

**INTERVIEW: H.E. ERIKSEN SØREIDE,  
NORWEGIAN MINISTER OF DEFENCE**



THE MAGAZINE OF THE JOINT WARFARE CENTRE  
**THE THREE SWORDS**  
STAVANGER – NORWAY

**EXCLUSIVE INTERVIEW:**  
LIEUTENANT GENERAL JEFFREY G. LOFGREN  
The Deputy Chief of Staff for Capability Development,  
Headquarters Allied Command Transformation

# THE TRIDENT ISSUE

## CAX/CPX

- INTERVIEW WITH MAJOR GENERAL REINHARD WOLSKI
- LEARNING FROM TRIDENT ▪ JWC TRAINING ANALYSTS
- SKOLKAN: NATO'S OPERATIONAL BATTLESPACE
- TRACKING THE SIMULATED ENEMY ▪ TRIDENT JAGUAR 16



**PLUS**

THINKING AND CODIFYING: THE U.S. ARMY OPERATING CONCEPT

EXAMINING THE MILITARY ROLE IN COUNTER-TERRORISM



NATO  
+  
OTAN



**COVER**

Tactical troop helicopter NH90 photographed by Joerg Huettnerhoelscher, Shutterstock. Black and white photographs of different TRIDENT exercises; second photograph was taken at NATO 2015 Lessons Learned Conference and published with the courtesy of JALLC. **Bottom:** U.S. paratroopers training with the Lithuanian Mechanized Infantry. The picture shows U.S. paratroopers dismounting a Lithuanian M113 armored personnel carrier during training in Lithuania, 4 June 2014. Photo: Staff Sgt. Kimberly Bratic, U.S. Army. Flowers in tribute to the victims of the terrorist attacks in Paris. Photo: Nazar Gonchar/Shutterstock.



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## FROM THE EDITOR



DEAR READER,

Welcome to the 30<sup>th</sup> edition of The Three Swords Magazine. We would like to dedicate this edition to our outgoing Commander Major General Reinhard Wolski and Deputy Commander Brigadier General Roger Watkins. Allow me to speak on behalf of all staff and say that you have very successfully navigated our JWC ship through very demanding exercises and an organizational optimization process. Thank you for always making sure we reached the shore.

But, for the JWC the slogan "After the exercise is before the exercise" is still valid and it is still full steam ahead for all of us. At our doorstep are the Change of Command in July, the Incident Development Workshop for exercise TRIDENT JUNCTURE 16 as well as ongoing planning events for both TRIDENT JAGUAR 17 and TRIDENT JAVELIN 17.

There have been many changes to our security environment in the last two years. With Russia's illegal military intervention in Ukraine, the ongoing Operation Inherent Resolve—the U.S.-led coalition against ISIL terrorists in Iraq and Syria—and in addressing global migration challenges, we are once again reminded of the importance of establishing and maintaining security alliances. As the Warsaw Summit is nearing, NATO is strong and fully committed to maintain our peace and security for the years to come, as reflected best in the words of NATO Deputy Secretary General Ambassador Alexander Vershbow: "No matter what the challenge, NATO and its Allies find a way." In this respect, JWC has recently reinforced its internal structures in order to continue to deliver top-notch exercises to ensure our forces' readiness and preparedness.

For this edition we have a wide range of articles from different contributors and guest authors, including several readings on TRIDENT exercises and exclusive interviews, including that with the Norwegian Minister of Defence H.E. Eriksen Sørreide and HQ SACT's Deputy Chief of Staff for Capability Development Lieutenant General Jeffrey G. Lofgren as well as sections covering topics related to our organizational culture. Along with all that we also have guest articles from NATO Centre of Excellence Defence Against Terrorism, the U.S. Army Europe, and an exclusive U.S. Army perspective on the future of warfighting.

We hope you enjoy reading this issue, as we certainly enjoyed producing it!

I would like to conclude this foreword with a quote I like: "The wind and the waves are always on the side of the ablest navigators." So full speed ahead!

**Lieutenant Colonel Stefan Kuehling**  
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**Special Thanks:** Colonel William Jones, Joint Warfare Centre (JWC); CDR Helene Langeland, Allied Command Transformation (ACT); Lieutenant Colonel Gard Andersen, The Royal Norwegian Ministry of Defence; Captain Cody Moore, ACT; Colonel Mehmet Aslantas, NATO Centre of Excellence Defence Against Terrorism (CoE DAT); Captain Murat Dogusoy, NATO Rapid Deployable Corps-Turkey (NRDC-TUR) and Lieutenant Colonel Chris Haley, JWC.



## THE THREE SWORDS

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## Major General Reinhard Wolski German Army Commander, Joint Warfare Centre

**A**LMOST TWO YEARS ago, I stepped into the new role as Commander Joint Warfare Centre. This was in fact my fourth tour within NATO, following a 13-month long operational tour in Afghanistan. I knew JWC well from ISAF training and realized what an important role the Centre had in making a difference in the readiness of incoming forces and personnel prior to deploying to support the largest operation in the history of the Alliance. I was also familiar with the training that JWC provided to the NATO Response Force. With all this in mind, I was very, very pleased with the assignment I had been given as Commander of this premier operational level training organization of NATO based in Norway.



"operationalize" the Connected Forces Initiative (CFI), our ever-growing training architecture is indeed our biggest contribution to NATO's Readiness Action Plan (RAP). Nobody in the Alliance can offer the same qualities. However, nothing is set in stone and we remain one of the most flexible organizations within NATO and our effort to become even more agile against the ever-widening spectrum of contemporary threats continues.

Our mission of delivering training and exercises has not changed; it is our constant. The JWC variable is the scope and depth of how we conduct training and this has changed and will continue to do so. Since taking command of JWC, I have directed eight TRIDENT series exercises, which aim at certifying the high-readiness of

From the outset of my command at JWC, it was recognized that a new era was upon NATO. The Wales Summit in September 2014 provided the leaders with a clear picture of where the centre of gravity would be in the foreseeable future. Despite the enduring commitment to Afghanistan, Kosovo and other operations, NATO strongly highlighted its commitment to ensuring security for all Allies, referring to Article 5 of its Treaty and reaffirming its posture as the bedrock of our Collective Defence. During that Summit, NATO leaders decided on the key components that would make the Alliance fitter, faster and more flexible to face 21<sup>st</sup> century challenges.

Fully engaged with the results of the Wales Summit, we strived to process all these changes surrounding us in order to incorporate new operational challenges and tactical strengths into our multi-tiered, multinational exercises and training events as well as other key areas of modern warfare, including capability development and experimentation, doctrine, computer simulation, operational analysis, and reviewing lessons learned, always with the NATO Level of Ambition (LoA) in mind.

As the premier provider of NATO's full-spectrum, joint operational warfare training, it became clear that the demand for complex exercises was increasing. Today, JWC prepares NATO's forces for a wide range of operational challenges, from Collective Defence and counterinsurgency to Strategic Communications and cyber defence, with the main objective being to achieve highly trained, integrated and capable NATO Command and NATO Force Structures. We simulate NATO's operational battlefield through diverse training scenarios developed in-house. These scenarios deal with the challenges of intense warfighting at the operational level, cutting across areas of intelligence, counter-terrorism, and many more. We bring the concept of Comprehensive Approach into focus to help create a more interoperable NATO. Together with efforts to

the Alliance's joint and combined staffs. To me, the computer-assisted, command-post TRIDENT Series of Exercises are a catalyst for NATO's future operational success, providing the only sufficient time and depth to train on the growing complexity of modern warfare, which is both conventional and hybrid in nature.

JWC's biggest strength is its people—we are "One Team" made up of a diverse collection of cultures and people. On a daily basis, our team of experts strives to meet NATO's operational needs. To continue to meet NATO's training and education requirements in the most effective manner, JWC found itself at a turning point in 2012. An internal organizational transformation was necessary, which consequently led to the implementation of an optimized structure in 2015. The key was to realign our structure with our dynamic training programme, making the planning of four+ and the conduct of four operational level exercises per year possible. This was done by proposing an optimized organization, which was supported by HQ SACT early on. Looking back at the restructuring, and seeing the result of the optimization and cultural programmes, I feel proud to have been part of it.

This edition of *The Three Swords* is the last one to be published under my command. It comes at a crucial moment when NATO is preparing for its Warsaw Summit. I cannot stress enough how much I have enjoyed my assignment at the helm of JWC for the last two years. I could easily say that JWC is one of the most interesting places to work within NATO in terms of personnel strength and output. In July, I am handing over the responsibility of JWC to my successor, the newly designated Commander, Brigadier General Andrzej Marek Reudowicz, with strong confidence. I will look back at my time at JWC with great pleasure.

*Reinhard Wolski*



# INNOVATIVE TRAINING FOR NATO'S TRANSFORMATION

By Inci Kucukaksoy, Public Affairs Officer, Joint Warfare Centre

**M**AJOR GENERAL REINHARD WOLSKI, the outgoing Commander of the Joint Warfare Centre, explains the importance of training and exercises and how the Centre's adaptive organization supports NATO's Transformation efforts. "NATO's enhanced exercise programme focuses on exercising Collective Defence Article 5 and non-Article 5 contingencies. JWC's operational level training is a catalyst in driving Transformation," Major General Wolski says.

"ONE THING IS CERTAIN: THE REQUIREMENT FOR EXERCISES IS INCREASING, AND SO IS THE REQUIREMENT FOR THEIR COMPLEXITY."

**Major General Wolski, thank you for giving us this interview. You took over as Commander JWC on 24 September 2014 and next month you are handing over your duties to Brigadier General Andrzej Reudowicz. What would you say has had the biggest influence on you during your time at JWC?**

— I think it is our coherence as a team and our ability to quickly adapt to change as an organization. With the completion of ISAF's mission in 2014, JWC assumed new responsibilities in training a broader NATO audience from NATO Command and NATO Force Structures. The JWC-led TRIDENT exercise series is vital to Alliance's Collective Defence commitment and in preparing the NATO Response Force (NRF) for the unique 21<sup>st</sup> century security challenges. One thing is certain: the requirement for training and exercises is increasing, and so is the requirement for their complexity. When I assumed my post at JWC, after Afghanistan, I realized that the staffs were quite up to speed on the organization's requirements, especially on issues related to

Article 5 Collective Defence and non-Article 5 response. Realism is the key to effective training and we adapted to this new training era rapidly in order to prepare NATO forces in the capabilities required in the potential future conflicts. Our vision has always been continuous improvement and looking ahead. We do this with a strong lessons learned mind-set. This is only possible in a cohesive organization like the JWC.

**Can you tell us some of your highlights during your term?**

— Upon assuming my role at JWC, the NATO Readiness Action Plan (RAP) was already being shaped. The RAP is very important in that it reinforces NATO's Collective Defence and addresses new risks and threats from the east and the south. Moreover, the RAP serves as a robust plan that helps us adapt our defence capabilities for increased preparedness and better response to emerging crises. The biggest highlight for me has been the opportunity to guide JWC in developing a very dynamic

training platform articulated through ACO and ACT. In this regard, the Framework for Future Alliance Operations (FFAO) gives important guidance on how any operation needs to be conducted in the foreseeable future. This is also reflected in our exercise design. For me, one of the big rocks is the training of the single-service headquarters, which must be certified as Joint Force Headquarters (JFHQs) capable of commanding and controlling joint operations. In order to provide the best operational level training, we also assist in developing new concepts and doctrinal work, which are instigated by operations.

**How does JWC support Transformation? And, what implications does the RAP have on JWC?**

— NATO's enhanced exercise programme focuses on exercising Collective Defence Article 5 and non-Article 5 contingencies. JWC's training is a catalyst in driving Transformation. We present NATO with a full spectrum of adversaries and we lead some of NATO's most





**Above:** Major General Wolski speaking about JWC's mission and role within NATO at the 13<sup>th</sup> Conference on Civil Protection (Samfunnssikkerhetskonferansen 2016), held at the University of Stavanger. PHOTO: JWC PAO

complex operational level exercises. Providing these highly complex training events demands state-of-the-art simulation systems, and JWC's CIS/IM training network is considered a unique infrastructure within NATO. JWC is also the only organization within NATO that creates and develops exercise settings and scenarios. The Skolkan scenario, for example, was created in order to evolve NATO training in light of new threats and very complex problems as well as redefined missions in NATO post-Afghanistan. Moreover, there is also a resurgence of interest in new concepts and doctrine. Together with ACT and the NATO Standardization Organization (NSO), JWC assists in doctrine development and feeds it into our training and exercises. We also collect best practices, publish staff officer handbooks and play-test them as best practices in our exercises. Another highlight during my term was the very successful application of the Connected Forces Initiative (CFI) in TRIDENT JUNCTURE 15 through our cooperation with the Canadian Joint Operations Command. We

also have in-house live media simulation capabilities. These have all been transformational. The most prominent outcome of the RAP was the establishment of the Very High Readiness Joint Task Force (VJTF), which today stands as a certified and ready NATO force. The JWC does not train the VJTF directly, but we train the headquarters that command the VJTF.

**How successful are we in meeting expectations of providing training that reflects the wide spectrum of operational challenges?**

— We basically increased our training capacity extensively in both number and complexity of exercises we conduct. Our new schedule of work involves designing and delivering four operational-level exercises per year. Each exercise planning process takes 15 to 18 months, during which time we are also preparing for the following year's exercises. In fact, we are currently planning exercises for which execution is due two and a half years from now. Looking back on the period between October 2014 and May 2016, we have delivered

eight major exercises whilst preparing for the subsequent four exercises. One of these is exercise TRIDENT JAVELIN, another milestone for NATO. In terms of new threats, such as enhancing NATO's ability to deal with hybrid warfare threats, we stretched our resources to provide the best training possible for the Alliance. I would also say that an early dialogue with the Training Audience is paramount for the successful delivery of a complex exercise.

**Do you not risk overwhelming the Training Audience?**

— I have heard people refer to operational-level exercises as too complex. Just by watching the news regularly you will see that the security environment surrounding us is constantly changing and conflicts are more diffuse geographically. Take Afghanistan for example; conducting military operations *is* a complex task. JWC is preparing NATO for this complexity in order to make the HQs of NATO Command and Force Structures not only survive such operations, but also to





## Joint Warfare Centre **Optimization** IN BRIEF



- JWC initiated an out-of-cycle Peacetime Establishment (PE) review in 2012 in line with the NATO Level of Ambition (LoA) to undertake more exercises of increasing complexity and the need to achieve this within the existing Peacetime Establishment (PE) resources, which is originally allocated to the Centre for fewer and less complex exercises.
- JWC's optimization of its internal structures ensures that the Centre is better aligned to deliver effective training and warfare output that will prepare our forces for the new security threats and challenges facing the NATO Alliance.
- The aim of the JWC optimization was to sustain its delivery of the best training possible for the NATO Command Struc-



ture and NATO Force Structure headquarters, now and in the future.

- As a result of the optimization, JWC has been organized as a highly agile and flexible matrix organization.
- The optimized internal structures of JWC supports enhanced training and warfare output, especially when it comes to the TRIDENT Series of Exercises, which has

become the Alliance's primary vehicle for readiness at the operational level.

- With the optimization, JWC's role and mission amongst NATO's training and doctrine communities is reinforced, especially in the framework of the Connected Forces Initiative (CFI) and always with the NATO Level of Ambition in mind. JWC achieves this through implementing the Readiness Action Plan (RAP) and with its new training architecture for world-class, operational-level training.
- In addition to meeting the requirements for additional NATO training and warfare capabilities, the re-organization of JWC also intended to give a comprehensive look at JWC's overall organizational culture as "One Team".

dominate them on a joint level, in that essence this means to fight a campaign. We provide computer-assisted command-post exercises (CAX/CPX) and training in multiple areas, we integrate the Comprehensive Approach and create a highly realistic information environment and near peer adversaries with multiple dilemmas across all PMESII (political, military, economic, social, infrastructure, and information) domains. It goes without saying that this requires complex thinking in terms of settings/scenarios, augmentation, the Opposing Force (OPFOR), Lower Control/Higher Control (LOCON/HICON), media simulation and White/Grey Cell compositions. Additionally, only CAX/CPX, for example, can facilitate integration of Capability Development (CAP-DEV) experiments. Add this to the appetite for realistic scenarios which is at an all-time high.

**You have also served as "EXDIR", or Exercise Director, for TRIDENT exercises. How does**

**this additional role differ from that of Commander JWC?**

— I have really enjoyed deploying with a 35+ strong team to meet the Training Audiences (TAs) in their locations, whether it's in their Peacetime Establishment (PE) headquarters or in a tent city where they have to operate from tents or on-site containers. As JWC's training team we see how they work together to accomplish the complex mission at hand. Communicating with the TA is a very fruitful dialogue in that we learn from them and they learn from us. But, success is only possible if and when I have a very strong reach-back team in Stavanger, and there is constant half day dialogue between both locations on how to run the exercise in terms of achieving the Training Objectives. Sometimes we take the lead and make it even more challenging for the TA, which we call dynamic scripting, a deviation from the original script to provide the most realistic training.

**Is there a stronger need to convey the Comprehensive Approach into exercises?**

— Yes, to a certain extent. During the course of the overall planning and execution process for exercises, we have occasionally observed tough challenges in application of the Comprehensive Approach, which means the involvement of international organizations (IOs), governmental organizations (GOs) and non-governmental organizations (NGOs) in our exercises as well as CIMIC and the CFI. Both NATO and non-NATO participants have learned a lot during this process. However, we shouldn't forget that we have to extensively train and exercise in order to continue to run complex kinetic and non-kinetic direct action in the joint environment. The Comprehensive Approach must be very well balanced in this endeavor. We might have a small, medium or large scale warfighting in the scenario, so there must be a balance in the application of the Comprehensive Approach.



**JWC has undergone a major structural optimization. What was the aim?**

— The process started in 2012, and the aim was to optimize JWC's internal structures in response to the increasing demand for new and more complex operational-level exercises. The optimization of JWC was also so that it could support the delivery of the Centre's warfare output in the most effective manner. That's mainly why we embarked on this out-of-cycle Peacetime Establishment review. As I mentioned, the process had already begun when I took over and I was quite motivated in moving it forward through its next phases. Our basic structure was based on a mission that had evolved significantly since 2006; mainly the issue was the lack of critical functions. The proposed trial proved to be a great success, and it received support from SACT, national channels and the NATO Defence Manpower Committee. The result was a matrix structure with a brand new training architecture, which makes it better aligned for us to perform JWC's mission. I am very grateful to all the people in JWC who have contributed to this optimization process during one of the busiest years in terms of exercise delivery. There were no demotivating surprises or frustration thanks to the strong culture we have here at JWC.

**Is there anything else you would like to add?**

— About Norway, our excellent Host Nation. Without their support in terms of facilities, services and opportunities we would not have been able to accomplish our mission effectively. I also enjoyed living here very much and I am happy to have met some of the kindest people I know. My wife also engaged in JWC's amazing community life. Having already served in NATO's several operational theatres and learned so much from both NATO and coalition soldiers, airwomen, airmen and civilians, I was very glad to continue this joint operational dialogue here at the helm of JWC. Working at JWC is the pinnacle of an officer's professional career. I am very happy to have been part of JWC's "One Team" and have had the experience to work alongside this eclectic group of amazing people. My message to this team is: You all serve so well to bring NATO into the next generation quite successfully. Well done and thank you so much. ✦



**Above:** The Minister shaking hands with the NATO Secretary General at NATO HQ, Brussels, before the Meeting of NATO Ministers of Defence, 14 June 2016. PHOTO: NATO

# "We need to be interoperable to maintain a credible Collective Defence," H.E. Eriksen Søreide

## THE THREE SWORDS □interview

The Norwegian Minister of Defence, H.E. Eriksen Søreide, visited Joint Warfare Centre on 31 May 2016. Following a bilateral meeting with the Commander, H.E. Eriksen Søreide received a mission briefing on JWC's current and future activities as the premier operational warfare and training centre of NATO. The programme included a guided tour of JWC's training facility, including a visit to the live broadcast studio where the Minister was briefed on media simulation and training. Here, Laura Loflin DuBois conducted an interview with the Minister on domestic and international security issues.

By Laura Loflin DuBois,  
Exercise Planner and TV Producer  
Joint Warfare Centre

**Minister, thank you for giving us this interview. From your perspective, why is it important to have the JWC based in Norway?**

— The Joint Warfare Centre (JWC) plays a significant role as NATO's focal point for training at the joint operational level. It is equally important for Norway to ensure a NATO footprint in Norway.

**How important is it for Norway to be a member of the Alliance?**

— As a founding member of the North Atlantic Treaty Organization (NATO), Norway has



On arrival to JWC, the Norwegian Minister of Defence, H.E. Eriksen Søreide was warmly welcomed by German Army Major General Reinhard Wolski. PHOTO: CPO VINCENT MICHELETTI, FRENCH NAVY



been an active member of the Alliance since 1949. NATO membership has been and still is a cornerstone in Norwegian defence and security policy. NATO's essential purpose is to safeguard the freedom and security of its members through political and military means. Norway has played an active role in the continuous reform process that the Alliance has undergone since 1949 to ensure that it has the policies, capabilities and structures required to deal with current and future threats.

**The security landscape has changed in the past two years; how has that changed the importance of collective security for Norway?**

— We are facing a more challenging security policy situation than we have done for a long time. In the east, we are experiencing a militarily capable and politically unpredictable Russia, and in the south, several areas are affected by war and conflict. In this context, collective security is crucial. The upcoming NATO Warsaw Summit in July will have greater focus on Collective Defence, NATO's core

task, and what the Alliance must do to adapt to the new security environment.

**Russia has shown a willingness to redefine geographic borders by force. Would you say Russia is currently an ally or adversary of Norway?**

— Russia's annexation of Crimea and destabilization of eastern Ukraine is unacceptable, and therefore, Norway has implemented restrictive measures against Russia in line with the European Union, as well as suspended the bilateral military cooperation with Russia. Russia poses no immediate threat to Norway today, but Russia has demonstrated a willingness to use a wide variety of tools to protect its interests and achieve its political goals. However, Russia is our neighbour, and therefore key to achieving security and stability in the High North. As a consequence, it has been important for Norway to continue our cooperation with Russia within Coast and Border Guard, search and rescue, our regular contact between the Norwegian Joint Headquarters and the Russian

Northern Fleet, as well as the mechanisms in the Incident at Sea Agreement. This is important in order to promote openness and avoid misunderstandings.

**Norway announced after the May Defence Ministerial in Brussels that it is looking for "more frequent peacetime presence of Allied forces in the High North at a time when Russia is showing interest in the region." Why is this and how confident are you that you will get that support?**

— Russia's military build-up in the North Atlantic area has implications for Norway, and for NATO as a whole. Predictability and stability are essential to security in the High North. Norway is dependent on our Allies for our security and a predictable presence of Allies in peacetime, combined with Norwegian peacetime operations, is necessary to maintain a stabilizing norm. In order for the Allied security guarantee to be credible, our Allies also need to be capable of conducting operations in our climate and geography, and we need to be





playing a limited role in the efforts against ISIL, it is important to underscore the fact that NATO Member States are contributing significantly towards the defeat of ISIL by their contributions to Operation Inherent Resolve. In this regard, Norway stands ready to take its share of the burden, both with military and civilian contributions.

**Finally, what are Norway's highest priorities when it comes to security?**

— Our highest priority is to protect and safeguard Norwegian sovereignty, territorial integrity, freedom of action, values and interests. We pursue this primary concern and goal in a number of distinct ways. We actively support a world order based on international rule of law under the auspices of a strong and functioning United Nations. We are members of the transatlantic security community and, as a NATO Member, we stand in solidarity with our Allies. We invest in our security by maintaining modern, capable and interoperable Defence forces. And finally, we constantly work to ensure that our society is resilient and prepared to work collectively and coherently if necessary. ✦

**Above:** Colonel Stephen Williamson, Deputy Chief of Staff of JWC's Exercise, Training and Innovation Directorate, briefing the Minister on TRIDENT exercises at the combat map room. **Below:** The programme included a tour of the training facility and a visit to the live broadcast studio. PHOTOS: CPO VINCENT MICHELETTI, FRENCH NAVY

interoperable. This is necessary to maintain a credible Collective Defence. NATO stands together, and we already experience an increased interest from our Allies in the challenges we are facing in the High North. In the run-up to the Warsaw Summit, Norway will advocate a significant strengthening of NATO's maritime capabilities, with a strong emphasis on the Northern Sea areas.

**Looking at the threat from the south, Nor-**

**way is increasing its force to fight ISIL. Why is this important to Norway? Should NATO as an organization do more to counter ISIL?**

— ISIL is under increasing pressure in Iraq and Syria. It is essential to maintain that pressure and increase our efforts in combating ISIL. As recent attacks in Europe have shown, the threat of terrorism concerns us all. It is now essential that close Allies, such as the NATO Member States, stand together in facing the challenge of terrorism. While NATO as an Alliance is only



EXCLUSIVE

# NATO CAPABILITY DEVELOPMENT & INTEROPERABILITY

LIEUTENANT GENERAL JEFFREY G. LOFGREN



United States Air Force Lieutenant General Jeffrey Lofgren is the Deputy Chief of Staff for Capability Development, Headquarters Allied Command Transformation, Norfolk, VA. He acts as the Allied Command Transformation's Director for NATO Capability Development providing guidance, direction and coordination to a Directorate consisting of 26 Branches that are functionally grouped to focus on NATO Defence Planning, Capability Engineering and Innovation, Command and Control, Deployability and Sustainability capabilities. Lieutenant General Lofgren supports the Commander with emphasis on improving Alliance interoperability in order to enhance NATO's operational capabilities to meet its current and future requirements.

Interview by Inci Kucukaksoy, JWC PAO

**General, thank you for giving us this exclusive interview for The Three Swords Magazine. How does Capability Development (CAPDEV) drive NATO's Transformation?**

— As SACT very often expresses in his speeches, the question more important than "What is Transformation?" is "What do we transform?" Capabilities, with all aspects of DOTMLPFI [*Doctrine, Organization, Training, Material, Leadership, Personnel, Facilities, Interoperability: Ed.*], is what we transform. Thus, Capability Development drives NATO's Transformation with improvement in all these areas

(Doctrine, Operations, Training, Leadership, Policy, Interoperability, to name a few). Starting from overall defence planning to developing concepts, experimenting, and eventually defining the requirement for the capabilities we need today and in the future. This naturally requires a strong engagement with the industry. What we do in CAPDEV is work with nations through the NATO Defence Planning Process (NDPP) and with the operators to define the concepts and requirements for NATO. From there we work with industry to identify solutions. We then use experiments, exercises,



A mid-term vision for joint capability integration in support of NATO's operational level exercises and doctrine, including experimentation and analysis, is the key focus throughout the discussions of the JWC/ACT Capability Integration Workshops in Stavanger. Photograph shows Brigadier General Watkins addressing the workshop participants, 2 June 2016. Photograph by: CPO Vincent Micheletti, French Navy.



like those at Joint Warfare Centre, and other venues, to test and develop these capabilities across DOTMLPFI. A key component to Capability Development in NATO is addressing interoperability in operations today and in the **future** (e.g. Afghanistan Mission Network, AMN, and Federated Mission Networking, FMN)—achieving interoperability is a continuous and coordinated effort and must focus on implementation. Use of exercises like those run in JWC, JFTC and specific exercises like CWIX and STEADFAST COBALT, which focus on interoperability, provide us feedback on when implementation is or is not working.

**What are your current priorities and which require the greatest attention?**

— My current priorities are to refine and get approved the future concepts for command and control (C2), sustainability and logistics and address the shortfalls identified in the NDPP. This starts with first getting everyone focused on the future and realizing the actions we take today are impacting the future. So, thinking *now* about what we want in the *future* will shape the way we think about capabilities today. It is hard sometimes to focus on the fu-

ture with the challenges of today, but investing now in the future is what is going to keep our edge. For me this is a lot about the transition from the Industrial Age to the Information Age way of doing things. Information and understanding of the security environment is critical. Leaders and decision makers are overwhelmed both at the strategic level and tactical level. Threats are working in the seams just below the threshold of military action. Hybrid warfare is a good example of this complexity. Therefore, as we think about the future, we need to have capabilities that can handle this big data and make sense of it. We will be more contested and therefore must be able to use a federated and decentralized approach to how we deal with the threat in the future. These are just a few of the areas I am focused on to help the team drive the change.

At the top of the list is educating and telling stakeholders across the Alliance that we need to focus on this new security environment differently. So, right now, it is about building understanding and consensus of the problem and of potential solutions. Things like big data scare people and they don't understand it, artificial intelligence, cognitive

computing, and federated clouds are thought to be science fiction but they exist today—they are real today. Early adopters will gain the edge and therefore NATO needs to take this step.

**What is your assessment of the security environment looking from today's standpoint?**

— The use of hybrid strategies by nation states and decentralized, social media-enforced terrorist groups are going to challenge the awareness and responsiveness of the Alliance. In this security environment the connections across the planet are real and effect how we prepare for the future.

**There is a sharp focus on NATO's military adaptation. According to the Deputy Secretary General, strengthening and modernizing NATO's deterrence posture for the 21<sup>st</sup> century is the most important challenge to be met between now and Warsaw Summit. Would you agree? What implications do you foresee this to have on CAPDEV?**

— We have done a lot to posture the Alliance since the last Summit with the Readiness Action Plan (RAP). However, the work is not done and the next step is to provide coherence





PHOTO: MASS COMMUNICATION SPECIALIST 1<sup>ST</sup> CLASS DANIELLE BRANDT, UNITED STATES NAVY, NATO

## "Embrace change; be proactive and ambitious as that is how we have maintained our warfighting edge."

and sustainability in what we do. For CAPDEV, we need to take into account the changes to the posture regarding repositioning, RSOM [*Reception, Staging and Onward Movement: Ed.*], enhanced forward presence and what that means for NATO C2, logistics and training. All this has increased the importance on interoperability implementation. The next step will be to pursue new methods and approaches to interoperability driven by industry. Adapting the military is natural and always occurring in NATO. How we guide this adaptation should be through the use of our concepts and vision for the future, which we must get the stakeholders to understand and support.

**One of the key events in the run-up to the Warsaw Summit was the 2015 Chiefs of Transformation Conference where you were one of the panel moderators, together with General Denis Mercier. What were some of the outcomes of this event which will receive further attention at the Warsaw Summit?**

— From the Chiefs of Transformation Conference we discussed several key initiatives that were refined by the expertise in the conference. These included cyber as a domain and how we will move forward on that declaration. We identified multinational and framework nation

linkages that are feeding into the Summit and we expect that the framework nation concept will expand to include partners. The complexity of the security environment challenge was recognized as an information challenge and the Summit will provide further guidance on how we need to adapt the Alliance to provide increased situational awareness.

**How would you say warfare is changing based on the unconventional nature of future threats, such as cyber threats and other forms of hybrid warfare?**

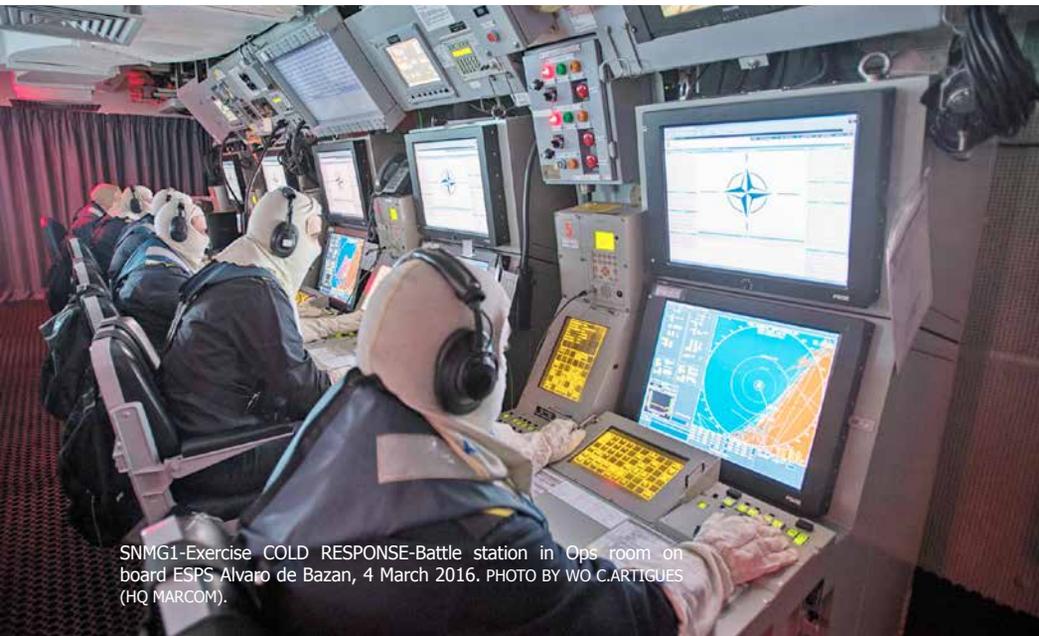
— We are being challenged by a greater number of actors, but more importantly they are able to operate just below the military threshold and therefore gain an advantage before tripping that formal military line. Cyber threats and hybrid threats act in this gray space yet set conditions for military action and decreases our reaction time. This drives a need for greater situational awareness utilizing all sorts of information (open source, social media and classical intelligence). Being able to sort through this information and find that critical bit of information is becoming increasingly more difficult, driving less reaction time. Training our people to operate in this environment is a key role Joint Warfare Centre plays.

**In your role, you continuously assess the strategic environment and threats and present your best military advice to strengthen the Alliance. Our focus in JWC is on preparing NATO forces for a wide spectrum of operational challenges, blending conventional, hybrid and terrorist modes of warfare into our scenarios. If we are expected to maintain a competitive edge over the future threats, would you agree that Capability Development processes, such as Experimentation, Concept Development and Doctrine, need to be better integrated into NATO training?**

— Absolutely; we need to expand our efforts in exercises for several reasons. First money requires us to be more creative in how we develop capabilities as we don't have the money to do individual events for each concept, doctrine or experiment. Second, we have figured out how to achieve the objectives of the capability development effort without impacting the training objectives in an unacceptable way. Furthermore, we need the operators' input to improve and ensure capabilities are actually delivering what the operator requires.

**Is the integration of emerging capabilities into JWC exercises a priority for you? And, picking up on that, how do you see JWC's**





SNMG1-Exercise COLD RESPONSE-Battle station in Ops room on board ESPS Alvaro de Bazan, 4 March 2016. PHOTO BY WO C.ARTIGUES (HQ MARCOM).



The Coalition Warrior eXploration, eXperimentation, eXamination eXercise (CWIX) is an annual NATO Military Committee approved event designed to bring about continuous improvement in interoperability for the Alliance. JWC is a key contributor to CWIX, and takes part in both Modelling & Simulation (M&S) Focus Area (FA) and Federated Mission Networking (FMN) FA. JWC also contributes with a Focus Area leader for the Mobile & Cloud Computing FA, as well as an analyst within the FMN FA.

JWC's CWIX 2016 video can be viewed at <https://www.youtube.com/watch?v=Ay-JmSC5MQc>

**role in operationalizing CAPDEV outputs?**

— Yes, from an Alliance perspective the declaration of initial operational capability for the Ballistic Missile Defence capability through exercise play is one of the high priorities within NATO delivered through exercises. Further, JWC has an important role to play in providing venues for determining lessons identified and then operationalizing changes into doctrine. The validation of those doctrine proposals within exercises is an important role the Joint Warfare Centre can play.

**How do you see the relationship between SACT's Transformation/development-based Focus Areas with those in SACEUR's SAGE?**

— I see these as complementary not at odds with each other as some would like to portray. SACEUR's Annual Guidance on Education, Training, Exercises and Evaluation (SAGE) is focused on achieving a capability for today and the Focus Areas are designed to set a vision and concept for the future; take stock of what we have today and figure out how best to get us to that future. SACEUR wants to be able to execute his mission today, but also tomorrow, and the Focus Areas are linking the two. Areas where we have shortfalls—the Focus Areas can help solve that for SACEUR. The Focus Areas are also about capabilities, not just material things, so new ways of operating, new doctrine are all part of this effort. Again, I see these as

complementary guidance that are aligned in their aim.

**Would you agree that by addressing unconventional conflicts and challenges to NATO's collective security, we are laying the groundwork for more structured engagement with the civil environment?**

— Definitely; the complex security environment demands we have a more Comprehensive Approach to our collective security and since collective security is one of our three core tasks it only makes sense we establish greater connections with other organizations such as the UN, EU, non-governmental organizations and others to address these challenges. I would also offer that the new security environment is blending the three core tasks. We see that hybrid actions can start out as a cooperative security challenge and rapidly evolve to crisis or even Collective Defence situations.

**Is this why there is now a stronger-than-ever focus on interagency partnerships; not only with EU and UN but with experts from Nations, academia and industry as well?**

— Yes, there is a clear appreciation that in today's complex environment NATO must partner. It is due to the realization that the global interrelationships between factors such as economics, politics, societal changes, environmental changes to name a few are interrelated

and therefore demands that NATO widen its partner basis to meet its core tasks. It is only through this network of partners that we will be able to provide our collective security.

**Amongst all these transformational advances and innovative ideas and concepts in NATO, are there areas that remain unchanged?**

— What will remain is the core strength of the Alliance and that is our people. We have dedicated people with a common set of core values who come together with the same aim. So, investing in those people is the key to our success. That is what Joint Warfare Centre does so well. Investing in our people to train them to take on the changes of the world and provide for our security.

**General, what is your message to NATO's Transformation community?**

— Embrace change; be proactive and ambitious as that is how we have maintained our warfighting edge. To do this we have to work together as a team to achieve our aims, we need to demand excellence, have a positive "can do" attitude to solving problems and focus on the mission. We are shaping the future now by the decisions and actions we take today. Our credibility depends on our efforts to ensure we have the capabilities needed to meet the challenges of the future. ✦



inspiring voices

# *A Farewell to JWC and Norway*

by Brigadier General Roger H. Watkins

**A**S I REFLECT OVER the past two years here at the Joint Warfare Centre, I am struck by three significant perspectives: the extraordinary quality of personnel and output in this headquarters, the resiliency of such a diverse collection of military and civilian professionals, and how fortunate we are to be located in Norway. I'll explain in slightly more detail what I mean.

When I arrived at the headquarters in early July 2014, JWC was in the midst of one of the largest turnovers experienced to date, some 41 per cent of the staff had either changed or would change over the course of the summer, including the Chief Joint Exercise Division, the Director of Management, myself, and somewhat unexpectedly, the Commander. Furthermore, a decision had been taken to develop an implementation plan for the restructuring, or optimization of the headquarters' organization. Finally, the Programme of Work for the

2014-2015 "exercise year" (September through June) was scheduled to be the busiest in the history of JWC. Despite all of these seemingly enormous challenges, JWC delivered five major exercises, including hosting two different Training Audiences here in Stavanger in back-to-back fashion, with over 800 personnel during each rotation. The results were superb, and the feedback received indicated that the JWC was truly having a positive effect on the preparation of the NATO Response Force (NRF) readiness and certification process.

Simultaneously, a small team worked under tremendous time and resource constraints to develop the implementation plan for the new trial optimized headquarters structure. Included in this massive effort was a full two-day "war-game" of the JWC's trial organization against the 2016 Programme of Work to ensure the new structure could cope appropriately. Additionally, after receiving approval from the Supreme Allied Commander Transformation (SACT), approval was sought

and received from the NATO Defence Manpower Committee to conduct the trial.

All the while the JWC was developing and planning what would become NATO's largest exercise since the Cold War, TRIDENT JUNCTURE 2015. The ability to accomplish all of this in just one calendar year was absolutely remarkable and I still look back in amazement at how this tremendous team came together to accomplish everything in such quality fashion!

Anytime an organization is made of a diverse group of individuals, the potential exists for tension, if not conflict, to manifest itself. The JWC currently encompasses personnel from 15 NATO Member Nations as well as one Partnership for Peace (PfP) Nation. Our staff has military personnel, NATO civilians and contractors—all who come together to deliver the extraordinary work I described above. How has this been accomplished?

I firmly believe that JWC's "One Team" culture has as much to do with our success as any other single factor. I still recall during





one of my immersion briefings when the lead of our organizational development planning team reminded us the famous quotation and said: "Culture eats strategy for breakfast."

The four core professional values that are the foundation of our "One Team" culture have indeed served JWC well. These values require people who are innovative and have a collaborative spirit that value the contributions of every single person, people who support fellow colleagues whenever and wherever they can, and people who respect and embrace our differences and people who hold themselves accountable and unselfishly serve during peacetime so that others may succeed in conflict. For these reasons I see an incredibly

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**Above (from left):** Brigadier General Watkins at the JWC's main entrance; Royal Norwegian Navy Captain Tor-Fredrik Johannessen, the Commanding Officer of HNoMS Harald Haarfagre and Brigadier General Watkins, signing the new Local Arrangement between HNoMS Harald Haarfagre and the JWC, 8 December 2015; during a promotion ceremony for a U.S. staff member and with his wife Leslie at the JWC 2015 Ball. Brigadier General Watkins with Major General Reinhard Wolski, JWC's senior officers and organizational culture facilitators. PHOTOS: JWC PAO

resilient and focused team here at the JWC that make the Commander and all of NATO extremely proud. In my view, JWC must continue to grow and nurture this important endeavour to ensure great success well into the future.

As I gaze out of the windows from the fifth floor here in the Command Group, I'm literally awestruck at the amazing beauty and majesty that Norway has to offer. The facility in which we are so fortunate to work every day is simply an amazing architectural and engineering marvel. It offers incredible workspace efficiency, modern communications and information systems, capacity to host Training Audience headquarters as well as our own Exercise Control team, and is capable of feeding over 1,200 personnel three meals per day.

Our very accommodating Host Nation also furnishes well trained and extremely motivated security forces and fire rescue professionals, as well as pleasant and efficient cleaning and maintenance staff. Combine this with all the real-life support in the form of lodging and transportation during exercise delivery and JWC-hosted conferences, it just makes for an incredibly motivating place to come to

work. I'm also extremely impressed that Norway has provided a flag officer, Voluntary National Contribution as a Special Advisor to the Commander. This extremely generous action allows the Commander JWC to accomplish many more activities and events and generates much goodwill towards NATO and the Centre.

Finally, just the sheer amount of incredible recreational activities, natural beauty to view and appreciate, and delicious local Norwegian cuisine make for an extremely rewarding and pleasurable place to spend an assignment abroad. Clearly, I will miss being a part of the JWC and living in Norway. Leslie and I will always reflect with extremely fond memories that the people and places we have been so fortunate to be a part of for the last two years. We extend our heart-felt appreciation and thanks to all of you and wish each of you much happiness and prosperity in the future. ✦

**Brigadier General  
Roger H. Watkins**  
U.S. Air Force  
Deputy Commander/Chief of Staff  
Joint Warfare Centre

**Below:** A Training Team meeting during TRIDENT JAGUAR 16. Training Analysts provide assessment of the direction in which the TA is heading. PHOTO: JWC PAO



# JWC TRAINING ANALYSTS & THE TRAINING OBJECTIVES

by **ROBERT SCHEIDER**  
Training Analyst, Training Event Development  
Joint Warfare Centre

and **LT COL MBE RE PAUL YOUNGMAN**  
British Army  
Training Analyst, Training Event Development  
Joint Warfare Centre

**A**S TRAINING ANALYSTS at the Joint Warfare Centre (JWC), our duties include advising Training Audiences (TAs) during development of Training Objectives and assessing whether exercise content will provide the conditions necessary to achieve them. Additionally, we assess the achievement of Training Objectives during the various exercise phases and sub-phases. Our usual guide in the preparation and delivery of exercises, Bi-SC 75-003, is very specific regarding the components of a training objective. However, it is less specific when developing or assessing Training Objectives. The most effective way to develop Training Objectives and to assess their achievement is to use traditional NATO planning and as-





# 1951

*The year when NATO started conducting military exercises.*



**EXERCISES:** During an exercise, forces are asked to respond to a fictional scenario that resembles what might occur in real life. Exercises cover the full range of military operations, from combat to humanitarian relief and from stabilization to reconstruction. They can last from a day to several weeks and can vary in scope from a few officers working on an isolated problem, to full-scale combat scenarios involving aircraft, navy ships, artillery pieces, armoured vehicles and thousands of troops.

Exercises vary in scope, duration and form—ranging between live exercises in the field to computer-assisted exercises that take place in a classroom. They are planned in advance by NATO's two strategic commands—Allied Command Operations and Allied Command Transformation—taking into account strategic priorities and objectives, operational requirements and specific exercise objectives.

Each exercise has pre-specified Training Objectives, which drive the selection of activities. Objectives may be to build skills and knowledge, practice coordination mechanisms, or validate procedures.

At the conclusion of an exercise, commanders and, in many cases, troops collectively review their performance. This process allows them to identify areas that work well ("best practices") and areas that can be improved ("lessons learned"). In this way, exercises facilitate continuous improvement of interoperability, efficiency and performance.

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assessment processes. In simplified terms, this involves conducting a mission analysis, developing Courses of Action (COAs) and selecting the most appropriate one. Then, creating a plan that includes Training Objectives as desired effects, establishing measures of effectiveness, assessing that effectiveness during and after execution, and, finally, making recommendations. But, before attempting to apply mission analysis techniques to a (for example) Joint Task Force Headquarters (JTF HQ) preparing for an NATO Response Force (NRF) standby period, let us begin with a much more simple example from the past.

From 1987 to 1989, one of us was a part of the U.S. Army 1<sup>st</sup> Armored Division (1AD), 1<sup>st</sup> Brigade Combat Team (BCT). Anyone entering any HQ within 1AD, from company-level to the Division HQ, would immediately notice a large sheet of paper with a handwritten list of that unit's Mission Essential Tasks (METs), with the overall lists of METs abbreviated as METL. Based on the NATO General Defence Plan (GDP) and Operational Plans (OPLANs) from AFCENT to CENTAG to U.S. VII Corps, 1AD's mission was to defend north-eastern Bavaria approximately north of Amberg and east of Nürnberg. While the Division's 2<sup>nd</sup> and 3<sup>rd</sup> BCTs were assigned to defend in depth from forward positions, 1BCT was the Division's reserve brigade and was primarily expected to conduct counter-attacks or establish blocking positions. This gave the mission, which was distinct from the other BCTs in the Division.

All types of U.S. Army units had corresponding "Army Readiness Training and Evaluation" program manuals listing tasks that, for example, a heavy BCT like 1BCT should be able to perform. By comparing the list of potential tasks to the mission, unit leadership developed a METL. In 1BCT's case, the METL included tasks such as deployment, movement to contact, forward passage of lines and attacks, but did not include tasks that were irrelevant to the mission or to the terrain. For example, there was no task related to river crossing operations, but a task concerning deception operations was added in 1988 when the BCT was assigned to execute part of the VII Corps and 1AD deception plans.

The Mission Analysis allowed us to identify tasks that needed to be trained, but not necessarily how to train them. There were

many tasks and not all could be accomplished in each exercise. In those days we conducted a number of exercises each year: Two gunnery exercises in Grafenwöhr Training Area (IRON THUNDER), two manoeuvre exercises focused at the battalion level and below in Hohenfels Training Area (IRON STAR), and two or three Division-level Command Field Exercises in the GDP area (IRON FORGE). Manoeuvre tasks such as "conduct movement to contact" for large units could be exercised well during IRON FORGE, but IRON STAR was a better venue for the same task at the battalion and company level. Commanders and staffs developed COAs to train specific tasks within specific exercises when developing long-term (18-month) training and exercise plans. For each exercise, the METs were operationalized into Training Objectives. They were defined by the Primary Task to be trained, Supporting and Enabling Tasks that identified the steps to achieve them, and Conditions and Standards under which the Tasks were to be performed.

## Mission Analysis

While a JTF HQ is a much larger and more complicated headquarters than that of a late 1980's BCT, the steps to develop Training Objectives are not that much different. However, one difference is that the BCT from the example had a very specifically defined mission, while a JTF HQ preparing for a standby period does not. It must be prepared to accomplish a wide range of missions across the spectrum of conflict; from peace support to warfighting. Therefore, the range of tasks will be broader and more generic.

While the 1980's BCT could draw on a list of tasks from a specific manual, there is no single list of tasks for a JTF HQ. Fortunately, Allied Force Standards Volumes V and IX (AFS Vol V and IX) include a list of Main Capability Areas (MCAs), with associated tasks, for the joint level. The MCAs provide a good starting point for METL development and are also linked to the SHAPE J7 Evaluation Criteria. They are: 1) Prepare, 2) Project, 3) Engage, 4) Sustain, 5) Consult, Command and Control, 6) Protect, and 7) Inform. From these, the Commander and staff can develop a list of tasks to be operationalized as Training Objectives. Again, AFS V and IX can be helpful in identifying potential tasks to be trained.



## COA Development

Based on the nature of the exercise and the list of potential tasks, the JTF HQ can develop COAs to achieve the Training Objectives. The exercise aim and exercise objectives as defined within the Exercise Specification (EXSPEC) will provide a framework in which to nest the Training Objectives. For example, whether an exercise is set in an Article 5 or non-Article 5, Major Joint Operation (MJO) or Small Joint Operation (SJO/Land), or other specific scenario conditions, EXSPEC will help determine what tasks can be exercised.

Another important consideration is the need for training. Commanders and staff can determine the need for training for each potential task based on previous HQ performance; new tasks yet to be performed by the HQ, as well as anticipated staff turnover in staff branches and other considerations. In the end, the HQ should identify a limited number of Tasks to be performed in each phase or sub-phase of the exercise. Preferably, the commander should prioritise these tasks in order of importance and they should be:

- limited in number by phase or sub-phase (ideally, around 10-15);
- comprehensive by covering cross-HQ processes, and preferably not stove-piped by a branch or section;
- distinct, so that there is no overlap between Training Objectives; and
- expressed in action verbs such as "develop", "plan", "coordinate", or "engage".

## Plan Development

The next step is to operationalize the Training Objectives. The HQ does this by defining the Supporting and Enabling Tasks (SETs), Conditions, and Standards to under-pin them. Perhaps the most important element is the former as these are the processes that must be achieved to accomplish the SETs. While it is tempting to list every possible step and small process, training objective developers should take care to ensure that each SET could realistically be accomplished and observed during the course of the exercise. Preferably, like the tasks above, they should be:

- limited in number and focused on the

- most important processes leading to the accomplishment of the task (ideally, around 10-15 as a maximum per task);
- processes or products that can be observed; and,
  - expressed in action verbs.

The next element of the Training Objectives describes the "Conditions" under which it should be accomplished. Bi-SC 75-003 explains Condition requirements very well. In general, they concern manning of the HQ as well as any Response Cells, the CIS environment and systems, processes that must be in place (battle rhythm, for example), and the exercise environment (including scenario and exercise play, whether through injects, simulation, or the Opposing Force, OPFOR).

Finally, the "Standards" provide the criteria upon which accomplishment of Training Objectives are assessed. Again, AFS Volumes V and IX can be a source document, as well as JTF SOPs and Standing Operating Instructions (SOIs), and Allied Joint Publications. To assist those who observe and assess the exercise, they should be as specific as possible.

## EXAMPLE TRAINING OBJECTIVE DURING A CPX: THE PROTECTION OF CIVILIANS

**TASK:** Plan and conduct activities with the intent to safeguard non-combatant civilians from physical violence; secure their rights to access essential services and resources; and contribute to a secure and stable environment for them over the long-term.

### Supporting and Enabling Tasks:

1. Conduct operational appreciation and assessment of the threat to civilians during the Crisis Response Planning (CRP),
2. Plan actions to protect civilians during the CRP and subsequent long-, medium-, and short-term planning activities,
3. Develop Effects and Measures of Effectiveness related to the type(s) of threat to civilians,
4. Incorporate threat to civilians in Operational Assessment.

### Conditions:

C1-Response Cells: To simulate subordinate components and formation that are

supporting Operations Assessment at operational level. It is also required to have the LOCON expertise to integrate Operations Assessment at the joint level.

C2-Command Post (CP) Augmentation: One Assessment Subject Matter Expert.

C3-Observer Trainer (O/T): One O/T with sufficient Operations Assessment expertise.

C4-Scenario Documentation: It is required to have a set of events to be processed and assessed prior to the STARTEX. This documentation should provide sufficient detail to lead to potential recommendations from the Joint Assessment Board.

C5-Expected MEL/MIL outcome: Incidents to challenge achievement of Decisive Conditions, leading to potential recommendations.

C6-C2IS: TOPFAS SAT-OPT-CAT available at all levels.

C7-CAX: Flow of information to be processed require to arrive at least three weeks prior to STARTEX, due to time required to collect and analyze data that has to be converted in assessment and proposed changes.

C8-Battle Rhythm: During the execution, Assessment Working Group members have to comply with an internal battle rhythm to analyze data that has to be converted in assessment and proposed changes.

### Standards:

- S1. Reference Documents:
- Knowledge and use of all relevant JTF HQ reference documents and operational assessment guidance amongst them.
  - The Comprehensive Operations Planning Directive (COPD V2).
  - NATO Operational Assessment Handbook.
- S2. Criteria of Performance: Knowledge of operational assessment; use of TOPFAS (OPT and CAT).





## Training Objectives and Relationship to Exercise Content

At JWC, we develop exercise content, including triggers from the Main Events List/Main Incidents List (MEL/MIL), Computer Assisted Exercise (CAX) simulation and OPFOR, based on the TA's training objective needs. For example, when developing the MEL/MIL, the content developers link each incident (or storyline) to a specific training objective and based on the training objective's SETs and Conditions, the developers script a number of injects to provide triggers to stimulate the TA. The better developed SETs and Conditions are, the more the content developers can develop and deliver effective and stimulating incidents and injects.

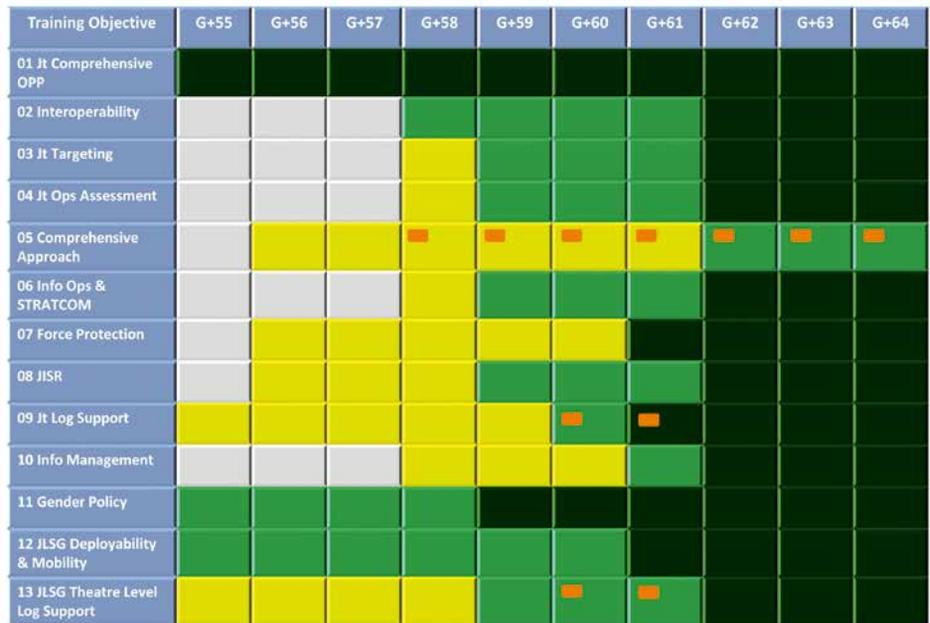
## Assessment

Just as accurately defined "Actions, Effects and Decisive Conditions" are the cornerstones to effective Operational Assessment, so are well-defined Training Objectives similarly critical to assessing the training progression of the TA's training objective. Over the years, we have used several methods for assessing Training Objectives based upon input from our Training Team's (TTs) Observer/Trainers. In general, the Observer/Trainers provide feedback on, among other things, whether the SETs have been accomplished to the specified standard. Well-developed tasks can be compared to Decisive Conditions, while the SETs are more like "Effects". As the SETs are achieved, the analyst can develop a cumulative assessment of each Training Objective. One recent method of assessment is based on the percentage of SETs that have been achieved and these are mapped across the exercising days. See Figures 1 (below, left) and 2 (above).

### EXAMPLE ASSESSMENT SCALE

	Observing
	SETs success observed
	SETs deficiency
	Majority SET success observed (≥%65 SET)
	TO success (≥%90 SET)
	TO failure (≥%90 SET)

### EXAMPLE TRAINING OBJECTIVE PROGRESSION



= SET Deficiency = ≥ 65% SETs Achieved = ≥ 90% SETs Achieved

About the training progression of the TA's training objective, the analysts report daily to the Exercise Director (EXDIR) who is then able to better determine, if at all, there is need for additional training or exercise content to provide the Training Audience with further opportunities to meet their Training Objectives. Then, at the end of the training event, training progression mapping and associated observations from Observer/Trainers are used to inform formal reviews, reporting and the capturing of lessons identified.

## Conclusion

Whilst the TA creates and owns its Training Objectives, it is the Training Analyst who provides intimate developmental support, bringing to bear his or her experience and advising on process as well as best practice. However they are built, it is crucial that the Training Objectives represent a vehicle that services the demands of the TA's Commander's training needs and intent as well as the exercise objectives, and that they will also provision SHAPE J7's Evaluation process. Ensuring that they will, it is the role of the Training Analyst who will map the Training Objectives across a MEL/MIL and exercise development process that can take some 10-months.

Finally, during exercise's execution, it is the Training Analyst who provides assess-

ment and analysis of the direction in which the TA is heading. He will advise the EXDIR as to whether he should or should not amend the MEL/MIL content, with the aim being to provide the TA with the correct stimulation to demonstrate training objective proficiency, thus achieving the "green status" by ENDEX.

While the levels of command and range of potential missions for NATO Command and Force Structure headquarters are far more complex than for a BCT in the 1980's, the process of developing sound Training Objectives need not be much more difficult. Tools such as the Training Objective Management Module (TOMM) can assist headquarters in developing Training Objectives collaboratively and some headquarters have developed their own systems. For example, Rapid Reaction Corps-France has a tool to incorporate AFS Vol V and IX tasks into their Training Objectives.

Additionally, headquarters preparing for exercises in which JWC is the "Officer Directing the Exercise" (ODE) can also receive advice and assistance from JWC Training Analysts. They are available to assist in delivering special Training Objective Workshops and in reviewing draft Training Objectives. Their early involvement in the Training Objective Development Process will benefit the TA and other stakeholders and increase the likelihood of achieving "green" on Training Objectives in due course. ✦



<INTERVIEW> **SKOLKAN: NATO's operational battlespace**

# THINK DIFFERENT





**Above:** Mr Dewing during an OPFOR meeting. **PHOTO:** JWC PAO **Top:** The Three Swords, Issue No. 21.

*The Joint Warfare Centre's PAO had the pleasure of talking to Mr Simon Dewing, one of the masterminds behind "Skolkan", about the history and inspiration behind NATO's operational battlespace for two/three-level command post and single-service exercises since 2012.*

Interviewed by Inci Kucukaksoy, Public Affairs Officer, Joint Warfare Centre

**In 2012, JWC launched the fictitious Skolkan setting and scenario, which transformed Scandinavia into a potential crisis area for NATO and completely changed the training platform for NATO Response Force (NRF). Turning back the clock, what do you remember the most about the creation of Skolkan?**

— I remember the enormity of the challenge. JWC was provided with very clear guidance from NATO, through SHAPE J7, and the process of questions and answers was informative in that it allowed us to establish the key baseline for the countries, the type of exercises envisaged and the timeline. The fact that we kept to the schedule and delivered our first exercise scenario was a success story in itself and a complement to the team. The premise for Skolkan was decided outside of JWC, but the remit was six countries of various political structures, graduated escalation over a three-year exercise period and a country that was able and willing to threaten NATO.

**What is the secret recipe for creating such a comprehensive repository of scripted data, including maps, biographies and peer or**

**near-peer adversaries?**

— Relationships. Only one of the countries was meant to be unstable for a non-Article 5 crisis. Relationships are international, national, partisan, political, social and economic and, of course, military. It is the threat of destruction that catches the imagination. Confrontation between people and countries happens all the time, but it becomes challenging when one person, a group or a country wishes to change the outcome and turn the confrontation into a conflict. Here, the dynamics come alive and the issues take hold. But before that, you will need to establish the country's setting and scenario; start with a blank sheet of paper and build relations between countries. When you have established their relations, you can "develop" the countries, which, in the case of Skolkan, are six countries that have to try and get on with each other. Inevitably, building countries requires situating that country in a larger setting. Europe has so many examples, but you can also expand world-wide. Low and behold, we used North Island, one of New Zealand's two main islands, for one of the countries, and named it "Lindsey".

**What key expertise and experience are required to create such a complex scenario?**

— Firstly, you need to understand who you are writing it for; in other words, you must know your Training Audience. In the Skolkan case, our Training Audience was a strategic and operational level headquarters, which meant that the requirement was for a complex environment where politics-meets-strategy meets the operational military environment.

Second, you need to understand the political-military context very well, and here you do not have to be ex-military, although it helps. Third, you need the experience on top of the education and training to make the right judgements and to be able to answer what is essential and what is desirable. Moreover, you need to be flexible and adaptive and to keep in the back of your mind that the Training Audience always seeks complexity.

In my opinion, unconventional thinking and pushing the boundaries developed through experience in the military environment is important. By this I mean that being an unconventional thinking conventional soldier, you will be able to think through complex scenarios



and actions and at the same time understand how to challenge the conventional thinking and processes at the operational decision-making level. Then there is the international relations; the quicker you understand the relationship between the political-strategic-operational level, the sooner you can explain the "why".

Last but not least, you need a vision. Your only limitation is your imagination. By vision I mean that when one is developing a setting, one should always think to the future and consider how a specific issue will challenge the commands that need to be exercised. When we talk about conflict and war, we usually mean the military style, but, of course, when one looks at the financial crisis of 2009, this was indeed an economic war, although it was unintended. These can be as disastrous as military wars. Such is their impact on the lives of people and the nations throughout the world. There is this constant confrontation and it does not have to be just military. In my opinion the current oil market downturn is an example of a comprehensive approach by a dominant oil country deliberately adopting a policy to maintain their dominance of the market. Flooding the market or withholding supply are a means of influencing markets for national

ends. Russia is in an information war with the West, trying to dominate the narrative and using multiple means to change the outcome. It is a political war about the power to influence geo-politics within its national strategic zone. This brings it in conflict with its neighbours. The current migration challenges in Europe have undermined EU's cohesion with more success than if a belligerent nation using military means tried to achieve the same outcome. These challenges are political but they all shape the environment in which the military must function. The point here is that our exercise settings and scenarios must provide the context for conflict using multiple instruments of power and ensure NATO command and force structures are challenged and trained to fight the future conflicts, not the past ones.

### Can we realistically address future conflicts through training?

— This was one of the great successes of Skolkan; it was in the European geo-strategic space. The first tranche of Skolkan concerned "Bothnia"—an authoritarian state based on the old East Germany, built to threaten Estonia. Remember that this was 2011, so we could easily use the Baltic States' anxieties and real-world issues in the exercise, and more importantly,

**SKOLKAN, IN A NUTSHELL:** The protection of NATO territory is the focal point in the Skolkan training scenario, which is commissioned by Supreme Allied Commander Europe (SACEUR) in January 2010 and developed by the Joint Warfare Centre (JWC) in 27 months. It transformed Scandinavia into a potential crisis area for NATO, including the Partner Nations of Sweden and Finland, who were also transformed into fictitious countries in various political/military states of conflict.

Skolkan was first launched during exercise STEADFAST JUNCTURE 12 (1-8 November 2012). Set in Estonia, this first Skolkan exercise saw NATO conducting a **Visible Assurance** mission to demonstrate its commitment to its Member Nations, namely Estonia, Latvia and Lithuania, while providing significant challenges to the NATO Response Force (NRF).

The countries of Skolkan include Bothnia, Torrike, Lindsey, Arnland, Framland and Otso. Currently, Skolkan has two settings: **Skolkan 1.0** presents a complex Article 5 collective defence of a NATO Member Nation that enables interaction between the Nations and the NATO Command Structure at all echelons, whereas **Skolkan 2.0** provides a complex non-Article 5 setting, in which a failing state contributes to regional instability, leading to a NATO-led Crisis Response Operation (CRO).

## SKOLKAN EXERCISES



STEADFAST JUNCTURE 12



STEADFAST JAZZ 13



TRIDENT JAGUAR 14



TRIDENT JUNCTURE 14



TRIDENT LANCE 14





the Training Audience could relate to that. For the first time in many years, NATO was now exercising on its borders with a credible threat. We even used some hostile activities, which now fall under the umbrella of Hybrid Threats. The problem is that the military prefers attributable, conventional threats, rather than deniable, unconventional, threats. This was a challenge, but subsequent real activities east of NATO have shown that we were indeed exercising reality. The first run out of Skolkan was exercise STEADFAST JUNCTURE 2012, where we introduced "rogue" units operating on NATO territory, which were denied to exist by the adversary. At that time, there was a push back by the Training Audience over credibility. But, the events in Ukraine confirmed that our thinking was on the right lines. Every war or conflict has been unconventional, even when armies faced each other in a linear fashion. Every successful commander has used unconventional strategies to gain an advantage, and those who did not are now on the scrapheap of history.

**At the end of the exercise, who wins?**

— Each exercise challenges the Training Audience to plan and execute at the operational level. It's not a question of whether they win; but what each member of the audience takes away

## Skolkan provides all the ingredients to challenge and pressure the military decision-making process.

and gains by the experience—and I think they do learn a lot. The uniqueness of JWC exercises is that they challenge the Training Audience to plan within a political context and deliver the direction and guidance to the tactical level. This operational level of command is extremely difficult because it occurs within the conflict or war, not in battle. The commander and his staff also have to deliver the end-state, which is usually a political one. Skolkan provides all the ingredients to challenge and pressure the military decision-making process, which is executed under simulated public scrutiny through media role players and usually within constricted time lines.

**Can you explain how do you ensure that the different aspects of this operational environment (economic, social, diplomatic and military) are well-threaded across the broad spectrum of warfare?**

— The exercise process designs how the play will roll out. The Training Audience will provide details of what they want and this again translates into Training Objectives. We then have a known period of time for the exercise, which determines how many opportunities there will be for assessment and decisions. This will also scope what challenges can be undertaken in three horizons, short term (0-3 days), medium term (4-6 days), and long term (beyond 6 days). Every military action will have an economic, social and diplomatic consequence which in turn will have a consequence on the military decision-making. The complex situation becomes complicated and challenging. The operational art is to unravel that in a timely manner. The scenario team's and the Main Events List/Main Incidents List (MEL/MIL) team's task is to offer the Training Audience the opportunity. Again, all this process is only limited by one's imagination.

PHOTOS: JWC PAO



TRIDENT JAGUAR 15 (NRDC-ITA)



TRIDENT JAGUAR 15 (ARRC)



TRIDENT JEWEL 15



TRIDENT JAGUAR 16





**Left:** The MEL/MIL Strategy Workshop for TRIDENT JAGUAR 16 (TRJR16), 7-18 March 2016. **Right:** Injects are scripted at the workshop in accordance with the exercise scenario. PHOTOS: JWC PAO

### So, what is the major threat in Skolkan?

— Skolkan can be played as an Article 5 scenario and a non-Article 5 scenario. In the Article 5 scenario, a country, which is not deterred by the political deterrence of NATO, needs to change its regional dynamics to meet its economic needs. The country in the Article 5 scenario is authoritarian and has a very capable military, which can choose to develop uncertainty in the Baltics. It has limited objectives and seizes a window of opportunity. The country in the non-Article 5 scenario, on the other hand, experiences internal conflict and is bordering Europe. The conflict, however, has regional consequences, specifically terrorist threats and restrictions on trade routes in the Baltics through to the North Sea. The challenge becomes whether and how NATO can change the outcome of what is a non-international state confrontation. This, I think, in many respects is more challenging than an Article 5, as the political-operational relationship is closer.

**One early impression was that Skolkan could have been developed further in the field of Comprehensive Approach. Do you find this to be true, and, if yes, has there been any change to this?**

— I think this is due to a misunderstanding of the scope and depth that Skolkan offers. As I said, it is limited only by imagination. The countries and international relations have all the necessary ingredients for a Comprehensive Approach. The key is what the aim of the exercise is and how much interaction is possible. In my eight years in JWC, I have watched how everyone concentrates on execution. Actually, all the work, including comprehensive interaction, needs to be staffed and interrogated during the planning phase; planning is everything. Without this element and the comprehensive preparation of the environment, you will have no foundation for understanding the complex environment, which will then be challenged during the execution phase.

We should also recognise that most people's experience in the Comprehensive Approach is through operational tours in Afghanistan. Skolkan is geographically located in northern Europe with common values to a majority of the population. The issues are different and diverse. These are all countries where governance and relationships are relatively stable, but even in stability there is confrontation. NATO and the EU are very dominant in the geo-political space and some of the

fictional countries remain independent and not to be subsumed; this creates the space for conflict. Skolkan offers a different challenge, and, hopefully, one that prepares the headquarters for the future, not the past.

While there is a tendency to limit the comprehensive nature to just the Civil-Military Cooperation (CIMIC), it is only one of many ingredients needed to form the environment of the crisis. The key is for the commander and his staff to identify the essential facilitators or actions that will unlock the crisis and begin the initial overtures to the belligerents. It is the interaction of people, not platforms that draw a conflict to an end.

There is a further dimension, which demonstrates the comprehensive nature of the training scenarios. As a scenario developer, you need to be able to anticipate and know how something will impact on the operational domain. The political domain is so dominant, but in the process of delivering the planning or execution of the operational military effects Training Audiences may forget that the real movers and shakers are the unintended consequences of political or economic effects. It is through politics that real power is distributed. These are the issues that move nations and pol-





## There are no winners in modern conflicts; you can be a victor, but then you need to rebuild—an issue which is rarely discussed...

fight their battle in a joint campaign. As such, the operational commander is similar to the conductor of an orchestra ensuring that the strings, percussion, and wind section are perfectly synchronised. In war, however, perfection is not attainable.

Terrorism, meanwhile, is in the criminal domain; it is an activity—violent, offensive—but, it is not in the military domain. Disinformation is in the political domain and politicians use it all the time. Only urban warfare is in the military domain, more specifically, on the tactical level, but it is just an environment, which constrains some tactics. In the operational level of command, urban warfare is a consideration, which needs to be analysed in order to have an insight into and understand why something has happened and how it will impact operations in general.

**How has Skolkan affected the MEL/MIL process as a whole? For example, nearly 1,000 injects were created over a period of 10 days during TRIDENT JAGUAR 16; is the process more dynamic than ever?**

— Skolkan is complex, war is complex, and the operational level of command is complex. We live in an age where video games and Hollywood feed the illusion of winning. But, there are no winners in modern conflicts; you can be a victor, but then you need to rebuild—an issue which is rarely discussed until after the fact. The first casualties of war are those not involved in combat, and Skolkan offers the opportunity for the military environment to try to understand the consequences and mitigate. The operational level of command is where most campaigns fail to achieve the political and public view of success, but it is not always their fault; trying to achieve a political success when you are under-resourced, under time pressure and answerable not only to the chain of command, but also to your national government and the government you are supporting,

places a burden on any individual. But, in a Crisis Response exercise, the commander is there as a catalyst for change. In essence, the military is part of the security domain but it does not own it; it only treats the symptoms; finding the cause is the politicians' responsibility. The military is therefore there to create the time and space for the politicians to find the cause through diplomacy.

In many respects, the MEL/MIL has been eased by the necessity to have an Opposing Force (OPFOR) with their own Campaign Plan, using all instruments of state. Even in a non-Article 5 scenario, the OPFOR can have an aim and objectives, which can then be turned into activities. This appears early in the process, so that the necessary intelligence can be provided to the Training Audience allowing them to analyse the content. Exercises have very little white noise so to give the Training Audience opportunities to develop a process and understand the crisis they have to plan against. The OPFOR, thus, represents the spine of the MEL/MIL; then additional areas need to be developed to keep the Training Audience distracted from the main event, which they will have to deal with during the course of the operation. These will be "Stakeholders", such as the in-country government, international organisations, media and others, who have a vested interest. There will be additional threats and sustainability issues, which will all add zest to the exercise.

**Mr Jens Stoltenberg, NATO's Secretary General, said that we are not back to the Cold War, but adapting to a changed security environment. My take is that training and exercises ensure the success of this adaptation.**

— I think JWC's task as the primary trainer for NATO at the operational level of command is, and will continue to be, of utmost importance to prepare NATO commands for deterrence and, if necessary, conflict. With modern

iticians and as a developer these can be used to pressure or challenge the military domain.

**Would you agree that what makes Skolkan transformational is the fact that it can be adapted to reflect any possible threat environment in Europe?**

— I am grateful for allusion to any threats, but I would prefer "the most possible threat environment." I know that Allied Command Transformation (ACT) did call Skolkan "transformational" and it has proven its worth. I think what you maybe alluding to is the hybrid nature of the modern crises in the world. Here, I would like to discuss the utility of force, which is better explained in General Sir Rupert Smith's book, with this very title, "Utility of Force". Essentially, one must understand that the use of force at one level may have no utility at the higher level. I will give you an example. When two Colonels met post-Vietnam War, the U.S. Colonel stated "you never beat us in battle," while the North Vietnamese Colonel's reply was "true, but it is irrelevant."

JWC exercises focus on the operational level and this level deals with allocation of resources, priorities and actions in time and space. Its key role is timely decisions and coordination to ensure the components can



The members of TRIDENT JAGUAR 16 White/Grey Cell provided NRDC-TUR Operational Liaison and Reconnaissance Team (OLRT) with valuable information to support their Crisis Response Planning phase of the exercise by enabling civil/military interaction for effective implementation of NATO's Comprehensive Approach. PHOTO: JWC PAO



technology providing new opportunities and options, NATO needs to train its staff on how these could be exploited in defence of the Alliance's collective values.

I think that it is also beholden on scenario developers to think the unthinkable and provide opportunities and examples of what could be. An example used in the recent exercise TRIDENT JAGUAR 2016, was an explanation of why a government with a majority of one vote could remain in power. One exercise paper distributed described how power is also in the hands of others (business elites or oligarchs) and their ability to persuade sitting members of the parliament to vote correctly. In an article by THE ECONOMIST on 17 February, titled, "Political Theatre: Crisis in Ukraine", there was a description of power politics in Ukraine and, I quote, "some see evidence of a grand backroom deal involving several oligarchs, the prime minister and the president." I rest my case: Fiction or Fact. JWC continues to provide a challenging platform for commands to exercise military planning and decisions in a comprehensive environment. The more you train, the more instinctive it becomes.

**So, in the end, does this all make you feel a**

#### **bit like a thriller novelist?**

— Actually, this is just like going back to academics, without the exams, which suits me. I have perhaps read and researched a lifetime equivalent in the last six years. I wrote the initial Country Book Economic Data based on research and a business studies qualification at my college when I was 18. I then was at HQ SHAPE when it was analysed, feeling a little like a student waiting to see if I got a pass. I did and now we have an economic developer who is maturing the product. I can say that Skolkan is a collective novel and that ensures its robustness and strength. I am certainly better prepared and understand the dynamics of this current political and economic challenge that Europe and the world are battling at the moment.

#### **Is there anything else you would like to share with our readers?**

— Yes, I was brought up during the polar years of the Cold War. Now, there is no polarity and life is more complex. There are now six major potential powers—U.S., Europe, China, Japan, Russia and India. I have lived for most of my life in South Asia and currently that area is heating up. International relations are global; communications are instantaneous, and econ-

omies operate simultaneously; there are liberal and illiberal governments. As Henry Kissinger says on foreign policy: "Many foreign policy decisions are choices between evils." There is no better way of ensuring one's survival than to follow the 2,000-years-old-maxim: "If you want peace, prepare for war." The Joint Warfare Centre does exactly that. ✦

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#### **FURTHER READING**

For these related stories, visit [www.jwc.nato.int](http://www.jwc.nato.int)

\* "Skolkan, Scandinavia's Alter Ego" by LCDR Ronel Reyes, The Three Swords Magazine, Issue No. 21

\* "STEADFAST JUNCTURE 12" by Lt Col Mark McMillion, The Three Swords Magazine, Issue No. 23

\* "STEADFAST JUNCTURE 12, Skolkan and the Nature of NATO's Rapid Military Response" by Jerome Guehenneux, JFC Naples POLAD, The Three Swords Magazine, Issue No. 24

\* "A World of Illusions" by Simon Dewing, The Three Swords Magazine, Issue No. 24



**Clockwise:** The training facility's main entrance; visit of NATO's Secretary General Mr Jens Stoltenberg to JWC on 12 October 2015 during execution of TRIDENT JUNCTURE 15; the Strategy Workshop for TRIDENT JUNCTURE 16; a view of the SITCEN; a briefing about the Information Environment of TRIDENT exercises. PHOTOS: JWC PAO



# LEARNING FROM TRIDENT

by **ANDREW EDEN**  
Lessons Learned Analyst  
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# A

FTER A GRUELLING YEAR WITH ONE TRIDENT series exercise after the other, the JWC finally closed its 2015 Programme of Work (PoW) in December with TRIDENT JET. The 2015 PoW, regarding exercises, started with TRIDENT LANCE in 2014 and continued into 2015 with TRIDENT JEWEL, two iterations of TRIDENT JAGUAR and JFC Brunssum's TRIDENT JUNCTURE—NATO's largest exercise in more than a decade with Training Audiences (TAs) from Canada, Spain, Portugal, Italy and Belgium. Each exercise brought with





**Above:** Major General Reinhard Wolski briefing to the NATO Lessons Learned Conference held in Lisbon, Portugal, November 2015. PHOTO: JALLC

it unique Exercise Control (EXCON) challenges, different TA approaches, and increasing ambition for the next exercise. One benefit of the rapid-fire output for JWC has been the opportunity to observe trends and patterns of the TAs. Additionally, the JWC has, during this busy time, reconfigured and optimized its structure to provide a scalable, responsive exercise delivery capability and new exercise settings, baselines and scenarios to continue to challenge our TAs. These changes have put pressure not just on our Scenario Branch but on the entire exercise delivery community to understand what these developing scenarios require to be supported, including Joint Intelligence, Surveillance and Reconnaissance (JISR) requirements, computer simulation (CAX), concept validation, doctrine testing, and incorporation of Comprehensive Approach actors, including non-governmental organizations (NGOs). Subsequently, the lessons we have identified have not just been external, in relation to our Allied Command Operations (ACO) stakeholders, but also internal, in some cases helping to re-write our processes as we go. So, what lessons were identified in 2015?

One outcome was, as Observer/Trainer

of the TA, the JWC was provided with rich insights into the application of operational art. In other words, we witnessed commendable agility, interaction with subordinate and superior headquarters, staff integration and synchronization both within the Joint Task Force (JTF) headquarters and to supporting headquarters as well as the application of effective battle rhythm to support the requirements of the planning horizons within the headquarters' and commanders' decision-making.

Inevitably, we also saw potential areas for improvement. One recurring theme of technical lessons identified across every TRIDENT exercise was the need for a more effective Information and Knowledge Management (IKM); this is always a challenge for joint headquarters dealing with multiple levels of command, multiple locations and different CIS systems, particularly when deployed. As information becomes increasingly available, along with technical solutions to collect and display it, so does the need to manage and align it with the principles of IKM. Similarly, leveraging corporate knowledge and exploiting the full breadth of our collective tacit knowledge and experience must be a commander's priority.

Strategic Communications (StratCom) was also identified across all exercises as a new discipline requiring urgent mastery by headquarters. As one of the Secretary General's priorities, StratCom is an area of specific interest for Allied Command Transformation and for JWC. JWC's scenario team has incorporated StratCom as a key element in its preparation and development of the "Skolkon" and "Soro-tan" scenarios, and the creation of JWC's in-house exercise social media platforms "Facepage" and "Chatter" continue to challenge and test our commanders. Last but not least, the trainers also identified that NATO doctrine should be consolidated for StratCom.

TRIDENT JUNCTURE 15 was notable for the scale of the inclusion of non-NATO entities, in keeping with our drive to test a Comprehensive Approach. From this exercise we learned the importance, and value, of having robust engagement strategies, and the means to execute them, with non-NATO entities. There are, of course, security, access, technical and ethical considerations to conducting this activity, and these need to be clarified in doctrine, prepared in scenarios, tested in exercises and mastered in execution.





Battlespace Management is another capability where we observed some real challenges for the joint headquarters. While creating and managing the technical tools for this capability alone constitutes a significant challenge, leveraging and exploiting the capability in the joint realm is an art. The commander's ability to dominate his Boyd cycle, that is, to observe multiple planning horizons, orient his staff, decide on Courses of Action, and coordinate subordinate actions, determines mission success. With increasingly adept adversaries who can set the pace with asymmetric levers such as Social Media, commanders increasingly require adept staff support. Managing time, space, forces and effects in a realistic and achievable manner is, again, an art. To support this, the JWC needs to build increasingly demanding exercises with real attention to the detail of realism. And, for this, we often need external support.

Closely related to both Battlespace Management and Knowledge Management are the issues of JISR, and the Targeting process. At the JWC, we have worked hard to present commanders with tough challenges and complex dilemmas in hybrid warfare environments. TRIDENT JUNCTURE 15 with its "Sorotan" scenario is a very good example. The demands of modern warfare highlight our strengths, and sometimes expose our weaknesses, in the areas of intelligence management, surveillance exploitation and agility of our Targeting processes. The JTF headquarters serves as a hub and a focus for the absorption and, most importantly, for the allocation of resources and the timely dissemination of intelligence and decisions. This requires highly effective communication across a suite of systems, a mastery of the available assets and their capabilities, and an agile, responsive and scalable Targeting cycle bound together with a clear and unambiguous purpose. These are three areas recently scrutinized by JALC analysis projects, and hopefully they remain high on ACT's Prioritised Analysis Requirements List.

The integration of national CIS and NATO technology is another area for scrutiny. Binding 28 Nations and Partners technically into exercises and operations is a formidable challenge. The success of ISAF and its Federated Mission Network (FMN) demonstrates what is possible: we must ensure that developing technology does not outstrip interoperability,

**Below (from top):** TRIDENT JUNCTURE 15 CPX After Action Review PHOTO: JWC PAO  
TRIDENT JET 16 deployed training team. PHOTO: HQ AIRCOM PAO



## Managing time, space, forces and effects in a realistic and achievable manner is an art.

both technically and doctrinally. At the JWC, we are familiar with connectivity challenges: TRIDENT JUNCTURE 15 required the interconnection of 3,100 personnel at eight TA locations and two EXCON locations, Stavanger and Ottawa. This illustrates the critical need for maintaining the agility, flexibility, scalability, security and interoperability of our CIS.

The efforts of JWC's newly re-configured Quality Assurance Branch are focused on observing and analyzing lessons from exercises for internal action. With JWC as the action body and lesson "owner", the lessons

collected through our in-house lessons management tool, and insights gained from our EXCON augmentee surveys, hot wash-ups, After Action Reviews (AARs) and post-exercise discussions provide us with a rich picture of how the exercise unfolded and where we can sustain, improve, adapt or focus our efforts the next time around.

A recent internal analysis requirement was on the subject of Response Cell (RC) manning. Following the PENTA J meeting in Lisbon in January 2015, and a supportive letter from the Chief of Staff HQ SACT, we have seen





**Above:** Major General Reinhard Wolski with Brigadier General Dzintars Roga, Latvian Army, ACOS Joint Education, Training and Exercises in HQ SACT, at the NATO Lessons Learned Conference. PHOTO: JALLC

really positive results in the population of the EXCON RCs. Bi-SC Directive 075-003 proposes that RC coordination begins at the Exercise Specification (EXSPEC) stage. However, with the requirements for the JTF HQ structure—including the RC structure—being addressed and developed later in the exercise cycle the actual manning of the RC can be a planning after-thought. A robust, fully manned and experienced RC will enhance any exercise, and TRIDENT JUNCTURE 15 was no exception, with a great performance by the EXCON team. What we hope to see in the progressing revision of Directive 75-3 is a clear mandate early in the exercise planning process for the finalization of the Response Cell's structure and the manning requirements.

THE PRESSURE ON HQS to exercise and mutually support other headquarters during exercises has never been greater. We must remember that RC staffs are critically important during the MEL/MIL Incident Development Workshop and the Scripting Workshop; not just during the execution: overall, a growing bill for NATO and Nations to bear. That being said, the benefits of such commitment are clear; the quality of the exercise remains high. Also, we have found that RC officers find the experience very useful in developing their professional skill-sets, so time spent in an RC is by no means wasted.

Since TRIDENT JUNCTURE 15, JWC

has seen a variety of configurations for a JTF headquarters and its supporting headquarters. These multi-level exercises provide another formidable challenge for everyone involved in the exercise. Early consideration of the RC laydown is critical to a robust EXCON, but the complexity of these exercises resonates through the Training Objectives, Command and Control (C2) laydown, CIS requirements, scenario adjustments, intelligence requirements, non-NATO actors' involvement, real-life support capacity, and of course how the outside world sees us. We hope to see in future iterations of Directive 75-3 the familiar unitary planning process, one which promotes scalability and adaptability within realistic planning timelines providing both JWC and the TAs with adequate time to prepare. Key deliverables based on sound thinking of the full array of implications on C2, for instance, must be analyzed, decided, defined and delivered early in the planning process.

Other lessons from a 75-3 perspective focus on Phase IV, Analysis, and have to do with, among others, IKM and Battlespace Management. It would be good to see a tighter Boyd cycle or OODA loop between exercise headquarters and more engagement post exercise to ensure that we derive the best benefit quickly. We need to be more agile at turning around lessons identified to lessons truly learned, which can be achieved by exploiting our available corporate knowledge, coordinat-

ing our analysis efforts and focusing our efforts on specific areas of interest or concern.

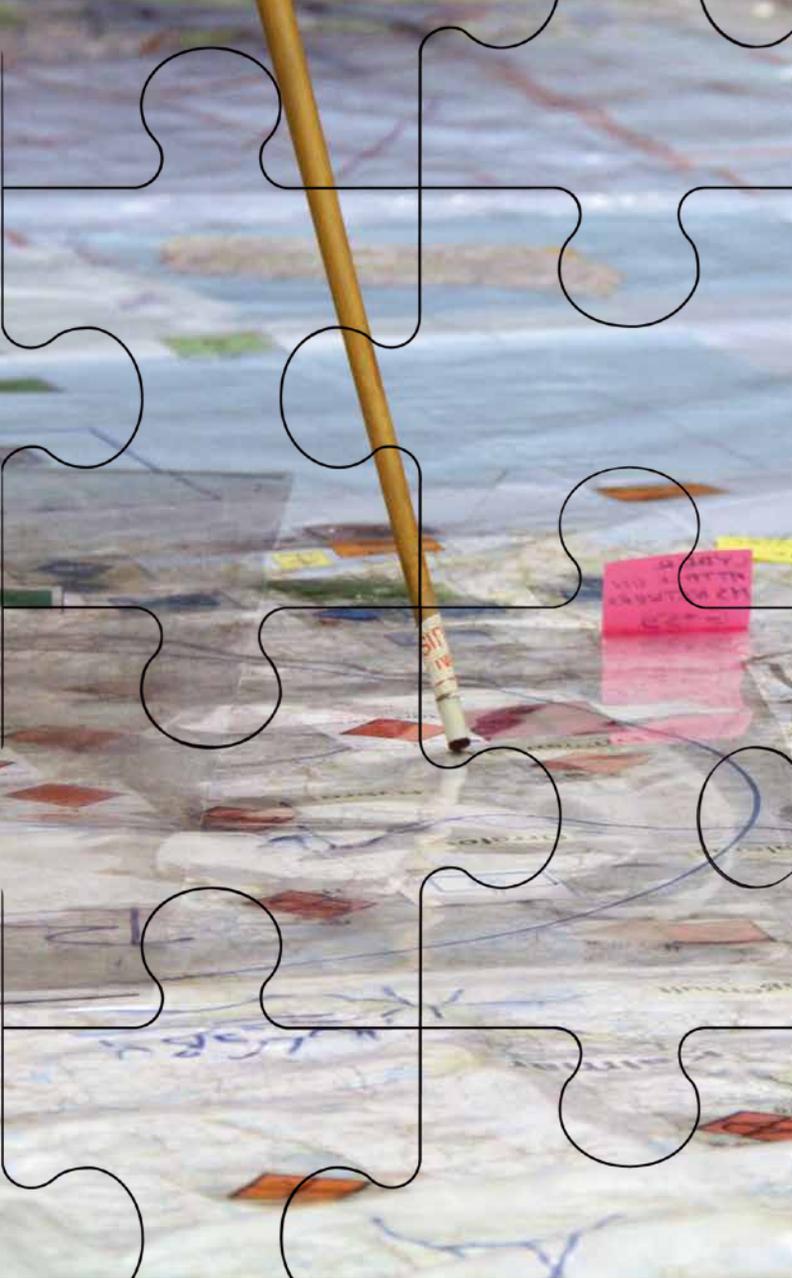
During TRIDENT JAGUAR 15, a Concept Integration, Experimentation Coordination Cell in EXCON, Stavanger, brought together colleagues from JWC, the JALLC, the NATO Command and Control Centre of Excellence and the ARRC, with close cooperation with the co-located JWC Training Team. This cell was able to coordinate their analysis efforts and together provide some rich insights into the exercise. TRIDENT JUNCTURE 15 pulled together no fewer than nine Centres of Excellence, and JWC looks forward to this continued close cooperation, facilitated by the ExTRA portal, before, during and, most importantly, after exercises for increased analysis value.

THE RESTRUCTURING of the JWC, executed on 6 August 2015, transformed us from a traditional line organization to a more flexible and scalable matrix organization. With it came the need to re-evaluate our processes and revise our SOP 800 for exercises. The timing could not be better for reviewing Bi-SC Directive 075-003, too, hoping that these two key documents will complement each other well. Lessons Learned is a discipline often associated with past practice, but which actually arms us to better face the future.

A busy 2016 already started with TRIDENT JAGUAR 16, which saw NRDC-Turkey conducting high-tempo operations within the "Skolkan 2.0" setting. Both JWC, as Officer Directing the Exercise (ODE) and NRDC-TUR, as the Training Audience, benefitted from the refinements of the exercise methodology, allowing these exercises to become well-suited to the unique requirements of the Graduated-Readiness Force (GRF) land headquarters taking on the responsibilities of a JTF HQ.

In 2017, we will undertake TRIDENT JAVELIN, a seriously ambitious undertaking with a new setting, "Skolkan 3.0", and no fewer than three Primary Training Audiences: JFC Brunssum, HQ LANDCOM and HQ MARCOM. Now is the time for the exercise community to gear itself for this challenge, and to make the most of our collective experience to ensure its success. ✦

*Editor's Note: This article first appeared as Major General Wolski's briefing to the NATO Lessons Learned Conference held in Lisbon, Portugal, in November 2015.*



# TRACKING THE SIMULATED ENEMY

## OPERATIONAL LEVEL INTELLIGENCE AND JISR IN TRIDENT EXERCISES

by **COLONEL CHRISTOPHER H. ENGEN**  
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**M**ILITARY leaders throughout history have recognized the need to understand and assess the intentions and capabilities of their adversaries as well as the effects of the surrounding environment. A variety of quotes from famous military figures extol the importance of detecting or predicting the enemy's intentions as a precursor to successful planning and execution. In an age influenced by the rapid and voluminous exchange of information in a highly complex global environment, however, apply-

ing the art and science behind military intelligence may present greater challenges than ever for commanders and their staffs.

As part of its mission to deliver computer assisted, command post exercises (CAX/CPX) in support of NATO Command and Force Structure headquarters, the Joint Warfare Centre (JWC) provides opportunities for those staffs to train the complexities of the Intelligence Cycle (Direction, Collection, Processing, Dissemination) and Joint Intelligence, Surveillance and Reconnaissance (JISR) process at the joint, collective and operational level. Designing and then delivering the conditions for these Training Audiences (TAs) requires a well-constructed and well-coordinated approach involving a range of stakeholders, across a time-frame of up to 15 months.





During MEL/MIL scripting workshops participants develop incidents and injects to support the Training Objectives. PHOTO: JWC PAO

## Framing the Requirements

In broad terms, within the context of the overall exercise design, creating the conditions to stimulate the Intelligence Cycle within a simulated environment requires exercise planners and content developers to first consider and address the following questions:

- **What do we want or need the TA to know?**  
*Examples:* Locations, activities, capabilities, intentions.
- **When do we want them to know it?**  
*Examples:* As an indicator/warning; prior to TA working groups, boards, or decision points; after an attack or a significant event.
- **Why do we want them to know it?**  
*Examples:* To shape TA assessment/understanding, influence TA decision(s).
- **How do we deliver and/or stimulate the requirement?**  
*Examples:* Through scripted and/or simulated exercise content.

Collectively, the answers to these questions form an envisioned end-state that represents a completed jigsaw puzzle that the TA must try to assemble through their application of the Intelligence Cycle. Working backwards from this desired end-state, JWC exercise content developers "cut" or deconstruct the puzzle into the individual pieces that will be developed and introduced to the TA through the most appropriate collection disciplines (e.g. HUMINT, IMINT, OSINT, SIGINT, MASINT)

as scripted and/or simulated content. Scripted content includes the broadly focused exercise scenario products and the more specific Main Events List/Main Incidents List (MEL/MIL) that is managed through the Joint Exercise Management Module (JEMM) application. Simulated content, on the other hand, is generated by the Joint Theater Level Simulation (JTLS). These two delivery means working in concert provide complimentary effects for the benefit of the TA. This methodology for framing the requirements helps exercise content developers to foresee not only the anticipated

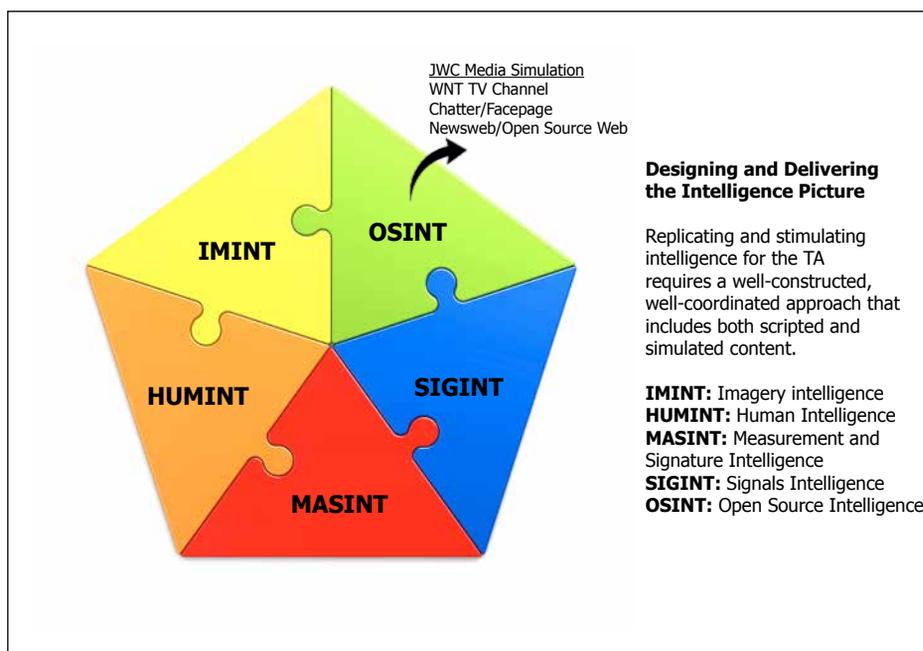
ENDEX conditions, but also the expected outcomes of discrete events.

## Managing the Requirements

Orchestrating the application of the methodology above represents the primary role of JWC's Chief Intelligence. For this exercise-specific role, the appointed "Chief Intel" serves as a member of the Core Planning Team during exercise planning and development, and supports Exercise Control (EXCON) delivery during the CPX execution. The role provides focused attention and oversight to ensure that all intelligence-related factors have been appropriately considered in order to deliver the best possible training for the TA. The Chief Intel drives cross-functional coordination and synchronization, and works to ensure shared understanding and consistent application (current doctrine/policy; exercise requirements, capabilities, and limitations) among affected stakeholders, both internal and external.

## Support to Joint Intelligence Planning

Within each exercise, the JWC-produced scenario provides the broad setting and detailed background information about the locations, groups, people and environment with which the TA are notionally involved. In accor-





dance with NATO Bi-SC 75-003, the Collective Training and Exercise Directive, the JWC Scenario Branch produces a diverse range of documents that address Political, Military, Economic, Social, Infrastructure, Information (PMESII) content and geo-spatial information for incremental delivery to the TA. Also included within these packages are the Crisis Response Intelligence Package (CRIP) and Crisis Situation Updates (CSUs). These products enable the staff to prepare the Joint Intelligence Estimate and Joint Intelligence Preparation of the Operational Environment as part of Crisis Response Planning (CRP). Any Requests for Information (RFIs) that the TA generate during the course of their planning may be submitted to the JWC exercise scenario team, who assess the requirements and prepare responses in the role of SHAPE and/or the NATO Intelligence Fusion Center (NIFC).

### Stimulating the Intelligence Cycle and the JISR Process

Building upon the scenario modules, the MEL/MIL adds fidelity and specificity in order to stimulate joint, operational level challenges to support the Training Objectives. The resultant storylines typically incorporate and rely upon intelligence-related subject matter that is developed during the JWC-led MEL/MEL Scripting Workshop, and later introduced to the TA during CPX execution. As MEL/MIL process custodians, JWC-appointed Event Managers guide the scripting process under the direction of the JWC Chief MEL/MIL. The Event Managers lead and synchronize the contributions of allocated script writers. Participants in exercise scripting workshops typically represent a mix of personnel from the JWC, other NATO units, and additional external sources who collectively contribute the expertise necessary to develop incidents and injects across all domains and warfighting functions. Producing credible, technically accurate, and complete

Producing credible, technically accurate, and complete injects that represent multi-source reporting across collection disciplines requires expertise from trained, experienced intelligence specialists.



NRDC-TUR Training Audience, TRJR16.  
PHOTO: JWC PAO



Colonel Engen, the author.  
PHOTO: JWC PAO

# 974

*Number of injects played during TRIDENT JAGUAR 16.*



TRJR16 OPFOR, the "Opposing Force", in Stavanger.  
PHOTO: JWC PAO



For more information about OPFOR, check out The Three Swords Magazine, Issue No. 29 at [jwc.nato.int/media/selected\\_articles](http://jwc.nato.int/media/selected_articles) for article titled "TRIDENT JUNCTURE 15 Opposing Force (OPFOR) and the Exercise Design" by Lieutenant Colonel Markus Schilcher.

injects that represent multi-source reporting across collection disciplines requires expertise from trained, experienced intelligence specialists. During the course of the workshop, the Chief Intel works in support of the MEL/MIL team to distribute, synchronize, and coordinate available expertise, which may be limited due to competing demands affecting the availability of externally sourced personnel.

TYPICALLY OCCURRING in tandem with the scripting workshop, STARTEX validation represents the vital link between scripted content and the simulated environment that unfolds upon execution. Representatives from the JWC (Scenario, MEL/MIL, OPFOR) and TA work with the JWC CAX team to validate the simulation generated conditions at STARTEX, including the size, composition, locations, and capabilities of friendly forces, threat/adversary forces, neutral forces, civilian traffic, etc. What that TA "sees" within their Command and Control (C2) systems beginning on Day 1 of the CPX relies upon this process. Thereafter, the simulation maintains and represents a consistent theatre and operational picture through the TA C2 systems, including physical aspects related to movement, consumption of resources, and perception. The simulation works in concert with scripted content to bring the exercise to life and provide "reality" within the TA command post(s).

## CPX Execution

Months of planning and preparation come together during the 10 days of the CPX, which are immediately preceded by five days of EXCON staff training. The Chief Intel leads a small, multi-discipline intelligence team within EXCON to manage the delivery of the pre-prepared intelligence content during the dynamic flow of simulation-enabled execution.

Key functions performed by this team include:

- Replicate SHAPE J2, including the receipt and response to RFIs from the TA;
- Replicate the NIFC through the preparation of exercise specific Daily Intelligence Updates and Special Intelligence Reports;
- Replicate/produce national intelligence reporting and products;
- Review, synchronize, refine, and validate intelligence-specific injects;
- Coordinate and support the activities of the intelligence/JISR staff members within the Lower Control (LOCON) Response Cells (RCs) that replicate the component commands or subordinate tactical echelons of the TA (Land, Air, Maritime, Special Operations, etc.).

EXCON training provides the means to famil-

iarize external augmentees and RC personnel with the tools (JEMM, JTLS) and processes (battle rhythm, information exchange) unique to exercise delivery. Once the exercise is underway, the Daily Intelligence Coordination Meeting, chaired by the Chief Intel, provides the venue within the EXCON battle rhythm to synchronize and validate the intelligence content that will be delivered to the TA during the upcoming 24 to 72 hours of exercise play. Further, the JWC Observer/Trainers, who are collocated with the TA, provide critical feedback to the EXCON Intel Team regarding the effects of the intelligence stimulation upon the TA as well as the progress of the TA intelligence staff in achieving their objectives. Adjustments and refinements are made to ensure that intelligence stimulation supports the flow of the exercise and the training requirements.

## Factors Influencing Execution

As noted earlier, JWC-delivered exercises focus on the joint operational level. The current NATO TRIDENT Series of Exercises like "JAGUAR" and "JUNCTURE" do not typically provide venues for highly specialized or tactical-level intelligence training. Only tactical-level information necessary or relevant to operational level analysis, assessment, and decision-making is prepared and delivered to the TA. Additionally, as a theater-level simulation,





NRDC-TUR Training Audience, TRJR16.  
PHOTO: JWC PAO

port segments) present within the EXCON structure and manned with trained personnel. These and other considerations represent key topics for further exploration and detailed discussion within the NATO intelligence and training/exercise communities.

As the preceding paragraphs outline, many factors influence the breadth, depth, and realism of intelligence and JISR stimulation during joint, operational-level CAX/CPX events. The exercise-appointed Chief Intel represents the focal point for coordinating and synchronizing support to JWC's intelligence-related deliverables. The JWC relies heavily upon external support and expertise to meet intelligence and JISR requirements. Shared understanding of the necessary inputs/tasks and collective support of the associated personnel and resource needs will enable the continued provision of challenging, realistic intelligence and JISR collective training for NATO Command and Force Structure HQs. ✦

**FURTHER READING**

For these related stories, visit [www.jwc.nato.int](http://www.jwc.nato.int)

\* "Data Mining in Real and Synthetic Environments" by CDR Tristan Lovering MBE, The Three Swords Magazine, Issue No. 28

JTLS does not generate all forms of tactical-level information or data, such as high-resolution imagery and real-time, full motion video feeds. The simulation does, however, provide the information that would be collected by tactical systems if employed properly and effectively by the TA as a result of the JISR process. The simulation generates text reports for analysis and action by the RC personnel performing intelligence and JISR staff functions.

It must be noted that the quality and rigor of LOCON RC reporting, product preparation/delivery, and support to the TA battle rhythm relies heavily upon the training and experience of the personnel filling those roles. This holds especially true for those serving as the subordinate intelligence staffs, collection managers, and JISR units. Getting the most out of the intelligence cycle and the JISR process during the CPX demands a subordinate team proficient in the latest NATO doctrine/policy, their roles and responsibilities, and technical support systems such as Intelligence Functional Services. Further, the TA must ensure their Standard Operation Procedures (SOPs), report formats, and dissemination guidance have been provided to the RCs and reviewed/rehearsed prior to execution.

The exercise-specific Computer and Information System (CIS) architecture represents another critical variable influencing execution. All applications and systems that support intelligence and JISR must be included within the exercise CIS architecture plan, properly configured, and appropriately tested. Success requires close coordination and collaboration

between affected participants across the CIS and intelligence/JISR functional areas.

**Future Considerations**

Future exercises must continue to account for and reflect the latest developments impacting intelligence and JISR. The advent of the NATO Alliance Ground Surveillance Forces (NAGSF) represents one such important, burgeoning capability for forthcoming CAX/CPX implementation. NAGSF core systems must be appropriately modelled within the simulation, the data transmission architecture reflected in the exercise CIS architecture, and the functions of this JISR unit (air, ground, and sup-



**Primary function:** High-altitude, long-endurance intelligence, surveillance and reconnaissance  
**Operational:** 2017/2018

**NATO Alliance Ground Surveillance:** Future capabilities for NATO. Here, Global Hawk remotely piloted aircraft (RPA), which will be acquired by a group of NATO Allies. PHOTO: TSGT APRIL QUINTANILLA

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<EXERCISE REVIEW>

# TRIDENT JAGUAR 16

*TRIDENT JAGUAR 16 certifies NATO Rapid Deployable Corps-Turkey as a Joint Task Force Headquarters*

By Inci Kucukaksoy, Public Affairs Officer, Joint Warfare Centre

*Directed by the Joint Warfare Centre (JWC), exercise TRIDENT JAGUAR 16 (TRJR16) fully tested NATO Rapid Deployable Corps-Turkey's (NRDC-TUR) ability to plan and undertake a land-heavy non-Article 5 Crisis Response Small Joint Operation based on the "Skolkan 2.0" training scenario.*

TRJR16 concluded on 14 May 2016 with the After Action Review (AAR) facilitated by the Exercise Director German Army Major General Reinhard Wolski, Commander JWC. With the completion of the 10-day Computer Assisted/Command Post Exercise (CAX/CPX), NRDC-TUR was certified as a NATO Force Structure stand-by Joint Task Force (JTF) Headquarters for the next two years. This means that, under the command of Turkish Army Lieutenant General Erdal Öztürk, NRDC-TUR has now been confirmed ready to serve as an operational level JTF HQ of a land-heavy Small Joint Operation, ready to deploy throughout SACEUR's Area of Responsibility (AOR) and beyond, providing the commanding and controlling headquarters for combined operations including land, air, and maritime components, if there is a requirement by NATO.

TRJR16 ran from 4-14 May and was split between two sites: the exercising headquarters, namely the Primary and Secondary Training

Audience, as well as JWC's Training Team were located at the "General Mazlum Işkora" base in Istanbul, while the bulk of the Exercise Control (EXCON) structure was based at JWC's training facility in Stavanger. Overall, the exercise involved nearly 1,800 military and civilian personnel from 25 NATO Member and Partner Nations. Also involved in the training event were a total of 38 organizations from within and outside of Turkey.

Sponsored by NATO's Strategic Command Allied Command Transformation (ACT), TRJR16 served as the final step to test NRDC-TUR's readiness and interoperability as a JTF HQ. It also allowed for NRDC-TUR to improve and fine-tune its staff procedures. The exercise itself was built on a challenging exercise script—a set of the Main Events List/Main Incidents List (MEL/MIL)—which is carved from the fictitious "Skolkan 2.0" training scenario created by the scenario team at JWC for NATO's expeditionary/contingency type of missions. At the core of Skolkan 2.0 lies the failing state of "Arnland" which is struggling both politically and financially. The tension gradually turns into a full-scale regional crisis on the doorstep of NATO. NATO's ensuing mission upon the request of the made-up "Government of Arnland" aims to secure the stability of the country as well as the sea lanes of communication in the Baltic Sea.

The mission has had it all; from high-intensity warfare—involving strategic air strikes

and an amphibious operation—to counterterrorism and humanitarian relief operations. Indeed, for 10 intense days, the exercise participants feel like living in a computer-simulated world. This high degree of realism was accomplished by the JWC-led EXCON through the MEL/MIL process in which the CAX experts, Opposing Forces (OPFOR) and the Media team, with their daily newscasts, breaking news and articles all played an important role. Train as you would fight. That's exactly what NRDC-TUR did as they demonstrated NATO's commitment and backing to Arnland.

"During the Execution phase, the Training Audience was exposed to almost 1,000 injects, which challenged the land, air and maritime components. JWC created a set of great training opportunities in the fields of JISR, Joint Targeting, Interoperability, Comprehensive Approach, StratCom, Cyber, Gender and Force Protection," said German Army Lieutenant Colonel Peter Mientus, the exercise Chief MEL/MIL.

He added: "Overall, we have created sufficient content for the Training Audience to reach their Training Objectives and the script

**Opposite (clockwise):** Training Team with the Training Audience in Istanbul; media training; a discussion between the OPR, Chief SITCEN and other EXCON personnel; Chief MEL/MIL daily briefing; media training with Lieutenant General Erdal Öztürk; daily wrap-up meeting at JWC's map room. PHOTOS: JWC AND NRDC-TUR PAO.





reflects both the intent of Commander NRDC-TUR and challenges the overall Training Audience on the operational level."

Royal Norwegian Navy Commander Tom Robertsen, JWC's Officer of Primary Responsibility (OPR) for TRJR16, noted: "As the JWC Training Team, we are impressed by progress of the Training Audience, but also equally important was the cohesion amongst

the Planning Team, which made it easier to execute the exercise as one team in two locations. Overall, I would say that the professionalism and experience in the whole EXCON structure—internals as well as externals—allowed for good solutions to be developed in a very challenging exercise design. As the JWC team, our aim has been to provide the most realistic training for NRDC-TUR and to see how they react to situations they could encounter in a real combat operation."

NRDC-TUR is one of SACEUR's nine Graduated Readiness Forces (Land) Headquarters under Allied Command Operations (ACO). TRJR16, as it was presented by Lieutenant General Öztürk, is the zenith exercise

of a two-year period of training events, including exercise EURASIAN STAR 15. "These two years of exercising with external significant collaborations allowed NRDC-TUR to develop its joint mindset," an exercise press release said.

Other participating HQs to TRJR16 included the Joint Logistics Support Group (JLSG) and NATO Special Operations Headquarters (NSHQ). Also directed by the JWC, the previous TRIDENT JAGUAR exercise series include the certification of NATO Rapid Deployable Corps-Spain (NRDC-ESP) and Naval Striking and Support Forces NATO (SFN) in 2014, and NATO Rapid Deployable Corps-Italy (NRDC-ITA) and Allied Rapid Reaction Corps (ARRC) in 2015. †

**Above (clockwise):** A White Cell meeting in Istanbul; Lieutenant General Öztürk with General Sir Adrian Bradshaw KCB OBE, DSACEUR; the exercise simulation media team with Lieutenant Colonel Kuehling, JWC Chief PAO, at the so-called "Arnlund Security Assistance Force" HQ; Chief Media briefing on media issues. PHOTOS: JWC AND NRDC-TUR PAO





**Clockwise:** An OPFOR briefing; TRJR16 Gender team (JWC GENAD Maj. A.J. Sullivan, SHAPE GENAD Ms Charlotte Isaksson and NRDC-TUR GENAD 1<sup>st</sup> Lieutenant Cansin Yalçın); media training, Major General Wolski speaking at the exercise DV Day; the White Cell tent in Istanbul and exercise welcome address in Stavanger.





The events of 11 September 2001 shocked the Western world, almost two decades on Europe's deadliest terror attacks hit Paris and Brussels on 13 November 2015 and 22 March 2016, respectively. **Clockwise:** Soldiers patrolling near Louvre Museum, photograph by Elena Dijour/Shutterstock. Reporters working near the Republic Square in Paris after November 13 terror attacks, photograph by Aija Lehtonen. Belgium army and police in Grand Place, photograph by CRM/Shutterstock. Istanbul Ataturk Airport attack, 29 June 2016, photograph by deepspace/Shutterstock. Flowers for the terror victims, photograph by Nazar Gonchar/Shutterstock. The front covers of the newspapers display headlines of the November 2015 terrorist attacks in Paris, photograph by Hadrian/Shutterstock.

**MAJOR KATHLEEN MCKENDRICK**

British Army  
 Course Director,  
 NATO Centre of Excellence Defence Against Terrorism

# EXAMINING THE MILITARY ROLE IN COUNTER-TERRORISM: the United Kingdom as case study

**Editor's Note:** The views expressed in this article are the author's own and do not represent those of the UK Government, Armed Forces or of the Centre of Excellence, Defence Against Terrorism.

**D**ESPITE THE traditional supposition that "any liberal democracy that uses its armed forces to combat terrorism will incur controversy both domestically and internationally,"<sup>1</sup> the use of the military in counter-terrorism roles by liberal democracies appears to be resurgent. The large scale deployment of troops on French and Belgium<sup>2</sup> soil in response to attacks by Islamist extremists in 2015 represents a domestic trend that has international antecedents. The attacks on the Pentagon and the World Trade Centre in 2001 heralded an era of expeditionary military action "beyond the bounds of recognised international humanitarian law."<sup>3</sup> Though this response, led by the United States of America, generated significant controversy at the time,<sup>4</sup> the use of military force against transnational threats has, to some extent, become accepted as necessary.<sup>5</sup>

This paper discusses the boundaries of legitimacy in the employment of military force to counter terrorism by liberal democracies.

The application of these boundaries is further explored using the United Kingdom (UK) as a case study. Having used its military at strength for a sustained time period to counter a domestic terrorist threat in Northern Ireland,<sup>6</sup> the UK government today remains vocally prepared to employ its armed forces in the conduct of the counter-terrorism.<sup>7</sup>

The UK's experience has focussed attention on the boundaries of the employment of military force in the counter-terrorist role, and has allowed them to adopt a comparatively well-developed position. This position is certainly not beyond controversy; nonetheless Aniceto Masferrer (*University of Valencia, Spain*) and Clive Walker (*University of Leeds, UK*) observe that many jurisdictions "have followed the blueprint of the UK's legal definition of terrorism and the measures built upon it."<sup>8</sup>

As terrorist threats continue to evolve in a globalised context, the military have an important and expanding role in counter-terrorism. It is impossible to successfully employ them in this role unless the scope of their

activity is limited to constitute a legitimate response for whichever state they represent. In the case of the UK, this essay concludes that it is of paramount importance that the military is employed strategically. In the contemporary context, this requires a response, which is both intelligence-led and ethical.

## Literature Review

Since the 9/11 attacks, there has been a vast increase in literature on terrorism. Within this field, the militarisation of the response to terrorism and the question over whether the means justify the ends in the war on terror have been hotly contested. Concerns over exceptional measures have undermined the campaign completely in the eyes of some, who conclude that "the position that there must be moral certitudes and universal values in this 'war' (...) provides the ideological cover for (...) instances when those certitudes and values are abrogated."<sup>9</sup> Other commentators rally against this view, mounting impassioned defences of





HMS OCEAN, docked on the river Thames at Royal Greenwich for an anti-terror exercise ahead of the Olympic Games, London, May 2012. PHOTO: DAVID BURROWS/SHUTTERSTOCK

the conduct of the "war on terror."<sup>10</sup>

Michael Ignatieff (*The Lesser Evil: Political Ethics in an Age of Terror*) charts a middle way, arguing that the nature of terrorist tactics may warrant exceptional measures, but that these must be subject to democratic checks and balances.<sup>11</sup>

Philip Bobbitt (*Terror and Consent: The Wars for the Twenty-First Century*) argues that "conditions of terror" pose existential threats to democratic "states of consent". He concludes that this threat is the result of changes to the nature of the state, which we have not yet recognised.<sup>12</sup> Audrey Kurth Cronin (*How Terrorism Ends: Understanding the Decline and Demise of Terrorist Campaigns*) is more sanguine about our ability to counter terrorism within the current strategic framework, examining how terrorist causes die out.<sup>13</sup>

Benjamin Wittes (*Law and the Long War: The Future of Justice in the Age of Terror*) discusses the two frameworks commonly held to represent different approaches to counter-terrorism; the wartime approach and the law-enforcement approach, and observes that rather

than being completely distinct, the United States of America's counter-terrorism strategy has consistently used elements of both.<sup>14</sup>

Masferrer and Walker edit an in-depth examination of the legal aspects of various states' counter-terrorism measures, describing how since 9/11, "new codes of counter-terrorism laws have constantly and often acutely challenged traditional legal concepts."<sup>15</sup>

Geraint Hughes (*The Military's Role in Counter-Terrorism: Examples and Implications for Liberal Democracies*) tackles the question of military involvement in counter-terrorism directly, describing the political, strategic and ethical challenges which arise from the use of military means to combat terror.<sup>16</sup>

In light of what is perceived as a persistent global threat,<sup>17</sup> international organisations and national governments have established new organisational structures<sup>18</sup> and published counter-terrorism policies and strategies.<sup>19</sup> The UK strategy for counter-terrorism is articulated in a cross-government departmental publication called CONTEST.<sup>20</sup> The current

version is the third published, and it is notable that the strategy has endured two changes of government since its inauguration in 2003.

## Definitions

The absence of a comprehensive definition of terrorism has been lamented for decades. Walter Laqueur described in 1986 how a research guide listed 109 definitions published between 1936 and 1981. He commented that there have been many more since and pointed out that "the U.S. Government alone has provided half a dozen, which are by no means identical."<sup>21</sup>

There has been no convergence on a definition since this observation and the number of variations has only proliferated. Of relevance are the North Atlantic Treaty Organisation (NATO) definition of terrorism as "the unlawful use or threatened use of force or violence against individuals and property in an attempt to coerce or intimidate governments or societies to achieve political, religious or ideological objectives,"<sup>22</sup> and the legal definition applied by the UK Government:



- "(1) In this act, terrorism means the use or threat of action where:
- a. the act falls within sub-section (2),
  - b. the use or threat is designed to influence the government or an international government organisation or to intimidate the public or a section of the public, and,
  - c. the use or threat is made for the purpose of advancing a political, religious, racial or ideological cause.
- (2) The action falls within this sub-section if it:
- a. involves serious violence against a person,
  - b. involves serious damage to property,
  - c. endangers a person's life, other than that of the person committing the action,
  - d. creates a serious risk to the health and safety of the public or a section of the public, or,
  - e. is designed seriously to interfere with or seriously disrupt an electronic system.
- (3) The use or threat of action falling within sub-section (2), which involves the use of firearms or explosives is terrorism, whether or not sub-section (1) b is satisfied."

Both these definitions (NATO and the UK Government) demonstrate the tendency of governments and international organisations to adopt broad definitions, which require judg-

ment as to the circumstances where they are applied. United Nations has been unable to define terrorism, instead using international legal instruments, which criminalise certain terrorist acts. For the purposes of this essay, Cronin's definition of terrorism as incorporating acts with the following four characteristics will be used: a fundamentally political nature, the symbolic use of violence, purposeful targeting of non-combatants and carried out by non-state actors.<sup>23</sup> Counter-terrorism describes the measures undertaken by a state to prevent or disrupt terrorism, or to mitigate its effects.

This essay considers the UK as a liberal democracy that is "a political system marked not only by free and fair elections, but also by rule of law, a separation of powers, and the protection of basic liberties of speech, assembly, religion and property."<sup>24</sup> Some of the ways these characteristics will affect the response of the state to terrorism are expounded below.

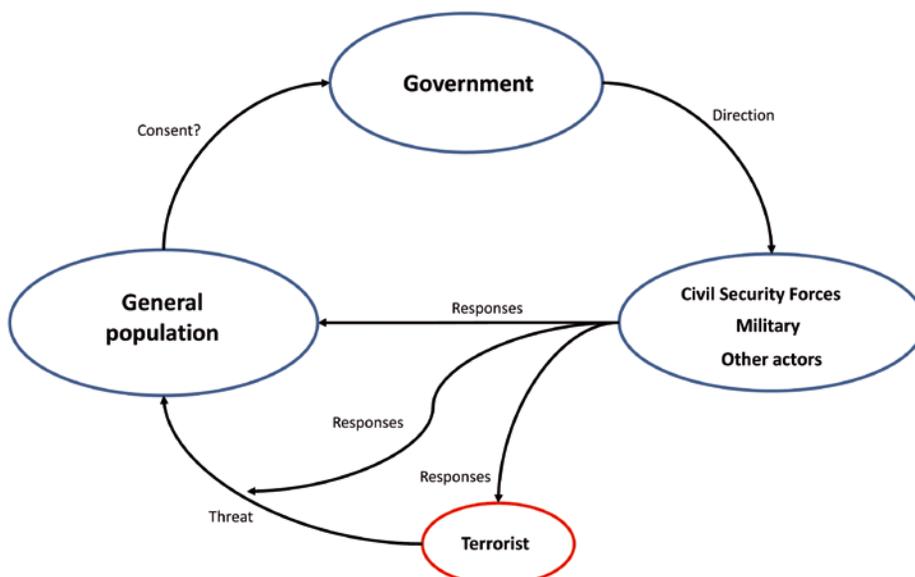
The response must be politically acceptable, which can be understood as meeting the criteria of perceived efficacy, ethical justifiability and legality.

## Legitimacy—Bounding a Legitimate Response to Terrorism in a Liberal Democracy

Democratic governments are dependent on the consent of the governed. Terrorist activities are designed to instill fear amongst the population and so erode consent.<sup>25</sup> Considering terrorism from the domestic perspective, where the terrorist threat is directed at the general public, the diagram (left) shows some of these links between the actors involved. The initial effect of terrorism may be to target the relationship between the population and the government by calling into question the latter's ability to provide security for the former. A secondary effect may be to undermine the relationship between the government and the population by provoking a response, which is considered either inadequate or unreasonably severe. The former would entail defaulting on the obligation of democratic states "to employ military means in order to protect their citizens from the threat of terrorism."<sup>26</sup> The latter might include a response which unduly curtails civil liberties.

Ignatieff describes a state response that lies between these extremes, which "serves majority interests without sacrificing the freedom and dignity of the individuals who comprise the political community to begin with."<sup>27</sup> The response must be politically acceptable, which can be understood as meeting the criteria of perceived efficacy, ethical justifiability and legality. Perceived efficacy means the response is seen as effective and commensurate with the severity of the threat. Ethical justifiability demands a balance between a consequentialist approach, where any means can be justified if the ends demand it, and deontological one, where inviolable rights of individuals must be maintained at all costs. A response which demands rights curtailment or violence

**Below:** By threatening non-combatants, terrorists seek to undermine the consent citizens award governments, on which liberal democracy depends. The way they do this is two-fold: by engendering fear in the general population or by provoking disproportionate responses.



can usually only be ethically justified on the grounds of preservation of life.<sup>28</sup> Finally, adhering to the principle of rule of law means the response should be legal, both internationally and domestically.

In the case of transnational terrorism, the threat posed by terrorists may not be levelled directly against a particular state or its population, but may still threaten the relationship between the government and the population if the government is seen to act illegitimately. In the absence of a direct threat to the public of a particular state, for example, the boundary of political acceptability might be narrowed, but, the outline constraints of efficacy, ethics and legality are still relevant. Variations on the nature of the terrorist threat may change the parameters of the response, but not the basic framework within which that response is conducted. Countering terrorism not only depends on maintaining a position that is within this framework, but on the ability to continuously and publically justify this position. This is complicated further in light of the fact that ethics and political acceptability are both contested and subjective concepts.

Finding the ethical balance of security for the majority without undue curtailment of individual liberty depends on an accurate understanding of the threat. However, this understanding is likely to be dependent on intelligence gathering, which will often be classified. Hence, the ability of the government to justify its position will be dependent on its ability to garner trust from the population.<sup>29</sup> Credibility will be improved by transparency where possible.<sup>30</sup> It is also worth noting that government credibility will be corrosively undermined by incidences where unjustifiable transgressions in ethical behaviour are revealed.

Proving when a response is effective can be equally difficult. The 2012 Olympic and Paralympic Games represented "the largest peacetime security operation in British history."<sup>31</sup> However, the apparently random nature of a terrorist threat makes it difficult to prove convincingly whether measures were effective or simply unchallenged. What is more, no matter how many acts of terrorism are prevented, the successful conduct of just one is more likely to dominate headlines. The complete eradication of risk represents an unduly stringent definition of victory. Cronin posits that this unachievable standard resulted in the failure

of United States to recognise when it had strategically defeated Al Qa'ida.<sup>32</sup> However, whilst the public perception of a response to terrorism is important, prioritising this too highly may lead to the misguided pursuit of actions which are ineffective, for the sake of being seen to react. Further, problems arise when it is considered impossible to mount an effective response within the constraints described, resulting in pressure on governments to cross ethical and legal boundaries.<sup>33</sup> Expansion of domestic law or derogation from international obligations may occur as a reaction to this.<sup>34</sup> Such exceptional measures should be temporally limited: an action that is considered acceptable in the wake of an attack may not be an acceptable long-term policy.

Terrorism does not usually pose an imminent, existential threat to a state, rather a long-term risk of eroding democratic legitimacy. Liberal democracies rely on the existence of checks and balances to counter this. Decisions made by executive leaders when an immediate reaction is required will subsequently be scrutinised by democratic institutions such as a free press and an independent judiciary. Debate, criticism and dissent over the legitimacy of a counter-terrorist response are to be expected and encouraged, as Ignatieff observes, "what is striking about democracy is the role of distrust in keeping the system honest."<sup>35</sup> Procedures must be in place which can review and adjust counter-terrorist measures in accordance with the changing situation. The UK counter-terrorism strategy articulates the need for this and reiterates a commitment to doing so.<sup>36</sup>

## The Military Role

States may employ police, paramilitaries, or even civilian organisations in counter-terrorism.<sup>37</sup> Attempts to definitively delineate between the sphere of the military and that of the civil security forces are invariably unpicked by a practical example. Controversy over the employment of the military is invariably linked with the use, or perceived use, of violence or of rights infringement. In actuality, within the parameters described above, the military or the civilian security forces may use either violent or non-violent means in the conduct of counter-terrorism. Some restrictions when employing the military arise from presenta-

tional issues. One of these is that presence of the military may be taken to represent the failure of the civil security forces. This is one reason why, in the UK domestic arena, police have primacy in the conduct of counter-terrorism.<sup>38</sup>

Other reservations over the use of the military sometimes centre over concerns of the tendency of the military to be too violent.<sup>39</sup> Recent revelations over the activities in Northern Ireland suggest that such concerns may not be entirely misplaced.<sup>40</sup> Mitigating against this impression demands a commitment to transparency where possible, as well as a reiteration of the importance of strategy behind the use of violence. If David Kilcullen is correct to characterise Islamist terrorism as part of a global insurgency,<sup>41</sup> then, in the absence of authoritative global governance, political primacy might be replaced with respect for irreducible values. Unethical conduct should be understood as strategically regressive, and will be counter-productive if it is allowed in pursuit of short-term gains.

## The Legal Framework of UK Counter-Terrorism

During the conflict in Northern Ireland a number of extraordinary judicial measures were employed to counter the terrorism threat.<sup>42</sup> When the process of "normalisation" began, the UK government replaced these measures with a series of acts that were applicable to a more general terrorist threat. The first of these was the Terrorism Act,<sup>43</sup> which defined terrorism, proscribed certain terrorist organisations and gave police certain powers in dealing with terrorist threats. Many of the measures introduced in this act and subsequent acts have proven controversial. The ability to indefinitely detain foreigners suspected of terrorism on entry to the UK, which was granted in the Anti-Terrorism Crime and Security Act,<sup>44</sup> was an example of this. This power was declared unlawful by a specially convened committee of law lords in 2004<sup>45</sup> and the relevant part of the act subsequently repealed. The most recent counter-terrorism legislation, the Counter-Terrorism and Security Act 2015,<sup>46</sup> grants powers related to the seizure of travel documents and restriction of movements and imposes a duty on certain authorities to report those they believe to be at risk of radicalisation.

Such measures have proven to be sig-



nificantly more controversial than the employment of the military in the counter-terrorism role. The construct for the military contribution to counter-terrorism is either extraterritorial, or under the auspices of Military Aid to the Civil Authorities (MACA). Provision for MACA is made under the Civil Contingencies Act.<sup>47</sup> This is usually invoked when the task at hand requires capabilities beyond those held by the police—explosive ordinance disposal being a relatively common example of this—but can also be used when the capacity of the civil authorities are overwhelmed. Northern Ireland was an example of an exceptionally extended period of MACA, albeit in the context of a low level sectarian civil war<sup>48</sup>—MACA "is provided at the specific request of the civil authorities, is subject to civil primacy and requires the authorisation of Defence Ministers."<sup>49</sup>

## The Military Contribution to CONTEST

As a liberal democracy, the UK is committed to countering terrorism within the parameters of legality and ethicality, specifically:

"CONTEST [the UK counter-terrorism strategy] will reflect our fundamental values and, in particular, our commitment, not only to protect the people of this country and our interests overseas but to do so in a way that is consistent with (...) our commitment to human rights and the rule of law."

The UK counter-terrorism strategy is organised around four "workstreams", all of which require a cross-governmental, multi-agency approach, including, where appropriate, the use of the military. Deciding actions at the boundaries of legitimacy is complicated, but there is a large area of activities that will be considered acceptable with little controversy. Possible military contributions to the four workstreams described in CONTEST, either domestically or internationally, are considered below:

**Pursue:** The large part of the military role in counter-terrorism is through the pursue workstream, which concerns the detection of threats and the disruption of terrorist activity. The military contribution to pursue is predominantly outside the territorial boundaries



**The overlapping roles of counter-terrorism and counter-insurgency:** The mission here (2014) was to disrupt lethal enemy aid and to search three compounds of interest in an area suspected of Taliban influence. The compounds were suspected to contain a homemade-explosive lab, a cache for narcotics and a home to local Taliban leadership. PHOTO: SGT JOSEPH SCANLAN, U.S. ARMY

of the UK. Invariably this is reliant to a large extent on some form of international co-operation. Extraterritorial activity in support of pursue may take various forms, up to and including military action against a state or non-state sponsor of terrorism. Such action may be limited to precision strikes, used by the U.S. against Libya in 1986, or may extend to regime change, for example the toppling of the Taliban in Afghanistan. Notably, the invasion of Iraq in 2003 was not justified by the UK Government as an effort to disrupt terrorism, although Iraq did later provide a theatre for counter-terrorist activities alongside counter-insurgency.

Connor O'Neill describes how in this kind of context the overlapping roles of counter-terrorism and counter-insurgency add a dimension of complexity, which require rapid transition by the military in doctrinal and operational practice.<sup>50</sup> The deployment of air power against Daesh could be characterised as the use of military force against a non-state actor supporting terrorism or a terrorist group itself. When action of this kind is used to disrupt terrorism, the military is able to make a unique contribution, which is beyond the capabilities of other government agencies. It is of paramount importance that such action is undertaken strategically,<sup>51</sup> and that it is part of

a plan directed towards a specific end-state.<sup>52</sup> In support of this, military commanders must be prepared to advise on the efficacy of force against a particular state or non-state actor. The military might also be used in the apprehension or interdiction of terrorists themselves, noting that "the essential mission of the military cannot (...) be the physical destruction of terrorist organisations, but their containment and frustration."<sup>53</sup>

Whilst some states use a policy of targeted killings of terrorist suspects, the UK extends its domestic policy of criminalisation of terrorism as far as possible into the international sphere. In this respect, the UK has maintained a distinct position from its transatlantic Allies and has been seen by some as a moderator of their militaristic response.<sup>54</sup> The use of a legal approach to counter-terrorism applies to suspects detained as part of operations in Iraq and Afghanistan, where increasing applicability of International Human Rights Law, especially the European Convention of Human Rights is being recognised.

The British Government states explicitly in CONTEST: "This document makes it clear that the government and its armed forces and intelligence agencies will not participate in, solicit, encourage or condone the use of torture



or cruel, inhumane or degrading treatment or punishment for any purpose." This commitment appears absolute, but is complicated in circumstances where procedures involve handing over detainees to local authorities of more dubious moral standing.

Given transgressions of ethical behaviour in the past, Clive Walker is right to assert that "mechanisms against abuse demand never-ending reflection and reinforcement."<sup>55</sup> This means that British authorities conducting extraterritorial detention will do so under heavy scrutiny and with increasingly complex legal obligations. Combined with the additional risk to the life of UK troops associated with mounting detention operations, it is possible that targeted killings may become a more attractive alternative to extraterritorial detention. This would represent a significant departure from current UK policy, and is highly unlikely without further developments in the international normative framework within which these killings are conducted.

Action of any nature in support of "Pursue" must be intelligence-led to be either effective or ethically justifiable. The globalisation of the terrorist threat has increased the potential sources of intelligence as well as the complexity of the intelligence picture. The UK has dealt with these demands by establishing the Joint

Terrorism Advisory Centre in 2003. This centre brings together cross-departmental expertise to analyse and process information, facilitating cross-agencies contributions to building the most comprehensive and commonly understood intelligence picture possible. This model of intelligence fusion has been widely replicated in other national governments and international organisations.

Intelligence is underpinned by an important detect function, which is equally likely to involve military input. Various defence intelligence assets deployed outside the UK provide collection capabilities. Reconnaissance aircraft supporting bombing missions in Syria are an example of this. The use of intelligence fusion means that, where it is relevant, the information collected by these assets can contribute directly to the understanding of the domestic threat in the UK.

The provision of counter-terrorism training to foreign armies also provides a partial contribution to the detect function. Not only does it allow UK presence in areas where there is suspected terrorist activity, but it fosters relationships with local security forces who may subsequently be more likely to share intelligence. Delivery of counter-terrorist training contributes further by effectively allowing distributed conduct of the pursue function. Such

operations open another political conundrum, that of association with unethical behaviour.

Armed forces may be used to contribute to the pursuit of terrorists in the domestic sphere when they have resources or capabilities beyond those of the police. Routinely, this includes a contribution to detection of terrorist threats, for example through the work conducted by the intelligence and security organisation, Government Communications Headquarters. The means employed for threat detection are not beyond controversy. Widespread collection and analysis of communications activity and in some cases privately submitted data by public authorities is considered an unjustified invasion of privacy by many.

Further, Lousie Amoore and Marieke De Goede (*Risk and the War on Terror*) describe how "risk based calculative models and practices are emerging as a key means of identifying vulnerable spaces and suspicious populations in the war on terror."<sup>56</sup> These methods identify potential terrorists before any crime is committed. Acting on these suspicions may see the liberties of a few are unfairly curtailed for the supposed security of the rest. Deciding the balance of where this activity is justified is the role of the democratic government, but if the military are practitioners of these methods it is important that they understand the context in which they

**COMBINED JOINT TASK FORCE**  
OPERATION INHERENT RESOLVE

Jan. 4, 2016

"But this is an organization (ISIL) that's losing territory, it's losing ground, it's, I think, increasingly losing anybody's sympathy, and this again shows what an appalling organization we're up against..."

~United Kingdom Prime Minister David Cameron

**ONE MISSION, MANY NATIONS**

A Royal Air Force Voyager KC2 refuels two RAF Tornado GR4, March 4, 2015, over Iraq. The RAF aircraft provide combat air support for the coalition against Daesh. (U.S. Air Force photo by Staff Sgt. Perry Aston)

**Left:** The United Kingdom is one of the key training partners and equippers of Iraqi Security Forces at Iraqi Army-run training facilities in Erbil, Taji, Besmaya and Al Asad. In addition, the United Kingdom is a robust aerial combat mission partner in Iraq and Syria. CJTF-OIR COALITION UNITY GRAPHIC

**About Operation Inherent Resolve:** Combined Joint Task Force—Operation INHERENT RESOLVE (CJTF—OIR) by, with and through regional partners, is to militarily defeat Da'esh in the Combined Joint Operations Area in order to enable whole-of-coalition governmental actions to increase regional stability.

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are employed. In terms of disrupting terrorist activity, the domestic response to terrorism in the UK is characterised by criminalisation. This is reflected in a preference for detention and trial of terrorist suspects in all circumstances, with exception made solely in the presence of an imminent threat to life. This is predominantly the domain of the police. The military, who only have civilian powers of arrest, are rarely engaged in the apprehension of terrorist suspects.<sup>57</sup>

**Prevent:** Currently, there is little deliberate employment of the military in support of preventing terrorism domestically, however it is worth noting that the military can provide an alternative for disaffected youths that may otherwise turn to violence.<sup>58</sup> As the reintegration of returning jihadists into society becomes an increasingly pressing issue, the involvement of the military in de-radicalisation programmes, such as that employed by Pakistan, may be worth investigating, although the efficacy of such schemes is questionable.<sup>59</sup>

Overseas, the military contribution to building stability is held to help prevent the root causes of terrorism. This contribution is most commonly realised through working with host nation security forces to undertake defence capacity building. Commitment to this task requires patience with incremental gains which are difficult to quantify, especially with regards to their direct effect on terrorism.

**Protect:** The military may be employed in the protection of civilians or infrastructure from terrorist attack either domestically or overseas. As in all areas, military employment in the domestic context will be predominantly contingent on the lack of police capability.<sup>60</sup> The military may also be used for deterrence, arguably effectively so at the 2012 Olympic games. Less well planned deployments include the conduct of armoured patrols at Heathrow Airport in 2003.<sup>61</sup> Using the military on the streets of the UK must strike the balance between reassurance and unnerving militarisation.

**Prepare:** The military have an essential part to play in the preparation of their part in an effective cross-governmental response to a major incident. This includes interoperability with civilian security forces and readiness of troops to contribute to UK's resilience. The conduct of this preparation itself makes a contribution,

albeit an unquantifiable one, to the deterrence of terrorist attacks. Wyn Bowen discusses how the use of chemical, biological or nuclear weapons to conduct mass casualty terrorism may be deterred if an effective and immediate response guarantees that the outcomes of such an attack would be denied.<sup>62</sup> The UK military participates in national and regional exercises conducted by the civilian authorities to practice this response.<sup>63</sup>

The provision of support to the civil authorities in the event of a terrorist incident is probably one of the least controversial aspects of the military role in counter-terrorism, but an effective response to such an incident is a pressing demand on an effective government. Philip Bobbitt asserts that this fact "will have important implications for the force structures and training of the Armed Forces of the democracies."<sup>64</sup> Indeed, in the UK, the likelihood of deploying armed military troops domestically has vastly increased. A report detailing a plan for the deployment of 5,000 armed troops in the event of a major terrorist incident<sup>65</sup> preceded a consolidated commitment to place 10,000 troops at readiness for this purpose in the Strategic Defence and Security Review.<sup>66</sup>

Training in the protection of civil liberties for soldiers and a plan for relief of such troops and their return to normal duties are key concerns when military forces are used in this role. A recent commitment to train 600 extra police firearms officers highlights continued investment in police capability and may allay fears that the military will be used in less than exceptional circumstances.<sup>67</sup>

## Conclusion

In the context of a quantitative increase in globalisation, the military has an important and expanding role to play in counter-terrorism. In a liberal democracy, the dependence of the government on the consent of the people means that the response to terrorism must fulfil the three-fold criteria of being politically acceptable, ethical and legal. Governments are conscious of the implications of militarising the response to "terror." This could be seen to bestow legitimacy on terrorists by awarding them combatant rather than criminal status; the overt presence of the military may cause panic at the severity of the threat; or the military may be perceived as predisposed

to nihilistic violence. Cognisant of these factors, the military contribution to counter-terrorism above all needs to be strategic. In the contemporary context, this means it must be intelligence-led and ethical. Presentation is important, so the state should strive to be as transparent as possible in its response to terror generally, and especially in its employment of the military.

There is also good reason for the military role to continue to be confined to MACA in the domestic arena. Much discussion over counter-terrorism focuses on the elements of the response, which involve the most difficult decisions over exceptional behaviour, many of which arise in the pursuit of terrorists or terrorist suspects. Counter-terrorism is in large part a battle of persuasion, where governments might "feign control over the uncontrollable"<sup>68</sup> in order to free their populations from fear.

The goal of completely eradicating the risk of a terrorist attack may be unachievable, and it is a dangerous mistake to consider the pursuit of this end to justify all means. Accepting this awards precedence to ethical conduct across the spectrum of activity, and encourages due focus on the important, but often sidelined, aspects of the military role in counter-terrorism, such as the preparation for the response to an attack. ✦



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ENABLING NATO  
RESPONSIVENESS THROUGH

# FREEDOM OF MOVEMENT



The road march, a.k.a. "Dragoon Ride": As part of Operation Atlantic Resolve, the 3<sup>rd</sup> Squadron, 2<sup>nd</sup> Cavalry Regiment spent months living and training alongside Allied forces in Estonia, Latvia, Lithuania and Poland. This road march traversed more than 1,800 kilometers, crossed five Allied borders, and included the participation of each nation's armed forces as the convoys travelled across each country. PHOTO: SGT 1<sup>ST</sup> CLASS JOHN WOLLASTON, U.S. ARMY

by **COLONEL THOMAS E. STACKPOLE**  
United States Army  
USAREUR Chief of Logistics Operations

AS NATO APPROACHES THE WARSAW SUMMIT, the most prominent initiative of the 2014 Wales Summit—the Very High Readiness Joint Task Force (VJTF)—is established, certified and ready. The land component of this "Spearhead Force" is a robust multi-national brigade-sized unit comprised of over 5,000 soldiers and hundreds of vehicles, which stays at a high state of readiness and can start deploying its forces in as little as 48-hours. This heightened level of readiness is a new and important aspect of the NATO Response Force (NRF) and will enable the Alliance to respond quickly in times of crisis.



*"We will significantly enhance the responsiveness of our NATO Response Force (NRF) by developing force packages that are able to move rapidly and respond to potential challenges and threats. As part of it, we will establish a Very High Readiness Joint Task Force (VJTF), a new Allied joint force that will be able to deploy within a few days to respond to challenges that arise, particularly at the periphery of NATO's territory."*

— **Wales Summit Declaration, 5 September 2014**

## Speed of Assembly

The VJTF marks a significant achievement for the Alliance. In June 2015, just four months after deciding upon the composition of the VJTF, NATO successfully exercised an interim VJTF made up of Czech and Dutch paratroopers, German and Norwegian infantry, Polish and Lithuanian Special Forces, Belgian artillery, U.S. helicopters and a Hungarian Civil Military Cooperation (CIMIC) unit during Exercise NOBLE JUMP in Poland.

In October 2015, during exercise TRIDENT JUNCTURE, NATO certified the functions of the new Spanish-led Spearhead Force for 2016. The development and enhancement process of the VJTF concept continues throughout 2016 with further exercises, such as BRILLIANT JUMP, TRIDENT JOUST and BRILLIANT CAPABILITY. During the Foreign Ministers meeting at NATO Headquarters on 8 October 2015, the Secretary General of NATO, Jens Stoltenberg, stated that "We now have everything in place to make the Response Force stronger, faster and more capable."<sup>1</sup>

Despite these significant advancements in readiness, there is still more work to be done to make the VJTF as well as other NRF and NATO forces faster and more responsive. Readiness to deploy is one component of responsiveness and has recently been the main emphasis of NATO's efforts. The speed at which we move the force across land is the other equally important component. I call this the "Speed of Assembly" and it is simply how fast we can move soldiers and equipment from many nations, by road or rail, to the location where they are needed. This is not an easy task considering the size and weight of military equipment such as a main battle tank, the geography of Europe, and the multiple border crossings. There are many barriers to rapid movement that must be systematically reduced to allow for Freedom of Movement

(FoM) across Europe. Preparations must be made in advance to ensure that the infrastructure, transport, and, most importantly, plans and processes are in place to enable a rapid deployment of forces throughout Europe, for either exercise or crisis response.

## The Challenges

The size of military equipment itself is a challenge. An American Abrams main battle tank weighs nearly 67 metric tons while the British Challenger 2 and the German Leopard 2 weigh approximately 62 metric tons. There are only a small number of military and commercial means for moving tanks and equally heavy armored recovery vehicles. These vehicles are mostly moved by rail with limited use of Heavy Equipment Transport from railheads to training areas. Both width and weight of vehicles might exceed allowable limits. Therefore, all routes which are to be used for movement of armored vehicles must be checked to ensure that the bridges and tunnels can support these moves. This is especially important for movements in NATO's easternmost countries.

The geography of Europe also presents challenges. To travel by land from the home of the current VJTF, Spain, to Western Poland, one must travel over 2,100 kilometers across mountains and through two other sovereign nations, France and Germany. The distance in itself is a challenge for a military convoy, but one that must be overcome in order to meet required employment deadlines and to avoid potential risks of using either sea or air. Coordination must be made for convoy overnight rest locations and refueling stops. In some cases, police traffic control escorts are necessary to ensure continuous and safe movement through congested areas.

Despite a Schengen Zone across much of

Europe for the movement of people and goods, there is no such arrangement for NATO military forces. Every NATO nation must arrange in advance for permission to travel across other NATO nations. Additional coordination is needed for the movement of military convoys, oversized or overweight equipment, and hazardous materials to ensure an efficient and safe passage across nations.

While the reasons for this are understood, the barriers created by this requirement must be addressed and reduced. This is needed for something as routine as evacuating an armored vehicle from a training event to a maintenance depot. Our forces cannot afford to wait days for border clearance processing if we intend to maintain high states of readiness. Just as the processes for political decision for the VJTF have been adapted and streamlined, the processes for movement across nations must likewise be adapted and streamlined.

## The Beginning

Within NATO, there is already a concerted effort to improve the FoM and, therefore, responsiveness of the VJTF. In April 2015, NATO Headquarters stood up the "Ad Hoc Working Group for Multi-Modal Strategic Transportation". This working group is chaired by the United States, and has national participation from Canada, Croatia, Czech Republic, Estonia, France, Germany, Hungary, Italy, Lithuania, the Netherlands, Poland, Slovakia, Slovenia, Turkey, and the United Kingdom. Its objectives are twofold:

1. Review current national multi-modal strategic transportation arrangements with the purpose of evaluating their sufficiency to support the deployment and sustainment requirements associated with the Readiness Action Plan (RAP);



2. Conduct an analysis to develop recommendations to mitigate and limit any identified risk(s).

So far, the Ad Hoc Working Group has surveyed the existing documents regarding border crossings, conducted a gap analysis of NATO and national publications and created a repository of the documents and regulations. Additionally, it began development of a Joint Operational Guidance (JOG) to facilitate the pre-clearance process for VJTF framework and sending nations. The JOG will lay the ground work for rapid processing for VJTF movements along pre-established routes. These procedures should be used for training as well as in time of crisis, so that we "train as we fight."

Rapid deployment of the VJTF will be facilitated by small Command and Control nodes called the NATO Force Integration Units (NFIUs). The NFIUs are working in conjunction with selected Host Nations to identify logistical networks, transportation nodes and supporting infrastructure in order to ensure that NATO high readiness forces can deploy to an assigned region as quickly as possible, within two to seven days.

The NFIUs were first established in Bul-

garia, Estonia, Latvia, Lithuania, Poland and Romania during 2015, and will be staffed on a rotational basis. Subsequently, two more NFIUs will be established in Slovakia and Hungary in 2016 and 2017, respectively.

In concert with the NATO Headquarters' effort, the U.S. Army Europe (USAREUR) is working bi-laterally with its NATO Allies to improve the FoM. USAREUR engineers and military police are assessing routes, which are used to move USAREUR forces into training areas across the eastern flank for Atlantic Resolve. As part of the "European Reassurance Initiative", USAREUR engineers are improving infrastructure, to include railheads and access roads to training areas. Working bi-laterally, Croatia, Czech Republic, Estonia, Poland and France reduced their diplomatic clearance timelines for the U.S. forces moving across their borders. This is helping to facilitate more realistic readiness exercises for the USAREUR units. This series of exercises, called "Freedom Shock Training Events", are no notice alerts for units to deploy from their home station to a training area to conduct specified tasks and training. To date, USAREUR has conducted Freedom Shock events with armored, air-

borne, air defense, medical, and logistics units. To exercise FoM, USAREUR units conduct rail or road movements to their destinations. For normal training events USAREUR units regularly drive their wheeled vehicles, including the Stryker armored vehicles, to their home stations in Germany and Italy from training areas as far away as Estonia and Bulgaria.

## Going Forward

To realize the full potential of the Spearhead Force, the work on FoM must proceed and accelerate. The need for ground movement corridors, standard diplomatic clearance timelines, and improved transportation infrastructure nodes applies to all regions of Europe and not just the eastern and southern periphery. After all, at some point, forces from all 28 NATO Nations will need to move and assemble for the purposes of either training or crisis response. Therefore, all Alliance Members must make these FoM objectives a priority. Speed is what will make the VJTF successful; FoM is what enables speed. ✦

1 Jens Stoltenberg, "NATO Defence Ministers take further steps to enhance Collective Defence," NATO News, 8 October 2015.

U.S. soldiers convoy through the countryside in M1A2 Abrams tanks en route to Hohenfels, Germany.  
PHOTO: SGT ALEXANDER SKRIPNICHUK, U.S. ARMY

### FURTHER READING

**FREEDOM SHOCK: ARMY EUROPE, READY AT A MOMENT'S NOTICE**  
By Sgt Daniel Cole, U.S. Army Europe Public Affairs, 19 March 2015  
<https://www.army.mil/article/144685>

At the NATO Defence Ministers meeting on 14 June, Mr Jens Stoltenberg underlined that NATO had now fully implemented the Readiness Action Plan (RAP) adopted at the Wales Summit two years ago. Today, he added, Allies were taking the next steps, including the FoM of NATO forces across Europe. "It is vital that our troops and equipment can move without delay. For exercises in peacetime, for reinforcements in an emerging crisis, time is of the essence."

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# HARMONIZING INTEROPERABILITY

by **LIEUTENANT COLONEL JAMES TOLBERT**  
United States Army  
USAREUR

**B**ECAUSE NATO IS FACING increased security threats from a multitude of sources, interoperability among our NATO Allies, and particularly with our non-NATO Partner Nations, has never been more important. However, that begs the question: What is interoperability? If you ask 10 different people, you will likely get 10 different answers based on the individual perspectives. In 2006, NATO defined the term in "interoperability in joint operations" as "the ability of different military organisations to conduct joint operations. These organisations can be of different nationalities or different armed services (ground, naval and air forces) or both. Interoperability allows forces, units or systems to operate together. It requires them to share common doctrine and procedures, each other's infrastructure and bases, and to be able to communicate with each other. It reduces duplication (...), allows pooling of resources, and even produces synergies among members."

For communicators around the world, defining interoperability is not easy and, more often than not, we are faced with the challenge of fitting the round peg into a square hole. Most frustrating is that the solutions to the "round-peg-and-a-square-hole" problem are often technologically easy and straightforward. The difficult task involved with achieving military interoperability is understanding the implementation of a multitude of national policies, procedures, and restrictions designed over years to protect national systems that simply "shut the door" on interoperability.

Interoperability is not a single problem

with a single solution. The United States Army Europe (USAREUR) and our European Allies and Partners are facing various national policies and technical communication challenges that affect our collaboration and information sharing (that is, interoperability) across all levels of command. The challenges of interoperability are quite different as one moves down from the strategic through the operational and to the tactical level of military command.

For the past several decades, interoperability stopped at the division or the corps level of command and no further below that. Many current NATO systems are designed to share information at this command level. Given enough time to train and integrate these systems, national formations at the division and corps command levels can pass meaningful mission command information. In today's complex European theater, however, NATO is mixing national units down to the platoon and company command levels.

On paper, it is possible to tuck an American battalion under a French brigade or a German platoon under an American company, but ensuring their nationally fielded communications systems directly interoperate is an extreme challenge. One would think a "radio is just a radio" and a "computer is just a computer," so making the various parts communicate should be straightforward. Quite often, it is, at least technically. However, even among units from NATO nations, which use common design-standards, NATO-compliant military radios may not be widely distributed within the military unit.

When we set aside the relatively easy-to-



PHOTO: NATO

solve radio-hardware issue, the real challenge to low-level tactical radio interoperability is in the Communications Security (COMSEC) processes used to secure voice communication. Can a German platoon talk to an American company? This has less to do with technical interoperability and everything to do with restrictions imposed by national policies and procedures. Nations have spent many years and enormous amounts of money to secure their military communications, which in turn impedes our now required interoperability.

Within NATO, common COMSEC protocols exist. However, according to national procedures, those shared COMSEC protocols must be distributed by means of nationally owned processes. Because of these nationally imposed restrictions, an American company cannot issue COMSEC protocols to a German platoon to share secure tactical voice communications. The German platoon must obtain the identical COMSEC protocol from its German national sources. This often leads to delays in securing tactical-voice communications, and those delays may cost soldiers' lives during major combat operations.





functions such as integrating fires, intelligence processing, logistical functions, and medical-evacuation procedures. These tasks require years of training to master and are graduate-level work for the interoperability of multinationally mixed formations. Passing an artillery-fire mission from a Polish headquarters to a French artillery battery not only has to traverse language and procedural hurdles, but the information has to pass through computer-based systems. These systems, in theory, were designed to meet NATO standards, but they work with each other without a tremendous effort. The ability to pass information cannot be assumed simply because all of the players are NATO members. Units in multinationally mixed formations require time to train and integrate their systems before leaders can expect satisfactory performance during combat operations.

The title of this article is "*Harmonizing Interoperability*". According to Merriam-Webster, to harmonize is: "to cause two or more things to be combined or to go together in a pleasing or effective way." According to the USAREUR's "Strong Europe" strategy, "Working with our Allies and Partner Nations is the normal way to operate in Europe, and contributes to strengthening our Alliance as part of the NATO Collective Defense."

Based on this definition and this strategy, harmonizing interoperability is a prerequisite for the challenges USAREUR faces today. Similar to how harmony works in music; true multinational military interoperability brings together many different people, policies, and technologies together to form a synergy that a military commander can use to make better life-and-death decisions during major combat operations.

Recent world events and USAREUR contributions and support to the NATO Very High Readiness Joint Task Force (VTJF) highlight the urgency of USAREUR's requirement to expedite the delivery of capabilities that enhance our ability to support our Allies and Partners, participate in multilateral engagements, and operate as part of a joint multinational force. Interoperability is one of those capabilities. Support for these capabilities is essential, not only to the framework of the USAREUR "Strong Europe" strategy, but to the success of our overarching U.S. Army Doctrinal Operating concept, which is to "Win in a Complex World." †

Moving up from the tactical to the operational level of command, recent technological advances have enabled the U.S. forces and our Allies to make great strides in national mission command systems. Unfortunately, these efforts have not been well coordinated between nations, resulting in a wide variety of solutions that are unable to interoperate with one another. One of the tenets of mission command and a prerequisite for true multinational interoperability is a meaningful Common Operational Picture (COP) that can be shared among Allied and Partner Forces. The term "common" in COP currently refers to a common or shared perspective within any one nation's military force, but not necessarily across national lines.

USAREUR operates in a joint, combined, and multinational environment throughout 51 countries across Europe and Eurasia and participates in more than 20 major NATO and non-NATO exercises each year. The procedures and mechanics of sharing a COP at the division or corps level are well understood and practiced with the intent that each nation would distribute the shared COP by means of national assets to their own lower

levels of command. This process can work well in major combat operations with nationally pure divisions, but the COP process breaks down for a formation multinationally mixed at lower levels.

Furthermore, as with radios, nationally fielded friendly-force tracking systems work well with a national-pure formation, but they do not work well in multinationally mixed formations. An American company using the U.S. "Blue Force Tracking" system and a German platoon with a German force-tracking system have no way to share positional data with one another at this level. A higher-level command post may be able to see both nation's units on their single COP system (assuming nations are releasing their national feeds to a COP), but units at the tactical level still have to rely on old-fashioned techniques to maintain positional awareness and, most importantly, avoid friendly-fire while rapidly targeting the enemy.

Moving beyond COP and friendly-force tracking are a number of tasks that armies around the world perform before and during major combat operations. These tasks are the bread and butter of land forces and include



**Above:** Soldiers advance on a village held by simulated opposition forces during exercise SABER JUNCTION at the Hohenfels Training Area, Germany.

PHOTO: MASS COMMUNICATION SPECIALIST 2ND CLASS JOSH KEIM, NATO

**Below:** U.S. artillery live fire exercise in Italy during TRIDENT JUNCTURE 15 (TRJR15). TRJR15 was the biggest NATO exercise in more than 10 years with participation of 36,000 personnel from over 30 countries. PHOTO: DAVIDE PASSONE, NATO



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# THINKING AND CODIFYING:

## The U.S. Army Operating Concept and Army Warfighting Challenges

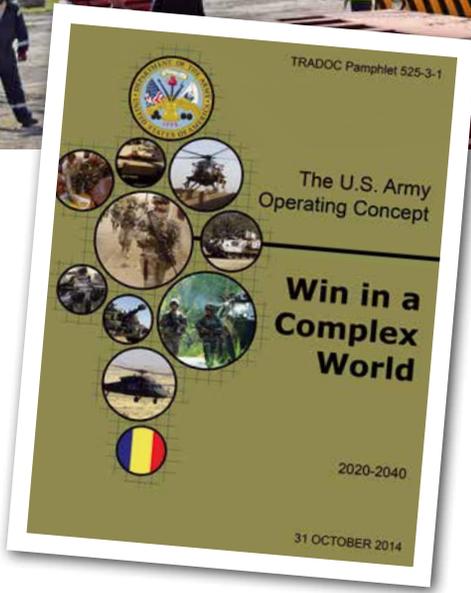
**Editor's Note:** The views expressed in this article are those of the author and do not necessarily reflect the official policy or position of the U.S. Department of the Army, the U.S. Department of Defense, NATO, or any of their other agencies.

**I**N 1991, THE DISSOLUTION OF THE SOVIET UNION posed a welcome dilemma for Western militaries. For decades, they had been structured primarily to meet the needs of the Cold War, but the sudden absence of an overarching adversary required the development of a new organizing principle. The Chief of Staff of the U.S. Army at the time, General Gordon R. Sullivan, initiated this re-alignment by directing Training and Doctrine Command (TRADOC) to lead the Army's effort to begin "thinking and codifying itself" for the new era.<sup>1</sup> Although the security outlook today is somewhat different than it was twenty-five years ago, it is similar in the sense that once again we must take stock

of the situation and alter our structures and practices accordingly. Or, to borrow Sullivan's phrase, Western militaries need to think about what they must do and then codify how they will do it.

**IN BROAD TERMS**, institutional "thinking" is manifested in concept documents, the insights from which are then "codified" in doctrine. The natures of these respective functions cause concepts and doctrine to operate within different time horizons. To be useful, concepts should peer far enough into the future so that the insights derived can be applied to generate new capabilities. Conventional wisdom holds that the size and complexity of military organizations and the long development period associated with modern weapons requires concepts—at least those that pertain to the entire force rather than just some smaller sub-set—to look as far as twenty years into the future. Doctrine, by contrast, is grounded





Concepts imagine the future in order to guide present decisions, while doctrine adapts the legacy of past decisions.

in the present, setting out how we wish to use existing capabilities. Put differently, concepts imagine the future in order to guide present decisions, while doctrine adapts the legacy of past decisions—in the form of our current structure and capabilities—to address today's military problems.<sup>2</sup>

Such, at least, is the theory, but several factors are making concepts more like doctrine. The cost of weapons, infrastructure, and personnel are rising faster than budgets, meaning that new capabilities constitute a smaller share of our military forces, which will be increasingly dominated by variants of legacy platforms. This trend is most evident in Air Forces. Because the United States can afford only so many fifth-generation F-22s and F-35s, decades old F-15s and B-1s continue to fly alongside even older B-52s and U-2s. Of course, component modernization ensures that even aircraft based on designs more than half-a-century-old are far more capable than their original form. Nonetheless, engineering trade-offs and strategic decisions made long ago continue to shape our force today due to the limitations of airframes' basic physical configuration and in overall fleet numbers.

A similar path dependence is now evident in ground forces as well. In the four de-

acades after 1940, American armored vehicle technology progressed from the M3 Lee to the M1 Abrams tank, the equivalent of the progression from a sturdy biplane to a jet fighter. Since then progress has slowed significantly. To be certain, modifications have made the M1A2 SEP significantly more capable than the original M1, but as with aircraft, underneath the modernized components, there are still fundamental characteristics inherent in the base vehicle that dictate what can and what cannot be done in way of improvements. Yet the M1 chassis is likely to remain the basis of the tank fleet for at least five more decades and the M2/M3 Bradley Fighting Vehicles might last nearly as long.

The force of the future will bear a stronger resemblance to that of today than was the case during the early portions of the Cold War. Concept writers have reduced scope for institutional re-imagining as they are increasingly bound by the tyranny of past decisions.

Paradoxically, the extraordinary pace of technological change renders this inertia less problematic than it might appear. This counterintuitive conclusion rests upon the premise that we have little chance of correctly anticipating the disruptive technologies that will alter warfare over the next two decades. Thus, even if we had the money and the institutional



wherewithal to design a completely new force for 2035 based upon first principles, once we reached that point, we might find that we had missed the mark completely.<sup>3</sup>

There is some safety in having a force designed from the aggregation of many different concepts over the course of many years. Our predecessors were as capable and well-intentioned as we are today, and might, by virtue of their experiences, have been more attuned to some aspect of warfare than we are now. Thus, their legacies might be quite useful, provided that we are ready to adapt them quickly when the situation demands.

The conclusion to be drawn from the foregoing discussion is that the utility of concepts is not a function of how strictly they accord to specified time horizons. Instead, their worth is measured by how well they enable the institution to focus scarce resources and provide an intellectual framework for reconciling the old and new into the best possible method of operations.

**Thinking: The U.S. Army Operating Concept**

With this expansive definition in mind, let us now examine the U.S. Army Operating Concept (AOC), interchangeably known as "Win in a Complex World, 2020-2040". TRADOC updates the operating concept every few years, an occasion that often attracts little attention, sometimes even within the Army. It was therefore noteworthy that "Win in a Complex World" was released at the annual conference of the Association of the U.S. Army (AUSA) in October 2014. This showcasing signaled the importance of the AOC, which is meant to begin the reorientation of the Army for the post-Operation Enduring Freedom era.

Another indicator of the importance of the document as a touchstone of institutional change is that General David Perkins, the TRADOC Commanding General, compares it to AirLand Battle (the 1982 and 1986 Editions of Field Manual 100-5 Operations), which many regard as perhaps the best example of American institutional thought and adaptation.<sup>4</sup> Yet, that comparison of a concept to doctrine—even one as successful as AirLand Battle—hints that "Win in a Complex World" might not conform to conventional notions of what a concept should be.



**From left:** General David Perkins, TRADOC (U.S. Army Training and Doctrine Command) Commanding General and Lieutenant General H.R. McMaster, Director, Army Capabilities Integration Center and Deputy Commanding General, Futures, TRADOC. TRADOC was borne of innovation and agility, and quickly adapts to shifting world, national, and institutional situations, in both peace and war.

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As a Strategic Communications tool, however, "Win in a Complex World" was a marked success, even eliciting some notice from the mainstream civilian press. The reception in the specialist defense media was generally positive, with headlines such as "Reinvention and Change in the U.S. Army", "The Army Gropes Toward A Cultural Revolution", and "The Army's Answer to Its Identity Crisis".<sup>5</sup>

Admittedly, some of this attention was due to the media-friendly backgrounds of the two Generals most closely identified with the development of the AOC: Perkins and Lieutenant General H.R. McMaster, the Director of the subordinate element of TRADOC responsible for the AOC. Perkins first earned fame as the Brigade Commander who led the "Thunder Runs" into Baghdad in 2003. McMaster has been in the public eye for even longer, as one of the chief protagonists of a 1994 Tom Clancy non-fiction bestseller, the author of an influ-

ential history of civil-military relations during Vietnam, a Commander recognized for innovative tactics in the Iraqi city of Tal Afar, and one of the officers selected by a celebrated promotion board led by General David Petraeus. In 2014, McMaster was featured as one of TIME's 100 most influential people.<sup>6</sup>

But if some of the civilian attention to "Win in a Complex World" might have been due to extraneous factors, that does not disqualify it as a serious statement of institutional adaptation. Several months before the release of the AOC, Secretary of the Army John M. McHugh and Chief of Staff of the Army Raymond T. Odierno signed a memorandum charging TRADOC with leading "Force 2025 and Beyond" (F2025B), an effort to develop a "comprehensive strategy to change the Army and deliver landpower capabilities."<sup>7</sup> The F2025B directive created a special governance structure meant to improve coordination



NATO exercise NOBLE JUMP 2015.  
PHOTO: MCD/EVERT-JAN DANIELS

among TRADOC, U.S. Army Forces Command, and the secretariat responsible for acquisitions and technology, an indication that from inception it was intended to produce change of a magnitude and at a pace beyond what normal processes will allow. The AOC is best understood as the conceptual component of that larger effort.

Yet, some who are familiar with force development conceptual work believe that carrying the Strategic Communications burden has detracted from the AOC, causing it to focus more on immediate threats than on long-term threats far into the future.<sup>8</sup> These criticisms have some merit, for despite the sub-title, it is not readily apparent to the reader how 2040 will be fundamentally different than 2020. A detailed examination of the characteristics of the future operating environment as described by the AOC will follow shortly, but for now it is sufficient to concede that the descriptions of how both adversaries and friendly forces will operate in the future are not that different than patterns already evident today.

Yet, even though some of what the AOC describes is not new, it does not mean that technologies (like the Internet) or developments (like urbanization) that are already underway will not be critical features of the future. More-

The scope for significant change lays mainly in the surrounding technologies, the way we organize our forces, and in how we manage, train, and educate leaders and soldiers.

over, the manifestations of these larger trends are likely to change over time; technology-enabled interaction in ten and twenty years' time might be quite different than what we see today. Still, some might be disappointed that the AOC does not make bolder predictions about how such trends might unfold into the far future of the 2030s. But, while such predictions would be interesting, only the exceptionally bold would choose to wager any considerable sum on those predictions actually coming to pass. The Army can hardly take risks on behalf of the nation that we would not run as individuals. In any event, as already noted, the economics of defense dictate that in twenty years the Army will not be radically different than it is today, as many of the vehicles and aircraft that are now or soon to be in service will continue to define the general shape of the force.

The scope for significant change lays mainly in the surrounding technologies, the way we organize our forces, and in how we manage, train, and educate the leaders and soldiers who will employ the force. In all of these areas, it is best to keep an eye on the near horizon and continually make optimizing adjustments than to make big bets on the future that are likely to fail.

Another reason for the more presentist cast of "Win in a Complex World" was that in institutional terms the future was already upon the U.S. Army in 2014. As part of the reduction from an active component strength from a wartime peak of 560,000 to 450,000 soldiers by 2017, the ground combat units were being reorganized from 42 Brigade Combat Teams (BCTs) with two maneuver battalions each to potentially as few as 30 three-maneuver-battalion BCTs. At the same time, plans were being developed for an even more drastic change to the aviation force that featured a simultaneous reduction of units, the elimination of two aircraft types, greater use of manned- and unmanned-aircraft teams, and a contentious rebalance of capabilities between the active component and National Guard.

More generally, the approaching end of combat operations in Afghanistan was bringing one phase of the Army's history to a close, while the character of the next phase was unclear. Thus, decisions that would reverberate into the future were due to be made regardless of where the institution was at in its concept and doctrine cycle. The immediate needs were to capture the lessons of Iraq and Afghanistan,

make the best possible judgement about what dangers might be lurking in the darkness immediately ahead, and begin the conceptual reorientation for a new era. The AOC fulfills those needs.

**Thinking: The Context**

What, then, is the direction of advance established by "Win in a Complex World"? The title provides one indication, as it can be read as a subtle shift from the "Prevent, Shape, Win" mantra of General Ray Odierno's early tenure as Chief of Staff of the U.S. Army. This is not to say that *Prevent* and *Shape* have fallen from the minds of American military planners; in fact, both are present within the AOC. But with the regional alignment of forces well underway, there was a sense that the U.S. Army can turn its attention to preparing for the toughest fights of the 21<sup>st</sup> century.

The preface by General Perkins gives insight into what the AOC is meant to achieve. "'Win,' it states, 'occurs at the strategic level and involves more than just firepower.'"<sup>9</sup> This observation might seem unremarkable; that the mere accrual of tactical victories does not necessarily lead to the achievement of policy objectives has been a tenet of western strategic thought since at least the time of Carl von Clausewitz. But, some commentators argue that this established principle has not always been observed in practice, alleging that the U.S. Army has suffered from an undue emphasis on tactical and operational method over the last several decades.<sup>10</sup> Future historians will surely debate to what extent that this was the case. Yet, even if unfounded, there is a natural tendency in concepts and doctrine to focus on operational technique and leave "the politics" to be dealt with elsewhere.

As we consider this specific document, it must be observed that it is, after all, titled the Army Operating Concept. But, if the link between operations and strategy is not attended to in high-level concepts or doctrine, then where will it be addressed? Army institutional planning is guided by policy documents, like the Quadrennial Defense Review, but these do not address the question of how we should turn operational victories into the strategic win. Neither does the current round of joint concepts link the operational to the strategic, nor do they provide sufficient granularity to guide detailed policy



and resource allocations at the service-level. So, while the focus on the strategic level exceeds the scope of the AOC as literally implied by its name, the overreach is, at worst, a victimless crime and might well fill a conceptual void and improve real-world outcomes.

Yet, if the desirability of the strategic win is self-evident, how to achieve it in "the complex world" alluded to within the subtitle is not. As the preface notes, the U.S. Army must be able to work effectively in a number of different theaters of operation with a diverse array of potential partners and against an equally diverse array of potential adversaries.<sup>11</sup> It is the sheer number of possibilities presented by these myriad permutations of location, hostile, and friendly forces that make the world "complex" for force planners.

In the face of this complexity, the best alternative is to seek to provide the widest range of options; the "strategic win" is more likely if land forces have multiple ways to deploy, organize, and operate. Such flexibility allows both policymakers and commanders to tailor the application of the military instrument to the political and strategic situation, while at the same time presenting adversaries—whoever they may be—with multiple dilemmas that complicate and constrain their own options.

The description of the future operating environment offers greater detail about the complex world envisioned by the AOC. The document identifies a range of potential ad-

versaries that encompasses an array of entities from powerful states like Russia, hostile regional powers like Iran, through non-state transnational terrorist and criminal organizations. All will undoubtedly do their best to take advantage of proliferating military technologies and increasingly potent dual-use technologies to gain advantage and counter Western military strengths.

It is thus necessary to assume that any given threat will potentially be more dangerous than a similar adversary would have been just ten or twenty years ago. Our technological superiority is no longer a given; though it will persist in many capability areas, against some adversaries there will be parity and in some cases we might even find ourselves at a technological disadvantage. For instance, Russian forces in Ukraine have demonstrated proficiency in electronic warfare that the U.S. Army cannot currently match.<sup>12</sup> "Win in a Complex World" also makes special note of the proliferation of weapons of mass destruction, counter-space capabilities, and cyberspace capabilities.

The AOC highlights two trends that, while not strictly military, will have significant implications for security. The first is what it terms the "increased velocity and momentum of human interaction and events."<sup>13</sup> This refers to the extent to which communications and transportation technologies, particularly the Internet, have increased the volume, speed, and number of connections among popula-

tions around the world. The other significant trend is urbanization; a largely global phenomenon. Both developments are already evident and seem likely to continue. If so, the future operational environment will see ground forces thrust into the midst of civilian populations; both physically in towns, cities, and mega-cities, as well as virtually through the near instantaneous spread of information (and disinformation) around the world.

### Thinking: How the Army Operates

The first half of "Win in a Complex World" can thus be summarized as reiterating the need for the U.S. Army to be able to secure the strategic win despite more capable adversaries and a challenging operating environment that leaves little room for error. The section "How the Army Operates" describes in ten parts the method by which the Army intends to meet this challenge. Unfortunately, the AOC does not organize these ten elements into a hierarchy that might explain how they interact, but for the purposes of this article they will be grouped into three categories:

- Institutional characteristics,
- Strategic/operational capabilities, and,
- Operational/tactical methods.

**Institutional characteristics:** There are two institutional characteristics. The key to understanding their significance is found in the preface, in which General Perkins notes that the complexity of the strategic environment ensures that any preparation for war will, at least to some extent, "get it wrong."<sup>14</sup> As ever, the initial burden of adjusting to unanticipated characteristics of future battlefields will fall upon the shoulders of those at the point of contact; competent leaders with cognitive skills allowing them to adapt will thus act as something of an institutional shock absorber. Therefore, the first necessary characteristic is to **develop innovative leaders and optimize human performance.**

But, ultimately even the most innovative leaders can only improvise so much while in contact; the full resources of the institution must quickly be brought to bear on solving unanticipated problems. Thus, the second characteristic is to **ensure institutional and operational synergy.**



Portuguese mechanized infantry during TRIDENT JUNCTURE 15.  
PHOTO: SGT SEBASTIEN FRECHETTE, NATO



Put differently, the generating force must effectively respond to operational signals. Such a response might be the development and fielding of a new piece of equipment, but might also be some form of non-materiel change, such as altering training methods, finding and assigning individuals with specific skills to where they are needed, or modifying unit organization.

**Strategic/operational capabilities:** The second category has three parts that collectively encompass the Army's main roles. Defined as they are by enduring policy imperatives, there is understandably little new in those capabilities. The first two—**engage regionally** and **respond globally**—were then incorporated into the 2013 Army Strategic Planning Guidance as a descriptor for what the Army was already doing.<sup>15</sup> The third strategic/operational capability, **respond to and mitigate crises in the homeland**, is even older, having been the Army's role since its inception. But, while the basic strategic/operational capabilities remain constant, how they are delivered will change.

Effective regional engagement with Partners requires continual adaptation to fluid military and political conditions. How the U.S. Army responds globally will also change, particularly in response to the spread of anti-access/area denial capabilities. Responding to crises in the homeland is also evolving. Climate change might alter the frequency and intensity of natural disasters. In a conflict, adversaries could retaliate against the United States through asymmetric means, such as cyber attacks, that would require assistance to civilian authorities at the same time that the military is engaged in an overseas campaign.

**Operational/tactical methods:** The remaining five elements are tactical/operational methods, and so more closely resemble the intuitive notion of an operating concept. According to the AOC, in the future **conducting joint combined arms operations** will consist of rapid, fluid transitions between dispersal in order to confuse and frustrate adversaries and concentration in order to strike with surprise and mass. But, at the same time that ground forces are dispersing and concentrating to strike at the enemy, they must **establish and maintain security** at critical points within the area of operations. To some extent this can be achieved through means other than static defense, such

as partnering with local law enforcement, security services and military forces or conducting raids and other offensive operations. Even defensive and stabilization operations need not necessarily be done from a reactive posture.

Nonetheless, there is a certain tension between wide area security and the rapid cycle of dispersal and concentration envisioned for joint combined arms operations. The AOC also recognizes that the ability to conduct such agile maneuver is dependent on exceptional intelligence and logistics capabilities. Hence, **develop situational understanding through action and sustain high tempo operations** are also identified as areas for future development. In describing the former, the AOC notes that merely collecting information does not necessarily equate to understanding; data must be placed in the proper political, social, cultural, and military context to be of use.

The AOC also cautions that we cannot rely solely on information gathered by technical means at distance; land forces must be willing to aggressively pursue information through physical interaction with the population and the enemy. In terms of logistics, the rapid transitions between dispersal and concentration pose obvious challenges for logisticians supporting multinational forces. This will be even more difficult when facing adversaries who might have the ability to disrupt our lines of communication. Yet, it is the final tactical/operational method that is perhaps the most important. However they are achieved, we must **consolidate gains**. Implicit within that statement is the truth that tactical actions must contribute to the larger policy objective. Thus, consolidate gains closes the circle, linking "How the Army Fights" to the goal of the "strategic win" stated in the preface.

### Codifying: The Army Warfighting Challenges

At a recent conference, General Perkins echoed the thinking-codifying formulation of General Sullivan two decades earlier: "The Army doesn't have the luxury of just thinking about the future. We're not a think tank. We actually have to produce the future."<sup>16</sup>

If the main body of the AOC represents the end of the thinking, then the second appendix—aptly titled "From Concepts to Capabilities: Building the Future Force"—represents

the beginning of the codification. That section contains the Army Warfighting Challenges (AWFCs), which are the main mechanism for bringing the thought within the AOC closer to fielded capabilities.

The AWFCs are defined as "enduring first-order problems" whose solutions are essential to maintaining effective ground forces in the future.<sup>17</sup> Each AWFC consists of a top-level problem and a set of supporting "learning demands" that, if answered, will address the core issue. For instance, the warfighting challenge of **Exercise Mission Command** has nine learning demands, one of which is "How do Army forces, at all echelons and under all conditions, prepare, execute and access operations using analog procedures and maintain commonality when the digital Mission Command Information Systems (MCIS) are degraded or unavailable?" Though hardly poetic, such specificity is the key to ensuring that concepts go beyond esoteric generalization and produce tangible outcomes that are technically feasible and can be practically implemented in operations. But, it is not just **what** questions are being posed, but also **who** is included in the process of finding answers. The AWFCs are designed to elicit the participation of a variety of stakeholders so that solutions are not developed within a specialist stovepipe that ignores the needs of other functions.

For instance, the Fires Center of Excellence (FCoE) at Fort Leavenworth is the lead for AWFC #17, Integrate Fires, but any full solution requires more than just the contributions of the FCoE or even the Field Artillery Branch; command, ground maneuver, air maneuver, communications, intelligence, and logistics must all also be taken into account. Neither is this collaboration limited to elements within TRADOC; the AWFCs provide a pathway for the field army to contribute. In the case of fires integration, U.S. Army Europe (USAREUR) has brought its perspective informed by European contingency planning, multinational exercises, and lessons about Russian capabilities gleaned from training missions to Ukraine.<sup>18</sup> Web-based collaboration even allows individuals from across the Department of Defense to contribute.

In practice, few individuals have the wherewithal to create detailed staff products for what is essentially a full-time virtual workgroup, but there is much work being done throughout the Army not directly connected



No individual or small group, however brilliant, can capture the entirety of modern warfare.

to the AWFCs that can still be incorporated into their solutions. For instance, a group of West Point cadets who had been working on a biomedical research project were able to contribute their research to the Improving Soldier, Leader and Team Performance AWFC through the MilBook collaboration portal.<sup>19</sup>

Of course, creating a mechanism for addressing a problem is no guarantee of a solution. Whether the AWFCs lead to the desired objective will not be known for many years. Yet, it is promising that since the release of the current series of AWFCs in 2014, they continue to evolve. This indicates that they are being actively tested and when found wanting improved. In early March, an update to the AWFCs included changes to the top-level descriptors of two of the challenges and twenty-six new or revised learning demands.<sup>20</sup>

Another sign of progress is that lessons generated by the learning demands have influenced requirements. For instance, there is an obvious desire for command posts to have the greatest possible capacity to amass, analyze, store, and distribute data; the AWFCs have helped place that imperative in balance with the necessity for formations to be mobile.<sup>21</sup> Armies have always had to make such trade-offs, but the AWFCs offer a means to ensure that all relevant views are taken into account rather than one functional element making decisions based upon its own narrow criteria and without reference to the bigger picture.

The history of doctrine in the U.S. Army suggests that ways of fighting imposed by fiat from the top are more likely to fail, as any gains are negated by new problems created by the biases of their creators; no individual or small group, however brilliant, can capture the entirety of modern warfare. Successful doctrine,



Exercise NOBLE PARTNER 16 opening ceremony, Vaziani Training Area, Georgia, 11 May 2016. PHOTO: MSGT GERARD BROWN

such as AirLand Battle, is typically the product of challenge, learning, and negotiation between doctrine writers and the field army.<sup>22</sup> The AWFCs are a means of channeling such energies.

### Maneuver Space

Codification is a long process, so there is still considerable scope for Allies to contribute their insights and influence the course of "Force 2025 and Beyond". It should be noted that the AOC and AWFCs are both products of multinational consultation through exchange and liaison officers, reciprocal collaboration in conceptual events such as the American "Unified Quest" and the British "Agile Warrior" wargames, and participation in experimentation like the Army Warfighting Assessments and Network Integration Exercises.

Yet, for all of this exchange of ideas, the description of coalition operations is one of the least developed aspects of "Win in a Complex World". The preface refers to a "Global Strategic Landpower Network" but there is no further mention of that concept. Instead, most subsequent references to Allies and Partners seem to imply that the main purpose of multinational collaboration is to make Allies as much like the U.S. Army as possible. Even if one were to accept the desirability of that goal,

it is an unachievable objective. The reality of budget pressures combined with the politics of national industrial bases, procurement, and export controls limits the progress that could be made along those lines. Thus, we must acknowledge that even a purely NATO expedition would be a polyglot military force, and most actual coalitions would be even more fractured in terms of military interoperability. We must assume that our forces will experience considerable heterogeneous friction.

One role of concepts, therefore, is to attempt to lessen that friction by ensuring that interoperability is a key consideration in setting requirements. It is not hard to imagine a seemingly beneficial technical improvement that yields some marginal increase in American tactical performance, but which causes a net loss of operational effectiveness across the coalition as even the most stalwart allies are "priced-out" of maintaining interoperability because of the change. This is all the more important because of the ambitious mode of operations described by the AOC. Fluid, rapid transitions between dispersal and concentration in the face of an adversary with electronic, cyber, and space capabilities would be a challenge for the command, intelligence, and logistics systems of even a well-trained homogenous national force; it might be beyond the reach of an alliance or coalition. Yet



the alternative of static, plodding operations is not tenable either. Allied input is critical to the development of operational approaches that balance what the capabilities of our adversaries compel us to do with what we as a multinational force are feasibly able to do.

The other promising element for further development is the task of consolidating gains. It has no single natural home among the AWFCs, even though one might argue that of the ten elements of "How the Army Operates" it is most critical to securing the strategic win promised in the preface. It is in this respect that the perspectives and wisdom of Allies might be most useful, for arguably the greatest obstacle to consolidating gains is a lack of understanding. Thus, a diversity of perspectives is more likely to lead us to creative concepts for the successful deployment of military capabilities within political, economic, social, and cultural contexts.

Diversity might be particularly useful in developing concepts for "gray zone" warfare, a

condition in which an adversary enjoys a tactical **military** advantage because of a disparity in the **political** will and authorities to apply force in a given situation. Though, hopefully, aggressive states that use such means will find that they are counterproductive in the long run; it is a matter of military professional responsibility to develop means of mitigating the short-term consequences of such mischief.

The nature of gray zone competition means that materiel aspects are the least important, while political, legal, social, and cultural considerations are paramount. Bringing multiple perspectives to bear on such ill-structured, subjective problems is the best means of developing solutions, and there is certainly ample scope for imaginative contributions in this regard. It is the role of concepts to begin developing the intellectual framework to address such difficult problems. So, even while the work of codifying the insights contained in "Win in a Complex World" continues, there is still much thinking to be done. ✦

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Exercise VIGOROUS WARRIOR 2015.  
PHOTOS: LT ÁKOS SZÉNÁSI, MILMED COE

# NATO Centre of Excellence for **MILITARY MEDICINE**

*A key asset to NATO operations and transformation;  
committed to the Health of our Forces*

by **KIMBERLY A. FERLAND**  
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ONE OF THE MAIN challenges facing the military medical system as noted in NATO doctrine "Principles and Policies of Medical Support" (MC 326-3) is that the public expectation of high quality medical support is continually on the rise. In line with this doctrine, the aim of military medical support on operations is to support the commander's intention through timely and effective health and medical services to the troops to achieve outcomes of medical care equating to best medical practice. These together have led the highest medical decision-making body in NATO, the Committee of the Chiefs of Military Medical Services (COMEDS), to develop a Medical Centre of Excellence to help coordinate efforts to advance Military Medicine across the Alli-



NATO Force Health Protection Conference in Budapest, 2014.  
PHOTO: LAJOS SZABO



ance. As a result, in 2008, COMEDS created the NATO Centre of Excellence for Military Medicine (MILMED CoE) with Hungary as the Framework Nation. In October 2009, the North Atlantic Council accredited and activated the NATO MILMED CoE in Budapest. The Centre currently has a multinational staff consisting of members from nine Sponsoring Nations (Belgium, Czech Republic, France, Germany, Hungary, Italy, The Netherlands, Romania and The United Kingdom of Great Britain) with the United States in the process of joining. The position of Director rotates between Hungary and Germany, and currently it is Brigadier General Dr Stefan Kowitz, who will hand over the command to the current Deputy Director, Colonel Dr László Fazekas, in July.

## Preventive Measures for the Health of Deployed Soldiers

One of the MILMED CoE missions is to counter the effects of diseases by monitoring the overall health of the fighting forces and by tracking the illness and symptoms that are experienced by the deployed personnel. Since its inception, the NATO MILMED CoE's "Deployment Health Surveillance Capability (DHSC)" Branch in Munich has provided a mechanism that looks across nations to en-

able NATO military leaders to obtain timely information on current health risks. Not only does this capability improve NATO's ability to respond to naturally occurring outbreaks, but it also acts as an early warning mechanism for the use of biological warfare agents against NATO nations and troops. For example, with the same system used to respond to the Ebola outbreak these last few years, MILMED CoE was able to monitor the health of our deployed forces in Africa. The experience gained during this epidemic has provided us with invaluable experience and knowledge and thereby increased our ability to respond to such outbreaks in the future.

In order to potentiate the knowledge and information gained during the Ebola outbreak, the DHSC Branch served as the hub of information and coordination for the multinational military and civilian stakeholders, but also for the medical directors and military command structures. Additionally, the Branch leveraged the previously developed network of public health centres across the Alliance and acted as the main point-of-contact for Ebola-related questions for NATO and EU Military Medical Services through the publishing of a weekly epidemiological situation update and also by hosting of a knowledge and experience exchange site on the COE's webpage.

With the declaration of the end of the Ebola epidemic, MILMED CoE, in partnership with the U.S. Regional Health Command Europe (RHCE) and French Forces Epidemiology and Public Health Centre (CESPA), hosted an Ebola crisis lessons learned workshop in order to gather and share the recipes for success as well as to document the part of our collective preparedness that needs improvement prior to the next major biological outbreak, whether natural or intentional. Here, many lessons and thoughts were shared, but the main conclusion of the workshop was that NATO must be prepared to provide a coordinated and unified response to future communicable disease threats in a domestic or international theatre of operations. The dual-use approach to an efficient, effective and sustainable response and readiness for biological threat agents (also called bio-agent or category B agents) makes NATO Medical and CBRN more prepared to respond to the consequences of deliberated B agents.

While the Ebola epidemic is a well-publicised disease outbreak, other infectious disease outbreaks have happened in the past and continue to happen. In order to prepare military medical staff, NATO MILMED CoE facilitates two courses: the Deployment Health Surveillance (DHS) Course (training units) at CESPA in France, and the Medical Management of



Infectious Diseases During Missions, in cooperation with the Bernhard Nocht Institute for Tropical Medicine and the Bundeswehr Military Hospital, in Hamburg. As an example, in April 2016, there was a minor Q-Fever outbreak within the KFOR mission, which reminded us that the biological risk is always there. NATO MILMED CoE supported NATO medical Chain of Command and deployed assets to face this Q-Fever outbreak, which was jeopardising NATO troops capacity to fulfil their missions.

### Medical Exercises

The VIGOROUS WARRIOR (VW) exercise series started in Hungary 2011 and it is currently the only multinational medical exercise. It is organized every other year, hosted by different NATO nations' medical services and facilitated and coordinated by the MILMED CoE who is experienced in executing the exercise in accordance with the Bi-Strategic Directive for Collective Training and Exercise (075-003). The second iteration of such a LIVEX was held in Germany 2013 with the aim of testing the concept of Smart Defence Initiative TIER 1.15: Pooling and Sharing, Multinational Medical Treatment Facility Role 2.

VW15 was part of the NATO Military Training and Exercise Programme and the only NATO medical exercise that took place in 2015. Nearly 350 military medical professionals from 14 nations joined together to participate in this individual training opportunity as well as national and multinational medi-

## TRIDENT JUNCTURE 18, which will be an Article 5 scenario, will include the largest medical component for any TRIDENT exercise to date.

cal units. The main focus of VW15 was bio-defence in order to better prepare for the next possible outbreak. In this exercise, the evaluation, analysis, and assessment of research processes were combined with the integration of doctrine in medical units and facilities. Different deployable mobile laboratories provided sophisticated capabilities and demonstrated the ability to provide detailed information to military and medical leadership. Another important aspect of the exercise was the testing of different Standardization Agreements (STANAGs). One example of this was the evaluation of the procedures to quickly deploy the Rapidly Deployable Outbreak Investigation Team (RDOIT) to investigate a disease outbreak in a biological environment.

Once again, the German Medical Service has taken on to host VW 17. The exercise scenario is currently being developed as a "walk phase" preparation for TRIDENT JUNCTURE 18, which will be an Article 5 scenario and will include the largest medical component for any TRIDENT exercise to date.

### How to Know that a Deploying Medical Unit and Command is Capable: Medical Evaluation

The MILMED CoE serves as the central hub for medical evaluations in order to ensure that NATO common standards are followed in military medical support to operations. In line with MC 326-3, medical evaluations support the overarching goal of achieving the best medical practice. To improve interoperability and support multinational solutions for medical support, MILMED CoE coordinates all medical evaluations conducted by certified medical evaluators. Additionally, MILMED CoE has been heavily engaged in the development of the STANAG 2560 "Evaluation of NATO Medical Treatment Facilities."

Currently, a primary focus for medical evaluations is on certifying multinational medical units assigned to NATO Response Force (NRF) and Very High Readiness Joint Task Force (VJTF). Additionally, national and/or multinational medical units assigned to the

**Below:** "Skilled and Resolute"—MEDEVAL team at United States 212<sup>th</sup> Combat Support Hospital, April 2016. PHOTO: CAPTAIN TONIA JORDAN



Operational Capabilities Concept of the Partnership Programme are also a focus, ensuring that medical units from NATO Partner Nations are able to meet the same standards as NATO Member Nations.

Beside the actual certification of medical units, MILMED CoE executes the "NATO Medical Evaluation (MEDEVAL) Course", which can be organized as a mobile training team course at different locations. Based on an official request from the Chief of Staff SHAPE, NATO MILMED CoE Training Branch organized and conducted the latest MEDEVAL of the USA 212<sup>th</sup> Combat Support Hospital (CSH) in April 2016. It is the first time ever that a medical facility has gone through the entire process of a NATO MEDEVAL as referenced in AMedP 1.6, Medical Evaluation Manual. This NATO MEDEVAL will lead to the 212<sup>th</sup> CSH becoming the first hospital to be certified by the Allied Commander of Operations, (SHAPE Belgium), based on the completion of the MEDEVAL process. With the evaluation and certification, the CSH can more easily integrate the medical personnel of NATO Allies or Partner Nations.

The overall aim of the MEDEVAL Course is to provide students with the appropriate skills to be able to evaluate medical modules under the auspices of their national military medical leadership. It is accredited by NATO, as well as by the Semmelweis University Budapest and the National Institute for Quality as well as Organizational Development in Healthcare and Medicines, thus granting Continuing Medical Education (CME) credit points for physicians and nurses. After the successful completion of the MEDEVAL Course, the students can refresh their knowledge on a regular basis at the Advanced Distributed Learning Portal of NATO MILMED CoE. Within this e-learning opportunity, two courses are available: NATO Medical Treatment Facility Evaluation Preparation and NATO Medical Evaluator Refresher Course.

## Improvement of Medical Lessons Learned Process

During the MILMED CoE's ISAF Medical Lessons Learned (LL) Workshop held at the end of 2014, the medical LL process was noted to have critical shortfalls, including a lack of input, problems with assigning topics for ac-

tion and nationally stove-piped processes. Coincidentally to this workshop, the Armed Forces Declaration, produced at the Wales Summit of the NATO Heads of State, directed NATO to analyse how to enhance the sharing of best practices and LL on medical support to armed forces personnel. The MILMED CoE produced a recommendation that was presented to COMEDS and was used as that body's report to the Military Committee.

In the final report of COMEDS, as follow up to the Armed Forces Declaration to the Military Committee, it is stated that "the Centre of Excellence for Military Medicine [MILMED CoE] plays the pivotal role in catalysing, recording and disseminating the learning of lessons and sharing of best practices." Since then the LL Branch of MILMED CoE has been developing a comprehensive observation collection and tasking process that is based on and linked to the LL process presented in the Bi-SC Command Directive (Bi-SCD) 080-006.

Under the leadership of ACT Medical Advisor and MILMED CoE, a process has been developed to improve the collection, processing and tasking of medical observations, as well as to facilitate the sharing of information and knowledge generated by this process. The increasingly interconnected and interdependent relationship between military and non-military medical support is the driving force behind the development of this adjunct document. Key integrated characteristics and improvements of the process include: enhanced responsiveness; centralization with clear delineation of the authorities; easy and intuitive access; ability to provide cross-organizational partnering; connection to national and NATO LL processes; passive and active data collection; integration with civilian-medical expertise; creation of Subject Matter Expert (SME) networks; and the active support of all levels of NATO Medical Services and NATO Member Nations.

As a part of this programme, MILMED CoE developed a medical LL database for unclassified observations, best practices and lessons identified. All these activities are coordinated with the Joint Analysis Lessons Learned Centre (JALLC) for sharing of observations, documents and lessons. The LL portal of NATO MILMED CoE will be integrated into the NATO LL network. As a result of all these activities and the developed process, the number of observations and lessons identified

has increased. Based on this, MILMED CoE will develop a medical LL field manual for the medical community.

## Workshop on Mental Health

Across NATO Nations, military psychiatrists have generally been focused on the mental health of deployed soldiers. As a result of this focus, a workshop on mental health and mild traumatic brain injury was held in Ramstein, Germany, in February 2015, in partnership with the Europe Regional Medical Command. The outcome of this workshop was discussed at the last COMEDS Military Mental Health Panel and will be used for possible adaptation of doctrine and to inform ongoing concept development. With the intention of bringing together expertise and information shared during the workshop, MILMED CoE provides the "Military Psychosocial Incident Management Course", which was developed in cooperation with the Centre for Mental Health, Military Hospital Queen Astrid, Belgium. The course is designed to provide the knowledge and skills for non-medical and medical leaders to effectively start up and/or to manage psychosocial care in the aftermath of minor or major casualty traumas and to enable participants to achieve psychosocial awareness in a military multinational environment.

## Future Medical Support with Prolonged Field Care

MILMED CoE conducted a workshop in November 2015 with the aim of analysing the implications that hybrid warfare and future Article 5 missions have on NATO medical support. For all attendees the achievements of medical support in ISAF were clear: the survival rate of nearly 95 per cent when reaching a medical treatment facility will be the benchmark for the future. But what is the best is not always possible, or not always achievable.

The probable environment of the next NATO military engagement includes decreased air superiority resulting in decreased freedom of movement, reduced Air Medical Evacuation (AIRMEDEVAC) capabilities, especially Forward AIRMEDEVAC, and an increased requirement for mobility on tactical and operational level. This is likely to reduce the ability to transport a battle casualty to a



surgically capable medical facility significantly from an ISAF standards perspective. The result is that wounded troops will require more efficient temporizing treatment in the field. Moreover, the workshop attendees stressed that the standards should not change and that getting a casualty to a surgically capable unit as quickly as possible should be a priority—as such, a "Prolonged Field Care" will be a reality. The workshop outlined the issues and presented a list of topics for future consideration by NATO medical support services.

In order to address some of the issues identified at the workshop, MILMED CoE and the U.S. Regional Health Command Europe (RHCE) hosted a follow-on workshop on prehospital care. The aim of this workshop was to collect best practices concerning prehospital care and to begin to develop scientifically-based recommendations for improvements to battlefield casualty care. The output will be used for NATO science and organization work and for the Prehospital Care Improvement Initiative Task Force (PHCII-TF), which has been supported by COMEDS. One of the first results of the Prehospital Workshop is that positioning of blood products far forward of ROLE 2 MTFs is critical to optimizing survival on the battlefield. Therefore, other COMEDS workgroups and panels with their Subject Matter Experts will analyse how this challenge can be achieved.

**Extensive Network and Good Reputation**

The few examples show that NATO MILMED CoE is linked and connected to a strong and wide network of partners and stakeholders for medical support and especially for military medicine. The results of the leading role and the work of MILMED CoE have implications on the tactical, operational and strategic level for NATO and NATO Partners alike. MILMED CoE supports and assists the transformation of medical support for the Alliance and is involved in the three main NATO projects: NATO Defence Planning Process, Smart Defence Projects, Connected Forces Initiative.

In acknowledgement of its important role and mission, MILMED CoE was awarded the Dominique-Jean Larrey Award in 2015. This award is the highest honour that COMEDS can bestow and is named after the French Surgeon General of the Napoleonic imperial



**Above:** Handover of the Larrey Award; Lieutenant General Dr. Gérard Nédellec, COMEDS Chairman (left) and Brigadier General Dr. Stefan Kowitz, MILMED CoE Director, 18 November 2015, Brussels. PHOTO: MELVIN ORR, NATO

forces, who invented, among other things, the field ambulance, which helped to significantly improve medical care in the field. This award is given in recognition of a significant and lasting contribution to NATO multinationality and interoperability, and to improvements in the provision of health care in NATO missions within the areas of military medical support or military healthcare development. Receiving this outstanding award is a prestigious honour and distinction, and it shows, as a most important feedback, that the work and efforts of MILMED CoE are recognized by COMEDS and the NATO medical community. †

**MILMED CoE in a Nutshell**

- Currently, Belgium, Czech Republic, France, Germany, Hungary, Italy, The Netherlands, Romania and The United Kingdom of Great Britain are the Sponsoring Nations. The United States, as a Voluntary Contributing Nation (VNC), assigned three experts to join the Centre,
- MILMED CoE brings together highly experienced medical professionals,

- 62 per cent of staff and budget is provided by Hungary,
- the Centre is composed of four medical Branches: Training, Lessons Learned, Interoperability and the Deployment Health Surveillance Capability; the latter being a satellite Branch located in Munich, Germany. The MILMED CoE is the only NATO Centre of Excellence with a satellite Branch, which is located in a country other than the Framework Nation,
- MILMED CoE's Training Branch is currently offering 10 different courses and training programmes for NATO, Partnership for Peace and other Nations.

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*"At SHAPE, we believe that this is the first cyber situational awareness framework that has ever been developed that is relevant to a defence organization."*

# CYBER

## SITUATIONAL AWARENESS FOR THE NATO ALLIANCE

by **COLONEL RIZWAN ALI**  
United States Air Force  
Team Leader, Task Force Cyber  
Supreme Headquarters Allied Powers Europe  
(SHAPE)

**C**YBER SITUATIONAL AWARENESS is often times referred as the "holy grail" of cyberspace. This is because there isn't any consistent definition, methodology or even an industry recognized framework of what constitutes cyber situational awareness. Academic that we have consulted, have referred to this as a "wicked problem", something that is difficult or impossible to solve because of incomplete, contradictory or changing requirements that are often difficult to recognize. For the past two years, we at NATO's Supreme Headquarters Allied Powers Europe (SHAPE) have taken on this challenge of solving this "wicked problem". Through this effort, we have been setting the standard of how to conceptually think of cyber situational awareness.



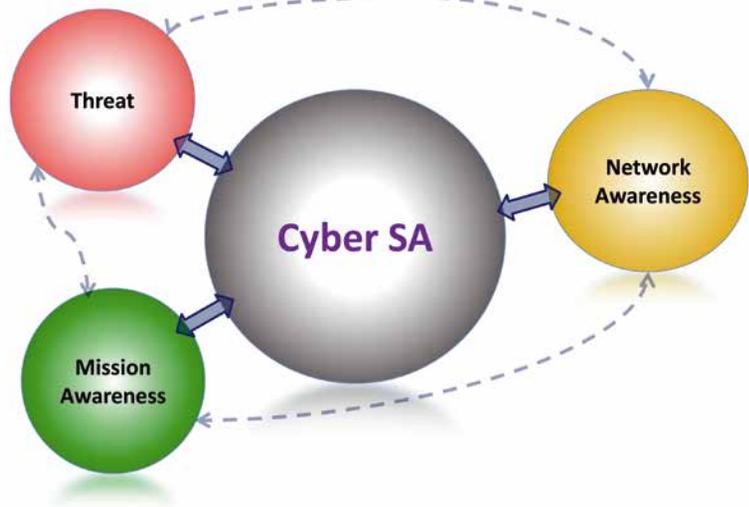
On the surface, the problem seems quite simple to solve, but just below the surface, the complexities are revealed. Many organizations have some type of mechanism to gather relevant metrics and threat data, which either their network technicians or some level of middle management use to make their decisions. However, most of these organizations have developed these lists of metrics through an ad hoc method, rather than starting from a conceptual framework of how to visualize what their key decision-makers need in order for them to make strategic decisions. Also, many have not consulted with the senior decision-makers to ensure the metrics they are gathering meet these leaders' information requirements.

**The Challenge of Aggregating the Data**

If we take a look at the typical large organization, such as a commercial entity, a governmental agency, or even an international organization such as NATO, we see it is very likely there are a significant number of reports being generated to support cyber situational awareness. These reports range from high-quality to low-quality; from high-reliability to low-reliability; and from technical-level to strategic-level. These reports are produced by dedicated people who firmly believe their analyses are definitive, authoritative and represent the cyber situational awareness view, which strategic leaders need to aid their decision-making process. Very often these pockets of cyber situational awareness entities do not know that other reports supporting cyber situational awareness are being generated elsewhere in their own organizations.

Even in the cases where some knowledgeable employees know that other reports exist, the task to aggregate and analyse the reports is far too complex to undertake without dedicated personnel and strategic direction on "how" to aggregate and analyse these myriad of reports. The unfortunate fact is the data aggregation challenge often revolves around not having a sound framework on what is required by the senior leadership of an organization to base their decisions upon. All too often, the development of this strategic framework is left to technicians and engineers who may not be aware of the strategic needs of the senior leaders. The challenge of developing a cyber situ-

Figure 1: Cyber Situational Awareness Framework



ational awareness framework is a leadership issue, not something that can or should be delegated to technicians to solve.

**Lack of an Industry-Standard Cyber Situational Awareness Framework**

At SHAPE, we faced the exact scenario described above. There seemed to be a dearth of information, lack of data aggregation, and the absence of a cyber situational awareness framework endorsed at the General Officer level. We discussed this issue with a number of senior decision-makers internally in SHAPE and at NATO HQ. We also had extensive discussions with industry up to the Chief Technology Officer, Chief Information Officer and Chief Executive Officer levels. We contacted senior governmental officials and even consulted with prominent academics who have thought deeply about this "wicked problem". Each of these interactions was useful, but they didn't yield the elusive cyber situational awareness framework that we could use within NATO and SHAPE in order to provide our key decision maker with relevant, decision-quality information.

**Varied Views of What Constitutes Cyber Situational Awareness**

If we were to take a survey of attendees at a typical cyber security conference, and ask them what they think is meant by cyber situational

awareness, we would get dozens of answers. Most of them would likely be valid. This is because cyber situational awareness means different things to different people.

For our network operators, cyber situational awareness means ensuring firewalls and other hardware and software are properly configured and system patches are all current. They would also note that they would need to effectively monitor the systems and networks for anomalies and then develop a series of metrics to help them determine trends over time. The network operators would likely make use of automated tools and interface with industry to determine what changes or unusual activities are happening in the global internet, which may have an impact on the organization's networks. For many organizations, this is sufficient. However, for an international military alliance like NATO, this is only a part of the cyberspace picture.

For our intelligence analysts, cyber situational awareness means identifying the threat actors. They utilize a variety of methods to determine who the threat actors are for an organization. These can be nation-state actors, criminal groups, hacktivists, or even malicious insiders. These analysts would traditionally gather information from multiple sources to include open sources like press reports, classified and unclassified reports from governments, analysis from companies that specialize in cyber situational awareness and malware campaign analysis produced by specialized en-



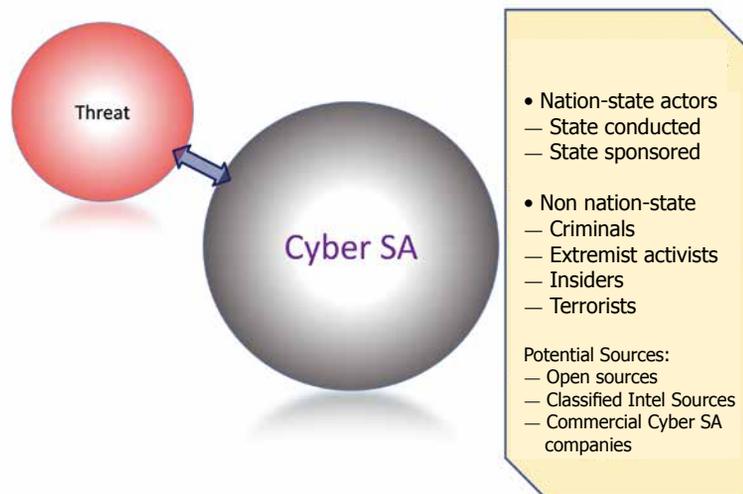
gineers. Again, for NATO, this portion of the cyber picture is important, but it is not complete. Finally, from a military perspective, NATO's operational commanders need to know how well defended are their mission networks. This would involve performing a full vulnerability assessment, determining single points of failure, and the training level of their cyber staff as well as the cyber threat awareness level of their entire staff. But, beyond the technical and training aspects, the operational commanders would also need to know how well their staff is able to operate in a degraded and denied cyber environment. Frankly, cyber situational awareness is a bit of a jigsaw puzzle. Each of these various aspects of cyber situational awareness is correct, though not complete. After all these discussions, and considerable analysis, we believe we have come up with a cyber situational awareness model, which will meet the needs of SHAPE and possibly many other national defence organizations.

## SHAPE's Cyber Situational Awareness Framework

For SHAPE, we believe that cyber situational awareness has three major components (Figure 1). Each of these components is important in helping us build a fuller cyber situational awareness picture for our senior leaders. They are:

- Threats
- Network Awareness
- Mission Awareness

Figure 2: The Threat Component



We categorize strategic-level threats (Figure 2) into two categories: nation-state actors and non-nation-state actors. Nation-state actors can conduct cyber operations themselves or through actors that are state-sponsored. Non-nation-state actors include criminals, extremist activists, insiders and terrorists.

Some of you may notice the technical threats such as viruses, malware, ransomware, etc., are missing from the list. That's because these are vectors that nation-state and non-nation-state actors may use in cyberspace, not threat-actors in and of themselves. In many cases it is difficult to differentiate between nation-state and non-nation-state actors due to the increased technical sophistication of non-

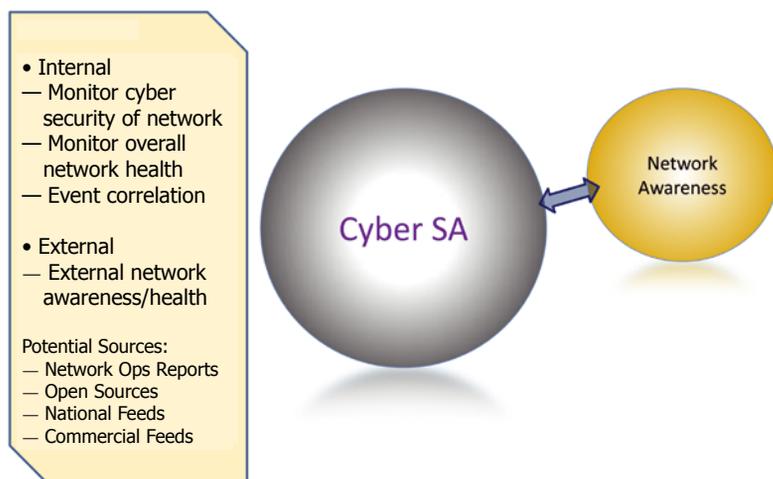
nation-state actors. Potential sources for this type of situational awareness include:

- Open Sources, such as press reports and academic analysis,
- Classified intelligence produced within NATO and supplied by the Alliance members,
- Cyber situational awareness reports produced by commercial companies.

The network awareness portion of SHAPE's view of cyber situational awareness is technically focused (Figure 3). Typically, when computer information systems (CIS) personnel talk about cyber situational awareness, this is what they focus on. But for SHAPE, network awareness is just one component of cyber situational awareness. For the internal NATO networks, we believe cyber situational awareness entails monitoring the cyber security of the network, monitoring overall network health as well as doing correlation of various incidents on the network to determine if there is a trend or persistent threat acting on our networks.

Since NATO is an international organization, for us being aware of major changes or incidents to the global internet is also important. An example of this would be the discontinued support for the Windows XP operating system. Though our network defenders fully addressed this issue for our internal NATO networks, it was important for us to know how this impacted the overall global internet and what implications there would be to NATO

Figure 3: Network Component



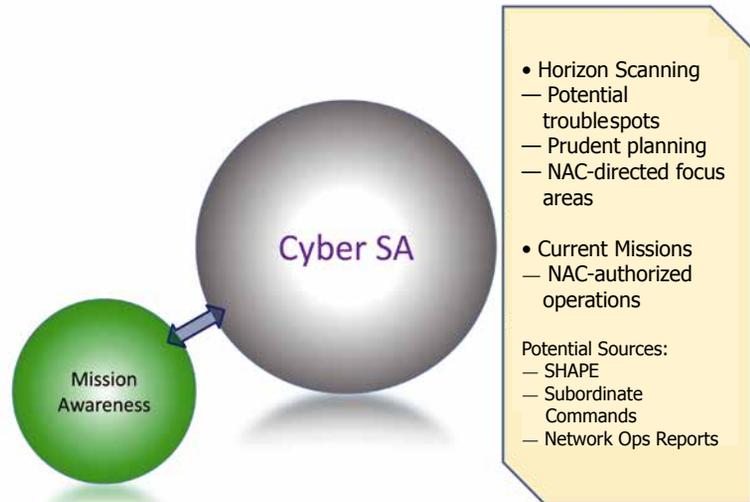
networks from unsecured Windows XP systems outside NATO.

Then finally, for SHAPE, we need to monitor our ongoing mission areas (Figure 4). This is an important facet of our cyber situational awareness that often gets overlooked if viewed only from a technician or intelligence perspectives. We need to provide the necessary horizon-scanning, from a military perspective, to the North Atlantic Council (NAC). We also need to be aware of any cyber issues related to current NAC-authorized operations that Allied Command Operations is conducting.

**Putting It All Together**

What I have described above is still not complete. The final piece required is to aggregate the various cyber situational awareness information presented by the threat, the network, and the mission components of the framework. This should be done by a dedicated team who can present this information in ways that can be easily understood by key decision makers. Only when this final piece, the data aggregation, is completed can this be presented as a true cyber situational awareness framework (Figure 5). When you put together all these different pieces of what constitutes cyber situational awareness, you end up with a fused picture, which can be applied to the common op-

Figure 4: Mission Awareness Component



erating picture the key decision makers need. For SHAPE, the entity that we use to do the data aggregation is Task Force Cyber. Task Force Cyber is made up of a mix of personnel who are trained to operate at the strategic level, but still have the necessary technical and military skills to make sense of the data generate reports, which provides the Supreme Commander Europe (SACEUR) with the strategic context to the cyber data that he is presented. The process of providing SACEUR with the strategic context to

the cyber data is not easy. The training and dedication of the officers and civilians involved with this key part of the cyber situational awareness framework has to be impeccable.

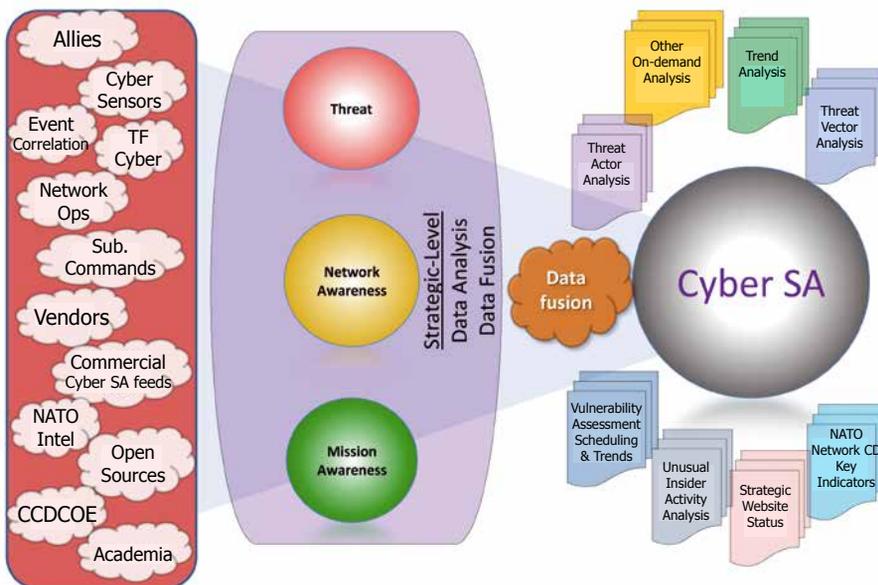
**Conclusion**

Through this careful analysis we believe we have solved the "wicked problem" of the cyber situational awareness framework. Making the effort to effectively define the problem and then developing a conceptual framework was critical for SHAPE. Though this framework (Figure 1) looks simple, it took a significant amount of time to conceptualize, and it represents a major milestone for NATO.

At SHAPE, we believe that this is the first cyber situational awareness framework that has ever been developed that is relevant to a defence organization. The framework has been well received when briefed to NATO Member Nations at various forums. It was also validated as an appropriate and relevant framework by an independent analysis conducted by a major industry partner at our request.

We are using this framework daily to help organize the activities of cyber team members within SHAPE and in our subordinate commands. SHAPE's framework is simple and malleable enough that it can be easily adapted and used by Alliance Members as a basis for their own national framework. It can also be easily adapted to other organizations that need a cyber situational awareness framework. ✦

Figure 5: Putting It All Together



# Q & A

*Mr Tomasz Krolikowski, the Chair of the Civilian Staff Association (CSA) in Stavanger, took some time to talk to PAO about the mission and recent activities of the organization, giving us some insight into their plans for the future.*

Interviewed by Inci Kucukaksoy, JWC PAO

**Mr Krolikowski, you are both the Chair of the CSA in Stavanger and you manage the databases for JWC's Real Life Support (RLS) Branch. Please tell us a bit about your primary role first.**

— I work in the RLS Branch, which is under the Mission Support and Sustainment Directorate. RLS is responsible for all logistic support for participants attending exercises, conferences and workshops hosted by the JWC. Despite being a small Branch, we are a great team with effective procedures and tools. In my view, we have one of the best systems for reception, in-processing and sustainment of exercise participants. Normally, NATO headquarters would spend both time and resources when building exercise environments, but thanks to JWC, these environments are readily available here, something which makes our exercises attractive and cost-effective for the NATO countries. Thanks to our good relation-

ship with the Host Nation, our Branch offers reasonably priced accommodation and meals, which allows participants to focus only on the exercise, not on cost and logistics.

**You have an interesting combination of roles. What does the Chair of the CSA do and who are the members?**

— According to Article 88.1 of the Civilian Personnel Regulations, all NATO International Civilians (NICs) in each NATO body are automatically members of the CSA. Each CSA is organized according to its own constitution. The executive agent of each CSA is the Civilian Staff Committee, elected by all NICs during the Annual General Meeting (AGM) for a period of two years. During the last AGM, I was re-elected as the Chair of CSA. In Stavanger, the CSA consists of four persons: chair, vice-chair secretary and treasurer. As the Chair of CSA, I represent JWC CSA in the



"I have experience in seeing things from both a civilian and a military perspective," Krolikowski says. "After university, I volunteered to join the Military Academy for Reserve Officers. I finished specialization as a mechanized infantry commander. When Poland joined NATO, I seized the opportunity to use my knowledge and language proficiency to work for NATO in my military capacity. I enjoyed working for NATO so much that when my contract had expired I gave up my uniform to be able to apply for a NATO civilian post."

Confederation of NATO Civilian Staff Committees. Locally, I am involved in protecting the professional interests of the staff, making proposals relating to the collective interests or conditions of employment of NICs. I advise on matters submitted to CSA by the administrative authorities and promote social, cultural and athletic activities.

**What influenced you to apply for the Chair position?**

— Several colleagues encouraged me to apply for the position. They said my qualities, such as honesty, discretion and courtesy make me suited for the role. I have always enjoyed helping others and work *pro bono* public, that is, for the public good. I studied International Relations and I know exactly how important it is to understand other cultures in order to achieve expected goals. While working for NATO, I have always promoted the NATO Code of Conduct values of integrity, impartiality, loyalty, accountability and professionalism.





Civilian employees working at JWC and CSU Stavanger photographed exclusively for The Three Swords, 10 August 2016. PHOTO: JWC PAO

**What are your current priorities?**

— My current priorities will be the promotion of civilian staff efforts in JWC's mission that is providing NATO with the best place for exercises and training. Additionally, I am involved in the set-up of a new performance management system, the implementation of the single spine salary structure and the Defined Contribution Pension Scheme (DCPS). In particular, the DCPS is a priority because it has flaws which have not been corrected, generating unnecessary concerns among the civilians.

**NATO is a unique organization with its civilian and military workforce working together on a day-to-day basis. Would you agree that we can achieve the best results by merging the civilian thinking and the military thinking?**

— Soldiers on the battlefield need a special way of thinking, which I like to describe as a warrior mind-set: toughness, endurance, aggression, discipline, total subordination to the

group and orders. This mind-set is promoted and sharpened through military education and exercise, which means that in peace time there might be a gap in the way how military and civilians see different tasks, situations and objects. It is important to take into consideration that civilians and military have different paradigms and both of them have advantages and disadvantages. Civilians should understand that the military system is developed and maintained for an important common purpose: keeping country and population safe and secure. And the military should know that without civilian support (manpower, resources, knowledge, technology etc.) soldiers are not able to achieve military objectives in their operations. Therefore, genuine dialogue, cooperation and confidence among staff are key to building a successful team in NATO. Of course, some officers still don't believe that civilians add positive value to the art of war. Then, I smile and cite the famous French

statesman Georges Clémenceau: "War is too serious a matter to entrust to military men."

**Do you view this a successful collaboration?**

— Some people like to depict NATO as an ineffective organization. They joke about it saying NATO means "No Action Talk Only". I strongly disagree with this. If you analyze European history during more than 60 years, you realize that the main goals of NATO were achieved. All borders of NATO countries have been successfully protected by the organization. Nowadays, we have different, more complex challenges: terrorism, possibilities of proliferation of weapons of mass destruction, mass migration, economic crisis and cyber-attacks. What makes the situation even worse is that some decision-makers believed that the age of wars is over and that a military conflict in Europe or North America is impossible. This has led to thinking that spending on defence is a waste of resources, which should be used in



a better way. In my view, this is naïve thinking because countries without protection tend to be the first victims of war and countries well prepared for war are rarely attacked. The Latin saying "Si vis pacem para bellum", *if you want peace, prepare for war*, is still valid.

**There are more than 6,000 civilian staff employed by NATO worldwide. Is there an umbrella organization for all of NATO in which JWC CSA is also represented?**

— As I mentioned, each NATO body (headquarters or agency) has a Staff Committee (SC) to serve as the executive agent on behalf of all NICs. SCs are part of a bigger entity called the Confederation of NATO Civilian Staff Committees (CNCSC). The role of the CNCSC is defined in Chapter 18 of the Civilian Personnel Regulations and includes discussing matters affecting NICs, offering advice, making proposals and electing spokespeople to represent personnel within the organization. What might be interesting to know is that NATO is part of a group of several international organizations (e.g. the Council of Europe, the European Space Agency, the Organization of Eco-

conomic Cooperation and Development, etc.) that have a common system of remuneration and pensions. CNCSC is actively involved in the coordination process on issues concerning salaries and allowances, taking part in the Coordination Committee on Remuneration (CCR) and the Committee of Staff Representatives (CRP).

**If you could highlight one event during your time as the CSA Chair, what would it be?**

— I think I would have to say my first ever CNCSC meeting, where I realized how global and sophisticated an organization NATO is, spread across two continents. I met many long-standing, enthusiastic people and I have had the opportunity of sharing my thoughts with representatives of other NATO bodies, compare our issues and concerns and take away best practices. I realized JWC civilians are not alone in the world and that I can rely on support and advice from other headquarters. Despite NATO being one entity with one NATO legal system, I see significant differences between bodies. I honestly can say that JWC's culture, relations among staff and co-

operation with the administration and Command Group is one of the best in the whole NATO organization.

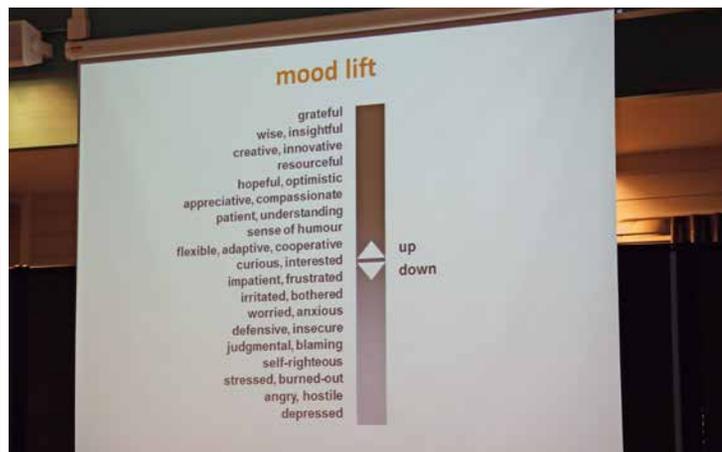
**So, in your view, what is the most significant characteristic of our organizational culture?**

— "One Team" culture does not mean that we should be the same. It means that everybody is inclusive to our mission and important for the whole of NATO. "One Team" means a common vision and goal, taking into account that staffs come from different cultures, hierarchy of values and habits. "One Team" culture promotes paradigms of interdependence described by Stephen Covey in his books: we achieve the best results if all staff will genuinely support and share their knowledge and coach each other.

**Is there anything else you would like to add?**

— I would like to take this opportunity to thank my colleagues from the CSA: Ms Nicola Lloyd, Ms Hildegunn Sivertsen and Mr Uwe Sprenger for their involvement and support to our civilian community. Without their advice and support it would have been difficult for me to succeed in my new role. ✦

**Below:** Culture shaping programmes for both civilian and military personnel have been conducted at JWC since 2013. PHOTOS: JWC PAO





# FEEDBACK

## The crucial element for building our teams

by **PAUL SEWELL**  
Organizational Development  
Joint Warfare Centre

### Prevalence of Teams

**A**N ORGANIZATION CAN only thrive and grow through its staff. If the staff is not able to develop in their working environment, then the organization can stagnate and fail. Individual development is therefore extremely important and those organizations which invest in their staff reap the benefits. Individuals may indeed grow and learn through this development; however, the real success is when the staff of the organization learns together. Put simply, an organization truly grows and develops through its teams, and not its individuals.

The Joint Warfare Centre (JWC) is, of course, no stranger to teamwork. On a daily basis it relies on all kinds of teamwork for almost everything it does. This covers the whole spectrum, from the planning and execution of its major operational exercises to the relatively simple task of allowing someone on base. The JWC is not unique in these endeavours, as teams—of all sizes, levels and abilities—exist and perform every day across the Alliance.

Most of us serving within NATO are familiar with at least the fundamentals of strong, robust teams. There is also no shortage of research in the business literature about creating teams. Advice about the ideal team size, composition and methodology for this area is well

covered. Yet, if this knowledge regarding teams is relatively well known and the importance of strong teams is well documented, why do we invest so little time in developing them? And, why are most teams created by chance and rarely by design?

Part of this is due to the expectation of professionalism. This is the enduring, unspoken rule that because we are all professionals we will just "make it work". Those with a military background will know this mind-set well. However, this is not guaranteed. If we look back through our careers we have all had our fair share of membership in poor performing, life-draining teams with people we just simply can't stand. So, what is the critical factor which differentiates between these effective and ineffective teams?



**Feedback or the "Killer App" for Teams:** Feedback is often seen as one of the simplest activities shown to be vitally important for the robustness and health of a team. This factor can markedly improve teamwork and has shown to drive significant results. And yet, ironically it has also shown through surveys taken across the JWC and other HQs that this attribute of successful teams has been consistently lacking. Why is this so?

## Common Barriers to Feedback

- **"NATO Polite":** Surprisingly, one explanation could be our multinationalism, which is also our strength. Those who work within the Alliance will be familiar with the phenomenon of "NATO polite". This is the tendency of not wanting to offend or criticize those from the other nations. It's as if there are these invisible barriers between our nations stopping us from giving feedback to someone from a different na-

tion, service, or rank out of fear that it may be seen as impolite or offensive. This bias forces us to see our colleagues more as representatives of nations rather than fellow human beings and members of our team. Consider how many opportunities you may have missed to giving your colleagues valuable feedback, which may have helped them learn and grow. It is ironic if we consider that the data from surveys show that we are crying out for feedback, but due to our tendencies, are unable to give and receive it. We're like the nervous teenager too afraid to ask the girl to dance.

- **The Negative Face of Feedback:** Feedback suffers from a bad press. It is often seen as something negative, about putting a person down. Granted, some of us come from nations and services which have their own special forms of giving feedback. These can include physical stress ("Drop and give me 20 push-ups!") or creative offensive wordplay questioning your parents' background. Those who have grown up in the military may have experienced this form of feedback in their earlier years, but there is no reason to believe that this style is still useful. During one of our courses, an Army officer at JWC once said, "If I'm not getting screamed at then I know I haven't completely screwed up, but I would also never expect to hear something positive." Stop and think for a moment of all the opportunities a person might miss out on throughout his/her career with this mind-set; how his/her development could have been accelerated if the

culture s/he grew up in had a more productive approach to feedback.

- **Lack of Skills for Giving Feedback:** A third barrier could be that we simply don't know *how* to give feedback. We don't know how to approach the issue or what to say. That is, we don't think we have the experience or techniques to be able to help our colleagues grow. True to human nature, when it comes to things we don't know much about, we often see the situation in terms of extremes. So, in the eyes of the uninitiated, feedback becomes only one of the two options on a very broad spectrum: shouting negative rants, or giving group hugs with "warm fuzzies".

## Why is Feedback Important?

The reality is that feedback is more powerful than we think. It is vital for the health and resilience of our teams. In fact, current research has revealed that one of the most important factors for productive teams is directly related to feedback. Researcher Julia Rozovsky spent a number of years conducting a large study of Google's teams.<sup>1</sup> She looked at team size, composition and the power differentials between the members of hundreds of teams and was unable to find the "secret sauce" of the teams that prospered. It wasn't until later in her research that she determined the one factor which could be attributed to these productive teams. That key ingredient was what Prof Amy Edmondson called "*psychological safety*—the shared belief held by members of a team that the team is safe for interpersonal risk-taking."<sup>2</sup> According to this, teams with higher psychological safety were more effective because they were more comfortable giving and receiving feedback when they did not have to consider ranks and divisions within the teams. They felt more comfortable proposing new ideas, exploring different ways of working and are more open to changing how they work.

Based on this, consider some of the teams you have been in during your career, in particular some of your most favorite groups. Were you happy to be in them? Could

**Below:** A meeting with the Gender Focal Points where valuable feedback was shared with the Commander, the exercise planners and the scenario team. PHOTO: JWC PAO



- 1 Charles Duhigg, "What Google Learned From Its Quest to Build the Perfect Team", New York Times, 25 February 2016.
- 2 Amy Edmondson, "Psychological Safety and Learning Behavior in Work Teams", June 1999.



you speak freely and speak up if you thought something was going in the wrong direction?

## Benefits of Feedback in the Teams

It is time to stop seeing feedback as something which is "nice to have", and see it for what it really is: a tool to make our teams stronger and more resilient. Being able to give good feedback and talking to each other strengthens the team's bonds, increases trust and rapport among the team members, and also improves the flow of communication to enable the team to be more action-oriented, productive and agile.

- **Feedback broadens our perspective:** Feedback is useful for both parties. At its core, it shapes and develops both the person receiving the feedback and the person giving the feedback, as they are both forced to look at what is working well and what is not. Being in a multinational organization such as NATO, we are fortunate to have exposure to new ways of working and approaches. When there is a clear channel for feedback between you and your colleagues, then the doors between you open to all these resources. Without dialogue and conversation, they remain locked.

- **Feedback accelerates our development:** No one has the monopoly on reality and it is unrealistic we as leaders and team members think that we have all the answers. Using feedback as a normal tool in our teams exposes us to the many different cultural, organizational and individual perspectives which can help unlock our problems and issues. Always keep in mind that what constitutes a problem for one

culture, service, or individual, may already be solved by another.

## Implementation

The topic of feedback was brought up in a recent team-building programme at JWC earlier this year with a newly formed group comprising three sections, two of which were completely new. The responses were candid, but because they discussed this as a group, the traditional barriers mentioned above were not present. So, once we've established the power of feedback in teams how do we institute it? Unfortunately, feedback cannot be improved with a Staff Order or a Directive from the Chain of Command. For feedback to be authentic it always has to be built from within the team. The team has to agree collectively that it is OK to both give and receive feedback from the other members. This is important. Although most people inherently know the value of feedback, it's not until you discuss it as a group that it will be acceptable. This could be as easy as raising it at your next team meeting.

## Some Pointers

The following pointers are worth considering for any team wishing to institute feedback. These pointers can be discussed in a weekly meeting, offsite, or wherever seems appropriate:

1. **Feedback should always be focussed on improving the individual and team:** It can be easy to simply tell people what they did wrong. However, focussing the feedback on constructive improvements is much more useful.

2. **Feedback should always be given with positive intent:** This is vital. If we know that the person giving us feedback has our development in mind then it's easier to accept, even if it might appear a bit rough around the edges. If we agree that there is always a positive intent behind giving feedback, then we can be more accepting no matter how it is delivered culturally.

3. **Feedback should be authentic and not forced:** From our work in the JWC, authenticity is always important and a key element of our reputation. Feedback should be delivered when you think it most appropriate, rather than something you put on your calendar.

4. **Feedback can be both constructive and positive:** Feedback does not always need to be about how we can improve. Even though we may sometimes act stoic and purely focussed on duty, there is rarely an abundance of positive feedback in our teams. This is especially important in NATO, where our colleagues, perhaps in their first NATO post, have no idea how well they are performing. Giving your colleague a simple positive remark or congratulating them on their recent presentation or paper can strengthen their motivation as well as strengthen the bond in the team.

In summary, feedback does not need to be a long drawn out process where both parties feel awkward. Instead, when it is more ingrained and commonplace it can become a natural tool to strengthen the resilience and effectiveness of the team and its members.

And all this goodness can begin with a simple conversation. †

## TESTIMONIALS



**LT CDR  
IAN FRASER**  
*Exercise Event Manager*

*"We should remember that feedback can also be positive, it's important to also highlight what is going well."*



**LT COL  
CSABA ELEKES**  
*Staff Officer (OPFOR)*

*"When someone gives me feedback, I consider it an honour to hear their thoughts."*



**LT COL  
HOLGER JUDT**  
*Staff Officer (OPFOR)*

*"For me, feedback means that my co-worker cares about me and that's a good feeling to have in a team."*

## Change of Command at NCI Agency CSU Stavanger

ROYAL NORWEGIAN NAVY Commander Senior Grade Svein-Inge Soendergaard assumed command of NATO Communications and Information (NCI) Agency's CIS Support Unit Stavanger (CSU Stavanger) from Norwegian Air Force Lieutenant Colonel Atle Kjosnes during a ceremony held at the Joint Warfare Centre (JWC) on 10 June 2016.

The ceremony was presided over by U.S. Army Colonel Earl Nakata, representing NCI Agency Directorate of Service Operations. In his remarks, Colonel Nakata praised Lieutenant Colonel Kjosnes' leadership, contribution and dedicated commitment to both CSU Stavanger and the JWC since 2012. Colonel Nakata said: "On behalf of the Agency's leadership, I would like to express their sincere appreciation for your strong commitment, the continual display of your can-do attitude, your consistent demonstration of your broad professional knowledge and exceptional support to the Agency's mission."

Before assuming the duties and responsibilities of commanding officer for the CSU Stavanger, Commander Senior Grade Soendergaard served at NATO's Allied Command Transformation (ACT) in Norfolk, Virginia, United States, from 2010 to 2014. After returning from the United States, he served as a military liaison officer with the UN Mission in South Sudan in 2015. "I am excited and grateful for the opportunity to lead and serve with you, all the talented people that make up CSU Stavanger," Soendergaard said, adding: "I consider it a privilege to be allowed to support JWC and their continuing efforts to train and prepare the operational level of NATO."

Addressing the continuing re-organization process within the NCI Agency, Commander Senior Grade Soendergaard said:



CDR Soendergaard (right) took command of the Unit receiving the NCI Agency flag from Colonel Nakata, representing NCI Agency Directorate of Service Operations.

"The Unit has managed to transform itself; while at the same time it not only delivered excellent support to the JWC, but also took on additional tasks. This is an impressive accomplishment that both Atle Kjosnes and the team should take pride in."

The ceremony was attended by JWC and CSU Stavanger's international civilian and military staff and family members and guests from the local community.

### About CSU Stavanger

CSU Stavanger, previously known as Squadron Stavanger, stood up in 2004 under the NATO CIS Services Agency (NCSA) and is today a CSU in NATO Communica-

tion and Information Agency. As part of the NCI Agency Service Operation Directorate, the Unit is responsible to the General Manager for delivery of Communications and Information Systems (CIS) services to customers in Stavanger and Norway.

Its main customer, Joint Warfare Centre, receives a series of services both as static service delivery to permanent staff as well as dynamic and flexible event services in support of the ACT Programme of Work for exercises. The CSU delivers on multiple platforms advanced, simulated and modulated exercises to the local warfare facility and remote locations, supporting the Education, Training, Experimentation and Exercise (ETEE) environment in NATO.

Lieutenant Colonel Atle Kjosnes, Colonel Nakata and Commander Senior Grade Soendergaard photographed by JWC's Public Affairs Office just before the ceremony.



## JWC Names Military Member of the Year 2015

ROYAL NAVY Petty Officer Paul Medcalf, Core Services System Administrator from NCI Agency CSU Stavanger, was named the Joint Warfare Centre's Military Member of the Year (MMOY) 2015.

During an awards ceremony held at JWC's Harald Hårfagre Auditorium in Jättå, Stavanger, on 18 April, German Army Major General Reinhard Wolski, Commander JWC, presented Medcalf with the Letter of Commendation and a plaque of appreciation. "JWC's Military Member of the Year Award is a recognition of the outstanding service and dedication of our international enlisted personnel to the mission of the JWC and their vital role within NATO," said Major General Wolski, adding: "I firmly believe that people, JWC's 'One Team', is our most important asset, so it is a pleasure for me to recognise Petty Officer Medcalf

and announce his nomination to represent the JWC at this year's MMOY competition; thank you for your professional and personal excellence."

Led by Allied Command Transformation (ACT) the MMOY Programme was established in 2003 with the first selection being held in February 2004. The Programme aims to recognize the vital role played by the Non-Commissioned Officers (NCOs) of ACT and its subordinate headquarters, and is an annual opportunity for senior enlisted members within ACT to honour one of their junior NCOs for his or her hard work and dedication to duty in support of his or her command and the mission of the NATO Alliance. "It was a huge privilege to be nominated for such an award and I'm very proud to have won," said Petty Officer Paul Medcalf.



## The U.S. 426<sup>th</sup> Air Base Squadron in Stavanger recognizes Norwegian security conscripts and officers



The U.S. Air Force Certificates of Commendation were awarded to Corporal Aage Hetland, Corporal Thomas Sundal, Corporal Jim Daniel Lillesalt Hansen, Corporal Geir-Inge Ostli, Private Kim Jonas Risvik, Private Andreas Pettersen Rostberg, Private Lene Marie Vage Myklebust and Private Vetle Gudmestad Nylund.

EIGHT NORWEGIAN SECURITY conscripts received end of tour recognition during a ceremony at the 426<sup>th</sup> Air Base Squadron's Community Activity Centre in Jättå, Stavanger, on 1 March 2016. Presided over by Lieutenant Colonel Kenneth R. Burton Jr., the Commander of the 426<sup>th</sup> Air Base Squadron, the ceremony was held as part of the overall United States Diplomatic Security Relationship Program. Colonel Kevin P. Cullen, the Commander of the 501<sup>st</sup> Combat Support Wing, which falls under U.S. Air Forces in Europe and Africa, and his Command Chief, Chief Master Sergeant Robert L. Sealey visiting from the United Kingdom were also in attendance. "You have been an integral part of our mission here in Stavanger, supporting us around the clock every day of your one-year tour. I applaud your willingness to stand watch and enable us to carry out our duties with confidence," Lieutenant Colonel Burton told the awardees.

NATO RAPID DEPLOYABLE CORPS—TURKEY  
**EXERCISE TRIDENT JAGUAR 16**  
**DEPLOYED EXCON TEAM**

PHOTOGRAPH: NRDC-TUR PAO



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