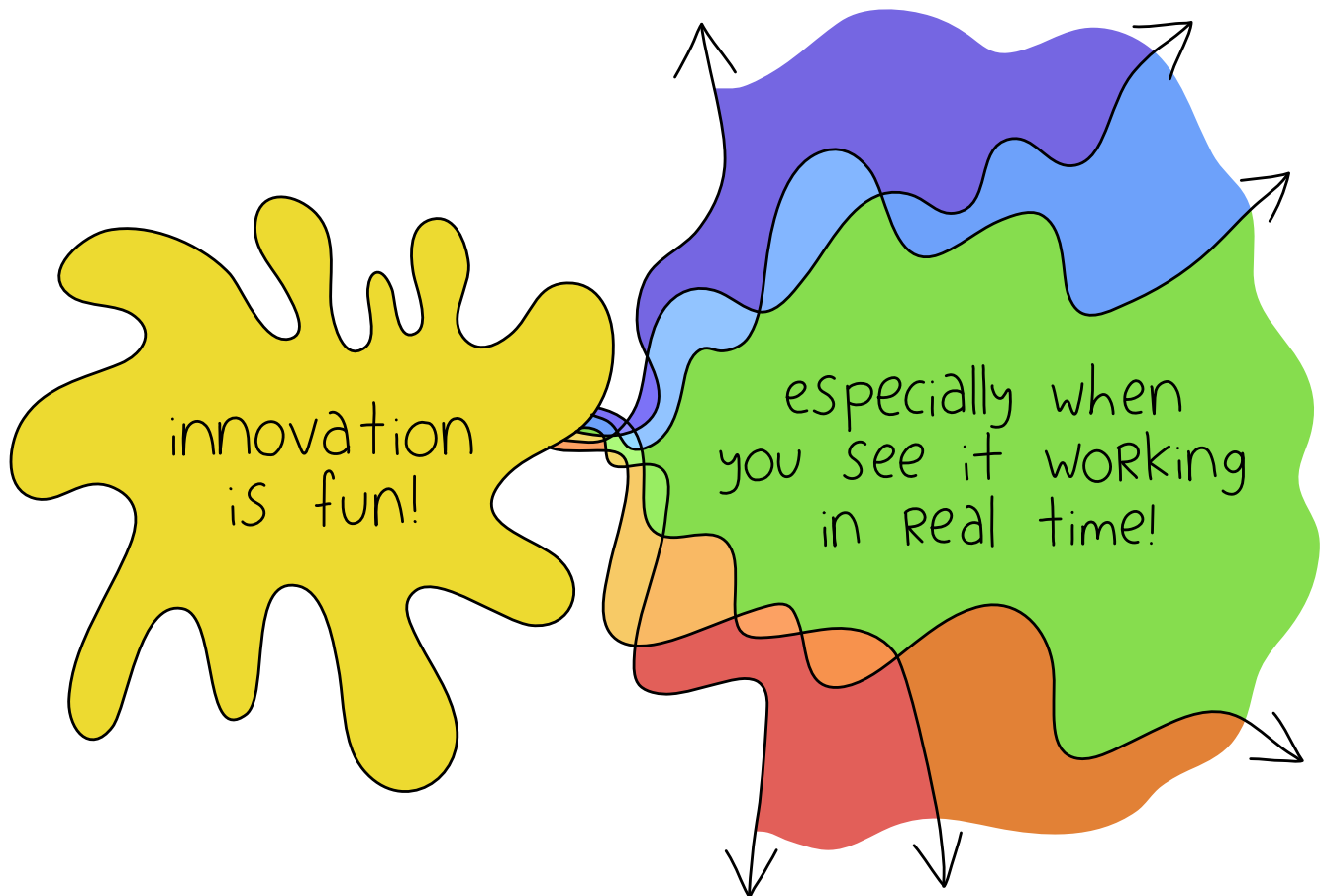
Successful innovation  
takes time!



# Deliver, track progress, and show success!

This is the fun part of innovation and improvement: actually seeing whether your proposed solution can solve the needs.

Effective delivery requires measurement to ensure that you are on the right track. You need both quantitative and qualitative metrics to guide your work. Although there is no single set of metrics that will be appropriate for all solutions, the metrics should tie back to both value to the user and impact on mission. You can't improve

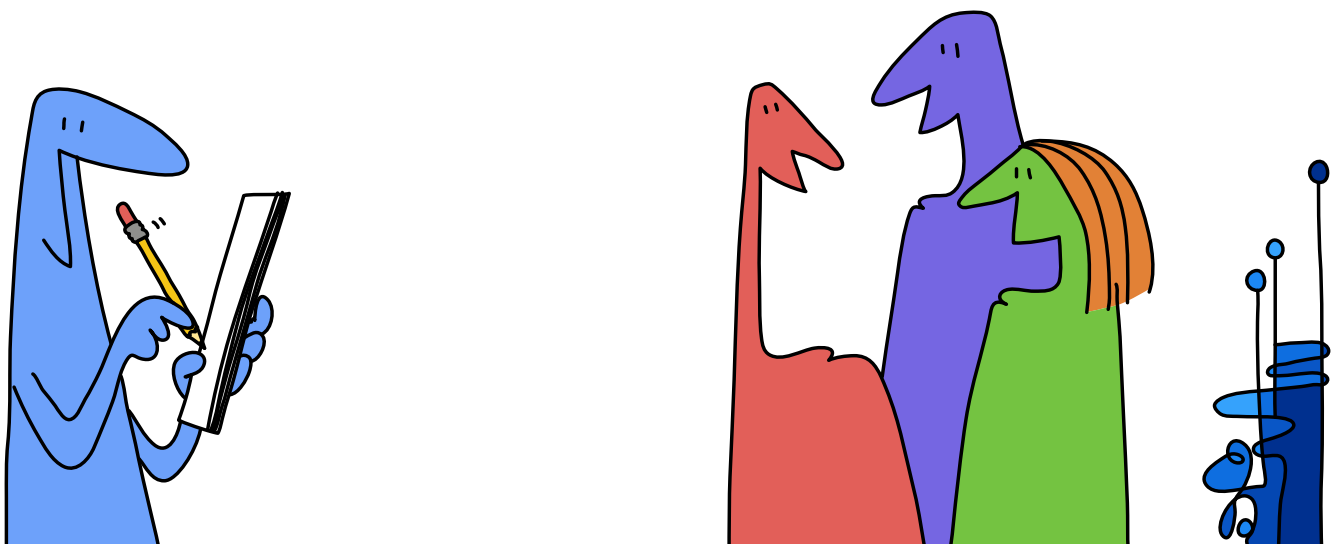




that in which you cannot measure. Steps three and seven of our eight-step approach for improving processes involve meaningful VoC and or VoP measurements. Quantitative metrics such as customer adoption, satisfaction, burden reduction, improved speed to mission, or cost reductions are all important, but qualitative metrics are also important for defining impact. For example, even if adoption is limited in the early stages, if airmen have a particularly strong emotional reaction—whether positive or negative—to a proposed solution, that is a useful indicator of future impact.

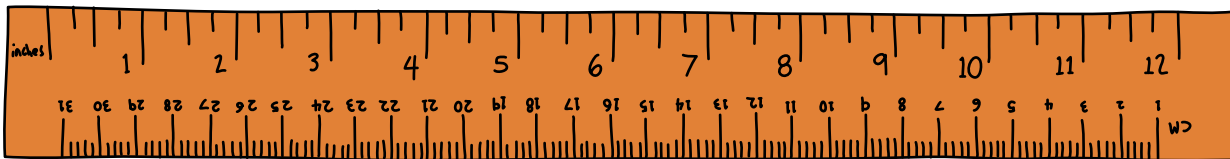
Even more important than metrics, though, is the process of observing users interacting with the proposed solution. By observing carefully how the solution is working “in the real world,” you can gain important insights into ways to improve the proposed solution or identify new pain points that can help lead to more valuable innovations.

“even more important than metrics, though, is the process of observing users interacting with the proposed solution.”



Regardless of what you measure, or how, you should make sure to make observations and document your findings. Through this process, you will have the critical information you need to make the case for continued funding or investment and receive additional inputs for new innovations.

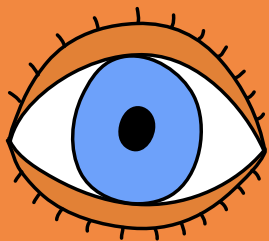
you can't improve



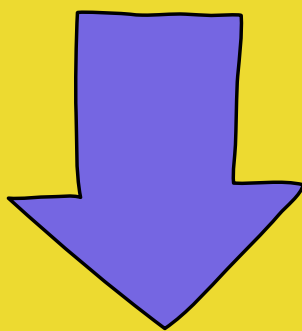
what you can't  
measure

It is perhaps more important to record when a solution doesn't achieve the outcomes that you expected. Remember, as Thomas Edison observed "I have not failed 10,000 times—I've successfully found 10,000 ways that will not work." If you find a way that will not work, that is a useful insight to share throughout the organization.

The essential thing is to stay focused on your vision, track your progress, and report your results. Doing this repeatedly leads to success.



stay  
focused  
on your  
vision




track  
your  
progress



Report  
your  
results

# PHASE FOUR:

prepare  
for scale



Congratulations! You've identified a problem worth solving, developed and tested a solution. Now comes arguably the most important—and hardest—part: scaling. With growth and scale come new opportunities and challenges.

# Sharing your Success or Failures

You may have submitted your project on the Airmen Powered by Innovation platform ([usaf.ideascale.gov.com](https://usaf.ideascale.gov.com)), there are specific questions to help you document what you have learned. The Outcomes stage is meant for you to share the failures and success of a project so the rest of the Air Force can learn and grow from this.



**SHARE  
YOUR  
SUCCESS**

# Developing a Communication Plan for Innovation Efforts

A Communication Plan establishes a framework to identify and communicate objectives/priorities, key audiences, messages, outcomes, communication channels and measures of effectiveness.

**IMPORTANT:** Consult with your PA office to begin developing your communication plan

## **Objectives:**

- Create buy-in and inspire support for innovation efforts and culture
- Craft appropriate messaging for key audiences
- Ensure quality and consistency of messaging
- Influence knowledge, attitudes and behaviors
- Identify stakeholders, influencers and audiences

## **Figure out Your Priorities:**

What are you trying to communicate and why? It is always best when you can link communication objectives to your organization's lines of effort to illustrate the priorities you are supporting.

Examples:

- Connect Airmen with a community of people who can help them solve problems
- Create buy-in and inspire support for innovation efforts and culture
- Empower Airmen to engage and leaders to take smart risks
- Educate Airmen, Supervisors and Commanders on how to use innovation pathways/capabilities to achieve their objectives
- Inspire an entrepreneurial and problem-solving mindset

## **Who are the Stakeholders/Key Audiences:**

For your messages to be effective, you first have to know your audience. Who are you communicating to/with? Be as specific as you can. If your audience has sub-audiences who care about different things list them out. Really think about this. What do they care about? What is their current level of knowledge and engagement with you? Why should they care about what you are doing? What problems do they face that you can help them solve?

Examples:

- Senior Leaders
- Intrapreneurs/Airmen
- Units/Organizations
- Industry Partners

## **What Messages to Send?**

What messages do you want each of your audiences to take away from your communication? A message should evoke an emotion, a reason why they should care. Always ask yourself, "So what?" In order to craft messages that resonate with your audience, you must know what makes them tick. Find common ground between disparate groups and focus on those (genuine empathy and similarity builds trust). Keep your messaging simple, concise and repeatable. Deliver your messages in a conversational manner.

Examples:

- Failure is learning, so learn fast to move forward  
You can't learn from mistakes without making them
- Work together to find a way to get to YES  
Find "NO" and kill it
- Your ideas matter
- Every Airman can create the change they want to see
- Coaches/mentors are available to help you



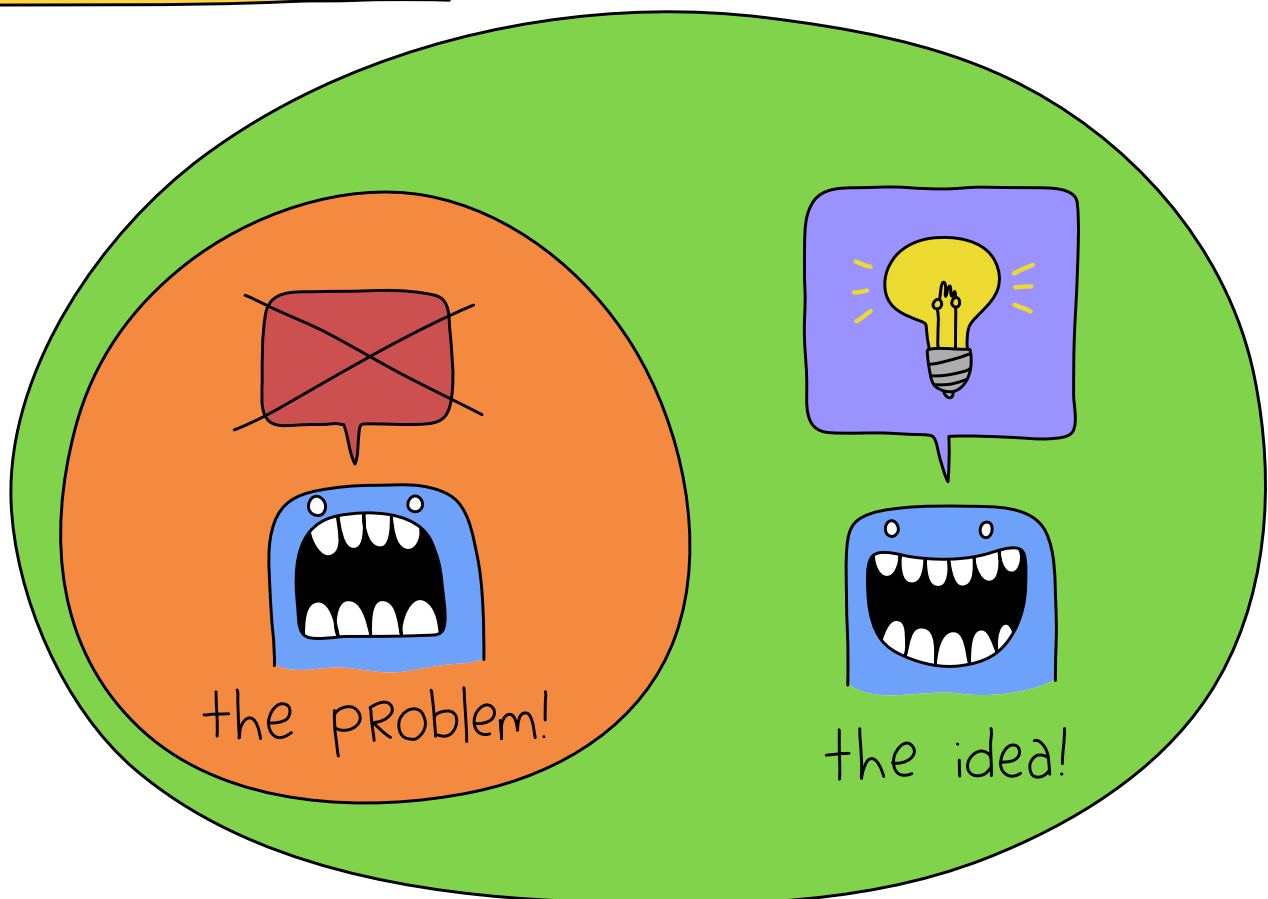
## What are the Desired Outcomes?

What results are you looking to achieve with your communication? As much as possible, develop outcomes that can be measured.

Examples:

- Advocacy
- Senior Leader Support
- Buy-in and a sense of ownership
- Funding
- Transition of idea to execution
- Develop understanding of “Why?”

the solution:



## Considering Communication channels

Determine the best mediums/platforms for delivering your messages. Think about where/how your audiences receive their information. Which platforms evoke a sense of trust with your audience?

Examples:

- Websites
- Press Releases
- AF New Stories
- Blogs
- Monthly Newsletters
- Monthly Senior Leader Updates
- Speaking Engagements
- Airmen Powered by Innovation Platform
- Air Force Portal
- Slack Workspaces
- Videos
- Infographics
- Email Campaigns
- AF Connect
- Social Media
  - Facebook
  - Twitter
  - Instagram
  - Linkedin
  - YouTube

## **Considering Measures of effectiveness**

How do you know what you are doing is working? Are you reaching your target audience? Your PA office will help you identify these measures.

Examples:

- Surveys
- Focus Groups
- Social Media Metrics
- Mainstream Media Metrics
- Vector Data
- Sentiment Analysis of Media Coverage
- Level of Involvement and Awareness

Resources:

- Most Important: Your Public Affairs Office
- Command Priorities/Lines of Effort
- AFWERX Website (and other innovation community websites)
- This Innovation Handbook 😊
- Communication Plans from other Spark Cells or innovation communities/ organizations

# Importance of documentation

Because you have submitted your project in the Airmen Powered by Innovation Platform ([usaf.ideascale.gov.com](http://usaf.ideascale.gov.com)) there are specific questions to help you document what you have learned. The Outcomes stage is meant for you to share the failures and success of a project so the rest of the Air Force can learn and grow from this.

Documenting how you got to where you are is an important part of shaping where you are going. Documentation helps prepare you for new opportunities that are aligned with your current success; it also helps remind you of your unique strengths. As Peter Drucker wrote: “it may be more important in innovation to build on one’s strengths because of the risks of innovation and the resulting premium on knowledge and performance capacity.”

Take the time to record what you have learned, how you have achieved it, where you have struggled, and where you think opportunities exist. It will make sure that you continue to grow effectively.

The eight-step approach for improving processes uses this technique of documenting clearly and cleanly in the following eight steps:

1. Clarify & Validate the Problem
3. Break down the Problem & Identify Performance Gaps
4. Set Improvement Target(s)
5. Conduct Cause Analysis
6. Develop Countermeasures & Implementation Plan
7. See Countermeasures Through
8. Confirm Results and Process Change
9. Standardize Successful Processes

The beauty of a well-produced eight-step problem solving model is that it serves as a one page storyboard of the whole approach. It provides a disciplined way of reporting on problems that encourages a disciplined way of solving problems. It eliminates the lengthy “death by PowerPoint” briefings in use today in that it forces the synthesis and distillation of the entire effort to be captured on a single side of a single piece of paper. This single piece of paper is approximately twice the size of your typical printer paper and is often called an “A3” due to the metric sized paper called A3. In fact, this eight-step problem solving model is often also just simply referred to as an A3.

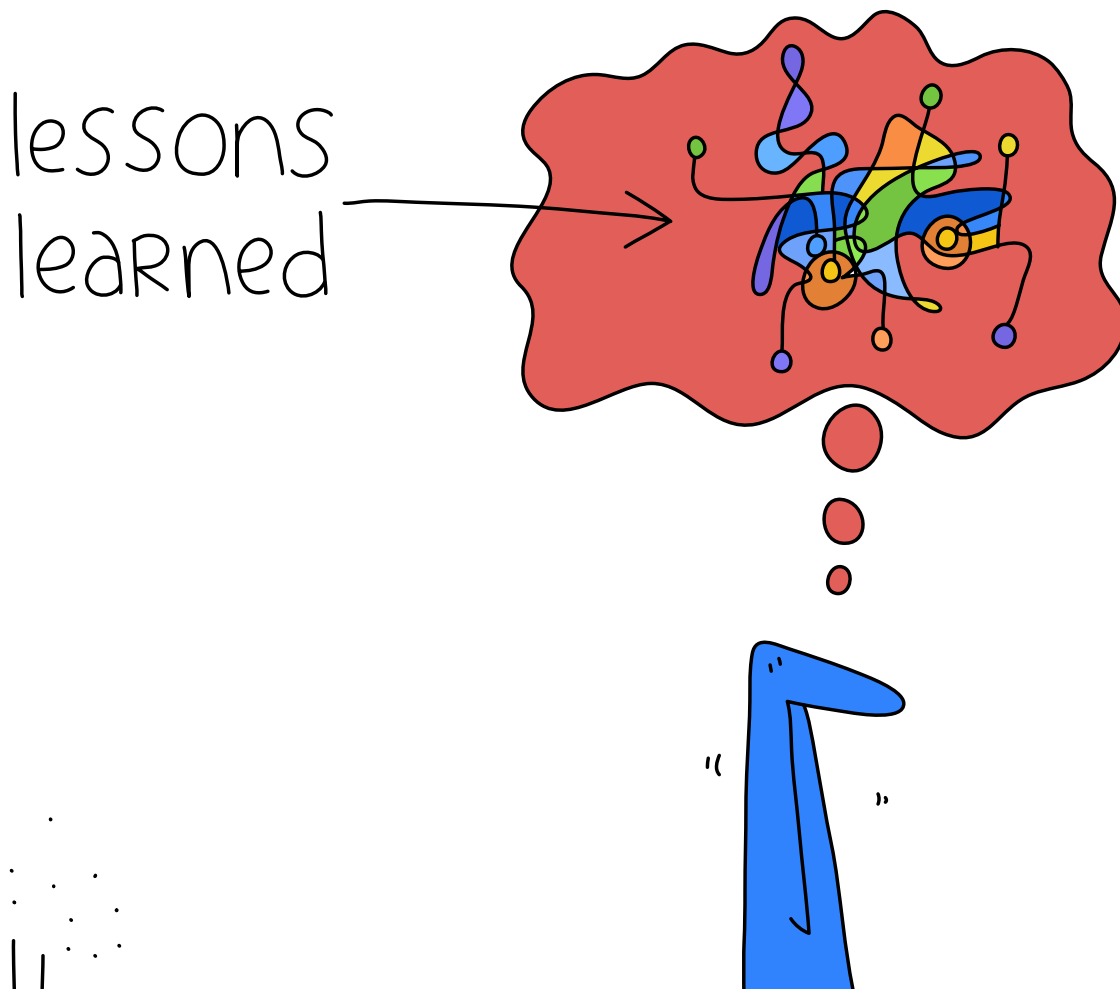
Using our eight-step A3 provides clear context for issues and recommendations for leadership decision making and execution that improves our business process. When applied properly and consistently, CPI methodologies and tools help ensure problems that are solved, remain solved. The Air Force advocates using this standardized eight-step framework (A3) as the umbrella for Airmen to facilitate improvement efforts using a host of tools that help identify mitigate root causes so our processes remain improved.

# Acknowledging “lessons learned”

When thinking about the next phase of your solution, if you only focus on the successes, you may miss important insights and opportunity for improvement. Make the extra effort to acknowledge “lessons learned”:

- What did not work?
- What was unexpected?
- What things would you do differently if you could?
- What will you do differently next time?

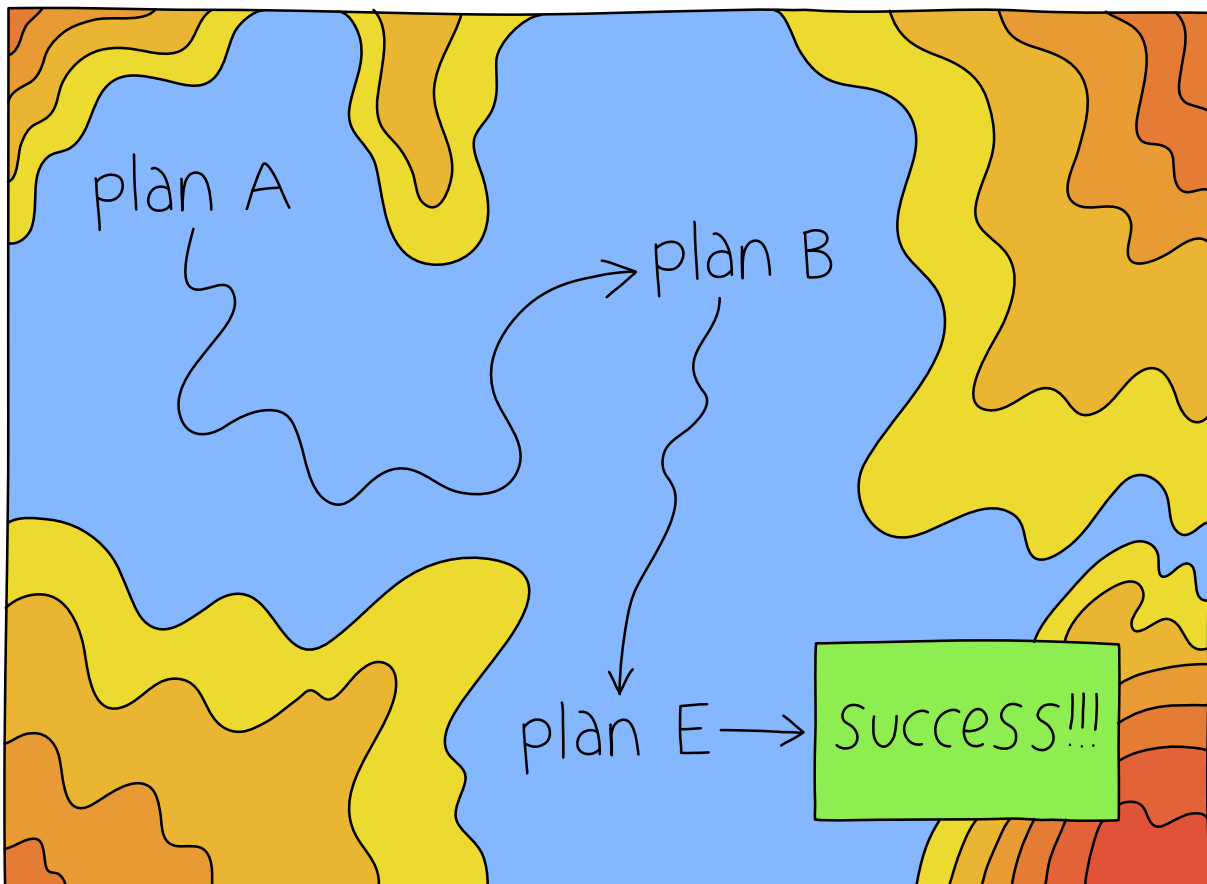
By exploring these questions--and sharing the answers with others—you can develop better practices over time and identify new potential solutions to higher-value problems.



# Developing a product strategy and customer acquisition strategy

*“Logistics Planning - The wisdom to realize when working on plan A, you’ll run into conflicts in executing plan B and being properly prepared, and successfully executing plan E”*

*- Capt John P. Laverdure*

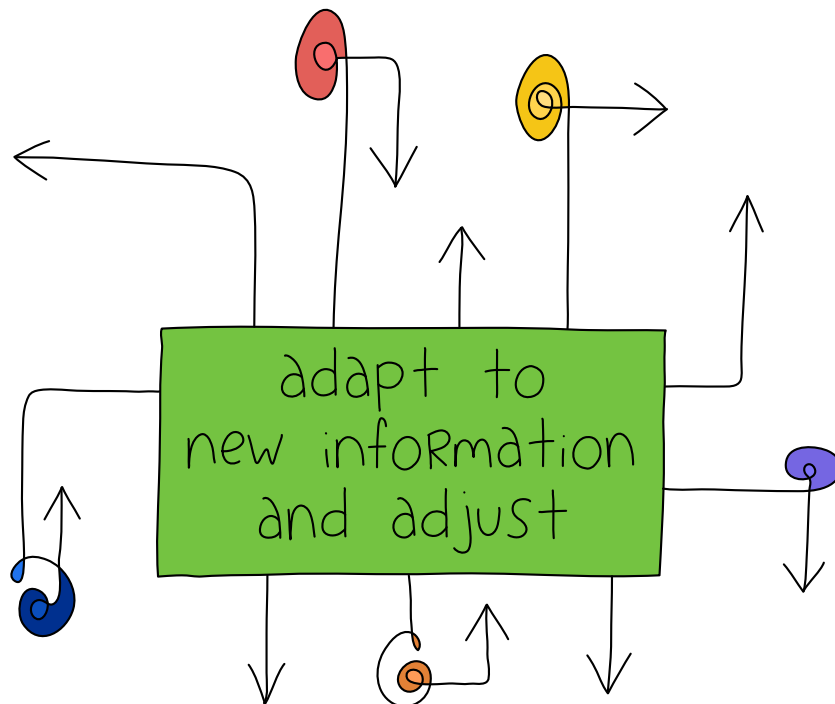


# Value of product strategy

Earlier, we discussed the importance of developing a strong product vision, the “North Star” for your solution. As you move to scale your solution, it’s necessary to develop a product strategy for your solution.

There is no single explanation for what constitutes a good product strategy, but two leading voices help provide some guidance. Melissa Perri explains that a product strategy is “a system of achievable goals and visions that work together to align the team around desirable outcomes for both the business and your customers.” Marty Cagan describes a product strategy as a “sequence of products we plan to deliver on the path to realizing the vision.”

The product strategy should be a description of how you will achieve your vision. Your strategy will likely change over time as you gain more insight and new capabilities, and it will be informed by both the unique challenges underlying the problem, the existing product and environment, and the unique capabilities of the product delivery team and organization. Similar to logistics planning, developing and executing product strategy requires a willingness to adapt to new information and adjust, while still delivering on the vision.





## What is a product roadmap?

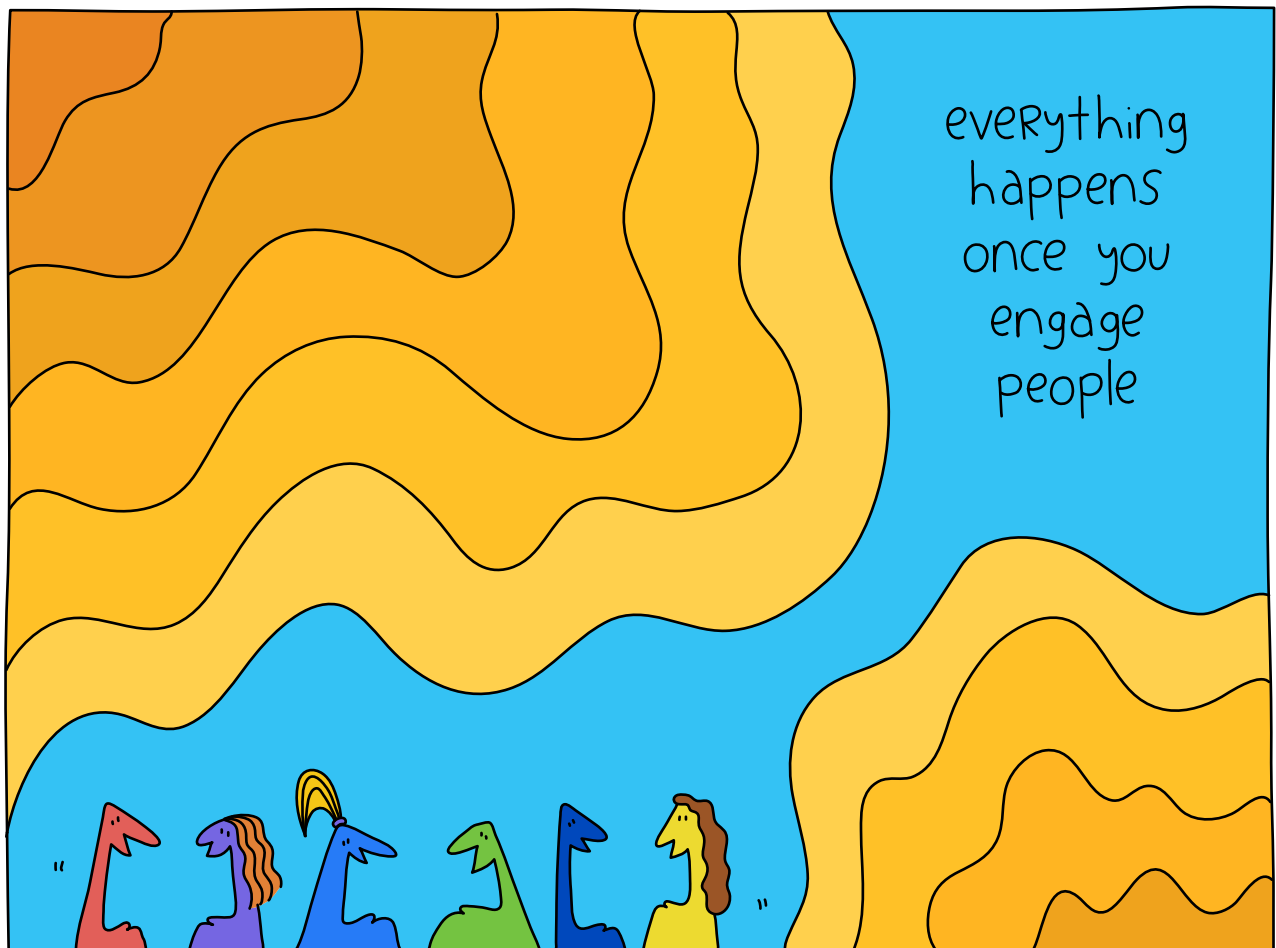
The classic expression of product strategy is a roadmap, which details a sequence of measurable goals and expected outcomes. An agile roadmap will evolve throughout the life of any product you are working on, but should always represent the latest strategic thinking. Make it public and be clear about the bets you are making, who they are designed to help, and how you know you will win or lose. Your roadmap should be designed to meet the specific needs of your product's internal and external stakeholders and may look different from other product roadmaps in terms of structure and presentation.

Because we are agile in our approach, it's important for the everyone to understand that a roadmap is not a promise: it is a prediction, subject to change and typically created with the best available, yet imperfect, information. Take time with the team and stakeholders at regular intervals (every three months or so) to re-evaluate your strategy and make sure you all understand whether you are moving in the right direction. This ensures that everyone is already aligned if and when you have to pivot in a different direction.

Source: <https://product-guide.18f.gov/we-do-product-well/communicating-clearly-and-often/> 18F Product Guide

# Considering customer acquisition

Even though you have already identified early adopters for your solution, you will want to spend time thinking through ways of acquiring new end-users to try out your solution. Remember that after the early adopters, the remainder of the diffusion curve is actually the majority of the users. As you think about scale you will need to come up with different approaches to attract active and engaging new users to your solution.



Part Three

---

# Spark Cells

# How to start a Spark Cell

## **Overview (What):**

This is a quick synopsis of what it takes to create a Spark Cell from the ground up.

## **Objectives (Why):**

- Spark Cells enable Airmen to develop rapid innovative solutions to Air Force challenges to create the faster, smarter Air Force of the future
- Spark Cells bring ideas, people, funding and resources

## **Partnerships**

Local and Non-Local Businesses - Collaboration of ideas, process refinement and consulting opportunities, DoD Partnerships for accessible tech, relationship building with DoD-invigorating small business partnerships and competition in tech development, Transition Partners for AD to Civilian

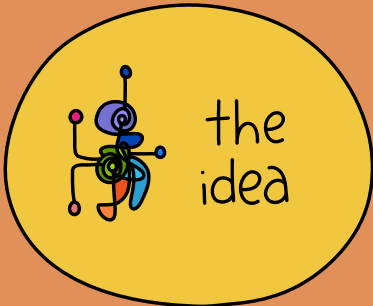
## **Local and non-local academia**

Collaboration of ideas and problem areas, “Free Chicken” in research and development, Recruitment of future members of the DoD, Retainment of current members of the DoD, Naturally advocates and promotes the face of the Air Force

## **Joint Partners**

Collaboration, current project ideas, sharing of success and failures (LL), sharing of partnerships and academia, and better problem curation.

the campaign



← the point  
it needs  
to reach in  
order to  
take off

Success

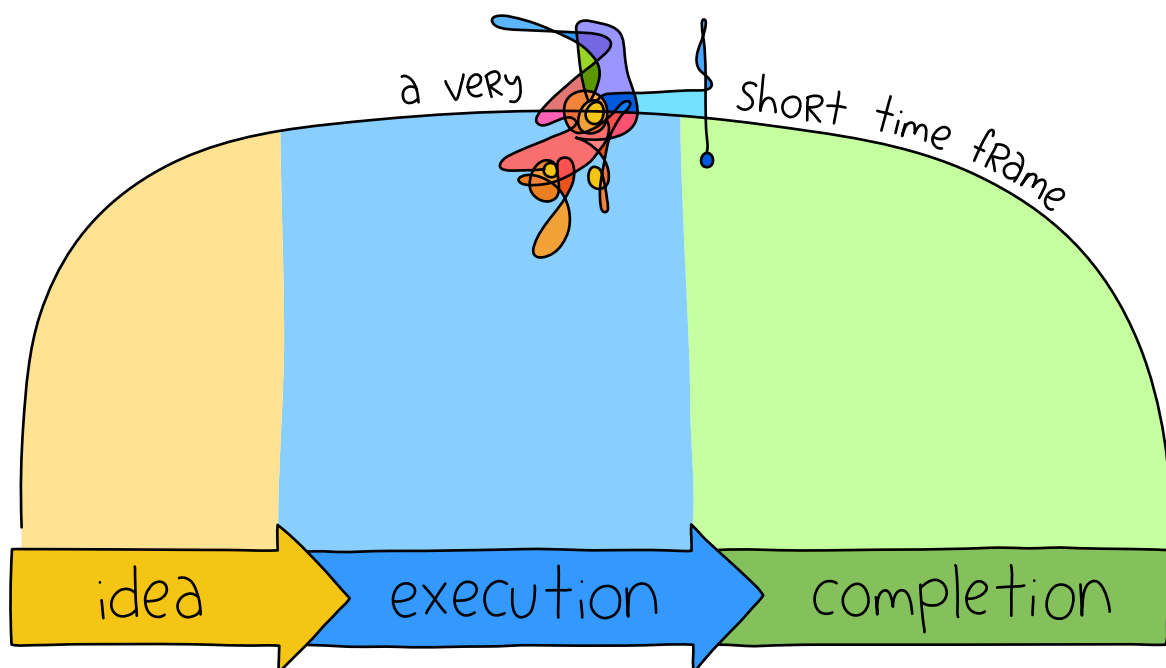
# Igniting a Spark Cell

## Overview (What):

This is a quick startup guide outlining the required infrastructure and critical enabling competencies to create a successful Spark Cell.

## Objectives (Why):

- Spark Cells enable Airmen to develop rapid innovative solutions to Air Force challenges to create the faster, smarter Air Force of the future
- Spark Cells bring ideas, people, funding and resources to solve tactical-level problems.
- Spark Cells are quick start producers, taking solution ideas from concept to execution in a very short time.

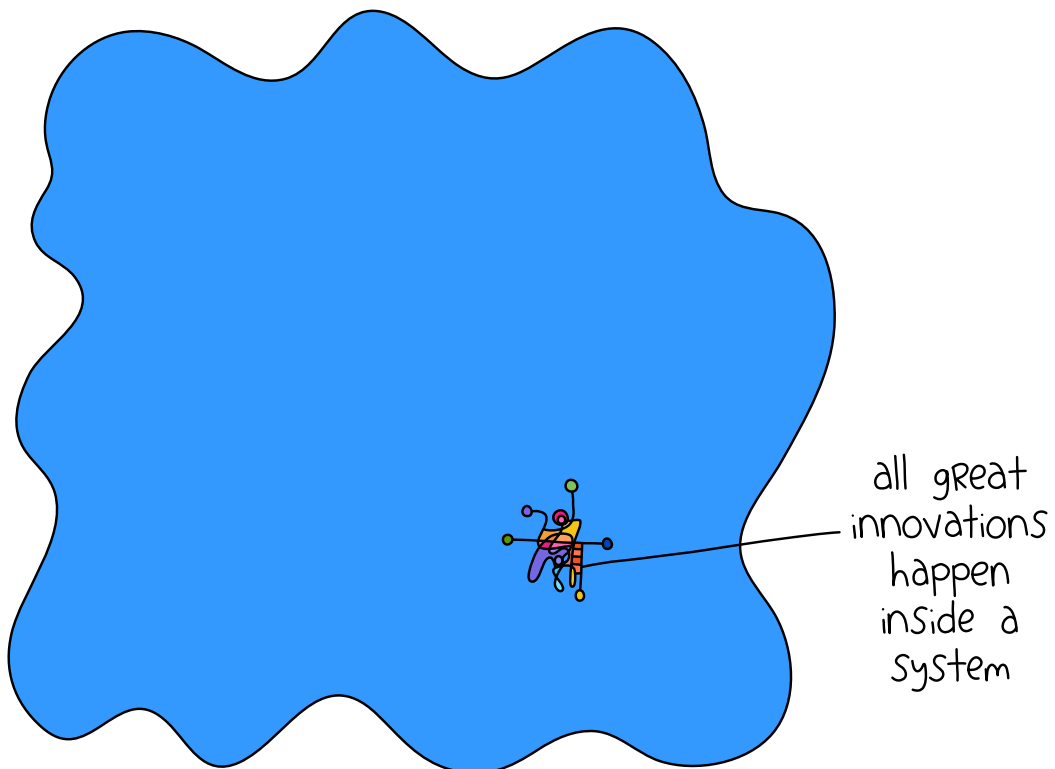


## Required infrastructure

- Goal Statement
- Innovation Champion
- Spark Cell Lead
- Charter
- Support Agencies
- Process to ID/Prioritize Problems

## Must do enablers (how to execute)

- Acquiring Consistent Working Space
- Clear, Concise, Communication
- Networking (Embedded into Ecosystem)
- Education
- Partnerships



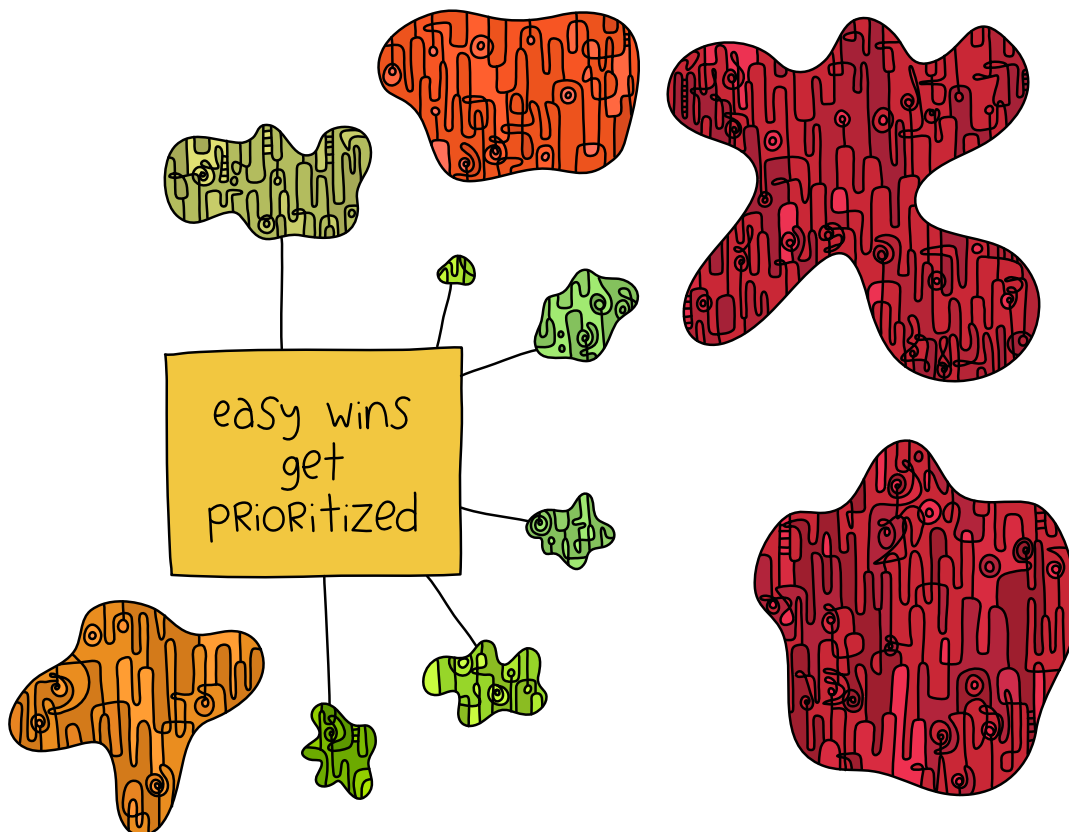
# Spark Cell - going pro

## Overview (What):

Spark Cells are manned and motivated and are ready to establish their presence. This guide helps you make that big jump to becoming a big deal.

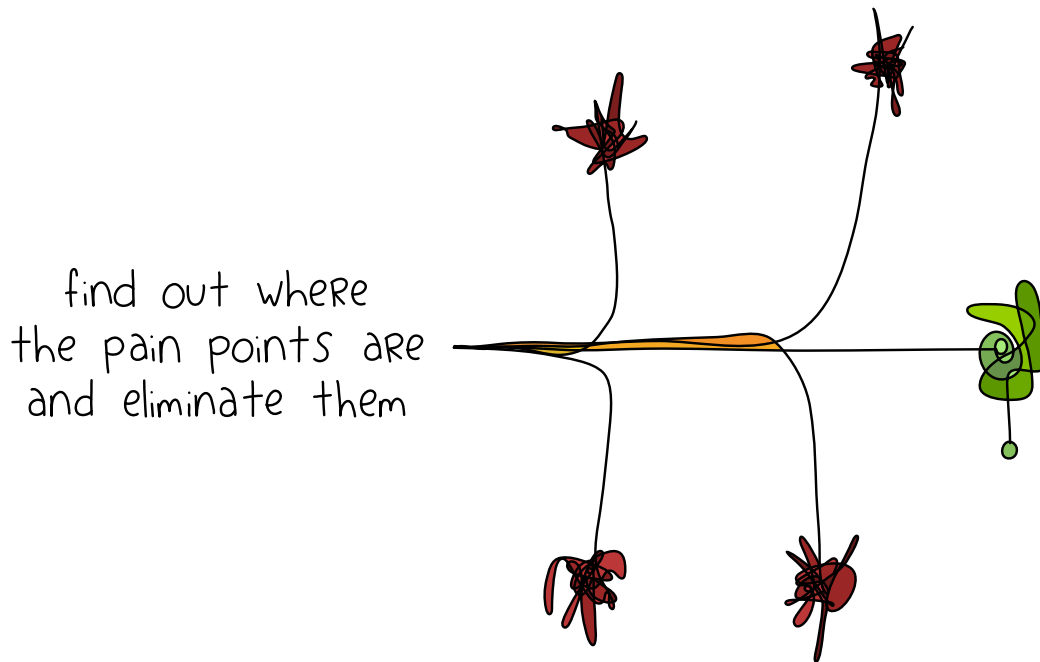
## Objectives (Why):

Similar to a start-up needing to build an MVP/demo to get their name out there and generate buzz, a Spark Cell needs big early wins to demonstrate their value to their wings.





## CREATE A WAY TO SOURCE PAIN POINTS FROM YOUR PEOPLE



### **Pain Point Funnel Examples:**

Grass Roots – walk around work centers and ask airmen

Airmen Powered by Innovation Platform – Start a campaign and publicize it via PA, Commander' calls, base announcement

CPI Partner – Talk to the base's CPI Green and Black belts

Social Media – Look on forums to see what people are complaining about

Surveys – DEOC Surveys reveal a lot of pain points

### **Filter/Sort**

Organize the pain points to find trends or common themes.

## Project Formation

You can't solve every problem at once, pick some big ones

Prioritize easy wins

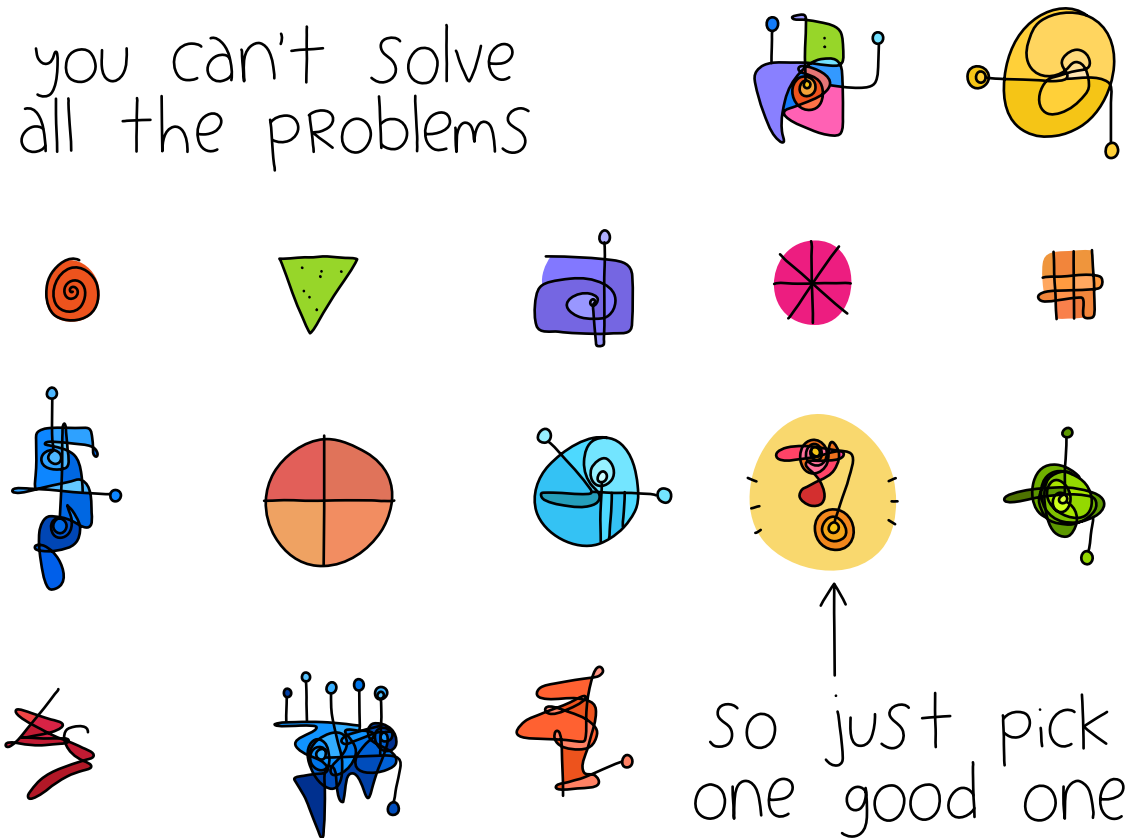
Big Impact, easy metrics, readily avail funds

Prioritize unit mission – Every unit should have desired end states.

## Transition to Project

A project needs: Spark Cell guidance, champion adoption (if the unit commander isn't interested you have to get them interested or move on), project led identification (the Spark Cell shouldn't lead the projects, a motivated End User will pay dividends throughout the project).

you can't solve  
all the problems



**Now that you've selected a few easy win projects, here's how to get them moving**

**Problem curation**

Root cause analysis

**Customer/Target audience discovery**

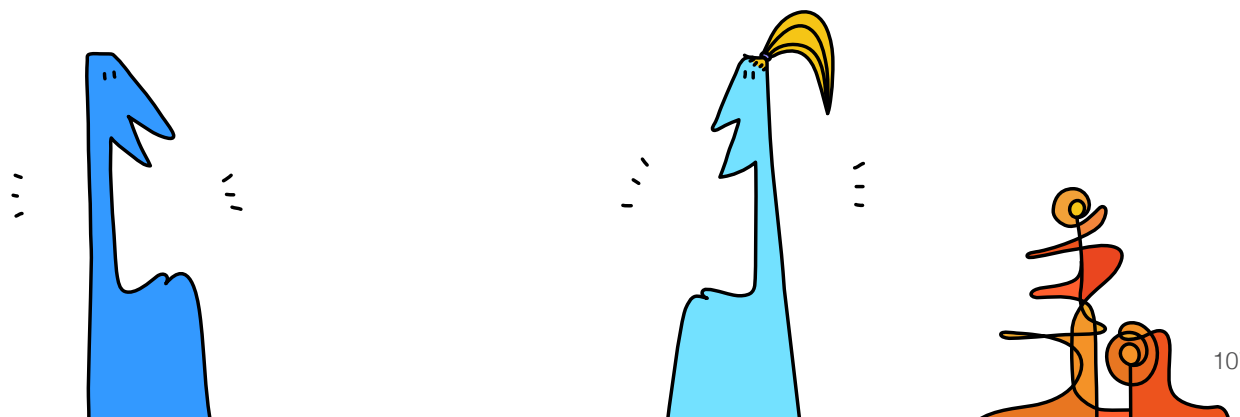
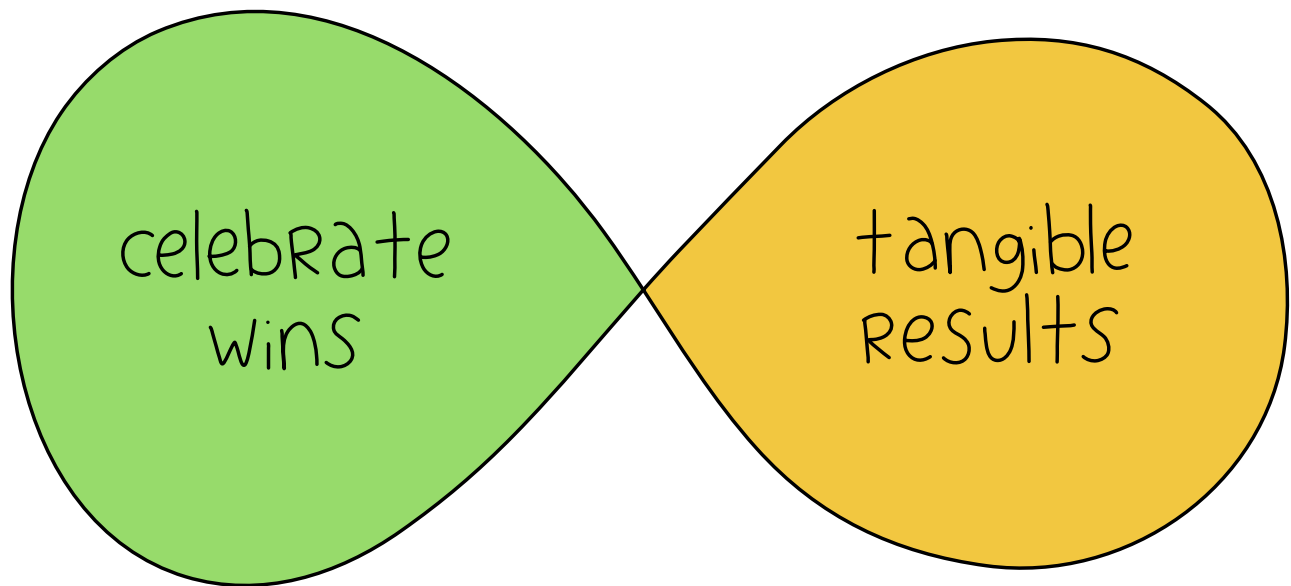
Find as many people loosely involved in the project as possible

**Interviews**

Talk to as many people as possible (~100)- Read the short book "Talking to Humans" for guidance

**COA development**

How to move forward? SIF, SBIR, CPI, etc



### **Market research**

Anyone else solving this problem? Other Spark Cells. Commercial company.

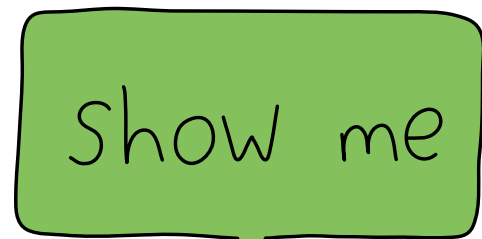
### **Pursue COA (celebrate successes)**

SIF funding request, SBIR Need ID

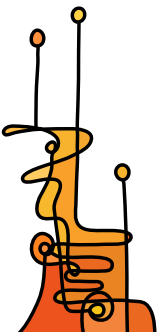
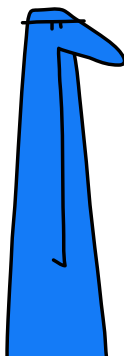
**Celebrate Success!** - SBOR contract received? Celebrate. SIF purchase accomplished? Celebrate.

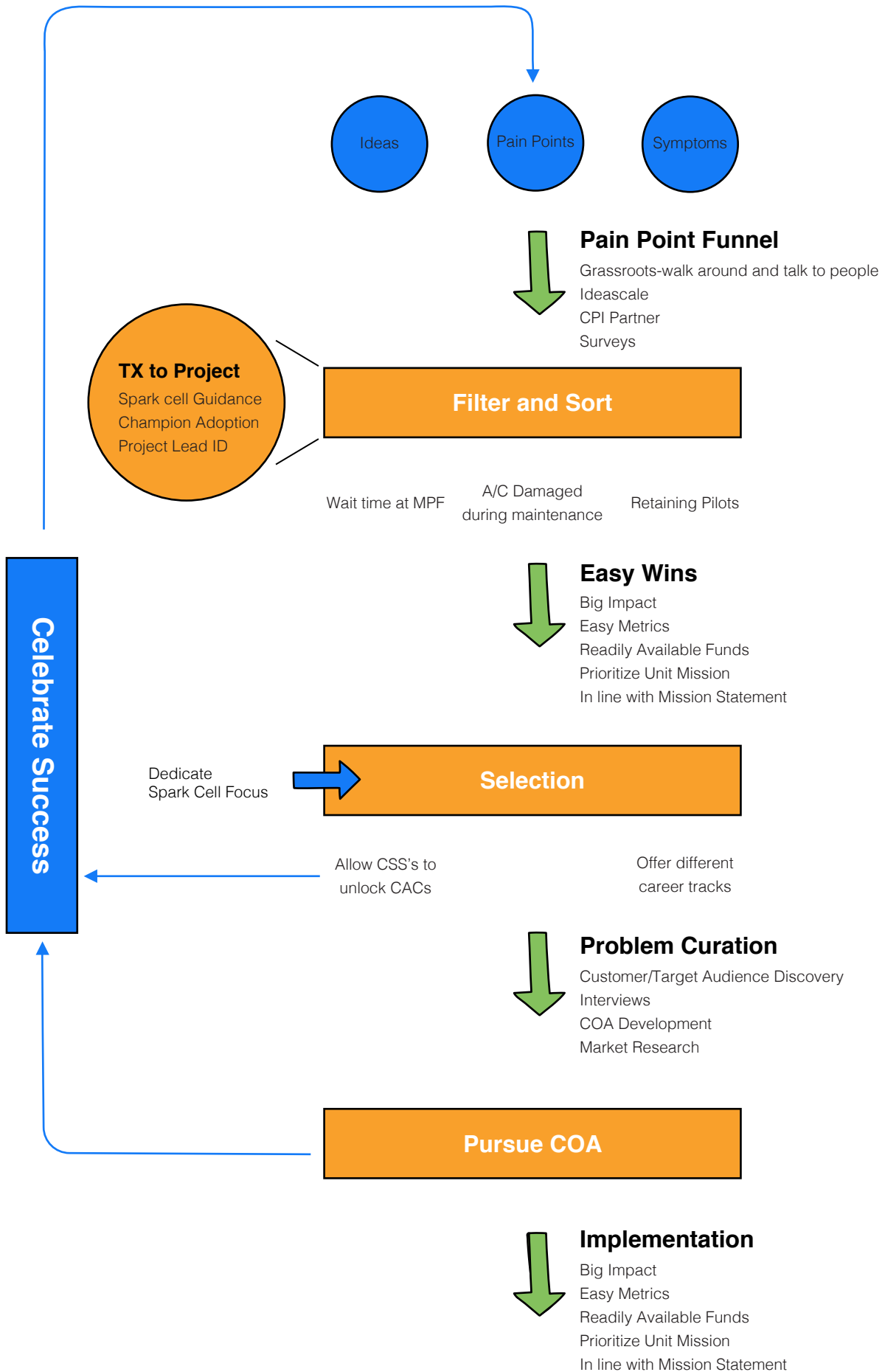
**Most people need to see physical results before they will believe in the system.**

most people  
need to see  
physical results  
before they will  
believe in the  
system



Show me

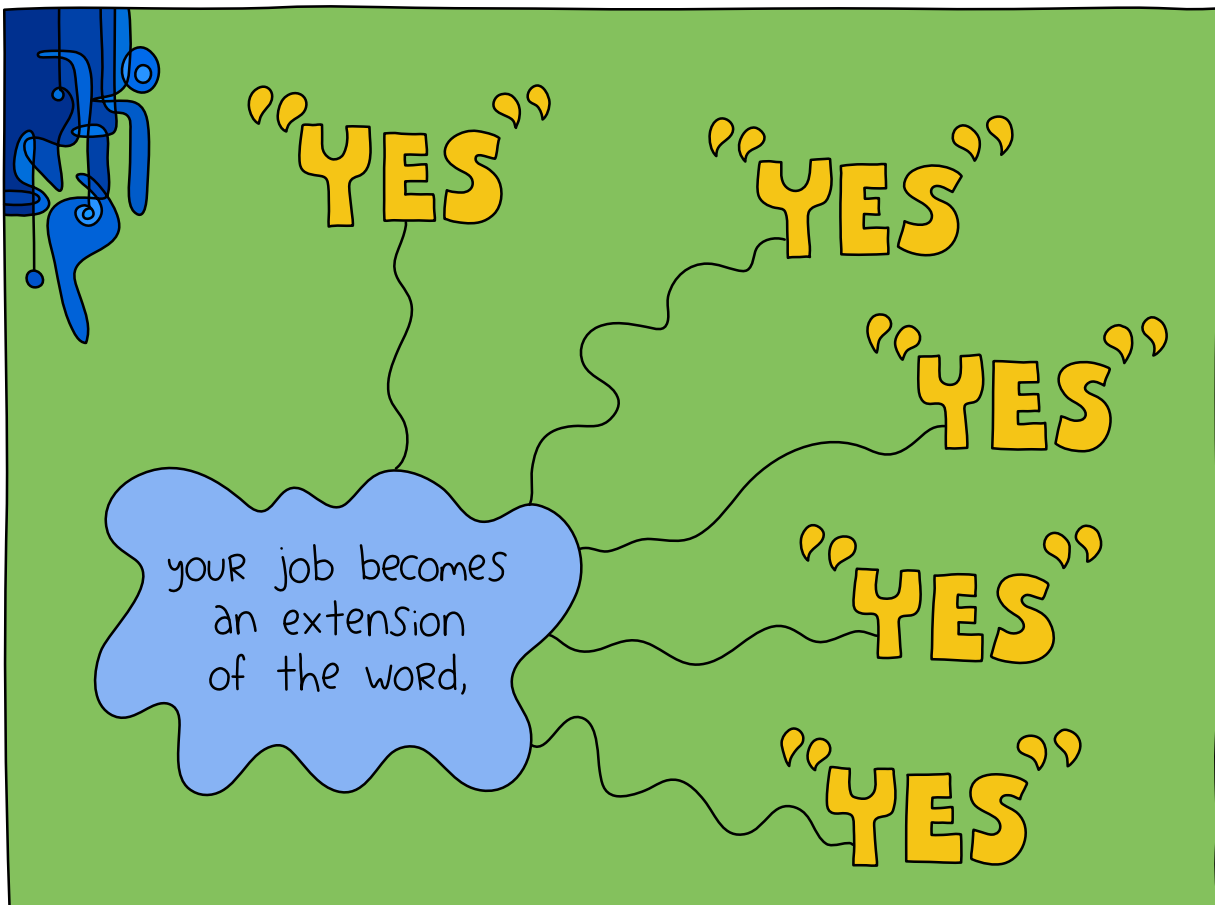




# Squadron leadership toolkit

*“Success no longer goes to the country that develops a new fighting technology first, but rather to the one that better integrates it and adapts its way of fighting ...Our response will be to prioritize speed of delivery, continuous adaptation, and frequent modular upgrades. We must not accept cumbersome approval chains, wasteful applications of resources in uncompetitive space, or overly risk-averse thinking that impedes change.”*

*- James “Mad Dog” Mattis, 2018*



## **Why should you embrace innovation?**

1. Your job is to manage resources and improve your unit.
2. Innovation is key to reform & lethality; two of the three NDS 2018 lines of effort.
3. The Air Force is trying to reinvigorate your squadron.

## **What does SPARK offer?**

1. You will fund projects through non-traditional contracts you otherwise cannot access.
2. Your Airmen will directly network with senior AF leadership.
3. Your Airmen will gain breadth of experience by working with other agencies.
4. Your Airmen will create base, MAJCOM, and possibly DoD-level impacts.
5. Your Airmen will partner with AFRL, Kessel Run, DIU and other innovation giants.

## **2019 SPARK successes**

- Dover: Four MSG, OG and MXG Airmen combined to procure and install red/green lane indication lights at the main gate. Original contract estimate: \$125K. Final cost: \$1.8K.
- JB MDL: SFS and CRW combined SIF funding to invest \$500K towards drone detection; received \$1.2M fund matching from SBIR program.

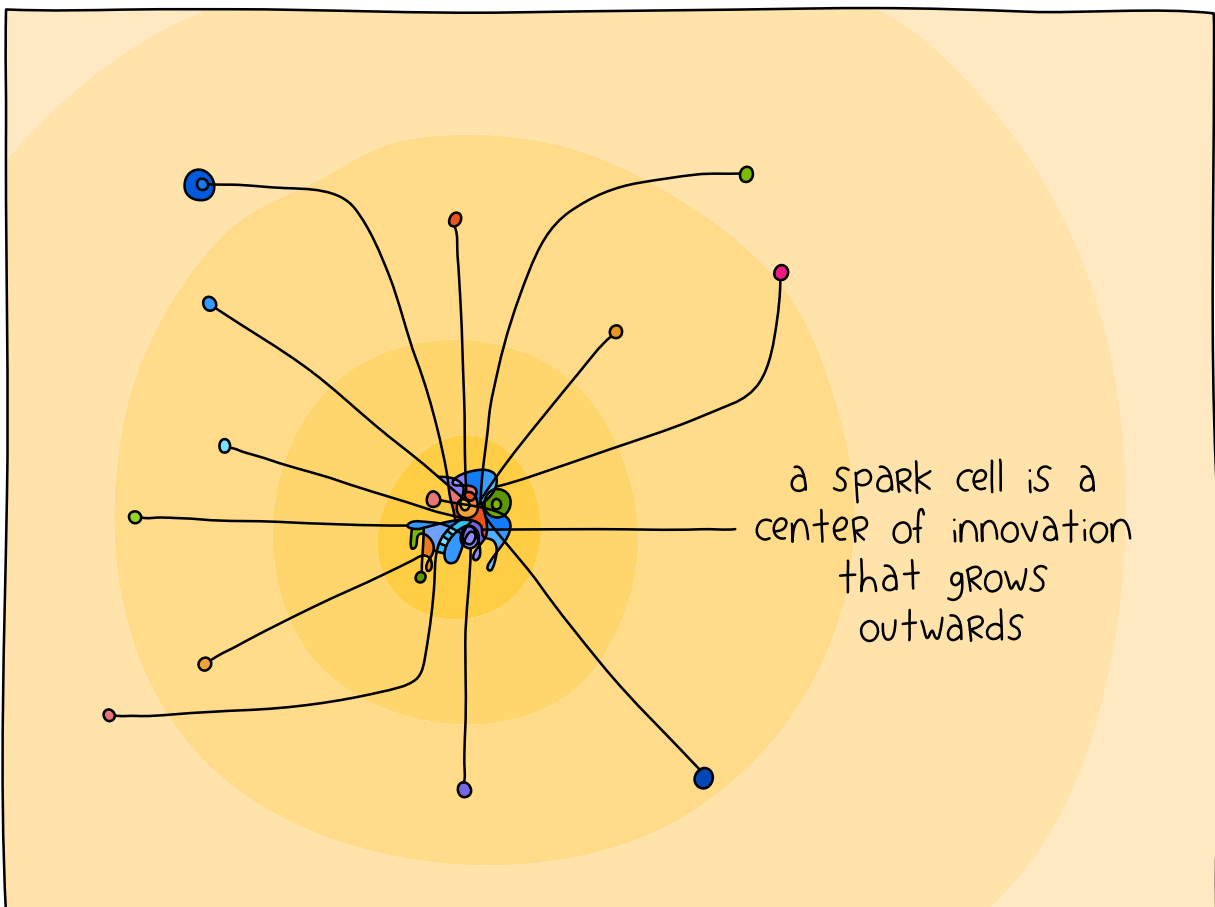
## **How do you invigorate your squadron?**

- SPARK Internship Program
- Dedicated whitespace
- Support Airmen and their projects by giving them time to work on them.
- Avoid “No” and Naysayers; seek out “Yes but, “ or better “Yes, here’s how.”
- Squadron Sprint Sessions; ask us how!
- We will teach your Airmen how to code, build, teach, pitch, innovate.

## Innovation Definitions

- AFWERX: Air Force Innovation Office
- SPARK: A network of 70+ base-level innovation hubs.
- SPARK Tank: Yearly competition featuring SPARK-curated ideas, pitched to senior military and civilian leadership
- SIF: A CSAF Squadron Revitalization program to: increase readiness, reduce cost, return time back to Airmen, and enhance the lethality of the force.
- SBIR: competitive awards based programs that encourage domestic small businesses to engage in Federal Research/Research and Development (R/R&D) with the potential for commercialization
- Whitespace: A percentage of time given to Airmen to pursue pet projects and innovation.

“Every idea starts with a problem; every project requires a project manager”





# Squadron leadership communication strategy

## Problem:

Squadron leadership (Commander & Senior Enlisted) is either the single greatest advocate or roadblock to the innovation effort.

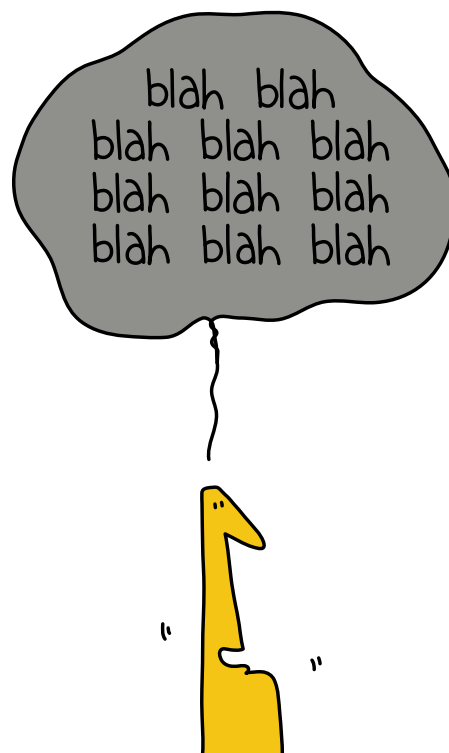
## Objectives:

- Provide real examples of innovation wins
- Appeal to the selfish nature of humanity
- Translate innovation jargon
- Cut through the wordsmithed BS.
  - “A grassroots innovation program whose mission is to bring tomorrow’s tools to the warfighter today while inspiring a bottom-up culture of innovation” vs.
  - You will fund projects through non-traditional channels you otherwise cannot access.
- AFWERX: We believe a communication strategy targeted to SQ/CCs will be valuable. Stop talking about the possibilities of innovation, start teaching commanders how to get started

talking about  
innovation



isn't  
innovation



# Makerspace and IT infrastructure

**How to Guide: Research, Research, Research**

## **Makerspace**

Build specific requirements from vision and goals, visit other makerspaces for inspiration

## **Partners**

Communications Sq, Contracting Sq, PA, Civil Engineering Sq, Legal, volunteer (day laborers)

## **Hats**

GPC, ITEC, Facility Manager

## **Materials and Equipment**

Space, use case (training space) and accessibility will determine needs (do not purchase yourself out of collaboration)

## **Essentials**

Proper Education, Software, maintenance tools, safety equipment, security

## **IT Infrastructure**

Partners - Communication Sq, Contracting Sq, Legal

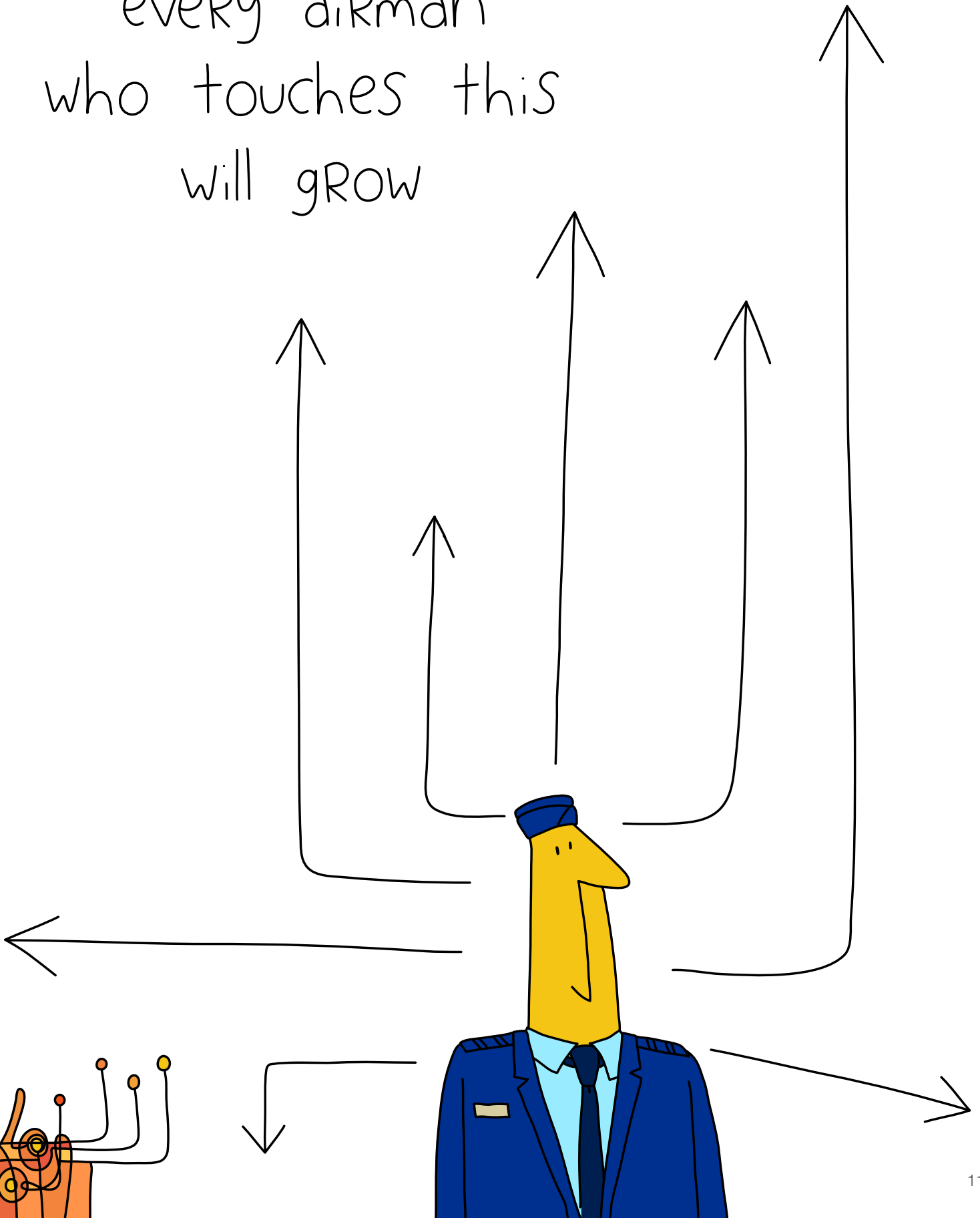
Hats - GPC, ITEC, Facility Manager

Systems - High intensity, needs will drive purchase (3D rendering, VR, AR)

\*Most purchases will be outside of ordinary tracks and need to be coordinated through CS and CONS.

See Appendix section on the Government Purchase Card to learn more about how to purchase the above.

every airman  
who touches this  
will grow



# Guide to successful pitching

## Overview (What):

The pitch guide provides techniques, tools, and methods to maximize leadership buy-in and Airmen motivation to pursue innovative ideas.

## Objectives (Why):

- Define/Shape the mentality of leadership regarding the process
- Define/Shape the mindset of Airmen regarding the process
- Facilitate Airmen ownership/commitment to a problem's solution
- Produce an AF-wide common structure for pitch events
- Capture the data to improve the process overtime

## How to Guide:

Stakeholders (Who):

- Wing Leadership (Wg/Grp/Sq)
- Spark Cells
- Innovative Airmen
- Innovation beneficiaries

Resources (Time/Money):

- Time, dependent on problem being solved
- Dedicated Innovation Coaching
- Procedures
- Rubrics
- Impacted Units / SMEs

## Execution Plan/Timeline (How):

1. Submit the idea
2. Address the critical questions that have to be answered:
  - What problem does the squadron need to solve?
  - How does the squadron plan to approach solving the problem?
  - What resources are needed (must include manpower/skills, workspace/facilities, materials, money)?
  - How will the materials be purchased (i.e, Form 9, GPC, GSA, etc.)?
  - What is the expected timeline?
3. Evaluate against rubric to determine improvement vs innovation
  - Risk
  - Process
  - Obstacles
  - Technology
  - Money
4. Consult Advisory Boards/SMEs and do market research such as:
  - CE
  - Contracting
  - Finance
  - Comm
  - JA
  - PA
  - Other Affected Units

\*\*Based on the innovation climate of the wing make a determination on when the pitch will occur after step 2, 3, or 4\*\*

# How to host a Spark Collider

## Overview (What):

Collide Airmen and their compelling problem statements to best in class partners in industry and academia.

## Objectives (Why):

- Identify and curate your organization's focus areas & problem statements
- Connect solution providers and commercially available options to pain points and problem sets
- Identify key stakeholders and organize support/obtain buy-in
- Obtain Signed Memorandum of Agreement between DoD Customer & SBIR Phase 1 Company

## How to Guide:

Stakeholders (Who):

Spark Cells, Airmen, Innovation Champions

Resources (Time/Money)

Spark Cell time to build event; should be no cost by utilizing wing resources

Execution Plan/Timeline (How)

2 month planning timeline

## Logistics

1. Early PA/Protocol/Wing Leadership partnership to establish communication plan
  - a. Socialize the event with Wing leadership (Spark champion) to get buy-in
  - b. Request photojournalist to document event
  - c. Partner with protocol on a modified DV checklist that fits your event

2. Determine facilities (On/Off Base, Auditoriums, Aircraft Static Displays, etc.)
  - a. Entry Access List (EAL) for government facilities
  - b. Security Forces requirements
  - c. Potential use of local PTAC space
  - d. Request aircraft static displays through Current Ops
  - e. Request flight line photography approval from PA
  
3. Determine transportation requirements
  - a. Coordinate with Vehicle Control Center for a bus that can accommodate all guests (WG/CC can approve busses for visitors)
  - b. Borrow U-Drive for staff to utilize for unforeseen guest requirements (early departures, etc.)
  
4. Develop schedule/agenda (keep it simple & build in slack for changes in itinerary)
  - a. Event description (the “why”)
  - b. Target audience (the “who”)
  - c. Itinerary (the “what”)
    - i. Introductions & SBIR overview
    - ii. Company pitches & collisions
    - iii. Lunch & networking
    - iv. Base pain point tour
    - v. MoU discussions
  - d. List of companies attending (one paragraph blurb on what they offer)
  - e. List of base stakeholders attending (Sq mission statements)
  - f. Task squadrons to identify their problem statements and SMEs
  
5. Extend invitations to partners and stakeholders

## **Problem Statements & Connecting to Companies**

1. Identify local base pain points and refine problem statements
  - a. Critical piece to ensure you attract the right partners
  - b. Develop a 1 pager on pain points and focus areas to distribute to potential partners
  
2. Connecting SBIR Companies/COTS solutions to problem statements
  - a. Engage with AFWERX to obtain a list of SBIR Phase I companies
  - b. Down-select the companies that can potentially solve local pain points
  - c. Invite 2-3 companies with promising tech that don't necessarily align with local pain points but can potentially inform future "unknown unknowns"
  - d. Schedule calls with each interested company to refine customer discovery
  - e. Connect company with unit on base and identify local SME to invite to event

## **Potential Stakeholders**

- MAJCOM (obtain buy-in Phase III)
- AF Rapid Sustainment Office (RSO)
- Cross-Wing
- Base Innovation Champions
- Unit Subject Matter Experts (SMEs)
- Financial Management (CPTS)
- Contracting (CONS)
- Companies
- AFWERX
- Academia
- PEOs/AFRL
- Public Affairs



# Fueling MAJCOM & wing Spark Cell collaboration

## Overview:

Develop, communicate, enable and oversee MAJCOM systems, technology, and innovation development strategies, roadmaps, guidance, standards, architectures, and projects.

## Ensure MAJCOM:

- Enables innovation at tactical, operational and strategic levels.
- Has effective Systems & Technology (S&T / AFI 61-101) innovation development processes and methods.
- Has effective systems and technologies to support MAJCOM missions.
- Has effective processes to develop, field, and sustain systems and technologies through routine innovation development activities.
- Has systems that are interoperable with the Joint Force (special operations and conventional) and other governmental and partner nation forces.
- Develops proficient systems, technology and innovation experts.

## Objectives:

- Addresses the missing MAJCOM <> Wing Spark Cell communication structure
- Ensures MAJCOM delivers value to Wing Spark Cells
- Provides a bridge to Program of Record with the intention of delivering a fielded and sustained capability
- Enables pathway to the larger Requirements Generation and POM process to field and scale solutions
- Facilitate collaboration within the MAJCOM innovation ecosystem.

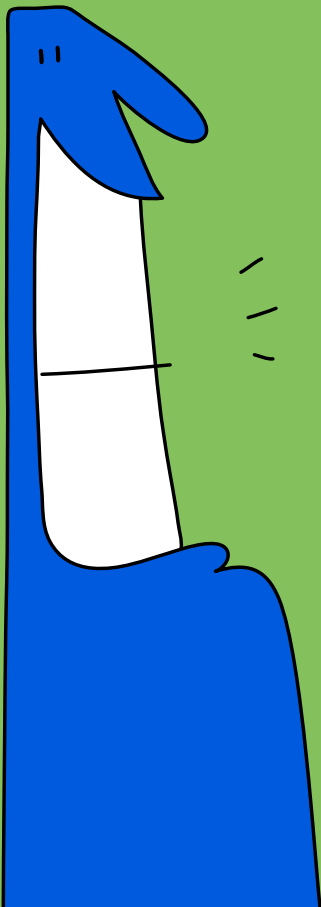
# How to get to yes without going to jail

## Overview

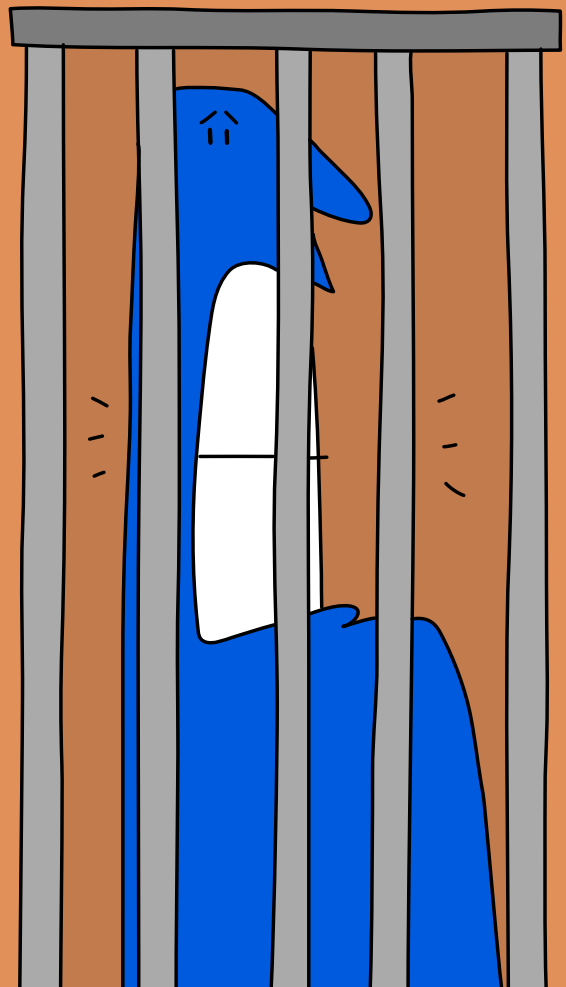
In the current fiscal landscape, we continue to see declining budgets to tackle ever increasing requirements and mission sets. The Air Force needs to be smarter in how we execute, driving the need for innovation in products and processes. The current CSAF has pushed the Squadron Innovation Funds to encourage and facilitate innovation at the lowest levels. While Squadron Innovation Funds aren't guaranteed in future budgets, the good news is that there are resources available outside of SIF to tackle innovation. This paper will look at resourcing options that are available, how to identify and bring the right players to help shape requirements, distinguish the difference between fiscal law and policies and guidance, and how to identify the right resources for those requirements...all in an effort to get to "yes."

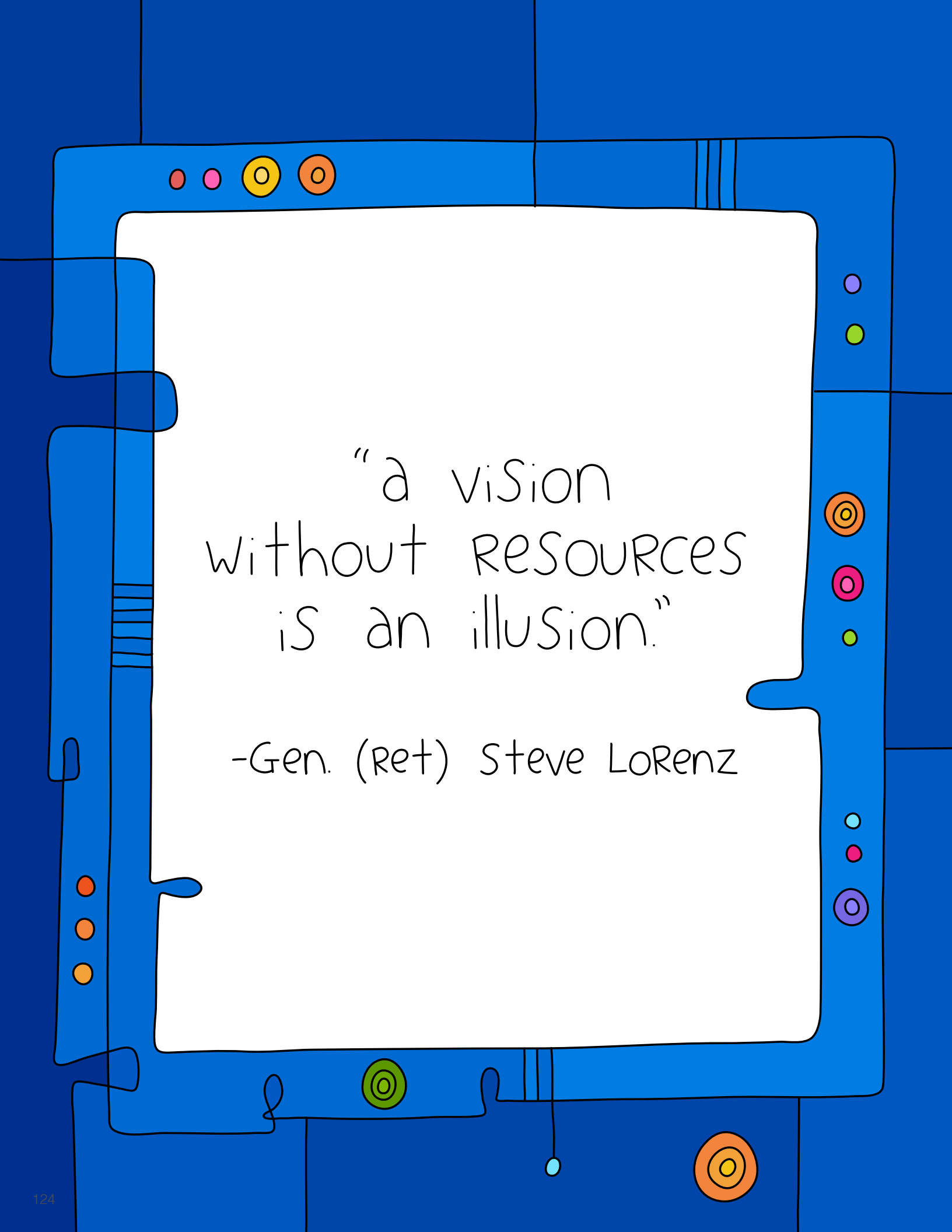
how to get  
to 'YES' without  
going to jail:

CORRECT



INCORRECT





"a vision  
without RESOURCES  
is an illusion."

-Gen. (ret) Steve Lorenz

## Objectives

Spark cells are typically comprised of bright, eager Airmen with a strong desire to solve problems in our Air Force. They have innovative ideas and are hungry to deliver value – motivation critical to invigorating Air Force culture and maneuvering its bureaucracy. However, desire and vision alone will not accomplish this objective. Resources are finite - this paper focuses on funding, but so are time and manpower - and easily outnumbered by a typical wing's mission requirements. Successful spark cells:

Strategy should drive resources. Make sure your team reads the National Defense Strategy and National Military Strategy. Understand the global landscape and where your wing fits into that mission. Doing so elucidates your wing and MAJCOM commanders' priorities...and, in turn, where the funding goes. If your innovative ideas align with these priorities you are much more likely to secure support and funding. At worst, you better understand where the wing is going and can shape future campaigns after these priorities.

Develop early and engaging partnerships with their comptroller, contracting, and legal teams. Successful spark cells maintain a close relationship with these entities. Doing so enables these organizations to help build a viable, legal path to 'yes' from an idea's conception, rather than being brought in midstream where the potential for 'no' increases exponentially.

When necessary, dive into daunting subjects like federal appropriations law. Your comptroller team should be a partner, but sometimes personalities make progress difficult. When this happens, there are several ways to move forward. Using the chain of command or leveraging the Air Force innovation ecosystem are viable paths. Another proven option is bring your own research to the potential roadblock office...

## **Case Study**

### **Resourcing as a mechanism for increased speed and agility**

Create Partners, not Roadblocks: FM/CONS/JA are often viewed as roadblocks to accomplishing an objective for Innovators. While these entities don't have a reputation for helping Innovators, they are necessary partners to bring new technology into an organization. The more collaborative the relationship with this trifecta, the more success an Innovator is likely to have.

### **Increased Speed**

Oftentimes end users come to this group with the solution instead of the problem and the solution is not possible due to financial, legal, or contractual limitations. By going to this group early with the problem and curating a solution together with the wing's procurement experts, end users can drastically increase the flash to bang of ideas.

### **Increased Agility**

This group can also increase the agility of the end user by enabling them to react to late-breaking opportunities. Whether that's pushing an MOU through JA to partner with another base on an SBIR at the last minute, or to procure technology in the last few days before Close Out from a company that pre-competed their product on another base's CSO.

Most Innovation efforts fail because FM/CONS/JA are not brought into the fold early and one of them has issues with the plan put together by non-acquisition professionals that kills the project.

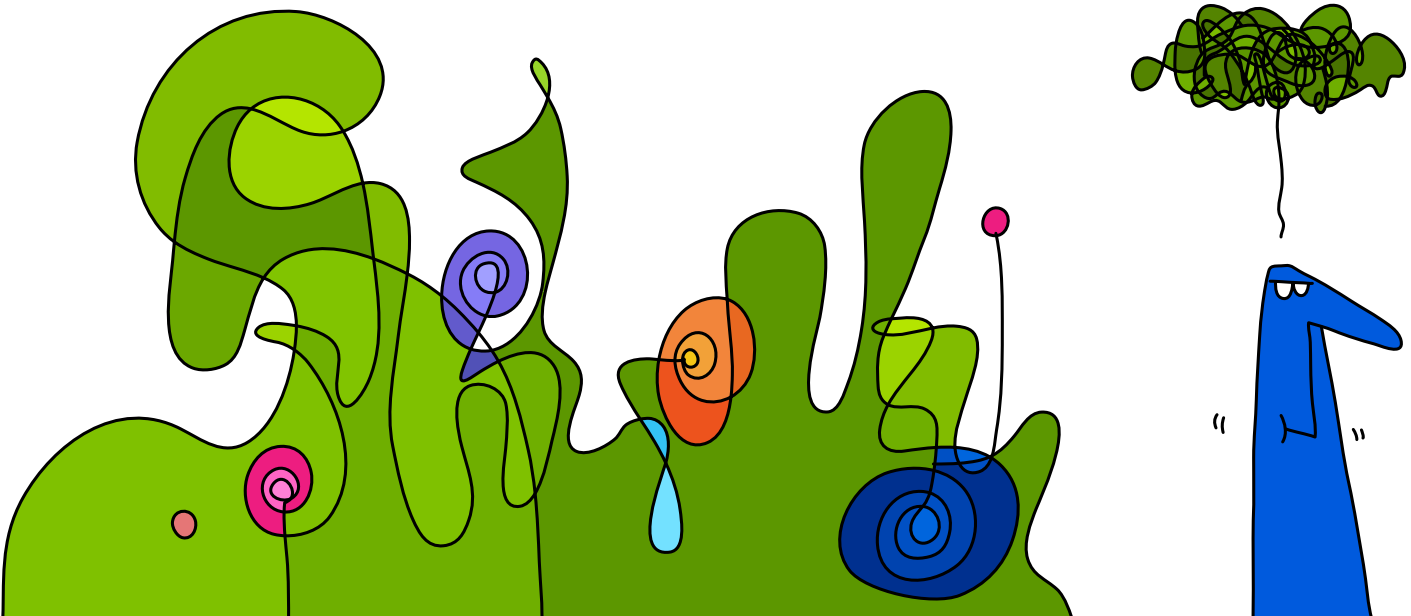
### **Broccoli of Innovation**

Working through the administrivia of how to bring ideas to fruition is kind of like eating your broccoli. It isn't always fun, but it is necessary. Understanding the distinction between fiscal laws, policies, and guidance and how to navigate that space is the difference between having an idea and making that idea a reality. Understand the legal constraints of your funds. Once you've brought in FM and JA, you need enough knowledge on the mechanics to be able to ask the right questions to shape ideas to an executable solution. Squadron Innovation Funds (SIF) and most other innovation funding mechanisms are appropriated

by Congress and come with legal restrictions. Have your comptroller team walk you through the basics of the purpose, time, and amount statutes as well as the annual budget cycle. These will tell you when you should advocate for funding, and how to spend it legally and effectively once you receive it.

When executing at wing-level, most dollars you have at your disposal are 3400 or Operations and Maintenance funds. Generally speaking, O&M is used for the day-to-day operations of the wings, such as travel and supplies and equipment under \$250K. Other appropriations exist and may be more appropriate to execute your ideas, especially if you are working to develop something new (3600 / Research and Development funds) or the items cost more than \$250K (3080 / Other Procurement funds). While this is the general rule, there are gray areas and other nuances that may be an option to get ideas funded. Your FM and JA functional communities can help you find the right answer.

innovation is like eating broccoli.  
the necessity outweighs the fun.



# Innovation in the total force; leveraging Guard & Reserve Airmen

## Overview

- Innovation is a total force effort, and ANG/Reserve Airmen are key stakeholders in this ecosystem. Effectively integrating these stakeholders into your spark cell efforts will lead to greater results.

## Objectives

- Build Total Force relationships for the innovation ecosystem
- Network regionally to include capabilities from neighboring individuals
- Collaboration outside gate w/ Airmen employed in industry & academia
- Manpower augmentation to support the innovation ecosystem

## Working with the Guard and Reserve Airmen at your base

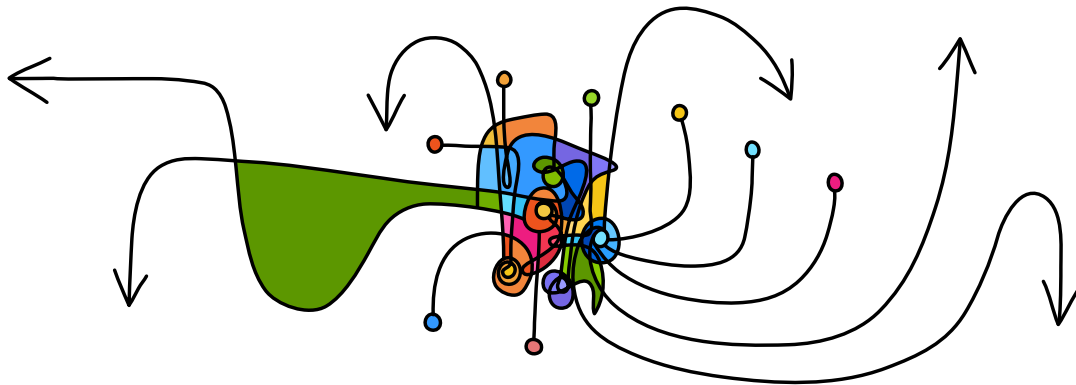
Many Air Force installations have Reserve and Guard units located on the same base. These units could be key players in helping with the innovation efforts of your Spark Cell. Building relationships with these units is the first step in effectively leveraging Reserve and Guard Airmen. In order to build your network you need to attract and recruit subject matter experts/innovators, it is important to interact with Airmen around the installation. You will need your senior leaders to communicate, endorse, and encourage participation in the Spark Cells across the total force environment on the installation. It will be key to utilize public affairs to advertise the Spark Cell to the Guard/Reserve/Active Duty/Civilian audiences. As a best practice, you can recruit and educate Airmen from existing councils and professional organizations, such as the Top 3, Company Grade Officer Council, etc.



## Collaboration outside the Gate

Many Guard and Reserve units are located on or near civilian airports either in the same town or nearby towns to active Air Force bases. These Reserve component airmen have jobs that bring expertise and skills that are different from the Regular Air Force. Additionally, there are many members of the Reserve and Guard who may live outside of a base, but are not assigned to that base. These individuals probably already receive communication via your social media and official public affairs products. Using these platforms to invite them to participate in your Spark Cell events is a way to leverage talent you would not normally have access to. In addition to their unique work experiences and perspectives, they may have contacts with academia, local businesses, and community leaders. There are also opportunities to partner with local ROTC Detachments, which would bring access to talented Cadets and possibly university partnerships/resources.

the more collaborative the idea,  
the more likely the success.



## Manpower

In some cases you may be able to utilize Guard and Reserve manpower to augment a Spark Cell project on a short-term basis. There are many different duty statuses that Guard and Reserve can fall into, you should work closely with Reserve and Guard leadership to determine the best way to utilize this resource.

Part Four

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# THE OPEN TOPICS:

using the SBIR/  
STTR program to  
help research and  
develop solutions

# The Open Topics

In 2018, AFWERX partnered with the Air Force's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) program to discover potential research and development opportunities by small businesses and non-profit U.S. research institutions to facilitate and expedite innovative solutions for the DoD.

Driven by market discovery, the Open Topics is designed to complement the existing SBIR/STTR program approach. The Open Topics offer a single point of entry for all small businesses, which allows them the flexibility to bring us tools and technology we didn't think to ask for. In this way, the Open Topics seek to match potential AF market demand with dual-use commercial supply to get rapid solutions to the warfighter.

The Open Topics use the three phase SBIR/STTR program process with key objectives described below:

## **Phase I: Discovery/Engagement**

The company's objective of Phase I is to establish the technical merit, feasibility, and commercial potential of the proposed R&D efforts and to find an AF member to partner with for a Phase II.

## **Phase II: Prototype Development**

The objective of Phase II is to run an experiment and expand on the R&D efforts initiated in Phase I to determine if they meet the AF partner's mission needs.

## **Phase III: Commercialization**

The objective of Phase III is for the small business to pursue commercialization resulting from the Phase I/II R&D activities. The SBIR/STTR programs do not fund Phase III and may involve follow-on, unit funds, other non-SBIR/STTR funded R&D or production contracts for products, processes or services.

# Benefits of Using the Open Topic

When looking to innovate and solve a problem within the AF, Airmen don't always have the expertise or money to test ideas against the challenge they are facing. The Open Topics provide a testing ground towards a potential solution through partnerships with small businesses and leveraging other people's money. If the partnership proves to be of value to the end-user, the Open Topic process provides a potential pathway toward follow-on procurement pending buy-in from other AF stakeholders. Our team is here to guide you by through the contracting requirements, the financial invoicing and money movement, and managing SBIR/STTR compliance; freeing you up to really focus on the development and fielding of potential solutions.

## **Benefits Overview**

- Rapid pathway to get the solutions to the warfighter
- R&D Funding for Phase I & II through the SBIR program
- Phase III follow-on procurement support
- Growth and support of US Small Businesses

# How to Participate

If you feel this may be the right program get involved by following these easy steps:

- **Submit your Problems and Ideas**

Take part in indicating an AF need by contributing your problems or ideas to a SBIR Focus Area campaign on [Airmen Powered by Innovation \(API\)](#). Your submissions into SBIR Focus Area campaigns allow us to ensure we're sourcing company solutions to problems we know we need to solve.

# How to Participate

- **Engage**

You are free to talk to companies and invite them to apply to the AF SBIR/STTR program. You can also view the current list of SBIR/STTR awarded companies [here](#) and start engaging with a company of interest to work towards testing a potential solution.

- Partner with a Small Business

Once you find a company, you can either fund the partnership through your unit's R&D funds or the company can compete for SBIR/STTR Phase II funds. The Open Topics Phase II application is very competitive and requires companies to submit a Customer Memorandum with their application package. The Customer Memorandum is used to provide justification of why the company should be awarded a Phase II. This memo plays a HUGE role in the selection process and must clearly articulate a plan to develop and transition the proposed solution. It's OKAY to say that transitioning the solution to a Phase III is contingent upon the company's Phase II success. The program has been built to be competitive and favor those who are serious about transitioning technologies and making true long-term partners out of the small businesses we engage with.

Questions? Check out the AF SBIR/STTR [website www.afsbirsttr.af.mil](http://www.afsbirsttr.af.mil), or contact the helpdesk at [usaf.team@afsbirsttr.us](mailto:usaf.team@afsbirsttr.us) | 855-855-5360. You can also join our [DoD-only SBIR calls!](#)

# SBIR phase overview

## PHASE 1

Customer Discovery - the company is put on contract for \$50K and a 3 months period of performance to determine if their solution addresses an Air Force need and to plan out a phase 2 trial with the Air Force customer.

### Details:

- Award - \$50,000
- Period of Performance - 3 months
- Approximately 1000-1500 awards a year

### Key Activities:

- Determine product/market fit in Air Force
- Identify Air Force stakeholder/ obtain signed MOU
- Complete Phase II application

### Notes:

- RDT & E(3600) funded with SBIR dollars
- Solicitation is made through a CSO (Commercial Solutions Opening) allowing for other than 3600 funding to be applied in future SBIR Phases

## PHASE 2

Proof of Concept - the company is awarded up to \$1.5M/27 months to make necessary adaptations and developments on their existing non-defense solution to be useful to the Air Force customer. Companies may receive additional funding during the course of phase 2 to perform additional work and scale their solutions.

### Details:

- Award -Unmatched: up to \$750K, Matched: up to \$1.5M
- Period of Performance: up to 27 months
- Approx. 300-500 awards per year

**Key Activities:**

- Execute Phase II project plan
- Tailor commercial offering for DoD use-case
- Determine considerations for transition

**Notes:**

Matching Ratios: **this may change from round to round, please check solicitation instructions.**

Gov't non-SBIR Dollars: 1:2 up to \$1.5M

ex: \$750K gov + \$1.5M SBIR = \$2.25M total

3rd Party Investor: 1:1 up to \$1.5M

ex: \$1.5M Investor + \$1.5M SBIR = \$3M total

**PHASE 3**

Streamlined procurement – The solution developed in phase 1 and/or 2 may now be purchased sole source by any federal agency. All funds must come from the purchasing organization (i.e. squadron, wing, program office, etc.). Phase III can use any money type and any contract type – talk to your local contracting or finance office for more information about how to purchase out of Phase III.

**Details:**

- Award: dependent
- Period of Performance: dependent

**Key Activities:**

- Managed by customer's organization
- Follow-on product or offering
- New contract and funding sources

**Notes:**

- This is funded by non-SBIR dollars
- Contracting and funding is executed by other than SBIR office resources.

**DIRECT TO PHASE II (D2P2)**

In some instances, companies may be eligible to skip Phase I and go directly to Phase II if they have a confirmed customer and signed MOU.

**Details:**

- Award: \$750K-\$3.0M
- Period of Performance: up to 27 months
- Approx. 100-150 awards per year

**Key Activities:**

- Same as normal Phase II

**Notes:**

- Matching dollars may be required - **this may change from round to round, please check solicitation instructions.**
- Matching Ratios (same as normal Phase II):

Gov't non-SBIR Dollars: 1:2 up to \$1.5M  
ex: \$750K gov + \$1.5M SBIR = \$2.25M total  
3rd Party Investor: 1:1 up to \$1.5M  
\$1.5M Investor + \$1.5M SBIR = \$3M total

**STRATEGIC FINANCING (STRATFI)****Details:**

- Award: \$12M-\$60M
- Period of Performance: up to 48 months
- Approx. 10-30 awards per year

**Key Activities:**

- Further develop and integrate into the Air Force



**Notes:**

- All current Phase II companies eligible
- Matching Ratios: 1:1:2

1 = DoD non-SBIR dollars (\$3M min)

1 = SBIR dollars (\$15M max)

2 = 3rd Party Investor (\$6M max)

ex:  $\$3M + \$3M + \$6M = \$12M$

ex:  $\$15M + \$15M + \$30M = \$60M$

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# SBIR/STTR special topic

When a few Air Force folks from AFWERX and the Air Force Research Laboratory learned more about this program, they started to formulate a new idea: Could they transform this cumbersome process into a singular platform for startups and small businesses to work with end-users inside the Air Force?

And with that, “**Open Topics**” were born.

## **Criteria for Consideration**

- Technical Feasibility: There should be minimal technical risk to the overall solution. The best solutions will have demonstrated technical feasibility by showing the solution being used broadly by other customers, especially in the non-defense space.
- Dual-Purpose Defined: Commercial technology with DoD applicability

## **Financial Sustainability**

- The offeror(s) should demonstrate financial sustainability of the solution and the offeror(s). The best solutions will demonstrate this by sales of the solution to non-defense clients and other sources of private investment.

## **Defense Need**

- The offeror(s) should demonstrate that they have an understanding of the fit between their solution and defense stakeholders. The best solutions will demonstrate this with documentation (i.e. a signed memo) from a specific, empowered end-user and customer (the end-user and customer may not be the same person) in the USAF who is ready and willing to participate in the trial of the proposed prototype solution.

Now, the program is managed by AFVentures and is much easier for businesses to apply to, resulting in more than 900 contracts being awarded to companies that provide products and services ranging from organizational culture design agencies to data analytics platforms to 3D printing recycled plastics.

Knowing how companies apply isn't really important (unless you're a startup, in which case you should check out this blog), but here's a quick summary of why this is something you should care about.

# Advantages of SBIR/STTR

Reference: [https://www.sbir.gov/sites/default/files/SBIR-STTR\\_Policy\\_Directive\\_2019.pdf](https://www.sbir.gov/sites/default/files/SBIR-STTR_Policy_Directive_2019.pdf)

Phase III Contracts: Phase I or Phase II award satisfies competition for follow-on contracts (SBIR/STTR Policy Directive, pg 76)

SBIR/STTR Phase I and Phase II awards satisfy any competition requirement of the Armed Services Procurement Act, the Federal Property and Administrative Service Act, and the Competition in Contracting Act. An agency that wishes to fund an SBIR/STTR Phase III award, which is an extension of prior Phase I and/or Phase II awards, is not required to conduct another competition for the Phase III award in order to satisfy those statutory provisions. As a result, in conducting actions relative to a Phase III SBIR/STTR award, it is sufficient to state for purposes of a Justification and Approval, if one is deemed required by the agency, that the project is an SBIR/STTR Phase III award that is derived from, extends, or completes efforts made under prior SBIR/STTR Funding Agreements and is authorized pursuant to 15 U.S.C. 638(r)(4). Further justification is not needed.

No Limits to Phase III Award and Going Direct to Phase III (SBIR/STTR Policy Directive, pg 76):

There is no limit on the number, duration, type, or dollar value of Phase III awards made to a business concern. There is no limit on the time that may elapse between a Phase I or Phase II award and Phase III award, or between a Phase III award and any subsequent Phase III award. A Federal Agency may enter into a Phase III SBIR/STTR agreement at any time with a Phase II Awardee. Similarly, a Federal Agency may enter into a Phase III SBIR/STTR agreement at any time with a Phase I Awardee. A subcontract to a Federally-funded prime contract may be a Phase III award.

Federal Agencies may enter into a Phase III SBIR/STTR agreement at any time with a Phase I Awardee.

Sole Source Awards (SBIR/STTR Policy Directive, pg 78).

If pursuing the Phase III work with the Awardee is found to be practicable, the agency must award a non-competitive contract to the firm.

### **How does this help me or my unit?**

Think of the SBIR program as a mix between the Education With Industry program and a contracting pathway to identify and solve problems you, your unit, and the Air Force has.

Maybe you can't think of a problem you're facing or don't know how a startup or small business could help. That's ok! One of the benefits of this program is being able to explore your curiosity and what's within the realm of the possible for Air Force capabilities or your own professional development.

Airmen don't always have enough time, expertise, or discretionary money to accomplish and new innovative things. SBIR can provide quicker solutions and higher quality products to Air Force problems. Utilizing Sbir can help to generate prototypes for base-level problems and solve real Airmen problems quickly by leveraging other people's money.

**Simply put:** This program provides a way for you to partner with a cool startup or small business, run an experiment to tailor their product or service to your mission set without needing to commit unit funds, and exchange new, innovative ideas with brilliant minds across the U.S.

Like the headline of this article suggests, we like to think of this as a mini, on-the-job Education with Industry (EWI) program.

While you won't necessarily get the chance to go on a 10-month TDY to work with the company you partner with, you do get regular access to some of the most forward-thinking people in their industry. As an Airman who may eventually want to work in industry or academia one day, this is the perfect opportunity to start building your network and learn from people who are actively working on something related to your current job.

We hope this is starting to sound at least somewhat intriguing to you because we're super pumped about it.

# How to leverage the SBIR program

We hope to continue to use the flexibility of the SBIR process to work with innovative small businesses to help solve the AF's challenges. But to do so, here's what we need from you:

- **A succinct problem definition.**

We do not want a requirements document, we want a broad outline of the problem you need solved. You can get the details when you engage with the company on contract.

- **An open mind.**

The SBIR program is limited to small businesses, you will need to be open to the idea of working with a commercial small business (less than 500 employees and U.S. based) to address the issue that you have described.

- **Top Cover.**

To proceed with use of the SBIR program, we will need to make sure that you have support from your leadership to spend time pursuing this idea.

- **Mission alignment.**

To advance under SBIR, we will need a clear understanding of where the problem fits within the big AF picture.

- **Share.**

The SBIR info with companies that you want to apply to the SBIR program.

# The SBIR process

## **1. Browse SBIR Companies**

If you'd like to partner with a SBIR company to see if their product or service aligns with your mission and interests, review our portfolio of companies.

## **2. Submit your Problems and Needs**

If you don't know where to start, submit a problem statement on the Airmen Powered by Innovation ideation platform under the SBIR campaign and we will connect you with a company that may be able to help you.

Not sure how to submit? Watch this video.

## **3. Partner with a SBIR Company**

To officially partner with a SBIR company in Phase I, you must fill out a Memorandum of Understanding (MOU) to indicate your interest before they can move on to Phase II--a trial with the Air Force funded through the SBIR program--and potentially Phase III--a Air Force funded contract.



# What is an MOU?

## Why an MOU?

An MOU is a Memorandum of Understanding. This is used to officially partner you with a company that has been accepted into Phase I. An MOU must be completed in order for the company to move on to Phase II of the SBIR process. This document is an agreement between you and the company that solidifies the Air Force's interest in continuing a partnership.

If you find a company in Phase I w/ whom you would like to do R&D, fill out an MOU to get them into Phase II here: [https://www.afwerx.af.mil/resources/SBIR-Open-Topic-Customer-Memorandum\\_19.3-P2-D2P2.docx](https://www.afwerx.af.mil/resources/SBIR-Open-Topic-Customer-Memorandum_19.3-P2-D2P2.docx)

We'll admit it--starting to fill out that MOU is a bit overwhelming at first. If you need some help, watch this video for a walkthrough and join our DOD-only SBIR calls.

The journey doesn't end there, of course. After deciding to partner with a SBIR company, you will likely need to gain leadership buy-in and meet with enabling units at your base like contracting, legal, and public affairs to ensure the project is successful.

# Executing SBIR phase III contracts

## Overview

The SBIR program enables small businesses to explore their technological potential with the goal of commercializing the technology. The SBIR program has 3 phases: Phase I is focused on establishing feasibility. Phase II is for prototype development. Phase III is for commercialization of the technology. Phase III contracts may be awarded to any company who has completed Phase I or II. Phase III work may be for such things as products, production, services, R/R&D, or any such combination. Unlike Phase I or II, SBIR funding may not be used for Phase III. Phase III contracts allow any Air Force unit to purchase technology developed through the SBIR program.

## Objectives

- Flexible/agile method to obtain warfighter capabilities
- Faster than traditional contracting methods
  - No additional competition required (solicitations for Phase I & II satisfy competition requirements) per 15 U.S.C. 638(r)(1) and (r)(4).
  - Fewer documents required (DD2579, J&A, Pre/Post Award Synopsis not required)
  - Contract award in as little as two months
- Any type of funds appropriate for the requirement except SBIR/STTR funding
- Any commercial contract type and any contract vehicle as appropriate
- No limit on # of awards (per company)/\$ amount/period of performance

## How to Guide

### Stakeholders (Who):

- User
- Spark Cell Lead
- Company Rep
- Contracting
- Legal
- Finance

**Resources (Time/Money):**

- Must be funded by the user's organization (non-SBIR)
- Funding amount depends on requirement, but no max ceiling
- Contract award in as little as two months from identifying technology or end of Phase II
- No limitations on period of performance

**Execution Plan/Timeline (How):**

The process starts when an end user identifies SBIR-developed technology that is ready for commercialization. AFWERX is developing a database of Phase I and II contractors who are eligible for a Phase III contract.

End users start the acquisition process by:

- Securing non-SBIR funding
- Defining the requirement (SOO/SOW) (start with SBIR II SOW)
- Providing Requirements Package to the Contracting Officer items include:
  - Period of Performance
  - Type of Government Funds
  - CDRLs
  - GFP/GFI/Base Support
  - Data Rights
  - DD 254
  - International Traffic in Arms Regulations (ITAR)
  - Other docs as necessary

Solicitations of Phase I and II satisfies competition requirements for the Phase III contract. No J&A required under FAR 6.302-5 (see 10 U.S.C 2304 (f)(6)) & 15 U.S.C. 638(r)(1) and (r)(4). CO prepares memo for the file (with input from end user) on how the Phase III "derives from/extends/completes" a previous SBIR/STTR award. The memo addresses how the contract is appropriate for Phase III, meeting the requirements of 15 U.S.C. 638(r)(1) and (r)(4).

**“Work that derives from, extends or completes an effort made under prior SBIR/STTR funding agreements...., but is funded by sources other than SBIR/STTR set-aside funding.”**

*- SBIR and STTR policy directives*

The following definitions apply:

- “Derives from” is a broad test that refers to work that traces back to efforts performed under prior SBIR/STTR funding agreements
- “Extends” means the work can be for other application not researched or performed in prior SBIR/STTR efforts
- “Completes” means commercialization of the prior SBIR/STTR research into a commercial product or application

Once the Contracting Officer (CO) has all the information needed, the CO will issue a letter RFP requesting a technical and cost proposal from the contractor.

Technical and cost proposals are evaluated by the end user:

- Do not have standard technical evaluation criteria (Phase I/II criteria are provided in DoD BAA or AF CSO)
- Cost reviewed against proposed technical effort (FAR 15.404-1(d) & (e))
  - Contractor has clear understanding of the requirement
  - Proposed costs consistent with various elements of technical proposal
  - Proposed costs realistic for proposed technical approach and POP

CO evaluates proposed price (dollar value), ensures all required documentation are received from contractor and user, negotiates any outstanding issues, prepares contract for contractor signature, completes required reviews and makes award.

Data Rights must be considered: DFARS 227.7014(a) prescribes DFARS 252.227-7018, Rights in Noncommercial Technical Data and Computer Software-Small Business Innovation Research (SBIR) Program.

### **References/Links to Websites**

<https://www.sbir.gov/about/about-sbir>

SBIR Program Overview Presentation

Part Five

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# Squadron Innovation Funds

# Guidance on what to use SIF for

Squadron Innovation Funds initiatives should meet the intent of innovation laid out at the introduction of this handbook. There isn't any specific guidance on this, as the goal is to put the power into the squadron commander's and Airmen's hands on where to go next.

# Overview of financial management

As a Total Force initiative, the Squadron Innovation Funds initiatives will encompass various funding streams. You can secure Operation & Maintenance (O&M); Procurement; and Research, Development, Training & Education (RDT&E) funding. Due to the complexity of certain ideas, external coordination with agencies such as Communication, Civil Engineering, Personnel, Legal, Finance, Contracting, or others may be required. Therefore communication early and often with these agencies and your unit Resource Advisors will be critical to ensure the program's success and timely enactment.

For example, establishing a training lab may require coordination with multiple organizations including the Local Communications Squadron and the Air Force Installation Management and Support Center (AFIMSC).

SIF has been established for each component (Active Duty, Air National Guard, and Air Force Reserve). Wing Commanders will be provided the discretionary O&M resources to invest in the most innovative ideas their Airmen bring forward to increase both readiness and lethality. SIF will be allocated with 80% going directly to the Squadron Commanders entrusted with mission success and 20% to the Wing to accelerate the best ideas and provide a competitive environment to excel. Diverting Innovation funds to other priorities outside of the APAN direction is prohibited.

All expenses must be coded with ESP "CA" for tracking purposes.

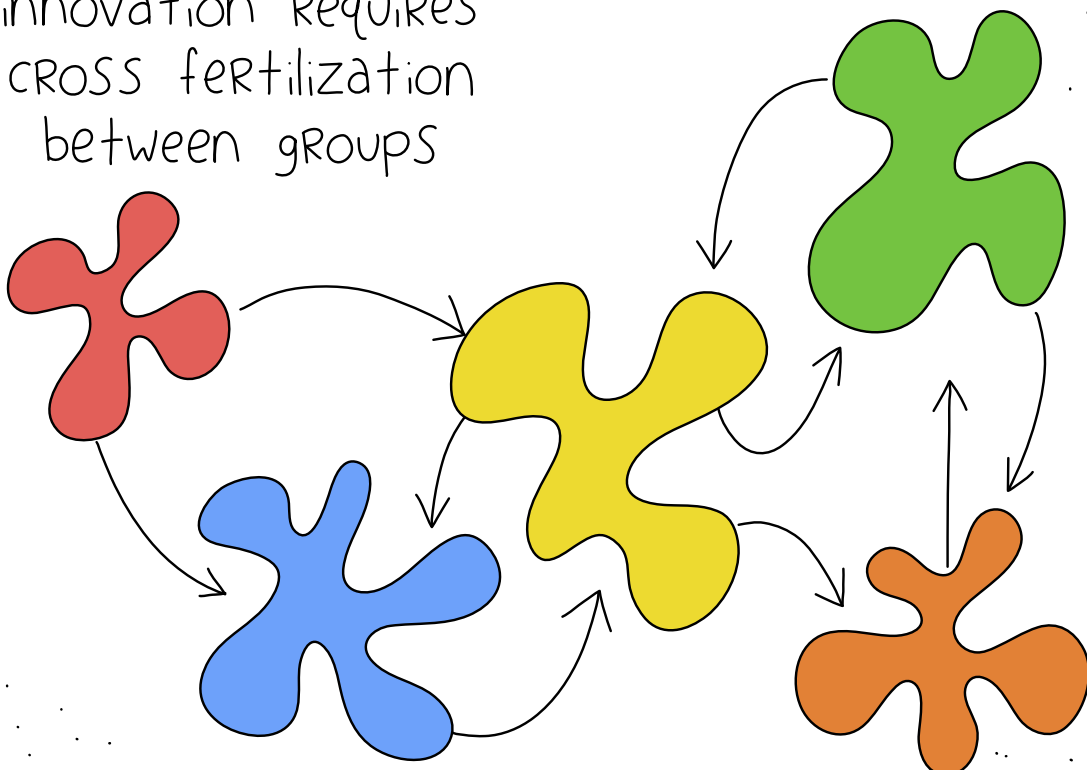


# Active Duty O&M (3400) (FC30)

Funding will be allocated across the portfolio (based on UMD population of the unit) ranging from \$100K - \$750K. Funds will be disbursed from SAF/FMBO to the MAJCOMs Spring 2020. MAJCOMs will be responsible for distributing targets (bogeys) to their applicable Wings and Squadrons. Funding will be maintained at the MAJCOM level and reimburse the unit based on incurred expenses or as needed.

Collaboration and cross feeding of ideas is encouraged as shared resources can be used to solve common problems and/or produce stronger outcomes. Instances where two or more agencies pool their financial resources, funding will be distributed to the executing agency/squadron and the associated squadron bogeys will be decremented accordingly.

innovation requires  
cross fertilization  
between groups



# **Air National Guard O&M (3844) (FC58)**

Air National Guard (National Guard Bureau) leadership has committed \$9.2M to fostering the ideas of Airmen at more than 90 installations across the 54 states and territories. In order to provide a level playing field at the onset, most wings will start with a bogey of \$100K with the exception of two larger populations who will receive \$200K.

The NGB Innovation team will act as sounding board, catalyst and coordinator for initiatives, and will also log unfunded requirements for those wings whose ideas exceed bogeys. At established times in the budget cycle, funding will be withdrawn from units whose efforts don't result in executable plans, and all recovered funds will be repurposed to support prioritized leadership-approved innovation unfunded requirements.

# **Air Force Reserve O&M (3740) (FC54)**

Air Force Reserve leadership has committed \$4.3M to fostering the ideas of Airmen at more than 45 wings and units. In order to provide a level playing field at the onset, most wings will start with a bogey of \$82k, with the exception of four larger populations which will receive \$162k.

HQ AFRC/FM will work with the wings to identify unfunded requirements for those wings whose ideas exceed bogeys and present to leadership for possible funding realignments. At established times in the execution cycle, funding will be withdrawn from units whose efforts don't result in executable plans. All recovered funds will be repurposed to support prioritized, leadership-approved, but unfunded, innovation and readiness requirements.

All expenses will be coded with ESP CA to ensure proper tracking. Wings are aware of the importance of providing answers regarding selected initiatives, and the results.

# **Defence Health Program (DHP) (FC2X)**

Requirements that may fall under the purview of Innovation should be communicated through the local Medical Group Resource Management Office to the OAC Manager at the Air Force Medical Operations Agency for prioritization and consideration. Requirements will compete with other DHP unfunded requirements.

# Procurement & RDT

Funding for projects requiring Procurement greater than or equal to \$250,000 and RDT&E funding must be line item appropriated. If an item has not been identified within the Fiscal Year justification documentation (<https://www.saffm.hq.af.mil/FM-Resources/Budget/>), a New Start authority must be requested.

There are two methods for submitting an idea:

- The utilization of the Airmen Powered by Innovation Platform is highly encouraged. As a community for innovators across the Air Force they stand ready to solve problems at the lowest level, through prototype ideas and execution. Ideas can be submitted through: <https://usaf.ideascalegov.com/>.
- Submit Unfunded Requirements (UFRs) through the MAJCOM. Approved innovation initiative UFRs should be forwarded to [usaf.pentagon.saf-fm.mbx.saf-fmbi-integration-workflow@mail.mil](mailto:usaf.pentagon.saf-fm.mbx.saf-fmbi-integration-workflow@mail.mil).

SAF/FMBI Integration will validate the requirement and identify how funding will be processed – by either a Below Threshold Reprogramming (BTR) or an Above Threshold Reprogramming (ATR). BTRs are processed internal to the AF and can be submitted throughout the year as needed. ATRs require Congressional approval and need to be submitted two months prior to the Feb 2020 and June 2020 submissions to OSD(C). Note that the timeline is subject to change.

Once approved for funding, the project will be added to the UFR list to compete for available funds. Funding is not guaranteed and it may take several weeks to identify a source. The BTR process is 3 – 5 days and the ATR process is a minimum of 3 months.

# Conclusion

Innovation and Improvement requires resources and discipline, but if you solve a deep and meaningful problem for your fellow Airmen, you will be joining the ranks of millions of innovators who have had a vision and saw it through to execution.

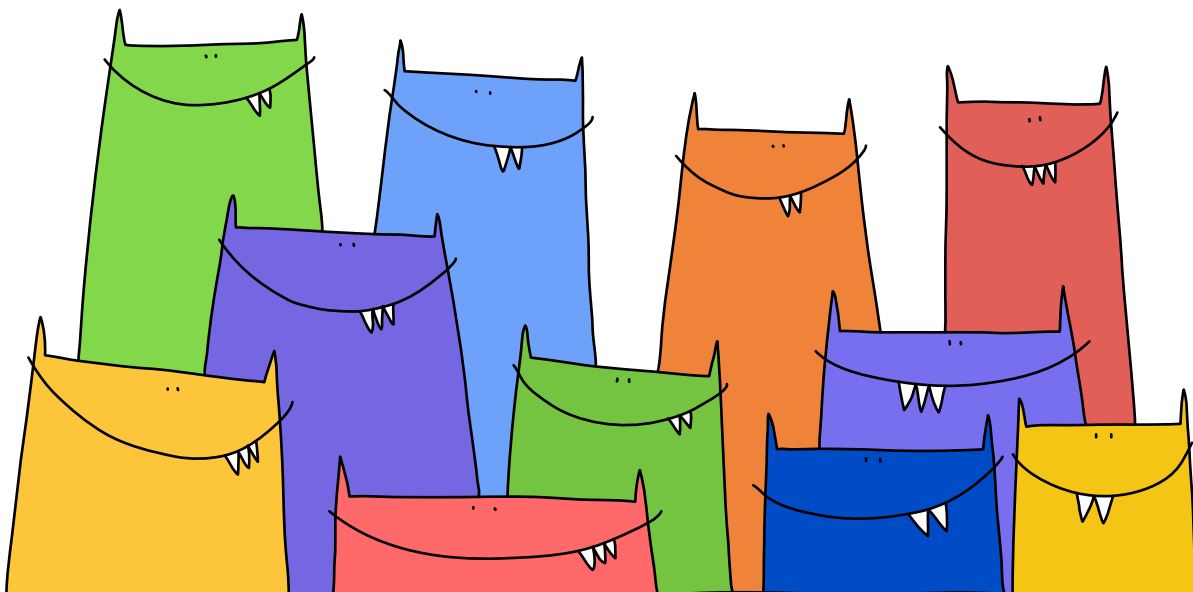
Remember three things:

First, you can do it! Innovation and Improvement is not about advanced technologies or revolutionary new approaches. It is about applying technology, methods, or processes to solve problems facing airmen in the accomplishment of their mission. It is about finding ways to make a contribution and aiming high.

Second, do not do it alone! The AF has invested numerous resources with the goal of helping create an ecosystem for innovation. Reach out to fellow innovators, your MAJCOM, Spark Cells, our Air Force CPI Office, and AFWERX. We can only succeed if we work together.

And, finally, continue to **THINK BIG, start small, and Scale Fast!**

nobody gets there alone



# THINK BIG!

start  
small

scale  
fast



-General Goldfien

# Appendix

## Airmen pitch to leadership template

### (Topic title)

#### Overview

- 5-8 sentences describing what your topic is about

#### Objectives

- Up to 5 bullets describing WHY this topic/tool matters

#### How to Guide:

Stakeholders (Who):

Resources (Time/Money):

Execution Plan/Timeline (How):

List of Contributors and Contact Info (email/phone)

(Below is a list of optional headers that could help explain your topic/tool; add additional headers as required)

Supporting Documentation

Examples/Stories

Facility/Location

Templates

References/Links to Websites

Lessons Learned

Risk and Mitigation

Contacts to SMEs

Websites



# APFD 1 - Page contract deviation

## Deviation Request

### Contracting Activity Requesting the Deviation:

Department/Agency: SAF

Organization/Office Symbol: AQCP

PR Number: N/A

Contract Number: N/A (multiple TBD)

Contractor / Program Identifier: N/A (multiple TBD)

### Citation:

O FAR

NI DFARS DFARS PGI 213.307(b)(1)

DAFFARS

**What is required by the citation?** Use of DD Form 1155, Order for Supplies or Services, for purchases made using simplified acquisitions procedures.

### Deviation:

#### Type of Deviation Requested:

Individual

Class

**Description:** This deviation provides for the use of a 1-page contract as part of the Air Force Pitch Day initiative, which is a pilot program established by SAF/AQ in response to SECAF request.

**Effect:** The use of an AF generated 1-page contract will not have a significant effect beyond the internal operating procedures of the Air Force. The 1-page contract only changes the format of the award document from the DD Form 1155, clauses are incorporated by reference and there is no change to the government or contractor rights and responsibilities.

**Duration of Deviation: Previously Approved:** No

From: 01 Mar 2019 To: 01 Apr 2019

**Published in Federal Register?** No.

**Justification:** The Secretary of the Air Force, Heather Wilson, and Assistant Secretary of the Air Force (Acquisition, Technology & Logistics), Dr. Will Roper have revealed a same-day contracting opportunity aimed at getting small innovative startups interested in doing business with the government. The Air Force intends to hold a pitch day (March 2019) during which startups will pitch their solutions to various Air Force problem sets. After submitting proposals to an upcoming SBIR BAA, those startups that provide solutions with potential (and meet established evaluation criteria) will be invited to participate in the event and have the opportunity to pitch their ideas to different PEOs depending on the topic area. After their pitch those startups that provide the most potential could be selected by the PEOs for SBIR Phase I awards. This initiative aims to award 1-page contracts within a day after their pitch.

FAR 13.307 authorizes the use of an agency form for simplified acquisitions; however, DFARS PGI 213.307 requires the use of DD Form 1155 for purchases made using simplified acquisition procedures. The proposed contract conforms to the material aspects of a standard contract form and meets the SecAF and AF Acquisition Executives desire for a 1-page contract. Mandatory and statutory clauses are incorporated by reference. In advance of the AF Pitch Day, training will be available to potential startups to assist with understanding clauses and other unique aspects of working with the Department of Defense.

**Legal Review:** This deviation has been reviewed by legal counsel and has been determined to not be precluded by law, executive order or regulation. Legal review documentation is attached.

# Approval of unusual contract financing for CSOS

## APPROVAL OF UNUSUAL CONTRACT FINANCING FOR COMMERCIAL SOLUTIONS OPENING DEMONSTRATION AND PRESENTATION EVENT

### FINDINGS

FAR 32.202-1(d) requires head of the contracting activity approval for any unusual contract financing. AFFARS 5332.202-1(d), through MP5301.601(a)(1), delegates the approval of unusual contract financing to the Senior Contracting Official (SCO). However, this is a class approval for all Commercial Solutions Opening (CSO) demonstration and presentation events.

FAR 32.202-1(b) allows commercial interim payments and commercial advance payments may be made under the eight (8) specific circumstances. The CSO events do not meet all 8 circumstances because solutions are expected to have a price less than the simplified acquisition threshold. IAW FAR 32.202 1(d), any contract financing arrangement not in accord with the circumstance identified in subsection 32.202-1(b) would be considered unusual contract financing.

During CSO events, Contracting Offices intend to invite companies to pitch commercial solutions with a goal to make final selections at the event then sign the contract and make a commercial advance payment (not greater than 15% of the total price) using the Government Purchase Card on the same day.

FAR 32.202-1(b) circumstances necessary to authorize advance commercial payments and applicability to CSO demonstration and presentation events:

(1) The contract item financed is a commercial supply, technology, or service. Reference DEVIATION USA001228-18-DPAP and SAF/AQC (18-C-03), Defense CSO Pilot Program Launch, all supplies, technologies, or services procured via a

CSO are treated as commercial items.

(2) The contract price exceeds the simplified acquisition threshold. CSO contracts will not exceed the value of the simplified acquisition threshold.

(3) The contracting officer determines that it is appropriate or customary in the commercial marketplace to make financing payments for the item.

The purpose of the CSO Pilot Program is to test whether the use of a CSO and a commercial contract will give the Air Force access to products and services available from nontraditional defense contractors who are otherwise unwilling to do business with the Government. Many of these companies are small, early-stage, emerging firms seeking venture capital investment. While the Government is not investing in these companies to gain equity, an initial payment will enable the Government to gain access to these types of companies and solutions. It is customary for these types of companies to receive venture capital investment funding, advance payments, or other forms of advance financing.

(4) Authorizing this form of contract financing is in the best interest of the Government.

- The benefits to the Government include access to nontraditional defense companies and their innovative solutions. Furthermore, these companies will be able to focus on delivering solutions to enhance mission effectiveness and increase lethality instead of working to get a bridge loan or struggling to make payroll.

(5) Adequate security is obtained (see 32.202-4).

- Contracting officers shall use the offeror's financial condition as the security for Government financing IAW FAR 32.202-4(a)(2). Assessment of the contractor's financial condition shall consider both net worth and liquidity. If the contracting officer finds the offeror's financial condition is not adequate security, the contracting officer shall require other adequate security or will not use this type of payment.

(6) Prior to any performance of work under the contract, the aggregate of commercial advance payments shall not exceed 15 percent of the contract price.

- Advance payments under CSO demonstration and presentation events days shall not exceed 15% of the contract price.

(7) The contract is awarded on the basis of competitive procedures or, if only one offer is solicited, adequate consideration is obtained (based on the time value of the additional financing to be provided) if the financing is expected to be substantially more advantageous to the offeror than the offeror's normal method of customer financing.

- The 15% advance commercial payment is not substantially more advantageous to the offeror than venture capital investment or other methods of customer financing used by the nontraditional defense contractors the CSO is targeting.

(8) The contracting officer obtains concurrence from the payment office concerning liquidation provisions when required by 32.206(e).

- Liquidation will be on a whole contract basis. Contracting officers shall use a uniform liquidation percentage as the liquidation method, therefore concurrence with the payment office is not required by FAR 32.206(e).

## DETERMINATION

IAW FAR 32.202-1(d), and based on the above findings, I have determined advance commercial payments on contracts valued under the for the CSO demonstration and presentation events are in the best interest of the Government and approved for use within the limitations listed above. Contracting Officers will determine and document the business case if using advance commercial payments.

# Commercial solutions opening (FA4484-20-S-C001)(V6)

JOINT BASE MCGUIRE-DIX-LAKEHURST  
Commercial Solutions Opening (CSO)  
Solicitation Number FA4484-20-S-C002  
Date: 18 November 2019

## **SECTION A: Introduction**

Joint Base McGuire-Dix-Lakehurst (JB MDL) is conducting a commercial solutions opening (CSO) authorized by Department of Defense Class Deviation 2018-O0016. Under a CSO, the Air Force may competitively award proposals received in response to a general solicitation, similar to a broad agency announcement, to acquire innovative commercial items, technologies, and services, based on a review of proposals by scientific, technological, or other subject-matter expert peers within the Air Force. Under this CSO, all items, technologies, and services shall be treated as commercial items.

The Air Force intends to obtain “innovative” solutions or potential new capabilities that fulfill requirements, close capability gaps, or provide potential technology advancements. Solutions may include existing technologies or procedures that are not currently in use by units at various locations that would enhance or streamline their mission capabilities. Based on available funding, this CSO is targeting solutions priced less than \$30,000. However, the Government may evaluate proposed solutions priced greater than \$30,000.

“Innovative” is defined as any technology, process or method that is new as of the date of submission of a proposal. It also includes any new application of an

existing technology, process, or method.

This CSO contains broadly defined areas of interest and interest in more specific requirements. While these areas of interest are geared toward meeting requirements at locations listed in each area of interest, the Government reserves the right to award contracts from this CSO to meet Air Force requirements at other locations with similar areas of interest and mission requirements.

JB MDL will utilize an open two-step CSO evaluation process, and in some rare cases a one-step evaluation process. Under the one-step evaluation process, offerors whose proposed solutions meet the need of the government will not be required to provide a Virtual Pitch or an In-Person Pitch and will be immediately notified if they were selected for an award. Under the two-step evaluation process, offerors that receive an invitation to make a Virtual Pitch or an In-Person Pitch to the JB MDL team will be notified of the date and time for the pitch in their invitation. Offerors invited will pitch their solution to evaluators and will be immediately notified if they were selected for an award. For further details, review Section C of this document for Procedures and Criteria for Selecting Proposals.

In order to expedite payment, the Government intends to pay this contract with the Government Purchase Card (GPC). This will require you to have the ability to accept a credit card payment at the time of award.

## **SECTION B**

### Instructions for Preparation and Submission of Proposals

The following section outlines the proposal requirements. It also includes timelines for submissions and information about the pitch day.

All contracts will be firm-fixed price. All supplies or services procured via this CSO are treated as commercial. The Air Force must determine the price fair and reasonable prior to award. JB MDL is conducting this CSO as a Total Small Business Set-Aside. The Air Force intends to evaluate the Small Business status of each offeror based on the North American Industry Classification System (NAICS) of the proposed solution. The Air Force intends to award FAR Part 12 contracts as a result of this CSO, but reserves the right to award agreements (e.g. Other Transaction Agreements), if deemed in its best interest.

**Proposal Contents (Note: The Government reserves the right to not consider a proposal for award if it omits any of the required information below.)**

Proposal Volume / Section	Requirements/Limitations
<p><b>Cover letter</b></p> <p>Must include:</p> <ul style="list-style-type: none"> <li>i. Area of Interest for which proposal is submitted. Example: FA448420SC001-001AOI 001 – TITLE: Air Base Wing</li> <li>ii. Proposed Team Member Names</li> <li>iii. Proposal "Validity" Date</li> <li>iv. Authorized Offeror Representative or Point of contact(s)</li> <li>v. An overview of the company, as it relates to the Area of Interest under which the proposed solution is submitted</li> <li>vi. CAGE Code, DUNS Number</li> <li>vii. SAM Screen shot from SAM.gov</li> <li>viii. Relevant NAICS code and description</li> </ul>	<ul style="list-style-type: none"> <li>• Maximum of 2 pages. Page limitation does not include screenshot.</li> <li>• Offerors shall include a screenshot from SAM.gov as validation of your correct CAGE code, DUNS number and current business address along with the verification that you are registered to compete for ALL Contracts.</li> </ul>
<p><b>Volume I - Technical</b></p> <p>See additional requirements below.</p>	<ul style="list-style-type: none"> <li>• White paper shall not exceed 5 pages</li> <li>• Pitch/Slide deck shall not exceed 15 slides</li> <li>• OPTIONAL: Up to five-minute video clip to narrate or illustrate the proposed solution</li> </ul>
<p><b>Volume II - Price</b></p> <p>Must include:</p> <ul style="list-style-type: none"> <li>i. Proposed prices</li> <li>ii. Delivery or Period of Performance</li> </ul>	<ul style="list-style-type: none"> <li>• No page Limit.</li> <li>• Flexible quantities or pricing options should be provided to maximize the Air Force's ability to award with available funding.</li> <li>• Awards for supplies will be delivered Freight on Board (FOB) Destination.</li> </ul>

***\*\* NOTE: Submitted documents shall not contain classified data or sensitive information and proprietary information shall be clearly marked \*\****



To limit confusion, all proposal volumes must include the title of the area of interest on which the offeror is proposing a solution, and use the following naming convention:

- Proposal-FA448420SC001-CoverLetter-<Company Name>.doc
- Proposal-FA448420SC001-White Paper-<Company Name>.doc
- Proposal-FA448420SC001-Pitch Deck-<Company Name>.ppt
- Proposal-FA448420SC001-Price-<Company Name>.doc

## **Technical Volume**

The technical volume shall include a white paper, a pitch/slide deck and an OPTIONAL video clip to narrate or illustrate the proposed solution that is no longer than 5 minutes in length. The technical volume will be reviewed holistically and there is no set format requirements for these documents. It is recommended (but not required) that more detailed information is included in the white paper and higher level information is included in the pitch deck.

The technical volume should address the technical and importance to agency program factors: how the proposed solution is innovative and the feasibility of the solution solving the unit's challenge(s), including examples demonstrating possible application of the proposed innovation or existing use of the solution in the commercial marketplace.

The quality of the video submissions will not factor into the government's feedback. The government encourages low-cost video production, such as cell phone videos.

Video Submission Instructions – Video submissions must be posted to Youtube.com or other video hosting website for the government to access. Videos may be marked public or private. The vendor must provide a link and password (if marked private) in order for the government to access the video submission. The government will not provide access to the vendor's video outside of the government evaluation team without the permission of the vendor. Do not provide a shortened URL, such asyoutu.be.

## Technology Concept and Company Capability

Offerors shall provide the following information in sufficient detail to allow the Government to make an assessment of their capability to support the proposed solution.

- Offerors shall describe the unique aspects of their proposed solution as it “relates” to the Area of Interest.
- The proposed solution shall not repeat the Areas of Interest/Topics or contain the contents of the white paper pasted into slides, but rather provide convincing evidence that the proposed solution will meet the Government’s need.

The following examples of convincing evidence are strongly encouraged:

- (a) Authentic company URL or web address.

**Note:** The Government may elect to use the information provided as part of its continuous market research. However, the government is not obligated to use the URL or web address as part of its evaluation process to determine the Selectee or Awardee.

- (b) Summary of product commercialization currently used in the open market.

- (c) Pictures, diagrams, models or figures to depict the essence of the proposed solution.

## SAM Registration

It is critical offerors are registered in the System for Award Management (SAM), <https://www.sam.gov/>, you will not be eligible for an award if not registered in SAM at the time your proposal is submitted. Additionally, verify that you are registered to receive contracts (not just grants) and that your address matches your proposal and SAM.

- When registering in SAM.gov, be sure to select ‘YES’ to the question ‘Do you wish to bid on contracts?’ in order to be able to compete for CSO. If you are only registered to compete for grants, you will be ineligible for award.

- The Air Force is working to move fast, please double check your CAGE codes and DUNS numbers to be sure they line up, if they are not correct at the time of submission, you will be ineligible for award.

JB MDL has partnered with the New Jersey Institute of Technology (NJIT) Procurement Technical Assistance Center (PTAC) to provide New Jersey based small businesses with free technical assistance, training, proposal reviews, and counseling. To gain access to these free resources register at [www.njit.edu/ptac](http://www.njit.edu/ptac). (If your business is not headquartered in New Jersey, please contact your local PTAC for technical assistance via this link: <https://www.dla.mil/SmallBusiness/PTAP/PTAC/>).

### **Ask Me Anything (AMA)**

Due to the large amount of expected interest in this CSO, and in order to maintain a written record of questions, the Air Force will be accepting individual questions through e-mail. The questions and answers will be published via FBO.gov to ALL offerors on a monthly or quarterly recurring basis, except in rare cases when the issue needs to be addressed immediately.

All e-mails for questions, solicitation clarifications, or possible amendments must be emailed to: [87CONS.CSO.Team@us.af.mil](mailto:87CONS.CSO.Team@us.af.mil). To avoid any confusion, the subject line of the email shall include the following (depending on the section of the solicitation or Area of Interest you have question(s) on):

- AMA - Area of Interest
- AMA - Solicitation Section (A, B, C or D)

### **Proposal Submission**

In order for your proposal to be evaluated for a possible contract award, it must be submitted via email to [87CONS.CSO.Team@us.af.mil](mailto:87CONS.CSO.Team@us.af.mil) at any time through 30 September 2022. A hardcopy will not be accepted. No proposal will be accepted after 3:00 PM Eastern Time on 30 September 2022 as the authority to enter into a contract under the CSO program expires at this time. Offerors may submit proposal amendments any time prior to the proposal evaluation deadline. Evaluation shall be within 45 days of the submission.

However, the Government will ONLY review the final amended proposal that is submitted.

To avoid any 'lost in transit' situation, offerors shall contact the Contracting Office to confirm receipt of an email or proposal electronic delivery immediately after submission. Please ensure that your e-mail address listed in your proposal is current and accurate. JB MDL is not responsible for ensuring notifications are received by firms changing mailing address/e-mail address/company points of contact after proposal submission without proper notification to JB MDL. Changes of this nature shall be annotated in the FBO submittal or amendments.

**\*\*Notes:** Offerors are responsible for ensuring that ALL Amendments to this solicitation are reviewed carefully prior to submitting a proposal.

# Section C: Procedures and criteria for selecting proposals

JB MDL will utilize a two-step evaluation process, and in some rare cases may make an award without completing the second step in the two-step process, which may require a Virtual Pitch or an In-Person Pitch.

## **ONE-STEP CSO Evaluation Process – Direct Award (No Pitch)**

Evaluation of offerors' proposed solutions/packages: The Air Force will conduct its evaluation based on three factors: technical, importance to agency programs, and funds availability.

- The technical factor will assess how innovative the solution is (as defined in this announcement) and the feasibility of the solution solving the unit's challenges.
- The importance to agency programs factor will assess the solution's potential to enhance the mission effectiveness of the unit.
- The funds availability factor will assess the availability of funding to purchase the solution.

**Price Reasonableness Determination:** Price shall be considered to the extent appropriate, but at a minimum, the contracting officer will use market research as the primary method to determine that the price is fair and reasonable. The Government may elect to use external market research in the evaluation of the proposal. The Air Force must determine the price fair and reasonable prior to award using the procedures at DFARS subpart 212.209. In some circumstances, the contracting officer may request information from the offeror regarding recent purchase prices paid by the Government and/or commercial customers for the same or similar commercial items.

At the conclusion of proposal evaluation and based on the results of the evaluations, the Air Force may select offerors for direct award. An award

notification will be sent out, which shall include a request for further details or documents prior to award (i.e. contractor self-developed Performance Work Statement (PWS), delivery details...etc.) A PWS is similar to a Service Level Agreement (SLA) used in the commercial marketplace. The PWS shall detail the proposed work to be completed during the period of performance. In order to expedite payment, selectees must be able to accept an initial payment (15%) under the contract through a Government Purchase Card (GPC) as part of the conditions of award, as soon as all the details for award are discussed and agreed upon by both parties.

**NOTE:** PWS shall not contain classified data or sensitive information. Proprietary information shall be clearly marked.

**TWO-STEP CSO Evaluation Process (If applicable)** – JBMDL reserves the right to request a Virtual Pitch or an In-Person Pitch.

**Step One:** Evaluation of offerors' proposed solutions/packages: The evaluation criteria for a two-step process is the same as the one-step process: technical, importance to agency programs, and funds availability. Price reasonableness determination is also the same.

**Step Two:** Virtual Pitch or an In-Person Pitch: Offerors invited to participate in a two-step CSO Evaluation Process (Pitch Day) will receive an invitation which shall provide all of the details for the pitch session, request for additional information, as well as the time and date that the pitch will be conducted. Offerors selected for Pitch Day will have an opportunity to pitch (Virtually or In-Person) their solution to evaluators. The pitches will be evaluated using the same factors as the initial evaluation: technical, importance to agency programs, and funds availability.

After offerors pitch their solution to evaluators, to the greatest extent practicable, offerors will be notified if they were selected for an award immediately following their pitch. Same as in the one-step process, offerors proposing service-based solutions will be required to provide a contractor self-developed PWS prior to award. In order to expedite payment, selectees must be able to accept an initial payment (15%) under the contract through a Government Purchase Card (GPC) as part of the conditions of award.

**Note:** The Air Force reserves the right to award to an offeror if it is unable to pitch due to unexpected circumstances or circumstances beyond its control.

### **Pitch Sensitive Information**

The Air Force Pitch Day event(s) present highly visible public relations opportunities as well as the chance for small businesses to network with other potential investors. It is the government's intention to conduct the Pitch Day event in an open, public forum. Therefore, the contractors "must avoid" use of classified, procurement sensitive data in their Pitch. However, if it is necessary to add such information, the contractor shall (i) notify the government two business days prior to the pitch day; (ii) mark all applicable documents clearly.

If a Pitch is approved to be in this category, only authorized contractor representatives and Government personnel who "have a need to know" with signed non-disclosure agreements, will be allowed in a secured and guarded room. All other pitches with no restrictions will be presented in an open environment.

### **Site Visits/Product Demonstration**

Site visits may be conducted at the discretion of the contracting officer throughout the acquisition process. The purpose of the site visit is to:

- i. Allow contractors and government to discuss their concerns while observing the product demonstration.
- ii. Allow the government to judge whether the products can satisfy its needs as identified in the Area of Interest/Solicitation;

The site visit shall not be construed as guarantee for award, and the government shall not bear the contractor's cost expended for the site visit.

**Note:** During any step of the CSO, the Air Force may send questions or comments for the offerors to address via email or during Pitch Day.

# Section D: Areas of interest

See attached Areas of Interest/Topics for this CSO.

- AOI 001 – JBMDL 87th Air Base Wing
- AOI 002 – JBMDL 305th Air Mobility Wing
- AOI 003 – JBMDL 621st Contingency Response Wing
- AOI 004 – JBMDL Expeditionary Operations School
- AOI 005 – JBMDL Civil Engineering Group
- AOI 006 – JBMDL AMC Test and Evaluation Squadron
- AOI 007 – Dover AFB – Installation Support
- AOI 008 – MacDill AFB – Installation Support
- AOI 009 – PACAF Air Operations
- AOI 010 – Eielson AFB – Force Support Squadron
- AOI 011 – Eielson AFB – Civil Engineering Squadron
- AOI 012 – Eielson AFB – 353rd Combat Training Squadron
- AOI 013 – Eielson AFB – Security Forces Squadron

**Note:** The Areas of Interest/Topics listed above are subject to change at any time during this procurement process. More Areas of Interest/Topics may be added/ revised on a monthly or quarterly basis. An amendment will be issued when such a change occurs. Offerors are encouraged to review all the Amendments to this solicitation prior to submitting a proposal.



# CSO Policy memo 18-C-03

## **DEPARTMENT OF THE AIR FORCE WASHINGTON DC OFFICE OF THE ASSISTANT SECRETARY**

Contract Policy Memo 18-C-03

MEMORANDUM FOR ALMAJCOM/FOA/DRU (CONTRACTING)

FROM: SAF/AQC 1060 Air Force Pentagon Washington DC 20330-1060

SUBJECT: Defense Commercial Solutions Opening (CSO) Pilot Program Launch

To optimize mission outcomes, Congress has provided specific, express authority for DoD to conduct an exciting, new pilot program that has great potential to significantly impact our ability to expedite delivery of the “latest and greatest” technologies to the warfighter. OUSD (A&S) DPC implemented the program via Class Deviation 2018-00016, Defense Commercial Solutions Opening Pilot Program on June 26, 2018.

The purpose of this Pilot is to test whether a streamlined contracting procedure using a CSO solicitation (a variant of a Broad Agency Announcement (BAA) as described at FAR 35.016), is effective in fulfilling a requirement, capability gap, or potential technological advancement with respect to which the innovative commercial item, technology or service acquired provides a solution or a potential new capability. In other words, the purpose is to test whether the use of a CSO and a commercial contract will give the Department access to products and services available from nontraditional defense contractors who are otherwise unwilling to do business with the Government. Some of the benefits of this Program are:

1. CSOs are considered competitive procedures for the purpose of section 2376(1) of title 10 of the United States Code and FAR 6.102;
2. DOD Source Selection procedures do not apply;
3. Solicitations may address multiple areas of interest (general or more specific) and can be issued for longer periods i.e., a three year solicitation may be

issued as long as it is updated annually.

4. Evaluations are streamlined with the primary evaluation factors already provided for in the Class Deviations and are conducted via a technical evaluation (“peer review”).
5. All supplies or services procured via a CSO are treated as commercial items absent the requirement for a commercial item determination.
6. The program allows for the award of a contract OR an Other Transaction for Research or Prototype as long as the solicitation indicated the government reserves the right to award a contract or agreement as a result of it’s solicitation. (Note: Prototypes may also be procured via the commercial contract).
7. A separate synopsis in accordance with FAR 5.201 is NOT required.
8. The solicitation must address the timelines for proposal submittal in accordance with FAR 5.203 (b) and the allowance for a 45-day response time at FAR 5.203 (e) is only required if a CSO is used for R&D with contract awards over the SAT
9. CSOs may be structured to allow for receipt of proposals at any time during an opening (see the BAA Guide and the sample solicitations on the CSO page).
10. Funding type is not limited to 3600 funds (except for R&D, but R&D is not limited to budget activities 6.1-6.4) i.e., 3400 funds may be used and other funding types as appropriate.
11. Significant decrease in acquisition cycle time.

As alluded to, CSOs are similar to BAAs, so contracting officers (COs) are encouraged to refer to the “Air Force Research Laboratory (AFRL) BAA Guide for Contracting and Technical Personnel” (particularly Chapters 3,4,6,9 and 10) for additional non-mandatory, instructional guidance on ways to structure the CSO and conduct evaluation and selection of successful offerors. Although CSOs are similar to BAAs, there are differences, as well. For example, since the supplies or services acquired via a CSO are treated as commercial, the Pilot Program is implemented under DFARS 212, whereas BAAs are implemented under FAR 35. Further, BAAs are used solely for research and development and typically result in cost type contracts; whereas, awards made using a CSO are considered commercial and may only result in fixed price, including fixed price incentive, type contracts.

Lastly, to address the associated approval and reporting requirements for awards in excess of \$100M, the AFF ARS language at attachment 1 is effective

immediately until incorporated into the AFF ARS or otherwise rescinded. For additional information on the program, visit the CSO page, which includes additional resources such as a CSO Briefing, FAQs, sample solicitations, and more.

Restrictions. Prior to an award in excess of \$100M, the SAE must make the determination required in Class Deviation 2018-00016. In such cases, the contracting officer must submit the determination for approval to SAF/AQ and SAF/AQC concurrently after coordination by the MAJCOM/DRU/AFRCO SCO (or for AFLCMC and SMC, the SCCO)(or for AFIMSC, this includes AFICA/CC as the SCCO and all MAJCOM OL Director's of Contracting). Allow 30 days for staffing and approval after receipt by SAF/AQ.

Award Notification Requirements. For awards in excess of \$100M, the contracting officer must prepare the required Congressional Defense Committee Notification letters posted on the

Commercial Solutions Opening AFFARS Library page and forward them to SAF/LLW and SAF/FMBL for processing within 30 days after award. When sending the notification, courtesy copy SAF/AQC and USD(A&S/DPC. Maintain proof of submission of award notification in the contract file. This notification does not take the place of the Announcement of Contract Awards made via the DD 1279 in accordance with DFARS 205.303 and AFFARS 5305.303. 2013 Edition 5312-1 Oli IRI 10 TL

OFFICE OF THE UNDER SECRETARY OF DEFENSE  
3000 DEFENSE PENTAGON WASHINGTON, DC 20301-3000  
RO  
ACQUISITION AND SUSTAINMENT  
JUN 26 2018

In reply refer to DARS Tracking Number: 2018-00016

MEMORANDUM FOR COMMANDER, UNITED STATES SPECIAL OPERATIONS  
COMMAND (ATTN: ACQUISITION EXECUTIVE) COMMANDER, UNITED STATES  
TRANSPORTATION COMMAND (ATTN: ACQUISITION EXECUTIVE) DEPUTY  
ASSISTANT SECRETARY OF THE ARMY (PROCUREMENT) DEPUTY ASSISTANT  
SECRETARY OF THE NAVY (ACQUISITION AND PROCUREMENT) DEPUTY  
ASSISTANT SECRETARY OF THE AIR FORCE (CONTRACTING) DIRECTORS OF

## THE DEFENSE AGENCIES DIRECTORS OF THE DOD FIELD ACTIVITIES

SUBJECT: Class Deviation-Defense Commercial Solutions Opening Pilot Program

Effective immediately, contracting officers may acquire innovative commercial items, technologies, or services using a competitive procedure called a commercial solutions opening (CSO) by following the procedures provided in this class deviation. Use of a CSO is authorized by section 879 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2017 (Pub. L. 114-328). Under a CSO, DoD may competitively select proposals received in response to a general solicitation, similar to a broad agency announcement, based on a review of proposals by scientific, technological, or other subject-matter expert peers.

Use of a CSO in accordance with this class deviation is considered to be a competitive procedure for the purposes of 10 U.S.C. chapter 127 and FAR 6.102. Contracting officers shall treat items, technologies, and services acquired using a CSO as commercial items. Notwithstanding the limitation in DFARS 235.006-71, a CSO may be used to fulfill requirements for research and development, ranging from advanced component development through operational systems development. When using a CSO in acquisitions for research and development, contracting officers shall use the procedures in this class deviation in conjunction with FAR part 35.

Contracting officers may use a CSO only

- To obtain solutions or potential new capabilities that fulfill requirements, close capability gaps, or provide potential technological advancements;

DARS Tracking number 2018-00016 Defense Commercial Solutions Opening Pilot Program

When meaningful proposals with varying technical or scientific approaches can be reasonably anticipated; and When the contract entered into under the pilot program will be fixed-price, including fixed-price incentive contracts.

When using a CSO, contracting officers shall ensure the CSO - describes the agency's interest, either for an individual program requirement or for broadly defined areas of interest covering the full range of the agency's requirements;

Describes the criteria for selecting proposals, their relative importance, and the method including, where applicable, the potential type of data rights that may be determined necessary to meet DoD's minimum needs; Specifies the period of time during which proposals submitted in response to the CSO will be accepted; Contains instructions for the preparation and submission of proposals; and Uses "S" in position 9 and "C" in position 10 of the procurement instrument identifier to identify the solicitation as a CSO.

Contracting officers shall publicize a notice of availability of a CSO through the Governmentwide point of entry at least annually, and, if authorized pursuant to FAR subpart 5.5, may also publish a notice in noted scientific, technical, or engineering periodicals. Synopsis under FAR subpart 5.2 of individual contract actions under the CSO is not required. The notice published pursuant to this paragraph fulfills the synopsis requirement.

The primary evaluation factors for selecting proposals for award shall be technical, importance to agency programs, and funds availability. Price shall be considered to the extent appropriate, but at a minimum, to determine that the price is fair and reasonable.

Proposals received as a result of a CSO shall be evaluated in accordance with evaluation criteria specified therein through the review of such proposals by scientific, technological, or other subject-matter expert peers. Written evaluation reports on individual proposals are required, but proposals need not be evaluated against each other since they are not submitted in response to a common performance work statement or statement of work.

The requirements of DFARS 215.371-2 do not apply to acquisitions of innovative commercial items, technologies, or services under a CSO pursuant to this class deviation.

Contracting officers shall not award contracts in excess of \$100 million pursuant to a CSO without a written determination from the Under Secretary of Defense for Acquisition and Sustainment (USD(A&S)) or the cognizant service acquisition executive of a military department of the efficacy of the effort to meet mission needs of DoD or the relevant military department. In order to secure USD(A&S) approval, send the written determination, along with a request for USD(A&S) review and approval, via email to the Defense Procurement and Acquisition Policy

(DPAP) Contract Policy and International Contracting Directorate (CPIC) at osd.pentagon.ousd

DARS Tracking number 2018-00016 Defense Commercial Solutions Opening Pilot Program atl.mbx.cpic@mail.mil. Requests for approval of the written determination by the cognizant service acquisition executive shall follow military department policy and procedures. Not later than 45 days after the award of a contract under a CSO for an amount exceeding \$100 million, the USD(A&S) will notify the congressional defense committees of such award. To facilitate reporting, not later than 1 day after the award of a contract exceeding \$100 million under the pilot program authority, the contracting officer shall prepare a notice of award for the congressional defense committees that includes o A description of the innovative commercial item, technology, or service acquired; O A description of the requirement, capability gap, or potential technological advancement with respect to which the innovative commercial item, technology, or service acquired provides a solution or a potential new capability; o The contract award amount; and o Identification of the contractor awarded the contract; and Submit the notice of award to USD(A&S) via the cognizant service acquisition executive of a military department for signature, if applicable. o In order to secure USD(A&S) signature, send the notice of award, along with a request for USD(A&S) signature, via email to DPAP/CPIC at osd.pentagon.ousd atl.mbx.cpic@mail.mil. o Requests for approval of a notice of award by the cognizant service acquisition executive shall follow military department policy and procedures. Contracting officers shall ensure that contract files fully and adequately document the market research and rationale supporting a conclusion that the requirements of this class deviation have been satisfied.

The authority to enter into a contract under the pilot program expires on September 30, 2022. The expiration of this authority will not affect the validity of any contract awarded under the pilot program before the expiration date. As used in this class deviation. "innovative" means any technology, process, or method, including research and development, that is new as of the date of submission of a proposal, or any application that is new as of the date of submission of a proposal of a technology, process, or method existing as of such date. This class deviation remains in effect until September 30, 2022, or otherwise rescinded.

# Commercial solutions opening

CSO Authority  
U.S. AIR FORCE

Sec 879 of the FY17 NDAA provided authority for the Department to implement a Pilot Program to Acquire Innovative Commercial Items, Technologies, and Services resulting from a general solicitation (CSO) and the peer review of such proposals

- OUSD(A&S) Class Deviation 2018-00016
- Contracts and agreements must be Firm Fixed Price, including FPI

May not enter into a contract or agreement for an amount >\$100M without a written determination from the SAE Must notify Congressional Defense Committees within 45 days of award of a contract >\$100M

- Authority to enter into a contract under the Pilot Program expires September 30, 2022

## **What's a CSO?**

U.S. AIR FORCE | A CSO is a general solicitation modeled after Broad Agency Announcements (BAAs) (FAR 35.016) . This is an expansion of the use of a “general solicitation” as defined at 10 USC 2302 (see notes) Nearly identical to BAAs except CSOs cover all innovative supplies, services and R&D

- Innovative means any technology, process, or method, including research and development, that is new as of the date of proposal submission; or any new application of an existing technology, process or method as of the proposal date. All funding types, including O&M, would be appropriate
- All products/services procured using a CSO are considered commercial notwithstanding the definition under FAR Subpart 2.101

## CSO Use

- A CSO may be used to award a contract or an other transaction to fulfill requirements, capability gaps, or procure potential technological advancements that meet the definition of innovative items, technology, and services acquired under the pilot program shall be treated as commercial items in accordance with the procedures set forth in Class Deviation 2018-00016 shall only be used when meaningful proposals with varying technical/scientific approaches can be reasonably anticipated. May only use fixed-price type contracts, including FPI awards may not exceed \$100M without SPE approval
- A prototype may be procured under a contract or OT as a result of a CSO may NOT award a grant or cooperative agreement since the principal purpose of both is to transfer a thing of value for a public purpose not for the direct benefit of the Government

## CSO Process

Selection of innovative commercial items, technologies, and services is a competitive procedure if award results from:

A CSO that is general in nature identifying areas of mission or technical interest, including criteria for selecting proposals and soliciting the participation of all offerors capable of satisfying the Government's needs; and

- A peer review (technical evaluation prepared by subject matter or technical expert) If only one proposal is received in response to a CSO within the open period, and it is reviewed as described and is evaluated favorably and selected for award, it is considered "competitive" and "effective competition"\* does not apply \*The requirements of DFARS 215.371-1 & 2 do not apply to acquisitions using a CSO pursuant to Class Deviation 2018-00016
- Many solicitation variations: closed, open, closed/open with one or two step procedures (See AFRL/PK BAA Guide for Contracting and Technical Personnel); Sample solicitations are posted on AFCC
- Evaluation criteria are specified in the Class Deviation CSOs can result in the award of a contract or an other transaction as long as specified in the solicitation



- Does not require the use of FAR or DoD Source Selection Procedures - No Commercial Item Determination is required!!!
- Use Part 12 procedures in conjunction with FAR Part 35 when procuring R&D For awards exceeding \$100M, prepare a notice of award for the congressional defense committees that addresses award details specified in the Class Deviation

# FAQs

## **What clauses apply?**

The clauses under FAR Part 12 such as, 52.212-4 and -5 and DFARS Subpart 212.3

## **What evaluation criteria are used?**

See the Class Deviation and sample BAAs and tailor evaluation criteria to the meet the needs of the acquisition

## **Is a special warrant required to issue a CSO?**

No, a contracting officer warrant is all that is required to issue a CSO; however, if an other transaction will be awarded as a result of the solicitation, then an agreements officer warrant is required

## **Is price evaluated?**

See DFARS 212.209 Determination of Price Reasonableness

## **Does FAR 16.403-1(c) apply if a FPI type contract is selected for award?**

Yes

## **Is a Commercial Item Determination (CID) required?**

No, products/services/technologies procured under a CSO are considered/ treated as commercial notwithstanding the definition in FAR 2.101 (see the FAQs for additional scenarios)

## **What is a CSO?**

A CSO is a general solicitation modeled after a Broad Agency Announcement (BAA), as described at FAR 35.016, which uses a streamlined, merit based selection process. CSOs are general in nature, identifying areas of mission or technical interest, including the criteria for selecting proposals via a peer review... i.e., technical evaluation. (Also see the CSO Briefing.)

**Has the AFFARS been modified as a result of the DFARS Class Deviation?**

We will be publishing an interim change to the AFFARS (via policy memo) in mid-late August 2018. AFFARS 5312-72, Pilot Program for Defense Commercial Solutions Opening, will be added to the AFFARS to address the approval process and the Congressional notification requirements for awards in excess of \$100M.

**Will the Air Force provide CSO training?**

See the SAF/AQCP CSO Briefing, AFRL BAA Guide for Contracting and Technical Personnel, Frequently Asked Questions (FAQs), and sample BAAS on our CSO web page.

**Will DAU provide CSO training?**

DAU intends to address this topic in CON 360 and CON 280, although the timeline for course updates is unknown.

**Are sample solicitations available?**

Sample BAAs are available on our CSO web page. These samples must be modified to meet the needs of the instant acquisition. Additional samples will be uploaded once received them from the field.

**Are CSOs limited to the procurement of existing commercial items that meet the definition at FAR 2.101?**

No. The commercial item definition at FAR 2.101 does not apply to procurements made using a CSO. Supplies and services procured via a CSO are, however, considered commercial and are procured using FAR Part 12 and DFARS Part 212 procedures.

**How is this different from doing any other FAR Part 12 contract?**

The contract itself is not different... j.e., the clauses at FAR 52.212-4/52.212-5 and DFARS 212.3 are utilized. However, this is different because a streamlined solicitation method is being used which allows for the procurement of innovative solutions through a merit based selection process

**Is market research and an acquisition plan required?**

In accordance with FAR 7.102(a)(1), acquisition planning and market research

are required for all acquisitions in order to promote competition and ensure that the Government meets its needs in the most effective, economical, and timely manner. Follow the FAR, DFARS and AFFARS for market research and acquisition planning requirements.

**Can I use a CSO if I know only one offeror is capable of submitting a proposal?**

No. A CSO shall only be used when meaningful proposals with varying technical/scientific approaches can be reasonably anticipated.

**If only one offer is received as a result of a CSO during an open period, do the “only one offer” requirements at DFARS 215.371-1 apply?**

No. These requirements do not apply to CSOs. The award would be considered competitive under this circumstance.

**If more than one proposal is received for the same area of interest, do the evaluators compare the two proposals?**

No. CSOs are used when meaningful proposals with varying technical/scientific approaches can be reasonably anticipated. Since the proposals provide for “varying approaches”, it is not reasonable nor is it necessary to compare them. Rather, they are evaluated based on the technical criteria identified in the solicitation only. (See AFRL’S BAA Guide for Contracting and Technical Personnel, Chapter 6.)

**What type of funding can be used for awards resulting from a CSO?**

Any type of funding can be used, including O&M. Use the funding type that is appropriate for the effort. Direct questions regarding funding to your financial management (FM) point of contact.

**What type of contracts may be used for awards resulting from a CSO?**

Only firm fixed price type contracts, including fixed price incentive, may be used.

**Can an “other transaction for prototype project” be awarded as a result of a CSO?**

Yes, as long as the CSO includes language specifying that the Government reserves the right to award a contract or other transaction as a result of this announcement.

**Can a grant or cooperative agreement be awarded as a result of a CSO?**

No. The principle purpose of both grants and cooperative agreements is to transfer a thing of value for a public purpose, not for the direct benefit of the Government. Products/Services procured as a result of a CSO are for the direct benefit of the Government.

**Can a prototype be procured as a result of a CSO?**

Yes. A prototype may be procured via a contract or other transaction resulting from a CSO. However, in order to award an “other transaction”, the CSO must include language indicating that the Government reserves the right to award a contract or other transaction as a result of this announcement.

**How do you determine the price to be fair and reasonable?**

Follow the procedures at DFARS 212.209.

**Do contractors have to be registered in the System for Award Management (SAM)?**

Yes. The use of a different solicitation type does not eliminate this requirement.

**Is there a dollar limit to awards resulting from CSOs?**

Yes. Awards are limited to \$100M unless approved by the Senior Acquisition Executive (SAE).

**When does the pilot program expire?**

The authority to enter into a contract under the pilot program expires on September 30, 2022.

**Would a CSO be suitable for the procurement of Advisory and Assistance Services (A&AS)?**

The intent of the Pilot Program is to allow cos to use a CSO to acquire innovative commercial items, technologies or services to obtain solutions or potential new capabilities that fulfill requirements, close capability gaps, or provide potential technological advancements. As such, before issuing a CSO, the CO must determine that meaningful proposals with varying technical or scientific approaches can be reasonably anticipated. In accordance with FAR 2.101, all A&AS are classified as either: 1) management and professional support services; 2) studies, analysis and evaluations; or 3) engineering and technical services.

The output of the A&A\$ may take the form of information, advice, opinions, alternatives, analyses, evaluations, recommendations, training and/or the day-to-day aid of support personnel. But the award is for a particular service to be performed, so innovation is unlikely. To use a CSO, the CO would have to expect offerors to provide alternative approaches to providing these services (such as, replacing a human with a robot, a computer, or artificial intelligence). The anticipation of varying outputs would not be sufficient justification for the use of a CSO. Therefore, a CSO is unlikely to be appropriate for the procurement of A&AS.

**Is a Commercial Item Determination required in accordance with DFARS 212.102/ali) in order to “treat or consider” products/services procured via a CSO as commercial?**

No. The products/services procured using a CSO under the Pilot Program are automatically treated as/considered to be commercial.

**If a previously procured product or service was not determined to be commercial in accordance with DFARS 212.102/ali), can the contractor submit a proposal under a CSO in order to reverse the CO’s determination?**

In order to use the CSO for the solicitation and selection of proposals the following conditions must be met:

1. The Co must reasonably anticipate the receipt of meaningful proposals with varying scientific or technical approaches
2. The CSO will be used to obtain solutions or potential new capabilities that fulfill requirements, close capability gaps, or provide potential technological advancements
3. The product or service must meet the definition of “innovative” in the Class Deviation
4. The resultant contract(s) will be fixed-price, including fixed-price incentive contracts. Based on these criteria, a previously procured product/service would not be considered “innovative”, nor would it fill a gap or capability requirement; therefore, the answer to this question is no. However, if the contractor submitted a proposal under a CSO for the previously procured product or service to be used in a “new and innovative way to fill a gap or capability requirement” i.e., “it is any new application of an existing technology, process or method as of the proposal date”, then it could be procured via a CSO.

**FAR 12.102(b) states: “Contracting officers shall use the policies in this part**

**in conjunction with the policies and procedures for solicitation, evaluation and award prescribed in Part 13, Simplified Acquisition Procedures; Part 14, Sealed Bidding; or Part 15, Contracting by Negotiation, as appropriate for the particular acquisition.” Does this mean a CO can use the DoD Source Selection Procedures in conjunction with this Pilot Program?**

No. The CO cannot use the DoD Source Selection Procedures when using this Pilot Program nor should the Co use the procedures in Part 13 or Part 14 as they are not applicable nor are they appropriate when making awards from a CSO. The Co must use the evaluation and selection procedures provided for in the Class Deviation. For additional information, please see the AFRL Guide for Technical and Contracting Personnel.

**Since a CSO is a competitive procedure for the purposes of FAR 6.102, are resultant awards made using the competitive negotiated acquisition procedures in FAR 15.3 and its Supplements?**

While a CSO is categorized as a competitive procedure for the purposes of FAR 6.102, the resultant proposals are expected to vary by the technical approach and the price. As such, proposals are not compared to one another, nor shall resultant award(s) be made via the competitive source selection procedures in FAR Part 15.3 or its Supplements. For CSO awards, COs shall determine price reasonableness in accordance with DFARS 212.209.

**If an award is made to a small business, does the CAR have to be marked accordingly?**

Yes. The Class Deviation does not exempt the Pilot Program from FAR Part 19 and its Supplements.

**Is a DD2579 required under this Pilot Program?**

Yes. The Class Deviation does not exempt the Pilot Program from FAR Part 19 and its Supplements.

**What definition does the CO use when determining a product or service to be commercial under the Pilot Program?**

There is no definition of commercial that is applicable to this Pilot Program. In accordance with the Class Deviation, COs shall treat items, technologies, and services acquired using a CSO as commercial items. The definitions in FAR 2.101 do not apply to this Pilot Program.

**In accordance with FAR 12.207, commercial items may be awarded using firm fixed price, fixed price with economic price adjustment, time and material, and labor hour type contracts. Do these limitations apply to the Pilot Program as well?**

No. In accordance with the Class Deviation, only fixed price, including fixed price incentive, type contracts may be used under this Pilot.

**Can R&D be procured via a CSO?**

Yes. In accordance with the Class Deviation, notwithstanding the limitation in DFARS 235.006-71, a CSO may be used to fulfill requirements for R&D, ranging from advanced component development through operational systems development. When using a CSO to acquire R&D, the CO shall use the procedures in the Class Deviation in conjunction with FAR Part 35 and its supplements.

**When procuring R&D via a CSO, is funding limited to budget activities 6.1 through 6.4?**

No.

**If a fixed price incentive type contract is selected for an award made as a result of a CSO, do the limitations at FAR 16.403-1(c) apply?**

Yes, they are applicable. No exception was provided for in the Class Deviation.



# CSO talking paper

## Commercial Solutions Offering (CSO) Overview

### **End User Problem/Need**

Operational Units often find good technology that can solve their problem but can't find a way to get them on contract. Those units are traditionally not good at writing Performance Work Statement's (PWS). This results in the local CONS office awarding a contract to the lowest price, which likely isn't the company that the operational unit wanted, and the product the end user ends up with may not be able to solve their problem. Another common scenario is where government has a problem and doesn't know if there's a commercial solution. Both scenarios can result in the operational unit wasting months of time, getting frustrated, and ending up exactly where they started.

### **What is a CSO/Legal Authority**

A CSO is an innovative contracting method where a problem statement is posted to FBO targeting non-traditional vendors to bring new technology to the government. This solicitation can be specific (I.E. Machine Learning Software targeting Flight Crew scheduling for C-17 crew), or broad (I.E. machine learning technology). CSOs were authorized in National Defense Authorization Act for Fiscal Year 2017 and AFICA has published guidance reaffirming the use of CSOs at the base level.

### **Benefits of a CSO**

- 1) User doesn't have to type of exact requirements package. This solicitation defines the problem and allows the vendor to bring the solution to the customer.
- 2) Gives the user the ability to select the exact product/vendor they want and can choose the vendor with what he believes is the best product instead of the

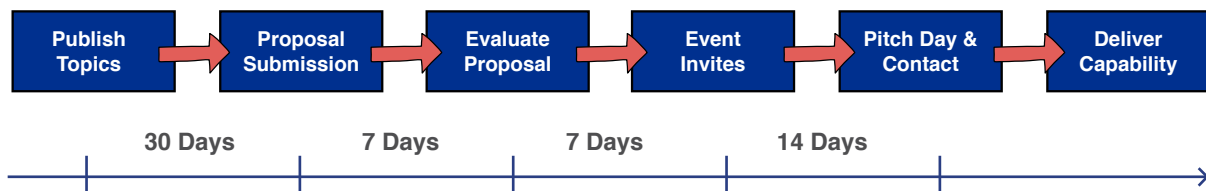
traditional way of lowest price.

3) Allows user the ability to choose multiple vendors for the same problem/ requirement

4) Decreases the acquisition timeline (as little as 2 months)

### CSO Timeline

The below timeline is an example of how quickly this process can be done and not a mandate on how all CSOs should go. For example, CSOs that receive more bids may want a longer evaluation phase, or multiple pitch days.



### Paperwork Require

Below is an example of the paperwork that may be involved with a CSO.

Required from Air Force	Required from Vendor
<ul style="list-style-type: none"> <li>- Area of interest for problems (1 page each, CONS does with user)</li> <li>- Small Business Coordination Sheet (2 pages, CONS does)</li> <li>- Streamlined Acquisition Summary (5 pages, CONS does)</li> <li>- Market Research (5 pages, CONS does)</li> <li>- Vendor SAM Registration (CONS does)</li> <li>- Vendor SAM historical data (CONS does)</li> <li>- Small Business Certification (CONS does)</li> <li>- Vendor receipt confirmation (CONS does)</li> </ul>	<ul style="list-style-type: none"> <li>- Cover sheet (1 page, vendor does)</li> <li>- White paper (5 pages max, vendor does)</li> <li>- Pitch Slide (15 pages max, vendor does)</li> <li>- Pricing proposal (1 page, vendor does)</li> </ul>

## **Joint Base McGuire-Dix-Lakehurst (JB MDL) CSO**

JB MDL conducted a broad CSO focusing on 4 problem statements. Of the 72 bids that JB MDL received, 2 companies did not meet JB MDL's small business criteria, 8 companies were excluded due to lack of SAM registration prior to the pitch day. After the vetting process, 10 companies came out to the pitch day, and 5 companies were awarded a contract that day. From start to finish their whole process took 55 days, starting on 18 April and ending on 10 June.

### **Additional Info**

- DOD CSO Paper (3 Pager)
  - <https://www.acq.osd.mil/dpap/policy/policyvault/USA001228-18-DPAP.pdf>
- AF CSO Paper (2 pager)
  - [https://cs2.eis.af.mil/sites/10059/afcc/knowledge\\_center/Documents/Contracting\\_Memos/Policy/18-C-03.pdf](https://cs2.eis.af.mil/sites/10059/afcc/knowledge_center/Documents/Contracting_Memos/Policy/18-C-03.pdf)
- McGuire Lessons Learned
  - Contracting moved quickly for proof of concept but they moved too quick for the end user who weren't completely prepared to take on all (10) of these projects.
- Additional Info
  - <https://aaf.dau.mil/contracting-cone/defense-cso/>
  - <https://www.fbo.gov/>

# Government purchase card (GPC)

AFI64-117 22 JUNE 2018

## Chapter 8

### PROHIBITIONS FOR GPC AND CONVENIENCE CHECKS

8.24. Travel Related Expenses. Any expenses associated with official Government travel, or temporary duty, supported by travel orders and reimbursed on a travel voucher which includes rental/lease of motor vehicles, purchase of airline, bus, train tickets, fuel, meals, drinks, lodging, or other travel or subsistence costs are prohibited. (T-0) Individual employees should use their issued Government Travel Card (GTC) for such reimbursable expenses.

8.34. Unmanned Aircraft Systems. Cardholders are prohibited from the purchase, lease, or contract of any unmanned systems, to include but not limited to, Commercial Off the Shelf Drones, Unmanned Aircraft Systems, Unmanned Aircraft, Ground Control Station, Remote Video Terminal, Electro-Optical/Infrared sensors or any other payload, unmanned ground vehicle/system, or unmanned boat/submersible drone/system. (T-2) GPC purchases of spares/replenishment parts for AF approved unmanned systems are not restricted by this AFI.

**Exception: The GPC may be used to purchase the above if purchase is for Research Development Test & Evaluation purposes.** The GPC holder making Small Unmanned Aircraft Systems purchase under this exception shall notify AFMC/A3V, [afmc.a3v@us.af.mil](mailto:afmc.a3v@us.af.mil), within 30 days of such purchase. The purchase notification shall include the make, model, and quantity of items purchased. Purchases made under this exemption are not exempted from applicable Air Force Instructions that govern acquisition, cybersecurity, operation and employment of the purchased items. (T-2)

8.35. Preferred Use Memberships. Preferred use memberships (e.g. Amazon Prime, Wholesale Clubs, etc.) are prohibited for purchase with the GPC (or convenience checks). (T-1)

## Chapter 7

### **GOVERNMENT PURCHASE CARD USAGE**

7.1.2. The GPC shall only be used for authorized Government purchases that are valid mission requirements using appropriated funds. (T-0) For those organizations that have non-appropriated funds, see AFI 34-275, Air Force Non-Appropriated Fund (NAF) Government Purchase Card Program. For Chapel Tithes and Offerings Fund GPC usage, see AFI 52-105, Chaplain Corp Resourcing. Contact local comptroller and/or legal office if any doubt exists regarding the proper use of appropriated funds.

7.1.3. **Ensure that a reasonable price is obtained through price comparisons and other market research methods** as prescribed by FAR Part 10.001, Market Research, Policy and discussed in paragraph 2.2.6.3. (T-0) Cardholders should request discounts. When overseas, price comparisons may be made using available prices from existing schedules, other overseas merchants or commercial sources.

7.1.7. The Bureau of Fiscal Service, U.S. Department of Treasury currently limits Government-to-Government card transactions to a daily maximum of \$24,999.99 per card. This includes inter-governmental (i.e., from another DoD agency) and intra-governmental (i.e., from another AF entity). This rule does not apply to purchases from commercial merchants, either via open market or through GSA Advantage, GSA Global Supply or GSA's retail stores, as well as from Personal Property or GSA Fleet and Defense Logistics Agency (DLA) Printing Services. Consult Financial Management for inter-governmental and intragovernmental purchases in excess of \$24,999.99 using other mechanisms (e.g. the IntraGovernmental Payment and Collection, or the Invoicing Payment Platform). (T-0)

7.1.8. **For purchasing of office supplies, all CONUS cardholders shall use the Federal Strategic Sourcing Initiative Program. (T-0) All office supply purchases shall be made through either an AbilityOne retailer (in-store or on-line), AF Advantage , or the AFWay contract (for toner only).** (T-0) If using AF Advantage, cardholders should seek additional price reductions for office supplies. Requests for deviation from the AF Office Supply Program must be

submitted in the form of a waiver request to the Office Supply Commodity Council via email at [office.supply.cc@us.af.mil](mailto:office.supply.cc@us.af.mil). (T-1) Visit the Office Supply EIM page for more information on waiver requests, or to see the complete program Ordering Guide.

**7.1.10. Internet purchases must be limited to those web sites that provide secure transaction safeguards.**

7.1.12. Education & Training Section personnel shall use the GPC to pay for Government or Commercial Off-The-Shelf training and education up to \$25,000 for an individual event or planned series of the same training event, activity, or course material. AF/A1DI approval is required, if course curriculum includes more than 50% of leadership content. For AF/A1DI approval, submit request via the Civilian Automated Training Input Program (CATNIP). (T1) Additional information regarding civilian education and training may be found in AFI 36401, Employee Training and Development.

7.1.13. Organizations may pay for Government or commercial off the shelf training and education with their organization funds up to \$25,000; however, if the Government has a need for tailored training or tailored training materials, the requirement shall be placed on Government contract by a warranted contracting officer. (T-0) In accordance with DoD Financial Management Regulation, Volume 10, DoD Administrative Instruction Number 40, and AFI 36-401, Employee Training and Development, an SF 182, Authorization, Agreement, Certification of Training must be submitted to the Education & Training Section, and approval obtained, before an individual may attend training. (T-0) The approval process requires coordination/concurrence from an individual's supervisor, second-level supervisor, and the organization's training coordinator before submitting to the Education & Training Section for review and approval, prior to the training start date. The Employee Development Manager/Specialist (EDM/S) will ensure requested training is in compliance with all statutory, legal, and administrative requirements. The cardholder must have an approved SF 182 prior to obligating payment to a vendor. (T-0)

7.9. Third-Party Payment Service (e.g. PayPal, Google Pay, etc). Third party payments are categorized as those payments where it is identified that the purchase will be processed via a third party and no goods or other services

received (other than payment). **The cardholder should make every attempt to choose another merchant with whom to procure the goods and/or services.**

When a third-party payment service is used, the cardholder automatically forfeits all dispute rights guaranteed under the GPC purchase by the Bank. While certain dispute rights may accrue by using the third-party payment service, these rights are not as favorable to the cardholder/Government as those provided pursuant to the GSA SmartPay® contract because the cardholder has to resolve the dispute instead of the Bank. If it is necessary to procure using a third party payment service, the approving official must ensure there is adequate supporting documentation showing that there was a detailed review of the purchase and that the use of the third party payment service was unavoidable. Supporting documentation shall be kept in the cardholder's files. (T-1)

7.12.5. Communication and computer equipment and software including telephone instruments, cell phones, and expansion plug-in cards must be approved through the local Communications Squadron. (T-1) **This is required to ensure configuration control, compatibility with AF and joint systems**, and compliance with Section 508 of the Rehabilitation Act, as amended in 1998 (PL 105-220). Technical solution documentation provided by the Communications and Information Officer should be maintained in the cardholder files. Secure telephones may not be purchased directly from merchants using the GPC. (T-0) All secure phones must be requisitioned through the standard Base Supply System. All Air Force IT hardware will be acquired using the applicable enterprise buying programs through AFWay (e.g. Quantum Enterprise Buy (QEB), Digital Printing & Imaging (DPI), Cellular Services and Devices Blanket Purchase Agreements) unless waived by the MAJCOM CIO/A6 through the AFWay process. (T-2)

7.12.11. Visual Information, Electronic Digital Imaging and Video Equipment and Services. The Public Affairs (PA) Office will review and approve all procurement requests for film/digital photographic cameras, video cameras, and photographic printers to ensure compatibility with existing imagery infrastructure and to verify there is no duplication of imagery services available in the PA Office as prescribed in AFI 35-109, Visual Information. (T-3)

# JB MDL CSO lessons learned 20130710 (crosstalk)



## JB MDL Pitch Day & Commercial Solutions Opening (CSO)



Maggie Falkner  
Contract Specialist



## JB MDL Pitch Day Commercial Solutions Opening (CSO)

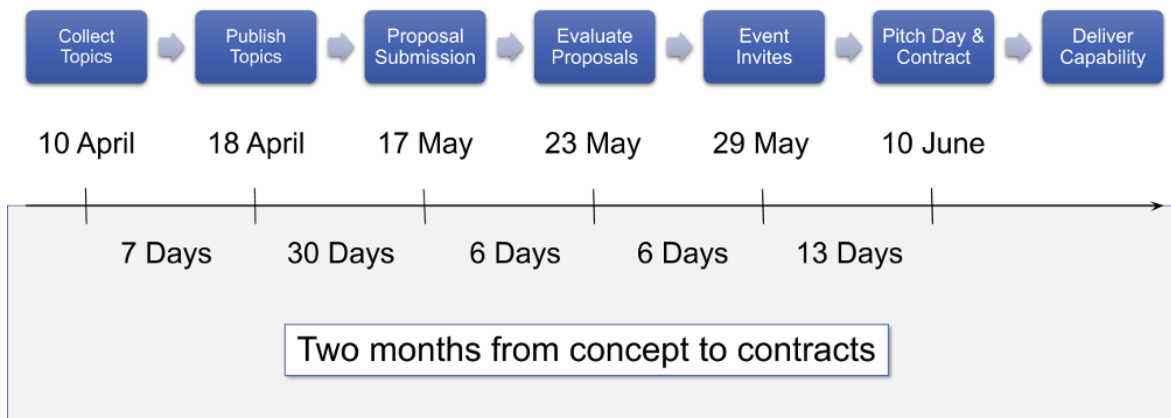


KEY ELEMENTS	BENEFITS	JB MDL CSO
<ul style="list-style-type: none"> <li>&gt; Similar to Broad Agency Announcement (BAA)</li> <li>&gt; Innovative supplies, services, and R&amp;D</li> <li>&gt; All funding types</li> <li>&gt; All products considered commercial</li> <li>&gt; Contract or Other Transaction</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Remove barriers to entry</li> <li>&gt; Gain access to emerging technology</li> <li>&gt; Speed capability delivery to the warfighter</li> <li>&gt; Help restore agility to the acquisition process</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Open, 2-step solicitation</li> <li>&gt; 3400 (O&amp;M) Funding</li> <li>&gt; One-page FAR Part 12 contract</li> <li>&gt; Firm-Fixed Price</li> <li>&gt; Advance Payment (15%)</li> </ul>





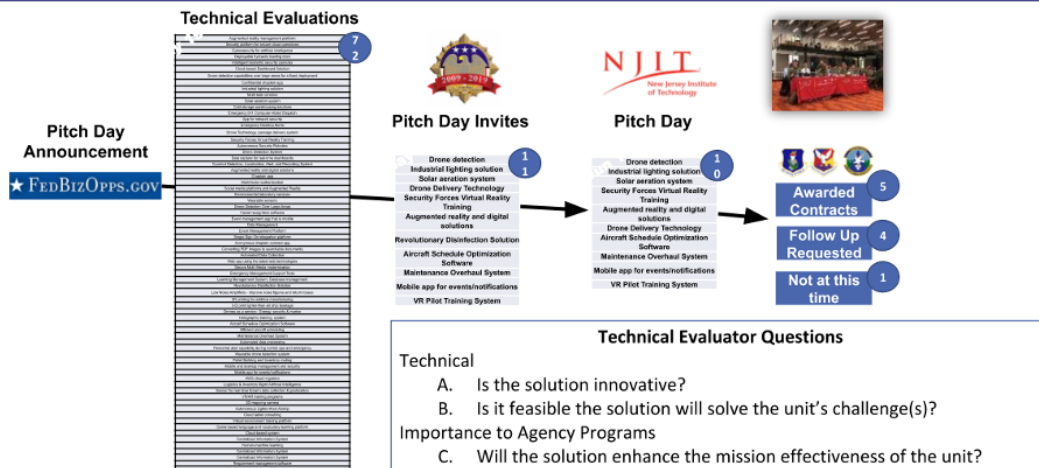
# JB MDL Pitch Day Timeline Overview



Win as One



# JB MDL Pitch Day Proposal Evaluations



Win as One

# JB MDL Pitch Day

**DEPARTMENT OF THE AIR FORCE**

CONTRACT NUMBER: FA44819PC010  
 Contractor/Officer: Battespace Simulations, Inc(CAGE 4KCR8)  
 Issued By: 87th Contracting Squadron  
 2402 Vanlenberg Avenue McGuire AFB, NJ, 08641  
 Delivery: Stephen Hepig (609) 754-0800, 1-99 Hangar Rd, McGuire AFB, NJ, 08641

This is a Firm Fixed Price, 100% Small Business Set-Aside, commercial solutions opening (CSO) authorized by section 879 of the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2017 (Pub. L. 114-528).

Option Item No.	Description	Qty	Unit	Unit Price	Amount	15%
0001	Training system to increase the level of ground-based threat training for rapid combat power projection capabilities (6 Mo License)	1	EA	\$121,809.19	\$121,809.19	\$18,271.37

Delivery: 60 days from award date

Payment will be made by Government Purchase Card, invoicing instructions will be provided by the Contracting Officer.

*Kenny Duck*  
 KENNY DUCK  
 Battespace Simulations, Inc  
 DATE: 10 JUN 2019

*JUSTIN S. GOLDEN*  
 JUSTIN S. GOLDEN, TSgt  
 Contracting Officer  
 DATE: 10 JUN 2019

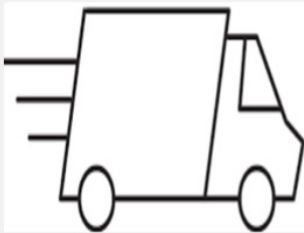
CLAUSE INCORPORATED BY FULL TEXT:  
 52.212-2 Clause incorporated by reference (FAR 5306) (This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be viewed electronically at <https://www.acquisition.gov/brochure/contract-clause>)  
<https://www.acquisition.gov/brochure/contract-clause> (FAR Clause)

If the resulting contract results in the award of a **small**, the following clauses will apply:  
 CLAUSE INCORPORATED BY REFERENCE: 52.205-19, 52.204-20, 52.204-21, 52.204-22, 52.204-23, 52.204-24, 52.215-4, 52.215-6, 52.215-7, 52.215-8, 52.215-9, 52.215-10, 52.215-11, 52.215-12, 52.215-13, 52.215-14, 52.215-15, 52.215-16, 52.215-17, 52.215-18, 52.215-19, 52.215-20, 52.215-21, 52.215-22, 52.215-23, 52.215-24, 52.215-25, 52.215-26, 52.215-27, 52.215-28, 52.215-29, 52.215-30, 52.215-31, 52.215-32, 52.215-33, 52.215-34, 52.215-35, 52.215-36, 52.215-37, 52.215-38, 52.215-39, 52.215-40, 52.215-41, 52.215-42, 52.215-43, 52.215-44, 52.215-45, 52.215-46, 52.215-47, 52.215-48, 52.215-49, 52.215-50, 52.215-51, 52.215-52, 52.215-53, 52.215-54, 52.215-55, 52.215-56, 52.215-57, 52.215-58, 52.215-59, 52.215-60, 52.215-61, 52.215-62, 52.215-63, 52.215-64, 52.215-65, 52.215-66, 52.215-67, 52.215-68, 52.215-69, 52.215-70, 52.215-71, 52.215-72, 52.215-73, 52.215-74, 52.215-75, 52.215-76, 52.215-77, 52.215-78, 52.215-79, 52.215-80, 52.215-81, 52.215-82, 52.215-83, 52.215-84, 52.215-85, 52.215-86, 52.215-87, 52.215-88, 52.215-89, 52.215-90, 52.215-91, 52.215-92, 52.215-93, 52.215-94, 52.215-95, 52.215-96, 52.215-97, 52.215-98, 52.215-99, 52.216-1, 52.216-2, 52.216-3, 52.216-4, 52.216-5, 52.216-6, 52.216-7, 52.216-8, 52.216-9, 52.216-10, 52.216-11, 52.216-12, 52.216-13, 52.216-14, 52.216-15, 52.216-16, 52.216-17, 52.216-18, 52.216-19, 52.216-20, 52.216-21, 52.216-22, 52.216-23, 52.216-24, 52.216-25, 52.216-26, 52.216-27, 52.216-28, 52.216-29, 52.216-30, 52.216-31, 52.216-32, 52.216-33, 52.216-34, 52.216-35, 52.216-36, 52.216-37, 52.216-38, 52.216-39, 52.216-40, 52.216-41, 52.216-42, 52.216-43, 52.216-44, 52.216-45, 52.216-46, 52.216-47, 52.216-48, 52.216-49, 52.216-50, 52.216-51, 52.216-52, 52.216-53, 52.216-54, 52.216-55, 52.216-56, 52.216-57, 52.216-58, 52.216-59, 52.216-60, 52.216-61, 52.216-62, 52.216-63, 52.216-64, 52.216-65, 52.216-66, 52.216-67, 52.216-68, 52.216-69, 52.216-70, 52.216-71, 52.216-72, 52.216-73, 52.216-74, 52.216-75, 52.216-76, 52.216-77, 52.216-78, 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# Success Stories

## PondHawk Unit at Laurel Pond JB MDL

Fast Delivery



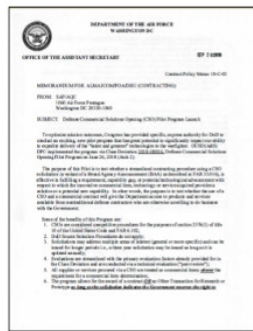
Bubbles from Diffusers



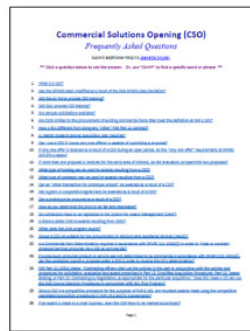
# Commercial Solutions Opening (CSO) Resources



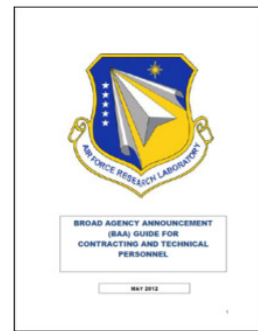
DoD Defense CSO Pilot Program



SAF/AQC Defense CSO Pilot Program Launch



SAF/AQC CSO FAQs



AFRL BAA Guide

Visit SAF/AQC Knowledge Center for Commercial Solutions Opening (CSO)

Win as One



## Identify SMEs: Lessons Learned

Lessons Learned	Description (D), Success (S), Problem (P), Improvement/Recommendation (I/R)
Have an experienced and diverse Technical Team and Subject Matter Experts (SMEs)	<p><b>D:</b> Engage Technical Evaluators and SMEs early in the acquisition process.</p> <p><b>S:</b> Thorough Ask Me Anything (AMA) session.</p> <p><b>P:</b> Some military personnel were not accessible due to training, new assignments or deployment.</p> <p><b>I/R:</b></p> <ul style="list-style-type: none"> <li>• Assign alternate Unit POC, Technical Evaluator or SME in case the primary is out of the office.</li> <li>• Assign each Topic/Area of Interest to a specific evaluator/SME. Do not send emails to "All" and assume/believe one of the listed personnel in the correspondence will respond.</li> </ul>

*Win as One*

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## Fast-Paced Learning Experience: Lessons Learned

Lessons Learned	Description (D), Success (S), Problem (P), Improvement/Recommendation (I/R)
Fast-Paced Learning Experience	<p><b>D:</b> Recruit a team with positive attitude and willingness to dive into the new contracting vehicle with little supervision ... running and facing all challenges with optimistic minds.</p> <p><b>S:</b> We met all our deadlines and executed five contracts within two months.</p> <ul style="list-style-type: none"> <li>• Prioritizing our time/workload, planning ahead, and constant communication within CONS group helped manage this fast-paced learning experience.</li> <li>• Without this experience, we would not have been able to put together these slides to help fellow airmen that plan to use CSO.</li> </ul> <p><b>P:</b> Although the experience was challenging, we were able to overcome most obstacles.</p> <ul style="list-style-type: none"> <li>• Due to the large amount of proposed solutions received, CONS ended up doing some of the technical evaluations.</li> <li>• Being 87 CONS/ AMC's CSO first experience, the entire process was a little overwhelming due to constant brainstorming and unavailable samples/templates.</li> </ul> <p><b>I/R:</b></p> <ul style="list-style-type: none"> <li>• Consider more time for each task.</li> <li>• Engage more Technical Evaluators or SMEs.</li> </ul>

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## Engage Local PTAC: Lessons Learned



Lessons Learned	Description (D), Success (S), Problem (P), Improvement/Recommendation (I/R)
Partner with Local Procurement Technical Assistance Center (PTAC)	<p>D: Reach out to local PTAC office to get word out to local small businesses and assist with SAM registration &amp; proposal preparation.</p> <p>S: Over 50% of small businesses invited to Pitch Day were from New Jersey. NJIT PTAC provided venue and support for Pitch Day event.</p> <p>P: How do we get the word out to non-traditional defense contractors or innovative small businesses in local area?</p> <p>I/R:</p> <ul style="list-style-type: none"> <li>• Partner with local PTAC to advertise event to local small businesses.</li> <li>• Suggest webinar or other workshop to assist companies with SAM registration.</li> <li>• Ask if PTAC has access to a good venue for Pitch Day event.</li> </ul>

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## Pitch Day Event Location: Lessons Learned



Lessons Learned	Description (D), Success (S), Problem (P), Improvement/Recommendation (I/R)
Pitch Day Event Location	<p>D: Reach out to the Points of Contact at the location where the Pitch Day Event will take place for parameters, restrictions and other accommodation requirements.</p> <p>S: 98% of the invited contractors were able to pitch without any obstacles.</p> <p>P: The event location host required series of items that had to be addressed/approved before Pitch Day, such as:</p> <ul style="list-style-type: none"> <li>• Flying drones at NJIT required clearance, therefore we were unable to have a flying demo.</li> </ul> <p><b>Note:</b> Efforts are currently being made to have the contractor come to JB MDL for demo.</p> <ul style="list-style-type: none"> <li>• NJIT had to be included as additional insurance on a primary and non-contributory basis – Thankfully, this requirement was waived prior to the Pitch Day Event.</li> </ul> <p>I/R:</p> <ul style="list-style-type: none"> <li>• Ask the event location host for additional requirements early in the acquisition stage.</li> </ul>

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## FBO Solicitation Type: Lessons Learned



Lessons Learned	Description (D), Success (S), Problem (P), Improvement/Recommendation (I/R)
Synopsis of Proposed Acquisition	<p><b>D:</b> Post synopsis as a regular solicitation on the Federal Business Opportunities (FBO).</p> <p><b>S:</b> Positive attitude and contractor's willingness to submit their proposed solutions and packages via email to contracting versus FBO.</p> <p><b>P:</b> Some large packages and corrupt documents were not allowed to get through the Air Force network.</p> <p><b>I/R:</b> Never post your synopsis on FBO as a "Special Notice", post as a regular solicitation. Otherwise the vendors will not be able to upload their packages and the Agency Admin will need to enable the bid module to make changes, which is a long painful process (if at all possible).</p>

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## Industry Ground Rules: Lessons Learned



Lessons Learned	Description (D), Success (S), Problem (P), Improvement/Recommendation (I/R)
Establish ground rules for engaging with industry	<p><b>D:</b> Government technical evaluators were given instruction to act impartially and not give preferential treatment to any company.</p> <p><b>S:</b> AMA questions and answers were posted for all offerors to see. No protests.</p> <p><b>P:</b> With Subject Matter Experts across 4 wings in multiple squadrons, managing Q&amp;As about specific challenges during the short timeframe was a challenge.</p> <p><b>I/R:</b> Setting a vendor aside from other "interested" vendors to ask questions and obtain clarifications could give them an impression of being selected for award. If they are not selected for award, they may be disappointed and request for a debrief. The point is: stick to the program, don't have sidebars without everyone involved, this creates illusion of favoritism whether or not the offeror is awarded a contract. Capture info provided by the Government and provide to all offerors.</p>

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## AMA Q&A: Lessons Learned



Lessons Learned	Description (D), Success (S), Problem (P), Improvement/Recommendation (I/R)
AMA/Questions & Answers (Q&A)	<p><b>D:</b> Vendors were provided the opportunity to ask questions that gave them better understanding of the CSO process.</p> <p><b>S:</b> AMA was successful</p> <p><b>P:</b> Duplicated effort</p> <p><b>I/R:</b> If a teleconference is preferred as means of an AMA, record the Q&amp;A session (if allowed)... This may turn out to be a duplication of effort as each question will still have to be typed during or after the meeting, this can be avoided by obtaining the questions directly via emails from interested vendors.</p> <p>In order to avoid any misinterpretation and save man-hours, consider taking questions in writing versus doing a conference call. Compile all the questions in an excel spreadsheet. Send technical questions to the Technical Evaluators, unit POCs and SMEs. Contracting office shall address questions related to the CSO solicitation or Pitch. Seek legal opinion if necessary.</p>

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## Clear Proposal Structure: Lessons Learned



Lessons Learned	Description (D), Success (S), Problem (P), Improvement/Recommendation (I/R)
Provide Clear Instructions to Offerors for Proposal Content	<p><b>D:</b> The primary evaluation factors for selecting proposed solution for award shall be technical, importance to agency programs, and funds availability.</p> <p><b>S:</b> Most vendors were cooperative.</p> <p><b>P:</b> Initial packages from vendors were all jumbled.</p> <p><b>I/R:</b> To avoid chaos, separate the Proposed Solution Contents (Instructions to Offerors) into different volumes. For example:</p> <ul style="list-style-type: none"> <li>• Technical Volume: Limit Technical volume to technical information only.</li> <li>• Pricing Volume: Pricing should have a separate volume with no page limitation, since it is mostly going to contain numbers. Consider requesting a draft PWS &amp; delivery schedule to incorporate into final contract.</li> <li>• Cover page: The cover letter will serve as an 'Introductory Package', which can be limited to one or two pages.</li> </ul>

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## Define Roles & Procedures: Lessons Learned



Lessons Learned	Description (D), Success (S), Problem (P), Improvement/Recommendation (I/R)
Define Roles & Procedures	<p><b>D:</b> The CSO team consisted of one CO and two contract specialists. There were several other individuals who assisted in planning, technical assistance, etc.</p> <p><b>S:</b> Everything went relatively smoothly and the Pitch Day was a success.</p> <p><b>P:</b> With several "hands in the pot" and this being our first attempt at this process, it sometimes wasn't always clear what was expected of each member of the team. This sometimes led to duplication of effort or small mistakes.</p> <p><b>I/R:</b> Define roles and responsibilities at the very beginning of the process. Ensure all team members understand their role throughout the different phases.</p> <p>Consider instituting peer reviews during critical phases of process to avoid typos and other small mistakes.</p>

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## Technical Evaluator Guidance: Lessons Learned



Lessons Learned	Description (D), Success (S), Problem (P), Improvement/Recommendation (I/R)
Evaluation of Proposed Solutions	<p><b>D:</b> Each proposed solution was not competed, traded off, or compared against any other proposed solution. Rather, each one was evaluated solely on its own individual merit in accordance with CSO Solicitation criteria.</p> <p><b>S:</b> There was no protest.</p> <p><b>P:</b> CSO provides for streamlined evaluations, but evaluators provided mixed quality of bullets in the technical evaluations.</p> <p><b>I/R:</b> Provide clear instructions on what exactly is expected of evaluators as early in the process as possible. Consider providing examples of previous quality evaluations. This will help develop debrief letters and prepare for (possible) protest.</p> <p>Technical Documentations: SMEs or Technical Evaluators are encouraged to have detailed documentations of their rationale for not accepting an offer prior to the Pitch award. This will make the debriefing process easy/faster.</p>

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## Commander Review of Proposals: Lessons Learned



Lessons Learned	Description (D), Success (S), Problem (P), Improvement/Recommendation (I/R)
Commander Review of Proposals Before Pitch Day	<p><b>D:</b> Process to complete evaluations and finalize invites to Pitch Day.</p> <p><b>S:</b> Completed evaluation of 72 proposals and obtained Commander review of final invite list in ~14 days to send invites out on schedule.</p> <p><b>P:</b> Wings used different techniques to obtain Commander review of final invite list. Email approval provided less opportunity for the Commander to understand proposals and ask questions prior to Pitch Day.</p> <p><b>I/R:</b> Schedule face-to-face meeting for evaluators to present their recommended proposals to Commanders prior to invites.</p>

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## Share CSOs in Debriefing: Lessons Learned



Lessons Learned	Description (D), Success (S), Problem (P), Improvement/Recommendation (I/R)
Share other CSO/SBIR Opportunities in Debrief	<p><b>D:</b> The purpose was to state areas where unsuccessful offeror failed to meet the CSO solicitation criteria and why it was not selected for award. It also provided constructive feedback to strengthen future proposals.</p> <p><b>S:</b> No protest. All debriefing requests were met in a timely manner.</p> <p><b>P:</b> Little input/support from Technical Evaluators.</p> <p><b>I/R:</b> Communication with vendors: It is very important to first thank unsuccessful contractors for their efforts and interest in the CSO. Try to encourage them that there are other pitches they can still look forward to. The fact that they were not selected for award for this CSO does not mean they failed. Notify them that the U.S. Air Force has begun putting out CSO at multiple locations, encourage them to review the recommendations in the debriefing letter, make adjustments to their innovation strategy in preparation for their submission of future proposed solutions. If possible, site up-coming CSOs or SBIR rounds that have been posted on FBO.</p>

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## Mail Merge: Lessons Learned



Lessons Learned	Description (D), Success (S), Problem (P), Improvement/Recommendation (I/R)
Pitch Invitation Letter to Offerors	<p><b>D:</b> Microsoft Office Mail-Merge function provided invaluable benefits to the entire CSO/Pitch Day process.</p> <p><b>S:</b> Mail-Merge was used with the evaluation spreadsheet to auto-fill and auto-send many important CSO documents, including: invite letters, non-invite letters, the one page contract, and the debriefing letters.</p> <p><b>P:</b> With 72 proposals and limited 'assigned' technical evaluators a lot of data required for these documents was missing. Due to a break in communication, the contracting team had to scramble to 'fill in the gaps'.</p> <p><b>I/R:</b> Recommendation: assign technical POCs early, fill out the evaluation spreadsheet with complete detail and use mail merge to send out all contractor correspondence.</p>

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## Advance Payment: Lessons Learned



Lessons Learned	Description (D), Success (S), Problem (P), Improvement/Recommendation (I/R)
Contracting Officer Unusual Contract Financing Determination and Findings and Advanced Payment Approval	<p><b>D:</b> Engage Budget Office early in the acquisition process.</p> <p><b>S:</b> Advance payment up to 15% with the Government Purchase Card (GPC) was accomplished on the Pitch Day event.</p> <p><b>P:</b> One GPC was utilized for all the Pitch Award transactions.</p> <p><b>I/R:</b></p> <ul style="list-style-type: none"> <li>• Before the Pitch Day event, work out a long-term plan for the expanded use of GPC purchases with the Budget Office to obtain guidance regarding the use of GPC across the wings.</li> <li>• To avoid accounting issues and keep GPC transactions clean, have one GPC per Wing and do not mix funding streams.</li> </ul>

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# Problem statement example - AOI 001 - JBMDL 87th Air Base Wing

## **AOI-001**

### **Title: 87th Air Bse Wing**

TECHNOLOGY AREA(S): Security, Medical, Engineering, Human Resources, Communications, Business Systems, Logistics

DESCRIPTION: The 87th Air Base Wing is a team of mission-ready warriors and professionals delivering innovative Agile Combat Support, enabling a full range of missions across Joint Base McGuire-Dix-Lakehurst. Operations include maintaining security of the base, maintenance of communications infrastructure, facilities construction & maintenance, medical clinic operations, procurement, accounting, logistics, human resources, food services, community services, and media relations. The Air Force wishes to stay at the cutting edge of these various functions and technologies and is looking to partner with innovative small businesses that may have solutions to Air Force challenges. The areas listed below are general challenge areas that the Air Force is interested in novel solutions:

1. Base Security Systems
2. Inventory Management Systems
3. Emergency Management tools & systems
4. Autonomous pickup and delivery of small parts and supplies
5. Drone detection capabilities over large areas
6. Transportation solutions: around base & commuting to work
7. Smart City technologies

Additionally the Air Force has a number of specific challenges that require tailored solutions:

1. JBMDL has hundreds of community events each month. Most of the information is passed through emails, flyers, and separate websites/social media of each organization on base. Interested in a streamlined platform to communicate and organize this information, including gamification or other approaches to increase attendance.
2. Most organizations have multiple legacy systems requiring users to access each of the systems to consolidate information. Interested in ways to consolidate access and inputs to these systems in a single user friendly interface.
3. A solution for members to anonymously connect to a Chaplain via an app or another medium to reduce the barriers for members to obtain spiritual guidance.
4. Organizations receive customer inputs via a pdf and manually generate multiple documents using information in the pdf. Interested in ways to automate the creation of those documents.
5. Tools for automating data collection & visual display of executive-style dashboards.
6. Digital Path Finder
7. MEDICAL Equipment - Tracking and Accountability
8. 87 Medical Groups is interested in a capability related to patient check-in (perhaps self-check in) that can link to Aeromedical Services Information Management System (ASIMS) and our Electronic Health Records (EHR) to identify whether our Active Duty (AD) patients have individual medical readiness (IMR) requirements. In a similar vein, a capability to identify/collect/update Third Party Collections information for our non-AD population (dependents and retirees) and automatically populate or generate the form (DD Form 2569) with the required information.

## 9. Smart City technologies

10. Transportation solutions around base & commuting to work. The Air Force has a number of specific challenges that require tailored solutions: Members and dependents without privately owned vehicles are unable to access the base facilities easily, residents of base housing have trouble accessing the local areas and connecting to off base transportation methods, during peak hours (6:30 AM – 8:30 AM; 11:00 AM – 1:00 PM; 4:00PM – 6:00 PM) the gates to enter the base and housing areas have high levels of congestion.

The Air Force is interested in exploring innovative technology domains that may not be covered in the list above, so this topic is intended to also be a call for open ideas and technologies that cover other related areas not currently listed (i.e. the unknown-unknown). This topic is meant for innovative solutions to be adapted in innovative ways to meet DoD stakeholders' needs in a short timeframe and at a low cost.

# References

## **BACKGROUND**

Charted in 2016, AMC's Spark program now encompasses individual, base-level innovation hubs. While each hub is structured differently, most employ some form of a prototyping lab, designed to test Airman-developed solutions and commercial off-the-shelf systems (COTS) prior to rapid implementation. To do this, many labs have (or are planning to) procured non-traditional technology including 3D printers, VR systems, 3D scanners and Internet of Things (IoT) devices. Due to the requirement of liaising with industry and educational institutions via commercial applications like Skype, Hangouts, Slack, Trello, etc., most innovation labs follow AFWERX' lead in operating primarily off the protected Air Force NIPRnet (AFNet), unless required to share FOUO or classified information.

## **PROBLEM STATEMENT**

DoDI and AFMAN Guidance for the procurement of Information Technology (IT) has not been updated to allow for the rapid prototyping and equipping nature of the Spark innovation effort. Depending on interpretation of References 1-4 below, specifically the definition of what constitutes "Air Force IT hardware," one could argue that any electrical device capable of transmitting data like an AppleTV or \$0.05 passive RFID tag must be purchased through AFWay from a vendor via an existing offering or new contract. This process can take weeks to months for each item, and is often much more expensive than purchasing from approved GPC vendors like GSA Advantage or Amazon (this is why units routinely spend more than \$2K each to purchase \$400 iPads, for example).

### **Reference 1: AFMAN 17-1203 (IT Accountability)**

2.2.1. All AF IT hardware (including PWCS) will be procured using applicable AF Information Technology Commodity Council (ITCC) enterprise buying programs via AFWay at <https://www.afway.af.mil>, (e.g. Client Computing Solutions Quantum Enterprise Buy [CCS QEB], Digital Printing & Imaging [DPI], Cellular Services & Devices BPAs). All AF IT hardware not purchased through ITCC buying programs (CCS, DPI, & CSD BPAs), are mandated to use the NETCENTS-2 contracts, which enable delivery of products, services and solutions that adhere to the AF Enterprise Architecture, (T-1).

### **Reference 2: AFI 64-117 (GPC Program)**

7.12.5 All Air Force IT hardware will be acquired using the applicable enterprise buying programs through AFWay (e.g. Quantum Enterprise Buy (QEB), Digital Printing & Imaging (DPI), Cellular Services and Devices Blanket Purchase Agreements) unless waived by the MAJCOM CIO/A6 through the AFWay process (T-2).

### **Reference 3: AFMAN 17-1301 (COMPUSEC)**

3.5. Information Technology Asset Procurement. Comply with evaluation and validation requirements in DoDI 8500.01 for all IT services, hardware, firmware, software components, or products incorporated into DoD ISs.

3.5.1. Follow the guidance in AFMAN 17-1203 and the AF Information Technology Commodity Council (ITCC) guidance available on the AF Portal or AFWAY (<https://www.afway.af.mil/>) for procurement activities of all IT hardware, cellular, and peripheral devices (e.g., desktops, laptops, servers, commercial mobile devices [CMDs], multifunction devices [MFDs] printers, scanners, and wireless peripheral devices).

#### **Reference 4: DoDI 8500 (IT)**

##### h. Information Technology

(1) All IT that receives, processes, stores, displays, or transmits DoD information will be acquired, configured, operated, maintained, and disposed of consistent with applicable DoD cybersecurity policies, standards, and architectures.

#### **RECOMMENDATION**

Seek official AMC/A6 interpretation of what constitutes AF IT hardware. Specifically, allow AMC Spark hubs to rapidly develop and acquire COTS solutions outside the traditional Comm/AFWay purchasing process when the acquisition meets ALL of the following stipulations:

- Not intended to operate on the AFNet, nor transmit/receive FOUO or classified information (complies with references 3 & 4).
- Purchased for use by an official AMC Spark Office for innovation (prototyping/modernization) efforts only
- Complies with all applicable GPC/Contracting regulations regarding purchase limits, contracts and approved vendors.



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