



How the pandemic became an extraordinary growth opportunity for the Joint Warfare Centre: Future Exercise Support Capability Study, Wargaming Design Capability, and the JOPG Leaders Workshop



The Joint Warfare Centre's

FUTURE EXERCISE SUPPORT CAPABILITY STUDY

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Driving Change in NATO Training

IF YOUR WORLD is impacted or informed by the outcome of NATO's large-scale exercises, then I offer that the Joint Warfare Centre's (JWC) 2021 Future Exercise Support Capability Study deserves your attention, or at least the time it takes to read this article. I admit bias. As the director of the study, I am partial to the perception of value it creates. That is largely due to the great efforts of our team to put this together in a quick six months. My thanks to them upfront, especially the study's main author, British Navy Commander Wayne Ubhi from the JWC's Exercise Planning Branch.





STEADFAST JUPITER-JACKAL 2020
crisis response planning (Grey Cell).
Photo by JWC PAO

This study seeks to answer a complex problem statement, namely, *how does the JWC remove constraints on NATO exercise and experimentation levels of ambition?* This dilemma arrives from the collision of multiple factors, which readers familiar with NATO exercises will likely recognize.

First, NATO recently shifted responsibility for large-scale exercise planning and execution from Allied Command Transformation (ACT) to Allied Command Operations (ACO). This shift means that SHAPE, a primary "customer" in terms of exercise outcomes, now also serves as "Officer Scheduling the Exercise" (OSE) for exercises such as the STEADFAST JUPITER series.

Second, and this is related to the first point, there is a growing level of ambition regarding what goes into and comes out of an exercise such as STEADFAST JUPITER. In other words, complex exercises are becoming even more complex.

Third, as a result of the second point, the JWC is operating near maximum capacity to deliver exercises of such complex breadth, depth, and scale. Therefore, if complexity continues to increase, the JWC needs to adapt to ensure the quality of outcome.

But why does exercise complexity continue to increase? Because NATO exercises follow the strategic and operational focus of the Alliance. In recent years, that focus has shifted to an operating environment which is increasingly difficult to replicate with existing exercise

ways and means. In order to make recommendations for change, it is critical we first understand the capacity of the JWC as it exists today. The first part of the +30-page study main body seeks to do just that. Rather than *what we think we can do*, the study sets out to explore *what we know we can do* through the analysis of six methods for delivering an exercise.

Many veterans of past JWC-delivered exercises will find themselves familiar with the first delivery method: the computer-assisted (CAX) command post exercise (CPX). The CAX/CPX has long been the flagship product of the JWC, and it is used to deliver a venue for training, certification, evaluation, and experimentation by linking the strategic, operational, and tactical levels of NATO in a major joint operation. Here we typically see a joint force headquarters and the upcoming NATO Response Force (NRF) as the main training audiences. Additional training audiences are usually one level away from those forces, and have numbered as many as 18 in total, as seen in STEADFAST JUPITER 2021.

The CAX/CPX model requires roughly two years to develop from a concept in SA-CEUR's Annual Guidance on Education, Training, Exercises, and Evaluation (SAGE) to exercise closure. The detailed process of delivery is laid out in NATO's Collective Training and Exercise Directive (Bi-SC 75-003) and the JWC Standard Operating Procedure (SOP) 800.

Exercise production is a complicated process, but what it creates is impressive: it

integrates the battle rhythms from SHAPE through the joint force commands (JFCs) and the component commands with tactical units in a simulation-support training environment that exercises the NATO decision making process at, quite literally, all levels. Not for the faint hearted, NATO's major joint operation-scale CAX/CPX is a behemoth with high return on investment for the Alliance.

The CAX/CPX is but one of six ways in which the JWC can deliver training objectives today and is the largest in terms of "relative resource requirements", or R3. The R3 is what the study employs to measure the aggregate input cost of each form of exercise delivery. It combines the analysis of the following inputs: personnel hours, financial cost, communications, simulation capacity, and infrastructure. The R3 is thus the numerical representation of what an exercise will cost the JWC in terms of capacity.

In order facilitate comparison of exercise delivery methods, the study establishes the JWC's annual R3 "allowance" as 100 units. An exercise series at the breadth, depth, and scale of STEADFAST JUPITER costs 50 of those units, annually. This takes into consideration the multi-year design of the exercise process; there are always at least two distinct exercises under-development. Using the R3 approach allows the Centre to provide both ACT and ACO recommendations regarding future exercise scheduling based upon objective resource cost estimates. It also allows the JWC to compare "apples to apples" when recommending other exercise formats.

One of those formats is wargaming — another of the six methods the JWC can build today to deliver training objectives. As with all methods, our ability to offer a wargame design capability is contingent upon available R3 capacity. For wargaming specifically, the constraining input is trained cadre who are dual-hatted for this role. As each of the methods have a unique balance of resource demands, our ability to understand and articulate the costs and benefits of each offers more flexibility to NATO's exercise community.

During the SAGE drafting process, this knowledge gives commanders options regarding the allocation of JWC's R3, which is finite. This returns the conversation to the problem statement and how we aim to remove constraints in the future.



We are attacking our capacity limitations across two-time horizons. From now through 2024, the study recommends over a dozen incremental improvements that will add to our effectiveness. In the long term, 2025-2035, the study signposts the need for innovative solutions which start with articulation of future exercise *ends*. The remainder of this article will detail both.

Incremental changes seek to improve in the near-term without drastic changes to our methods (*ways*) and the resources (*means*). The process of studying the *ways* and *means* of exercise delivery yielded numerous suggestions from across the greater NATO Education, Training, Exercises, and Evaluation (ETEE) enterprise. Many of the resulting recommendations are nuanced as written in the study; presented here are abridged highlights.

The first recommendations seek modifications of the NATO Exercise Process as enumerated in Bi-SC 75-003. It is important to understand that the current design establishes four stages for the NATO Exercise Process: 1) Specification Development, 2) Planning and Product Development, 3) Collective Training and Exercise (CT&E) Conduct, and 4) Analysis and Reporting.

Firstly, we recommend adding a "Stage Zero". The purpose of this phase is to facilitate senior leader discussions before hard decisions

are required in Stage 1. This would also assist identification of risks, risk owners, nascent strategic concepts, emerging lessons, and perennial exercise challenges through the conduct of SHAPE (as OSE) led discussions.

“The JWC recommends adding a **'Stage Zero'** to the **exercise process** for **better EXSPEC**, **better informed senior leadership**, and **early initiation of risk mitigations.**”

Stage Zero essentially occurred for STEADFAST JUPITER 2022 where senior leadership in the exercise community established a steering committee to address the complexity of the exercise. Well before Exercise Specification (EXSPEC) work began in Stage 1, this venue enabled OSE, Officer Coordinating the Exercise (OCE), and Officer Directing the Exercise (ODE) stakeholders to meet and mitigate challenges.¹ The result was a better EXSPEC, better informed senior leadership, and early initiation of risk mitigations — all relative to the current process and previous exercise experiences.

Second, following in this same vein, we also recommend the enhancement of Phase 4 to Stage 3 (CT&E) of the exercise process. Currently, the four phases of Stage 3 are: Phase 1) Foundation Training, Phase 2) Crisis Response Planning (CRP), Phase 3) Execution, and Phase 4) Assessment. Our proposal is to enhance the assessment phase through facilitation of supplemental training focused on the outcomes of the execution phase.

In other words, with a focused problem and a narrow training audience, the JWC would allow recently exercised leaders a safe venue to return to key aspects of the exercise where they could experiment with different approaches, reinforce lessons learned, or otherwise deeply ingrain the exercise's most valuable takeaways.

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Exercise STEADFAST JUPITER-JACKAL 2020 EXCON huddle. Photo by JWC PAO



COLLECTIVE TRAINING AND EXERCISES



ABOVE: (Clockwise) The main entrance of the JWC's training facility. The scripting workshops during STEADFAST JUPITER-JACKAL 2020 and TRIDENT JUNCTURE 2018 CPX. Photos by JWC PAO

Another important aspect of exercise delivery is the involvement of our advisory team. The JWC's advisory team is a training multiplier, providing feedback to the training audience on NATO processes and procedures, while also keeping the EXCON at the JWC informed on how the audiences are engaging with exercise material. The study details the recommendation for a continuous collaborative approach for the advisory team. Starting with exercise inception (Stage 0), the team would establish communications and relationships with the training audiences in order to ensure they provide value through all stages and phases of an exercise.

Aligned with the continuous collaborative approach is the JWC's new Joint Operations Planning Group (JOPG) Leaders Workshop. Tailorable to the needs of a training audience headquarters, this workshop establishes a vital baseline of understanding for a JOPG leader. This includes not only the doctrine, but the current best practices to employ in this vital role. The JWC advisory team can provide this training within any stage of the exercise process and adapt to any level of training audience.

Parallel to the increased value provided by more persistent JWC advisory team, the study offers that a similar approach to the

NATO Senior Mentor Programme would be complementary. As retired military flag officers, senior mentors are critical team members who ensure commanders themselves are also afforded an opportunity for coaching during an exercise. By enabling and synchronizing their engagements early and often, both the advisory team and senior mentors can exponentially increase their net effect across the two-year lifespan of an exercise programme.

The 2020 pandemic provided lessons to the JWC focused on the challenge of delivering exercises in a travel- and workspace-restricted environment. These lessons made it to our study in a section focused on the tools we use to collaborate remotely. Many of our findings are likely echoed by other NATO organizations and include the need for comprehensive review of collaboration tools and their capacity relative to potential demand. The improvement of communications infrastructure to maximize remote work and remote HQ collaboration is covered in detail. These recommendations are likely familiar to anyone working in NATO since February 2020.

What is not as self-evident as videoconferencing improvements is the inadequacy of remote (also known as virtual) events

as a substitute to in-person exercise planning events. Over the last year, we have proven that in extremis all-virtual events can accomplish the goals of in-person conferences. However, there is danger in assuming equality of outcomes in terms of quality.

As we have seen in STEADFAST JUPITER 2021 (STJU21) planning activities, all-virtual or hybrid (limited in-person attendance, as well as virtual) events preceded the exercise scripting workshop. This workshop is where the events, storylines, and incidents of the exercise are painstakingly created and synchronized in preparation for execution. This process can be compared with writing a book using 200+ authors. For STJU21, this workshop was impacted by the shortcomings of inputs produced in subsequent workshops lacking face-to-face coordination. The lesson learned is substitution of in-person planning with virtual comes at a cost to quality of outcome.

This brings the discussion to a pervasive theme in the study: technology. In that one word can be found much of the source of the complexity generating this work. In the near term, there are several recommendations for immediate adoption / adaptation / combination of software, hardware, or architecture to incrementally improve the communications





ABOVE: (Left) A meeting of the JWC's advisory team. **RIGHT:** General (Ret.) Sir James Everard KCB CBE, NATO's Lead Senior Mentor, speaking at the JWC's 15th anniversary celebration, October 23, 2018, when he served as Deputy Supreme Allied Commander Europe. Photos by JWC PAO.

capabilities of the exercise enterprise. What is important to note is that seemingly small investments in such improvements would have direct positive correlation to the JWC's aforementioned exercise capacity.

Such incremental improvements hold the potential to change the JWC's capacity in terms of percentage. While critically important, incremental improvements alone will not suffice. Looking past 2024, innovation is needed — specifically innovation which aims at future functional services. Aggressively, these recommendations seek to move the JWC's capacity by factors rather than percentages.

However, there is a significant caveat to innovation. In order to innovate *ways* and *means*, exercise *ends* must be clearly articulated. During 2021, there has been an unprecedented number of publications discussing both the type and quantity of strategic-level documentation. These serve as signposts for the potential ETEE *ends* of the future. Such documents, as they move toward operationalization across NATO, are critical to the vision of what future exercises will look like and what they will accomplish.

Today, NATO exercises are ambitious. They are built to accomplish much for the Alliance, and thus, much is invested in their

conduct. As such, the success of units within exercises is seen as critical to training and evaluation objectives. There is experimentation as well, but warfare development takes a backseat to the accomplishment of tasks in support of said objectives. What this means is that a NATO exercise on the scale of STEADFAST JUPITER is not a safe place for the senior leadership to make bold moves. There is certainly not a "train-to-fail-to-learn" mentality, as seen in some nations' internal exercise programmes. Such a mentality can be seen as a counterpoint to the "train-to-evaluate" aims of the exercises.

What if that binary did not exist? What if a joint force commander could make bold moves in a large-scale exercise and also feel safe that they will succeed in achieving their training and evaluation objectives? I believe that the resulting value of large-scale exercises to the Alliance would be exponentially increased.

In order to get there, the exercise enterprise will need to employ new tools. Such tools exist today, albeit their applications are in the dual-use space and not built to NATO specification — yet. Much work is needed across the Bi-Strategic Commands with much work already underway. For the JWC, the key tool of the future may be a true parallel synthetic

environment, which replicates the totality of processes and relationships that our training audiences would expect to engage with in their operational environment. Exercise tools of the future will require investment and experimentation. The study concludes with a discussion of the JWC's role in that Bi-Strategic process. As a critical bridge between Transformation and Operations, the JWC can and will continue to endeavour to make NATO better.

This study serves as a start point for further conversations and collaboration; it has already initiated follow-on work ahead of further distribution. Empowered by the involvement of the NATO exercise community, the Alliance is set upon a path toward a future where exercise levels of ambition are not constrained. ✦

ENDNOTE:

- 1 OCE: "Officer Conducting the Exercise" is usually the joint force command headquarters.

About the author

Colonel Lackey is a U.S. Army Infantry Officer who has held numerous assignments in Europe, including as former commander of Battlegroup Poland supporting NATO's Enhanced Forward Presence. Passionate about innovation and the Alliance, connect with him on LinkedIn.