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Resistance to Innovation in NATO

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This article is part of a new series on The Strategy Bridge analyzing some of the issues surrounding the problem of #TechnologyInnovation.

Military leaders need to understand the symbiotic relationship between risk-taking and innovative progress. It may be commonly assumed that the North Atlantic Treaty Organization (NATO)—one of the most durable and best-funded multinational defense organizations in history—has sufficient communication systems in order to operate effectively as an alliance of many disparate forces. One might then also assume that NATO-member special operations forces—the elite units of the alliance—have the best and most effective communication systems to coordinate and react to crises rapidly. However, this is not the case. If a crisis were to occur today, communication across the partner forces would be difficult. Technological solutions to these problems do exist and could be implemented with relative ease. Why are they unlikely to be adopted? The authors argue that institutional resistance to innovation at NATO is driven by the inherent characteristics of managing and maintaining a large, heterogeneous alliance among sovereign entities. This resistance can only be overcome if decisive, flexible, and adaptive military leaders are bold enough to allow an organization to accommodate new, sophisticated technologies. Otherwise innovation in the military grinds to a halt. Solving problems like this will not be easy, but it is necessary for NATO to adapt to the rapidly changing strategic environment and technological landscape in which it finds itself.

Innovative technologies that can effectively connect multiple NATO special operations forces, such as multilateral online and offline mapping, military radio controlling, text messaging, targeting, calling for fire, etc. already exist. Currently, the Tactical Assault Kit application for Android and Windows allows for all of these capabilities. The Tactical Assault Kit platform permits for a wide range of methods for establishing connectivity, even blending military satellite communication and commercial equipment. The Tactical Assault Kit communication system has been field tested by U.S., Norwegian, and Danish special operations forces in support of operations against ISIS. NATO special operations forces partners were initially restricted from accompanying Iraqi or Syrian partner forces on the battlefield, but they were allowed to support them with close air support. The communication chain, however, was too slow and led to some delayed direct support for

the counter-ISIS forces on the battlefield. All this changed when a couple of bright minds saw the potential in Tactical Assault Kit and managed to put together tactical field kits, using the existing mapping tool as the technical medium to speed up coordination and target acquisition between counter-ISIS forces and NATO special operations forces elements. It thus became a success story, and the system is being actively used in the Middle East and Southeast Asia.



Image of the Android Tactical Assault Kit (ATAK), a mobile geospatial infrastructure that promotes unprecedented team collaboration, developed by the Air Force Research Lab (AFRL)

For a comprehensive employment of Tactical Assault Kit within NATO special operations forces, every allied country will have to change the way they look at military communication. In order to best explain the concept of scalable connectivity in this context, one needs to consider how military missions are planned. The military mission consists of three fundamental parts: shoot, move, and communicate. Ahead of a mission, how to shoot and move are thoroughly analyzed in order to utilize the best tools in the toolbox. For instance, if a unit is planning an urban special reconnaissance mission, there are several tools to choose from. A civilian car can be chosen over a tactical vehicle to maintain a low profile when inserting the special reconnaissance team into the target area. To maximize the freedom of movement without being compromised, the team might select civilian clothes and easily concealed weapons. Using this approach, the likelihood of being detected is minimized, whereas the chance of success is maximized. In short, it comes down to the calculation of risk versus gain. Communications deserve as much attention and investment as the weapon components for the mission to be effective, but this is not currently the case.

Only a few tools are available as communication options, which restrict military elements to primarily utilize encrypted push-to-talk radios. The typical military communication plan, the so-called PACE (primary, alternate, contingency, emergency) plan, is mainly composed of different frequencies, predetermined satellite or VHF/HF communication channels, and regular cellphone use as emergency backup. However, current and near future peer adversaries all have electronic warfare capabilities. This means that the choice of NATO communication equipment and its integration into the planning phase of battle determines mission success or failure. Scalable connectivity can be an effective tool when the area of operations' frequency spectrum is analyzed and appropriate communication tools are utilized. Despite the aforementioned benefits, NATO has been slow, if not resistant, to leveraging communication solutions that can connect its respective special operations forces. Furthermore, NATO members are prone to purchase equipment from large military communication corporations. This industrial base supply chain problem stems from corporations that offer rigid, comprehensive solutions that offer little to no flexibility by having proprietary software and hardware. It also leads to transmitting a large military fingerprint easily detectable by adversaries. To move past the problem of inflexible military communication equipment, NATO needs to rethink the concepts of what is secure and classified and how this will impact the risk to a mission and force.

NATO special operations forces have been slow to adopt innovative solutions such as Tactical Assault Kit, despite its attractive and innovative features. What explains this resistance? Resistance to innovation is at once puzzling, intellectually intriguing, and a commercially interesting phenomenon. In the 1940s, the German psychologist Kurt Lewin was the first to introduce a systemic understanding of the resistance phenomenon. The cause, according to Lewin, is not found in the mind of the individual employee, but in the dynamics of opposing forces, including the behavior of leadership. According to the political economist Josef Schumpeter, "Innovation is the



Kurt Lewin (Wikimedia)

creation of new combinations that represent a departure from established practices.” In other words, a technological tension between the need to innovate and the desire to maintain order and stability will always exist. Wendell Wallach nicely defines the problem as “the pacing gap” between the introduction of a new technology and the establishment of laws, regulations, and oversight mechanisms for shaping its safe development. Wallach believes that modern technological innovation is occurring at an unprecedented pace, making it harder than ever to govern using traditional legal and regulatory mechanisms.

NATO as a whole suffers severely from the pacing gap, due to the fact that it consists of 29-member countries. If a new communication technology is proven highly successful by one country, the product still has to be vetted by each country’s security and intelligence services. A process like this takes time and consumes resources, forcing poorer nations to evaluate the importance of a new technology versus the old. This process exacerbates the pacing gap within NATO as standardization becomes a protracted process of having to generate consensus among the member states.

Innovative technologies face the dilemma of military leaders who are uncertain of their possible benefits versus their potential risks. Yet the pacing gap has kept military leadership from confronting this dilemma in a timely manner. Tactical Assault Kit can form the base of a future communication platform for NATO SOF. However, this vision for the future will only be feasible if the need for connectivity among NATO special operations forces is persistently socialized and eventually accepted. NATO Special Operations Headquarters can function as a key hub of this socialization process. As a premier NATO special operations schoolhouse, it trains and educates member states special operations soldiers in areas including communication technology. Such education can focus on learning the basics of emerging technology and how to employ those unique technical capabilities. By creating a consensus for a way ahead and also facilitating basic courses via their schoolhouse in Belgium, NATO special operations forces as a whole might be able to step into the future outfitted with the best possible means of fighting in an increasingly complex world of near-peer competitors and hostile networks.

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Header Image: Map and Logo representing NATO (NATO)