

Cultivating an Innovation Culture through Virtual Challenge Statement Workshop

The COVID-19 pandemic is changing the nature of the way we work, but not our ability to deliver value to our sponsors. Originally slated to be an in-person half day workshop, the [Innovation Toolkit](#) (ITK), [Bridging Innovation](#), and MITRE's Air Force Cyber Operations Portfolio teams quickly adapted their approach to a virtual workshop – a series of one-hour sessions spread across four days.

The workshop was organized by the MITRE's Air Force Portfolio (AFP) to support its FY20 Goal 5e, *Cultivating an Innovation Culture*, which seeks to encourage participation in the DoD innovation ecosystem to leverage resources and enable technology acceleration, increasing the speed of delivery across the Air Force. The first step to engaging in the innovation ecosystem is for sponsors to have a robust challenge statement that can be used to source nontraditional companies through initiatives like the [AFWERX/Air Force Research Lab \(AFRL\) Small Business Innovation Research Program \(SBIR\)](#).

This was ITK's first ever fully virtual workshop with participants joining via Skype for Business from their homes. Participants included representatives from across the AFP, Office of the Secretary of Defense, and the Treasury, with sponsors from the Cyber Resiliency Office of Weapon Systems (CROWS), AF Command, Control, Communications, Intelligence and Networks Directorate, AF Business and Enterprise Systems Directorate, Business Enterprise Systems Programming Innovation (BESPIN), and MGMWERX.

We are in a global power competition. To achieve competitive advantage over peer adversaries in current and future competition and conflicts, the National Defense Strategy (NDS) emphasizes the need for delivering at the speed of relevance, driving innovation, and strengthening partnerships. Cultivating MITRE's innovation culture is critical to helping our sponsors address the NDS objectives and deliver mission impacts.

Colonel Michael E. Clark from CROWS remarked, "In this new, almost completely virtual world we have found ourselves in, this workshop provided a great mechanism for our teams to think through the problem sets facing the CROWS today."

The virtual workshop trained participants on a [tool chain](#) to take specific gaps and translate them into broader challenge statements, ensuring sponsors were prepared to submit publicly-releasable challenge statements to share with nontraditional solution providers. AF Cyber Operations Portfolio Chief of Staff and Lead Innovation Analyst, Marissa McCoy, explained how Challenge Statements provide context for nontraditional companies on why a challenge exists and is important, and how challenge statements are designed to capture the problem space while not outlining an expected or explicit solution. Key components of a good challenge statement include:

- Writing in plain English with few acronyms
- Choosing a challenge that is real, has impact, and does not currently have an adequate solution
- Explaining who the stakeholders are and why the challenge is important
- Outlining the company incentive and how it's worthwhile

Over the course of the week, Dan Ward and Rachel Gregorio from the multi-disciplinary team of MITRE engineers who curated the ITK, introduced participants to editable tools like the [Lotus Blossom](#) and [Storm Draining](#) to get the teams brainstorming about their challenge areas (divergent thinking) and down-selecting to one idea (convergent thinking). Subsequent days focused on defining and refining the problem using the [Problem Framing](#) tool, then employing the [TRIZ Prism](#) to generalize the problem so that it can be shared with a broad non-government audience.

“Personally, it forced me to think about our problems in a new way and to consider the interactions of the various problem sets facing CROWS. I found it extremely beneficial to visualize the problem set that had been formulating in my head and share it with other team members,” added Colonel Clark.

“I’m very proud that we are working together to navigate this new terrain of working remotely during this unprecedented time and continue to impact critical national challenges,” said Doug Robbins, vice president of MITRE’s Air Force Portfolio. “Influencing our sponsors to think differently about their problem sets is a fantastic outcome from this virtual engagement.”

The MITRE Innovation teams are gathering lessons learned from this online session to incorporate into the next Bridging Innovation hosted ITK challenge statement workshop that will likely take place in July (prior to the SBIR 20.3 release). Please reach out to the [ITK team](#) if you’re interested in the tools and/or workshops.

Learn more about [Bridging Innovation](#), [ITK](#), and how to engage in the [AFWERX SBIR Program](#).

The image is a screenshot of a Zoom meeting. The main content is a slide titled "Problem Framing" with the number "24" in the top right corner. The slide contains the following text:

- [Tool details: https://itk.mitre.org/problem-framing/](https://itk.mitre.org/problem-framing/)
- Use this canvas to inspect parts of the problem you need help solving
- Why to use this tool
 - Establish a consensus about the team's purpose.
 - Gain a sense of what "done" will look like.
 - Define the scope of the team's initial activities and goals.
 - Reduce the purposes.

To the right of the text is a form titled "Defining the Right Problem". The form has several sections with questions and checkboxes:

Defining the Right Problem		
What is the problem?	Who has the problem?	What is the impact?
When and Where is the problem?*		How many people are affected? How long does it last? How often does it occur?
Why does this happen? Underlying conditions (What do we know?)	What are the objectives of the problem? (Please use small, verifiable, professional, positive, measurable objectives)	What should be done? Underlying conditions (What do we know?)
How do you feel about it? (How do you feel about it?)	Why hasn't it been solved? (How do you feel about it?)	What are the constraints? (How do you feel about it?)
Based on what you, the problem is:		
Your right to problem solve is:		
By _____		
with _____		
on _____		

At the bottom of the slide, there are three video thumbnails showing participants: Marissa McCoy, Dan Ward, and Rachel Gregorio. The Zoom interface at the bottom shows icons for chat, video, microphone, screen share, mute, and a red hang-up button.

From their home offices, Marissa McCoy, Dan Ward, and Rachel Gregorio present to over 40 online participants during the virtual challenge statement workshop