

Tactical Advancements for the Next Generation (TANG)



160321-N-IA020-001 PEARL HARBOR (March 21, 2016) Tactical Advancements for the Next Generation (TANG) participants of the Integrated Air and Missile Defense (IAMD) Mission Planning Seminar post their likes, wishes, questions and concerns about pre-event concepts to kick-off the week. The TANG brings government civilians, contractors, enlisted and officer personnel together with commercial enterprises to tackle challenges through innovation. (U.S. Navy photo by TANG Team/Released)

By DON Innovation

In 2011, Program Executive Office Integrated Warfare System 5.0 (PEO IWS 5.0) established an approach to innovation new to the Navy and has ignited warfighter creativity to deliver solutions. The initiative, dubbed Tactical Advancements for the Next Generation (TANG), employs a customized suite of Applied Design methodologies to tackle human-centered challenges within DoD. The collaborative process brings together today's warfighter with a diverse group of stakeholders and experts to solve complex challenges. Working alongside the sponsor, multi-disciplinary project teams conduct immersive research to frame the problem space and better understand the pain points of a topic. To discover



170206-N-IA020-001 SUFFOLK VA (February 6, 2017) Rear Admiral Patrick Piercey, Commander Naval Surface Force Atlantic, discusses his thoughts on toughness and resiliency to the gathered innovators at a Tactical Advancement for the Next Generation (TANG) event focusing on Sailor toughness. (U.S. Navy photo by TANG Team/Released)

unexpected insights, the team also explores tangentially related fields that provide different perspectives and responses to similar challenges.

Following months of research and discovery, TANG hosts an intense Design Event that brings together operators, stakeholders, technologists, and strategic partners to co-create low fidelity prototype solutions to the challenge opportunities.



161019-N-IA020-001 SUFFOLK VA (October 19, 2016) Submariners creating rough prototypes of their solutions to improve information flow at a Tactical Advancement for the Next Generation (TANG) event focusing on Submarine Information Exchange. (U.S. Navy photo by TANG Team/Released)

In the Design Event, synthesized research outcomes, relevant emerging technology, and compelling case studies set the foundation for structured brainstorming and rapid prototyping efforts. The power of real time collaboration between end-users, designers, testers, acquisition professionals and senior decision makers cannot be overstated as it short-circuits more traditional, lumbering paths of acquisition. By the end of two cycles of concept generation, a TANG Design Event produces more than 20 human-centered concept candidates for rapid prototyping and refinement. In

many ways, however, the Design Event is the start of the journey.

Following the Design Event, the Sponsors, together with the TANG Team and Stakeholders, selects the highest-impact solutions and partners with a network of performers to deliver capability to the Fleet at speed. These low fidelity prototypes jumpstart the acquisition process, leverage existing Programs of Record (PORs), create opportunities for new initiatives, and impact non-technical areas such as policy and training. By guiding the end-users, stakeholders, and technologists through a structured Applied Design process, TANG is mitigating early risks and accelerating solutions to the field, resulting in a faster, more effective and ultimately lower-cost development cycle.

The TANG portfolio has grown rapidly in the past six years to serve areas beyond the Submarine Force. Recent expansion has included Maintenance and Material Management (3M) for the Surface Navy, Integrated Air and Missile Defense Mission Planning, Food Service, Aviation Mission Support, and Sailor Toughness. With 50+ concepts in various stages of development and 7 concepts delivered to the Fleet, TANG continues to transform ideas into lasting impact across the Navy. Whether it's replacing a military grade \$128k submarine periscope joystick with Xbox controller or envisioning new approaches to cultivate toughness in the Navy, TANG concepts are leveraging the warfighters' creative mindset to support the Navy mission in new and exciting ways.