#10 - Engineering and Constructing NATO's Technology-Forward Eastern Flank Deterrence Line

Summary

NATO's Eastern Flank Deterrence Line (EFDL) is an engineering-intensive vision for deterring aggression via technological overmatch. It requires industry partnership to design and build a multi-layered defense featuring unmanned systems, AI-enabled networks, and advanced munitions, all supported by resilient infrastructure to create a credible, cost-effective deterrent.

Full Description

The Eastern Flank Deterrence Line (EFDL) is a NATO concept designed to deter aggression by leveraging technological overmatch and a resilient industrial base. It addresses the challenge of a potential adversary's advantages in geography and readiness by proposing a multi-layered, technology-forward defense. The success of this concept is fundamentally reliant on advanced engineering and construction capabilities.

The EFDL framework emphasizes a shift from human-centric warfare to a model that integrates low-cost, networked, and autonomous systems. This creates a significant demand for engineering innovation across multiple disciplines. Key engineering aspects include the design and development of unmanned aerial and ground systems (UAS/UGV) for reconnaissance, electronic warfare, and direct/indirect fires. The concept calls for a robust, AI-enabled command and control (C2) network, requiring sophisticated software and systems engineering to integrate disparate sensors and platforms into a cohesive kill web. Furthermore, the development of cost-effective, precision-guided munitions and launched effects, potentially accelerated by additive and subtractive manufacturing, is critical for increasing magazine depth.

From a construction and infrastructure perspective, the EFDL requires the emplacement of a defense-in-depth across NATO’s eastern flank. This involves engineering tasks such as the use of unmanned systems to create anti-tank ditches, emplace obstacles like

concertina wire and dragon teeth, and position prepositioned containers with munitions and supplies. The entire network must be supported by a resilient infrastructure of redundant communication links, including fiber and SATCOM, and agile sustainment solutions like forward-deployed manufacturing and autonomous logistics. In essence, the EFDL is an engineering-intensive vision that requires deep partnership with industry to design, build, and execute.

Learning Objectives

- Understand the Strategic Concept: Audience members will be able to explain the core principles of the Eastern Flank Deterrence Line (EFDL) and its goal of using technological overmatch to deter aggression.
- Identify Key Engineering Requirements: Attendees will learn to identify the critical engineering disciplines such as unmanned systems, AI-driven command and control, and advanced munitions which are essential for the EFDL's success.
- Recognize Construction and Infrastructure Challenges: Participants will understand the significant construction and infrastructure tasks required, including the emplacement of a defense-in-depth and the creation of resilient communication and logistics networks.
- Appreciate the Role of Industry Partnership: The audience will recognize the fundamental need for deep collaboration between NATO and industry partners to design, develop, and implement this complex, engineering-focused defense concept.

Speakers

Colonel Brian Sawser, USAREUR-AF Deputy Chief of Staff, Engineer, is a 1999 graduate of the United States Military Academy, commissioned in the U.S. Army Corps of Engineers. He holds multiple master's degrees in engineering and strategic studies.

His command assignments include leading the US Army Corps of Engineers Memphis District, as well as combat engineer units in the 101st Airborne Division. He has served in key staff roles for the United States Army in Europe and the United States European Command. Colonel Sawser's military awards include the Defense Superior Service, Legion of Merit, and Bronze Star.