



Joint Analysis & Lessons Learned Centre



15 Years of the JALLC

**#WEARENATO**

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The JALLC would further like to thank all of its staff, past and present, for their overall contribution to the success of the Centre over the past 15 years.

For more information on any of topics presented in this book, please see the JALLC's website at [www.jallc.nato.int](http://www.jallc.nato.int) or refer to the contact details on the back cover.

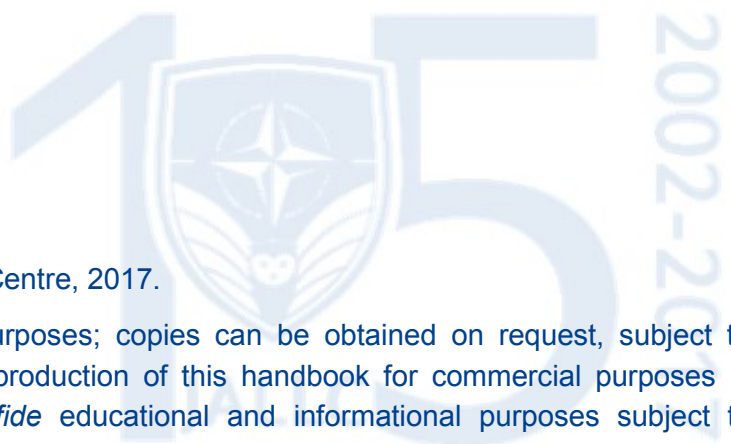
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2002-2017

# Foreword

*It is my great pleasure to present this 15th Anniversary Commemorative Book, which celebrates 15 years of NATO's Joint Analysis and Lessons Learned Centre (JALLC).*

*A lot has happened in the past 15 years, and I am proud to see how the JALLC, along with the rest of NATO, has evolved to meet the challenges posed by the ever-changing global security threat environment. Since opening its doors in 2002, the JALLC has contributed to the Alliance's transformation in many ways, covering many topics: from ISAF to Public Diplomacy, from Operation UNIFIED PROTECTOR to the NATO Force Structure Joint Task Force HQ concept. The flexibility and adaptability of the JALLC has always been its greatest strength and is what makes this HQ so unique and valuable to NATO.*

*The Euro-Atlantic area faces an unprecedented range of threats. The emergence or resurgence of state actors as potential peer competitors coupled with expanding terrorism, and persistent transnational risks such as organized crime, climate change or economic instability all contribute to the complexity of the global environment. We have shifted from a complicated to a complex environment, and this requires a permanent adaptation of our Alliance to continue to operate while simultaneously coping with this new and rapidly evolving 21st Century complex environment.*

*I am confident that the JALLC will contribute to the changing needs of the Alliance for this continuous adaptation, and play its role in ensuring that NATO is ready and responsive to face those threats from wherever they may come.*

*This book represents 15 years of the JALLC. That means 15 years of Joint Analysis, helping NATO to understand complex and enduring problems and recommending ways in which NATO can transform to improve its support to the Allies. And, as the international security environment has evolved, so too must the work of the Centre. The JALLC will now primarily focus on NATO's Lessons whereby it will manage and maintain the NATO Lessons Learned Portal and support Alliance initiatives to continuously better a Commander's ability to improve military capacities. In short, Lessons need to prepare the ground and allow future analyses of what is to come.*

*In the same way, the 15th anniversary of the JALLC is not only an opportunity for us to look back on what the JALLC has achieved and how it has evolved over the past 15 years, but foremost encourages us to look forward to the foreseeable future. Times are changing and NATO, as ever, will adapt to these changes. The JALLC has a role to play in facilitating that ability to adapt, and I look forward to the next 15 years of NATO's Joint Analysis and Lessons Learned Centre.*

*I would like to take this opportunity to extend my thanks to the JALLC's Host Nation, Portugal, for their continued support to NATO and to all of the JALLC's staff for their contribution to the Alliance in the past, present, and future.*



A handwritten signature in blue ink, consisting of a large, stylized 'D' followed by a horizontal line.

Denis Mercier  
General

French Air Force  
Supreme Allied Commander Transformation



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2002-2017



*Welcome to the JALLC*

## Our History

The precursor body to the JALLC was the Permanent Maritime Analysis Team (PAT) based at Northwood, UK, which conducted operational analysis of NATO maritime exercises using a staff predominantly composed of naval officers. The PAT, suitably augmented, formed the core of the team tasked with analysis of the NATO Implementation Force (IFOR) and Stabilization Force (SFOR) operations in the Former Yugoslavia. The final report by the IFOR Joint Analysis Team recognized the lack of a standing NATO joint analysis capability, which led to the formation of a NATO Working Group tasked to develop the concept for a JALLC.



*Signing the founding documents of the JALLC*

The operational requirement for the JALLC was approved by the NATO Military Committee (MC) in June 1997 and the detailed the JALLC implementation concept, which also recommended that the JALLC be located in Portugal, was approved by the MC on 07 December 2001. The JALLC was activated on 02 September 2002, was formally opened on 06 December 2002 and declared full operational capability on 28 March 2006.

## Our Mission

Today, the JALLC is NATO's centre for performing Joint Analysis of operations, training, exercises and experiments. The JALLC supports the exchange of Lessons Learned and facilitates the development of Lessons Learned Capabilities, reinforcing the continuous transformation and modernization of NATO's forces and capabilities.

## Our Role & Tasks



*Unveiling the plaque commemorating the opening of the JALLC which still hangs in the JALLC's lobby today, now next to a plaque commemorating the 10th and 15th anniversaries.*

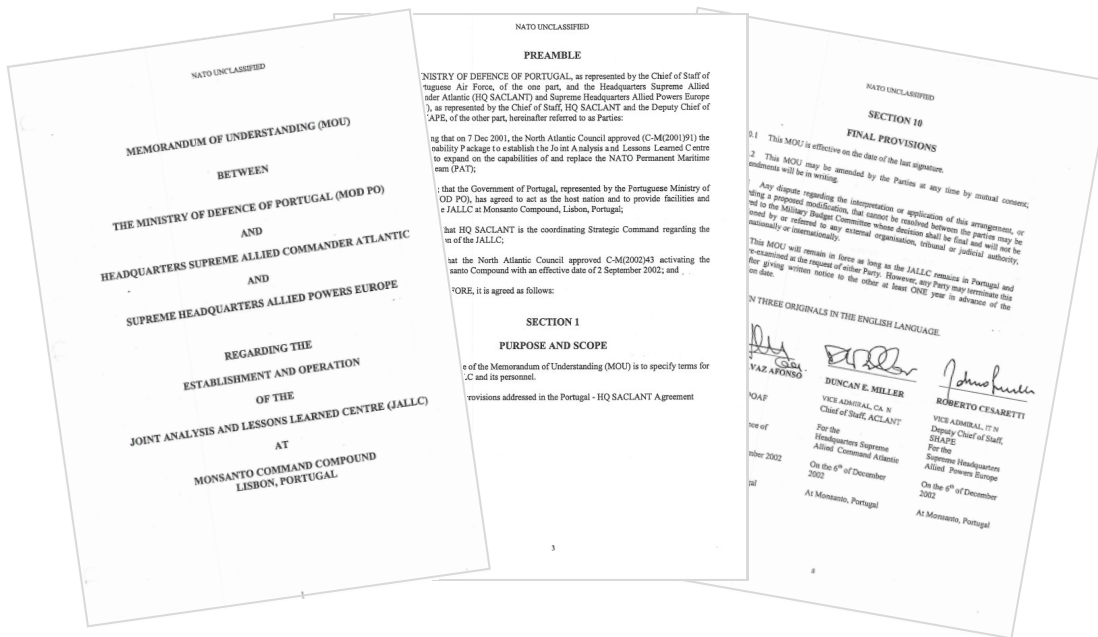
The JALLC, as part of the NATO Command Structure, and subordinate to HQ Supreme Allied Command Transformation (HQ SACT), provides analysis support to operations, training, exercises, and experimentation. The JALLC also supports the overarching NATO Lessons Learned capability by maintaining and managing the NATO Lessons Learned Portal; providing Analysis and Lessons Learned training; and engaging, through the JALLC Advisory & Training Team, with NATO commands and the Allies, partners, and other entities to support their Lessons Learned capability development. In addition the JALLC provides a wide range of support services to the NATO Force Structure and Agency Structure in Portugal.

# Our Activities

Although the JALLC was originally conceived to primarily analyse exercises, changes to the NATO environment and growing NATO involvement in operations resulted in the JALLC's focus shifting to operations and major NATO Response Force exercises. Gradually, the JALLC has become engaged in a wide range of activities, such as Training Courses and maintaining the NATO Lessons Learned Handbook and the Joint Analysis Handbook. The JALLC also convenes the annual NATO Lessons Learned Conference which covers themes topical to the Lessons Learned community and draws participants from across NATO, Nations, Partner Nations and other organizations.



The future of the JALLC is built upon its history: continuing to provide high-quality analysis reports in a timely fashion. The JALLC will also continue to improve its own processes through the learning of lessons: allowing it to build on the established tradition of excellence and rigour, while adapting to the changing environment.



The 2002 Memorandum of Understanding between Portugal and NATO regarding the JALLC

## The JALLC's Commanders 2002 - Present



2002 - 2004  
Major General  
Jean-Pierre Roman  
Belgian Army



2004 - 2007  
Major General  
Mehmet Çetin  
Turkish Army



2007 - 2010  
Brigadier General  
Jørgen Hansen-Nord  
Danish Army



2010 - 2013  
Brigadier General  
Peter Sonneby  
Danish Air Force



2013 - 2016  
Brigadier General  
Mircea Mindrescu  
Romanian Army



2016 - present  
Brigadier General  
Mário Barreto  
Portuguese Air Force



2002-2017



# 15 Years of Joint Analysis

# Analysis: The Key to Learning

NATO's Lessons Learned Process is key to its transformation. By taking experiences, both good and bad, from the past and analysing them in the present, we can learn for the future. This is where the JALLC comes in: The **Joint Analysis** and **Lessons Learned** Centre is aptly titled. The key terms in the title are **Analysis** and **Lessons**. If we take a closer look at these two elements we see they are connected; you don't get Lessons without some Analysis:

**Lessons:** are the desired end products; they are enduring improvements in the Alliance's capability, based on our past experiences.

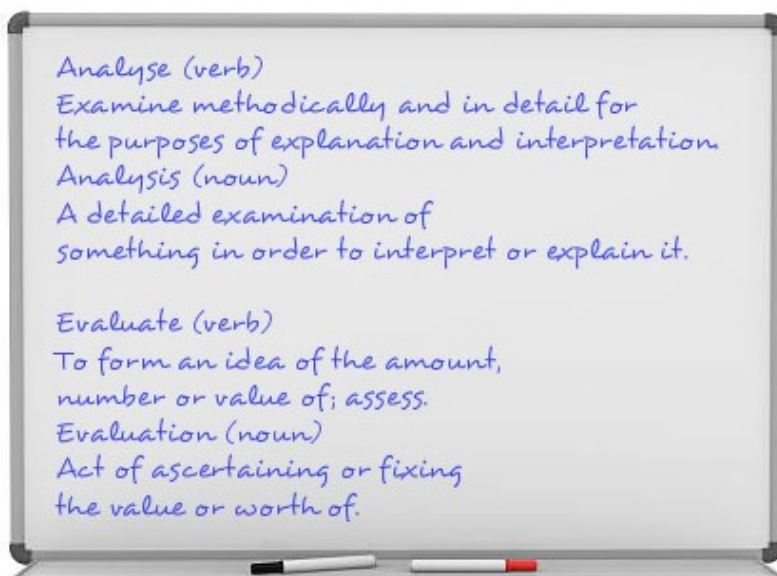
**Analysis:** is the process that needs to be completed in order to identify those Lessons.

According to NATO, *Analysis* is the study of the whole by examining its parts and their interactions. So what is *JOINT analysis*? How is *JOINT analysis* different from any other type of analysis and why does NATO need it? In this section we're going to explain the difference between regular analysis and joint analysis and how the JALLC uses joint analysis in NATO's Lessons Learned Process to identify lessons that the Alliance potentially needs to learn. Let's start by looking at what analysis is and what analysis is not.



**What is Analysis?** Analysis is a process used to thoroughly understand areas of activity identified to have potential for improvement. Analysis involves taking something and looking at it in different ways to *develop understanding of essential features or meaning*. Conducting analysis should not result in *attaching a value or rating* to what is being analysed. That is contrary to the definition of *evaluation*, where the *act of ascertaining or fixing the value or worth of something* is the basis of the activity.

**What Analysis is NOT...** So, analysis is then by definition not *evaluation*. Put another way: when conducting analysis we don't *judge*. The distinction between analysis and evaluation is so important and the differences so great that we have to look at them as philosophically different concepts. Taking a look at the definitions of Analyse and Evaluate makes this distinction even more clear; see the whiteboard below.



## Military Analysis

The use of analysis is not new in the military. In fact, military organizations were among the first to use analysis to actively support decisions and help improve their effectiveness. As well as its use in support of learning Lessons, analysis provides support to the decision-making process in NATO as well as to other areas such as capability development and identifying training requirements.

## So How does NATO use Analysis to Learn Lessons?

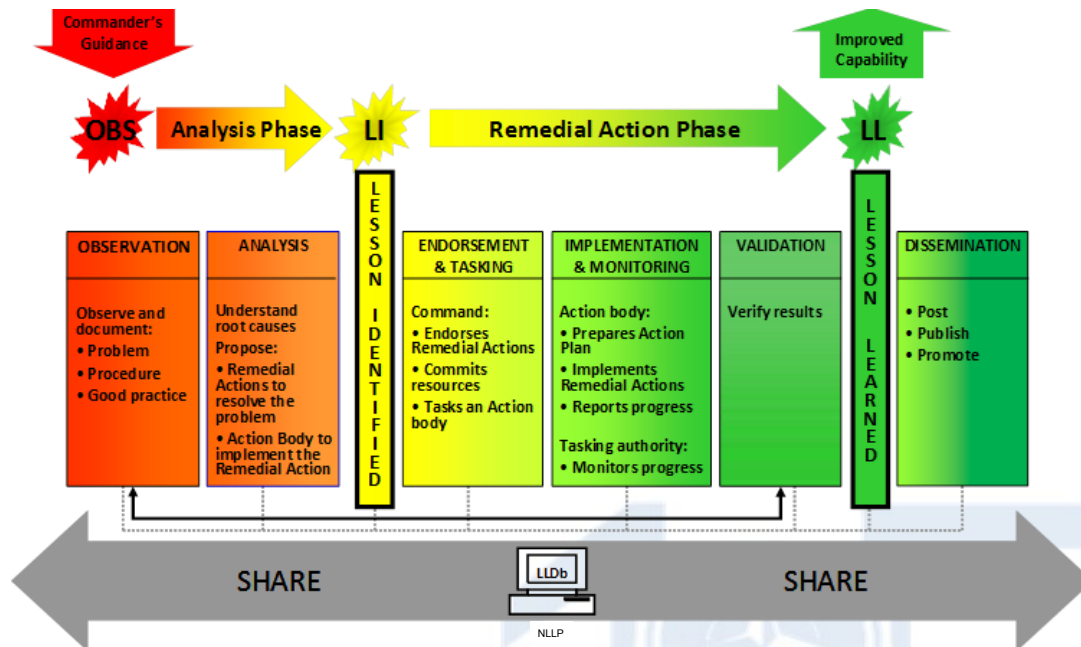


To answer this question, let's start by looking at the end product: a **Lesson**. The term Lesson is broadly used to describe people, things, and activities related to the act of learning from experience to achieve improvements. A Lesson is not learned until something changes in the way we operate. Before a Lesson can be Learned, it first needs to be identified. Before we can identify a Lesson, we must analyse the underlying problem to see if it is a potential Lesson. Before we can analyse the problem, it first has to be observed and recorded. That is why learning lessons in an organizational capacity is the responsibility of everyone in that organization: it all starts with observing and recording a problem.

The idea of using Lessons to improve an organization is that, through a formal approach to learning, individuals and the organization can reduce the risk of repeating mistakes and increase the chance that successes are repeated. However, there needs to be a process in place that allows the problem owner to report the problem and for that problem to be analysed and identified as a Lesson to be learned by the organization; this is what we call a Lessons Learned Process.

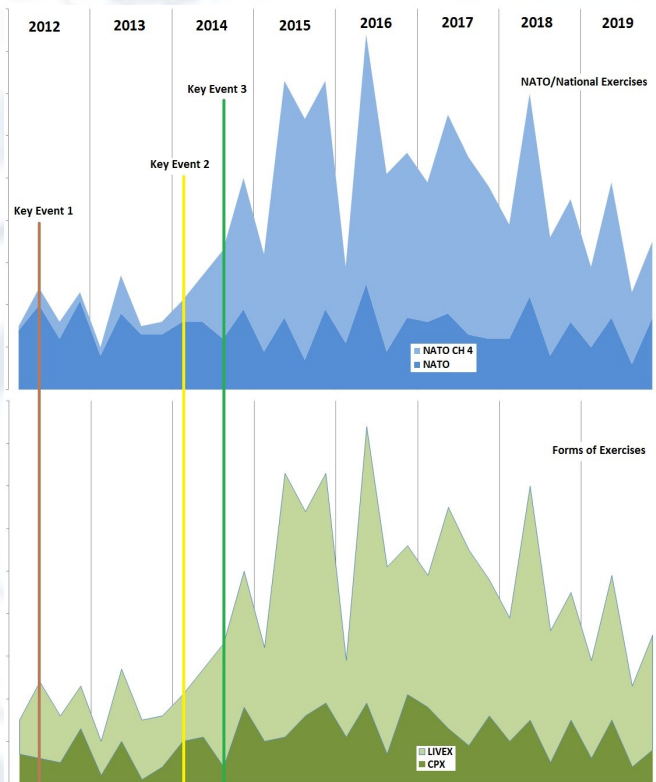
### The NATO Lessons Learned Process

NATO's Lessons Learned Process is depicted below and is applied to all formal observations made by anyone within NATO regarding anything from daily routine activities to conducting an operation, from things that went wrong to best practices.



As we can see in the figure above, there is an entire stage dedicated to analysing the observation made. It's in this stage that the root cause needs to be identified and remedial actions suggested. That allows us to determine whether the observation is a Lesson Identified. Sometimes that analysis is relatively simple: there is an obvious root cause, the problem is internal, and the solution can easily be found. But sometimes this is not the case, and that's when analytical expertise is required. **This is where the JALLC comes in.**

## When the going gets tough...



An example of analysis of NATO's Exercise Programme in which the JALLC showed how NATO is delivering against Alliance Requirements.

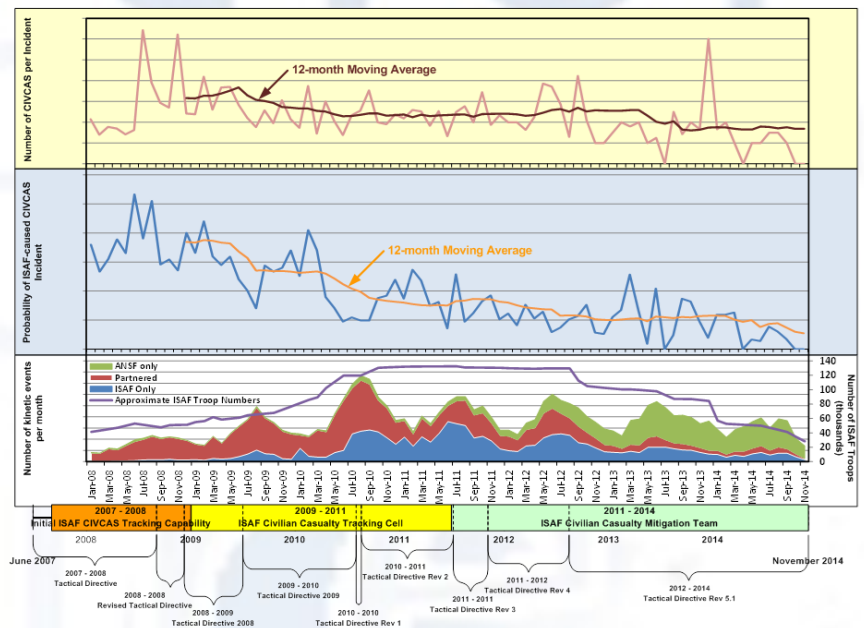
When someone in NATO encounters a problem that doesn't have an obvious root cause, is perhaps recurring, and impacts NATO as a whole and not just one HQ, that problem does not have a real problem owner. This type of problem can't be solved *internally*. In these cases, expert analysis, often using a combination of approaches techniques, will be required to determine whether the problem is not just a problem but actually a *Lesson Identified* and how that Lesson will need to be learned; i.e. what remedial action should be taken. This analysis approach is what we call Joint Analysis.

## How does the JALLC do Joint Analysis?

The JALLC conducts Joint Analysis upon request of its superior command (HQ SACT) which collects and collates analysis requirements from across NATO and selects only those that truly require this level of subject matter expertise to analyse them.

The JALLC will first define and refine the analysis requirement—which can be anything from solving a problem to ascertaining how a best practice might be implemented in NATO—with whoever made the initial observation and/or whoever will be responsible for taking any remedial action. The JALLC then conducts extensive research and collects the necessary data which sometimes involves analysts going to different commands throughout NATO, observing NATO exercises, conducting interviews with present and past commanders, and of course reviewing key NATO documents. All of the data is then analysed, conclusions drawn, and recommendations for improvement made.

The JALLC's work takes place in the Analysis stage of the NATO Lessons Learned Process and frequently results in a Lesson Identified which, once endorsed, implemented, and validated (the next stages of the process) should become a Lesson Learned.



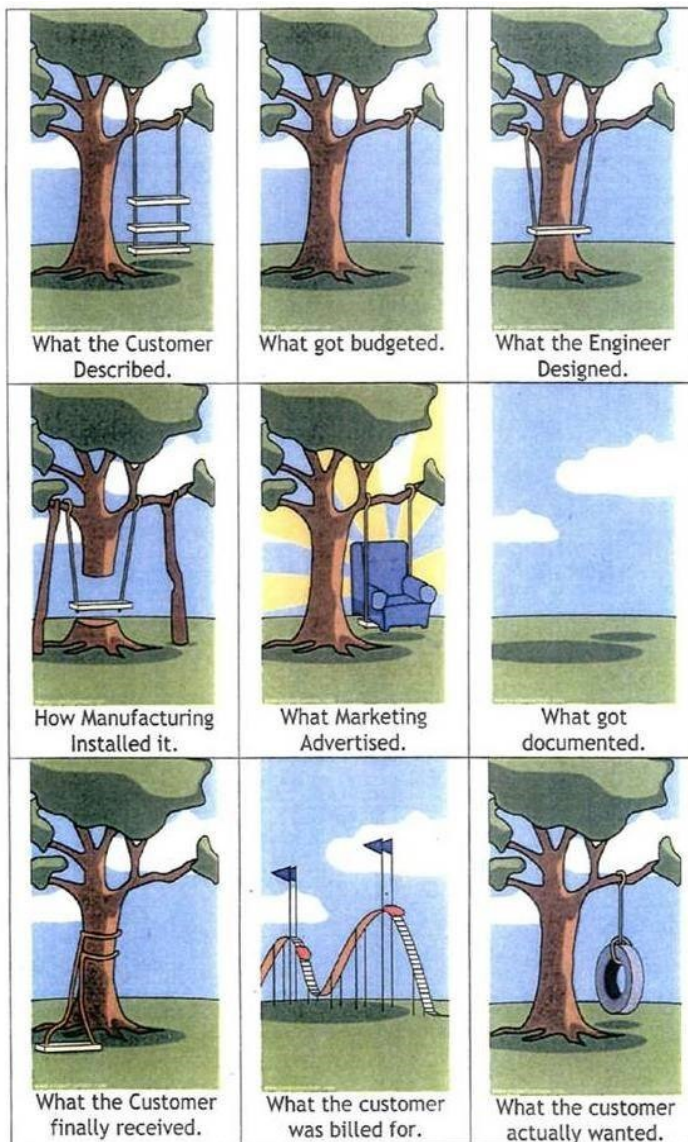
An example of combined qualitative and quantitative analysis conducted by the JALLC to establish how ISAF reduced incidents of Civilian Casualties over the course of the mission

# The JALLC Project Approach

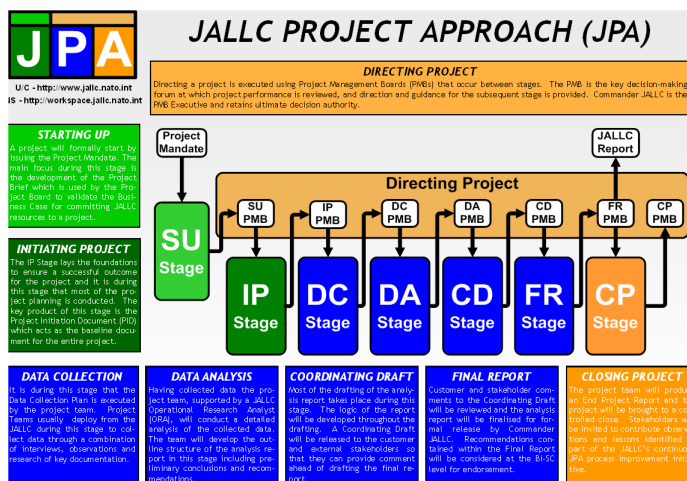
When the JALLC first started conducting Joint Analysis back in 2002, there was no set method for managing a project and there was little in the way of quality assurance. Although projects were being completed, by 2009, it was generally decided that Joint Analysis projects would be managed more effectively and efficiently if they all followed the same methodology in terms of managing the timeline, delivering products, and quality control.

This reasoning led to the introduction in 2010 of the JALLC Project Approach (JPA) which is a tailored version of the PRINCE2® (PRojects IN a Controlled Environment) project management method. This standardized approach to managing projects provides a controlled and organized progression through a set timeline, with regular reviews of progress against an agreed business case, flexible decision points, involvement of those in charge as well as stakeholders at the right time, good communication throughout the project, and agreed quality requirements and monitoring.

The first iteration of the JPA was something of an experiment, but turned out to be a great success. Over the years, the JALLC has continued to adapt and refine the JPA to incorporate lessons and best practices identified and learned from actually conducting joint analysis projects using the JPA.



The cartoon from the back of the first brochure on the JPA in 2009 highlighting the usual problems with project management and what the JPA tries to prevent from happening.



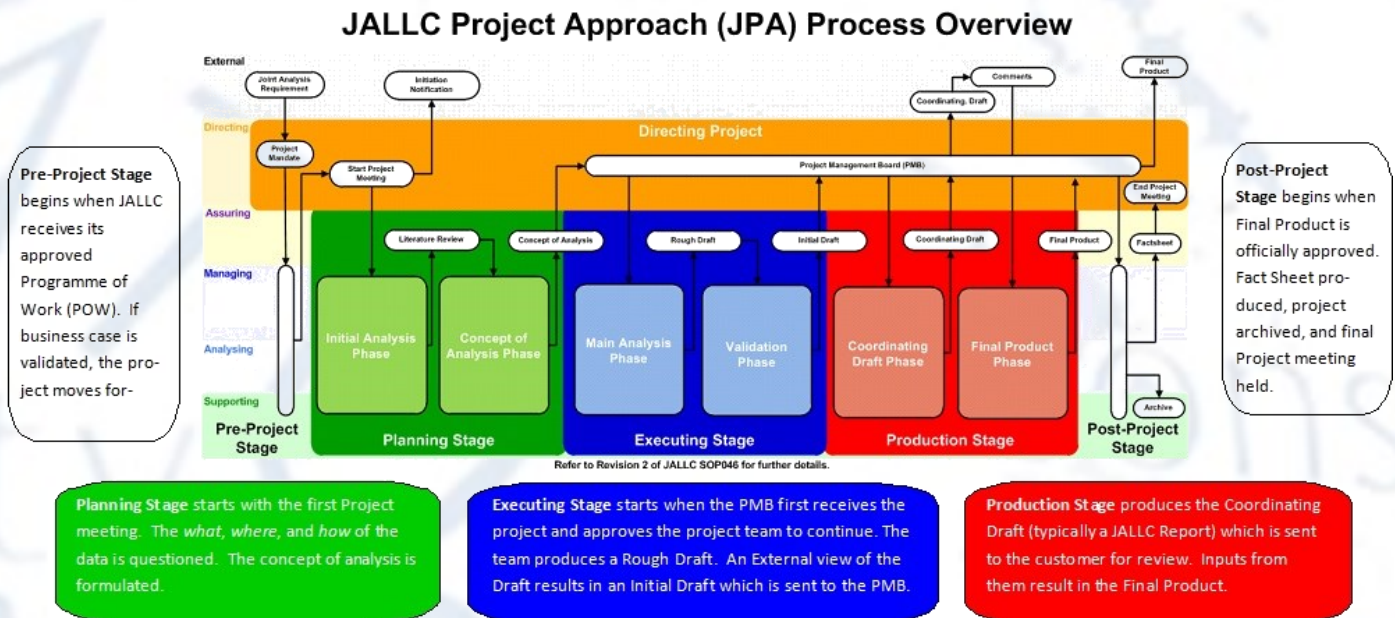
The 2009 version of the JPA as set out in the JALLC's brochure.

The latest review of the JPA led to some significant changes, including reducing the number of stages and management board meetings required to improve the organic flow of the project and allow for a better distribution of stages and phases across the life-cycle of a project, as well as incorporate some thinking on marketing the JALLC's work post project to improve awareness of what the JALLC does.

The JPA is under constant review to ensure that the JALLC identifies and learns its own lessons from managing analysis projects. The JPA is updated on a regular basis to ensure any necessary changes are incorporated.

## How does the JPA work?

The JPA divides the life-cycle of a project into five stages: the Pre-Project Stage, the Planning Stage, the Executing Stage, the Production Stage, and the Post-Project Stage. The Planning Stage, the Executing Stage, the Production Stage, form the main stages of the project in terms of analysis and production and are sub-divided into phases.



*The 2016 version of the JPA as set out in the JALLC's brochure showing a simplified diagram of the stages and phases.*

The JPA is initiated when the JALLC receives a Joint Analysis Requirement, either via its biannual Programme of Work or via the Emergent Analysis Requirement process which allows urgent analysis requirements to be addressed as a high priority. Once a requirement is received, the **Pre-Project Stage** begins. In this stage, the project director and manager are identified and conditions are set for the project team to start work. The principal customer will be contacted for a joint review of the requirement and budgets and timelines established.

The **Planning Stage** follows and is when the JALLC conducts preparatory data collection and planning. A literature review is conducted to help build understanding of the project and identify previous relevant research, after which, research questions are developed and refined. In this stage a comprehensive analysis plan is developed, identifying what data needs to be collected, where the data can be found, what data collection techniques to use, and how the data will be analysed.

During the **Executing Stage** the actual collection, analysis, and synthesis of data to answer the research question(s) developed in the previous stage is carried out. The data analysis is done by the JALLC's professionally trained analysts using a variety of analysis methods. The project team will then draw conclusions from the data and suggest solutions or recommendations to the issues identified.

The **Production Stage** entails development of the outline and draft of the first version of the final written product (usually a JALLC analysis report). First, a Coordinating Draft of the product will be produced which will be sent to the customer and key stakeholders for approval. It is worth noting that the principal customer and any other stakeholders are kept informed of the significant findings and are consulted regarding the veracity of the information upon which these findings are based throughout the whole life-cycle of an analysis project. The Coordinating Draft is the culmination of that information in one product. Any comments on the Coordinating Draft are incorporated and the Final Product is produced.

# Joint Analysis Reports

## 2002-2017

Since the JALLC's door's opened in 2002, the JALLC has conducted over 200 joint analysis projects for customers from all over NATO. Below we present a selection of 15 reports spanning the past 15 years.

### ***Analysis of Future ISAF C2 Structure (2004)***

In this report, the JALLC reviewed NATO's Command and Control (C2) structure and made recommendations for a future C2 structure. At the time of the project, the International Security Assistance Force (ISAF) mission was limited to providing security in and around the area of Kabul, Afghanistan; however, a UN Security Council resolution had just authorized an expansion of ISAF activities, and this JALLC Analysis Report was requested as consideration was being given to what C2 structure would best support an expanded mission. The report stated that as the mission expanded, ISAF's commander would likely focus less on tactical operations and more on the operational level of command. To support this, the JALLC recommended ISAF to be structured as a Joint Force HQ with subordinate component commands as required, allowing the flexibility to expand and contract as mission requirements changed and provide sufficient staff to coordinate with other forces operating in the area.



### ***Operation ACTIVE ENDEAVOUR: Analysis of Effectiveness (2006)***



Operation Active Endeavour (OAE) initially began in response to the terrorist attacks of 11 September 2001. The aim of OAE was to provide a deterrent/surveillance presence in strategic waters around the Mediterranean at a time when the level of terrorist threat, and the location of the threat, were not known. By 2002, OAE had developed into a permanent presence, and by 2004, NATO put in place a New Operational Pattern that included dedicated national assets defined in a Combined Statement of Requirements, rather than employing elements of the NATO Response Force (NRF). By early 2006, SHAPE became concerned with the level of contribution participating Nations were making, particularly in terms of surface ships and maritime patrol aircraft.

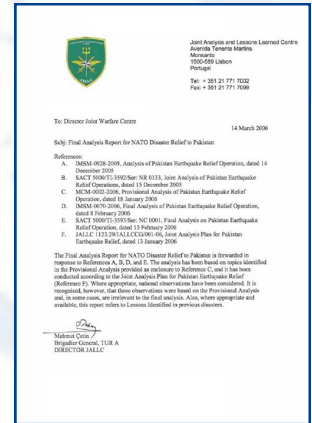
The JALLC was requested by SHAPE to analyse the effectiveness of OAE, and to assess whether: the intelligence and associated infrastructure were being used effectively; NATO assets (ships, aircraft, submarines, etc.); there was quantifiable evidence to show OAE was having a deterrent effect; and there were additional benefits to OAE outside its stated objectives.

The project team found that OAE was indeed having a deterrent effect on various types of illegal traffic; that new levels of coordination between NATO and non-NATO nations were being developed; and internal processes for information and intelligence sharing were being developed. However, although OAE was having a deterrent effect, this effect was being constrained by OAE's Rules of Engagement regarding the boarding of merchant vessels and the fact that there were perceived shortfalls in the contribution of destroyer/frigate and maritime patrol aircraft by participating Nations. Additional benefits to NATO and non-NATO nations attributable to OAE included the beneficial impact on the perception of security for merchant shipping in the Mediterranean, pressure against illegal activities, and cooperation with non-NATO partners. The findings from this project were presented to the MC by SHAPE and have had a positive effect on OAE and other relevant NATO missions.

## Disaster Relief in Pakistan (2006)

On 08 October 2005, the Islamic Republic of Pakistan suffered a major earthquake. More than 73 000 deaths and 70 000 injuries were reported, in addition to four million being left homeless. NATO offered to assist the international community in responding to this major natural disaster, initially focusing on two main capabilities: supplies and repairs. The requested supplies included tents, shelters, meals, blankets, medical supplies, and cold weather gear. The requested capabilities involved helicopter support, road engineering restoration teams, emergency field hospitals and mobile surgical teams, and movement handling and onward movement teams from an airport of debarkation.

On the whole, it was concluded that the operation was a success and the Alliance had made significant contributions. This mission showed that the Alliance was able to provide support to help deal with the consequences of a natural disaster in addition to already ongoing relief efforts. The operation also provided an opportunity to prove the ability to generate a tailored NRF, rapidly deploy it to a distant expeditionary environment, and successfully execute a type of mission envisioned by the Heads of State at the Prague Summit in 2002. The redeployment of the Force was also highly successful and demonstrated the importance of a Deployed Joint Task Force-led, centrally planned, fully coordinated and executed plan. The operation validated many of the transformation decisions implemented since the Prague summit, but also underscored the need for more change with regards to some issues such as strategic airlift or common funding.



## Overcoming Constraints in Force Generation (2008)



In this report, the JALLC examined contributions to the NRF and Crisis Response Operations (CRO) and identified common constraints identified by Nations. Working through the National Military Representatives, the JALLC used a questionnaire and interviews to gather information. This led to the identification of six constraints associated with the NRF and five with CRO. Limited funding was the only common constraint. Recommendations were made for policy and process changes to overcome those constraints. Significantly, the JALLC found that CRO— mostly ISAF— had significantly fewer issues with force generation than the NRF. Three reasons were given for this: ISAF was seen as a higher priority for limited resources, Partner nations and other non-NATO forces were able to support ISAF, making the pool of potential resources larger; there was a higher level of transformation within ISAF, such as new equipment and procedures.

Although there were a few procedural issues identified in resourcing the NRF, the majority of the constraints identified were political in nature; from concern over how the NRF would be employed, to adequate funding for NRF participation, to higher priority national missions. Political will was identified as a major barrier to NRF participation. Interestingly, more recent NATO member Nations were reported as perceiving more transformational and more Alliance-building benefits from NRF participation than older members. Unlike NRF force generation, the constraints identified for CRO force generation were evenly split between politics and capability. NATO, as a whole, did not have the required capabilities and equipment to fill the requirements. Lack of funding and national caveats were identified as major political constraints on force generation. In some cases, adequate resources were provided to the CRO but caveats on employment of those resources created resource shortfalls in certain geographic or functional areas. Overall, 12 key recommendations were made concerning force generation improvements.

## ***Sharing, Dissemination, and Release of Information in ISAF (2009)***

In 2008, the JALLC was requested to analyse the sharing, dissemination, and release of information in ISAF in Afghanistan. Information sharing in the NATO environment is complex and challenging due to its multinational force structure and organization. This challenge was most evident at ISAF, with the many contributing nations that supported mission Operation ENDURING FREEDOM. The JALLC, acutely aware of these challenges, endeavoured to identify areas for improvement and best practices that could be used to spur improvements for current and future NATO operations.

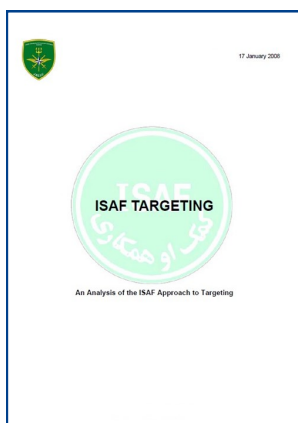
In order to analyse the sharing, dissemination, and release of information in ISAF effectively, the JALLC:

- \* Analysed information sharing within the ISAF area of operations, with specific focus on the interaction with nations and non-military partners, in order to identify possible areas for improving ISAF and wider-NATO information sharing capabilities;
- \* Examined the necessity to maintain two computer networks within the ISAF Area of Operations;
- Examined the viability of the ISAF theatre Command, Control, Communications, Computers and Intelligence architecture for the timely dissemination of time-critical information;

The analysis identified that information sharing among the many contributing nations and vast assortment of entities operating in Afghanistan was challenging. From this study, the JALLC provided recommendations which yielded significant improvements in information sharing and dissemination at ISAF.



## ***ISAF Targeting - An Analysis of the ISAF Approach to Targeting (2008)***



This report represented a review of ISAF's targeting approach with a focus on how it compared to existing NATO doctrine on the matter. In this report, the JALLC found that ISAF conducted its targeting generally in line with NATO doctrine and seemed to be quite effective. Based on the findings, five recommendations were made concerning both doctrinal changes and modifications to the ISAF targeting process.

The first four were recommendations to align NATO doctrine with ISAF targeting policies that were found to be (more) effective. ISAF's policies were adding flexibility in delegating the approval authority, formalizing the role of the target support cell, incorporating a requirement for deliberate vetting of targets, and highlighting the importance of information sharing between Nations in the target nominating process. Additionally, the report stated that NATO doctrine on dynamic and time-sensitive targeting needed clarification.

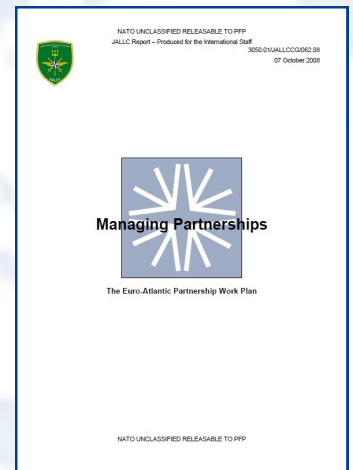
Finally, the JALLC documented a need for an improved training programme for NATO targeting and weaponizing personnel. Recommended improvements included standardized requirements and a certification standard for targeting personnel. It was also recommended that targeting training be included in future mission rehearsal training events.

## ***Managing Partnerships - The Euro-Atlantic partnership Work Plan (2008)***

Ahead of NATO Summit 2009, Allied Command Operations (ACO) and Allied Command Transformation (ACT) identified the need for a study of NATO's Partnership for Peace (PfP) programme. Consequently, the JALLC was tasked to analyse the generation and execution of the Euro-Atlantic Partnership Work Plan (EAPWP) in order to enable the stakeholders to optimize the Work Plan's utility against NATO's PfP Policy, Partners' objectives, and the current operational environment.

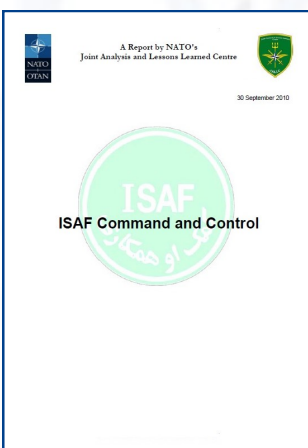
From the analysis, the project team found that both Partners and NATO Nations considered the EAPWP highly valuable as a building block for other PfP activities and outreach programmes. However, the analysis also identified a number of areas for improvement. For instance, the analysis identified gaps in the EAPWP's management procedures; planning mechanisms; and capacity for review, feedback, and input in relation to programmes. Overall, the JALLC found that greater emphasis on leadership engagement, along with the development of some processes/tools, would improve the overall relevance and effectiveness of the programme. The JALLC's review of the EAPWP further found that, although the programme could be run more effectively, both Partners and NATO Nations recognized the EAPWP as an essential element of NATO's outreach activities. The recommendations in the report identified room for further improvement in the design, coordination, and management of the EAPWP.

This study was significant in that it was the first time the JALLC was required to study NATO activities at the political-strategic level and provide recommendations directly to NATO HQs. Given this context, the study was highly successful because its recommendations have helped guide the development and implementation of NATO's PfP and outreach activities since 2008.



## ***ISAF Command and Control (2010)***

In 2009, HQ ISAF asked HQ SACT to task the JALLC to examine ISAF C2 in order to identify anticipated gaps and overlaps and to determine the levels of shared situational awareness and understanding between HQ ISAF and other HQs in Afghanistan at that time.



The study was conducted in close cooperation with NATO's Command and Control Centre of Excellence. Early on, it became apparent that there were probably some overlaps and duplication of effort within the ISAF command structure, but, given the level of maturity of the command at the time of the project, it was deemed appropriate to focus more on other interesting findings that reached beyond the original scope of the study; mainly how NATO might consider managing both multi-nationality in operations and levels of command in a post-Cold War environment. Principally, the report suggested that NATO's levels of command in 2010 did not reflect the realities of an operation such as ISAF. Further, the study illustrated that related NATO doctrine in 2010 was of limited utility in understanding or driving the construct of the operation in Afghanistan.

## ACO Intelligence Structures and Processes (2011)

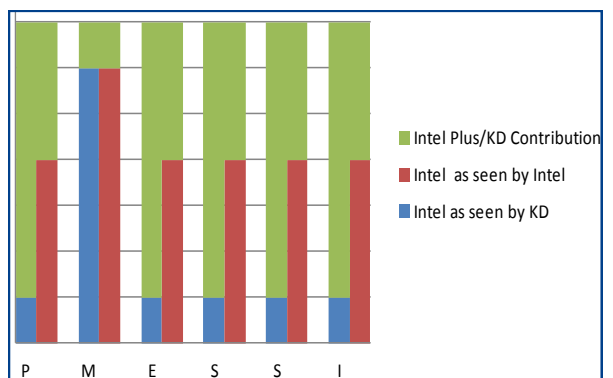


By 2010, ACO and ACT had identified a need to increase efficiency and streamline Intelligence efforts. The JALLC was tasked to undertake an analysis of the roles and responsibilities of ACO's intelligence structures within SHAPE and the Joint Force Command Knowledge Centres. The scope of the analysis included looking at the basic processes, workflows, and mutual interaction, and the future role of the NATO Intelligence Fusion Centre, with the aim of optimizing the Intelligence processes to support operations.

The JALLC found that Knowledge Development (KD) and Intelligence are inseparable concepts. Although no clear delineation was established between the two

concepts, the KD concept recognized Intelligence as a crucial contributor to KD with the addition of a broader scope for analysis focus, methods, and sources. The JALLC also found that introduction of the KD concept within NATO was hampered by a lack of change management and inadequate direction and guidance. NATO's KD concept needed to be endorsed by the Military Committee, along with updates to policy and doctrine relating to Intelligence and KD; the creation of full KD structures and related mechanisms; and procedures and training.

The Military Committee expressed the view that this JALLC Report would, "...contribute very significantly to the range of ongoing transformation projects," further, highlighting that National Representatives expressed their thanks and appreciation for this work, before HQ SACT endorsed the JALLC's analysis and findings in June 2011.



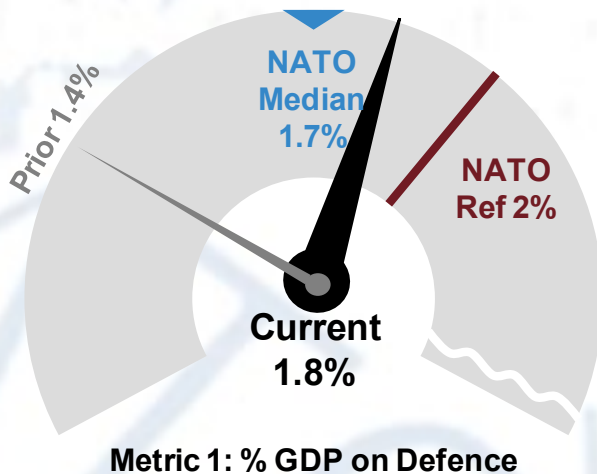
Representational view of the contributions of Intel and KD to a commander's holistic understanding. Blue is what KD sees Intel as contributing, red is Intel's own view of its contribution. Red also corresponds to the current contribution of the JFCs' KD structure. Green is the theoretical contribution hoped for by the KD Concept: the Intel Plus..

## Motivating Improved Contributions to the Alliance Defence Measurements (2011)



In this project, the JALLC distilled the complex matter of how and where Allies utilize their defence capabilities into 13 simple and politically relevant defence metrics. Together, the set of 13 metrics could be used to measure Allies' contributions to the Alliance and paint a comprehensive picture of Alliance capability at the political level. The JALLC report was published in August 2011 and in February 2012, Defence Councillors, representing the 28 Allies in the NATO Defence Policy and Planning Committee (Reinforced) (DPPC(R)), agreed on a final consolidated list of 11 metrics, selected from the original set of 13 metrics proposed by the JALLC. They also agreed that an initial population of the metrics should be compiled and

presented to the Council for notation in advance of the Chicago Summit. In accordance with the JALLC's recommendation, the metrics calculations were then performed biennially in 2012 and 2014.



On the first of two dashboards, metrics are displayed in dial form to show national contribution to alliance burden sharing.

The work of the JALLC was instrumental in enabling Allies to reach agreement on the set of metrics in several ways. First, the concept the JALLC employed to design the metrics relied upon nations measuring their commitment in the context of their national capacity, both financially and militarily. This enabled each Ally to understand what proportion of their national capacity was being devoted to NATO and to compare their proportion with that of the other Allies. It also enabled Allies to agree on a single guideline value for the metrics that all Allies, regardless of the size of their economy or military forces, could aim for. While this concept had been employed before with Allies' financial contribution being measured as a percentage of their GDP with a target of 2%, the JALLC was able to extend the concept to work also with respect to military contributions to the Alliance.

Another novel suggestion from the JALLC was to use the median value rather than the mean value as a benchmark for Allies' to compare themselves with other Allies. This helped to allay concerns among Allies that the metrics exercise could turn into a beauty contest, as all Allies would either be in the top half of the bottom half of Allies rather than being listed in a league table. Allies have since agreed to report on whether they are in the top, middle or bottom third, adding further granularity to the reporting.

Following the Wales Summit in 2014 and the introduction of assurance measures, the metrics were adapted slightly to account for the new emphasis in the requirement for Allies' contributions to the Alliance, but the set still consisted of the 11 metrics the JALLC had originally proposed with minor alterations to the data definitions – an indication of just how robust the solution proposed by JALLC had been. Furthermore, in recognition of the value of the metrics to the Allies and the need to communicate them more widely, some of the metrics would be declassified and shared with the general public. Since 2012, the NATO Annual Report has devoted at least two of its twenty pages to reporting on the declassified metrics. As Allies look to the future, the set of metrics has recently been revised again, retaining nine of the original JALLC metrics, but merging metrics relating to contributions to operations and updating the definitions to reflect changes to NATO's force structure since the Warsaw summit.

The latest set of seven metrics, agreed by the DPPC(R) in 2017, looks set to continue to assist Allies in gaining a comprehensive picture of how and where they use their resources, helping the Alliance to achieve its capability priorities and foster political will for years to come.




## Operation UNIFIED PROTECTOR, Lessons for the Alliance (2012)

The 2012 Operation UNIFIED PROTECTOR (OUP): Lessons for the Alliance report compiled 15 Lessons Learned from OUP—a 2011 NATO-led operation enforcing UN Security Council Resolutions relating to Libya. A unique operation in NATO's history.

On 31 March 2011, NATO took sole command and control of the operation, which was designed to protect civilians and civilian-populated areas under threat of attack. The origins and nature of this operation led to many high-level lessons being identified in after action reports and this report by the JALLC focused on those of interest to the NATO HQ International Staff (IS), International Military Staff, and ultimately the Allies.

**Operation Contributing Nations (as of 31 March)**

					
 Belgium	6	0	 Netherlands	7	1
 Bulgaria	0	1	 Norway	6	0
 Canada	11	1	 Romania	0	1
 Denmark	4	0	 Spain	6	2
 France	33	1	 Turkey	7	6
 Greece	2	1	 United Kingdom	17	2
 Italy	16	4	 United States	30	1
<b>Total</b>				<b>205</b>	<b>21</b>

*NATO quickly assumed sole command of OUP on 31 March 2011, just four days after the issue of the North Atlantic Council Execution Directive, with ships and aircraft provided by fourteen member nations; and in full accordance with the UN mandate of no boots on the ground.*

The report divided the 15 lessons into three broad groups: political considerations, organizational and doctrinal issues, and NATO assets and capabilities. The seven topics presented under political considerations included consultation with Non-NATO Entities, defining the political end states, information sharing in the lead up to and during NATO operations, the NATO Intelligence Warning System, procedures for sponsoring of operational partners, Strategic Communications, and Participation in Standing NATO Forces. There were three lessons under organization and doctrinal issues: transition from a non-NATO coalition, Special Advisors, and Awareness of the NATO Crisis Response Team and Crisis Management Process. The remaining five lessons related to Manning and Augmentation, Intelligence Surveillance and Reconnaissance Assets, Precision Guided Munitions, Data Link Systems and the Recognized Air Picture, and full implementation of NATO logistics planning mechanisms.

## ***Evaluating the Impact of NATO's Public Diplomacy - A Framework to Enhance NATO's Public Diplomacy Activities through Evaluation (2012)***

In 2001, the Public Diplomacy Division of NATO's IS wanted to better understand how to improve the way it evaluates the effectiveness and impact of NATO's public diplomacy activities. The JALLC was asked to analyse existing, or suggest new, practices and tools for assessing the impact of NATO's public diplomacy activities on its main target audiences in order to recommend a comprehensive Framework for evaluation and enhancement of public diplomacy activities.

The JALLC found that any effective public diplomacy evaluation must be based on well-defined goals and objectives. The Framework recommended by the JALLC in this report began with detailed planning, based on the idea that the only way to reasonably evaluate whether public diplomacy activities were having the intended results (in terms of their effects on the target audience) is first to plan how public diplomacy activities are expected to achieve the intended results. Objectives are included in the plan to provide measurable indications of the progress. Public diplomacy activities are then implemented,

monitored, and evaluated based on its associated objectives. The findings from any evaluation are used to improve the plan and the relevant public diplomacy activities.

The Framework developed by the JALLC enables progress and evaluation to be monitored on two levels: first, whether public diplomacy activities are having the intended immediate and direct outputs, and second, whether those immediate and direct outputs from public diplomacy activities are having the desired outcomes and impacts expected in the plan.



# Protection of Civilians - How ISAF Reduced Civilian Casualties (2015)



As ISAF grew during its first years of existence, both in size and in geographic scope, ISAF forces came into ever more and closer contact with Afghan civilians. However, due to a significant increase in the level of violence in Afghanistan from 2006 on, unfortunately the number of civilian casualties (CIVCAS) rose correspondingly. This increase in CIVCAS led NATO to look at ways to significantly reduce those numbers, resulting in the implementation of a very deliberate and successful strategy, incorporating a range of measures, designed to reduce CIVCAS.

To ensure that NATO benefited as much as possible from ISAF's CIVCAS reduction learning curve, the JALLC was tasked to carry out an in-depth analysis of how ISAF reduced CIVCAS.

CIVCAS incidents were related to the intensity of operations by NATO forces in Afghanistan. A statistical analysis was carried out on data collected over the period 2008–2014 which provided irrefutable evidence that ISAF did indeed reduce the incidence of CIVCAS, and that this reduction was a result of measures taken by ISAF to do so, such as specific training programmes, reporting and tracking measures—most notably the Civilian Casualty Mitigation Team established in 2011—and the continual update/revision of tactical level documentation.

Lessons and best practices which needed to be institutionalized within NATO policies, doctrine, procedures, and structures were then identified. This more qualitative analysis resulted in the proposal for a CIVCAS Reduction Cycle comprising three distinct activities—*prevention, mitigation, and learning*—which would be applied by NATO forces engaged in operations.

The final report made a number of recommendations which have been incorporated into the NATO Policy for the Protection of Civilians that was endorsed by the Heads of State and Government participating in the meeting of the North Atlantic Council (NAC) in Warsaw in 2016.



The JALLC's proposed CIVCAS Reduction Cycle

# Comprehensive Study on the Strategic Lessons Learned from ISAF (2015)

For more than 11 years, under the mandate of several UN Security Council Resolutions, NATO has committed resources and considerable effort to enable the Afghan government to provide effective security across the country and to develop the Afghan security forces to ensure that Afghanistan would never again be a safe haven for terrorists. The ISAF Mission in Afghanistan terminated on 31 December 2014. The many challenges that have arisen in Afghanistan have provided fertile ground for NATO to learn, resulting in meaningful lessons to further the Alliance's transformation. To ensure these valuable lessons would not be lost, SACT requested that the JALLC analyse strategic lessons from the ISAF mission in order to facilitate strategic military inputs to relevant transformational initiatives within NATO. ISAF Periodic Mission Reviews formed the principal data source for this project. These were analysed, together with other documents of strategic relevance.

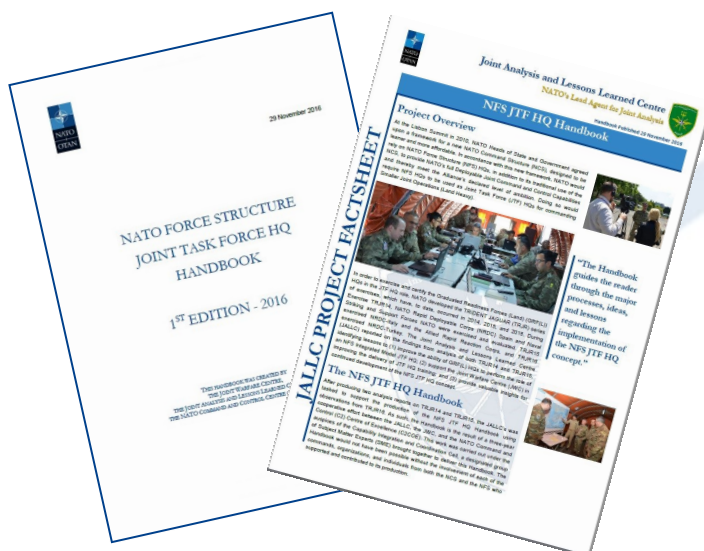
Over 600 observations and lessons were extracted and analysed, allowing the project team to identify and summarize the top eleven strategic topics related to ISAF in the following four domains: Political, Military, Economic, and Social.

This report was approved by the MC and sent to the NAC for notation and sent to the Allied Joint Doctrine Operations Working Group for action.



ISAF time line showing the different phases and key events of the mission

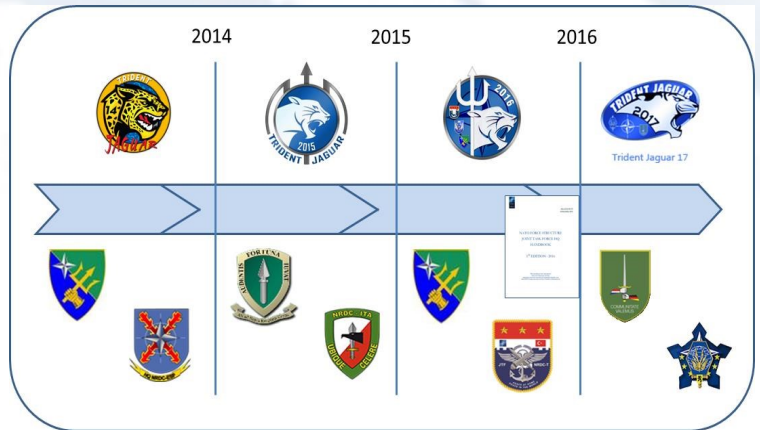
# NATO Force Structure Joint Task Force HQ Handbook (2016)



In order to train, exercise, and certify the Graduated Readiness Forces (Land) HQs—the JAGUARS—for the Joint Task Force HQ role, NATO developed the TRIDENT JAGUAR (TRJR) series of exercises. In the 2014 iteration of the exercise, NATO Rapid Deployable Corps (NRDC) Spain and Naval Striking and Support Forces NATO (STRIKFORNATO) were the first NATO Force Structure HQs to be successfully certified. In 2015, it was the turn of NRDC-Italy and the Allied Rapid Reaction Corps and in 2016 NRDC-Turkey. In 2017, the 1<sup>st</sup> German Netherland Corps and the Rapid Reaction Corps – France were certified.

All JAGUARS successfully met the requirements and were certified as Deployable Joint Operational HQs, available to the Supreme Allied Commander Europe for a one- or two-year stand-by period, in accordance with NATO's Long Term Rotation Plan.

The JALLC was tasked to analyse the processes, capabilities, and structures of the HQs involved as they were used during the exercises. Through two Joint Analysis Reports, the JALLC identified lessons to improve the ability of these HQs to perform the role of a NATO Force Structure Integrated Model Joint Task Force HQ; supported the Joint Warfare Centre in improving the delivery of training; and provided valuable insights for the continued development of the concept.



*Training audiences for the TRJR series of exercises*



The JALLC contributed to the production of the first edition of the NATO Force Structure Integrated Model Joint Task Force HQ Handbook in 2016. The Handbook combines observations from the TRIDENT JAGUAR exercises with insights and analysis from Subject Matter Experts at the Joint Warfare Centre, the JALLC, and NATO's Command and Control Centre of Excellence.

On 29 November 2016, a Signing Ceremony for the Handbook took place at the 2016 NATO Lessons Learned Conference in Lisbon, Portugal. The Handbook was signed by Brigadier General Mário Barreto, Commander of the JALLC, Captain René van Pamelan-Hollenberg, Director NATO Command and Control Centre of Excellence, and Lieutenant Colonel Jacek Ropejko, Branch Chief, Quality Assurance (Lessons Learned) of the Joint Warfare Centre (JWC) who was representing Major General Andrzej Reudowicz, Commander of the JWC. The Signing Ceremony marked the official launch of the Handbook.

# Analysis Education & Training

## Joint Analyst Training Course

In order to ensure that the JALLC military and civilian analysts are able to do their jobs and perform the special kind of analysis that the JALLC conducts, the JALLC provides a Joint Analyst Training Course at its facilities in Lisbon, Portugal. The purpose of the course is to provide analysts with the specific techniques, tools, and knowledge they will need to conduct JALLC analysis projects in accordance with the JALLC Project Approach.



The JALLC Analyst Training Course is a five-day course which leads participants through a wide range of issues and topics related to the conduct of analysis at the JALLC. The course covers all stages of the JPA and includes lectures and practical group assignments which give the students a chance to practice the knowledge they've gained. The course also includes training on how to organize findings into a written product.

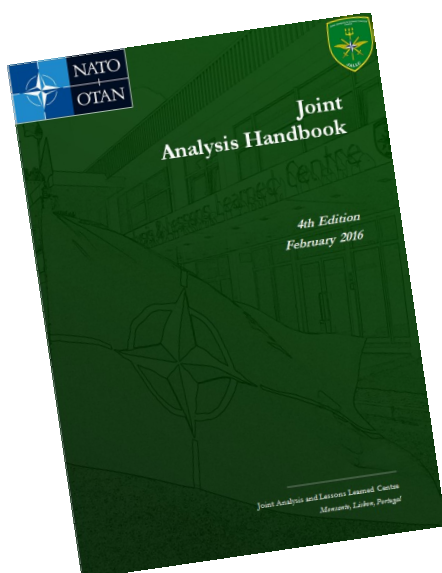
Over the years the course has evolved and matured and has become an integral part of the JALLC's training package. Although the course is primarily designed for JALLC Analysts, its scope is broad enough to be of interest to anyone within NATO, and indeed outside of NATO, conducting analysis projects. For this reason, the JALLC opens up any spare places on the course to non-JALLC participants whenever possible.

The course is complemented with a range of training materials which include, slides, hand-outs, read-aheads, practical experiments, and lectures. The course is delivered by the JALLC's team of expert trainers who provide a learning experience on everything from project management to analytical writing, setting course participants up for success in their careers as analysts.

## Joint Analysis Handbook

In order to support, not only the JALLC analysts, but all analysts within NATO and even those outside of NATO, the JALLC developed the Joint Analysis Handbook. Many of the principles, procedures, tools and techniques described in this handbook are not only applicable to Joint Analysis, but also to other areas of analysis. As such, this handbook has always been an invaluable source of information for any analyst—military or civilian—working in NATO, in the member Nations, or beyond the scope of the Alliance.

This handbook provides guidance on how to conduct analysis in support of Lessons Learned processes. It is primarily designed to assist Lessons Learned Analysis Staff Officers with all aspects of conducting analysis, both in the office and when deployed to operations, training events, exercises, or experiments. The first edition was published in 2005 digitally and printed for the first time in 2007. The latest edition, the fourth, was published in February 2016.





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2002-2017



# 15 Years of Lessons

# Learning Lessons

## NATO the Learning Organization

Learning within NATO is quite simply the basis for transformation of the Alliance and NATO recognizes that in order to learn, a dedicated procedure needs to be in place to ensure that mistakes are not repeated and best practices are captured. Indeed, NATO key documents on the matter of organizational learning state that the purpose of a Lessons Procedure is to learn efficiently from experience and to provide validated justifications for amending the existing way of doing things, in order to improve performance, both during the course of an operation and for subsequent operations. This emphasizes the need for a speedy resolution for lessons, for good analysis, for only conducting change if really required, and for the benefit of future activities, not just as a reflection on past efforts.

*“For it is a habit of mankind to entrust to careless hope what they long for, and to use sovereign reason to thrust aside what they do not desire.”*

Thucydides, 404 BC, the Peloponnesian War

A Lessons capability comprises several important elements including a defined and workable business Process, within which stakeholders can clearly identify their roles and responsibilities; Tools to support the capture, managing, searching and sharing of knowledge including lessons; and a properly resourced Structure wherein trained and experienced staff officers, supported by active Communities of Interest, can manage internal and external organizational learning. Additionally, a positive learning mind-set across an organization is extremely important, governing the success of real learning, sustained improvement and profitable knowledge-sharing with Allies.

Everyone within an organization needs to be involved in learning lessons for the Lessons Capability to be successful. Yet often it seems that many people believe that the presence of a Lessons Capability frees them of their own responsibility for organizational improvement and learning: *“I don’t have anything to contribute; I don’t need to learn anything myself; it’s not up to me to change the way we do business!”* Yet nothing could be further from the truth.

A lesson is not learned until something changes in the way we operate, and the ones who need to change are the ones affected by an issue. Everyone in an organization has a responsibility for learning lessons, and needs to understand its value. The simplest way to get everyone involved in NATO in learning lessons is to ensure that the capability is constantly demonstrating value. To do this, the JALLC has an important role to play supporting NATO’s Lessons Learned process, Lessons information sharing, and encouraging participation in the Lessons Learned community. In this respect, the JALLC also helps other organizations and even NATO’s Partners set up and improve their Lessons capability.

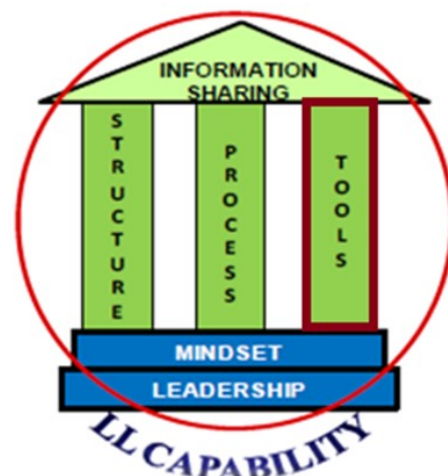
In this chapter we explain a bit more about how the JALLC’s activities in the Lessons domain have contributed to NATO’s Lessons Learned Capability over the past 15 years. These activities include the development and evolution of the NATO Lessons Learned Portal, the NATO Lessons Learned Conference, and the JALLC’s own outreach activities.

# The NATO Lessons Learned Portal

## A Lesson in History or... A History of Lessons

NATO has always prided itself on being a learning organization; improving over time by capturing hard-won knowledge and applying it efficiently and effectively, transforming to meet the needs of the Allies. Much of this transformation is based on results from application of the NATO Lessons Learned Capability; its structure, process, and tools.

Connecting the right people by gathering them through the Lessons Learned Community, following the right process, using the appropriate tools, ensures that Lessons from all over NATO and from all NATO activities are captured, analysed, learned, and shared. And it is this last requirement in particular—the right tool—that would lead to the development of the NATO Lessons Learned Database (NLLDb) that would later become the NATO Lessons Learned Portal (NLLP) we know today.



## The Need to Share

The screenshot shows the NATO Lessons Learned Database (NLLDb) login page. At the top left is the NATO logo (a compass rose) and the text 'NATO OTAN'. Below it is the JALLC logo (a shield with a trident and crossed swords) and the text 'JALLC'. The main heading is 'NATO Lessons Learned Database'. There are two buttons: 'New User' and 'Quick Start Guide'. Below these is a link: 'Software requirements for details click [here](#)'. The login section is titled 'User Login:' and contains two input fields: 'Username:' and 'Password:'. Below the input fields is a 'User Login' button.

*A screen shot of the first NLLDb log in 2005*

The need to share observations, lessons, and best practices was identified early on within NATO as being key to a successful Lesson Learned Capability. As such, an IT tool would need to be developed and made available to the NATO Lessons Learned Community. This tool would need to be easy to use and facilitate the NATO Lessons Learned Process.

In 2003, initial development began on a Lessons management tool, inspired by the Lessons Learned Database of the PAT, the JALLC's precursor body. With the JALLC in the lead, this first tool became the NATO Lessons Learned Database, designed to address the needs of NATO Lessons Learned Community. Launched in 2005, it was initially only made available on NATO's classified computer network, limiting its scope. However, by the following year, in 2006, an unclassified version was launched and made available via the internet.

The NLLDb was then available to all NATO Lessons Learned Community members—mostly Lessons Learned Staff

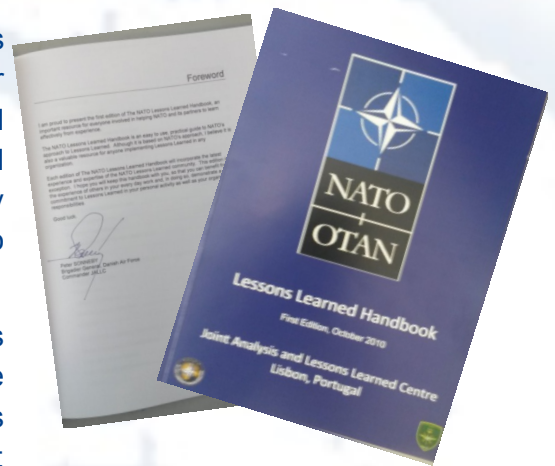
Officers—who needed to request access through the JALLC, as the database manager. This was initially granted on a *need to know* basis. By 2010, access was also being granted to Lessons Learned Community representatives from NATO Partner nations, widening the scope of the NLLDb.

As the use of the NLLDb evolved, certain users, such as Lessons Learned Staff Officers from NATO's Joint Force Commands, SHAPE and HQ SACT, were granted access to more areas of the NLLDb which would allow them to better perform their roles.

## What did it do?

The NLLDb was initially developed with NATO Lessons Learned Staff Officers in mind, allowing them to better coordinate and manage work relating to Observations and Lessons from routine NATO activities, operations, and exercises. The NLLDb functioned as a centralized and easily accessible location for these officers to work from and also became the archive for anything to with NATO's Lessons.

Although the NLLDb was designed to house all Lessons related material, it also contained guidance on how to use the database and on the NATO Lessons Learned Process. This guidance remained on the NLLDb until 2010, when the first edition of the NATO Lessons Learned Handbook was published, which took over the role of providing guidance and information on NATO Lessons Learned Process. The NATO Lessons Learned Handbook is now in its fourth edition and continues to inform its audience on all matters related to Lessons.



The first edition of the NATO Lessons Learned Handbook

Early guidance on the NLLDb described Observations as, “Detailed examinations of phenomena prior to analysis, diagnosis, or interpretation.” Lessons Identified were described as “Observations that have been processed and deemed to be beneficial to others.” The staffing process was described as including discussion of the nature and causes of the observation, recommendations of actions to be taken, and a proposed action body. A Lesson Learned was considered to be, “An implemented recommendation action that produced an improved performance or increased capability.” Best Practices was a term which was only introduced later to cover a need to describe a technique, process, or methodology that contributed to the improved performance of an organization and had been identified as the best way of operating in a particular area compared to other good practices. This terminology would later become established within the NATO Lessons Learned Community, albeit—as with all transformational terminology—the exact meaning of the terms would evolve and be refined as time passed, to meet the relevant needs.

## How did it work?

It was clear from the outset that the NLLDb would need to meet certain needs to serve its purpose:

**Access:** all users needed to be able to access Observations, Lessons, and Best Practices either being run through the NATO Lessons Learned Process or which had been archived.

**Contribution:** all users needed to be able to contribute Observations, Lessons, and Best Practices as efficiently and effectively as possible; this meant designing a user-friendly template.

**Extract:** database research results needed to be provided in an easy to use and searchable format (PDF) that could be downloaded for further use.

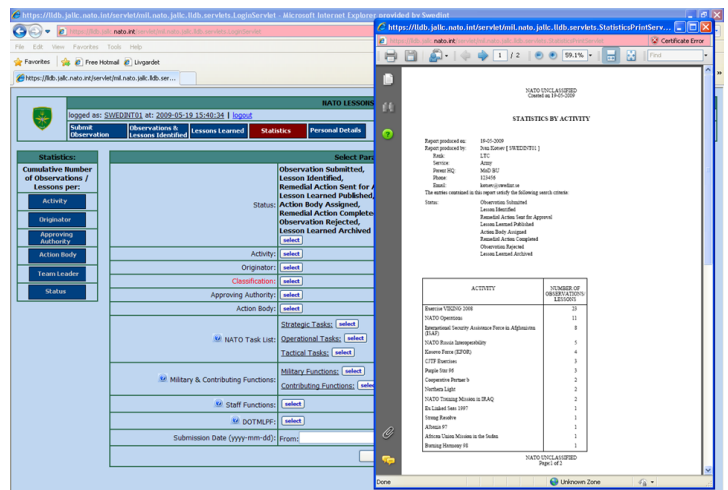
**Management:** the database would need to be managed properly to ensure that it remained factually correct and contained only relevant information. Specially trained Staff Officers from the JALLC, HQ SACT, SHAPE, and the Joint Force Commands had enhanced permission rights allowing them to review, update, approve, and reject the entries in the database.

**Search:** database entries would need to include metadata that would allow users to search for and through Observations, Lessons, and Best Practices by applying specific filters.

# Keeping up with the times; Meeting Challenges: 2005-2010

From its launch in 2005, the NLLDb underwent several upgrades, retaining its core functions but becoming steadily more technically advanced and user friendly. The review of the NATO Command Structure in 2013 resulted in greater awareness of the NLLDb among NATO Nations and Partner nations and saw a corresponding increase in the use and submission of observations to the NLLDb. It was also at this time that the roles and responsibilities related to NATO's Lessons Learned Capability were revised, resulting in further adjustments to how the NLLDb operated. These revisions would ensure users became aware about Lessons entering the NATO Lessons Learned Process via the NLLDb.

In light of these changes, one challenge faced by the NLLDb developers during the evolution of the database was the need to balance the timely submission of Lessons, Observations, and Best Practices, with the assurance that such submissions were being properly reviewed and approved through the Lessons Learned Process. It was important to maintain the quality of the data contained in the database. As such certain checks were put in place that would allow trained Lessons Learned Staff Officers to validate the relevance of submissions, that they were factually correct, and to prevent duplication before they were published on the NLLDb, greatly increasing the value of the data it contained.



A screen shot of the old NATO Lessons Learned Database

Finally, the exponential growth of the internet since 2005 meant that search capabilities, website development, and increasing computer familiarity had greatly evolved and improved. As such, what by 2010 was already viewed as standard practice (software, platforms, methods, etc.) had not even been thought of, or was simply in its early development stages, when the NLLDb was developed in 2005.

All of the above changes and challenges, and the ever-increasing need to share information within NATO, resulted in the recognition that the NLLDb was no longer a powerful enough tool to suit the Alliance's needs. There was now a need for a Lessons Sharing tool that could do more than just function as a database of Lessons. What was needed was a Lessons information exchange system that was web-based, easier to use, and easier to manage.



The NATO Lessons Learned Prototype Portal Home Page in 2010

# The NATO Lessons Learned Portal 2010-2017



The NATO Lessons Learned Portal was developed by the JALLC to answer to these needs. It was launched online as a prototype in 2010 and initial user feedback was positive, prompting further development and refinement. In March 2013, a NATO Lessons Learned Working Group, dedicated to develop and maintain a NATO Lessons Learned Community, reviewed the prototype and provided input for a development plan for the Portal. Simultaneously,

work was being conducted to include reference to the NLLP and its use in key NATO documents, setting out roles, responsibilities, workflows, and functionalities, among other things.

Since 2013, the JALLC has continued to develop and manage the NLLP, which has become NATO's key tool for the sharing of Lessons Learned and related information. The NLLP is a centralized platform, allowing the NATO Lessons Learned Community to share Lessons Learned related documents, such as overarching reference documents (Policies, Reports, Handbooks, etc.) and operational and exercises-related lessons (Best Practices, Lessons Identified, Lessons Learned).

The NLLP also supports Communities of Interest which are areas within the NLLP that connect users with a common interest in a specific subject or within a specific area of expertise by providing them with access to dedicated and exclusive areas of the NLLP to announce events and share documents.

## Communities of Interest FAQs

**What is a Lessons Learned Community of Interest Area?** *A Lessons Learned Community of Interest Area is a specific website on the NLLP designed to facilitate the sharing of Lessons Learned related information and the interaction of the NLLP members with a common interest on a specific subject within a specific area of expertise.*

**What are the Terms of Reference for the Lessons Learned Community of Interest Areas?** *The creation and administration of Lessons Learned Community of Interest Areas is regulated by the Procedure for the creation of the Lessons Learned Communities of Interest (LLCOI).*

**What is the procedure to request the creation of a new LLCOI Area?** *The LLCOI Area can be created based on a real need identified by one or several organizations. One of them will necessarily act as the Sponsoring Organization for the LLCOI Area and should submit the Application Form to the JALLC that will be forwarded to HQ SACT for approval.*

2017 is a key year in the evolution of the NATO Lessons Learned Portal. One aspect of its ongoing evolution involves a technological upgrade of the software. This upgrade was necessary to meet the need to keep the Portal operable and sustainable for the future. Another aspect of the evolution is the general improvement of the NLLP's functionalities in order to turn the Portal into the NATO's single Lessons Management Tool, as part of the implementation of the NATO's wider and concerted efforts to improve its Lessons capability which began in June 2017.

# The Evolution of the 2003-2017



Since 2003, the JALLC has hosted the NATO Lessons Learned Conference, which has become an important event in NATO's Lessons Learned calendar, bringing together participants from NATO and National entities, developing a stronger NATO Lessons Learned Community. This event provides participants with the opportunity to exchange information and experiences within the NATO Lessons Learned Community and stimulates discussions on best practices for improving NATO's Joint Analysis and Lessons Learned capabilities, enabling the continuous transformation of the Alliance. In this section we provide an overview of how the NATO Lessons Learned Conference has evolved throughout the years and take a brief look at what the future may hold.

## Conference Attendance Over the Years

From the very first conference in 2003 to the latest iteration which was held in 2016, the conference has transformed from a fairly modest affair, which saw subject matter experts get together to discuss relevant topics, into what it is today. As the conference grew in participant numbers and importance, it became the key event for the Lessons Learned Community to get together on an annual basis, to touch base and catch up on the latest thinking as well as to review experiences from the previous year. Today, the conference boasts attendance of over 250 participants from a wide range of NATO and Non-NATO Entities, representing many NATO Nations and partners.

	Attendees from NATO Entities	Attendees from NATO Nations	Attendees from Partner Nations	Other Attendees	Total Attendance
2003	33	18	NA	NA	51
2005	NA	NA	NA	NA	86
2006	70	53	NA	NA	123
2007	58	71	NA	NA	129
2008	112	77	12	NA	201
2009	112	90	17	1	220
2010	69	85	15	3	209
2011	121	127	18	5	271
2012	117	89	15	NA	221
2013	129	59	15	4	207
2014	129	62	29	2	249
2015	162	90	18	6	276
2016	147	101	25	2	275

## Location, Location, Location



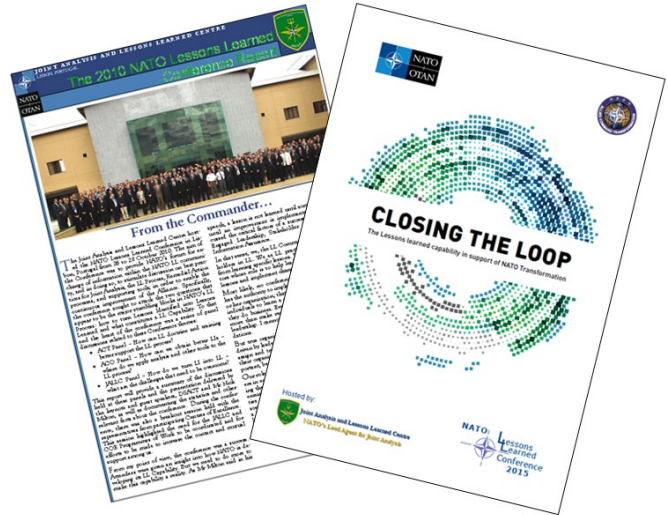
The location of the NATO Lessons Learned Conference has changed over the years. From 2003 to 2006 the conference was held at hotels in or near Lisbon. But the growing number of participants and the increasing importance of the conference meant that a more suitably sized and located venue was required. In 2007, the conference moved to its current location, the Portuguese Military Academy in Amadora, Lisbon. The academy provides a good mix of large auditorium spaces, smaller break out rooms, and an area to socialize and network.

# Conference Reporting

The conference has had a wide range of themes over the years centred around NATO's Lessons Learned Process. These themes have included subjects such as: *Extracting Lessons from Operations* and *Closing the Loop - The Lessons Learned Capability in support of NATO Transformation*. Each conference theme is broken down into related topics which are discussed by panels of subject matter experts and the conference audience.

The JALLC has always produced a report on the conference, although the format, content, and reach of the product has evolved over the years. For the first conference in 2003, the JALLC produced minutes: a simple and fairly short document, summarizing in bullets the agenda, number of participants, topics discussed, and any highlights. As conference participant numbers swelled, it became apparent that there was a need for a product that would provide more detail on what was covered at the conference.

In 2010, the JALLC published the first edition of the NATO Lessons Learned Conference Report, which was made available to the public via the JALLC's website. This version of the report contained overviews of the panel discussions, summaries of key speakers' presentations, pictures from the conference, and other related information. By 2015, the conference report had evolved into what it is today: a 50-page booklet on all things related to the NATO Lessons Learned Conference, including information on the JALLC and its activities. The report is printed in colour and is also available in digital format on the JALLC's website.



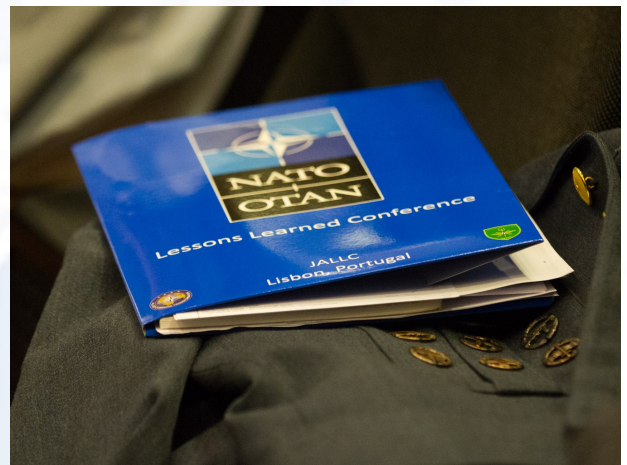
## Conference Overview 2003 - 2016

2003

The very first NATO Lessons Learned Conference was held in 2003 and was mainly intended to provide a venue at which participants could exchange views and ideas on the NATO Lessons Learned Process in general and more specifically on the NLLDb (the forerunner of the NLLP) and the PfP Lessons Learned Database.

2005

Although there was no conference in 2004, a 2005 iteration was held to ensure that the overarching NATO Lessons Learned Process, structure and technology was understood by all Lessons Learned stakeholders to enable the continuous improvement of the Alliance. The Lessons Learned Community understood that, after the process had been defined and the basic tools put in place, it would still be a challenge to ensure they were implemented at every level of NATO. As a result of the success of the 2005 conference, the decision was made to make the NATO Lessons Learned Conference an annual event and the JALLC was tasked by SACT to become its host.





2006

The 2006 conference was focused on enhancing the understanding and responsibilities of those involved in NATO's Lessons Learned Process. The roles and responsibilities of relevant NATO and national organizations in the NATO Lessons Learned Process were discussed and technological and conceptual improvements made or developed over the course of the previous year were presented. For the first time, the conference also offered participants a review of current operational lessons and issues in a separate seminar.

2007

By 2007, the role of the Lessons Learned Process in NATO as well as the increasingly important role of the Lessons Learned Community in its implementation were

becoming clear. The best practice of ensuring that the NATO Lessons Learned Process evolved based on ideas and experiences from within ACT, with direct cooperation from ACO, was being developed. Following this concept, the 2007 iteration of the conference aimed to provide a forum for the reciprocal exchange of ideas and experiences in the area of Lessons Learned. During the conference, Lessons Learned related improvements and innovations were presented, including those to the NATO Lessons Learned Database, and the JALLC's *Joint Analysis Handbook* was highlighted.



2008

2008 was the first time that NATO's Partner nations were invited to attend the conference, furthering NATO's efforts to integrate them into NATO practices and operations. Given the role of the Lessons Learned Process and Community as a stimulus to the development of best practices, ACT, with direct cooperation from ACO, wished to ensure that the NATO Lessons Learned Process itself evolved based on such ideas and experiences. The 2008 conference succeeded in providing a platform for defining that evolution. This conference also offered a panel discussion showcasing NATO Commands and Nations internal Lessons Learned processes and how their processes interacted with the NATO-wide Lessons Learned Process. The challenge would be to keep everyone involved and actively contributing, pushing Lessons through to implementation. Critical to achieving this would be increasing the level of participation in the Lessons Learned Process throughout NATO and expanding the use of networking by key players.

2009

A central theme that emerged from the 2009 conference was overcoming hindrances to sharing. The need to share was no longer questioned at this stage. Instead, the problem was in identifying *what* needed to be shared and *how* it should be shared. It was pointed out that the issue begins in identifying the *customer* for the information to be shared. Not everything can or should be shared; only applicable and relevant lessons should be shared with a targeted customer. Sharing Lessons with and within ISAF emerged as the other central theme of the 2009 conference. The main point highlighted was that NATO must use the criteria of applicability, relevancy, and common sense in the sharing of Lessons related information.

2010

The aim of the 2010 conference was to provide NATO with a forum for the exchange of information within the NATO Lessons Learned Community, and in doing so, to stimulate discussion on best practices for Joint Analysis, the Lessons Learned Process, Remedial Action processes, and supporting tools, in order to enable the continuous improvement of the Alliance. Specifically, the conference sought to tackle the two questions that appeared to be the major stumbling blocks in NATO's Lessons Learned Process: how to turn Lessons Identified into Lessons Learned; and what constitutes a Lessons Learned Capability.



2011

The format for the 2011 conference differed greatly from previous years where the focus had been on the NATO Lessons Learned Capability and Process, and was aimed at Lessons Learned Practitioners, examining how NATO can implement lessons learning in its organizations. The theme for this conference was *Extracting Lessons from Operations* and the focus was moved from Lessons gained from operations to the operators themselves; those who are best placed to identify lessons and who in turn must learn lessons if the organization as a whole is to improve.

2012

The 2012 conference theme was: *Learning from the Past – Preparing for the Future*. The theme allowed participants to look beyond development of the NATO Lessons Learned Capability and the capture and implementation of specific lessons from NATO's (then) recent activities, towards the broader perspective of NATO's activities of the past decade to consider how experience and lessons can be applied to NATO's future activities.



2013

The 2013 conference was focused on the fundamentals of NATO's organizational learning processes, aiming to showcase how NATO learns from experience, and consolidates and shares lessons among its Command and Force Structures as well as with member and partner countries. The conference theme was: *Consolidating Lessons, Sharing and Learning*.

2014

The 2014 conference focused on the theme: *Learning from Experience, Strengthening the Alliance*, and looked at how NATO’s learning process can be structured to ensure it is a continuous one. The concept of continuous learning was echoed in (then) SACT’s description of his vision of Transformation which was given during his opening speech: “...a golden thread which binds NATO’s past, present, and future.”

2015

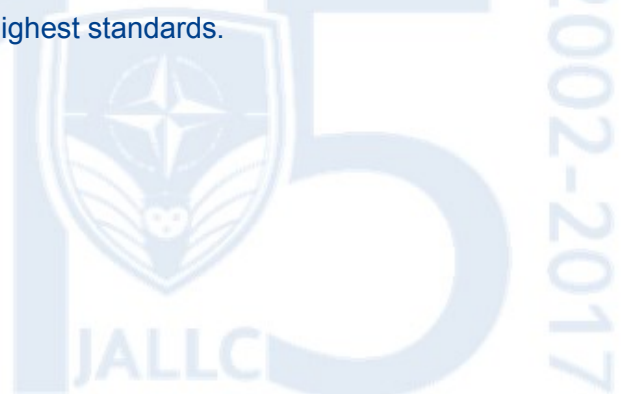
The aim of the 2015 Conference, which covered the theme: *Closing the Loop: The Lessons Learned Capability in Support of NATO Transformation*, was to assess how NATO’s Lessons Learned Capability supports the Alliance’s ability to prepare for and conduct current and future military operations. During the conference, participants explored new approaches to embed lessons from Non-NATO Entities and investigated parallels with the way other organizations manage their Lessons Learned process.

2016

During the most recent iteration of the conference, which was held 2016, the focus was on the theme: *The Future of Lessons Learned: Innovation and Improvement*. The audience heard presentations and discussions on various topics relating to the Conference theme including on SACT’s key focus areas, innovative ideas for the future of Lessons Learned and how NATO Lessons Learned support can be improved. Having the Lessons Learned Community come together at the Conference invigorated efforts to optimize the NATO Lessons Learned Process; in particular the role the JALLC will play in this respect and the future of the NATO Lessons Learned Portal.

## The future of the NATO Lessons Learned Conference

The JALLC is always looking for ways to improve the NATO Lessons Learned Conference in terms of content, participant experience, and tangible outcomes for the Alliance. The JALLC seeks to align the Conference with NATO’s and the Nations’ expectations for the future and will continue to strive to organize and deliver this key event in NATO’s Lessons Calendar to the very highest standards.



# Reaching Out for 15 years

The JALLC has a long history of outreach amongst the Lessons Learned community. The NATO Lessons Learned Conference has built a reputation for bringing the broader Lessons Learned community together. In addition, the JALLC has readily accepted many invitations to attend and present at a large number of conferences, training events, seminars and working groups to provide expertise both in general Lessons Learned process terms, but also on specific analysis themes. Indeed, the JALLC is often seen as a source of subject matter expertise in many areas beyond simply *Doing Lessons* by virtue of the often unique nature of some of its analysis projects and the NATO-wide reach that these involve. A good example is the JALLC's study of Provincial Reconstruction Teams (PRT) in ISAF: the only, to date, holistic overview of each and every PRT in ISAF, their configurations, outputs and achievements. The project manager continued to brief this topic at the highest levels in NATO some time after the project was finalized.



*(L) CDR Mike Kleibaum and Mr Andrew Eden with two members of NCIA during a JATT-facilitated lessons brainstorming session at the Oeiras campus in Portugal. (C) LTC Hans Postma and Mr Andrew Eden at Camp Bastion, Afghanistan, en route to Kabul, Afghanistan. (R) Mr Andrew Eden and LTC Paul Handle on a cultural tour during an outreach visit to Kazakhstan.*

## Early Days of Reaching Out

In the JALLC's early years, much of the Lessons related outreach was conducted by what was then called Production Branch, and by the Operations Division and Exercise, Training, and Experimentation Division for joint analysis projects. Gradually, as the JALLC gained experience in conducting joint analysis and its capacity developed, the requirement for outreach increased. Initial outreach efforts focussed on promoting the NATO Lessons Learned Database, rolled out in 2005, but would quickly expand into other areas including training events at the Joint Force Commands and NATO HQ, to not only increase familiarity with the database, but also to enhance individual HQs' own Lessons capability. Part of these efforts also included providing database support to the development of NATO's Defence Planning Process conducted at HQ SACT's Staff Element Europe at Liveoak on the Mons campus.

The capstone to the JALLC's early outreach activities was actually a joint analysis study that required the JALLC to examine the NATO Lessons Learned Process, including the Remedial Action process and lesson sharing, both from the NATO and national perspective. In addition, and as part of the data gathering effort, the analysis team produced a separate report on the theme specific to ISAF.

The analysis, and importantly the relations gained across the Alliance and both NATO and Nations contributing to the ISAF mission, were an important contribution to the development of a course that would help train the NATO Staff Officers in NATO's Lessons Learned Process (the Lessons Learned Staff Officers Course) and the JALLC Advisory and Training Team which would become a dedicated team of subject matter experts that travelled around NATO providing support, training, and expertise regarding almost all matters related to Lessons Learned.

# The Lessons Learned Staff Officers Course

In May 2009, the JALLC supported the pilot NATO Lessons Learned Staff Officers Course, hosted by the Swedish Armed Forces International Centre, which, to this day retains the directorship of the course. This highly popular course has trained over 400 students from 40 nations (an average of 25% of each course's students represent Partner nations), and is responsible for a significant increase in appreciation and understanding of the value and importance of Lessons related activities within the military.

The course increased awareness both of the utility of the NATO Lessons Learned Process and the JALLC itself, and as a result, the JALLC was increasingly requested to conduct briefings and training across the Alliance. This demand required the establishment of the JALLC Advisory and Training Team, for training and mentoring in Lessons related activities, and a suite of media to promote Lessons management and JALLC analysis projects. These have included the (digital) publication of the JALLC Analysis Handbook (2005), the publication of the NATO Lessons Learned Handbook (2010), the NATO Lessons Learned Portal (2010), and The Explorer, the JALLC's newsletter, first published in October 2010, and JALLC Project Factsheets, produced from 2011 on.



## The JALLC Advisory and Training Team

The JALLC Advisory and Training Team, or JATT as it was referred to, was established in 2010 to assist member and Partner Nations as well as NATO commands and agencies, to establish and enhance their Lessons capabilities. The JATT advised on Lessons related processes, including NATO's own Lessons Learned Process, Lessons related organization, and supporting tools. The JATT mostly worked through assisting structured NATO training and also by sending out Mobile Training Teams and conducting various mentoring activities but also acted as a hub for the NATO Lessons Learned Community. The original team comprised of two members, but the

*(From top to bottom) Mr Andrew Eden and LTC Paul Handle on a cultural tour during an outreach visit to Kazakhstan. LTC Robert Polak, Joint Warfare Centre, as a student at the NATO Lessons Learned Staff Officers Course, Sweden in 2011. Mr Andrew Eden and LTC Paul Handle with students during an outreach visit to Kazakhstan. LTC Hans Postma and Mr Andrew Eden arriving at KAIA North, Kabul, Afghanistan.*

demand for the team's support quickly became so great that the team was soon expanded to include a third member. The JATT members were civilian and military JALLC personnel from different backgrounds and nationalities ensuring the broadest possible scope and reach of the team as well as a broad experience base.

## The Approach to Outreach

The JATT developed a three-stage approach to its outreach activities, comprising Initial Assessment, Focussed Engagement, and finally Monitoring & Mentoring. The Initial Assessment phase allowed the team to understand the current and potential capability the entity being assessed may have for Lessons related activities, and the appropriate support which would be required to establish or enhance a Lessons capability. The Focussed Engagement phase could include close support of training events, provision of supporting IT resources, and assistance in establishing a Lessons Process. The final phase, Monitoring and Mentoring, comprised maintenance of an advisory relationship and a strong information-sharing relationship.

To ensure operational effectiveness and efficiency, but also to encourage information-sharing, JATT prioritized a Regional Approach to its outreach programme. For instance, the JATT would engage several regional Nations, or a NATO Joint Force Command with its subordinate Component Commands, in the same programme.

Well-trained personnel are a key driver for successful Lessons Process. The JATT supported this in two ways, with support to the NATO Lessons Learned Staff Officer Course and to national training activities, providing guest speakers and facilitators to training events.



*LTC Hans Postma and Mr Andrew Eden from the JATT with LTC Matthias Fieser DEU A, the JALLC Permanent Representative at ISAF, with students from the IJC, winter 2011.*



*CDR Mike Kleibaum briefing at the NATO Lessons Learned Staff Officers Course, Sweden*

Typically, the training provided would reflect the NATO Lessons Learned Staff Officers Course curriculum, and included instruction on the theoretical and doctrinal background to Lessons related activities, observation gathering, Lessons staffing procedure, Lessons sharing Best Practice, supporting IT resources, and examples and case studies of Lessons related processes and procedures from within and outside the Alliance.

Since 2010, the JATT has undertaken a large number of engagements, including quarterly support to the NATO Lessons Learned Staff Officers Course, visits to NATO Command and Force Structure HQs, and NATO and Partner Nations, plus a large number of Centres of Excellence, and Partner Training Centres. The JATT has also closely supported HQ SACT's Nations Engagement Team (NET), providing a small briefing team during the NET's missions to NATO Nations under the auspices of HQ SACT's Deputy Chief of Staff, Capability Development.

The JATT has also conducted two training events in ISAF, training staff at HQ ISAF, ISAF Joint Command and the NATO Training Mission Afghanistan. In addition, the JATT represented the JALLC and conducted outreach including training in the USA, France, Spain, Portugal, UK, Norway, Sweden, Finland, Poland, Germany, Slovakia, Slovenia, Croatia, Bosnia and Herzegovina, Turkey, Italy, Hungary, Denmark, Belgium, the Netherlands, Australia, Kazakhstan, Azerbaijan, Afghanistan, Romania, Bulgaria, Ireland, Georgia, Estonia, and Lithuania.

## The JALLC's Outreach Activities Today

Today the JALLC continues to offer training on conducting Analysis and the NATO Lessons Learned Process. This training includes the use of various lessons-gathering processes, staffing and sharing tools, basic analysis techniques, and lessons learned procedures. The aim of the JALLC's outreach efforts remains to develop a strong information-sharing relationship with those it reaches out to through delivering flexible, bespoke support at the customer's location. The strength of the JATT's activities lies in the ability to tailor the support provided—be that for example analysis training, or assistance setting up a Lessons Learned capability or, in fact, any kind of support required relating to Analysis and Lessons activities.

The JATT's composition is tailored to each outreach event to ensure the best possible mix of civilian and military experience and expertise is provided to the customer. Although priority is given to NATO Operations requesting support, the JALLC also engages with organizations within the NATO Command Structure and the NATO Force Structure, Centres of Excellence, Nations, Partners, and even other international organizations.



For example in 2015 and 2016, the JALLC provided support to the Ministry of Defence in Baku, Azerbaijan, the Afghan National Army in the context of the Resolute Support Mission, Joint Force Command in Brunssum, the Netherlands, the Hungarian Ministry of Defence (see picture), the Lithuanian Armed Forces, the Italian Air Force, the Japanese Ministry of Defence, the Ukrainian Armed Forces, to name but a few.

*Lessons Learned Consultation with HUN MoD and HDF Officials (L to R, COL László Tóth, Head of Lessons Learned Department of HDF Training and Doctrine Centre, COL Santiago San Antonio Head of Plans & Programming Division JALLC, LGEN Zoltán Orosz, Deputy CHOD HDF, BGEN József Szpisják, Commander HDF Training and Doctrine Centre, LTC James Johnson, Chief JATT). © www.honvedelem.hu*





2002-2017



# 15 Years of Support to Exercises and Operations

# Support to NATO

## Exercises & Experimentation

JALLC support to NATO exercises and experimentation over the past 15 years has been multifaceted and has underpinned every aspect of the JALLC's Mission. JALLC military and civilian analysts have participated in all stages of the NATO Exercise Process, from Concept Specification and Development, through Planning and Product Development, Operational Conduct to Analysis and Reporting. Exercises, especially the Crisis Response Planning Phases (IIA/IIB) and Execution Phase (IIIB), have represented excellent venues at which to collect observations and to complete surveys, questionnaires, and interviews. This invaluable data has been pivotal in supporting the JALLC's analysis of NATO's many complex issues and challenges. In this section we provide an overview of a selection of NATO Exercises and Experiments over the past 15 years which give a good indication of the kind of support the JALLC provides to these important NATO events.

### **Exercise NORTHERN LIGHT**

**2003** Exercise NORTHERN LIGHT 03 provided a key opportunity for NATO to conduct several experiments to test new operational concepts, ideas, and equipment. These experiments were designed to be conducted during Exercise NORTHERN LIGHT 03 without significantly affecting the actual exercise being carried out, taking advantage of the exercise scenario, location, and forces taking part. The results of the experiment were used to further develop and enhance NATO's operational effectiveness in several specific areas. The experiments were also more generally used to demonstrate NATO's ability to conduct large scale experimentation, to develop NATO procedures for experimentation, and to ensure relevant experimental results were efficiently collected and used to enhance NATO's operational effectiveness.



The first experiment tested the effectiveness of using autonomous underwater vehicles (AUVs) fitted with commercial off-the-shelf sensors in response to a terrorist threat in ports and harbours. The JALLC concluded that although AUV technology at the time was relatively mature for carrying out mine-hunting operations with minimal operator training, the concepts, doctrine, tactics, and procedures for the employment of AUVs and their integration with NATO's conventional Mine Counter Measures forces required development, refinement, and promulgation. The second experiment tested the concept of amalgamating the in-theatre coordination responsibility of the Multinational Joint Logistics Centre with the command and control authority of the Maritime Multinational Logistic Command in order to provide a leaner organization for the logistics support of joint operations. One key conclusion was that a Joint NATO Logistics Command may afford a viable solution to the provision of timely logistics support to the NATO



Response Force in the planning, preparation, and execution phases of an operation: such an idea eventually resulted in the NATO Joint Logistic Support Group concept. The third experiment tested the Concept of Operations and functions of the SHAPE Prototype Nuclear, Biological, and Chemical Event Response Team (PNBC-ERT) and Analytical Laboratories and Sample Gathering teams. The JALLC concluded that the concept was a workable method of enhancing a Commander's staff in an area where organic specialist knowledge is scarce and was recognized as such by both the Joint Force Command HQs and Component Commands.

## Exercise ALLIED ACTION 2004



Exercise ALLIED ACTION 2004 was the first Command Post Exercise to test the Deployable Joint Task Force (DJTF) HQ concept to provide joint C2 for the NRF.

Four JALLC analysis projects benefited from data collected at this exercise including one JALLC analysis project which looked at the Effects Based Approach to Operations (EBAO) concept developed by the Joint Force Command Naples' DJTF HQ, and another which looked at the process, organization and technology associated with the coordination between the DJTF

and the parent HQ. The JALLC analysis project that examined the Information Operations (Info Ops) activities carried out by Joint Force Command Naples staff during the exercise reported on five key areas: the role and position of the Info Ops Chief, global synchronization of the Info Ops effort, staff training on Info Ops, Info Ops targeting, and Info Ops exercise play. Finally, the JALLC also investigated the Information Management and Knowledge Management (IM/KM) processes within the DJTF HQ and their ability to support the Commander's Critical Information Requirements, Internal Communications, and Information Channels.



2004

## Exercise ALLIED WARRIOR 2005

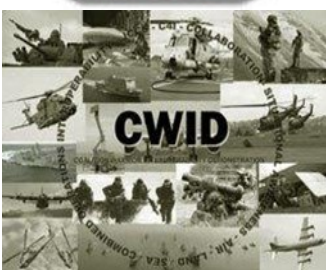


In 2005, the JALLC was requested to carry out analysis of the integration of the Nuclear, Biological, and Chemical Joint Assessment Team (NBC-JAT) within the whole DJTF HQ and its relationship with the supported command being the (then active) Joint HQ Lisbon.

Specifically, the JALLC investigated the integration of the NBC-JAT into Joint HQ Lisbon and the various relationships between the relevant staff functions between the assessment team and the HQ.

2005

## MULTINATIONAL EXPERIMENTS (MNE) 4, 5, and Coalition Warfighting Interoperability Demonstration (CWID) 2006



JALLC staff were actively engaged during 2006 in NATO's EBAO programme by, among other things, providing the deputy lead for the MNE 4 NATO analysis team, and having overall responsibility for producing the final Analysis Report for the Experiments which was published by HQ SACT in November 2006. JALLC representatives also participated in the EBAO Working Group of the two Strategic Commands and were closely involved in the ACT-led workshops developing the effects based campaign assessment process to be examined as part of MNE 5 which would take place in 2008.

The JALLC further participated in the analysis conference of CWID 2006.

2006

## **Exercise STEADFAST JACKPOT 2007**

2007

A JALLC team, augmented with US Navy Reservists, conducted combined analysis during Exercise STEADFAST JACKPOT 2007 that looked at NRFC2 Reachback capabilities of the: Intelligence Fusion Centre and the Joint Electronic Warfare Core Staff, the Joint Common Operational Picture, and the integration of the NBC-JAT within the HQ. Three Interim JALLC Reports were released in 2007 and a fourth, on NBC-JAT, was released in early 2008.



## **Exercise STEADFAST JOIST and STEADFAST JUNCTURE 2008**

2008

The NRF Time Sensitive Targeting process was addressed through the observation of the Joint Force Commands during Exercise STEADFAST JOIST 08 and STEADFAST JUNCTURE 08. The JALLC's own report on Time Sensitive Targeting, issued in December 2008, fused the main findings of these exercises at the operational level and linked them with the findings from analysis of the ISAF targeting process. The main findings from the analysis were briefed at various NATO conferences and recommendations were made for the revision of relevant NATO key documents and manuals.



Moreover, the JALLC also used data collected during Exercise STEADFAST JUNCTURE 08 to analyse Joint Force Command C2 capabilities and the DJTF functionalities using the EBAO, resulting in the report on C2 and Reachback which was published in January 2009.

## **Exercise STEADFAST JUNCTURE and LOYAL JEWEL 2009**

2009

Exercises STEADFAST JUNCTURE 09 and LOYAL JEWEL 09 were two of the NATO exercises that addressed the Deployable Joint Staff Element (DJSE) C2 concept implementation and at which the JALLC was present to collect data. The JALLC was able to identify Lessons regarding the C2 construct being tested as successively implemented by the HQs taking part in the exercise.

The report produced by the JALLC on DJSE Command and Control was released in December 2009 and the first findings from STEADFAST JUNCTURE 09 were briefed to the relevant HQ Commanders which allowed for internal procedures to be adjusted in preparation for Exercise LOYAL JEWEL 09, ensuring that this exercise was even more effective and efficient in terms of implementing the DJSE Command and Control Concept.



## Exercise STEADFAST JUNO 2010

Exercise STEADFAST JUNO 2010 saw the JALLC continue its analysis of DJSE implementation during which observations were made regarding the nature of the information exchanged along with the mechanisms employed to achieve collaboration and synchronization between relevant HQs, with a particular emphasis on information flow between organizations in the HQs that need to work together.

2010

This project was ground-breaking as it would be the first time that social network analysis would be used to provide insight into the complex nature of informal communication that occurs between HQs within NATO. Relationships between organizations in the HQs were mapped based on data from over 48 000 email exchanges that were captured during the execution phase of the exercise. The JALLC report, published in June 2011, had broad implications for the future form of a deployable concept in NATO. It highlighted both the importance of informal communication in guaranteeing the smooth functioning of the HQ, and also the inherent danger of over-reliance on informal exchanges in place of formal mechanisms. The JALLC made recommendations for enhanced training, guidance for staffs on different means of communication, and improved standardization for information management at the operational level.



## Exercise STEADFAST JOIST 2011



In 2011, SHAPE needed to develop a Deployable Joint HQ model. This model, built within the framework of the new NATO Command Structure was to include the practices and procedures to implement the NATO policy for deployed forces and its Conceptual Framework for Alliance Operations.

2011

The JALLC was requested to analyse this new concept and model during Exercise STEADFAST JOIST 2011, and to provide

recommendations in order to help adapt Exercise STEADFAST JOIST 12 to be a test-bed to conduct some experiments with the new Deployable Joint HQ model. A common Joint Force Command concept was finalized in December 2011 as a result of the JALLC's contribution which also went on to inform the future development of the Conceptual Framework for Alliance Operations.

## CRISIS MANAGEMENT EXERCISE (CMX) 2012

In 2012, the JALLC provided specialist support to NATO's annual political/military Crisis Management Exercise. The execution phase of CMX12 was held at NATO HQ in Brussels and its aim was to exercise the Alliance's strategic political/military level consultation and collective decision-making when faced with Chemical, Biological, and Radiological events and a crisis stemming from cyber-attacks. During the exercise, the JALLC provided support to staff to facilitate the gathering of observations and the production of daily summaries and assisted NATO HQ International Staff with the analysis of all of the submitted observations and lessons from the exercise.

2012

## **Exercise STEADFAST JAZZ 2013 and the NATO Exercise Reporting Process**

2013

In 2013, the JALLC supported NATO School Oberammergau's Mobile Education Training Team by presenting NATO Response Force Lessons during an engagement with Rapid Response Corps – France in preparation for their participation in Exercise STEADFAST JAZZ 13.

In conjunction with this exercise, during the first half of 2013, the JALLC actively supported the comprehensive revision of NATO key documents on how the Alliance reports observations and lessons made during its exercises. Although efforts began in 2012, they continued into mid-2013 with the final version of the report being released in October 2013.



## **Exercise TRIDENT JAGUAR 2014**

2014

Exercise TRIDENT JAGUAR 14 was the first of three in a series of exercises, analysed by the JALLC, that would go on to culminate in the release of the NATO Force Structure Joint Task Force HQ Concept Handbook. This exercise was also analysed in conjunction with the JALLC's work on The NATO EXTRA Portal and the analysis of NATO's Exercise Reporting Process (as mentioned above).



The JALLC not only analysed the concepts and constructs exercised, but also provided support to the Lessons capturing processes in the exercising HQs. Five JALLC project team members were deployed to all exercise locations including Exercise Control at the Joint Warfare Centre in Stavanger, HQ NRDC Spain's forward location in Menorca, and HQ STRIKFORNATO, aboard the USS Mt Whitney (LCC-20).



## **Exercise TRIDENT JUNCTURE AND NOBLE JUMP 2015**

2015

The JALLC participated in the Very High Readiness Joint Task Force Functions Testing Table Top Exercise which involved close coordination with Joint Force Command Naples to arrange training requirements for subject matter experts identified to form Deployed Observation and Assessment Teams (DOATs) as part of the Very High Readiness Joint Task Force Functions Testing programme throughout 2015.

As a consequence, a tailored training programme on Lessons and Joint Analysis techniques was conducted by the JATT for 30 DOAT experts as well as training, advice, and mentor support to the DOAT experts during Exercise NOBLE JUMP 15.



## Exercise CAPABLE LOGISTICIAN 2015



The JALLC was requested to provide support to Exercise CAPABLE LOGISTICIAN 2015's Evaluation, Analysis, and Reporting Cell (EAR-C) as it had done in previous years. The JALLC was asked to assist in determining requirements for providing specific training to EAR-C team members. In this context the JALLC was able to deliver tailor made interview and observation training for the Exercise as well as advice, and mentor support to logistics subject matter experts during the exercise.



## Exercise TRIDENT JAGUAR 2016

Having provided support to the previous to TRIDENT JAGUAR Exercises, the JALLC supported the 2016 iteration in the series which saw more HQs take on the role of a NATO Force Structure Joint Task Force HQ as NATO continued to develop this still relatively new concept.

2016

During this exercise, the JALLC used the opportunity to validate the findings from the previous two exercises in the series and collate all the guidance and recommendations regarding the implementation of the NATO Force Structure Joint Task Force HQ concept into a handbook to guide the future implementation of the concept. The Handbook, co-produced by the JALLC, Joint Warfare Centre, and the NATO Command and Control Centre of Excellence was published in November 2016 in a signing ceremony which was held during the NATO Lessons Learned Conference that year.



## Exercise TRIDENT JAGUAR 2017 AND 2018



The JALLC provided support to HQ 1st German Netherlands Corps and HQ Rapid Reaction Corps - France during Exercise TRIDENT JAGUAR 17 Phase IB (Academics) and 1C (Key Leader Training) in Munster, Germany and to HQ NRDC - Greece during Exercise TRIDENT JAGUAR 18 Phase IB (Academics) in Thessaloniki, Greece.

2017



# Support to NATO Training

Over the past 15 years the JALLC has provided various organizations, missions, operations, and exercises with training support required to ensure success. This support ranges from long-term training to the ISAF mission, to bespoke Key Leader Training for specific events. Combining military experience with civilian subject matter expertise is what makes the JALLC's training teams unique and so successful within NATO, providing a broad spectrum of training topics, on site, in the field, and at the JALLC's HQ in Lisbon, Portugal. Below we have provided a summary of some of the key elements of the JALLC's support to training over the years.

## ISAF 2002-2014

NATO took the lead of the ISAF in Afghanistan on 11 August 2003. Mandated by the United Nations, ISAF's primary objective was to enable the Afghan government to provide effective security across the country and develop new Afghan security forces to ensure Afghanistan would never again become a safe haven for terrorists. From 2011, responsibility for security was gradually transitioned to Afghan forces, which took the lead for security operations across the country by summer 2013. The transition process was completed and Afghan forces assumed full security responsibility at the end of 2014, when the ISAF mission was completed. A new, smaller non-combat mission (Resolute Support) was launched on 01 January 2015 to provide further training, advice, and assistance to the Afghan security forces and institutions.



The JALLC has been involved in providing support to training events for the ISAF Mission since 2004 and right up until the handover to Resolute Support Mission. During these training events, organized by the Joint Force Commands, Joint Warfare Centre and Joint Force Training Centre, the JALLC collected information on the effectiveness and relevance of the training. Findings from analysis of these events would be fed back to ensure the next iteration of the training could be improved. These training events

prepared personnel for ISAF deployments in HQ ISAF, Regional Commands, Provincial Reconstruction Teams, and Operational Mentoring and Liaison Teams and were key to the success of the ISAF mission.

The JALLC has produced over 35 reports on ISAF over the years with a great many of the early reports focussed on findings from observing training events. Over the years, the JALLC saw its support to training role evolve to include an advisory element due to the vast amount of experience gained by the JALLC as the ISAF mission progressed and the JALLC's reports turned more towards identifying the Lessons that could be of importance to the Alliance as the Mission progressed and eventually came to a close.



# Key Leader Training, Academics, and Battle Staff Training

**Key Leader Training (KLT)** is individual training designed for the *Key Leaders* under the responsibility of the Primary Training Audience commander for a specific exercise venue or upcoming military operation. It is important to link the Key Leaders with their own staff taking part in academics, usually conducted concurrently, to allow the interaction using syndicate discussion and backbrief. This training usually covers presentations and discussions on the different aspects of the future operation.



The overall purpose of the **Academic Seminar** is to prepare Commanders and their key staff for the challenges of likely operational missions, and to function as an operational HQ as planned in the exercise. The aim of a seminar is, amongst other things, to ensure that the Training Audience achieves a common understanding of the future mission to be exercised and how it is to be executed. Further it ensures that joint processes and integration are fully understood and helps to make sure that everyone is aware of the areas that causes difficulties when working in a joint multinational environment as well as of the solutions to overcome these difficulties.

**Battle Staff Training (BST)** is a collective training opportunity to fulfil Training Audience Commanders' requirements for the enhancement of conducting the decision-making process (working groups, boards, etc.) within the HQ. The size and scope of the BST will determine which methods and tools (role play, mentors, etc.) are used for the achievement of the Commanders' aims.



As an example, of the JALLC's support in these areas, the JALLC provided KLT to KFOR in 2006. NATO has been leading a peace-support operation in Kosovo – the Kosovo Force (KFOR) – since June 1999 in connection with NATO's 78-day air campaign against Milosevic's regime in the area. KFOR derives its mandate from UN Security Council Resolution 1244 (1999) and the Military-Technical Agreement between NATO, the Federal Republic of Yugoslavia, and Serbia. KFOR's original objectives were to deter renewed hostilities, establish a secure environment and ensure public safety and order, demilitarize the Kosovo Liberation Army, support the international humanitarian effort, and coordinate with the international civil presence. Today, KFOR

continues to contribute towards maintaining a safe and secure environment in Kosovo and freedom of movement for all.

Other training initiatives the JALLC has been involved in over the years include support to the Combined NATO/US Training Development Events which are organized through the NATO School Oberammergau. For example, in 2012, the JALLC supported the NATO/US multi-tier ISAF and UNIFIED ENDEAVOUR training events. The JALLC was tasked to identify key factors affecting the outcome of Combined Training Events and Exercises in order to improve future preparations for operations. The JALLC's support resulted in analysis of the practical application of the concept behind NATO's Connected Forces Initiative which highlighted that the key to success is communication and mutual understanding for different approaches in the execution of training and exercises.



The JALLC also closely supports the NATO School Oberammergau in a number of other training events and courses, including the Communication, Command, and Control Course, and with the Joint Warfare Centre in developing training such as the Interview and Observation training course.


# The NATO Exercises, Training, Reporting, and Analysis Portal


Military exercises and training are essential elements that drive NATO's proficiency levels and overall success as a multinational military organization and are developed in support of NATO's overall objectives. It is important to ensure that as much information as possible is captured and learned at these events to properly identify where improvement can be made. In this respect, and to enhance the information sharing in the training and exercises field, the JALLC developed the NATO Exercises, Training, Reporting, and Analysis Portal (EXTRA) information sharing platform to be the focal point for sharing exercise and training related knowledge and lessons.




## What is the NATO EXTRA Portal?

The NATO EXTRA Portal is the exercise/training information-sharing platform for NATO. Developed for those closely engaged with NATO exercises and training, it contains links to NATO sites, points of contact, calendars, a library for specialized documents, and a database for lessons. Additionally, the portal provides users—primarily the exercise or training event Officers of Primary Responsibility, Exercise Planning Groups' and Core Planning Teams' members—with easy access to:

 NATO EXTRA documents relevant to all exercises, such as overarching training/exercise reference documents (policies, directives, etc.)

 Specific exercise/ training documents, including the concept development, planning, conduct, analysis and reporting documents; and exercises/ training related lessons (Observations, Lessons Identified, Lessons Learned)

 The NATO EXTRA Portal enables users to filter lessons and documents by relevant criteria such as specific stages, phases, and sub-phases.





The NATO EXTRA Portal also serves as an online forum for the NATO EXTRA Community of Interest to exchange ideas, ask questions, and promote events.




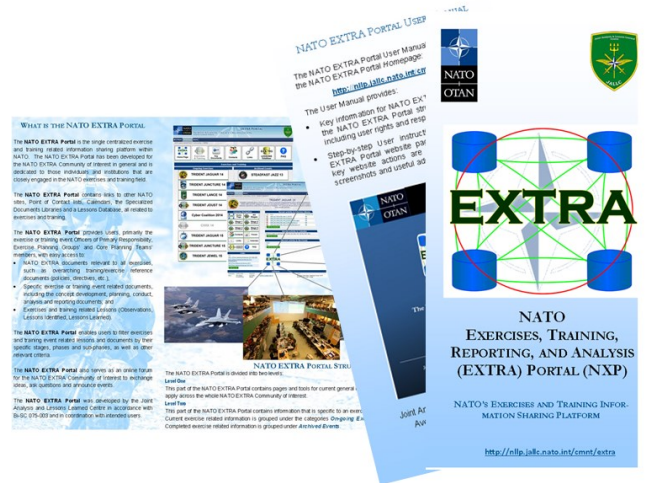
# How was the NATO EXTRA Portal Developed?

The NATO EXTRA Portal was launched in 2014 after a thorough research, development, and planning processes including:

 a review of NATO key documents clarifying potential requirements for the NATO EXTRA Portal which resulted in the conclusion that further analysis was needed to develop a product that addresses the expectations and needs of its target audience.

 Visiting key NATO organizations and interviewing subject matter experts including personnel from both of NATO's Strategic Commands, both Joint Force Commands, the Joint Warfare Centre, the Joint Forces Training Centre, and the JALLC itself.

 Identifying gaps in NATO key documents that potentially needed to be addressed and developing a consolidated list of requirements, ultimately resulting in implementing the necessary software solutions.

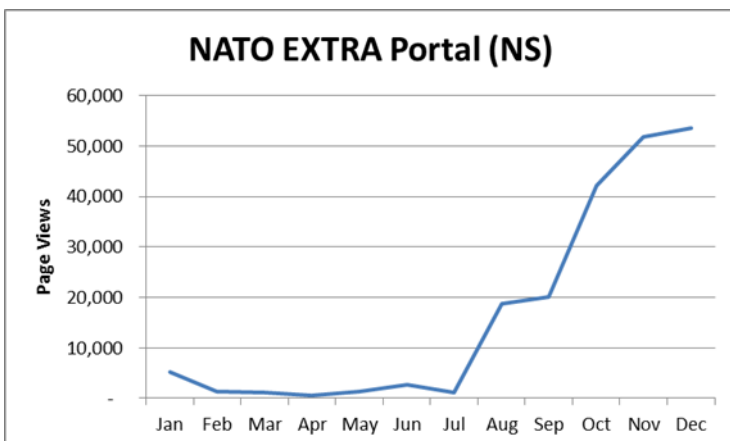


Subsequently, the NATO EXTRA Portal was tested, first internally and then externally, incorporating useful feedback and implementing changes.

## The NATO EXTRA Portal Manual

In conjunction with the platform, the JALLC developed the NATO EXTRA Portal User Manual. This comprehensive guide provides users detailed explanations on the various uses, tools, functions, and other elements of the NATO EXTRA Portal. The manual also includes step-by-step guidance on how to perform certain key actions and additional information to help users take advantage of all the NATO EXTRA Portal has to offer.

The manual follows the structure of the website and covers topics such as how to access the NATO EXTRA Portal, how it is managed, who the users are, and the life cycle of an exercise training site. The manual includes a useful *aide memoire* and a list of all the deliverables to be uploaded during the course of an exercise.



The NATO EXTRA Portal, forms an integral part of the NATO Lessons Learned Portal and accounts for more than three quarters of the overall page views (in 2014). The chart shows NATO EXTRA Portal page views by month during 2014.

In 2015 the management of the NATO EXTRA Portal was handed over to NATO's Joint Force Training Centre and will continue under their auspice going forward.

# Support to NATO Operations

Over the past 15 years, many of the JALLC's joint analysis studies have been in support of operations, covering a wide range of topics for commands throughout NATO. In fact, NATO's ISAF mission has been a major source of joint analysis requirements, with around 50% of the operations orientated studies relating to the mission, confirming the importance of NATO's activities in the region at the time.

But the JALLC has also provided more direct support to certain NATO operations and missions by sending its subject matter experts into the field to provide support and guidance, including for ISAF, KFOR, OUP, OAE and Operation Ocean Shield (OOS).

In this section we present an overview of support to operations provided by the JALLC over the years.

## ISAF



As described earlier, NATO took the lead of ISAF in Afghanistan on 11 August 2003 until Afghan forces assumed full security responsibility for their country again at the end of 2014, when the ISAF mission was deemed completed. Resolute Support Mission was launched on 01 January 2015 to provide training, advice and assistance to the Afghan security forces and institutions as needed.

In the period between 2003 and 2013, the JALLC conducted more than 35 studies covering a variety of subjects in support of the ISAF mission. For example, the JALLC analysed topics related to air

operations, intelligence, C2, targeting, medical issues, logistics, information sharing, interoperability, and Lessons Learned.

Over the years, a number of JALLC project teams were sent to Afghanistan to collect data. The very first JALLC project team arrived in Afghanistan in the autumn of 2003 and spent approximately 30 days looking through databases, interviewing key personnel, and generally fact finding for a JALLC study. However, as the significance and size of the ISAF mission grew within NATO, the number of projects the JALLC was conducting in relation to the mission increased. In 2004, eight teams visited the ISAF HQ and in 2005 and 2006 the JALLC sent data collection teams to Afghanistan on a regular basis to cover various projects being conducted, resulting in the JALLC being present or represented at ISAF on an almost permanent basis. As the ISAF mission began to wind down, and travel and budgetary restrictions began to play a role in NATO, so too did the number of related JALLC projects. The last JALLC project team was sent to ISAF in 2010 to collect data for a specific project although the JALLC would maintain a permanent representative at ISAF up until 2013.



This period in NATO's and the JALLC's history was also marked by a shift in focus towards more political-strategic issues which did not require JALLC project teams to be present in Afghanistan for data collection anymore. The most recent JALLC studies covering ISAF-related issues reflect this shift in focus and cover topics such as strategic Lessons from ISAF, how ISAF reduced civilian casualties, and the JALLC's study on two decades of lessons from operations and exercises also reported on lessons from the ISAF mission in a broader NATO context.

## Kosovo Force (KFOR)



KFOR's mission is to contribute to maintaining a safe and secure environment as mandated by UN Security Council Resolution 1244. In carrying out its mission, NATO cooperates and assists the UN, the EU and other international actors, as appropriate, to support the development of a stable and peaceful Kosovo. KFOR supports the development of professional, democratic and multi-ethnic security structures in Kosovo. This includes NATO's support for the ongoing development of the Kosovo Security Force (KSF) through the provision of advice, training and capacity-building at KSF Brigade level and above. The KSF is as an all-voluntary, professional, multi-ethnic, lightly-armed force. Its basic missions include crisis response, assistance to civilian authorities in responding to natural and other disasters, Explosive Ordnance Disposal and civilian protection tasks.



Between 2004 and 2009 the JALLC conducted five projects in support of KFOR, which were conducted in close cooperation with HQ Joint Force Command Naples and HQ KFOR. Although the projects mainly focused on the core elements of the *KFOR Task Force Concept* the JALLC was able to extract Lessons for NATO at the tactical, operational, and strategic levels that would contribute to the wider process of transformation within the Alliance.

# Operation UNIFIED PROTECTOR



As stated by the NATO Secretary General in his 2011 Annual Report, “NATO’s Operation UNIFIED PROTECTOR (OUP) was one of the most remarkable in NATO’s history. It showed the Alliance’s strength and flexibility. European Allies and Canada took the lead; the United States provided critical capabilities; and the NATO Command Structure unified all those contributions, as those of our partners, for one clear goal.” NATO’s intervention to enforce UN Security Council Resolutions 1970 and 1973 was swift, OUP was brought to a successful conclusion exactly seven months later on 31 October 2011. NATO acted in full accordance with the UN mandate and consulted closely throughout with other International Organizations and international partners.

In an early phase of OUP, the JALLC supported Joint Force Command Naples by conducting a study into improving the operation’s C2 structure. The JALLC sent several project teams to OUP HQ in Naples and swiftly published a first report presenting the initial findings and observations. After the end of OUP, the JALLC conducted a further three studies aimed at capturing lessons related to various aspects of that operation that would help contribute to the improvement of future NATO operations. The reports published as a result of these studies mainly focused on the political-military level of the organization. One of the studies collected the national military perspectives of the operation.

## Support to Other Operations



In 2011, the JALLC published a report about external information sharing in support of counter-piracy operations, Operation Ocean Shield. The study focused on the tactical and operational level of command. However, some of the findings were broader and had relevance both on the strategic level and even outside NATO as this particular operation included many different participating maritime forces, such as EU Operation ATALANTA, Combined Maritime forces, and independent national deployments. Needless to say, one of the key findings in this study was the need for improved shared situational awareness.



In 2005, the JALLC issued a report providing observations, conclusions, and recommendations on NATO’s supporting contribution to the African Union’s mission in Sudan (AMIS). In 2012, JALLC provided NATO analysis support to EU Operation ALTHEA under the Berlin Plus arrangements. The JALLC also published a study on NATO’s disaster relief operation in Pakistan, four reports on NATO Training Mission in Iraq (NTM-I) from 2005 to 2007, and two reports on Operation ACTIVE ENDEAVOUR.

## Permanent JALLC Representatives

The JALLC has not only provided ad hoc support to many NATO operations in the form of the studies that it conducts, but it has also provided permanent Lessons and Analysis support to two missions since its inception in 2002: the NTM-I and ISAF.

The first permanent representative went to NTM-I in the autumn of 2004. The permanent representative in Iraq was tasked to support the NTM-I Commander to identify problem areas and recommend subsequent actions and, if required, set up an internal Lessons Learned and remedial action process. The permanent representative to NTM-I was maintained through 2005 and 2006. In 2006, the JALLC was ordered to set up a permanent representative in ISAF. At that time the Iraqi Lessons Learned Command was up and running and there was no longer a need for a JALLC permanent representative in Iraq. The last JALLC permanent representative returned from Iraq in February 2007.



In July 2007, the JALLC sent its first permanent representative to ISAF. The task was to be present in all activities in theatre and support Commander ISAF and to support JALLC ongoing analysis projects as a point of contact in the area of operations. JALLC maintained a permanent presence in ISAF during the period 2008 – 2013. The JALLC's ISAF permanent representative provided the JALLC with situational awareness and ISAF theatre data, provided ISAF with situational awareness of JALLC projects, helped ISAF to develop and submit Analysis Requirements for the

JALLC programme of work, and generally assisted the ISAF Lessons Learned Officers with their routine business.

The transition from ISAF to Resolute Support Mission meant that in 2013 the JALLC no longer needed a permanent representative in Afghanistan. The last JALLC permanent representative returned from Afghanistan in December 2013.





WORLD LEADERSHIP  
IN  
INNOVATION  
GOVERNMENT  
FUTURE  
LESSONS  
LEARNED  
FROM  
THE  
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AND  
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2002-2017



# From the Commander

# When the Pen is Mightier than the Sword...



An anniversary is always an important event. It is an opportunity to look back at how far one has come and to look forward to where one is going. This book marks the Crystal Anniversary of the JALLC and so, in this short chapter, it seemed appropriate to look to the future: into the JALLC's Crystal Ball as it were. Although the JALLC is a perhaps a backward looking organization in that it reviews events of the past, it is a forward thinking organization that takes those events and translates them into improvement and innovation for the future which ultimately leads to transformation.

The JALLC plays a somewhat special role within the wider scope of the Alliance. Essentially a think-tank, an HQ that deals in intellectual combat rather than armed combat, the JALLC's

strength is its ability to take vast quantities of entangled knowledge, and much like Alexander the Great and the Gordian Knot, slice through it. In this respect one could say that at the JALLC the pen truly is mightier than the sword. Taking this role into consideration at this special time, it seemed appropriate to take a look, not only at what the JALLC stands for, but how it is represented in terms of its crest.

The JALLC's crest (the shield and arms) was developed 15 years ago when the JALLC first became operational. It was decided at the time that the JALLC would be part of the transformational side of NATO and therefore placed within Allied Command Transformation under HQ SACT. But as a Bi-Strategic entity (meaning that the JALLC works for both strategic commands), the shape and colour of the shield was chosen to represent the affiliation with SHAPE, i.e. green and gold, setting it apart from its superior command and sister organizations, the Joint Warfare Centre and Joint Force Training Centre that all have NATO blue as their chosen crest colour. The crossed swords, wings, and trident, which make up the arms on the shield, were chosen to represent the services that would work in the JALLC, marking the change from a maritime based organization to a joint service organization. Finally, the NATO compass, the symbol of the Alliance, features in the middle of the arms.



15 years on and the JALLC has evolved with the times to become what it is today: a thought leader and knowledge custodian in NATO; a

*“Turn him to any cause of policy,*

*The Gordian Knot of it he will unloose,*

*Familiar as his garter.”*

champion for innovation, improvement, and transformation; a unique capability within the Alliance providing solutions to enduring NATO-wide problems that require a joint approach to their solution, whether based in analysis of specific areas of

the Alliance or from Lessons captured across NATO from operations and exercises. It seemed then appropriate to capture and reflect the JALLC's present role in its crest.

Therefore, in conjunction with the 15<sup>th</sup> Anniversary of the JALLC, a new crest has been designed that reinforces the visual identity of the Alliance and the JALLC's position within it, and yet better reflects the JALLC's current activities.

As can be seen from the pictures of the new crest, the shield shape has been retained as a reminder of the JALLC's past and its continued affiliation with SHAPE. The NATO compass, set against a NATO dark blue background, is now more prominently displayed on the shield, better representing the Alliance. The owl was carefully selected as a symbol of knowledge. It is drawn as a stylized image, sized in harmony with the NATO compass, and situated in a dominant position on the shield; representing its strength, but placed below the NATO compass to signify subordination to the Alliance. The owl is flying with spread wings, representing symmetry and equilibrium, while moving forward. The wings of the owl represent the two main activities of the JALLC: Joint Analysis and Lessons. The wings can also be seen as an open book, portraying the written products produced by the JALLC and reinforcing knowledge sharing. Each wing is divided into four parts which represent the Land, Sea, Air/Space, and Cyber domains of the military spectrum. The four parts also represent the Grand Strategic, Strategic –Military, Operational, and Tactical levels.



**Joint Analysis  
& Lessons  
Learned  
Centre**

**JALLC**

This new crest reflects 15 years of evolution; from the JALLC of 2002 to the JALLC of 2017. Although it is hard to say what the future holds for the JALLC, we hope that the new crest will contribute to its success and represent at least another 15 years' worth of excellence and dedication to transforming the Alliance.

Mário Barreto  
Brigadier General  
Portuguese Air Force  
Commander JALLC





Partnership  
Security  
Community  
Innovation  
Government  
Future  
Lessons  
Partnership



2002-2017



# JALLC Factsheets

# The JALLC's Factsheets

In 2011, the JALLC recognized the need for a short summary of its Joint Analysis Products that could not only be shared within NATO, but also to the wider public. This need resulted in the development of the JALLC Factsheet: a one-sheet, double-sided overview of the relevant project's background, the main findings, conclusions, and recommendations as well as any other interesting information that could be shared with the public. The Factsheets also included pictures from and/or related to the project as well as general information about the JALLC.

The first Factsheet was published in April 2011 and covered the project on ACO Intelligence Structures and Processes. Over the years since its introduction, the JALLC has published 44 JALLC Factsheets. In October 2015, the Factsheets were relaunched with a new design to bring them more into line with the rest of the JALLC's promotional material. All of the JALLC's Factsheets are available online at the JALLC's website or a printed copy can be obtained by contacting the JALLC's registry.

The Factsheets provide a valuable overview of the JALLC's analysis work over the years and a copy of each one can be found in this section.



## ALLIED COMMAND OPERATIONS INTELLIGENCE STRUCTURES AND PROCESSES

Report Published on 14 April 2011

### PROJECT OVERVIEW

The Strategic Commands identified a need to increase efficiency and streamline Intelligence efforts. Arising from this a JALLC task was developed to examine NATO Intelligence Structures, working groups, bodies and functions. Agreement was then reached to amend the project to cover Intelligence structures and processes within Allied Command Operations (ACO), with a view to providing input to a report by Supreme Allied Commander Europe (SACEUR) to the Director General, IMS.

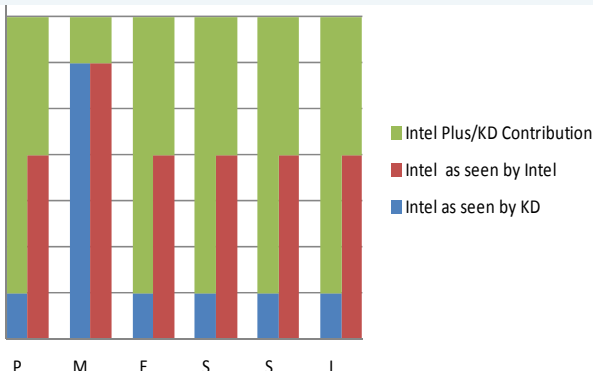
The requirement was to analyse the roles and responsibilities of ACO Intel structures, within SHAPE and the JFC Knowledge Centres, their basic processes, workflows and how they interact, and the role of the intelligence Fusion Centre, with the aim of optimizing the Intelligence processes to support operations:

- Identify the desired Intel contribution to operations and to the planning process as described in SHAPE's trial [and later the interim] Comprehensive Operations Planning Directive under the 2010 Peacetime Establishment (PE) structure.
- Within the new JFC structure and processes, identify Intel roles, functions, duplications, and missing capabilities.
- Analyze the role of IFC with the aim to optimize its contribution to operations in the light of the 2010 PE ACO Intel Structure.



Imagery analysis plays an important role in intelligence gathering and knowledge development process.

### MAIN FINDINGS AND RECOMMENDATIONS



Representational view of the contributions of Intel and KD to a commander's holistic understanding. Blue is what KD sees Intel as contributing, red is Intel's own view of its contribution. Red also corresponds to the current contribution of the JFCs' KD structure. Green is the theoretical contribution hoped for by the KD Concept: the "Intel Plus".

Two key findings were developed from the report. The first is that Knowledge Development (KD) and Intel are inseparable. The COPD and other current documents do not delineate a relationship between Intel and KD or what Intel is to contribute to planning. However, the Knowledge Development Concept recognizes Intel as a crucial contributor to KD with the addition of a broader scope for analysis focus, methods, and sources. KD transforms Intel into "Intel Plus." Thus far, KD has only been implemented at the JFC level and its full capability is still being developed. Even so, the report finds that the overall situational understanding at the JFCs comes from both traditional Intel and rest-of-KD sources. The JFC KD structures—regardless of the title of the section, branch, or individuals working on information and intelligence—provide a consolidated and seamless contribution to the commander's understanding. The key difference between a traditional Intel structure and a Knowledge Management Directorate, and the greatest potential value of KD, is one of Mindset. KD recognizes a need for a broader analysis focus and greater sharing and collaboration.

The second key finding is that the introduction of KD within NATO was flawed by a lack of change management and inadequate direction and guidance, which has directly hindered the expected benefits of KD—the Plus in Intel Plus—from materializing. There is a need for formal MC endorsement of the KD concept, updates to policy and doctrine





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## MAIN FINDINGS AND RECOMMENDATIONS (CONT'D)

relating to Intel and KD, the creation of full KD structures and related mechanisms and procedures, and the introduction of related training. Until these actions are achieved, NATO will struggle to achieve the full benefits that KD was meant to bring.

## PROJECT EXECUTION

Research was conducted from April 2010 to April 2011, at NATO HQ, SHAPE, JFC Brunssum, JFC Lisbon, JFC Naples, the IFC, FC Madrid and the JALLC. The JALLC analysis team undertook passive research by examining relevant policy and concept documents covering Intel, KD and Information Management; the Bi-SC KD Pre-Doctrinal Handbook—Final Draft; the 2010 PE Review; the DJSE Concept; and the IFC. The Analysis Report on Multi-National Experiment 4 and the KD Enabler 09 Final Experiment Report were consulted, along with commercial publications covering change management, KD, and related issues. Active research was effected by interviews with personnel working in Intel, KD and operations posts at NATO HQ (IMS), SHAPE, the IFC, JFCs Brunssum, Lisbon, and Naples, and Force Command Madrid. The analysis was founded on the results of the active and passive research.

### COLONEL JOSE PEDRO FERNANDES, PORTUGUESE ARMY

COL Fernandes served at JALLC as an INTEL Analyst from 2009 to 2010. COL Fernandes is an Infantry Officer with more than 30 years of service with assignments at the Infantry School, as Battalion Commander in a Portuguese Mechanized Brigade, and as teacher at the Portuguese Staff College. As a junior officer he attended the Basic and Advanced Methods of Instruction Courses in the UK and the Infantry Officer Advance Course in Ft Benning, USA. He served in Bosnia in the NATO SFOR mission, as the MNBG DCOS OPS and his last assignment before JALLC, was in the NATO Land Command Madrid HQ as the G2 Current OPS Section Chief.

### LT. COLONEL ZSOLT HORNYAK, HUNGARIAN ARMY

LCOL Hornyak has been a JALLC analyst since July 2010. Trained as an Signals Intelligence Officer, his postings include Hungarian Defence Forces Staff, JFC Brunssum, and the UN Mission to Angola.

### MAJOR PAULO DIAS, PORTUGUESE ARMY

Maj Paulo Rodrigues Dias has been a Staff Officer at the JALLC since April 2009, with particular responsibilities for C-IED and NATO Urban Operations issues. He has been a Platoon and Company Commander in the Portuguese Army, as a major he led the "Captains' Course, and has served in East Timor, S.Tome & Principe, and Cape Verde. In 2011 he deployed to ISAF as the JALLC Permanent Representative at HQ ISAF.

### MR. NIGEL BRANSTON, CIVILIAN

Nigel Branston is a retired Royal Air Force officer, with tours in NATO's HQs in Naples and Brunssum. He has been involved in operations ranging from the Falklands War (1982), NATO's International Force (IFOR) in the Former Yugoslavia (1995-6), to ISAF, to Director of Staff of JFC Brunssum's Deployable Joint Task Force HQ within the NRF. Nigel joined the JALLC in 2007 as an Analyst. He has worked on projects including Managing Partnerships; Outreach; Intelligence; Dismounted Soldier Systems; Reconstruction and Stabilization; and more.

## NATO LLDB ITEMS

ITEM #1136—CHANGE MANAGEMENT PROGRAMME IN NATO

ITEM # 1137—KD AND INTEL ARE INSEPARABLE

ITEM # 1138—COPD UPDATES SHOULD INCORPORATE KD PRINCIPLES

ITEM # 1139—BENEFITS OF KD WILL ONLY BE SEEN WHEN FULLY IMPLEMENTED



# JALLC

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## NATO'S LEAD AGENT FOR JOINT ANALYSIS

All JALLC Reports, the LL Portal, and NATO LLDB Items may be found in their entirety under the *Products* section on the NS WAN:

<http://www.jallc.nato.int>

Non-classified reports and LLDB Items, Project FactSheets, the Joint Analysis Handbook and Lessons Learned Handbook can be found on JALLC's Internet site at the same [address](#).

A proud member of Allied Command Transformation



## ISAF PRE-DEPLOYMENT TRAINING FOR POLICE OPERATIONAL MENTORING AND LIAISON TEAMS

Report Published on 07 June 2011

### PROJECT OVERVIEW

Police Operational Mentoring Liaison Teams (POMLT) are teams of up to 20 military and civilian police who deploy to Afghanistan to work with Afghan National Police (ANP) in the field, helping to build their skills as a professional police force. NATO initiated POMLT specific pre-deployment training in 2010 at two training centres, the US-run Joint Multinational Readiness Center (JMRC) in Hohenfels, Germany, and the French *Centre National d'Entraînement des Forces de Gendarmerie* (CNEFG) in St Astier, France.

JALLC was tasked to analyse ways to improve NATO-led POMLT Pre-deployment Training (PDT) for POMLTs deploying to ISAF. The task was requested by Joint Force Command (JFC) Brunssum. The agreed Analysis Objectives were:

- Determine to what extent the POMLT training is delivered in a standardized manner and in accordance with Best Practices, Tactics, Techniques and Procedures and emerging ANP Doctrine:
- Recommend how the training at JMRC and the CNEFG can better provide an acceptable package, including the effective use of supporting resources, to the POMLT personnel to conduct properly their mission when deployed.
- Identify any unnecessary duplication of content between the three phases of POMLT PDT.



JALLC analyst Mr Staale Hansen (r.) in talks with BG Bertrand Chavallier (l), Head of the French Gendarmerie Training Department *Centre National d'Entraînement des Forces de Gendarmerie*.

### MAIN FINDINGS AND RECOMMENDATIONS



A Spanish POMLT officer is coached in mentoring ANP during a training session simulating a traffic accident at CNEFG, St Astier, France.

#### Participation

The principal finding of this analysis is that lack of participation in NATO-led POMLT Training continues to be, as it has been with all other NATO-provided Pre-Deployment Training, the main issue limiting the overall value of the training. As with other training events, POMLT training provides excellent preparation for personnel deploying to ISAF, but far too few of those deploying participate in the NATO-led training and many attend no equivalent training in their home nations. NATO should make every effort to encourage Nations to send their personnel to NATO-led Pre-Deployment Training since it provides the best available preparation for specific functions in theatre, whether it be as a member of a POMLT or as a staff officer in HQ ISAF. Where this is not possible for individual nations, NATO should export the essential portions of its training into national pre-deployment training programmes to ensure that personnel arriving in theatre have the minimum required training.

#### POMLT Training Package

Both POMLT training facilities are providing high value and professional training. The training is supported by Subject Matter Experts with recent in-theatre experience as POMLT members and also by ANP officers and troopers. The value of the presence of these coaches to the training cannot be overestimated but requires careful coordination and





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## MAIN FINDINGS AND RECOMMENDATIONS (CONT'D)

advance planning to ensure that this valuable resource is used effectively. As the ANP develops as a professional police force, training should include more emphasis on long-term force management issues such as Logistics and Human Resources Management and the supporting systems already in use by the ANP.

### *Training Standardization and Duplication*

The training syllabi at JMRC and CFENG are not identical but participants of both courses achieve similar levels of competence. The main challenge to standardizing training is aligning NATO-led training with similar national training and with ISAF provided in-theatre training and ensuring resources are best spent to avoid duplication and provide individual elements of the training at the right phase in the training pipeline. Analysis here suggests that coordination with national planning cycles, the use of national observers, and mobile training teams can offer improvement in this area.

## PROJECT EXECUTION

The project was executed from November 2010 to May 2011. The team observed NATO Pre-Deployment Training Events at JMRC and at CNEFG, as well as at French national Phase 1 training in Rochefort, France. The team deployed to ISAF, where they visited NATO Training Mission – Afghanistan, ISAF Joint Command HQ, Regional Command North, and French and Turkish POMLTs deployed in Afghanistan.

JALLC analysts participated in the training event planning conferences, providing feedback from previous training events, and participated in the training events as a part of the Training Analysis Team. This is normally followed by a deployment to ISAF for interviews some weeks after the TA has taken up their posts in-theatre. Although in-theatre discussions with members of the TA of the specific TEs were not possible because the few teams that had done the pilot POMLT PDT had not yet developed or were not accessible to the JALLC Team during the short deployment phase, interviews were conducted with POMLTs that had not participated in NATO Training and with HQ divisions and branches in Kabul that are in close contact with the POMLTs in their daily work.

## PROJECT TEAM

### LTC MATIAS SKOGSEID, NORWEGIAN ARMY

Lieutenant Colonel Matias Skogseid has served in the Norwegian armed forces since 1978. After a short period as Artillery NCO and Military Police NCO, he attended the Air Force Officer School and, after commissioning, served in a variety of administrative, logistics and CIMIC positions, mainly as Head of Branch. LTC Skogseid has attended the Air Force Staff College and Norwegian Armed Forces Staff College and he served at HQ North and the Norwegian National Joint HQ in Stavanger from 1998 until he was posted as a military analyst to JALLC in 2010. He was deployed to AFSOUTH (KFOR, 1999) and to HQ ISAF (2003-04).

### MR STAALE HANSEN, ANALYST

Mr Hansen has worked as a contractor in the JALLC since October 2005. He is a retired Infantry Lt Col from the Norwegian Army. He has a varied national military background from service in His Majesty the King's Guard, The Northern Brigade, the Telemark Battalion, the Armed Forces INT Centre and in Ops Division on the Norwegian Chief of Defence Staff. From 2000-03 he served as ACOS J9 in Allied Command Europe, Mobile Force (Land) in Heidelberg, Germany and from 2003-05 as Military Analyst, Joint Plans in JALLC. His international experience includes service as Deputy Rifle Company Commander in Lebanon in 1982, Termination Force Mogadishu 1994, Chief G4 Sector NE in UNPROFOR in Tuzla, Bosnia in 1995, and JMCC Deputy Director in IFOR in Zagreb, Croatia in 1996. Since his initial assignment to JALLC, Mr. Hansen has followed ISAF Pre-Deployment Training events since the beginning of NATO's involvement and has deployed to various places in Afghanistan twelve times.



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## FRATRICIDE PREVENTION: AIR-TO-GROUND OPERATIONS AND IMPLEMENTATION OF THE BALL REPORT

Report Published on 20 June 2011

### PROJECT OVERVIEW

After a fratricide incident in Afghanistan in 2006, the Strategic Commands (SC) established a Bi-SC Analysis Lessons Learned (BALL) Team to conduct a study focusing on fratricide prevention. HQ SACT formed a Team the following year charged with implementing the recommendations from this report. In 2009 the SCs published a further, final report highlighting 19 issues influencing fratricide prevention; each issue addressed the implementation status of one or more associated corrective actions recommended from the initial report.

JALLC was tasked to analyze the fratricide prevention issues raised in the 2009 BALL Report in order to identify any unresolved NATO/ISAF issues.

Analysis objectives were:

- Assess the current (2010) implementation and resolution of NATO/ISAF issues from the BALL Report.
- Understand why issues identified as unresolved are still unresolved, and provide recommendations to resolve them.
- Report any additional fratricide prevention issues observed during the course of the study.



The JALLC Analysts from the Fratricide team wordsmith the draft report.

### MAIN FINDINGS AND RECOMMENDATIONS



Afghan Commandos with the Afghan National Army's 3rd Commando Kandak patrol the village of Payendi during a clearing operation in Kandahar Province, Afghanistan.

The JALLC determined that all of the issues identified in earlier BALL reports are being addressed and that nearly half of the BALL Report issues have already been resolved. Significant effort and technological advances continue to improve and increasingly standardize NATO training, techniques, and equipment for air-to-ground operations, thereby reducing the likelihood of fratricide, but this work is not complete.

The BALL Report can serve as a model for the lessons learned process because: problems were identified; information concerning them was shared between nations and HQs; deliberate actions were taken by NATO and nations; deliberate follow up was conducted; and the remaining issues continue to be addressed. The report itself represented the validation step in the NATO LL Process and the first time that JALLC has been formally tasked with Validation analysis.

The JALLC analysis report recommends that additional work is needed to resolve (BALL) issues in Air Command & Control, Attack Helicopters Operations and Combat Identification domains, and Lessons Learned process improvement, especially in the area of leadership engagement with learning lessons.





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## PROJECT EXECUTION

The final BALL report restricted its scope to air-to-ground fratricide avoidance issues. This JALLC analysis report retains the same scope as the source document to maintain focus on each of the BALL report issues and therefore does not examine ground-to-ground fratricide incidents or civilian casualties.

A detailed data collection plan was developed from the BALL report issues and the AOs. Locations visited to collect data included SHAPE, HQ ISAF, ISAF Joint Command, the Joint Air Power Competence Centre,

and Air Command HQ Ramstein. Data collection was primarily conducted through extensive document review and by interviewing staff at each location.

After data collection and analysis, a common position was achieved on the status of each issue between the FP-IPT and the JALLC team.

Following COMISAF tasking, JALLC is now involved on a joint study with the US Joint Staff's Joint Center for Operational Analysis looking at ways to reduce civilian casualties in Afghanistan

## PROJECT TEAM

### LTC CHRISTIAN PUIG, FRENCH ARMY

Lieutenant Colonel Christian Puig has served 31 years in the French army which includes more than 18 years as a HUMINT officer within the special forces. He has been deployed seven times in Former Yugoslavia, six times in Africa and twice to Afghanistan. As a JALLC analyst, he has participated in three different projects: KFOR intelligence architecture, ISAF Command and control, and Air to Ground Fratricide Prevention. He ended his tour at JALLC in August 2011 and reported to his new assignment at the Special Forces Command in Paris.

### CDR MIKE KLEIBAUM, GERMAN NAVY

CDR Kleibaum's background is in Naval Aviation, where he flew the Panavia Tornado as Command Pilot in the German Naval Air Arm's strike-fighter squadrons. *Fratricide Prevention* was his first involvement in an analysis project after joining the JALLC as Military Analyst in October 2010.

### MAJ JIRI TROJANEK, CZECH AIR FORCE

MAJ Jiří Trojáněk, Czech Air Force has served in the Armed Forces of the Czech Republic since 1984. After graduation from the Air Force Academy he served in a variety of flying ranks up to wing level within several Air Force Bases and at the Czech Joint Forces HQ. He has attended the NATO Staff Officers Course and the US Air Command and Staff College. In 2009, he was posted as a military analyst to JALLC and was deployed to Afghanistan as the JALLC Representative to HQ ISAF in 2010.

### MR. ARTHUR SOSA, ANALYST

Mr. Sosa has served as a senior analyst at JALLC for nearly five year on projects influencing NATO operations in Kosovo and Afghanistan. He is a retired US Army officer with thirty years experience in command at all levels. He was commissioned as an artillery officer and later qualified as a master aviator in military helicopter and fixed wing aircraft. Mr. Sosa graduated from the US Army Senior Service College, Command and General Staff College, and holds a Masters Degree in Education.

## NATO LLDB ITEMS

*Since this project was designed as the validation step for existing lessons identified in the earlier BALL reports, no new lessons emerged. JALLC proposed the following status for existing lessons in the NATO LLDB:*

*Proposed for Lesson Learned Archived: 200, 598, 600, 606, 608, 609, 900*

*Proposed for Lesson Learned – Remedial Action Implemented: 248, 599, 601, 602, 603, 604, 605,*

*Proposed for LI – Action Body Assigned: 609, 899, 901,*

*Proposed for LI – Remedial Action Approved: 897*

*Proposed for LI – Remedial Action Sent for Approval: 612*

*No change noted: 391, 611, 897, 898, 1018, 1019, 1020, 1021*



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## MOTIVATING IMPROVED CONTRIBUTIONS TO THE ALLIANCE: DEFENCE MEASUREMENTS

Report Published on 20 June 2011

### PROJECT OVERVIEW

In the Political Guidance following NATO's new Strategic Concept, Allies have expressed a desire for a simple set of defence measurements to foster political will to improve defence capabilities. The Nations already report key input and usability metrics that give an overview of their financial commitment to defence as well as the potential uses of their defence capabilities. However, although Allies report data regarding how they allocate their resources and where they use their defence capabilities, there are no agreed output measures to summarize this data. In response to a tasking from the Secretary General, the Supreme Allied Commander Transformation tasked JALLC to provide the NATO Assistant Secretary General for Defence Policy and Planning with a proposed set of output metrics to meet the need expressed in the Political Guidance.

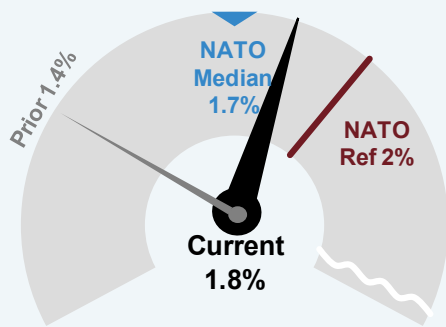


The Defence Measurements Project was initiated by a team of 16 workshop participants, project managers and contributing authors.

Project objectives were to:

- Develop a list of metrics suitable for presentation to NATO defence ministers during the October 2011 Defence Ministerial.
- Ensure that the Metrics are clearly defined and developed from readily available sources.
- Ensure the metrics are capable of illuminating national defence/security priorities.
- Conduct a data test to assess the ability to collect the necessary data and the utility of the chosen metrics.

### MAIN FINDINGS AND RECOMMENDATIONS



On the first of two dashboards, metrics are displayed in dial form to show national contribution to alliance burden sharing.

JALLC initially considered hundreds of potential metrics for inclusion in the report. Four guiding principles were used in the selection process. The metrics should: be simple, use no new data or definitions, make sense, and reflect the Political Guidance.

After culling the list, twenty-five proposed metrics were selected and Nations had the opportunity to provide feedback. These comments and suggestions were used to further filter the list. The end result is thirteen refined defence metrics complemented by clear descriptions of the data definitions required to calculate the metrics and two simple, powerful metrics dashboards.

The simple and logically consistent nature of the metrics presented should allow Nations to gain insight across the full range of defence capabilities mentioned in the Political Guidance. The metrics were designed to reflect a member's contribution as compared to its potential, in order to ensure that when the inevitable comparison between countries took place, such comparison would promote burden sharing by all Nations, regardless of size, economic capacity, or resources.

The metrics fall into five basic categories: Input Metrics, Investment Output Metrics, Usability Output Metrics, NATO Output Metrics, and Deployment Output Metrics. The associated dashboard presentations simplify the task of interpreting the metric values in an appropriate and meaningful way. The first dashboard type shows an individual coun-





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## MAIN FINDINGS AND RECOMMENDATIONS (CONT'D)

try's performance on all metrics. The second dashboard shows a comparison of every country's performance on one metric.

Additionally, JALLC collated over seven-hundred data items from more than fifteen different sources to ensure that it was feasible to calculate all thirteen metrics from existing data sources. The outcome of the data feasibility test, presented using the metrics dashboards, gives an early indication of the insight afforded by the proposed metric list into national defence capabilities.

## PROJECT EXECUTION

JALLC's Programme of Work for 2011 directed a study to develop a set of defence measurements for presentation at the October 2011 Defence Ministerial. In February, 2011, a team of managers, analysts, and participants met in a conference to narrow hundreds of potential metrics to a list of 25 and lay the groundwork for an interim report. After the interim report was produced, it was released to member nations for feedback and content. In May, June, and July, the team reconvened to use national comments and suggestions to craft the final report. On 12 August, 2011, JALLC produced its final report for presentation at the Defence Ministerial. JALLC is currently crafting a follow-on paper to uncover the full potential of the measurements.

## PROJECT TEAM

### DR. BENT-ERIK BAKKEN

Dr Bakken was seconded to JALLC from the Norwegian Defence University College as a Special Advisor to the Commander for one year. In July he returned there to his post Professor of Strategic Management. Previously he worked as a research director at the Norwegian Defence Research Establishment. He did his undergraduate in Operational Research at the University of Lausanne and completed his doctorate in Management and System Dynamics at the Sloan School of Management at the Massachusetts Institute of Technology.

### MRS. JACQUELINE EATON

Mrs. Eaton is a Senior Operational Research Analyst at the JALLC. In her role at JALLC, she provides analytical support to project teams working on the full spectrum of NATO issues ranging from ISAF civil-military medical cooperation, to NATO Response Force C2, to NATO Outreach. Prior to joining JALLC, Mrs. Eaton spent three years as a strategic analyst at the Defence Science and Technology Laboratory working for the UK MOD. She has over nine years of defence analysis experience.

### MAJOR JIRI TROJANEK, CZECH AIR FORCE

MAJ Jiří Trojáněk, Czech Air Force, has served in the Armed Forces of the Czech Republic since 1984. After graduation from the Air Force Academy he served in a variety of flying ranks up to wing level within several Air Force Bases and at the Czech Joint Forces HQ. He has attended the NATO Staff Officers Course and the US Air Command and Staff College. In 2009, he was posted as a military analyst to JALLC and was deployed to Afghanistan as the JALLC Representative to HQ ISAF in 2010.

### MR. KEN RUML

Mr. Ruml is an Intern at the JALLC, where he provides academic expertise to the project team. He did his undergraduate in International Area Studies at the Charles University in Prague and is currently a candidate for a Master's degree in Security Studies at the Political Science Institute of the same university. Mr. Ruml's past experiences include a short-term internship at the CFSP/ESDP Unit of the Permanent Representation of the Czech Republic to the European Union.

PROJECT FACTSHEET



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## EXTERNAL INFORMATION SHARING IN SUPPORT OF NATO COUNTER-PIRACY OPERATIONS

Report Published on 15 July 2011

### PROJECT OVERVIEW

Counter Piracy (CP) operations are being conducted off the Horn of Africa and in the Indian Ocean by many separate naval forces operating under a variety of command arrangements. NATO's involvement began in late 2008 under a UN remit to protect humanitarian assistance vessels and expanded during 2009 to become Operation OCEAN SHIELD (OOS) with the task to combat piracy and build regional capacity to combat piracy.

Upon initial NATO involvement, DSACT observed considerable confusion, duplication of effort and poor coordination among CP forces. Out this concern arose a JALLC task with the following analysis requirements:

- *Within the framework of OOS, identify what information is and should be shared, as well as how, between NATO and external entities.*
- *Examine the conduct of sharing information with external entities in that context and with respect to existing Policy, doctrine, and directives of NATO.*
- *Recommend courses of action to facilitate information sharing to enable coherent planning and execution of NATO maritime operations in which cooperation with external entities is necessary.*



Alleged pirates captured by crew of the Portuguese frigate NRP ALVARES CABRAL while assigned to TF 508, NATO's Counter-piracy Force operating off the Horn of Africa.

### MAIN FINDINGS AND RECOMMENDATIONS



The JALLC Counter-piracy Information Sharing Team meets with the Japanese Maritime Self-Defense Force liaison office in Djibouti.

JALLC found considerable improvement in information sharing since CP operations began. There is a clear sense of professionalism and dedicated effort to overcome barriers to sharing among the CP forces. A key finding of this report is the need for improved shared situational awareness through information assurance and an enhanced ability to exchange information. Additionally, NATO commanders need to clearly articulate information exchange requirements, ensuring a consistent approach to what needs to be shared, with whom, and how often.

Although much of the required information to be exchanged is unclassified, there is a need to share classified information. Similar observations in other NATO theatres of operation have resulted in recent changes to NATO's security policy that ease the process of releasing and sharing classified information; these processes have so far remained relatively unutilized in OCEAN SHIELD.

NATO has not articulated a clear policy on the handling and sharing of criminal evidence and personal information, largely due to differing policies of member nations, limiting sharing with international organizations like INTERPOL.

Finally, it was well recognized that Merchant Mariners need information available from CP forces. However, misunderstandings about what type of information is needed and how it can best be conveyed hampers the exchange.





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## PROJECT EXECUTION

Research was conducted from August 2010 to June 2011 at multiple locations including Portugal, Middle East, Africa, NATO HQ, SHAPE, and HQ SACT.

The team collected data—including mission documents and orders—from all headquarters involved in, or associated merchant liaison organizations and Interpol.

The project team reviewed and discussed work initiated by NATO Centres of Excellence (COE), such as the COE for Combined and Joint Operations from the Sea, and the NATO Maritime Interdiction Training Centre (NMIOTC). In addition, the project team used information from previous JALLC analysis projects that had examined information sharing in Afghanistan and in Operation ACTIVE ENDEAVOR.

## PROJECT TEAM

### LCDR DOUG MCNICHOL, ROYAL CANADIAN NAVY

Lieutenant Commander McNichol has been an analyst officer at JALLC since July 2008. He has trained in both anti-submarine and mine warfare and has served as Combat Officer of HMCS IROQUOIS and Executive Officer of HMCS ANTICOSTI. LCDR McNichol has extensive joint experience, having served with the Canadian Deployable Joint Headquarters, 2000–2004, and with the Canadian Expeditionary Forces Command HQ, 2005–2008. He has deployed twice with the United Nations, UNTAC in Cambodia 1992, and UNMEE in Eritrea 2000, as well as the Canadian Command Element with USCENTCOM 2001-2002, the Multinational Force and Observers in the Sinai Egypt 2004-2005, and most recently as the JALLC Permanent Representative at HQ ISAF in 2008.

### LTC MAREK PRZYMANOWSKI, POLISH AIR FORCE

LTC Marek Przymanowski has been an analyst officer at JALLC since August 2010. He has air defence experience; was trained in ground-based air defence systems such as SA-2/SA-3. He has occupied a number of positions from Fire Control Officer through High Frequency Platoon Commander to finish as Deputy Technical Commander of GBAD Squadron. He has Joint/NATO experience, working in CAOC-2 Kalkar, as GBAD planner from 2000-2003, and Multinational Corp North-East, AOCC Exercise & Training Officer 2004-2006. He has served in Command and Reporting Centre in Poznan as COS, and before assignment to JALLC, worked in the Office of the Chief of General Staff Assistant for Air Force Affairs – Poland.

### MR. DAVID ROSS, ANALYST

Mr. Ross is a contractor augmenting the JALLC peacetime establishment as a military analyst. He has a master's degree in computer science and an undergraduate degree in mathematics. A retired US Air Force colonel, he spent 28 years as an active duty officer, serving at all levels of command. He has extensive military and civilian experience in project management, C2 systems, capability development and intelligence support. He has worked closely with policy and doctrine at both the operational and strategic levels. Prior to joining JALLC, Mr. Ross served as a military advisor to Bosnia and Herzegovina for one year and to Albania for three years. Overall, he has 19 years experience working in NATO, joint, and coalition environments.

## NATO LLDB ITEMS

- Item 1195 – Articulating Information Exchange Requirements*
- Item 1196 – Information and Intelligence Sharing with non-NATO Entities*
- Item 1197 – Sharing Evidence with Interpol*



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## SHORTFALLS IN CRISIS RESPONSE OPERATIONS URGENT REQUIREMENTS (CUR) PROCESS

Report Published on 04 November 2011

### PROJECT OVERVIEW

As reported by ISAF and in other Alliance operations and missions, the current NATO-wide Crisis Response Operations Urgent Requirements (CUR) process does not seem to adequately meet operational needs. It is widely considered to be inflexible and unable to meet the tempo of NATO-led operations and to be falling short of delivering capabilities when needed, to the right level, and to a measurable degree of performance.

The JALLC was tasked to analyze the NATO-wide CUR approval process, with emphasis on meeting ISAF operational needs, in order to make recommendations to improve the performance of the CUR approval process (the Requirement Identification and Requirement Authorization stages). The project had the following analysis objectives:

- Map the recognized CUR approval process in order to establish a theoretical process model to be used as a baseline for the study.
- Using data from previous CUR bids, identify actual CUR approval process performance in order to identify variance with the baseline process model.
- Identify stakeholder expectations, spanning the CUR approval process, in order to establish the relationships between stakeholder expectation, the baseline model, and actual CUR approval process performance.



A bridge over the Helmand River, a project procured with NATO common funding using the CUR process.

### MAIN FINDINGS AND RECOMMENDATIONS

The time being taken to complete the approval of CURs is perceived by many of the stakeholders involved to be excessively long. Moreover, the process model for the approval of a CUR as described in various documents differs from the observed process model actually being carried out.

The major finding of this study is the issue of overarching governance for the NATO-wide approval process. In the absence of a single executive body with decision-making authority over all the stakeholders, a common understanding among stakeholders of roles and responsibilities in the overall process is essential, but this common understanding was not observed.



Infrastructure such as multinational airfields, like the one in Kandahar, depend on common-funded civil works projects identified and approved under the CUR approval process.

The NATO Office of Resources (NOR) and SHAPE should together initiate a working group with representatives from the key stakeholders involved in the overall NATO-wide CUR approval process to:

- develop a process model with defined roles and responsibilities agreed by all CUR process stakeholders;
- agree on the Project Submission Requirement (PSR) format and content to meet the precise needs of the NOR to be able to trigger the Project Authorization Stage;
- agree on applying project management principles to the CUR projects;
- agree on a collaborative software to support the CUR process and provide visibility for all the stakeholders.

PROJECT FACT SHEET





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## MAIN FINDINGS AND RECOMMENDATIONS (CONT'D)

The NOR should work with the Investment Committee to investigate if Allies would be content to authorize periodic Bulk Planning Funds for CUR project support by the Agencies.

SHAPE should seek to reduce the duration of the Requirement Identification Stage by establishing and enforcing PSR review and endorsement timelines for all levels within Allied Command Operations, and by focusing on the minimum information that is required in the PSR submitted to the NOR.

SHAPE should seek to refine the production process of the Requirement Identification Stage by ensuring that operational theatre HQs and Joint Force Commands establish, within existing resources, a requirements capture capability to ensure the necessary capacity and expertise is available to conduct effective requirements capture, analysis, and definition; and that SHAPE establish, within existing resources, a CUR project management capability comprising CUR process practitioners with project management responsibilities for individual CUR projects.

## PROJECT EXECUTION

Interviews with staff involved in the CUR approval process were conducted in March and April 2011, with a focus on mapping the CUR approval process and the identification of key issues. Concurrently, the Project Team collected data on a sample of previous and ongoing CUR submissions. This sample frame was defined as all the CUR submissions endorsed by the theatre level Operational Requirements Review Boards—for ISAF and Kosovo Force—during 2010 (48 in total). Key metrics were defined and analysed to determine actual CUR approval process performance and to capture stakeholder expectation.

## PROJECT TEAM

### LTC HANS POSTMA, ROYAL NETHERLANDS ARMY

LTC Postma has served in the Royal Netherlands Army since 1987. As a Signals Officer, he served in various Signal units, in both national and international material command units to design, develop, test and field C2 systems and as a brigade CIS Officer. He was posted as a military analyst to JALLC in September 2010. Following this project, LTC Postma will become the JALLC Advisory and Training Team (JATT) team leader.

### LTC ÖMER EMRE KASAL, TURKISH ARMY

LTC Kasal has served in the Turkish Army as an artillery officer since 1993. He has a master's degree in "Acquisition and Contract Management" from the US Naval Postgraduate School. He served as fire control officer and battery commander at regimental duty and as a project officer for the Fire Support Automation Programme at the Turkish Land Forces Headquarters. In 2006, he deployed to HQ KFOR. He was posted as a military analyst to JALLC in August 2010.

### MR ROBERT MEEHAN, CIVILIAN ANALYST

Mr Meehan has been at the JALLC since 2006, where he has been involved in numerous projects and deployments in support of ISAF and KFOR. From 1994–2004 he was a cavalry officer in the British Army and he has been a brigade planning officer, battle group warfare officer, UN observer, and brigade surveillance officer, and deployed on operations to the Balkans, Iraq/Kuwait and Northern Ireland.

## NATO LLDB ITEMS

*Item 1291 – CUR Process Governance*

*Item 1292 – Collaborative software support to the CUR process and stakeholders*

*JALLC proposed the following status for existing items in the NATO LLDB:*

*Proposed status for 351, 352, 409, 454, 529, 1142, 1143 and 1280: Lesson Identified – Remedial Action Identified.*

*Proposed status for 276 and 466: Lesson Identified.*



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## ACO OPERATIONS ASSESSMENT CAPABILITY

Report Published on 16 December 2011

### PROJECT OVERVIEW

The success of NATO operations, as described in SHAPE's Comprehensive Operations Planning Directive (COPD), is predicated on an Operations Assessment capability at each level of Allied Command Operations that can determine progress toward an operation's objectives and make recommendations to decision-makers. In late 2010, SHAPE expressed concern over possible shortcomings in ACO's Assessment capability created by the variations in Assessment structures and manning at the different levels in ACO and, to assuage this concern, requested JALLC to analyze the Operations Assessment capability in ACO.

The JALLC was tasked to analyze the current and proposed Assessment structures, processes and tools at the operational and strategic levels in order to recommend appropriate support for the Operations Assessment requirements of ACO. The project had the following analysis objectives:

- Ascertain the requirements of NATO HQ and SHAPE for Operations Assessment
- Determine whether the proposed JFC/JFHQ and SHAPE-level structures are adequate to meet these requirements for Operations Assessment
- Establish if NATO processes and tools are sufficient in breadth and depth to support Operations Assessment



A planner briefs the JFC Lisbon Command Group during Exercise LOYAL VISION. The purpose of Operations Assessment is to provide Commanders with feedback on progress and allow them to make informed decisions on how to adjust the operation plan.

### MAIN FINDINGS AND RECOMMENDATIONS

Shortfalls that have been identified in the current Operations Assessment capabilities in ACO, particularly at SHAPE, are not being addressed in proposals for the future structure. The lack of an adequate Operations Assessment capability at SHAPE undermines the Assessment planning and execution processes,

NATO's commitment to a Comprehensive Approach requires that Operations Assessment staffs are able to collect data from a wide variety of sources and make informed reports that assist decision making that spans the entire breadth of the political, social, and economic spectrum. To support this effort, availability of subject matter experts and operational analysts is necessary for Operations Assessment.

The Operations Assessment process as described in the COPD and the NATO Operations Assessment Handbook and the tools that support Assessment are sound; in

practice, however, structural deficiencies and a lack of Operations Assessment support impedes the overall Assessment process and could impair decision making. The focus of Assessment staffs has been on producing the politically-oriented Periodic Mission Review rather than informing the Operational Planning Process at the operational and military-strategic level.

To resolve these issues, the JALLC Team recommends:

- creating an independent Operations Assessment capability at SHAPE
- drafting a high-level policy and/or doctrine that governs Operations Assessment within NATO
- ensuring that Operations Assessment capabilities at all levels have access to subject matter experts and operational analysts

PROJECT FACT SHEET





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Admiral James Stavridis, the Supreme Allied Commander Europe, gives direction and guidance to the Strategic Operations Planning Group during Operation UNIFIED PROTECTOR as part of the commander's decision-making cycle. Well-resourced and coherent Assessment structures and processes give planning staffs the ability to deliberately measure progress and thereby provide the strategic and the operational commander with insight on if and to what extent they are achieving the mission objectives. Such insight allows commanders to make informed decisions on how to adjust the operation and can serve as the basis for periodic mission reporting to NATO's political leadership at the North Atlantic Council.

## PROJECT EXECUTION

The analysis was based on qualitative methods using document research and interviews of key Assessment personnel in ACO. JALLC conducted over 30 interviews with staff at NATO HQ, SHAPE, and the three JFCs, as well as other NATO commands and agencies including HQ ISAF and NC3A, between May and September 2011. An Interim Report was submitted to SHAPE with initial findings on 30 September 2011 to inform NATO's October ministerial meetings. Comments on the interim version were received from commands throughout NATO and incorporated into the Final Report.

## PROJECT TEAM

### LT. COMMANDER DAN FILLION, US NAVY

LCDR Fillion has served as a helicopter pilot in the United States Navy since 1997. He is a graduate of the University of Michigan, and has a master's degree in International Public Policy from Osaka University in Japan. He has deployed as a pilot in support of US counter-narcotics operations in the Caribbean and as part of Operation ENDURING FREEDOM, and as an aircraft carrier Tactical Action Officer in support of Operation IRAQI FREEDOM and Horn of Africa operations. He arrived at JALLC in 2010 after an assignment in US Seventh Fleet.

### LT. COLONEL ZSOLT HORNYAK, HUNGARIAN ARMY

LCOL Hornyak has been a JALLC analyst since July 2010. Trained as an Signals Intelligence Officer, his postings include Hungarian Defence Forces Staff, JFC Brunssum, and the UN Mission to Angola.

### MR. NIGEL BRANSTON, CIVILIAN

Nigel Branston is a retired Royal Air Force officer, with tours in Allied HQs in Naples and Brunssum. He has been involved in operations ranging from the Falklands War (1982), NATO's International Force (IFOR) in the Former Yugoslavia (1995-96), to ISAF, to Director of Staff of JFC Brunssum's Deployable Joint Task Force HQ within the NRF. Nigel joined the JALLC in 2007 as an analyst. He has worked on several projects including Managing Partnerships; Outreach; Intelligence; Dismounted Soldier Systems; Reconstruction and Stabilization.

## NATO LLDB ITEMS

- Item #1324 – Resourcing an Operations Assessment Capability at all Levels*
- Item #1325 – Policy and Doctrinal Support for Operations Assessment*
- Item #1326 – Expert Support for Operations Assessment*
- Item #1327 – Aligning Strategic-level Operations Assessment with PMR Development*
- Item #1328 – Software for Operations Assessment*



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## OPERATION UNIFIED PROTECTOR LESSONS FOR THE ALLIANCE

Report Published on 23 February 2012

### PROJECT OVERVIEW

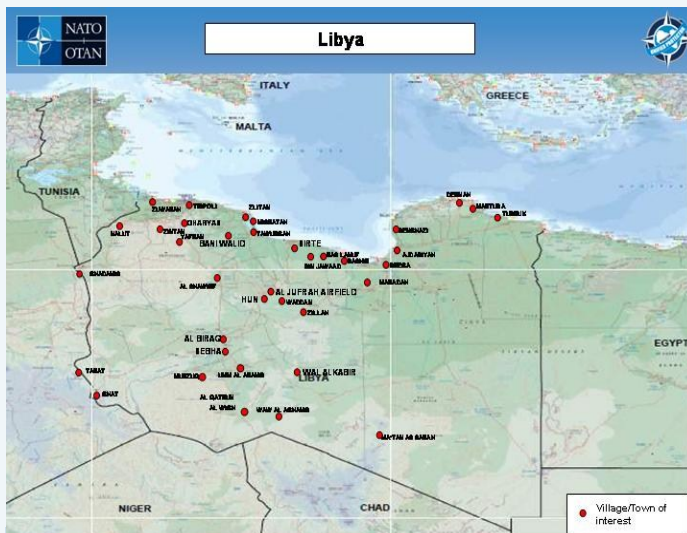
As stated by the NATO Secretary General in his 2011 Annual Report, "NATO's Operation UNIFIED PROTECTOR (OUP) was one of the most remarkable in NATO's history. It showed the Alliance's strength and flexibility. European Allies and Canada took the lead; the United States provided critical capabilities; and the NATO command structure unified all those contributions, as those of our partners, for one clear goal." NATO's intervention to enforce UN Security Council Resolutions 1970 and 1973 was swift, OUP was brought to a successful conclusion exactly seven months later on 31 October 2011. NATO acted in full accordance with the UN mandate and consulted closely throughout with other International Organizations and other international partners.

Upon completion of OUP, the JALLC was tasked to provide a compilation of those major and overarching lessons identified in the variety of NATO and national reports that are of interest to the NATO HQ International Staff (IS), International Military Staff (IMS), and ultimately Allies. The lessons contained in this JALLC report are intended to complement and not simply repeat those already promulgated in the reports produced by NATO HQ committees, SHAPE, the CJTF OUP commander and others involved in this seminal NATO operation.



French Mirage 2000D participating in NATO's Operation UNIFIED PROTECTOR.

### MAIN FINDINGS AND RECOMMENDATIONS



Map of Libya with villages/towns of interest.

A total of 15 OUP lessons are identified in the report and are presented in three broad categories. The focus for this report is on the political-military level, but remaining complementary to the OUP lessons learned reports prepared by a IS-IMS Working Group already submitted to the Secretary General and other reports prepared by SACEUR and the OUP Commander.

Seven of the lessons identified are concerned with political considerations and include guidance, engagement, awareness, and prioritization. The topics presented under political considerations include consultation with non-NATO entities, defining the political end states, information sharing in the lead up to and during NATO operations, the NATO Intelligence Warning System, procedures for sponsoring of operational partners, Strategic Communications, and Participation in Standing NATO Forces.

Three lessons relate to organizational and doctrinal issues, covering topics including transition from a non-

PROJECT FACT SHEET





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## MAIN FINDINGS AND RECOMMENDATIONS (CONT'D)

NATO coalition, Special Advisors, and Awareness of the NATO Crisis Response Team and Crisis Management Process. Five lessons are concerned with NATO assets and capabilities. These include Manning and Augmentation, Intelligence Surveillance and Reconnaissance Assets, Precision Guided Munitions, Data Link Systems and the Recognized Air Picture, and Full implementation of NATO logistics planning mechanisms. Despite the challenges faced by NATO in standing up OUP the operation was brought to a successful conclusion, principally due to the determination of participating Nations, and the dedication, flexibility, creativity, and professionalism of all the personnel involved in getting the job done.



HMS Liverpool fires her 4.5-inch gun during action in support of Operation UNIFIED PROTECTOR.

## PROJECT EXECUTION

The analysis was based on a vast variety of lessons learned, after action, and historical reports that were produced by all levels of NATO involved in Operation UNIFIED PROTECTOR, including NATO HQ, SHAPE, JFC Naples, the OUP Commander, and the OUP Air Component Commander. Previous analysis and lessons learned reports concerning other NATO operations and missions produced by the JALLC and other entities were also consulted to find evidence to support or strengthen identified OUP issues. Numerous subject matter experts across the Alliance were contacted to provide their insight into specific lessons reported.

### COLONEL FRÉDÉRIC CURTAZ, FRENCH ARMY

COL Curtaz is the head of the Exercise, Training and Experimentation branch of the JALLC. After graduating from the École Speciale Militaire of Saint-Cyr, he joined the French Marines and specialized in field artillery. He attended French War College in Paris between 2003 and 2004 and then served as a special military advisor to the Senegalese Armed Forces before becoming a professor at the French Army War College in Paris. He took command of the 43rd Marines Infantry Battalion in Ivory Coast between 2008 and 2009 and was subsequently appointed to the French Army Doctrine Center as head of the implementation office for Army lessons learned.

### PROJECT TEAM

#### MR. CHARLES RIDGWAY, NATO CIVILIAN

Mr. Ridgway has been the Editor at the JALLC since 2005. He spent ten years in the US Navy as a Surface Warfare Officer, serving on a cruiser, an aircraft carrier and as a exchange officer on a German frigate, before leaving active duty in 2003. During his time at JALLC, he has worked on over 80 analysis projects, covering virtually every operational and strategic level topic in which NATO has had an interest in the last decade.

#### MR. NIGEL BRANSTON, CIVILIAN ANALYST

Mr. Branston is a retired Royal Air Force officer, with tours in Allied HQ's in Naples and Brunssum. He has been involved in operations ranging from the Falklands War (1982), NATO's International Force (IFOR) in the Former Yugoslavia (1995-1996), to ISAF, to Director of Staff of JFC Brunssum's Deployable Joint Task Force HQ within the NRF. Nigel joined the JALLC in 2007 as an analyst. He has worked on several projects including managing Partnerships; Outreach; Intelligence; Dismounted Soldier Systems; Reconstruction and Stabilization.

#### MR. MARVIN THORSDEN, CIVILIAN ANALYST

Mr. Thorsden is a career analyst, researcher and training specialist with a background that includes sea, air, and land environments. His areas of technical expertise are Command and Control, Education, Training and Evaluation, and Combined Joint Operations. Marvin is currently a Senior Operations Analyst with the Exercise, Training, and Experimentation branch of the JALLC, and has over 25 years of experience conducting real-world data collection and analysis, the majority of which is military focused.



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## OPERATION ALTHEA ANALYSIS OF EUFOR C2 ARCHITECTURE

Report Published on 27 February 2012

### PROJECT OVERVIEW

Operation ALTHEA is part of the EU Common Security and Defence Policy support to Bosnia and Herzegovina. DSACEUR is the Operation Commander and, under the Berlin Plus arrangement, he requested, via HQ SACT, the JALLC's assistance to provide analysis support to Operation ALTHEA. The analysis requirement was to "Examine the Operation ALTHEA in-theatre Command and Control (C2) architecture in order to inform the Operation Commander's decision-making process and ensure effective alignment of in-theatre C2 structures to deliver the revised tasks." The project had three Analysis Objectives:



A Hungarian APC crew assigned to EUFOR

commander's decision-making process and ensure effective alignment of in-theatre C2 structures to deliver the revised tasks." The project had three Analysis Objectives:

- Map EUFOR's in-theatre C2 architecture and span of command (including possible deployment of reserve forces)
- Benchmark EUFOR's in-theatre C2 architecture
- From the benchmarking results, identify the anomalies and their possible causes

This project marks a milestone for the JALLC because it is the first instance that the JALLC has provided direct support to an EU military operation.

### MAIN FINDINGS

The JALLC employed a benchmarking methodology that allowed us to compare the EUFOR C2 structure with that of a sample set of mission and national HQs identified from a range of military formations including NATO, UN, other EU and national constructs. The benchmarking methodology involved comparing:

- The size of the EUFOR's C2 liability (the total troop strength over which C2 may be exercised) with the C2 liability of the other missions in the sample set to determine what size operation EUFOR can be considered to be;
- The proportion of personnel delivering C2 functionality (the HQ staff) with the total size of each missions in the sample;
- The benchmark for the numbers of C2 personnel from the equivalent military formations to that of EUFOR, with the numbers actually assigned to EUFOR HQ.

The results of the benchmarking were applied to the structure of EUFOR in order to identify anomalies. All identified anomalies were then subjected to statistical analysis and, for those that were flagged as being statistically significant, the JALLC offered possible causes and carried out trend analysis.

To support the analysis, the JALLC designed a theoretical HQ model to capture the C2 core staff, which could then



Methodology Flowchart





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## MAIN FINDINGS (CONT'D)

be applied across the sample set. Additionally, the JALLC developed the concept of "C2 Liability" to reflect the maximum potential strength of forces under a given command.

Benchmarking showed that EUFOR most appropriately represents a brigade-sized formation. Benchmarked against the size of other brigades from the sample set, the number of posts assigned to HQ EUFOR C2 core staff was found to be slightly different from the benchmark result. In terms of proportionality, however, the benchmarking results revealed an imbalance in the C2 core staff with some statistically significant anomalies.

These results will be used by the Operation Commander to inform his decision-making on the future size and structure of the HQ EUFOR.



The JALLC Ops Branch Head (2nd from right) and Project Manager (far right) attend a meeting with Commander EUFOR (centre) and his staff at Camp Butmir, Sarajevo

## PROJECT EXECUTION

The JALLC was tasked late in November 2011 with the requirement to provide a report by the end of February 2012. Given the compressed timeline, the JALLC adopted an abbreviated version of the standard JALLC Project Approach. Initial engagement with the customer took place in December 2011 to agree on the analysis requirement, objectives and proposed approach. Benchmarking was determined to be the most appropriate method and the focus of data collection centred on gathering sufficiently detailed information on example HQ constructs from a number of sources including NATO, UN, EU and Operation ALTHEA troop contributing nations.

The project team provided interim results to the EUSG Staff Group in January 2012 and a full report was presented to the EUSG at the JALLC on 28 February 2012, to coincide with a manpower and organization Review of EUFOR.

### LT. COMMANDER DAVID NOON, BRITISH ROYAL NAVY

LCDR Noon has been an analyst officer at the JALLC since 2009 and has been a team member on two previous projects: "ISAF C2" and "Military Support to Stabilisation and Reconstruction Efforts". Additionally, within the JALLC he has served as a staff officer in the Lessons Learned Analysis Branch. His previous appointments span the logistics disciplines and include: JFC Naples, HMS ILLUSTRIOUS, HMS SEAHAWK, Boscombe Down and HMS LONDON. He has also deployed on operational tours in Afghanistan and Iraq.

### LT. COLONEL ÖMER EMRE KASAL, TURKISH ARMY

LTC Kasal was posted to the JALLC as a military analyst in 2010 and has previously been a team member on the JALLC study, "Shortfalls in Crisis Response Operations Urgent Requirements Process". He has served in the Turkish Army as an artillery officer since 1993, including serving as battery commander. He holds a Master's degree in "Acquisition and Contract Management" from the US Naval Postgraduate School. He was also the project officer of the Fire Support Automation Programme for the Turkish Land Forces. In 2006 he deployed to KFOR.

### MR ROBERT MEEHAN, CIVILIAN ANALYST

Mr Meehan has been at the JALLC since 2006, where he has been involved in numerous projects and deployments in support of ISAF and KFOR. From 1994–2004 he was a cavalry officer in the British Army and he has been a brigade planning officer, battle group warfare officer, UN observer, and brigade surveillance officer, and deployed on operations to the Balkans, Iraq/Kuwait and Northern Ireland.

## PROJECT TEAM



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## OPERATION UNIFIED PROTECTOR LESSONS FROM NATIONAL MILITARY PERSPECTIVES

Report Published on 27 February 2012

### PROJECT OVERVIEW

In November 2011, the JALLC was tasked by the Supreme Allied Command Transformation to produce an analysis report on Lessons Identified during Operation UNIFIED PROTECTOR from national military perspectives. When this tasking was assigned, each of the Headquarters involved in the NATO chain of command for OUP had either already published its own report of lessons or was in the process of preparing one. As a result, this study is a complementary report that is focused on the ongoing Lessons Learned process conducted by Nations during OUP.

The JALLC collected the observations and lessons identified relevant to NATO from all of the nations that contributed forces to the Combined Joint Task Force UNIFIED PROTECTOR, developing a summary of national perspectives and identifying observed practices and procedures that enhance NATO's interaction with nations and partners supporting future NATO missions.

It is important to note that for this study, the JALLC approached all 28 NATO Nations and the four Operational Partners associated with OUP. When the data for this report was assembled, it became readily apparent that every Nation had a unique list of concerns that were not necessarily in line with the priorities of the other Nations. For this reason, the observations of this report are merged in such a way that they are of relevance to both Nations and NATO.



The JALLC team during interviews with National Military Representatives

### MAIN FINDINGS AND RECOMMENDATIONS

Ten major observations are identified in the report. The fact that much of the data reported has already been addressed in one or more of the NATO produced documents indicates that these are key focus areas for improvement that will benefit the Alliance and enhance future NATO operations. This report also contains two "other observations" that while important from a National Perspective were determined to be either internal national issues or with unspecified root causes.



A Norwegian F-16 prepares to launch from Souda Air Base in support of OUP

Two of the major observations are associated with personnel qualifications and rotation rates. Several Nations reported that personnel assigned to fill staff positions in support of OUP often lacked pre-requisite training and/or experience resulting in a mismatch of people and skills required, and that there was a reduced effectiveness of OUP Headquarters due to the frequent rotation of some assigned personnel.

Additional observations include Standing NATO Commitments, Strategic Communications, Force Preparation and Sustainment, Operational Partners with Sponsor Nations, Information Sharing, Precision Guided Munitions, Air Tasking Order Cycle, and the lack of Intelligence, Surveillance and Reconnaissance assets.

Within the report, National observations are cross-referenced with the various NATO Lessons Identified/Learned reports to highlight the importance of these National Perspectives to the Alliance as a whole. The overarching message is that the solutions to these challenges in NATO have been consistently identified, and should find support among Nations, because the national will to support NATO changes is paramount.





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## PROJECT EXECUTION



Four ships of NATO's surface Task Group 455 form up for a brief ceremony to mark the end of OUP on 31 October 2011.

This report was developed utilizing interviews, correspondence and other data that described lessons from individual Nations who contributed to Operation UNIFIED PROTECTOR. The JALLC contacted all 28 NATO members as well as the four Operational Partners that participated in OUP military operations in order to gain an understanding of their lessons from a military perspective and to improve future NATO operations.

As this data was collected and analyzed, the team researched NATO's other reports about OUP in order to identify the areas that could be addressed to enhance the Alliance's military ability to conduct future missions. This document was produced in support of the other JALLC report "OUP: Lessons for the Alliance" to show that the concerns of Nations walk in step with the concerns of NATO.

### LT COLONEL MAREK PRZYMANOWSKI, POLISH AIR FORCE

LTC Marek Przymanowski has been an analyst officer at the JALLC since August 2010. He has a masters degree in Electronics. Having specialized in Ground Based Air Defense, he has held multiple positions including Fire Control Officer as well as a Deputy Technical Commander of a Ground Based Air Defense Squadron. He has a wealth of Joint and NATO experience, and prior to taking the post at the JALLC, he worked in the Office of Chief of General Staff Assistant for Air Force Affairs, Poland.

### LT COLONEL KARL KRONSKJOLD, DANISH ARMY

LTC Karl Kronskjold is an infantry officer and he has served in the Danish Army since 1982. He is a Senior Staff Course Graduate from the Baltic Defence College. LTC Kronskjold has been deployed to the Former Yugoslavia and Afghanistan. Since 2008, LTC Kronskjold has been assigned to NATO in Portugal, first for two years at Joint Command Lisbon, and since April 2010 at the JALLC as a military analyst.

### LT COMMANDER ANTHONY SMITH, US NAVY

LCDR Smith has served as a pilot in the United States Navy since 1998. He graduated from the University of Washington with a degree in Computer Engineering. He has flown multiple combat missions in support of Operation IRAQI FREEDOM and served as the Assistant Air Operations Officer with Carrier Strike Group THREE in support of Operation ENDURING FREEDOM. He arrived at the JALLC in 2011.

### MR ARTHUR SOSA, CIVILIAN ANALYST

Mr. Sosa has served as a senior analyst at the JALLC for nearly six years on projects influencing NATO operations in Kosovo and Afghanistan. He is a former US Army Officer with thirty years experience in command at all levels. Mr. Sosa graduated from the U.S. Army Senior Service College/War College; Command and General Staff College. He holds a Masters Degree in Education.

### MR DAVID JONES, CIVILIAN OPERATIONAL ANALYST

David Jones is an operational analyst on the JALLC Production Branch's project support and assurance team. He has a masters degree in Military Operational Research from the UK Royal Military College of Science, with additional areas of studies in mathematics, statistics and health & safety. After seven years with BAE Systems he became a contractor for the UK Defence Science and Technology Laboratory. David began working for the JALLC in February 2011.

## PROJECT TEAM

PROJECT FACT SHEET



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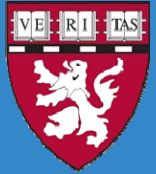
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## TOWARDS A COMPREHENSIVE RESPONSE TO HEALTH SYSTEM STRENGTHENING IN CRISIS-AFFECTED FRAGILE STATES



Report Published on 27 June 2012

### PROJECT OVERVIEW

JALLC, Harvard Medical School and Harvard Humanitarian Initiative are cooperating on a long term project, the overall aim of which is to infer elements of a strategic framework for health system strengthening in crisis-affected fragile states. Such health system strengthening depends on an effective comprehensive response by all participating actors particularly among the actions of the humanitarian & development and security communities.

This Factsheet focuses on the findings of the first case study conducted in December 2011 in Haiti and which addressed four key themes:

- the impact of the earthquake and the cholera epidemic on Haiti's health system;
- security community participation in health system recovery and reconstruction;
- the information generating and sharing mechanisms that allowed the security community to best participate in health system strengthening;
- coordination mechanisms that facilitated or directed the security community's involvement.



2 years after the earthquake  
Port au Prince downtown

### HAITI CASE STUDY- MAIN FINDINGS

The earthquake in January 2010 killed more than 230,000 people, destroyed much infrastructure, and had a devastating effect on governmental functions including the UN peacekeeping mission, which fuelled concerns that the possible lack of security would impact the international relief response. Many nations deployed military assets as part of their first response. Foreign military (mainly the US) opened the airport which enabled deployment of international humanitarian assistance; furthermore, military capabilities cleared rubble, provided security escorts, shared satellite images to enable damage assessment, and were one of the largest tertiary care providers.



Civil-Military Cooperation: MINUSTHA and IOM registering internal displaced persons

In this case study, the team found that:

- In an overwhelming, chaotic, disaster situation the security community might be an appropriate contributor to strengthen some elements of the health system: securing the supply chain; contributing to the health service delivery in providing surge secondary and tertiary care to assist health organizations regain their pre-crisis levels of functioning; supporting local and international leadership by providing security to health stakeholders.
- Coordination among key actors from the humanitarian and security community in the health sector requires long-term relationship to ensure that: there is mutual understanding among the security and humanitarian communities such that coordination mechanisms are in place prior to crisis responses; interoperability exists between the different coordination mechanisms; threats to health systems are detected and responded to quickly; Host Nation governance over the responders is clarified and supported by all means.
- An efficient and pragmatic way for coordination among the humanitarian and security communities is to create, and for all actors to contribute to, a commonly shared health information picture which is essential for timely service delivery and early detection of health threats.

PROJECT FACTSHEET





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## MAIN FINDINGS (CONTINUED)



A market in downtown Port au Prince: defective sewers affected water security

- Weaknesses in other systems (e.g. security) may affect the health system, and efforts to address these weaknesses need to be considered alongside health system specific activities.
- The most prominent challenge that hampers a coherent and effective response by the security, humanitarian and the development communities is insufficient coordination mechanisms at national/international political level to enable a whole of government response.
- Current military initiatives to facilitate a comprehensive approach are not being fully supported by civilian actors either from the security or humanitarian and development communities. Consequently, other ways will be explored that members of all communities involved in crisis response could be better engaged in common policy, plans, and standing mechanisms for interaction.

## PROJECT EXECUTION

This project will examine case studies in Haiti, Afghanistan, Libya and Kosovo. Each of these case studies was selected based on three criteria. First, each case a fragile state's health system was threatened by a human security crisis; second, in each case there was a global crisis response directed towards health system strengthening; and third, in each case a multinational military with a peace-keeping/building or stabilization mandate was present.



The final Cross Case Analysis of the cases will be published in Summer 2013.

## PROJECT TEAM



Cdr. Dr. Christian Haggemiller, German Navy, NATO – JALLC  
 Cdr. Luigi Ceppodomo, Italian Navy, NATO – JALLC  
 LtCdr Andre Thouvenel, French Navy, NATO – JALLC  
 Capt. Brad Holt, US Navy, NATO – Allied Command Transformation



Dr. Vanessa Bradford Kerry, Harvard Medical School, Dep of Global Health and Social Medicine  
 Dr. Margaret Bourdeaux, Division of Global Health Equity Brigham and Women's Hospital  
 Mr. John Crowley, Harvard Humanitarian Initiative

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## CONDUCTING AND RESOURCING COMBINED TRAINING EVENTS AND EXERCISES

Report Published on 06 November 2012

### PROJECT OVERVIEW

Combined training events are planned and conducted to achieve goals that individual training events cannot, allowing participants to benefit from shared or pooled resources contributed by the entities executing the training. NATO recognizes that cooperation with the United States' military, the largest force provider to the ISAF mission, provides mutual benefits for both parties in training future ISAF HQ staff members and similar collaborations could be applied for other missions.

The JALLC conducted an analysis into the complexities of a combined training event executed by the NATO Command Structure and another entity outside that structure, such as a NATO Nation's training body. The analysis was performed by examining the planning and execution of the NATO-US multi-tier ISAF Training Event 12-1 / Unified Endeavor 12-2 (TE 12-1 and UE 12-2) at the Joint Multinational Simulation Center in Grafenwoehr, Germany, which took place from 18 March to 06 April 2012. The project had the following Analysis Objectives:

- Identify key factors and resources required to achieve high levels of integration in combined training events and exercises.
- Examine priorities for best using the available resources identified as key to successful conduct of combined training events and exercises.



Daily Situational Awareness Brief during ISAF TE 12-1/UE 12-2

Photo courtesy of JWC and Eurocorps PAO

### MAIN FINDINGS AND RECOMMENDATIONS



Major General Berger, FRA A, Commander JWC and Co-Director of ISAF TE 12-1 addresses EXCON staff at STARTEX

Photo courtesy of JWC and Eurocorps PAO

The key to planning a combined training event is a single, unified process between the entities involved. Each contributing entity will have its own approach to training and will need to understand and consider the other's practices with regard to training during the planning and the execution of any combined training event. Familiarity with each other's training philosophies helps to facilitate compromises between the contributors and assists the combined planning and execution process of the training event.

With a greater number of entities involved in planning and executing a combined training event, it becomes more important to have clearly defined and documented roles and responsibilities. All major training documentation must be clearly conveyed in jointly endorsed documentation and made available to all involved as early as possible.

Replicating the full functionality of the real HQs requires the proper number of participants, key leaders, and properly manned response cells. Manning gaps need to be filled by available means in order to allow meaningful interactions between parallel functions in different HQs during the training event.

Subject matter experts, acting as trainers, are scarce resources. The balance between skilled and experienced specialists and professional trainers needs to be taken into consideration to adapt to any resource shortfalls.





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## PROJECT EXECUTION



TE 12-1/UE 12-2 Execution  
Photo courtesy of JWC and Eurocorps PAO

The analysis was based on research of NATO policy, doctrinal and strategic documentation, US military training documents, as well as all the available planning documents from TE 12-1 and UE 12-2. Additionally, observations and interviews were conducted with planners during the Final Planning Conference / Master Scenario Event List 2 (FPC/ MSEL 2) and during event execution at the several sites in Europe and the United States.

The project team got an overall picture of how combined training exercises were conducted, which helped them identify the root causes of any problems in the process and develop relevant recommendations. Our findings were presented to the Joint Warfare Centre in Stavanger in Norway in April 2012 to facilitate the preparation of the JWC's team for the Initial Planning Conference of the next combined ISAF training event.

PROJECT FACTSHEET

### LIEUTENANT COLONEL ZSOLT HORNYÁK, HUNGARIAN ARMY

## PROJECT TEAM

LTC Hornyák has been a JALLC analyst since July 2010 and has worked on a number of analysis projects as well as deploying to Afghanistan as JALLC's Permanent Representative to ISAF. He is trained in Signals Intelligence and has filled various posts at various intelligence units. Prior to his posting to the JALLC, he worked for the Defence Staff of the Hungarian Defence Forces as a Staff Officer. LTC Hornyák served with the UN mission in Angola in 1994 and the Joint Force Command Headquarters Brunssum from 2004 to 2007.

### MAJOR LOUIS-EDOUARD GEAY, FRENCH ARMY, ANALYST FROM COURS SUPÉRIEUR D'ÉTAT-MAJOR

Major Geay was assigned to the JALLC for a six month period before his admission to the French War College. His duties included studying the practical implementation of the NATO LL process through his contribution to a JALLC project. Before his allocation to the JALLC, he filled several posts at combat engineering units of the French Naval Infantry. He worked for the Joint Logistic HQ from 2009 till 2011, when he was enrolled in the French High Staff College. He has been deployed to several missions, including Bosnia and Herzegovina, Mayotte, French Guyana, Ivory Coast, and Kosovo.

### MR STAALE HANSEN, CIVILIAN ANALYST

Mr Hansen has worked as a civilian analyst in the JALLC since October 2005. He is a retired infantry officer from the Norwegian Army. He has a varied national military background including service in His Majesty the King's Guard, The Northern Brigade, the Telemark Battalion, the Armed Forces International Centre and in Ops Division of the Norwegian Chief of Defence Staff. From 2000 to 2003 he served as Assistant Chief of Staff J9 in Allied Command Europe, Mobile Force (Land) in Heidelberg, Germany and from 2003 to 2005 as Military Analyst, Joint Plans in JALLC. His international experience includes service in Lebanon in 1982, Termination Force Mogadishu 1994, Chief G4 Sector NE in UNPROFOR in Tuzla, Bosnia in 1995, and JMCC Deputy Director in IFOR in Zagreb, Croatia in 1996. Mr Hansen has followed ISAF Pre-Deployment Training events since the beginning of NATO's involvement and has deployed to various places in Afghanistan twelve times.

### NATO LLDB ITEMS

- Item 1524 - Familiarity with the counterparts' Training Approaches in case of a Combined Event*
- Item 1525 - Training Documentation of Combined Training Events and Exercises*
- Item 1526 - Undermanned Training HQ Cells filled by NATO staff officers*



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## INFORMATION SHARING WITH NON-NATO ENTITIES

Report Published on 13 November 2012

### PROJECT OVERVIEW



Project team upon arrival in Kabul.

The NATO Security Committee published the Supporting Document for Information & Intelligence Sharing with Non-NATO Entities (NNE) in 2009 granting greater authority and providing special guidance to facilitate partnering with NNE. This Supporting Document was augmented within the NATO Command Structure with a Bi-SC Handbook that provides guidance for implementing the new provisions for sharing authorized in the Supporting Document.

The representatives to the Bi-SC Information and Intelligence Sharing (I&IS) Task Force foresaw the need to further examine the success of the Supporting Document and Handbook in meeting the Strategic Commanders' needs when partnering and operating with NNE. The Supreme Allied Commander Transformation tasked the JALLC to examine progress and give recommendations for further improvements to NATO's ability to share information with its partners.

The Analysis Requirement was to analyze the implementation and practicability of NATO Security Policy (NSP) through its supporting documents and the Bi-SC Handbook, focusing on the information flow between NATO and NNEs

in support of ongoing NATO-led operations, in order to identify any substantial operational-level gaps in NSP and make recommendations to improve the policy and its implementation.

### MAIN FINDINGS AND RECOMMENDATIONS

The most significant finding is that recent improvements to NSP have been absolutely on target and not a single improvement made to enhance partnering was found to be incorrect. But further improvements are proposed.

One area where NATO's processes could be improved includes adapting the NATO Crisis Response System (NCRS) to foster early engagement with NNEs. A number of small changes to the NCRS and the Comprehensive Operations Planning Directive would enable and encourage early engagement with potential Operational Partners and other NNEs in future operations.

Measures could also be taken to provide relevant NNEs with better access to appropriate mission networks and information on the NSP itself so they can better understand how to interface with NATO.

At the moment, over 100 documents are used to fully articulate NSP which is both overwhelming and confusing to users. Articulating NSP with fewer documents and less complexity could facilitate better comprehension and, ultimately, application of and adherence to NSP.

Over-classification is a prevailing and common issue. Senior leaders must start enforcing relevant aspects of NSP in order to ensure that mission commanders can release information when the operational situation dictates it.



Project team being greeted by the HQ ISAF Security Team.

PROJECTFACTSHEET





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## PROJECT EXECUTION

The JALLC project team initially reviewed documentation on NSP, the supporting guidance, directives, doctrine, procedures, previous JALLC reports and open source material on information sharing with NNEs, followed up with research, video teleconferences and telephone conferences.

Interviews were conducted with staff from commands, organizations and units involved in ISAF or Operation UNIFIED PROTECTOR, as well as the International Committee of the Red Cross, United Nations Assistance Mission in Afghanistan and contractors.

Data analysis involved a subjective review of all collected notes and interviews, on the basis of which further research and interviews were conducted to determine the root causes of the prevailing opinions. This allowed the team to determine where issues were caused by policy, implementation or inadequate training.



A Swedish staff officer illustrates how information flows from NATO to a partner Nation.

PROJECTFACTSHEET

## PROJECT TEAM

### COMMANDER MIKE KLEIBAUM, GERMAN NAVY

CDR Kleibaum is a command pilot with a background in Naval Aviation. After joining the JALLC as a military analyst in October 2010, he participated in various analysis projects with an operational focus. This project was his first assignment as a project manager. In September 2012, CDR Kleibaum assumed the position of the JALLC Advisory and Training team leader.

### LIEUTENANT COLONEL GORDON HAGAR, CANADIAN ARMY

LTC Gordon Hagar has served at the JALLC as an analyst since July 2011. He has served as an armour officer and as a logistics officer in two service battalions and garrison units, is a graduate of the Royal Military College Kingston, and has successfully held sub-unit command at all previous ranks. He has been deployed to Rwanda (1995), Bosnia (2000), and Afghanistan (2002 and 2011), and has enjoyed exchange postings and courses in the United States, the United Kingdom, and on the European continent.

### MR DAVID ROSS, CIVILIAN ANALYST

Mr Ross is a civilian analyst working for the JALLC. He has masters' degrees in computer science and public service management and an undergraduate degree in mathematics. A retired US Air Force colonel, he spent 28 years as an active duty officer, serving at all levels of command. He has extensive military and civilian experience in project management, C2 systems, capability development and intelligence support. Prior to joining the JALLC, Mr Ross served as a military advisor to Bosnia and Herzegovina for one year and to Albania for three years. Overall, he has more than 22 years of experience working in NATO, joint, and coalition environments.



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## MEDIA MONITORING AND MEDIA ANALYSIS IN SUPPORT OF FUTURE NATO OPERATIONS

Report Published on 14 November 2012

### PROJECT OVERVIEW

Media monitoring (MM) and media analysis (MA) are important for effective communication and information activities during operations. During Operation UNIFIED PROTECTOR, existing MM and MA capabilities were increased with outsourced services to meet the needs of the operation.



French Minister of Foreign Affairs Laurent Fabius speaks at a press conference.

SHAPE requested the JALLC to analyse the suitability of existing MM and MA capabilities to support future operations. The Analysis Requirement was "What are the current MM and MA capabilities within NATO and to what extent are the services they provide suitable to meet the possible requirements of future operations?"

The conceptual model for the study compared current MM and MA capabilities with possible requirements of future operations, allowing the project team to identify where an appropriate balance or imbalance (representing a weakness or surplus strength) existed. MM and MA capability and requirement data was gathered by collecting survey data from a sample of NATO HQs. The survey results were analysed to identify statistical evidence of MM and MA strengths and weaknesses. Additional data was also collected which provided an understanding of possible causes of those identified strengths and weaknesses. The JALLC also analysed a two-week sample of MM products to validate the survey results and determine the extent of duplication in MM efforts.

### MAIN FINDINGS AND RECOMMENDATIONS

The JALLC found that MM was widely conducted within Allied Command Operations. No surplus strengths were identified suggesting that limited resources are not being applied to low priority requirements. Areas of MM strength were in monitoring English-language media, accessing the media using the internet and daily verbal MM reporting. Weaknesses in MM were in monitoring non-English languages (particularly those in the operations area), broadcast media (TV and radio) and the lack of more structured ways of producing and accessing MM products.

Although MA was evident within NATO, current capabilities appeared reliant on the judgment of a limited number of key individuals rather than on any systematic approach. While effective for short-term needs, this reliance on a small number of individuals is unlikely to be sufficiently robust or sustainable to support the demands of future operations. A number of reasons possibly explain the absence of systematic MA, including: there is little MA related training, MA software tools have less functionality than MM tools, and the value of systematic MA is not recognized by users.



NATO Secretary General Anders Fogh Rasmussen (center) with ISAF Regional Commander North Major General Erich Pfeffer (left) during a visit to Afghanistan.



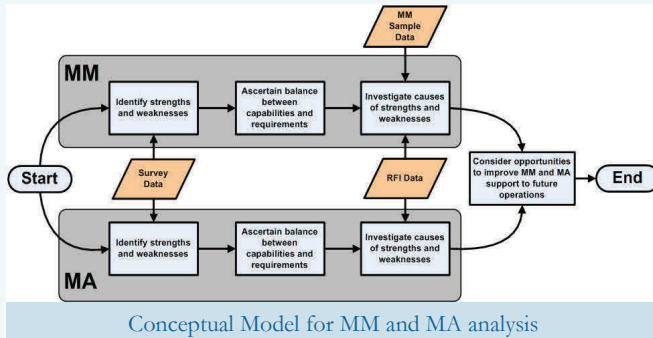


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## PROJECT EXECUTION

Initial background research and interviews took place in May and June 2012. JFC Lisbon's Public Affairs Office then helped the JALLC to develop MM and MA attributes which could be used as the basis for identifying related strengths and weaknesses. An online survey was conducted in June 2012 assessing the strengths of these MM and MA attributes and the relevant users requirements for both MM and MA. Simultaneously, sample HQs were asked to provide information about existing MM and MA capabilities to help understand the possible causes of strengths and weaknesses.



Statistical analysis of the survey results was completed in September 2012 and the report was published in November 2012 after consultation with the customer and stakeholders.

During the project, the JALLC was also asked to investigate the extent of duplication in MM products. A two-week sample survey—containing 1750 unique media items—was analysed, which revealed that duplication was not excessive.

Conceptual Model for MM and MA analysis

## PROJECT TEAM

### LIEUTENANT COLONEL ÖMER EMRE KASAL, TURKISH ARMY

LTC Kasal was posted to the JALLC as a military analyst in 2010 and has been a team member on two previous projects: "Shortfalls in Crisis Response Operations Urgent Requirements Process" and "Operation ALTHEA - Analysis of EUFOR C2 Architecture". He has served in the Turkish Army as an artillery officer since 1993, including serving as battery commander. He holds a Master's Degree in Acquisition and Contract Management from the US Naval Postgraduate School. He was the project officer for the Turkish Land Forces' Fire Support Automation Programme and in 2006 he was deployed to KFOR.

### LIEUTENANT COMMANDER DAVID NOON, BRITISH ROYAL NAVY

LCDR Noon served as an analyst officer at the JALLC between 2009 and 2012. He has been a team member on two previous projects: "ISAF C2" and "Military Support to Stabilization and Reconstruction Efforts", and was appointed Project Manager for the "Operation ALTHEA - Analysis of EUFOR C2 Architecture" project. While at the JALLC, he also served as a staff officer in the Lessons Learned Analysis Branch. His previous appointments span the logistics disciplines and he has experience of operations in Afghanistan and Iraq. On leaving the JALLC he was deployed on operations in the Arabian Gulf.

### MRS JACQUELINE EATON, SENIOR OPERATIONAL RESEARCH ANALYST

Mrs Eaton provides analytical support to project teams working on the full spectrum of NATO issues ranging from ISAF civil-military medical cooperation, to NATO Response Force C2, to NATO Outreach. Prior to joining JALLC, Mrs Eaton spent three years as a strategic analyst at the Defence Science and Technology Laboratory working for the UK Ministry of Defence. She has over nine years of defence analysis experience.

### MR ROBERT MEEHAN, CIVILIAN ANALYST

Mr Meehan has worked at the JALLC as an analyst since 2006 and has been involved in numerous projects and deployments in support of ISAF and KFOR. From 1994–2004 he was a cavalry officer in the British Army and he has held various positions including brigade planning officer, battle group warfare officer, UN observer, and brigade surveillance officer. He has been deployed on operations in Bosnia, Iraq/Kuwait, Northern Ireland, Kosovo and Afghanistan.



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## NATO SUPPORT TO TRANSFORMATION OF ALLIES' POLITICAL AND MILITARY STRUCTURES

Report Published on 29 November 2012

### PROJECT OVERVIEW

Over the past few years of NATO enlargement, new member Nations have identified the challenge of having a separate Ministry of Defence (MoD) and General Staff (GS). Some Nations expressed interest in receiving data on how these bodies could be merged or restructured to create more efficiency and suggested a collective approach for further analysis. At the 2011 Chiefs of Transformation Conference (COTC), it was agreed that NATO would provide support to the Nations in this respect as a matter of priority for Allied Command Transformation.

The JALLC was tasked with the following Analysis Requirement: collect information and analyze Nations' views or experience in merging (or not) their respective MoD and GS.

The agreed Analysis Objectives were to obtain a picture of the current structure of the Allies' MoD/General Staff and to summarize lessons and best practices that can be shared by the Allies.



COTC Workshop 2  
Prague, September 2012

### MAIN FINDINGS AND RECOMMENDATIONS



The Pentagon houses the Office of the Secretary of Defence, the Joint Staff, the service secretaries and the service chiefs of staff in a single architectural eyesore. It is an example of a merged geographic location with functionally separate MoD and GS.

During the analysis phase, the current relationships between the Allies' respective MoDs and GSs were analysed, producing the following results:

12 Allies reported that they have carried out a deliberate transformation process since 1991 to restructure and/or merge their MoD and GS. The two most significant factors influencing this change were a desire to improve the overall effectiveness of the defence structure as well as cost and resources considerations.

12 Allies also indicated an intention to change their structures: 11 intend to further integrate their MoD and GS, whereas one Ally confirmed it intends to decrease the level of integration between its MoD and GS.

Five Allies stated that they had gathered information regarding formal best practices and lessons learned regarding their experiences of restructuring their MoD and GS. Three of these five Allies confirmed they were prepared to share that information. The remaining two Allies indicated that they may be prepared to share their information. Two more Nations were prepared to share information they had gathered regarding their national MoD and GS structures.

But JALLC has offered to make available to any interested Nation, via the LL Portal, any lessons provided by other Nations on their experiences of merging/restructuring their MoD and GS.





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## PROJECT EXECUTION

JALLC's programme of work for the second semester of 2012 required this study to be presented to the Chiefs of Transformation Conference. In July 2012, after the identification of national points of contact, a request for information (RFI) was sent on 28 July 2012 to the 28 NATO member Nations to capture the current relationships between the Allies' respective MoDs and GSs.

The RFI sought information needed to examine both the functional and geographical aspects of a merger. For example, where civilian and military human resources management is handled by an MoD/GS joint staff team, it could be described as a *functionally* unified staffing element. In contrast, *geographically* merged staffing elements are located in the same office area or building regardless of whether they are functionally unified or separate.

A total of 22 Nations completed the RFI and returned it to the JALLC. During the Chief of Transformation Workshop in Prague in September 2012, the input from the first 11 Nations was presented. After the analysis of the information provided by the participating Nations, the results were used as a benchmark to answer the Analysis Objective.

### TOP TIP

For the first time JALLC used *Adobe Acrobat* to develop and distribute the RFI—used for capturing the relationships between Allies' respective MoDs and GSs—and collate the responses received. Previous JALLC studies have used other tools with mixed success for collecting survey data e.g. *QuestionPro* and *MS Office* applications *Word* and *Excel*; however, for this project it was decided that because the study was so dependent on data being received from each Ally, a more professional approach would be to issue the RFI as a pdf file to be completed by recipients using *Adobe Reader*. The completion and return rates for the RFI represent one of the success stories of this study, vindicating the use of *Adobe Acrobat* to collect focussed survey data.

PROJECTFACTSHEET



The German MoD and GS are functionally largely merged but staff supporting both the Minister and the CHOD are divided between two geographic locations.

The German MoD's headquarters have been located in Bonn (left) since the founding of the Federal Republic. Since 1993, after reunification and the relocation of the German Federal Government to Berlin, the Bendler Block (right) has been the other seat of the German Ministry of Defence.



## PROJECT TEAM

### MAJOR RÉMY GUILLIN, FRENCH ARMY

Major Rémy Guillin has served 21 years in the French Army, notably as an EOD expert of the Engineer Regiment and other units. He has been deployed twice to Former Yugoslavia, once to French Polynesia, once to New Caledonia and once to Ethiopia. Within JALLC, he worked on various projects, including "NATO Support to Transformation of Allies' Political and Military Structures" as a JALLC analyst and project manager. He is also in charge of developing an analysis tool for deployable or deployed HQs.



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## CULTURAL PROPERTY PROTECTION IN THE OPERATIONS PLANNING PROCESS

Report Published on 20 December 2012

### PROJECT OVERVIEW

During Operation UNIFIED PROTECTOR (OUP), NATO forces' performance with regard to avoiding damage to cultural property in Libya was well received by academia and in the media. Staff at HQ Supreme Allied Commander Transformation (SACT) Strategic Plans and Policy Branch believed that NATO's successful efforts at Cultural Property Protection (CPP) in Libya could form the basis for strengthening NATO's approach to CPP for future operations. The JALLC was subsequently tasked, through the 2012 Programme of Work, to analyze how CPP was conducted and successfully addressed during OUP and make recommendations for incorporating the resulting lessons into NATO's operational planning and execution.

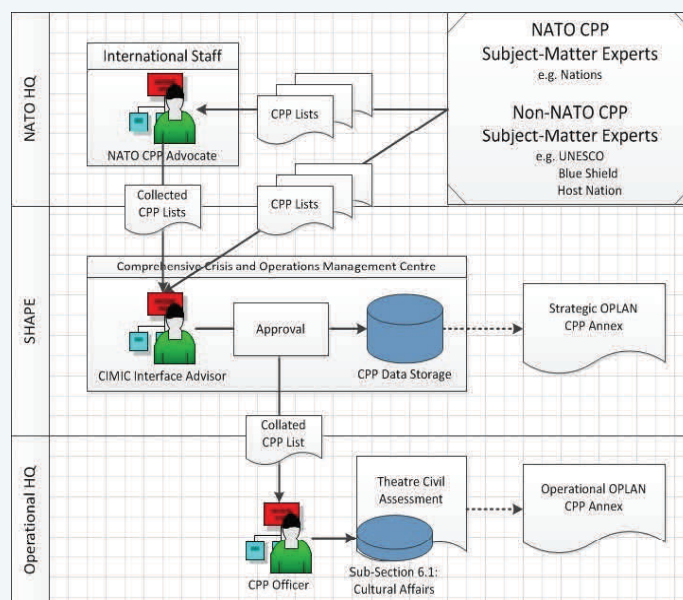
Initial research into what cultural property is in terms of CPP was undertaken by the project team. This included investigating NATO's and the Nation's CPP related international legal responsibilities, as well as which international organizations have an interest in CPP in order to identify contacts for further CPP related data collection.

The conclusions from this study were used to create a set of recommendations for the further institutionalization of CPP within NATO.



LTC Vieira, the Project Manager, in Austria for data collection with senior officers at the Austrian Armed Forces Allenstein Training Ground, where several interesting tactical-level CPP concepts are being developed. The UNESCO cultural property Blue Shield plaque is visible on the wall.

### MAIN FINDINGS AND RECOMMENDATIONS



JALLC's proposed flow for CPP related information within NATO

In NATO, CPP is treated as an operational-level sub-element of Environmental Protection and Civil-Military Cooperation (CIMIC), and is included in targeting doctrine, but is not covered as a stand-alone issue in strategic-level policy or doctrine. NATO policy should be created for CPP featuring the commitment of the Alliance to protect cultural property, adequate definitions, and clear designation of CPP related roles and responsibilities within NATO.

NATO's CPP obligations under international law can be met by using existing tools, procedures and processes that fulfill similar functions in other areas. The case study of OUP shows that while the NATO targeting process is capable of supporting CPP, targeting is not the best functional proponent for leading CPP efforts in a NATO operation. CIMIC, through the Theatre Civil Assessment, is better suited for taking the lead on obtaining, collecting, and making cultural property information available to those who require it. Existing NATO doctrine should be amended to reflect that CIMIC be the functional proponent for CPP, and cultural property information should be included in the Theatre Civil Assessment.





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## MAIN FINDINGS AND RECOMMENDATIONS (CONT'D)

Regarding training, CPP is addressed in some NATO courses but greater scope and depth on the subject would benefit NATO's approach to CPP. Therefore, relevant NATO training courses should be updated and/or created to provide deeper and broader CPP specific training to those working in CIMIC, operations planning, and targeting functional areas.

## PROJECT EXECUTION

The research performed by the project team established the criteria by which NATO's conduct of CPP in OUP was measured, allowing the project team to hypothesize that NATO's successes in protecting cultural property in OUP were based on deliberate and mature operational planning within NATO rather than measures taken at the time of OUP. That hypothesis was tested by gaining a thorough understanding of how CPP was addressed in all phases of OUP, through interviews, further research, and examining what NATO policy and doctrine exists to support CPP.

Research was conducted at the JALLC in Monsanto, Lisbon, Portugal from July 2012 to December 2012 with data collected in Italy, Austria, Germany and Belgium. Several organizations provided data for this report, including the US Committee of the Blue Shield, the US Defense Intelligence Agency, the International Military Cultural Resources Working Group, the NATO Intelligence Fusion Centre and the CIMIC Centre of Excellence.

## PROJECT TEAM

### LIEUTENANT COLONEL FILIPE VIEIRA, PORTUGUESE ARMY

LTC Filipe Vieira is an infantry officer and has served in the Portuguese Army since 1987. He has held multiple command and staff positions including in the Portuguese Infantry School, Lisbon's Military Headquarters, the Mechanized Brigade (1st Mechanized Battalion), Army Operational Command, and in the Office of the Chief of Defence. He has served on multiple missions in Europe and Africa with both the UN and NATO. He joined the JALLC as a military analyst in March 2011.

### LIEUTENANT COLONEL THOMAS SPANGENBERG, GERMAN AIR FORCE

LTC Thomas Spangenberg has served in the German Air Force since 1985. After graduating as an aeronautical and space engineer, his military career started in ground based air defence with the Patriot missile system. He attended the German Command and General Staff Officer course and completed several national staff assignments within the German Federal Ministry of Defence and the German Air Force. In 2012, he was posted to the Operational Preparation Directorate in Lisbon and joined the JALLC as a military analyst in November 2012.

### MR DAVID ROSS, CIVILIAN ANALYST

Mr Ross is a civilian analyst working for the JALLC. He has master's degrees in computer science and public service management and an undergraduate degree in mathematics. A retired US Air Force colonel, he spent 28 years as an active duty officer, serving at all levels of command. He has extensive military and civilian experience in project management, C2 systems, capability development and intelligence support. Prior to joining the JALLC, Mr Ross served as a military advisor to Bosnia and Herzegovina for one year and to Albania for three years. Overall, he has more than 22 years of experience working in NATO, joint, and coalition environments.

### MR DAVID JONES, OPERATIONS RESEARCH ANALYST

Mr Jones is an operational analyst working for the JALLC since February 2011. He has a master's degree in military operational research from the UK Royal Military College of Science, with additional areas of studies in mathematics, statistics and health & safety. After seven years with BAE Systems, he became a contractor for the UK Defence Science and Technology Laboratory.

PROJECTFACTSHEET



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## EVALUATING THE IMPACT OF NATO'S PUBLIC DIPLOMACY

Report Published on 20 December 2012

### PROJECT OVERVIEW

The Public Diplomacy Division (PDD) of the NATO International Staff identified the need to improve the way the effectiveness and impact of NATO's public diplomacy activities are evaluated so that they could more objectively report on the effectiveness of NATO's public diplomacy and enhance their public diplomacy activities. In April 2012, the JALLC was tasked by the Supreme Allied Commander Transformation, at the request of the NATO Assistant Secretary General for Public Diplomacy, to develop a comprehensive public diplomacy evaluation framework.

The JALLC researched and analysed various methods and approaches to evaluating the effectiveness and impact of public diplomacy and public relations used by both NATO and non-NATO organizations. The Public Diplomacy Evaluation Framework (referred to as the Framework) was then developed. The Framework is a theoretical construct for a total approach to public diplomacy evaluation comprised of:

- a theoretical foundation for understanding the relationships among goals, public diplomacy activities and intended and actual results;
- an evaluation methodology that includes a process for feeding evaluation findings into the activity planning process;
- procedures necessary to execute the evaluation methodology; and
- a selection of research methods and tools used to accomplish monitoring and evaluation of public diplomacy activities.



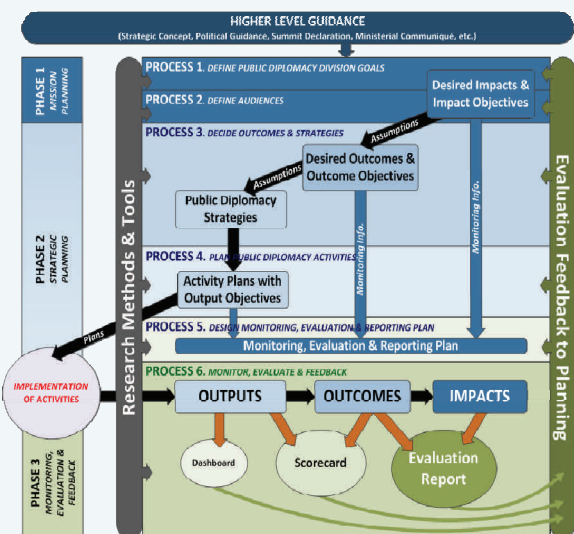
Opening remarks by NATO Secretary General NAME Anders Fogh Rasmussen during the Chicago summit, May 2012.

### MAIN FINDINGS AND RECOMMENDATIONS

The project team found that, to be able to evaluate whether public diplomacy activities have the intended effect on a target audience, a logical evaluation plan needed to be prepared and followed using the concept of *theory of change*.

The theory of change provides the baseline for evaluation and allows the user to link public diplomacy activities to goals, monitor actual results against expected results and feed findings back into the planning process to improve the theory of change as well as improve the selection of public diplomacy activities. The Framework is designed to follow the aforementioned process, enabling public diplomacy evaluation and enhancement of public diplomacy activities.

Evaluation within the Framework takes place on two levels. First, *Output Evaluation (Micro-level)* determines whether the public diplomacy activities are having the intended immediate and direct results (outputs). Second, *Impact/Outcome Evaluation (Macro-level)* determines whether those outputs (immediate and direct results) from public diplomacy activities are having the desired outcomes and impacts expected from the theory of change.



The Public Diplomacy Evaluation Framework

PROJECTFACTSHEET





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## MAIN FINDINGS AND RECOMMENDATIONS (CONT'D)

The Framework also includes feedback loops, derived from the evaluation findings, to improve public diplomacy planning on two levels. The first level of feedback focuses on *public diplomacy activity enhancement* and helps to make planned public diplomacy activities deliver improved immediate and direct results (outputs) by better selecting and implementing activities using lessons from evaluations. The second level of feedback focuses on *public diplomacy strategies enhancement* and helps in the design of more effective public diplomacy strategies and improve the theory of change by using lessons from evaluations of how the actual results (outcomes, impacts) compare with intended results from the theory of change.

## PROJECT EXECUTION

The Framework was developed using data collected from interviews, desk research and subject matter experts, incorporating elements from a number of existing evaluation frameworks. It was reviewed by a selection of public diplomacy evaluation experts from Nations, international organizations and academia. The results have been published in two JALLC products: the first, the main report, describes the conducted analysis and how the Framework satisfies PDD's analysis requirement; the second, the Public Diplomacy Evaluation Framework Guide, is a practitioner's guide for using the Framework.

## PROJECT TEAM

### COMMANDER ANTHONY SMITH, UNITED STATES NAVY

CDR Smith has served as a pilot in the United States Navy since 1998. He has flown combat missions in support of Operation IRAQI FREEDOM, Operation ENDURING FREEDOM and ISAF and served as the Assistant Air Operations Officer with Carrier Strike Group THREE. After being posted to JALLC in 2011, he has contributed to the SACEUR Strategic Analysis Team report on OUP and various other projects.

### LIEUTENANT COLONEL NERIJUS STANKEVICIUS, LITHUANIAN ARMY

LTC Stankevicius has served in the Lithuanian Army since 1994. After graduating from the Lithuanian Military Academy, he served in a variety of positions including intelligence officer, mechanized infantry, battalion commander and ISAF PRT commander. LTC Stankevicius attended the Joint Command and General Staff Officers course at the Baltic Defence College and holds master's degrees in public administration (Law University) and international relations and diplomacy (Vilnius University). He was assigned as a JALLC analyst in 2012.

### MAJOR JIŘÍ TROJÁNEK, CZECH AIR FORCE

MAJ Trojánek, has served in the Armed Forces of the Czech Republic since 1984. After graduating from the Air Force Academy, he served in a variety of ranks at various postings including at the Czech Joint Forces HQ. He has attended the NATO Staff Officers Course and the US Air Command and Staff College. He was deployed to Afghanistan as the JALLC Representative to HQ ISAF in 2010.

### MR NIGEL BRANSTON, CIVILIAN ANALYST

Mr. Branston is a retired Royal Air Force officer, with tours in Allied HQ's in Naples and Brunssum. He has been involved in operations ranging from the Falklands War (1982), NATO's International Force (IFOR) in the former Yugoslavia (1995–1996), to ISAF and served as Director of Staff of JFC Brunssum's Deployable Joint Task Force HQ within the NRF. Mr Branston joined the JALLC in 2007 as an analyst.

### MR KEITH BLISS, CIVILIAN SUBJECT MATTER EXPERT

Mr Bliss is a internationally recognized expert in marketing and communications. Mr Bliss has 18 years of corporate experience as a company director. He has spent the last 16 years as an independent consultant specializing in research, analysis and evaluation of communications strategies and markets for medium and large companies. Mr Bliss has also developed many research-based communications and marketing plans and has worked on three projects for Joint Force Command Lisbon as a facilitator.



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## REDEPLOYMENT FROM OPERATIONS (RFO)

Report Published on 15 February 2013

### PROJECT OVERVIEW



Soil Remediation prior to redeploying from a Forward Operating Base

During the spring of 2012, a 'Food for Thought' Paper was distributed by Canada and the Netherlands that describes the Lessons Identified as a result of their redeployment of fighting forces from Afghanistan.

The NATO Logistics Committee, on behalf of the NATO Military Committee (MC), sponsored this report to assist ISAF Troop Contributing Nations (TCN) preparing to withdraw from Afghanistan. The need to share lessons from redeployment was discussed at the April 2012 meeting of the MC, where the Supreme Allied Commander Transformation (SACT) stated that he would task the JALLC to collect, collate and summarize lessons about redeployment.

This report summarizes the inputs from 24 nations and organizations that responded to the SACT letter inviting them to share their lessons from their experience relating to redeployment from national, NATO or other multinational operations.

### MAIN FINDINGS AND RECOMMENDATIONS

The fourteen Lessons listed below are in narrative form in the report, grouped in three chapters:

#### Overarching Aspects of Redeployment

- Redeployment is an Operational Stage involving Logistics and Other Activities
- Content of Strategic Messaging
- Redeployment Doctrine

#### Planning for Redeployment

- Start the Planning Process for Redeployment Early
- Develop Clear Roles and Responsibilities
- Redeployment Requires Specific Skills and Knowledge
- The Need for Property Accountability and Inventory Control
- The Importance of Disposal of Property and Equipment
- The Need for Transit Agreements with Host Nation and Neighbouring Countries

#### Execution of Redeployment

- Execution and Timing of Redeployment
- Adjust the Force Structure for Redeployment
- The Availability of Material Handling Equipment (MHE) and Containers
- Providing Dedicated Redeployment Personnel Support to Troops in Theatre
- Maintain Flexibility in Lines of Communication



ISAF signals personnel preparing a camp network prior to redeployment





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## MAIN FINDINGS AND RECOMMENDATIONS (CONT'D)

It is encouraging that the issues brought forth by the 14 lessons in this report are presently being addressed in redeployment planning. Additionally, many of these lessons are addressed in some way within existing NATO policies, doctrine and directives. This report strives to bring together multiple resources into a single document.

## PROJECT EXECUTION

In order to collect, collate, and summarize lessons for this project, web based data proved to be the most expeditious means to exchange information within and outside of NATO circles and among the Comprehensive Approach community. JALLC websites proved essential to the team's success because of the ability to quickly and accurately disseminate and discuss concepts. Depending on the security classification of target audience, the existing JALLC NS and NU site formats were used to accelerate implementation of project websites, while JALLC representatives to ISAF leveraged the extant ISAF MS site to incorporate theatre lessons. The team collected 200 inputs and distilled these into 83 significant topics from which the 14 Lessons were collated for the report. The database allowed for the project team to track contributors, their references, and organize contributions by relevance to current operations, future operations, and/or doctrine. The websites are:

ISAF MS: <http://portal.hq.ms.isaf.nato.int/DCOSOPS/CJ3/TRG-LL/jallc/default.aspx>

NS: <http://workspace.jallc.nato.int/JALLC/Projects/RfO/default.aspx>

NU: <http://www.jallc.nato.int/activities/rfo.asp>

## PROJECT TEAM

### LTC GORDON HAGAR, CANADIAN ARMY

LTC Hagar has served at the JALLC as an Analyst since July 2011, has held command appointments at all previous ranks, and was promoted to his present rank 1 December 2012. He has deployed to Rwanda (1995), Bosnia (2000), and Afghanistan (2002 and 2011), and has enjoyed exchange postings and courses in the United States, United Kingdom, and elsewhere in Europe.

### LTC MAREK PRZYMANOWSKI, POLISH AIR FORCE

LTC Marek Przymanowski has been an analyst officer at JALLC since August 2010. He has an air defence background in ground-based air defence systems such as SA-2/SA-3. He has occupied a number of positions from Fire Control Officer to Deputy Technical Commander of a GBAD squadron. He has Joint/NATO experience, working in CAOC-2 Kalkar as a GBAD planner from 2000-2003, Multinational Corp North-East and AOCC Exercise & Training Officer 2004-2006. He has served in Command and Reporting Centre in Poznan as COS, and before assignment to JALLC he worked in the Office of the Chief of General Staff Assistant for Air Force Affairs-Poland.

### MAJ HAMERS, ROYAL NETHERLANDS ARMY

MAJ Hamers has served in the Royal Netherlands Army since 1988. As an Infantry Officer, he has deployed on various UN and NATO operations. He was posted as a military analyst to JALLC in June 2012.

### MR PAULO DA SILVA, INFORMATION MANAGER

Mr. Da Silva is a retired Portuguese Navy NCO and graduate of its Electronics School, specializing in various CIS fields. He has been the Webmaster and Information Manager at JALLC for more than 10 years, overseeing the JALLC IM systems, supporting projects, and advising on IM&CIS tools. Mr. Da Silva has numerous academic credentials and is currently pursuing a Masters Degree in ISM.

### MR ARTHUR SOSA, CIVILIAN ANALYST

Mr. Sosa has served as a senior analyst at the JALLC for nearly six years on projects concerning NATO operations in Kosovo and Afghanistan. He is a former US Army Officer with thirty years experience holding command at all attained ranks. Mr. Sosa graduated from the U.S. Army Senior Service College/War College; Command and General Staff College. He holds a Masters Degree in Education.



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## NATO'S ARCHIVE AND RECORD PROCESSES, STRUCTURES, AND TOOLS

Report Published on 23 April 2013

### PROJECT OVERVIEW

Information generated during an operation is critical to a reliable assessment of any operation; both during the conduct of operations and after their completion. Collection of information, conversion of information into records, and the transfer of those records to the NATO Archives, are all important parts of NATO's Record Handling process.

Despite a revised NATO Records Policy and the new Directive on Management of Records Generated on Operational Deployment, NATO Archivists, who form part of the NATO International Staff, had concerns about whether there had been significant improvement within the NATO Command Structure when it came to the handling of records relating to operational deployment. Also, the NATO Archivists were looking for recommendations to further improve NATO's records processes, structures and tools.

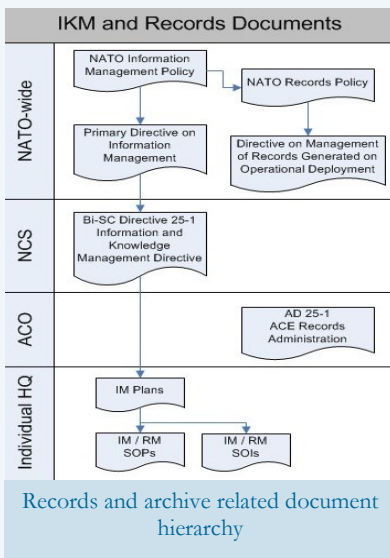
The Joint Analysis and Lessons Learned Centre (JALLC) was tasked by the Supreme Allied Commander Transformation, at the request of the International Staff, Director of the Information Communication Technology Management, to analyse the capability of the Allied Command Operations (ACO) and the NATO Command Structure (NCS) to apply the relevant policies and directives and make recommendations to improve NATO's Records Management (RM) process.



Well organized archives can stretch on for kilometers and provide access to valuable information to its users.

The report is classified NATO RESTRICTED as the analysis is based on ongoing operations and current procedures.

### MAIN FINDINGS AND RECOMMENDATIONS



The most significant finding of the JALLC's report is that ACO HQs would benefit from clear and updated directions and guidance on standardized record handling at the strategic, operational, and tactical levels. This could possibly be achieved by the two Strategic Commands' (Bi-SC) Information Knowledge Management Working Group (IKMWG) being reconvened. The IKMWG could then either consider making relevant updates to Bi-SC Directive 25-1 that would try to incorporate the provisions of the NATO Records Policy and supporting directive, or preparing a new Bi-SC directive that would cover RM. In particular, the disposition process, whereby information is vetted for archiving or disposal, would benefit from high level attention, better training, and more frequent practice to ensure that NATO is not losing valuable records.

In addition, ACO HQs seem to have some problems with their internal structures and with job descriptions for and qualifications of Information Management (IM) and RM personnel that may lead to inadequate management and archiving of NATO records of permanent value.

The team also noted that NATO's IM tools and systems seem to lack standardization, hampering RM and the archival process, potentially resulting in reduced visibility of stored information and poor sharing of information between commands.

PROJECT FACT SHEET





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## MAIN FINDINGS AND RECOMMENDATIONS (CONT'D)

NATO does not have any customized NATO training for the day-to-day handling of records; the JALLC recommended that training could help to improve the records handling skillset and should be developed to complement existing Information and Knowledge Management training.

## PROJECT EXECUTION

From October to December 2012, the JALLC team conducted data collection from various headquarters and NATO bodies including: NATO HQ, SHAPE, JFCs and NATO Communication and Information Agency. The team also interviewed key personnel in IM and RM and attended the NATO Information and Knowledge Management course in October 2012. The team's observations were then gathered and categorized and the team performed an analysis of the identified issues. Key areas for improvement in process, organization and technology were then identified and the report and recommendations prepared.

## PROJECT TEAM

### LIEUTENANT COLONEL KARL KRONSKJOLD, DANISH ARMY

LTC Karl Kronskjold is an infantry officer and has served in the Danish Army since 1982. He is a Senior Staff Course graduate from the Baltic Defence College and has been deployed to the Former Yugoslavia and Afghanistan. Since 2008, LTC Kronskjold has been assigned to NATO in Portugal, first for two years at Joint Command Lisbon, and since April 2010, at the JALLC as a military analyst and project manager.

### LIEUTENANT COLONEL MATIAS SKOGSEID, NORWEGIAN AIR FORCE

Lieutenant Colonel Matias Skogseid has served in the Norwegian armed forces since 1978. After a short period as an Artillery NCO and a Military Police NCO, he attended the Air Force Officer School and, after commissioning, served in a variety of administrative, logistics and CIMIC positions, mainly as Head of Branch. LTC Skogseid has attended the Norwegian Air Force Staff College and Armed Forces Staff College and he served at HQ North and the Norwegian National Joint HQ in Stavanger from 1998 until he was posted as a military analyst to JALLC in 2010. He was deployed to AFSOUTH N(KFOR, 1999) and to HQ ISAF (2003-2004).

### MR DAVID JONES, CIVILIAN OPERATIONAL ANALYST

David Jones is an operational analyst in the JALLC Lessons Learned and Analysis Support Branch. He has a master's degree in Military Operational Research from the UK Royal Military College of Science, with additional areas of studies in mathematics, statistics and health & safety. After seven years with BAE Systems he became a contractor for the UK Defence Science and Technology Laboratory. David began working for the JALLC in 2011.

### MAJOR JEAN-ALEXIS POUPON, FRENCH FOREIGN LEGION, ANALYST FROM COURS SUPÉRIEUR D'ÉTAT-MAJOR

Major Poupon was assigned to the JALLC for a six-month period before his admission to the French War College. His duties included studying the practical implementation of the NATO LL process through his contribution to a JALLC project. Prior to his assignment to the JALLC, he was appointed to operations with the French Foreign Legion.

## NATO LLDB ITEMS

- Item 1558 - Lack of standardized IM/RM Directions and Guidance in ACO*
- Item 1559 - Accessibility and connectivity within NATO CIS tools*
- Item 1560 - Records Management Annex to NATO OPLANs*



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## COUNTER- AND ANTI-CORRUPTION THEORY AND PRACTICE FROM NATO OPERATIONS

Report Published on 10 May 2013

### PROJECT OVERVIEW



The CAC Project JALLC team (left to right: Sq. Ldr Mike Greene, Mr. Nigel Branston, LTC Vasileios Tsamis, LTC Claudio Toro.

As a result of exposure to corruption in operations in Kosovo, Iraq and Afghanistan, NATO has come to understand that corruption in post-conflict states can threaten force protection and affect mission success.

In October 2012, in response to a request from Commander International Security Assistance Force (COMISAF), the JALLC was tasked to analyse Counter- and Anti-Corruption (CAC) efforts in post-conflict states and to gather lessons and best practices on CAC. The purpose of the study was to inform NATO and COMISAF of the effects of corruption on operations, and what is being done and can be done to minimize those effects.

The JALLC project team collated, reviewed and analysed CAC lessons and best practices from International Security Assistance Force (ISAF), previous conflicts and stabilization missions together with many papers produced by academia, governments, International Organizations (IOs) and NGOs. The JALLC team then identified the most significant and applicable of these lessons and best practices, drew conclusions and made

recommendations, in the context of ISAF and for future NATO operations.

### MAIN FINDINGS AND RECOMMENDATIONS

Five main conclusions can be drawn from the analysis: First, corruption is extremely complex, and there are no obvious, easy or quick remedies to corruption encountered during Crisis Response Operations. Second, corruption can pose a serious threat to such a mission and must therefore be addressed at the earliest opportunity in the planning process; it is much harder to fight corruption once it becomes established. This requires integration of CAC issues into relevant policies and doctrine. Third, corruption has not, until recently, been considered an area of expertise or activity for military forces. Military forces do not have the training, skills or resources to counter corruption alone. Fourth, it is essential to do everything possible to ensure that NATO and NATO-led operations are neither involved, nor perceived to be involved in, or supporting, activities that could be deemed to be corrupt. Finally, military forces do have a significant role to play, but dealing with corruption requires inter-agency cooperation and coordination, under a comprehensive approach, whereby information-sharing is key.

The enduring value of this study lies in the fact that lessons from ISAF's CAC experience have now been documented and the need for them to continue to be documented to feed future planning and operations is recognized.

The JALLC's recommendations from the analysis are grouped into eight categories, each with their own conclusions and recommendations: Policy and Doctrine, Training Own Forces, Planning, a Comprehensive Approach, Structures and Command, Finance, Procurement and Contracting, Mentoring the Host Nation, and Influence Activities.



NATO has come to understand that corruption in fragile and post-conflict states can threaten force protection and affect mission success.





NATO  
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## PROJECT EXECUTION

The analysis was carried out by the JALLC team, with the support of personnel from the US Joint Staff J7 Joint and Coalition Operational Analysis (JCOA) and the permanent representatives of JALLC and JCOA in ISAF HQ. The project team consulted widely with recognized authorities on corruption as well as with civilian and military personnel (past and current) from ISAF, NATO and members of IOs and NGOs, such as Transparency International and the World Bank.

Additionally, several hundred related NATO, National, IO, NGO and academic documents were analysed. CAC related material that was not related to the military sector was discarded, leaving some 146 lessons and best practices which were grouped into the eight categories.

## PROJECT TEAM

### LT. COLONEL VASILEIOS TSAMIS, GREEK ARMY

LTC Tsamis was commissioned as an infantry officer in the Hellenic Army in 1991. He has completed assignments with various infantry units in Greece, Cyprus and Kosovo as well as in military academies and HQs. He was posted to the JALLC in August 2011, where he has made significant contributions to a variety of projects and was the Project Manager for the "Counter- and Anti-Corruption" and "A Decade of Conflict" projects. He holds a Master in international and strategic studies and a certification in the PRINCE2 project management method.

### SQUADRON LEADER MIKE GREENE, ROYAL AIR FORCE

Sqn Ldr Greene joined the Royal Air Force in 1996 as a Flight Operations Officer. He has worked in Air Transport Tasking and as Senior Operations Officer at bases throughout the UK including London's VIP airfield. Now in his sixth year with NATO, Sqn Ldr Greene has experience in the Air Component Command and in a Joint Force HQ, from two operational deployments (Gulf Region Combined Air Operations Centre and Kandahar Airfield in Afghanistan) as well as extensive experience of Influence Operations and of the Comprehensive Approach in Operational Planning. He has been a military analyst at the JALLC since the beginning of 2013.

### LT. COLONEL CLAUDIO TORO, ITALIAN AIR FORCE

LTC Toro was posted to the JALLC as a military analyst in 2012. He has served in the Italian Air Force as an Air Defence Controller since 1991. Most of his career has been spent with Radar Squadrons as a Surveillance Co-ordinator, Ground Intercept Controller, Fighter Allocator, and Weapons Manager. In 1998, he was assigned to the US Balkan CAOC in Vicenza as Mission Director for the NATO Joint Operations in Bosnia and Kosovo. In 2007, he was assigned to the Italian Air Force HQ in Rome, where he had served until his current assignment to the JALLC.

### MR. NIGEL BRANSTON, CIVILIAN ANALYST

Nigel Branston is a retired Royal Air Force officer, with tours in Allied HQs in Naples and Brunssum. He has been involved in operations ranging from the Falklands War (1982), through the First Gulf War (1990) and NATO's International Force and Stabilization Force in the former Yugoslavia (1995–1996), to ISAF. Mr. Branston also served as Director of Staff of JFC Brunssum's Deployable Joint Task Force HQ within the NRF and joined the JALLC in 2007 as an analyst.

### NATO LLDB ITEMS

- 1562 - Planning to Deal with Corruption*
- 1563 - Dealing with Corruption within a Comprehensive Approach*
- 1564 - Counter- and Anti-Corruption Expertise / Training*
- 1144 - Contracting Support and Services in a COIN Operation*



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## A DECADE OF CONFLICT THE LESSONS FROM TEN YEARS OF JALLC ANALYSIS AND THE SIX THEMES THAT BIND THEM TOGETHER

Report Published on 17 May 2013

### BACKGROUND



SACT visits with JALLC staff after being presented with the Decade of Conflict Report.

NATO has probably faced greater change in the last decade than it did in its previous 50+ years of existence. For example, the number of Allies in the Alliance has increased by nearly 50%, the NATO Response Force (NRF) has been created, and the NATO Command Structure radically restructured. All of this change has happened in an environment of falling defence budgets, meaning NATO really has had to do more with less.

In 2012, to celebrate JALLC's tenth anniversary, Commander JALLC decided that a review of the knowledge contained in the some 130 JALLC analysis reports and the 1500 submissions to the NATO Lessons Learned Database was called for.

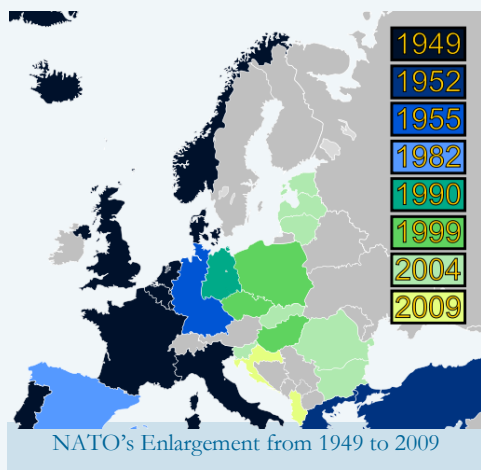
Consequently, the JALLC embarked on an internal project to provide a review and summary of a "Decade of Conflict" from a JALLC perspective, presenting a record of the more enduring findings, recommendations, and lessons from our decade of analysis. The final publication and release of the JALLC Decade of Conflict report coincided with SACT's visit to the JALLC in May 2013 as part of the celebration of ACT's tenth anniversary.

### NATO – EQUAL TO EVERY EMERGENCY

For the first 40 or so years since 1949, NATO's focus was on the collective defence of its members. When the Cold War ended, many questioned whether NATO could adapt and have any useful purpose in this changed world, and many still do. And yet, NATO has, since then, and most especially in this past decade of conflict, displayed a great deal of resilience and resourcefulness in addressing the wide variety of new, unanticipated challenges that have threatened its Members' security.

Under a series of Strategic Concepts agreed by consensus of the Allies, NATO has adapted significantly, creating new policies, doctrine, structures, standardization mechanisms, and processes. In addition, NATO redesigned its standing structures to address each new crisis it has faced.

Many still perceive NATO as the static, conventional organization it was in 1990. But when NATO has faced an emergency it has proven to be equal to it, even if the response has not been as elegant or efficient as some seem to expect.



### PROJECT EXECUTION

From the some 130 JALLC reports, representing the output of the JALLC since its inauguration in September 2002, the JALLC team first produced a summary of important findings and recommendations. The JALLC project team then looked for common causes and trends allowing individual lessons to be grouped into broader themes which resulted in the development of an underlying thesis and six themes which the JALLC believes, taken collectively, explain nearly all the issues documented in JALLC analysis reports from the last decade.

**NATO TIME-LINE**

1949: Signing of the North Atlantic Treaty in Washington DC. Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, the Netherlands, Norway, Portugal, the United Kingdom, the United States, and the Republic of Turkey join NATO.

1952: Greece and Turkey join NATO. Republic of Austria and West Germany join NATO.

1955: The Warsaw Pact is signed in Moscow.

1982: The Intermediate-Range Nuclear Forces Treaty is signed in London.

1990: The Berlin Wall falls.

1999: NATO intervenes in Kosovo.

2004: NATO expands to include Estonia, Latvia, and Lithuania.

2009: NATO expands to include Romania and Bulgaria.



NATO  
OTAN



## THE SIX THEMES

The six themes taken from the analysis are: the ongoing development of NATO's Crisis Management System; the requirement for flexible and adaptable command and control structures; the need for interoperability; the complexity of NATO; the increasing importance of the information sphere; and the commitment to contribute to Alliance ambitions.

Each one of these six themes became a significant research subject, and articulating the relevant issues and their relationships was a significant intellectual challenge. In their own right, each one of the six themes would be worthy of further, more detailed investigation and analysis. Indeed, if we were to make any recommendation, it would be that such further study be carried out.

## CONCLUDING OBSERVATIONS

NATO's decade of conflict has simultaneously been a decade of change, and the JALLC has been in the privileged position of occupying a front-row seat observing NATO's responses to that change. Indeed, in many ways, it seems that NATO's agility to respond has been quite remarkable for such a large, complex and culturally diverse organization.

We can be certain that, in an uncertain future, change will persist, and most experts agree that the rate of change is only likely to increase. After 2014, maybe the most significant change for NATO with ISAF transition is that we can expect to shift our emphasis from operational engagement to operational preparedness. To ensure that NATO remains capable of undertaking the three essential core tasks as agreed in its 2010 Strategic Concept, NATO's continuous transformation must be guided by its experience and the enduring lessons from the previous decade of change. It is essential that NATO continues to gather and learn from its collective experience.

### LT. COLONEL VASILEIOS TSAMIS, GREEK ARMY

LTC Tsamis was commissioned as an infantry officer in the Hellenic Army in 1991. He has completed assignments with various infantry units in Greece, Cyprus and Kosovo as well as in military academies and HQs. He was posted to the JALLC in August 2011, where he has made significant contributions to a variety of projects and was the Project Manager for the "Counter- and Anti-Corruption" and "A Decade of Conflict" projects. He holds a Master in international and strategic studies.

### PROJECT TEAM

#### MR. JOHN REDMAYNE, NATO CIVILIAN

Mr. Redmayne has worked as JALLC's Principal Operational Research Analyst since it was inaugurated in September 2002. He joined NATO in 1994 and spent eight years as an operational research analyst at NATO's Undersea Research Centre. Prior to that he worked in the UK for various companies in the defence and oil and gas sectors.

#### MR. CHARLES RIDGWAY, NATO CIVILIAN

Mr. Ridgway has been the Editor at the JALLC since 2005. He spent ten years in the US Navy as a Surface Warfare Officer, serving on a cruiser, an aircraft carrier and as an exchange officer on a German frigate, before leaving active duty in 2003. During his time at JALLC, he has worked on over 100 analysis projects, covering virtually every operational and strategic level topic in which NATO has had an interest in the last decade.

#### MRS. JACQUELINE EATON, NATO CIVILIAN

Mrs. Eaton joined the JALLC in 2006. In her role as the Senior Operational Research Analyst, she provides analytical support to project teams working on the full spectrum of NATO issues ranging from ISAF civil-military medical cooperation, to NATO Response Force C2, to NATO Outreach. Prior to joining JALLC, Mrs. Eaton spent three years as a strategic analyst at the Defence Science and Technology Laboratory working for the UK MOD. She has over nine years of defence analysis experience.



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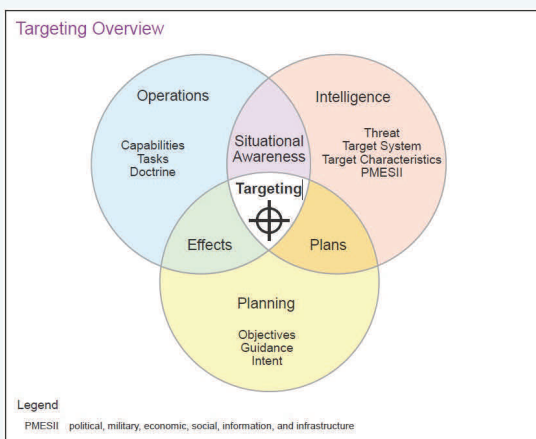
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## AN EXAMINATION OF THE ALLIED COMMAND OPERATIONS TARGETING ACTION PLAN

Report Published on 23 August 2013

### PROJECT OVERVIEW



Overview of Joint Targeting as described in US doctrine (from US Joint Publication JP-60).

The Allied Command Operation (ACO) Targeting Action Plan (ATAP) was published early in 2012 to resolve a variety of joint targeting lessons identified during Operation UNIFIED PROTECTOR (OUP). However, after the ATAP was published, progress on implementing the ATAP recommended solutions stalled.

SHAPE J2, owner of the ATAP, looking for ways to expedite implementation of the plan, requested a study that would advise on possible improvements.

Accordingly, the JALLC was tasked by the NATO Supreme Allied Commander Transformation, at the behest of SHAPE, to examine the ATAP's content, staffing and management to determine if the plan was complete and achievable, and designed and managed effectively.

Based on this examination, JALLC provided first a point paper summarizing the issues and, subsequently, a report with detailed recommendations on ways to resume progress on resolving the shortfalls in NATO's joint targeting capability.

### MAIN FINDINGS AND RECOMMENDATIONS

#### JOINT TARGETING CAPABILITY DEVELOPMENT ENVIRONMENT

NATO is reviewing its joint targeting capability end state goal (joint targeting level of ambition) in order to establish a common understanding of NATO's joint targeting expectations and responsibilities. This defined end state should provide the basis for refinement of NATO's joint targeting capability requirements. The refined requirements will be incorporated into the NATO Defence Planning Process, which aims to identify and resolve NATO's critical capability shortfalls.

#### KEY ELEMENTS OF AN ACTION PLAN

The ATAP should more clearly specify action bodies, milestones, end states, measures of performance, and measures of effectiveness in order to streamline its internal management.

#### LEVEL OF ENDORSEMENT OF THE ATAP

Implementing recommendations in the ATAP requires action from entities external to ACO, but SACEUR cannot task those external entities. A revised ATAP should be endorsed at a higher level of NATO to assign tasking and achieve accountability for task completion.



Submarines, like the German U32 pictured here, with their stealthy ISR capabilities make an important contribution to Joint Targeting (© Presse- und Informationszentrum Marine / Björn Wilke)





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## PROJECT EXECUTION

The JALLC researched and analysed NATO lessons relevant to joint targeting from Operation ALLIED FORCE, ISAF and OUP, and conducted interviews with members of the NATO targeting community and leadership at SHAPE and NATO HQ. The JALLC team attended the April 2013 Joint Targeting System (FAST) Working Group and NATO School Oberammergau Targeting Course.

The JALLC examined:

- the ATAP and targeting lessons identified from previous NATO operations to ensure that all appropriate lessons are covered in the ATAP.
- the ATAP's achievability by identifying possible friction points (such as NATO/National consensus, political sensitivity, co-ordination issues, unclear requirements, absence of defined LOA, etc.) that could be complicating the implementation of the ATAP's recommendations.
- the ATAP's design and management processes to determine possible reasons that its implementation had stalled.

Initial Findings were reported in a point paper early in the project. A detailed final report presents the analysis and detailed conclusions and recommendations for the customer and NATO joint targeting stakeholders.



The JALLC Targeting Team discusses the proposed outline for their report prior to submitting it to JALLC's Lessons Learned Analysis Support branch for project assurance review.

PROJECT FACT SHEET

## PROJECT TEAM

### COMMANDER ANTHONY SMITH, UNITED STATES NAVY

CDR Smith has been a pilot in the US Navy since 1998. He has flown combat missions in Operation IRAQI FREEDOM, Operation ENDURING FREEDOM and ISAF, and served as Assistant Air Operations Officer with Carrier Strike Group THREE. He was assigned to JALLC in 2011 as a military analyst.

### LT. COLONEL FILIPE VIEIRA, PORTUGUESE ARMY

LTC Vieira is an infantry officer, serving in the Portuguese Army since 1987. He has held multiple command and staff positions including serving in the Infantry School, Lisbon's Military Headquarters, the Mechanized Brigade/1st Mech Battalion, Army Operational Command and the Office of the Chief of Defence. He has served on multiple missions in Europe and Africa with both the UN and NATO. He joined the JALLC as a military analyst in 2011.

### MAJOR LARRY HAMERS, NETHERLANDS ARMY

MAJ Hamers has served in the Royal Netherlands Army since 1988. As an infantry officer, he has deployed on various UN and NATO Operations. He served in NATO's Joint Force Command Lisbon before being posted to the JALLC as a military analyst in 2012.

### MR ART SOSA, CIVILIAN ANALYST-

Mr Sosa is a former US Army Officer with thirty years of experience holding command at all attained ranks. He graduated from the U.S. Army Senior Service College/War College, Command and General Staff College. He holds a Master's Degree in Education and has served with the JALLC since 2007, contributing to numerous JALLC reports.



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## TOWARDS A COMPREHENSIVE RESPONSE TO HEALTH SYSTEM STRENGTHENING IN CRISIS-AFFECTED FRAGILE STATES



Reports Published between 27 June 2012 and 16 January 2014

### PROJECT OVERVIEW



To read more and find all the reports visit <http://www.jalcc.nato.int/newsmedia/helthcare.asp> or click [here](#).

From 2011 to January 2014, JALLC, Harvard Medical School and Harvard Humanitarian Initiative cooperated on a long term project, analysing health system strengthening in crisis-affected fragile states. Health system strengthening depends on an effective coordinated response by all participating actors particularly among the actions of the humanitarian & development and security communities.

This project has examined case studies in Haiti, Afghanistan, Libya and Kosovo. The case studies were selected based on three criteria. First, in each case a fragile state's health system was threatened by a human security crisis; second, in each case there was a global crisis response directed towards health system strengthening; and third, in each case a multinational military with a peacekeeping/building or stabilization mandate was present.

The Haiti case study was published on 27 June 2012 and the corresponding Factsheet is available at: [http://www.jalcc.nato.int/newsmedia/docs/factsheet\\_haiti\\_case\\_study.pdf](http://www.jalcc.nato.int/newsmedia/docs/factsheet_haiti_case_study.pdf)—or click on the image.

This Factsheet summarizes some of the more salient findings from the case studies of the crises in Afghanistan, Libya, and Kosovo as well as from the overall project, focusing on key themes from the study: the impact of the relevant crisis on the local health system, the security community's participation in health system recovery and reconstruction, and the coordination mechanisms that facilitated or directed the security community's involvement.



### MAIN FINDINGS: CASE STUDIES



Medevac in progress. Courtesy of NATO Centre of Excellence for Military Medicine

**Kosovo:** In 1999, Operation Allied Force put an end to the ethnic violence, persecution and segregation in Kosovo under Milošević's regime, culminating in what has been described as the "the largest refugee crisis in Europe since WWII". Kosovo's health system was necessarily impacted due to years of neglect, underfunding, and the air operation. The security community, specifically NATO's Kosovo Force, was heavily involved in the humanitarian response. A new health system, focused on primary health care, was implemented. Success of the new system was mixed, partly due to ongoing ethnic tension between Kosovo Albanians and Kosovo Serbians.

**Afghanistan:** Afghanistan is experiencing the cumulative effects of over three decades of war and instability. The NATO-led International Security Force Afghanistan has been instrumental in supporting both military and civilian

health system strengthening. Despite expectations that an improved health system would lead to improved stability, the project team found little evidence to support this hypothesis. This particular case study served to show that humanitarian organizations are often uncomfortable with the involvement of the security community in the health sphere, often resulting in potential limitations in what the security community can achieve in this area.

**Libya:** Libya's health system was threatened by an eight-month civil war during which the security community intervened under a UN mandate to protect civilians. Unlike the other case studies, no multi-national force with a peacekeeping/building or stabilization mandate was present in Libya and direct military health care aid to the population was limited. However, the security community had a positive impact on the preservation of the existing health system during the conflict by applying careful targeting which, in turn, assisted the humanitarian community in their efforts.

PROJECT FACT SHEET





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## MAIN FINDINGS: OVERALL

Each of the four case studies offered conclusions which reflected the successes and challenges of the security community in investing in health system strengthening in crisis situations.

In general, a safe and secure environment is a decisive condition for effective health system strengthening, a condition which necessarily requires the engagement of the security community. However, coordination, cooperation and interaction among the humanitarian, development and security communities remain crucial elements to ensure coherent responses to health crises.

In addition, the study showed that health system governance is imperative to ensure efficient health sector management and to help prevent corruption.

The Project Team also found that, although immediate crisis related health needs may be met through the employment of specific military assets in the short term, strengthening an entire health system requires long-term solutions and strategies that often go beyond the mandate, and perhaps the capability, of the security community.

Finally, during the case studies, the project team did not find conclusive proof that the success of direct medical engagements led by security actors contributes to greater stability.



The JALLC commissioned several illustrations by CDR Monica Allen Perin, US Navy artist, which were used in the published reports.

## PROJECT EXECUTION



The Choucha refugee camp in Tunisia, 18 March 2011, courtesy of Major Soussi, Tunisian Army.

This project examined cases in four countries: Haiti, Afghanistan, Libya and Kosovo.

For each of these case studies the relevant project team members from the JALLC and Harvard Medical School used a combination of literature review, subject matter expert and stakeholder interviews, and fieldwork to describe the case context in terms of the local health system and the global crisis response, outline major health threats, identify relevant actions taken by the security community that directly and/or indirectly affected the health system, and develop rich narratives for a selection of those actions.

## PROJECT TEAM

JALLC

Cdr. Dr. Christian Hagenmiller, German Navy, NATO – JALLC



Ltc. Laurent Zych, French Army, NATO – JALLC

LtCdr André Thouvenel, French Navy, NATO – JALLC

Cdr. Luigi Ceppodomo, Italian Navy, NATO – JALLC

HARVARD

Dr. Vanessa Bradford Kerry, Harvard Medical School, Dep of Global Health and Social Medicine



Dr. Margaret Bourdeaux, Division of Global Health Equity Brigham and Women's Hospital

Ms. Julie Talbot, Global Health Delivery Project

Mr. John Crowley, Harvard Humanitarian Initiative



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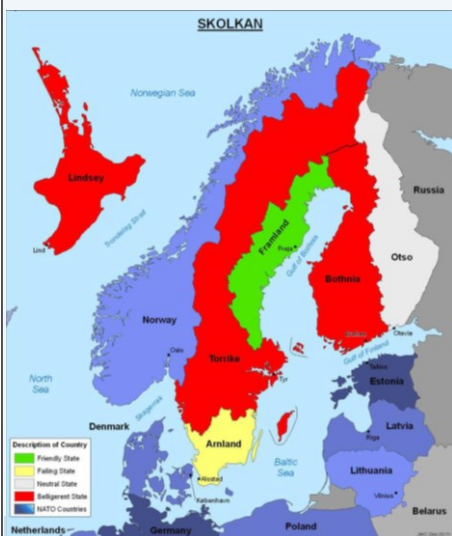
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## THE SKOLKAN SETTING COMPREHENSIVENESS AND COMPLEXITY

Report Published on 17 February 2014

### PROJECT OVERVIEW



The SKOLKAN Setting is based on the real world geography of the Baltic region, with fictional countries added for exercise play.

From 2008 until 2012, CERASIA was the only major, joint, crisis response exercise setting used for NATO collective training. Despite the CERASIA success and practical applicability, it was recognized that NATO's training and response preparation needed to evolve to keep pace with emerging threats, redefined NATO missions, and the evolution of the NATO Command Structure.

In 2009, SHAPE issued Direction and Guidance to develop a new, semi-fictional setting, geographically superimposed on the Scandinavian/Baltic region of northern Europe ("high north")—SKOLKAN—and emphasized that, among other things, both Article 5 Collective Defence and Non-Article 5 Crisis Response Operations (NA5CRO) were important training contexts it must be able to present.

The JALLC was tasked with the following Analysis Requirement: Conduct an analysis of the SKOLKAN Setting in order to determine whether it is comprehensive and complex enough to prepare NATO Forces for future threats.

The agreed Analysis Objectives focused on first developing an analysis tool—the so-called Architecture—and then benchmarking the SKOLKAN Setting (iteration 1) against the Architecture in order to describe the applicability of the SKOLKAN Setting within the contexts of the Continuum of Conflict, including "Future Threats" and NATO Responses.

### MAIN FINDINGS AND RECOMMENDATIONS

SKOLKAN is a robust and comprehensive training vehicle and the combination of all SKOLKAN settings will prepare NATO forces to respond to a very broad range of potential future threats.

The thinking required of Training Audiences for the Article 5 version of SKOLKAN (iteration 1) is different to what NATO forces have become accustomed to in operations and exercises over the last two decades—it demands a different mindset from that required to conduct out-of-area, Non-Article 5 Crisis Response operations such as those of the International Security Assistance Force (ISAF) or CERASIA training setting.

One limitation of SKOLKAN is that does not include all of the conditions present in ISAF or CERASIA: operations area-wide diversity of ethnic and religious groups and ideologies; significant cultural differences that are present between African or Middle-Eastern populations and the NATO forces; or Strategic Distance. As such, one challenge facing NATO will be to prepare its forces to operate successfully in both the North Atlantic area and at distance. Although increasing the overall number of exercises may not be feasible, rotating NATO exercises between Collective Defence and Crisis Response scenarios would keep both venues available for training and increased participation by the staff of the "off year" joint HQ would help ensure each Joint Force Command had personnel familiar with the unique challenges of both.



SKOLKAN includes elements of a Comprehensive Approach by giving the Target Audiences opportunities to interact with representatives of National government agencies.

PROJECT FACT SHEET





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## MAIN FINDINGS AND RECOMMENDATIONS (CONT.)

An observation beyond the scope of the project was that aspects of the SACEUR direction and guidance for creating SKOLKAN imposed constraints on its development that made full compliance with all of the mandates nearly impossible. It is important that those involved in the development of political/strategic direction and guidance for creating exercise settings, understand that decisions may result in trade-offs, and ensure that compromises are made deliberately—with a full understanding of their consequences.

## PROJECT EXECUTION

This project was divided in two stages. The first was focused on the development of the Architecture and ended with the production of an Incremental Report to describe and explain a draft of that Architecture along with the methodology used to create it.

The second stage focused on the analysis of the SKOLKAN Setting (iteration 1) materials for Exercise STEADFAST JAZZ 13 available in the JWC's Training Audience Web Page as well as on interviews made during the Crisis Response Planning and Execution phases of STEADFAST JAZZ 13. Additionally, although more limited in scope, all materials available at the time of the analysis concerning the 2nd iteration of SKOLKAN (an out-of-area failed state and a NA5CRO) were considered in the analysis as well.

## PROJECT TEAM

### LT. COLONEL JOÃO BRANCO, PORTUGUESE ARMY

LTC João Branco is an infantry officer who graduated from military academy in 1992. He also has a master's degree in communication sciences, organization and new technologies from the Portuguese Catholic University. He has had multiple command and staff positions, including platoon and company commander, and land forces command G7 branch head. He has deployed to several missions abroad, the last two in Afghanistan (OMLT).

### LT. COLONEL BJARNE KORSGARD, NORWEGIAN ARMY

LTC Korsgard is an infantry officer who has served in the Norwegian Army since 1982. He has had multiple NATO and Norwegian command and staff positions, including as platoon and company commander, serving in the national operational HQ, NATO Maritime HQ, NATO Joint Warfare Centre and NATO JFC Lisbon. He has served in ISAF, Afghanistan, and been a liaison between NATO and the African Union in Ethiopia.

### LT. COLONEL ZSOLT HORNYAK, HUNGARIAN ARMY

LTC Hornyak has been a military analyst since July 2010. He is trained in Signals Intelligence and has filled various posts at intelligence units and, later on, at the Defence Staff of the Hungarian Defence Forces. Prior to his posting to the JALLC, he worked for the Force Planning Department as a Staff Officer. LTC Hornyak also served with the United Nations mission in Angola in 1994 and the Allied Joint Force Command Headquarters Brunssum from 2004 to 2007.

### MR. MARVIN THORSDEN, CIVILIAN ANALYST, USA.

Mr. Thordsen is a career Applied Behavioural Analyst who has worked with NATO for the last 10 years. His specializations include real-world decision making, organizational dynamics and training development. He contributed to the development of the architecture and the SKOLKAN analysis.

## NATO LL PORTAL TRACKING AREA ITEMS

*Item 2009 – Article 5 and non-Article 5 Exercise*  
*Item 2010 – Impact of Direction and Guidance on SKOLKAN Setting Development*



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## COMMAND AND CONTROL OF NATO MARITIME OPERATIONS

Report Published on 06 June 2014

### PROJECT OVERVIEW



Ships, including those from the Standing Naval Forces, participating in NATO Exercise Brilliant Mariner 2013. (photo courtesy of MARCOM)

The 2011 NATO Command Structure Review resulted in the creation of HQ Allied Maritime Command (MARCOM). The HQ MARCOM mission is broader than those of the former Maritime Commands (MC) at Naples and Northwood, encompassing the requirement to serve as Maritime Component Command under a Joint Task Force and also to be capable of planning and running a maritime-heavy small joint operation (SJO(M)), all the while serving as NATO's principal maritime advisor.

COM MARCOM requested an analysis to support his progress towards full operational capability (FOC) by identifying the required capabilities that need to be available for MARCOM to effectively exercise Command and Control (C2), at the operational and tactical levels. JALLC support was approved by Supreme Allied Commander Transformation in order to ensure NATO can deliver desired outcomes in line with both NATO's maritime strategy and supporting maritime concepts, and the Alliance's level of ambition.

### MAIN FINDINGS AND RECOMMENDATIONS

JALLC analysis confirmed the valuable efforts made by MARCOM Transformation Program in addressing the challenges facing MARCOM as it works towards FOC. However, it also identified the conflict between MARCOM's status as an Single Service Command (SSC) and the requirement to act as the operational-level commander for an SJO (M), for which there is as yet no clearly articulated vision or definition, and for which MARCOM is not appropriately resourced.

The analysis resulted in two principal outcomes, which are detailed in the report. The first is the identification of significant capability gaps, derived from key NATO defense planning documentation, which might constrain MARCOM and interfere with its ability to meet the requirements to achieve FOC. The second principal outcome is identification and investigation of the challenges that JALLC believes represent the principal stumbling blocks to MARCOM reaching FOC. The four main themes are:

- Thinking Joint and thinking Operational, while keeping an eye on the sea
- Preparing for transition to crisis operations
- Communication and Information Systems (CIS) to support C2
- Understanding the operational environment – from situation awareness to comprehensive knowledge.

Based on the challenges and lessons identified, as developed in these four themes, the JALLC proposed recommendations to the NATO Military Authorities (NMA) and MARCOM.



The JALLC project team with Vice Admiral Hudson, COM MARCOM, during his visit to JALLC in February 2014





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## PROJECT EXECUTION

Research for this study started in October 2013 with a review of the many relevant NATO policies, doctrines and standards, and lessons from NATO or NATO-led operations and exercises. Staff officers and subject matter experts were interviewed from: NATO International Staff and International Military Staff; SHAPE; both Joint Force Commands; MARCOM; some of the NATO Response Force High Readiness Forces (Maritime); and maritime Centres of Excellence. Several maritime-related working groups and conferences were attended.

Analysis, based on the results of documentary research and interviews was effected through two distinct approaches. The first was a quantitative approach, extracting defined capabilities requirements from relevant authoritative NATO documents. The second approach was more qualitative, in which the four main themes to stand out from the first phase were further developed and analysed, leading to detailed conclusions and recommendations for how to meet, or at least mitigate the effects of, the challenges.

## PROJECT TEAM

### LT COMMANDER ANDRÉ THOUVENEL, FRENCH NAVY

Lt Cdr Thouvenel has served in the French Navy since 1993 as an Intelligence specialist, with several deployments at sea and ashore under NATO, UN and EU banners. In 2011, he was posted as a military analyst to JALLC and participated in two case studies (Haiti and Afghanistan) of the JALLC cooperative project with Harvard Medical School on the comprehensive response to health system strengthening in crisis-affected fragile states. He was deployed to Afghanistan as the JALLC Representative to HQ ISAF in 2012.

### COMMANDER LUIGI CEPPODOMO, ITALIAN NAVY

Cdr Ceppodomo has served in the Italian Navy since 1991 as an operations officer at sea under NATO and national banners. In 2011, he was posted as a military analyst to JALLC and participated in two case studies (Haiti and Kosovo) of the JALLC cooperative project with Harvard Medical School on the comprehensive response to health system strengthening in crisis-affected fragile states. He was deployed to Afghanistan as the JALLC Representative to HQ ISAF in 2013.

### MR. CHARLES RIDGWAY, NATO CIVILIAN

Mr. Ridgway has been the Editor at the JALLC since 2005. He spent ten years in the US Navy as a Surface Warfare Officer, serving on a cruiser, an aircraft carrier and as an exchange officer on a German frigate, before leaving active duty in 2003. During his time at JALLC, he has worked on over 100 analysis projects, covering virtually every operational and strategic level topic in which NATO has had an interest in the last decade.

### LT COMMANDER PEDRO RODRIGUES, PORTUGUESE NAVY

Lieutenant Commander Rodrigues has served in the Portuguese Navy since 1987 as an Operations Officer with most of his career at sea, including twice serving as commanding officer of a ship. He was posted to the JALLC as a military analyst in 2013 and was a member of the project team for the first three months, before being re-assigned to a JALLC study on Two Decades of Lessons.

### MR NIGEL BRANSTON, CIVILIAN ANALYST

Nigel Branston is a retired Royal Air Force officer, with tours in Allied HQs in Naples and Brunssum. He has been involved in operations ranging from the Falklands War (1982), through the First Gulf War (1990) and NATO's International Force (IFOR) and Stabilization Force (SFOR) in the former Yugoslavia (1995–1997), to ISAF. Mr. Branston also served as Director of Staff of JFC Brunssum's Deployable Joint Task Force HQ within the NRF. He joined the JALLC in 2007 as an analyst.

## NATO LL PORTAL TRACKING AREA ITEMS

- 2048 – *Developing Contingency Plans*
- 2049 – *Managing Augmentation Requirements*
- 2050 – *Building Maritime Comprehensive Knowledge*



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## CYBER DEFENCE SITUATIONAL AWARENESS IN NATO

Report Published on 13 October 2014

### PROJECT OVERVIEW



Project Manager COL Gilles Castel (r) with JALLC analyst Art Sosa outside the Allied Joint Force Command HQ in Naples

In response to the rapidly growing cyber threat targeting both NATO and Allied networks, Heads of State and Government at the 2010 Lisbon Summit took the decision to bolster NATO's cyber defence efforts. Significant progress has since been made in this respect, but it is important to recognize the emerging challenges to cyber defence that NATO faces.

The Joint Analysis and Lessons Learned Centre (JALLC) was tasked by Supreme Allied Commander Transformation (SACT) to conduct a study analysing Cyber Defence Situational Awareness and Information Sharing within NATO in order to improve the ability of the NATO Command Structure (NCS) to respond to Cyber Threats and share Cyber Defence lessons.

The study focused on mapping the key Cyber Defence actors within NATO and their connections, identifying the key information exchange requirements to be shared within NATO for Cyber Defence in the NCS, and identifying any gaps and shortfalls in NATO's Cyber Defence Situational Awareness.

### MAIN FINDINGS AND RECOMMENDATIONS

One of the main findings from the study is that, within the NCS there is a lack of clarity about who is actually responsible for Cyber Defence and what information should be shared and with whom. Currently, it appears that Cyber Defence related information is not being shared effectively among NCS Cyber Defence personnel, usually because personnel either do not know who has the information or who needs it. Where lines of communication regarding Cyber Defence information sharing do exist, these lines seem to be highly dependent on personal relationships—rather than on a standard process—implying that such lines of communication may be lost after personnel rotation.

To resolve many of these issues the Cyber Defence Working Group concept has been developed in a number of Allied Command Operations Standard Operating Procedures (SOP) and endorsed by SHAPE in the Cyber Defence Functional Planning Guide. Once these Working Groups are officially created, enshrined in SOPs, and recognised as the primary points of contact for Cyber Defence for their command, then it is expected that lines of communication and information sharing with regard to Cyber Defence will improve.

Many of the main-findings and recommendations from this study have since been addressed in the Enhanced Policy on Cyber Defence, Supreme Allied Commander Europe's Direction and Guidance on Cyber Defence, and SHAPE's Cyber Defence Functional Planning Guide. However, the report still provides a succinct overview of Cyber Defence in the NCS and sets out recommendations for the way ahead.



Cyber Defence is of growing concern within NATO (Source: NATO website)

PROJECT FACT SHEET





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## PROJECT EXECUTION



In 2011 there were 403 million unique variants of malware, compared to 286 million in 2010. Source: Symantec Internet Security Threat Report, April 2012 (Photo courtesy of National Intelligence Criminal Resource Centre, NATO)

In order to conduct an analysis of the Cyber Defence environment within NATO, the project team first needed to increase their understanding of Cyber Defence in general and in particular NATO Cyber Defence policy and Cyber Defence information sharing within the NCS. The project team achieved this by first performing a thorough review of relevant documents followed by conducting interviews with almost 60 subject matter experts, including personnel from HQ SACT, SHAPE, NATO Communications and Information Agency, the Joint Force Commands, and the Single Service Commands, as well as NATO's International Staff and International Military Staff.

The project team then defined Cyber Defence situational awareness in terms of the ability to Detect, to Assess and to Inform on Cyber Threats, utilizing these terms to categorize the gaps and shortfalls uncovered during their research and analysis.

The scope of the study was limited to cyber defence situational awareness within the NCS and was not an analysis of NATO's technical capabilities or a study of cyber related security matters.

PROJECT FACT SHEET

## PROJECT TEAM

### COLONEL GILLES CASTEL, FRENCH ARMY

COL Castel was posted to the JALLC as Legal Adviser (LEGAD) and military analyst in August 2013. He served initially as a Surface to Air Artillery officer until his graduation from the French War College in 2000. He then served as LEGAD in several Headquarters, either in France or in Operations as KFOR, SFOR or ISAF. His last deployment before joining the JALLC was chief of the Administrative Law Office by the French Ministry of Defence legal department .

### LIEUTENANT COLONEL CLAUDIO TORO, ITALIAN AIR FORCE

LTC Toro was posted to the JALLC as a military analyst in 2012. He has served in the Italian Air Force as an Air Defence Controller since 1991. Most of his career has been spent with Radar Squadrons as a Surveillance Coordinator, Ground Intercept Controller, Fighter Allocator and Weapons Manager. In 1998, he was assigned to the US Balkan Combined Air Operations Centre in Vicenza as Mission Director for the NATO Joint Operations in Bosnia and Kosovo. In 2007, he was assigned to the Italian Air Force HQ in Rome, where he had served until his current assignment to the JALLC.

### LIEUTENANT COLONEL RAFAL CHMURA, POLISH AIR FORCE

LTC Chmura has served in the Polish Air Force since 2000. After graduating from the Polish Military University of Technology (as an engineer), he served in a number of positions including as commander of a radar station and as a specialist in the Defence Planning Division of the Polish Air Force HQ. He completed the Operational-Tactical Postgraduate Studies at the Polish Academy of National Defence in Warsaw and holds masters degree in telecommunication in transport (from Warsaw Polytech). LTC Chmura joined the JALLC as a military analyst in 2013.

### MR. ART SOSA, CIVILIAN ANALYST

Mr. Sosa is a former US Army Officer with thirty years of experience holding command at all attained ranks. He graduated from the US Army Senior Service College/War College and Command and General Staff College. He holds a master's degree in education and has served with the JALLC since 2007.



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## COMMAND AND CONTROL OF BALLISTIC MISSILE DEFENCE

Report Published on 13 October 2014

### PROJECT OVERVIEW



US PATRIOT battery, outside the city of Gaziantep

The evolution of NATO Ballistic Missile Defence (BMD) Command and Control (C2) doctrine has been rapid. Although a NATO *Theatre* BMD capability has existed for several years, it was only at the Summit in Lisbon in 2010 that the Alliance decided to develop a NATO BMD capability. Within just two years from the date of that summit, at the Chicago Summit in 2012, the Alliance was able to declare an Interim BMD capability.

Taking this rapid evolution into consideration, and recognizing the fact that NATO continues to evolve its BMD capabilities at a fast pace—two further levels of capability are already foreseen—it makes sense in terms of the timeline of BMD C2 evolution to pause and review related NATO doctrine.

In view of the crisis in Syria, and within the framework of Article 4 of the North Atlantic Treaty, the Turkish Government called upon the Alliance in 2012 to augment Turkey's air defence capabilities to defend the population and territory of Turkey. In response to Turkey's request some NATO Nations have deployed Patriot missile batteries to contribute to the defence of territories at risk. As this is the first time NATO is using available C2 capabilities to control a mission of this type, SHAPE saw benefit in analysing Lessons from the mission to support the refinement of relevant doctrine.

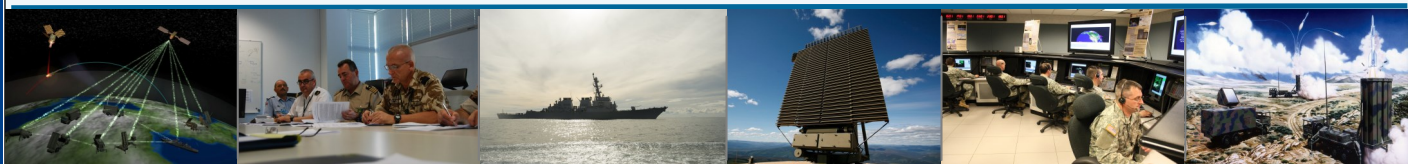
### PROJECT EXECUTION

Research for this study started in February 2014 with a review of existing policy, doctrine, direction, guidance, and standing defence plans. The team then deployed in Turkey for one week in March 2014 in order to interview all key leaders in the field. Staff Officers and subject matter experts were interviewed from SHAPE, HQ Allied Command Transformation, and HQ Air Command.

The project team identified C2 arrangements for generic missile defence missions. The project team then examined the specific C2 arrangements in place for the augmentation of Turkish air defence capabilities. Finally, the project team synthesized what was learned in the first two steps, identifying areas for potential improvement and proposing appropriate recommendations.



The JALLC project team with PATRIOT units representatives at INCIRLIK TUR Airbase, during Data Collection in March 2014





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## MAIN FINDINGS AND RECOMMENDATIONS

NATO policies and guidelines go to great lengths to differentiate between two types of missile defence—BMD and Theatre BMD (TBMD). With regard to roles and C2 arrangements, they are indeed quite different. However, many of the technical capabilities of BMD and TBMD are quite similar. Analysis indicates that the efforts to define the BMD and TBMD as different capabilities have been counter-productive, leading to a recommendation in this report that NATO recognize missile defence as a single set of capabilities that can be used in different roles.

For obvious reasons, the formal set of Allied Joint Doctrine for any functional area will sometimes not reflect the most recent NATO policy and concepts. For most functional areas, though, the processes for updating doctrine work well. Although major policy decisions on missile defence have been made and agreed by the Nations in recent years, there is a paucity of Allied Joint Doctrine for missile defence. To find current NATO thinking and guidance for missile defence, one must peruse a great number of political-level documents, never being 100% certain that the latest information has been found. Therefore Allied Joint Doctrine for missile defence should be brought up to date, possibly supplemented by an Allied Command Operations publication to reflect major decisions that are too sensitive, either in terms of timing or topic, to be reflected in doctrine.

When NATO augments a nation's air defence capabilities, the overall C2 arrangements for air defence become split between NATO (for those elements being deployed by NATO) and the nation (for those elements belonging to the nation). Although there will undoubtedly be unity of effort in these situations, close coordination of respective C2 functions is paramount to the success of any such augmentation. Therefore future Concepts of Operations for missile defence should clarify the C2 and coordination relationships between NATO and Host Nation commanders for peacetime missions.

## PROJECT TEAM

### PROJECT MANAGER

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LTC Zych has served in the French Army since 1987 as an air defence operations specialist, with several deployments under NATO, the UN, and National banners. He was in command of an artillery battalion before being posted as a staff officer and then as a military analyst to JALLC in 2011.

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MR DAVID JONES, GBR OPERATIONAL RESEARCH ANALYST

## NATO LL PORTAL TRACKING AREA ITEMS

- 2054 – *Optimizing BMD C2 Arrangements*
- 2055 – *Establishing BMD Doctrine*
- 2056 – *BMD Operations - BMDCC*
- 2057 – *The Role of National AOCs*
- 2058 – *NATO AMDC CONOPS Arrangements*
- 2059 – *NATO planning for Air Defence Augmentation*
- 2060 – *Civil Protection Coordination*



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## TWO DECADES OF LESSONS FROM OPERATIONS AND EXERCISES

Report Published on 11 November 2014

### PROJECT BACKGROUND



NATO Member Nations Flags fly outside NATO HQ  
(Source: NATO Website)

Transformation is critical to enhance the Alliance's credibility in the face of today's international security environment. The diversity of Alliance operations spanning the last twenty years, constant global economic pressures, and current events highlight an ever-present need for NATO to be prepared and equipped with effective capabilities, facilitated through a multinational and comprehensive Political, Military, Economic, Social, Infrastructure, and Information (PMESII) mind-set.

Strategic concepts and initiatives, and other strands of work within NATO—such as Smart Defence and the Connected Forces Initiative—are instruments through which the Alliance is transforming in an increasingly uncertain future threat environment. Such transformation is the essential ingredient to ensure and enhance the Alliance's readiness and combat effectiveness, thereby driving towards achieving the end state.

### PROJECT SCOPE

In light of the above, Supreme Allied Commander Transformation (SACT) reaffirmed that lessons from NATO operations and exercises should be applied to the development of NATO's strategic concepts and initiatives. Accordingly, the Joint Analysis and Lessons Learned Centre (JALLC) was tasked to identify key strategic lessons from the last 20 years of NATO operations and exercises, in order to make recommendations that will facilitate SACT's strategic military input to on-going initiatives to transform NATO.

#### Project Analysis Requirement:

*“Identify key Strategic Lessons from the last 20 years of NATO operations (primarily International Security Assistance Force (ISAF), Operation Unified Protector (OUP) and secondly from NATO Training Mission in Afghanistan (NTM-A) and NATO Training Mission in Iraq (NTM-I), and support to build up of the Kosovo Security Force (KSF) and exercises, in order to make recommendations that will facilitate SACT's strategic military input to on-going initiatives to transform NATO.”*



Norwegian F-16 flying over Suda Bay as part of the enforcement of the No-Fly-Zone and the protection of the Libyan civilian population under OUP (Source: NATO Website)

### METHODOLOGY

The JALLC Project Team collected and analysed 1261 relevant documents during the study and, despite a scarcity of ready-to-analyse strategic level lessons, discovered that many lessons did have strategic relevance that could and should be, and in some cases were already, harnessed to transform NATO. In order to ascertain the strategic relevance of the lessons (if any), the Project Team developed a categorization method which would allow them to filter lessons (MC 400/3 Categorization Process). All of the data collected by the Project Team was recorded and categorized using the same method developed during the initial analysis phase.





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## METHODOLOGY (CONTINUED)

Finally, the Project Team conducted in depth analysis of all of the data collected. The Project Team were not only able to confirm initial emerging trends, but also make some additional observations. All of the observations are discussed in the corresponding Report and presented along with conclusions and (where appropriate) recommendations developed by the Project Team.

### THE REPORT

The Report is likely to be of value to NATO's policy makers, doctrine developers, capability developers, and planners as it identifies and presents the discussion surrounding those Strategic Lessons that NATO has yet to address (fully) and which should be considered in light of NATO's key strategic initiatives and, more widely, to NATO's Transformation in general.

The main findings presented in the Report have been set out in terms of nine strategically relevant topics to NATO's transformation. These nine strategically relevant topics have been grouped in the context of four key Strategic Focal Areas, which relate to how NATO manages its transformation at the strategic level:

**Managing the Force:** relating to Preparation – Training of Forces, Force Generation, and Interoperability.

**Managing the Operation:** relating to Command and Control, Joint Intelligence, Surveillance, and Reconnaissance, and Knowledge Development.

**Managing the Campaign:** relating to Crisis Management and Crisis Response Operations, Comprehensive Approach, and Security Force Assistance.

**Managing the Narrative:** relating to Strategic Communications.

The Report also has eight project-specific annexes which contain information that, while relevant to the Project and potentially interesting to some readers, either falls outside the scope of the study or the JALLC felt should not be presented in the main body of the Report.

### FOLLOW-ON STUDY

A follow-on study entitled "Two Decades of Lessons from Operations and Exercises – Commander's Insights" is currently ongoing with a forecast completion of mid-2015. The intention of this further analysis is to capture insights and knowledge as well as understand the experience of current and former NATO Commanders to confirm and complement the findings from the study presented in this report.



KFOR troops wait at a check-point in a local village (Source: NATO Website)

PROJECT FACT SHEET

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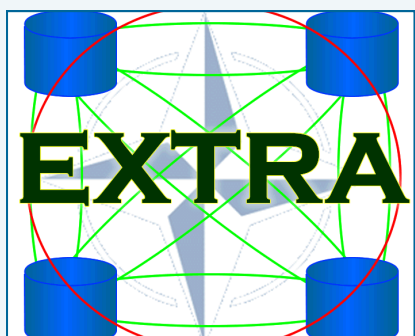
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## THE NATO EXTRA PORTAL

Report Published on 14 January 2015

### PROJECT OVERVIEW



The NATO EXTRA Portal is available on the NATO Secret WAN (<http://nllp.jallc.nato.int/cmmt/extra>)

Exercises and training are an important part of NATO's transformation and of ensuring that NATO *trains as it fights and fights as it trains*. Lessons Identified (LI) and learned during an exercise must be captured and institutionalized within NATO effectively and efficiently so that the Alliance can obtain maximum benefit from each exercise.

In this respect, to enhance the information sharing in the training and exercises field, the Supreme Allied Commander Transformation tasked the Joint Analysis and Lessons Learned Centre (JALLC) to develop and promote the NATO Exercises, Training, Reporting and Analysis Portal (EXTRA) Information sharing platform. The EXTRA Portal is to be the focal point for sharing exercise and training related knowledge and lessons.

This report documents the efforts of the JALLC to refine the requirement for the NATO EXTRA Portal; describes the NATO EXTRA Portal as it has been designed, developed, and tested; and offers recommendations on the way ahead for the future use and management of the NATO EXTRA Portal.

### DEVELOPMENT AND TESTING

Before considering how the NATO EXTRA Portal should be structured, the project team first conducted a review of the two Strategic Commands' (Bi-SC) Collective Training and Exercise Directive 075-003, as the only document within NATO that sets out the initial requirements for the NATO EXTRA Portal.

However, for any such portal to be truly useful for its target audience, the expectations, needs, and requirements of its users also had to be ascertained. Therefore the project team visited a number of NATO bodies and HQs, based on their involvement in NATO exercises and training in general, interviewed staff officers—including personnel from both Strategic Commands and both Joint Force Commands (JFC), as well as the Joint Warfare Centre (JWC), the Joint Forces Training Centre (JFTC) and the JALLC—and subject matter experts, in order to collect data on functional requirements for the NATO EXTRA Portal.

The functional requirements identified during the document review and user interviews were combined into a single list of NATO EXTRA Portal required functions. The project team added some functions based on the experience of developing, upgrading, and managing the NATO Lessons Learned Portal. Each functional requirement was then developed into a suitable software solution or tool, delivering the required functionality. Based on required functionalities, the NATO EXTRA Portal was developed

Finally, the NATO EXTRA Portal was subjected to internal and external review and testing in two stages: Test 1 examined whether the constructed NATO EXTRA Portal worked as it was designed; and Test 2 elicited feedback from initial—and potential future—users in order to further refine the NATO EXTRA Portal to meet their needs. The results of both tests were used to further develop and refine the NATO EXTRA Portal in terms of its functionality and user-friendliness.



The structure of the NATO EXTRA Portal

PROJECT FACT SHEET





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## THE PURPOSE OF THE NATO EXTRA PORTAL

The NATO EXTRA Portal is an information sharing platform dedicated to those individuals and institutions that are closely engaged in the NATO exercises and training field and for the benefit of the NATO EXTRA Community of Interest in general. It has been developed in accordance with Bi-SC 075-003 and is designed to reflect its users expectations and requirements.

The NATO EXTRA Portal is a hub of exercise-related links, tools and functions, including: a library, an archive, and a lessons database, all of which enable users to filter exercises and training event-related information by their specific stage, phase, and sub-phase, as well as other specific criteria.

The NATO EXTRA Portal is designed as a one-stop-shop for exercises and training related information and is divided over two levels: Level One covers general information and Level Two covers Exercises and Training related information.



The NATO EXTRA Portal is the single centralized exercises and training related information sharing platform within NATO

## THE NATO EXTRA PORTAL MANUAL



The NATO EXTRA Portal User Manual

In order to ensure that the NATO EXTRA Portal can be, and will be, used to its maximum effect, the project team developed a NATO EXTRA Portal User Manual Guide.

This comprehensive guide provides users with a website page by website page explanation of the various uses, tools, functions, and other important elements of each page. The manual also includes step-by-step guidance—including screenshots—on how to perform certain key actions as well as useful additional information to help users take advantage of all the NATO EXTRA Portal has to offer.

The manual follows the structure of the website and covers such topics as how to access the NATO EXTRA Portal, who the users are and how it is managed, and the life cycle of an exercise training site. The manual includes a useful aide memoire and a list of all the (expected) exercise deliverables that should be uploaded to the NATO EXTRA Portal during the course of an exercise.

PROJECT FACTSHEET

## PROJECT TEAM

### PROJECT MANAGER, LIEUTENANT COLONEL NERIJUS STANKEVICIUS

LTC Stankevicius has served in the Lithuanian Army since 1994. After graduating from the Lithuanian Military Academy, he served in a variety of positions including infantry platoon commander, motorized infantry company commander, intelligence officer, mechanized infantry battalion commander and in 2011 he was deployed to Afghanistan as ISAF PRT commander. LTC Stankevicius attended the Joint Command and General Staff Officers course at the Baltic Defence College and holds master's degrees in public administration and international relations and diplomacy. He was assigned as a JALLC military analyst in 2012.

### MR. PAULO DA SILVA, INFORMATION MANAGER

Mr. Da Silva is a retired Portuguese Navy NCO and graduate of its Electronics School, specializing in various Communication Information Systems (CIS) fields. He has been the Webmaster and Information manager at JALLC for more than 10 years, overseeing the JALLC Information Management (IM) systems, supporting projects, and advising on IM&CIS tools. Mr. Da Silva has numerous academic credentials and holds a master's degree in Information Systems Management.



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## ANALYSIS OF NATO'S EXERCISE REPORTING PROCESS

Report Published on 18 March 2015

### PROJECT OVERVIEW



Polish soldiers at an exercise

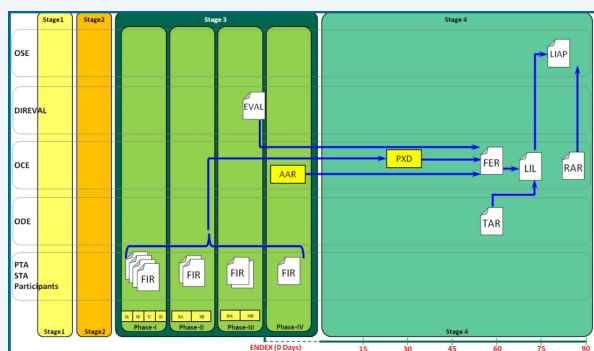
Exercises and training are an important part of NATO's transformation and of ensuring that NATO *trains as it fights and fights as it trains*. Lessons Identified (LI) and learned during an exercise must be captured and institutionalized within NATO effectively and efficiently so that the Alliance can obtain maximum benefit from each exercise.

To enhance information sharing in the exercises and training field, the Supreme Allied Commander Transformation tasked the Joint Analysis and Lessons Learned Centre (JALLC) to analyse NATO's Exercise Reporting Process used within the Exercise, Training, Reporting, and Analysis (EXTRA) Community of Interest (CoI).

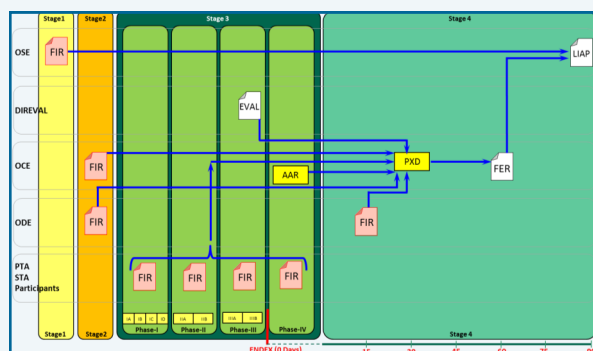
This report was the second part of a wider study related to NATO's EXTRA CoI that also included the development and launch of the NATO EXTRA Portal: the single centralized exercise and training related information sharing platform within NATO.

### NATO'S EXERCISE REPORTING PROCESS

The project team conducted an extensive review of the Strategic Commanders' (Bi-SC) Collective Training and Exercise Directive 075-003, which sets out NATO's Exercise Reporting Process in detail, and observed the reporting process conducted during Exercise Trident Jaguar 2014 (EX TRJR14). From comparison and analysis of those two sources of information, the project team were able to identify areas in NATO's current Exercise Reporting Process that could be improved. Below the existing and proposed Exercise Reporting Processes are illustrated.



The existing NATO Exercise Reporting Process

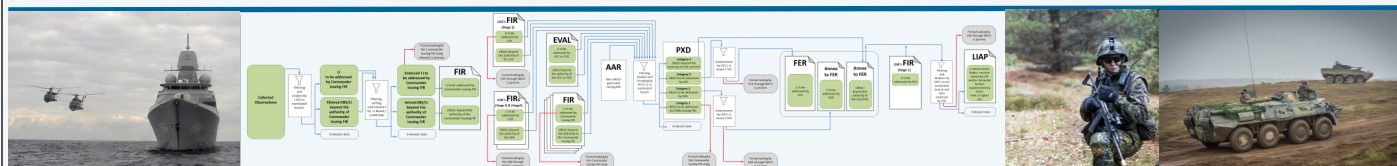


The proposed NATO Exercise Reporting Process

The shortfalls identified as a result of the analysis conducted by project team are summarized as follows:

**Shortfall 1** – Bi-SC 075-003 does not explain the Exercise Reporting Process very well in terms of the number, content, timing, and responsibility of the required deliverables, which results in the risk that not all Observations and Lessons Identified (LI) are being captured, analysed, and shared during an exercise.

**Shortfall 2** – Absence of clear guidance in Bi-SC 075-003 as to how Observations and LI should be reported in exercise deliverables (reports) results in the risk that such Observations and LI are not properly addressed/actioned during the Exercise Reporting Process by responsible tasking authorities and/or transitioned into the NATO Lessons Learned process for further staffing and tracking.





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## NATO'S EXERCISE REPORTING PROCESS (CONTINUED)

**Shortfall 3** – The role of the NATO EXTRA Portal is not clearly described in Bi-SC 075-003 and therefore not clearly understood by the EXTRA Col, resulting in the risk that Observations and Lessons are not being efficiently and effectively shared among those who need them.

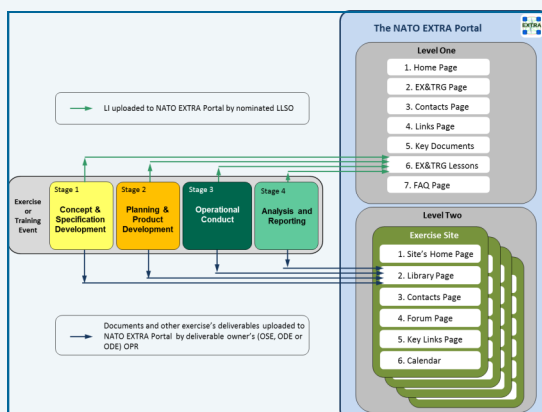
**Shortfall 4** – The process for transitioning LI into the NATO Lessons Learned process is not clearly described in Bi-SC 075-003. Those using the process are not consistently transitioning those LI into the NATO Lessons Learned process for further staffing and tracking, resulting in the risk that they may not be being learned throughout NATO.

### ADDRESSING THE SHORTFALLS

The project team suggested improving NATO's Exercise Reporting Process to address the shortfalls identified by the project team by aligning the process more to what happens in practice (i.e. during an exercise) and by providing additional guidance in Bi-SC 075-003 with regard to the content, format, and timing of exercise reporting deliverables.

Doing so will ensure that all Observations and LI are captured at the right moment in the exercise and fed into the exercise reporting process and, ultimately, the NATO Lessons Learned process where they can be shared and utilized NATO-wide. However, it will be important for all of NATO's EXTRA agencies and organizations to achieve agreement on how exactly the Exercise Reporting Process should be revised to ensure maximum efficiency and effectiveness. The proposed Exercise Reporting Process is illustrated on the first page of this factsheet

### INTERACTION WITH THE NATO EXTRA PORTAL



How the Exercise Reporting Process should interact with the NATO EXTRA Portal

The NATO EXTRA Portal is the pre-eminent tool within NATO for capturing and disseminating Exercise and Training related information among the NATO EXTRA Col. As such, its role and purpose within the NATO Exercise Reporting Process is key to ensuring that LI find their way into NATO Lessons Learned process.

LI and deliverables coming out of an exercise should be uploaded to the Exercise and Training Lessons Database in the NATO EXTRA Portal after each stage and phase of an exercise in Observation, Discussion, Conclusion, and Recommendation (ODCR) format. This allows exercises and training related information to be easily accessed and utilized by the NATO EXTRA Col, facilitating timely lessons sharing.

The relationship between the Exercise Reporting Process and the NATO EXTRA Portal is illustrated on the left.

PROJECT FACT SHEET

### PROJECT MANAGER, LIEUTENANT COLONEL NERIJUS STANKEVICIUS

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### PROJECT TEAM



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### ATTACK THE NETWORKS

Report Published on 11 May 2015

#### PROJECT OVERVIEW

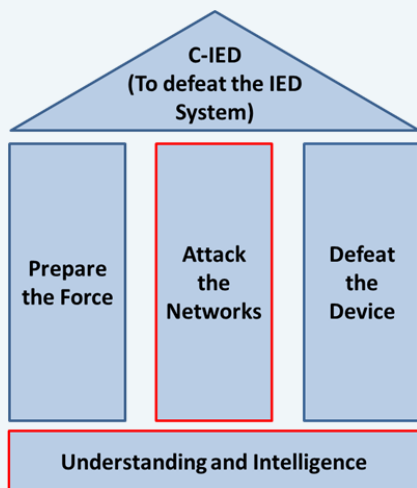


Figure 1: AtN in the C-IED Temple

Attack the Networks (AtN) is one of the three pillars of NATO's Counter-Improvised Explosives Device (C-IED) concept. However, despite being recognized as an essential capability for the Alliance, according to the Military Committee, progress to develop the AtN pillar of C-IED has been slow.

An earlier JALLC study on AtN, conducted in 2013, contributed to the revision of NATO's C-IED Action Plan by analysing NATO operational and strategic lessons in order to generate a broader and deeper rationale supporting AtN.

This follow-on study, jointly requested by the Deputy Assistant General of the Emerging Security Challenges Division of the International Staff and the Director of the Intelligence Division of the International Military Staff in 2014, was intended to identify the military requirements for a future AtN capability in NATO by analysing "NATO and national AtN military lessons and information collected at all levels, in order to identify the military requirements for NATO AtN."

#### ATN CAPABILITY DEVELOPMENT

NATO's AtN capability has not developed as effectively or as quickly as desired because AtN is still considered to be an integral part of NATO's C-IED capability and not an independent capability. In order to ensure the development of the AtN capability can effectively progress, that development must be harmonized with other NATO and non-NATO activities to counter threat networks (see figure 2).

However, for NATO to be able to ensure that harmonization process, it needs first to develop a broad counter-threat network concept, which the JALLC has termed a *Network Identification and Engagement (NIE)* for the purposes of this project. The specific AtN military requirements relating to the development of an AtN capability then form a subset of the broader NIE military requirements.

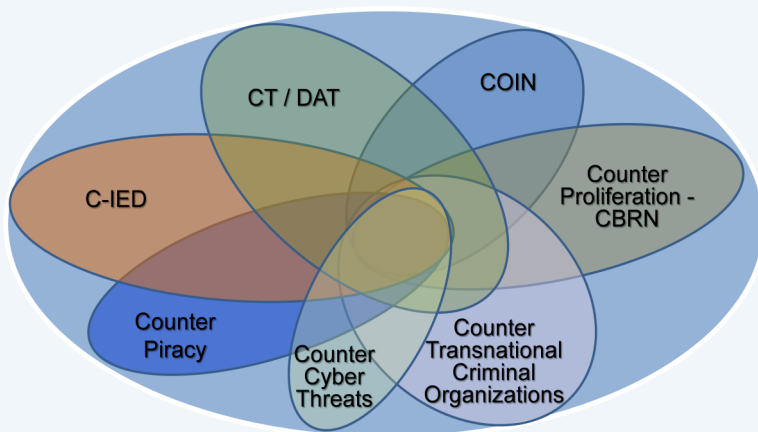
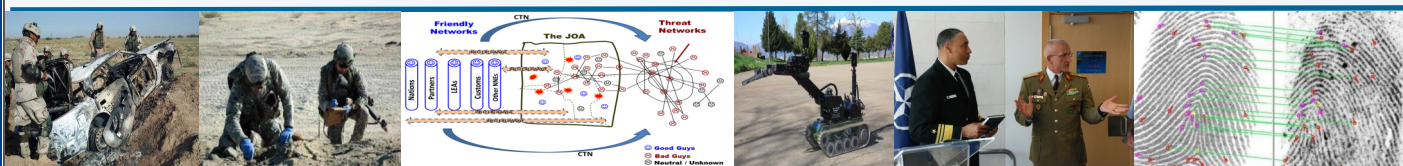


Figure 2: Interrelated Counter Threat Networks Activities

#### NETWORK IDENTIFICATION AND ENGAGEMENT CONCEPT

The NIE concept is intended to cover the full spectrum of counter-threat network activities conducted by NATO (see figure 3; overleaf). The project team believes that the development and institutionalization of such a concept would allow NATO to better coordinate all counter threat activities, resulting in more efficiency and effectiveness in operational planning and execution.





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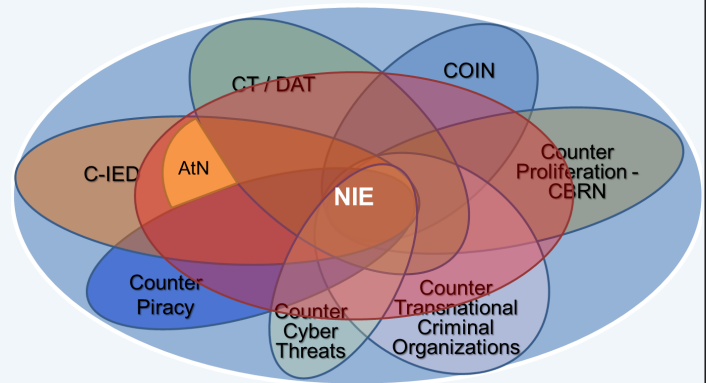


# NETWORK IDENTIFICATION AND ENGAGEMENT CONCEPT

(CONTINUED)

The overarching military requirements for a NIE (and therefore new AtN) capability identified by the project team fall broadly into the following categories:

- Concepts and Standards;
- Education, Training, and Exercises;
- Organization;
- Materiel and Resources; and
- Information Exchange and Cooperation.



Network Identification and Engagement Concept

But more than just the development of military requirements will be necessary if NATO is to effectively develop its NIE capability; institutionalization of the proposed NIE concept (if endorsed) within NATO will be essential to ensure the development of the related capability.

Such institutionalization will require some effort as it involves not only changing and developing *capabilities* within NATO, but also changing and developing the current *mindset*. Such efforts could include, for example, improving AtN/NIE visibility in day-to-day tasks, improving NATO's ability to coordinate military capabilities dealing with threat networks, increasing understanding when it comes threat networks and countering them, and ensuring that AtN/NIE is adequately represented within collective exercises.

Efforts will also need to be increased to enhance information-sharing capabilities (including those with Non-NATO Entities) and the development of new related concepts and technologies, such as the new NATO Human Network Analysis and Support to Targeting (HNAT) concept which is fundamental to AtN and NIE. In addition, the Nations could consider making exploitation capabilities (such as forensics laboratories) more available to NATO as and when required.

Finally, NATO's training and education requirements for AtN/NIE will need to be (re)assessed and where necessary revised, on a continuous basis, to ensure that NATO remains aware and capable of countering all types of threat networks.

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LTC Ramalho is an Artillery Officer who graduated from the Portuguese Military Academy in 1988 and graduated in Management and Computer Science from Universidade Autónoma de Lisboa. He has held multiple command and staff positions, including acting Regiment Commander at Madeira Military Region from 2011 to 2013. He served at the NATO Joint Command Lisbon from 2001 to 2008 and was Counsellor at the National Defence Policy Directorate in the Portuguese MOD from 2008 to 2011. He has been a military analyst at the JALLC since 2013.

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## Enabling Successful Multinational Logistics with NATO's Joint Logistics Support Group

Report Published on 25 May 2015

### PROJECT OVERVIEW



Setting up of a fuel bladder to ensure the continuous fuel supply of an Operation.  
(Courtesy of NRC - 2012)

In order to help ensure that NATO can efficiently prepare and facilitate a Joint Logistics Support Group (JLSG) capability, the Joint Analysis and Lessons Learned Centre (JALLC) was tasked by HQ Supreme Allied Commander Transformation (SACT) to conduct an analysis of key policy and doctrine relating to the JLSG concept, relevant lessons, and observations collected during operations and exercises. The findings are presented in the report published by the JALLC entitled "Enabling Successful Multinational Logistics with NATO's Joint Logistics Support Group."

The JLSG concept has been in place for a period of approximately ten years, but the JLSG HQ has only been fully executed twice (once during an exercise and once during an operation) and partially implemented on other occasions. Therefore, there are limited numbers of observations, lessons, or best practices relating to the JLSG HQ that cover the full spectrum of JLSG tasks.

In order for a JLSG HQ to operate effectively and meet the logistics requirements of the Nations, the Nations themselves must first fully support it with assets and trained personnel. JLSG HQs must be properly exercised to show off their potential and earn the confidence of the Nations they rely on for support. It is therefore important to recognize that if the JLSG concept is to be reliant on the use of augmentees, then such augmentees must be effectively prepared to carry out their mission.

### SIX LESSONS IDENTIFIED

The project team collected, reviewed, summarized, and analysed lessons, observations, and best practices from NATO-led exercises and operations, and then reviewed NATO JLSG-related doctrine and guidance including the JLSG Implementation Instruction. From this analysis, the project team determined the extent to which identified JLSG-related lessons, observations, and issues had been addressed by NATO and identified a further six lessons which may be of importance to the further improvement of NATO's JLSG capability.

#### Lesson Identified 1: Harmonize Direction and Guidance

Relevant NATO doctrine and policy needs to better reflect how the JLSG should work in practice, including how the JLSG HQ is stood-up, how the JLSG Core Staff Element (CSE) provides preparation support to an operation, and how the JLSG CSE is formed.

#### Lesson Identified 2: Establish Core Capabilities for the JLSG HQ

The JLSG HQ CSE may not be sufficiently manned to fully execute its tasks. Increasing the number of JLSG CSE personnel and balancing the CSE-to-augmentee ratio may help ensure that the JLSG can perform in line with expectations.

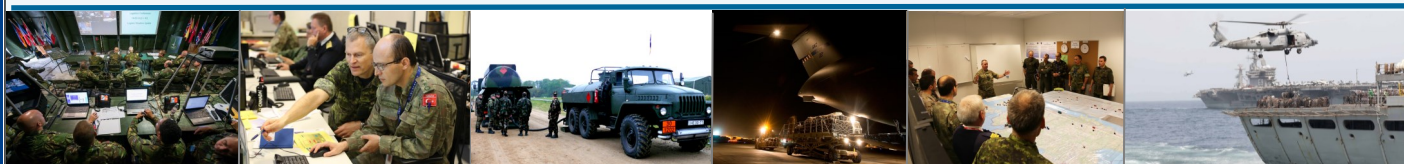
#### Lesson Identified 3: Availability of Standard Operating Procedures (SOP) and Job Descriptions (JD)

Ensuring all JLSG personnel (including augmentees) have access to all relevant SOPs and JDs, as well as ensuring that those SOPs and JDs are up to date and concurrent with NATO's logistics environment will, most likely, improve the efficiency and effectiveness of JLSG HQs.



Recovery is one of Logistics functional areas, exercised during Capable Logistician 2013. (Courtesy of NRC - 2013)

PROJECT FACT SHEET





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## SIX LESSONS IDENTIFIED (CONTINUED)

### Lesson Identified 4: The Need for a Recognized Logistics Picture (RLP)

Good logistics Situational Awareness (SA) entails a full understanding of theatre logistics needs, coupled with a full understanding of the means to meet those needs. But attaining and maintaining logistics SA is perceived as being challenging. Troop Contributing Nations (TCNs) may not be prepared to share the information required to build an RLP, which is key to good logistics SA. Agreeing an RLP baseline/minimum requirement among Nations may improve the exchange of logistics data between NATO and TCNs to the RLP.



A line of Serbian military vehicles leaving southern Kosovo passes a KFOR contingent of US Marines deploying to the town of Pozaranje. (Courtesy of AP - 1999)

### Lesson Identified 5: Manning the JLSG HQ

Manning the JLSG HQ is a multi-faceted challenge involving normal manning of NATO PE positions, rapidly releasing personnel from primary responsibilities when needed for the JLSG HQ, and rapidly augmenting the HQ by various means. However, the practical and successful use of modular augmentation from an NFS command helped overcome this challenge and may be a future best practice for JLSG HQ augmentation. Additionally, the project team's findings indicate that the supplemental use of contractors to fill gapped billets in the JLSG HQ may also be a sensible approach to the manning challenges faced by the JFCs when standing-up a JLSG HQ.

### Lesson Identified 6: Train and exercise the JLSG

Activating JLSG HQs when needed relies on available and trained personnel assigned to the HQ upon unit activation. However, shortfalls in availability of personnel and the limited number of training events can limit a JLSG HQ's ability to successfully execute theatre logistics at the outset of NATO-led operations. Increasing the number of opportunities JLSG personnel (CSE and augmentees) have to train together with other relevant NATO units, and ensuring a JLSG focus during training events, may help improve the JLSGs capability to meet mission requirements.

## BUILDING CONFIDENCE IN THE JLSG

During the course of the study, the project team also identified four main issues that could be perceived as potentially undermining the confidence and trust in the JLSG from a national perspective: limited demonstration of the JLSG HQ; limited control and coordination capability; untrained personnel; and unfilled Combined Joint Statement of Requirements. Collectively these main issues have an impact on how the JLSG concept is perceived within NATO and among the Allies. By addressing these issues, there is an opportunity to improve confidence and trust in the capabilities of the JLSG.

PROJECT FACT SHEET

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CDR Koen has served in the US Navy for 23 years as a naval flight officer and is currently on his third NATO tour; NATO Airborne Warning and Control System, the Joint Electronic Warfare Core Staff, and currently, the JALLC. CDR KOEN has served in numerous operations including Operation ALLIED FORCE and Operation UNIFIED PROTECTOR.

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## EXERCISE TRIDENT JAGUAR 2014

### ENABLING NATO FORCE STRUCTURE JOINT TASK FORCE HQ

Report Published on 25 May 2015

#### PROJECT OVERVIEW



EX TRJR14 Crest

At the Lisbon Summit in November 2010, NATO Heads of State and Government agreed upon a framework for a new NATO Command Structure designed to be leaner and more affordable. As a consequence, where in the past NATO Command Structure HQs were able to provide NATO's full Deployable Joint Command and Control Capabilities, from 2011 on NATO would also rely on NATO Force Structure (NFS) HQs for such capabilities to meet the agreed NATO Level of Ambition. The concept for how NFS HQs would be used as Joint Task Force (JTF) HQs was set out in the Bi-SC Conceptual Framework for Alliance Operations (CFAO).

To identify best practices and capture lessons on implementation of the NFS JTF concept, Supreme Allied Commander Transformation (SACT) tasked the Joint Analysis and Lessons Learned Centre (JALLC) to conduct a study, based on an analysis requirement submitted by Joint Warfare Centre (JWC).

This report presents a discussion of the origin of the NFS JTF HQ concept, and observations and a discussion on the implementation of the concept with NATO Rapid Deployable Corps Spain (NRDC-ESP) as the NFS JTF HQ during Exercise TRIDENT JAGUAR 2014 (TRJR14), and provides recommendations for the future development of the JTF HQ concept. It also

presents observations on exercise preparation, build-up, and NRDC-ESP's implementation of the JTF HQ concept during TRJR14.

This report is designed to be the first in a series of reports that will support the maturation of the NFS JTF HQ concept.

#### MAIN FINDINGS AND RECOMMENDATIONS

Considerable uncertainty remains about the precise characteristics of a Smaller Joint Operation (SJO), or a land-, maritime-, and air-heavy SJO; further complicated by the introduction of an SJO minus (SJO -) in the Bi-SC Agreed Capability Codes and Capability Statements.

Within the context of a land-, maritime-, or air-heavy SJO without single service components, the supported and supporting interrelationships (SSI) concept as described in CFAO is pivotal. It is recommended that :

- the JALLC proposals presented in this report for command and control (C2) arrangements for SJOs be examined by the Strategic Commands (SCs) and, if endorsed, the ideas incorporated within the CFAO and other relevant NATO documents;



The USS Mount Whitney during EX TRJR14





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## MAIN FINDINGS AND RECOMMENDATIONS (CONTINUED)

- consistency be ensured between future exercise scenarios used for the certification of NFS JTF HQs, and the environment characteristics appropriate for the C2 arrangements as defined in NATO policy and concepts;
- further work be carried out by the SCs on establishing the characteristics of an SJO, SJO -, and their land-, maritime- and air-heavy derivatives;
- follow-on analysis be carried out by the JWC and the JALLC to analyse further the NFS JTF HQ concept and turn lessons identified into lessons learned.

## PROJECT EXECUTION



Inside Deployed NRDC-ESP JTF HQ during EX TRJR14 in Menorca, Spain

After thorough review of the relevant NATO documents, the JALLC team collected observations and conducted surveys and interviews during Stages Two (Planning & Product Development) and Three (Operational Conduct) of TRJR14 to understand how NRDC-ESP interpreted the NFS JTF HQ concept.

Additionally, formal reports produced during Stage Four (Analysis & Reporting) of TRJR14 by SHAPE, the Officer Scheduling the Exercise (OSE), the Officers Conducting the Exercise (OCE), and the Officer Directing the Exercise (ODE) were used to substantiate and build on the collected data.

The reporting for this project has been done in two stages. Firstly, and in collaboration with the JWC, raw

observations were developed from the collected data which were written in the Observation-Discussion-Conclusion-Recommendation (ODCR) format and shared with JWC during Stage Four of the Exercise. Secondly, the raw observations were reviewed and categorized to identify issues worthy of further analysis and these issues form the basis for this report.

## PROJECT TEAM

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LTC Stankevicius has served in the Lithuanian Army since 1994. After graduating from the Lithuanian Military Academy, he served in a variety of positions including infantry platoon commander, motorized infantry company commander, intelligence officer, mechanized infantry battalion commander and in 2011 he was deployed to Afghanistan as an ISAF PRT commander. He attended the Joint Command and General Staff Officers course at the Baltic Defence College and holds masters' degrees in Public Administration (Law University) and International Relations and Diplomacy (Vilnius University). He was assigned as a JALLC military analyst (Joint Plans) in 2012.

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### PROTECTION OF CIVILIANS HOW ISAF REDUCED CIVILIAN CASUALTIES

Report Published on 01 June 2015

#### PROJECT OVERVIEW



Chairman of the Military Committee handing over the ISAF flag to NATO's Secretary General (*Resolute Support Mission Website*).

As ISAF grew during its first years of existence, both in size and in geographic scope, ISAF forces came into ever more and closer contact with Afghan civilians. However, due to a significant increase in the level of violence in Afghanistan from 2006 on, unfortunately the number of civilian casualties (CIVCAS) rose correspondingly. Although exact CIVCAS numbers are unclear, best estimates suggest that the number of CIVCAS doubled over the period 2005 to 2006. This increase in CIVCAS led successive ISAF Commanders (COMISAF) to look at ways to significantly reduce those numbers, resulting in the implementation of a very deliberate and successful strategy, incorporating a range of measures, designed to reduce CIVCAS.

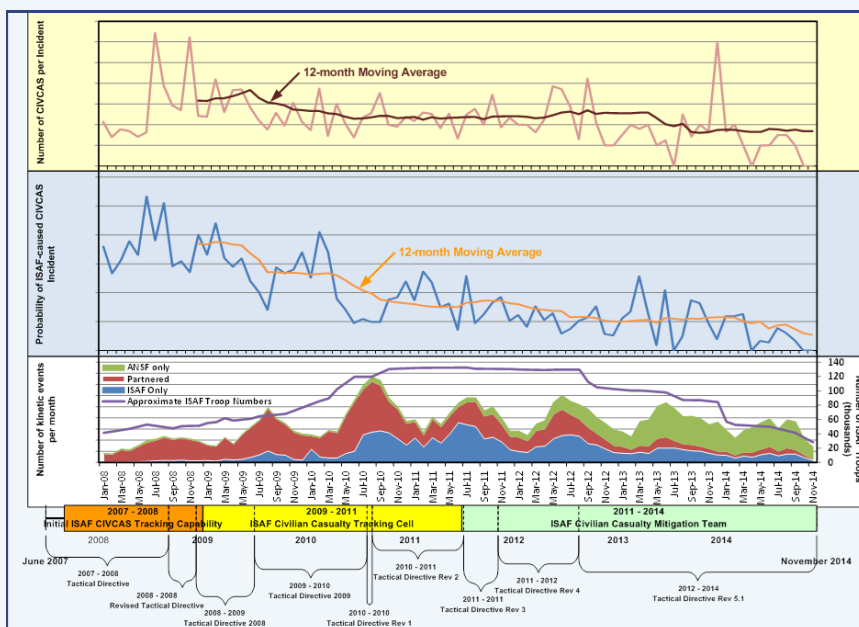
To ensure that NATO benefits as much as possible from ISAF's CIVCAS reduction learning curve, the Joint Analysis and Lessons Learned Centre (JALLC) was tasked to carry out an in-depth analysis on how ISAF reduced CIVCAS. The study took input into consideration from NATO's key partners, including International Organizations (IO) and NGOs, that have contributed to ISAF's work in terms of its CIVCAS reduction achievement.

#### STATISTICAL ANALYSIS

The JALLC's statistical analysis of CIVCAS data from ISAF demonstrates that ISAF did indeed successfully reduce ISAF-caused CIVCAS over the period 2008 to 2014, and that there is evidence that this reduction was a result of measures taken by ISAF to do so, such as specific training programmes; reporting and tracking measures—most notably the Civilian Casualty Mitigation Team (CCMT) established in 2011—and the continual update/revision of tactical level documentation.

All of these measures ultimately contributed to the right mindset, the right processes, and the right conduct of operations to reduce CIVCAS. Yet no single measure was responsible for the drop in ISAF-caused CIVCAS; it took the whole package of measures, each addressing a specific area.

The analysis of the data strongly indicates that the CIVCAS reduction strategies and measures implemented by ISAF over the period 2008 – 2014 were effective; by 2014, the probability of an ISAF-caused CIVCAS Incident occurring during a significant kinetic event when ISAF was present was reduced by approximately 80% compared with 2008. Additionally, over the same period, the average number of CIVCAS per ISAF-caused CIVCAS incident was halved.



ISAF CIVCAS Reduction Trends 2008 to 2014

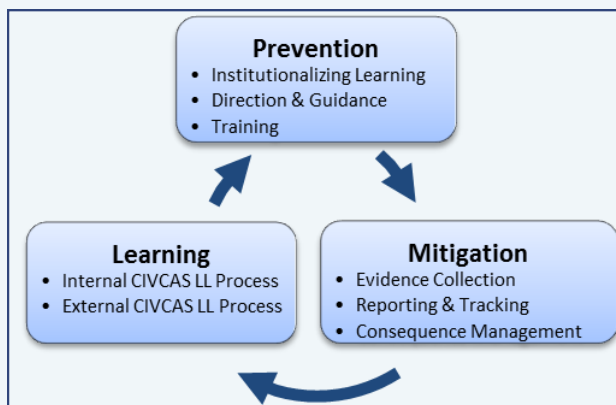




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## THE CIVCAS REDUCTION CYCLE



The CIVCAS Reduction Cycle

The project team collected and reviewed approximately 200 different NATO and non-NATO documents on ISAF and CIVCAS-related topics. This literature review allowed the project team to identify certain key CIVCAS reduction strategies and best practices developed by ISAF. These strategies and best practices were then categorized to support their further analysis for potential NATO-wide benefit.

The project team discovered during this analysis that strategies and best practices undertaken to reduce the Incidence of CIVCAS fell into three clear stages and that these stages formed a cyclical pattern, that, if consistently followed, should result in CIVCAS reduction. The project team has termed this cycle the **CIVCAS Reduction Cycle**.

The **Prevention Stage** encompasses all those activities that need to take place prior to or during engagement with adversaries in order to avoid CIVCAS as much as possible and includes activities relating to Institutionalizing Learning, Direction & Guidance, and Training.

The **Mitigation Stage** includes those activities undertaken in connection with any event or incident that has resulted in CIVCAS: Evidence Collection, Reporting & Tracking, and Consequence Management.

The **Learning Stage** closes the cycle and brings together all the lessons and best practices that have been captured during the Prevention and Mitigation stage using both internal and external Lessons Learned Processes.

Breaking down a process, such as CIVCAS reduction, into separate elements—phases, stages, etc.—allows for a better understanding of the value of each of those elements separately, as well as of the relationship of the elements to each other and to the whole. The benefit of doing so is a deeper understanding of the process in general and the creation of a solid foundation for institutionalization in NATO.

## PROJECT TEAM

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LTC Claudio Toro served as an Air Defence Controller officer until his graduation from the Italian Air Force War College in 1991. He then served in Control Radar Centres, either in Italy or Hungary, or during NATO-led operations including SFOR, KFOR, and OUP. His last deployment before joining the JALLC was at the Italian Air Force HQ in Rome. LTC Toro was posted to the JALLC as a military analyst in August 2012.

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### Comprehensive Study on the Strategic Lessons Learned from ISAF

#### Project Overview

For more than 11 years, under the mandate of several UN Security Council Resolutions, NATO has committed resources and considerable effort to enable the Afghan government to provide effective security across the country and develop the Afghan security forces to ensure the Afghanistan would never again be a safe haven for terrorists.

The International Security Assistance Force (ISAF) Mission in Afghanistan terminated on 31 December 2014. The many challenges that have arisen in Afghanistan have provided fertile ground for NATO to learn, resulting in meaningful lessons to further the Alliance's transformation. To ensure these valuable lessons would not be lost, Supreme Allied Commander Transformation tasked the Joint Analysis and Lessons Learned Centre (JALLC) with the analysis of the strategic lessons from ISAF mission. The goal of this study was to facilitate strategic military inputs to the on-going initiatives that are transforming NATO today.

The ISAF Periodic Mission Reviews formed the principal data source for this project. In addition, other documents of strategic relevance were analysed. From these data sources, the project team extracted over 600 observations and lessons, which were subjected to an in-depth analysis, allowing the project team identify the top eleven strategic topics related to ISAF, grouped into the relevant domains of the PMESII categories (Political, Military, Economic, Social, Information, and Infrastructure) as follows.



“The experience from ISAF suggests that unity of effort between separate operations or missions can be achieved at the political and strategic level through out-of-theatre coordination”

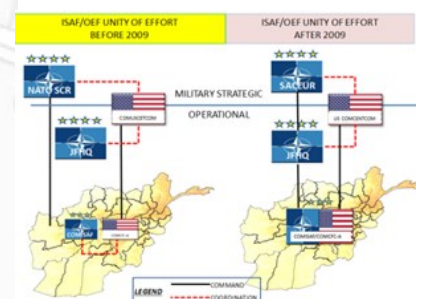


ISAF time line showing the different phases and key events of the mission

#### Political Domain

**Nations Influence:** Throughout the duration of the ISAF Mission, the ISAF Combined Joint Statement of Requirements remained persistently unfilled. The resulting capability shortfalls coupled with national caveats imposed on the forces had the cumulative effect of reducing the operational effectiveness of ISAF. There is little NATO can do to address this issue without the concerted effort of Nations to contribute the required resources free of caveats.

**Comprehensive Approach (CA):** From the outset of the ISAF Mission, NATO recognized the need to operate in cooperation with other International Community actors in Afghanistan. The evidence from the ISAF Mission demonstrates that NATO has made significant and worthy strides in developing its CA which has clearly made the Alliance more capable to deal with emerging crises.



JALLC PROJECT FACTSHEET

## Military Domain

**Training:** Pre-deployment training (PDT) has consistently proved to be an important factor for overall efficiency of NATO operations and missions. NATO PDT capabilities steadily evolved and improved over the duration of the ISAF Mission.

**Unity of Command:** The experience from the ISAF mission suggests that unity of effort between separate operations or missions can be achieved at the political and strategic level through out-of-theatre coordination, but to ensure operational unity of effort, more than just in-theatre coordination was required. This requirement was finally met by dual-hatting the ISAF and the US-led Operation Enduring Freedom commander.

**Command and Control (C2):** The C2 structure for a mission needs to be adapted to match mission dynamics and complexity. Across the ISAF timeline, the operational commander in theatre was required to engage in non-operational and political-strategic level activities. This situation led to the reorganization of the ISAF in-theatre upper command structure into HQ ISAF, the ISAF Joint Command, and the NATO Training Mission in Afghanistan.

**Security Forces Assistance (SFA):** SFA represents a mind-set change requiring a fundamental shift in how NATO thinks and operates. Lessons from ISAF clearly show the need for NATO to establish an appropriate and effective SFA capability as articulated in NATO's 2010 Strategic Concept.

**Transition from ISAF to Resolute Support Mission (RSM):** The most important prerequisites for a successful transition from ISAF to RSM were the change from an execution mission focus to a mentoring mission focus and the early engagement of the Troops Contributing Nations (TCN).

## Economic and Social Domains

**Funding:** A responsive NATO common funding policy and management is required to cope with an ever-changing operational environment.

**Protection of Civilians:** With reference to the earlier JALLC report on Protection of Civilian Casualties (13 February 2015), much was done during the ISAF Mission to reduce Civilian Casualties (CIVCAS) through the implementation of a deliberate strategy incorporating a range of measures designed to reduce CIVCAS.

## Information Domain

**Information and Lessons Sharing:** Information sharing among TCNs, Nations, and NATO was a key requirement to ensure an efficient allocation and employment of NATO and national resources in theatre for both operational and logistical purposes.

**Strategic Communications (STRATCOM):** What ISAF actually achieved on the battlefield was less important in many ways than how those achievements were perceived by the public. Experience from the ISAF Mission has demonstrated the importance of using information for strategic/operational effect and to foster public opinion.

## Project Team

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LTC Aguado joined the Spanish Army in 1985. He graduated from the Higher Staff College in 2003, and has served in a variety of positions and missions, including at HQ ISAF as a strategic planner in 2012. LTC Aguado was assigned to the JALLC as a military analyst in 2014.



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# Viability of the NATO Standing Naval Forces

## Project Overview

In 1968, Standing Naval Force Atlantic was formed as NATO's first Standing Naval Force (SNF). Since then, the concept has grown to include four standing groups: two maritime groups, comprising of frigates and destroyers (SNMG), and two naval mine countermeasures groups of minehunters and minesweepers (SNMCMG) operating both in the Atlantic and the Mediterranean. With the formation of the NATO Response Force, subsequent to the Prague Summit of November 2002, the four groups became the initial maritime Immediate Reaction Force (IRF(M)), intended to provide a full range of maritime capabilities as an intervention capability across a broad spectrum of military operations.

Since the beginning of the new millennium, however, there has been a steady reduction in the number of assets provided by Allies to the four SNF groups. At present, this trend shows no signs of reversal and the recent deterioration of the global security environment has highlighted the need to enhance the SNF. In October 2014, NATO's two Strategic Commands, with Allied Command Operations (ACO) in the lead, supported by Allied Command Transformation (ACT), were requested to provide an action plan pertaining to the reinvigoration of the SNF. The Joint Analysis and Lessons Learned Centre (JALLC) was tasked by HQ Supreme Allied Commander Transformation to support this work and, conducted a study into the viability of the SNF in order to identify factors that impact the Allies' participation in the SNF and to make recommendations on how to improve/change the current SNF model.

## The SNF Plays an Important Role

There is consensus among Nations and NATO Subject Matter Experts that the SNF continues to play an important role for NATO. However, falling participation rates need to be addressed with some urgency. Nations need to be incentivized to commit assets by developing initiatives to encourage Nations to do so and/or the current SNF Model has to be changed.

The analysis of the key SNF-related documents confirmed that they are still broadly consistent with NATO SNF requirements stated by recently updated NATO policy and guidance. However, some aspects remain out of date and require revision.

The analysis of a broad spectrum of areas of improvement for the current SNF Model identified the following three keys issues that, if addressed, may indeed serve to improve the current SNF Model:

- **Deconflicting National Priorities with NATO Commitments;**
- **Extending the Framework Nations Concept to the SNF Force Generation process; and**
- **Improving SNF Visibility.**



**“Since the beginning of the Millennium, there has been a steady reduction in the number of assets provided by the Allies to the four SNF Groups.”**



## A Holistic Approach to Advance the SNF

The viability of the SNF appears to depend on resolving the issues identified by the project team that predominantly relate to the falling SNF participation rates and corresponding problems with SNF Force Generation. But rather than attempting to resolve each problem individually, the project team has suggested a more holistic approach to improving the viability of the SNF in the long run. Two potential approaches are considered: maintain the SNF Model as it is but take certain measures to improve its viability; or change the SNF Model and consider other viable options.

### Maintain the Current SNF Model

The current SNF Model can be maintained but, in addition to taking immediate action on the three key issues listed overleaf, the project team suggested that certain measures, aimed at encouraging Allies to adequately resource the SNF, should be taken to ensure the future viability of the SNF under the current model. These measures include: reducing costs to Allies, enhancing High-End Training, regionalizing the SNF, improving planning, and bringing SNF Force Generation issues to the attention of the NATO political level.

### Change the SNF Model

Alternatively, the current SNF Model could be changed, in which case the project team suggested two options. The first option considers the merging of the two SNMGs into a single, reduced scale group. The second option introduces the concept of an on-call NATO maritime force.

#### Option 1: A Reduced Scale SNF

Under this option, the two SNMCMGs—historically less impacted by Force Generation problems—would be retained and the two SNMGs would be merged into one single group. However, although the principle of NATO SNF would be preserved, fewer ships would be available.

#### Option 2: The On-Call Concept

The second option considers the introduction of an On-Call maritime force concept. In the context of this study, the project team presented two versions of a potential On-Call Concept, which can be summarized as follows:

**A Full On-Call Concept.** NATO IRF(M) would be made up of a number of on call very high readiness groups. This option would address many of the Nations concerns, offering greater flexibility and potentially lower funding requirements.

**A Hybrid Standing/On-Call Concept.** Maritime assets would be part of the SNMG for six months and then move to the On-Call NATO Maritime Group for the following six months. This option would allow a standing element to the SNF to be retained, while Nations' concerns regarding funding and flexibility are (at least in part) addressed.

## Project Team

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CDR Mignucci has served in the French Navy for 35 years; first as a Naval Aviation flight officer until 2000 and then as a staff officer in a Navy and joint operational environment. He was assigned to the JALLC in 2014.



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## Exercise Trident Jaguar 2015 Enabling NATO Force Structure Joint Task Force HQ

### Project Overview

At the Lisbon Summit in 2010, NATO Heads of State and Government agreed upon a framework for a new NATO Command Structure (NCS) designed to be leaner and more affordable. In accordance with this new framework, NATO would rely on NATO Force Structure (NFS) HQs, in addition to its traditional use of the NCS, to provide NATO's full Deployable Joint Command and Control Capabilities. The concept for how NFS HQs would be used as Joint Task Force (JTF) HQs was then set out in the Conceptual Framework for Alliance Operations (CFAO). NATO developed the TRIDENT JAGUAR (TRJR) series of exercises, designed to exercise the Graduated Readiness Forces (Land) (GRF(L)) HQs in the JTF HQ role. In May 2015, the JALLC reported on the findings from analysis of the first of the TRJR exercises (Exercise TRJR14).

During Exercise TRJR14, both NATO Rapid Deployable Corps (NRDC) Spain (NRDC-ESP)—as the first GRF(L) Corps HQ to undertake responsibilities of an NFS JTF HQ—and Naval Striking and Support Forces NATO (STRIKFORNATO)—as the first NFS JTF HQ Maritime/Expeditionary capable of delivery of joint effects on land from sea—were exercised, evaluated and certified. The factsheet summarizing that project can be found on the JALLC's website: <http://www.jallc.nato.int>.



**“The findings from this analysis show that clear guidance as to how the GRF(L) HQs need to change to be able to operate effectively and efficiently as JTF HQs remains key.”**



*NRDC-ITA exercising (left) and ARRC arriving (right) at JWC Stavanger, Norway participating in TRJR15.*

During Exercise TRJR 2015 (TRJR 15), it was NRDC Italy's (NRDC-ITA) and the Allied Rapid Reaction Corps' (ARRC) turn to be exercised and evaluated in the JTF HQ role. During the exercise they were required to plan and conduct a Crisis Response Small Joint Operation (Land Heavy) (SJO(L)) in a high intensity, complex military civilian, and asymmetric, failing state environment, involving warfighting in the early stages. The exercise was staged at the Joint Warfare Centre (JWC), Stavanger, Norway in April and May of 2015.

The JALLC was tasked to analyse processes and structures used by the HQs during Exercise TRJR15 in order to identify lessons to improve the ability of GRF(L) HQs to perform the role of an NFS Integrated Model (IM) JTF HQ. The identified lessons are intended to support JWC's continuing efforts to improve the efficiency and effectiveness of JTF HQ training and will go on to contribute to the next phase of this wider TRJR project which will be to develop and publish an NFS JTF HQ handbook.



## Overarching Conclusions



The CFAO does not provide sufficiently clear details on an IM JTF HQ in terms of its Command and Control (C2) and liaison requirement. To further clarify the IM JTF HQ concept and provide a better understanding for the GRF (L) HQs, the project team recommended the CFAO include details for certain key concepts.

The complexity of the operation exercised exceeded what is expected of an IM JTF HQ; commanding an SJO(L) of limited complexity. Guidelines regarding the different types of SJOs are necessary to ensure IM JTF HQ's are trained according to their needs.

Wider sharing of IM JTF HQ related lessons throughout the whole GRF(L) community would be beneficial to the preparation and build-up toward certification and stand-by. As such the NATO Lessons Learned Portal and the NATO Exercise, Training, Reporting, and Analysis (EXTRA) Portal should be promoted.

## Command and Control

The inclusion of a subordinated Division HQ, as exercised by the ARRC during TRJR15, merits further analysis. In addition, it became clear that the Supported/Supporting Inter-relationships (SSI) are not being used to their greatest effect. Finally, further guidance is required on how to establish liaison between Component Commands and the IM JTF HQ where the joint operational and land tactical elements are integrated.

## Structure and Manning

Having a single, flexible, and adaptable structure, suitable for all the potential roles that a GRF(L) HQ may be tasked with, should be considered a best practice as it minimizes organizational disruption when transitioning between the different roles. Further, integrating augmentees continues to be a challenge for the IM JTF HQs, particularly with regard to ensuring augmentees are familiar with HQ procedures and structure prior to their arrival on site. Providing read ahead material is a best practice, but also developing Standard Operating Procedures for augmentee integration may be helpful in this respect.

## Planning and Synchronization

Both IM JTF HQs integrated some land tactical activities simultaneously with their operational level planning and synchronization activities through the use of a single battle staff and corresponding set of Standard Operating Instructions. The synchronization matrix tool developed by the ARRC was unique and used to great effect in deconflicting all operational and tactical level activities and the use of such a tool may be considered a best practice.

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## The Evolution of the NATO Airborne Early Warning and Control (NAEW&C) Force

### Project Overview

During the lifetime of the NATO E-3A (NE-3A), the changing security environment and technological developments over the last 30 years have resulted in the scope of the NE-3A capability evolving from primarily providing surveillance of NATO airspace to supplying an immediately available airborne Command and Control (C2), air and maritime surveillance, and battle-space management capability.

During this time, the NATO Airborne Early Warning & Control (NAEW&C) Force's role has expanded to support a wide range of challenges NATO has faced over the last three decades: air policing, communications/data networking, support to counter-terrorism, evacuation operations, embargos, initial entry, and crisis response. Consequently, the NE-3A Airborne Warning and Control System (AWACS) Component has been a key player in NATO operations and exercises for more than 30 years.

In light of the impact and role that E-3A aircraft have had on NATO operations and missions, at the Wales Summit in 2014, Heads of State and Governments affirmed their commitment to the modernization of the NE-3A fleet. Ultimately, the Strategic Commands (SC), with HQ Supreme Allied Commander Transformation (SACT) in the lead, were requested to provide input to the Military Committee on the future requirements for any follow-on to Alliance E-3A AWACS capabilities. In response to this request, SACT issued direction and guidance specifically requiring the Joint Analysis and Lessons Learned Centre (JALLC) to conduct an analysis of lessons learned in support of HQ SACT Assistant Chief of Staff Capability Engineering & Innovation, the designated lead for the tasking within Allied Command Transformation.

### Six Consequences of the Expanding Role

The project team conducted a review of relevant documentation as well as interviews with Subject Matter Experts from across the NE-3A community. Based on the research conducted, the project team observed that the changing strategic environment, technological advances, key events, missions, and operations that took place during the 30 years of the NAEW&C Force have impacted and expanded its role over time to meet the increasing operational requirements. As a result of this expanding role, there have been certain key consequences for the NAEW&C Force, which the project team summarized under six main areas in the JALLC Research Paper:

- The need for basing outside the NATO area of responsibility
- NAEW&C Force Training Capabilities
- The evolution of NE-3A aircraft self-protection measures
- Tasking of the NAEW&C Force - Setting Priorities
- Data Exchange / Processing Capacity
- Flying in Civil Airspace



**“Today the NAEW&C Force provides an immediately available C2, air and maritime surveillance and battle-space management capability in a wide range of missions.”**





## NATO's Regional Focus Initiative - Exploiting Regional Expertise

### Project Overview

*"We have agreed on a framework for a new NATO Command Structure, which will be more effective, leaner and affordable. It will also be more agile, flexible, and better able to deploy on operations, including Article 5 contingencies and providing visible assurance. ... It will have a new relationship with our national headquarters, and will also ensure a regional focus."*

(Lisbon Summit Declaration Issued by the Heads of State and Government participating in the meeting of the North Atlantic Council in Lisbon on 20 November 2010)

The Regional Focus (RF) Initiative emerged out of the 2010 Lisbon Summit as NATO's approach to advance the exploitation of regional expertise.

The Joint Analysis and Lessons Learned Centre (JALLC) was tasked by Supreme Allied Commander Transformation to provide a thorough evidence-based description of the RF Initiative's intent and mechanism in order to ascertain whether a regional dimension is being effectively incorporated into current NATO activities such as the Readiness Action Plan (RAP); probably the most prominent NATO activity with a regional dimension not only today but also for the foreseeable future.

The project team analytically derived the RF Initiative's composition and developed a suitable benchmark for the alignment of the RAP with the RF Initiative from the evidence collected in connection with the project. The project team further conducted a qualitative content analysis of the evidence. Using a combination of categorization methods, the project team developed a Framework of Analysis providing a consistent context for the description of the RF Initiative's and the RAP's compositions.



*After the Wales Summit, NATO agreed a Readiness Action Plan to ensure the Alliance is ready to respond swiftly and firmly to new security challenges. This is the most significant reinforcement of NATO's collective defence since the end of the Cold War.*

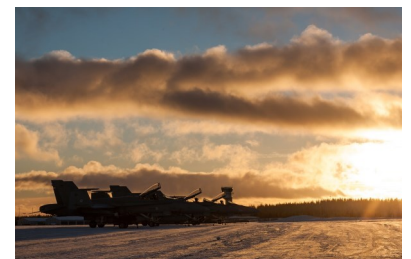
### Three Key Conclusions

The project team identified three key conclusions which relate to the following topics and are discussed in detail in the report and summarized overleaf:

- The RF Initiative's Intent;
- The RF Initiative's Mechanism; and
- The RAP-RF Initiative Alignment.



**"One of many factors essential to ensure the sustained security of the Alliance and its members is the effective exploitation of regional expertise."**

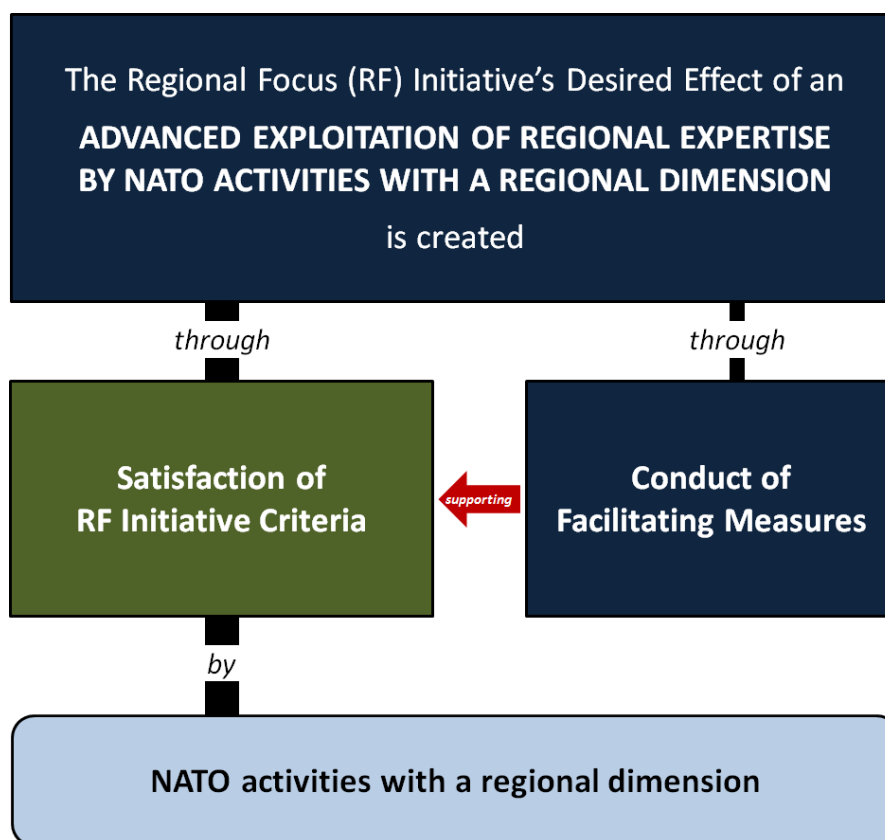


## RF Initiative's Intent

The RF Initiative's desired effect is to advance the exploitation of regional expertise; its objective can be described as enhanced situational awareness, advance planning, and NATO profile; its end-state is represented by more effective collective defense, crisis management, and cooperative security capabilities.

## RF Initiative's Mechanism

To create the desired effect of an advanced exploitation of regional expertise, the RF Initiative applies a two-fold approach mechanism: (1) the satisfaction of RF Initiative Criteria by NATO activities with a regional dimension; and, (2) the conduct of facilitating measures to support this satisfaction.



*The Regional Focus (RF) Initiative's Mechanism*

## RAP-RF Initiative Alignment

The RAP supports NATO's ability to effectively exploit regional expertise.

## Key Recommendations

Based on the conclusions the project team identified two key recommendations:

**Match the RF Initiative's Intent:** Ensure that future NATO activities with a regional dimension encapsulate the RF Initiative Criteria within their respective compositions in order to match the RF Initiative's Intent.

**Assess the Alignment:** Regularly assess alignment between NATO activities with a regional dimension and the RF Initiative.

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### Knowledge Enterprise: Implementing Knowledge Management as an Enterprise Function in ACO

## Project Overview

Knowledge Management (KM) is central to Allied Command Operations' (ACO) mission to prepare for, plan, and conduct military operations to meet NATO's political objectives. KM serves to safeguard against the loss of knowledge, which is especially important in a context where one third of ACO military staff rotate out of their positions every year. KM also supports the creation and acquisition of the knowledge ACO needs to meet current and emergent security challenges.

The Joint Analysis and Lessons Learned Centre (JALLC) was tasked to assess the extent to which KM processes and activities are implemented at ACO's strategic, operational, and tactical levels. The report's findings are based on a representative survey of ACO staff and on a case study of SHAPE's Comprehensive Crisis and Operations Management Centre.

## Defining Knowledge Management

Various definitions of what KM actually entails exist within NATO as well as elsewhere. In the JALLC's report, the project team have defined KM as: a staff-wide enterprise function—a function regarding the management of all information, expertise, insights, and best practices across the staff with the objective of ACO becoming knowledge-centric. As stated in the report, within ACO, there is currently no agreed definition of KM processes and activities. In order to evaluate the conduct of KM across ACO, the project team therefore developed a list of six KM processes, together with the associated activities. A survey for ACO staff members was developed and conducted on the basis of those KM processes and activities, which are described in brief in this factsheet.

## Processes and Activities

### Learning Knowledge

The learning process is about helping new ACO staff members gain a better understanding of their work environment and the position they are to fill. Survey results revealed that the biggest potentials for improvement in this area lie in supporting new ACO staff members to learn about their functions, roles, and responsibilities through systematic Hand-Over-Take-Overs, the mentoring of newly arrived staff members, and improvements in induction training.

### Raise Staff Awareness

The process of raising staff awareness comprises activities relating to improved awareness of the relevant Command Group's intent, as well as of new NATO policies, initiatives, and directives. In this respect, the survey results indicated that the majority of ACO staff members feel sufficiently informed regarding NATO's and their HQ's strategic direction.



**“Knowledge Management supports the creation and acquisition of the knowledge ACO needs to meet current and emergent security challenges.”**



## Processes and Activities (continued)

### Identify and capture staff knowledge

This process is about the identification and capture of the knowledge of individual staff members in order to make it usable by ACO. Research conducted by the project team revealed that there is room for improvement in capturing the knowledge of departing ACO staff members through systematic exit interviews and reports.

### Create and share knowledge

Knowledge creation is about the formation of new knowledge in the minds of staff members; the process of knowledge-sharing revolves around staff members making their knowledge accessible to others by interacting with them. The analysis conducted by the project team revealed that there is potential in ACO to increase the use of creative techniques in this respect, such as brainstorming, and to enhance internal review mechanisms as well as Command Group feedback on staff work.

### Use outside knowledge

The use of outside knowledge is a process whereby staff members systematically exploit knowledge from outside their daily routines or from outside the organization as a whole. This type of knowledge can be found in external publications, Lessons Learned databases, and reports from major battle staff events and exercises. The ACO-wide survey results revealed that more could be done in terms of ACO staff's use of outside knowledge.

### Organize and store information and explicit knowledge

Information and explicit knowledge denotes items which are stored on repositories such as databases, portals, or platforms in order to serve as organizational memory. This process requires information on work-related content or other staff members being organized and stored on information and knowledge bases in order to make it retrievable for staff. The survey results show that a majority of ACO staff feel it is easy to find information and/or subject matter experts within NATO.

### Improvements to Knowledge Management

The report provides recommendations on how tangible improvements in these processes and activities might be achieved through the development of a new NATO Information and Knowledge Management Policy, an ACO-wide directive on KM, a training programme on KM for ACO staff, and the inclusion of a feedback option in the next version of the Tasker Tracker Enterprise.

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# NFS JTF HQ Handbook

## Project Overview

At the Lisbon Summit in 2010, NATO Heads of State and Government agreed upon a framework for a new NATO Command Structure (NCS), designed to be leaner and more affordable. In accordance with this new framework, NATO would rely on NATO Force Structure (NFS) HQs, in addition to its traditional use of the NCS, to provide NATO's full Deployable Joint Command and Control Capabilities and thereby meet the Alliance's declared level of ambition. Doing so would require NFS HQs to be used as Joint Task Force (JTF) HQs for commanding Smaller Joint Operations (Land Heavy).



In order to exercise and certify the Graduated Readiness Forces (Land) (GRF(L)) HQs in the JTF HQ role, NATO developed the TRIDENT JAGUAR (TRJR) series of exercises, which have, to date, occurred in 2014, 2015, and 2016. During Exercise TRJR14, NATO Rapid Deployable Corps (NRDC) Spain and Naval Striking and Support Forces NATO were exercised and evaluated. TRJR15 exercised NRDC-Italy and the Allied Rapid Reaction Corps, and TRJR16 exercised NRDC-Turkey. The Joint Analysis and Lessons Learned Centre (JALLC) reported on the findings from analysis of both TRJR14 and TRJR15, identifying lessons to (1) improve the ability of GRF(L) HQs to perform the role of an NFS Integrated Model JTF HQ; (2) support the Joint Warfare Centre (JWC) in improving the delivery of JTF HQ training; and (3) provide valuable insights for continued development of the NFS JTF HQ concept.

**“The Handbook guides the reader through the major processes, ideas, and lessons regarding the implementation of the NFS JTF HQ concept.”**



## The NFS JTF HQ Handbook

After producing two analysis reports on TRJR14 and TRJR15, the JALLC's was tasked to support the production of the NFS JTF HQ Handbook using observations from TRJR16. As such, the Handbook is the result of a three-year cooperative effort between the JALLC, the JWC, and the NATO Command and Control (C2) Centre of Excellence (C2COE). This work was carried out under the auspices of the Capability Integration and Coordination Cell, a designated group of Subject Matter Experts (SME) brought together to deliver this Handbook. The Handbook would not have been possible without the involvement of each of the commands, organizations, and individuals from both the NCS and the NFS who supported and contributed to its production.

## The NFS JTF HQ Handbook



The JTF HQ Handbook was signed on 29 November at the NATO Lessons Learned Conference 2016 by (from left to right) Captain René van Pamelen-Hollenberg, Director NATO Command and C2COE, Brigadier General Mário Barreto, Commander of the JALLC, and Lieutenant Colonel Jacek Ropejko, Branch Chief, Quality Assurance (Lessons Learned) of the Joint Warfare Centre (JWC). Lieutenant Colonel Ropejko was representing Major General Andrzej Reudowicz, Commander of the JWC. The Signing Ceremony marked the official launch of the Handbook.

Commanders, staff officers, and analysts identified good practices and areas for further study and reflection in concert with the NATO transformational and operational communities' efforts to develop the NFS JTF HQ concept. The Handbook combines observations and good practices from the TRJR exercises in 2014, 2015, and 2016 with insights and analysis from SMEs at the JWC, JALLC, C2COE, NCS, and NFS HQs.



Training Audiences of the TRJR series of exercises

The Handbook guides the reader through the major processes, ideas, and lessons regarding the implementation of the NFS JTF HQ concept, and discusses how the GRF(L) HQs may transform from their Corps HQ role into an NFS JTF HQ role and assume operational level command over subordinate commands and forces. The Handbook also discusses numerous ways in which a GRF(L) HQ may work within an Integrated Model framework by implementing a variety of different C2 models for delivering operational and tactical level capabilities simultaneously.



It is intended that the NFS JTF HQ Handbook remains a living document, updated to reflect new NFS JTF HQ experiences in TRJR exercises and ongoing doctrinal development. This Handbook, and future updates thereof, will be available on the NATO Lessons Learned Portal, NATO EXTRA Portal and JWC SharePoint Portal.

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## Strategic Assessment of NATO Exercise Programme

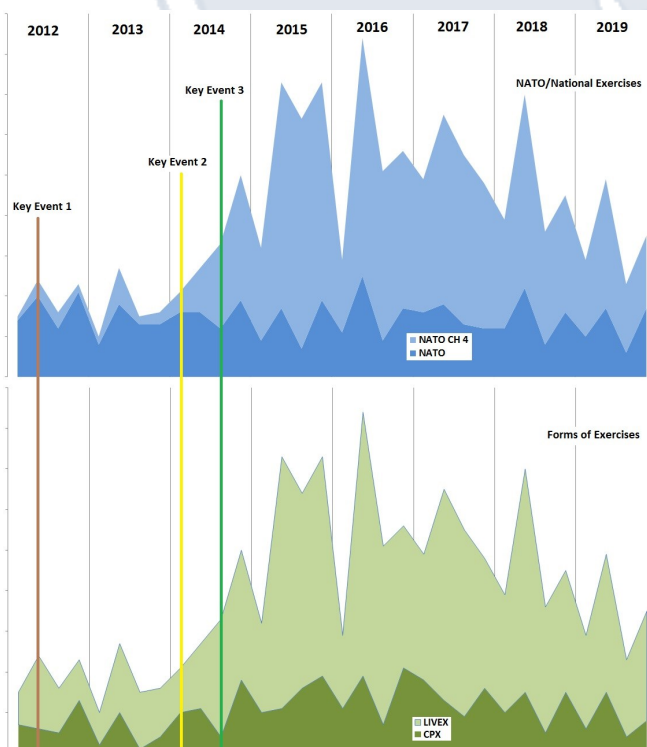
### Project Overview

At the Wales Summit in September 2014, Allied leaders approved a Readiness Action Plan (RAP) to ensure the Alliance will be ready to respond swiftly and firmly to the new security threat environment. In conjunction with the implementation of the RAP, NATO's Exercise Programme was revised to take into account the preparation of higher readiness forces as well as contributing to assurance measures. In the lead up to the Warsaw Summit 2016, Supreme Allied Commander Transformation (SACT), Supreme Allied Commander Europe (SACEUR), and the Chairman of the US Joint Chiefs of Staff were interested in determining whether the NATO Exercise Programme was meeting Alliance Requirements from a strategic perspective. In this context the JALLC was tasked to analyse how the NATO Exercise Programme is delivering against Alliance Requirements with respect to Readiness, Responsiveness, Interoperability, Assurance, and Deterrence.

The project was conducted in conjunction with the US Joint Staff, Joint Lessons Learned Division (JLLD) and involved the development of the first comprehensive NATO Exercise Programme Database (NEP Db) which incorporates data from all of the exercises listed in the (electronic) Military Training and Exercise Programme (MTEP) from 2006 to 2021. The NEP Db allowed the project team to analyse a large quantity of exercise related data and identify trends or changes to the NATO Exercise Programme. It also allowed the project team to relate Alliance Requirements to exercise content within the context of Readiness, Responsiveness, Interoperability, Assurance, and Deterrence.



“There are good indicators that NATO is not only exercising more together but focussing on exercising together more.”

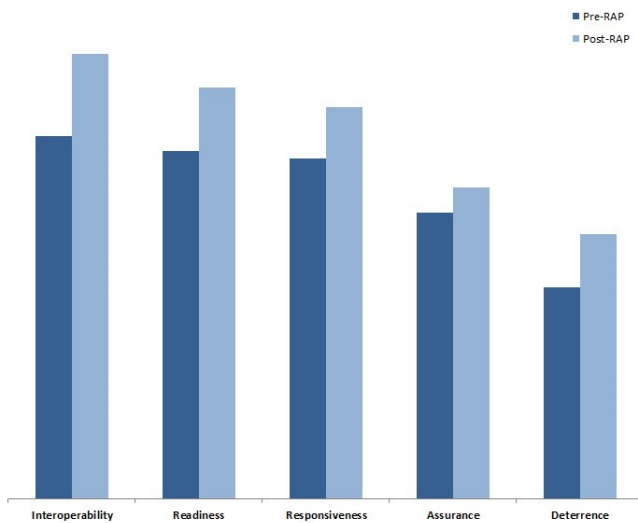


2014 was an important year in shaping the programme; certain initiatives within NATO, events taking place in Crimea, and the implementation of the RAP have influenced its development. In particular, the overall number of exercises increased as national exercises were incorporated in the NATO Exercise Programme (light blue) and the type of exercise being conducted shifted to Live Exercises (LIVEX) (light green).



JALLC PROJECT FACTSHEET

## NATO Exercise Programme Delivering Against Alliance Requirements



The changing global security threat environment has resulted in NATO adapting the NATO Exercise Programme to meet Alliance Requirements, in particular in response to events taking place in the last five years on the world stage. As a consequence, there is a perceivable increase in the total number of exercises conducted under the NATO flag, the focus and location of such exercises has shifted and the type of exercise being

conducted has been adapted to meet current needs. As such, the NATO Exercise Programme is delivering against Alliance Requirements.

### Interoperability

Interoperability is one of the key objectives of NATO exercise; In fact, any exercise carried out by two or more Nations should generally contribute to increasing interoperability. Moreover, there are good indicators that NATO is not only *exercising more together* but focussing on *exercising together more*.

### Readiness & Responsiveness

Readiness and Responsiveness are consequences of Nations and Partners exercising together and cannot, therefore, be exercised in their own right. Nonetheless, the project team identified trends in this area such as an increase in NATO's intent to be more ready and responsive was measured in terms of the increase in the number of exercises conducted, the aims and objectives of the exercise programme, as well as an increase in overall exercise participation.

### Assurance & Deterrence

Assurance & Deterrence, are effects of exercising together and, as such, cannot be directly derived from analysis of just the NATO Exercise Programme data. However, in demonstrating the Alliance's credible military capability and strategy (Interoperability and Readiness), NATO also demonstrates the political will to act (Responsiveness). Where this is the case, the Alliance can be said to be Deterring a potential aggressor and Allies may therefore feel more Assured.

In this context, the number of exercises and their location may contribute to NATO's efforts to deter a potential aggressor and therefore also to NATO's efforts to assure its Allies. Likewise, the change in the type of exercises being conducted over the last five years showcases NATO's resolve and commitment as well as its capabilities, not only to the Allies, but, perhaps more importantly, to any potential aggressor. Moreover, increasing participation of the newer NATO Nations in exercises demonstrating their resolve and commitment to the Alliance, may also indicate increased interoperability ensuring readiness Alliance-wide demonstrating Alliance cohesion.

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LTC Tschakert has served in the German Army since 1992. He has served in a variety of posts and has attended the Joint Command and General Staff Course in Portugal before his assignment to the JALLC. He holds a master's degree in military science, security and defence.

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# NATO Interoperability Verification & Validation (IV&V)

Analysis of Key Events Providing Communication and Information Systems IV&V Opportunities

## Project Overview

Interoperability is critical to every aspect of Communication and Information Systems (CIS) capability development; from initial concept through to operational use. Consequently, CIS IV&V is a prerequisite in achieving the appropriate level of interoperability to ensure the effectiveness of Alliance Forces—and in particular the NATO Response Force (NRF)—across the full spectrum of Alliance operations and missions. In this context, several events are available to NATO and Partner nations that afford CIS IV&V opportunities. Effective coordination and synchronization of these events is necessary to permit the effective exploitation of their outcomes to the benefit of NATO, the Allies, and Partners.

Against this background, Supreme Allied Commander Transformation (SACT) tasked the Joint Analysis and Lessons Learned Centre (JALLC) to conduct an analysis of the events that provide the main CIS IV&V opportunities and to make recommendations for their greater harmonization. The task was also identified as an opportunity to support further development of the SACT Command & Control (C2) Focus Area.



JALLC PROJECT FACTSHEET



## Key CIS IV&V Events

The eight key events providing CIS IV&V opportunities that fell within the scope of this project (during the period 2014-2016) were:

- *Technology for Information, Decision, and Execution Superiority: TIDE Sprint;*
- *Coalition Warrior Interoperability eXploration, eXperimentation, eXamination, eXercise: CWIX;*
- *Federated Mission Networking Coalition Interoperability Assurance and Validation: FMN CIAV;*
- *BOLD QUEST;*
- *UNIFIED VISION;*
- *CYBER COALITION;*
- *STEADFAST COBALT; and*
- *TRIDENT JUNCTURE.*

These key CIS IV&V events are viewed as valuable events by NATO and Partner nations and considered integral to ensuring the effectiveness of Allied and Coalition Forces. Many events were attended with keen interest by high-ranking officials and various political and military dignitaries of host and visiting nations.

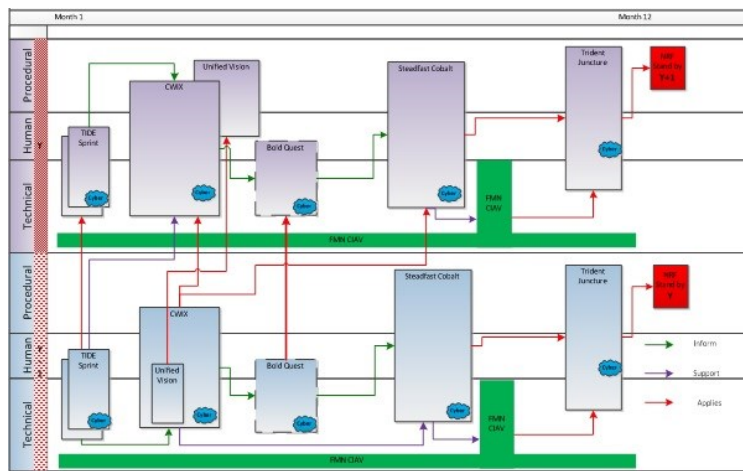
“CIS IV&V is a prerequisite in achieving the appropriate level of interoperability to ensure the effectiveness of Alliance Forces”



## Numerous CIS IV&V Opportunities

The overarching conclusion of the analysis is encouraging; the CIS IV&V opportunities afforded by the reviewed events (2014-2016) were beneficial to both NATO and Partner nations and met their needs. Moreover, increased participation is foreseen for the next three years (2017-2019).

The project team further identified that the eight key events provided numerous CIS IV&V opportunities. Further, current national participation and the expressed intention for further participation shows that the CIS IV&V landscape is generous and that most nations are willing to participate in all opportunities that bring benefits to national CIS interoperability capabilities in a federated environment.



The model pictured above represents one of the project team's recommendations (see below) which is to develop a comprehensive CIS IV&V Portfolio to improve the exploitation of outputs. This model is NRF-centric, covers a three-year cycle, and shows different types of event outcomes.

## Main Recommendations

Analysis of the data led the team to several key findings for the benefit of NATO and participating Allies and Partners that are related to: cyber; use of terminology; exploitation of the event outcomes; governance of the events; and, interoperability of supporting IT tools. Based on these findings, the project team were able to make several recommendations that would contribute to a greater harmonization of the events and further support the development of the SACT C2 Focus Area. These recommendations include:

- Developing a comprehensive CIS IV&V Portfolio to improve the exploitation of outputs from one event to another.
- Conducting a study on cyber IV&V opportunities, in order to identify ways for their increased harmonization.
- Defining requirements for suitable IT solutions to support NATO Interoperability Testing.
- Developing a *Governance Directive/Overarching Guidance* for each event, detailing the structures and delineating the roles and responsibilities between Governance and management entities. Such documents should be seen as long-term provisions and may be complemented by *Terms of Reference* for the management entities.
- Formalizing an advisory function and coordination function with representatives from all events in order to further increase harmonization.

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# Enhancing ACO Intelligence Capabilities

## Project Overview

In June 2016, NATO Heads of State and Government highlighted in their Warsaw Summit Declaration the importance of comprehensive intelligence arrangements and Joint Intelligence, Surveillance, and Reconnaissance (JISR) capabilities for NATO's timely and informed political and military decision making:

*"We will further improve our strategic anticipation by enhancing our situational awareness, particularly in the east and south and in the North Atlantic. Our ability to understand, track and, ultimately, anticipate, the actions of potential adversaries through Intelligence, Surveillance and Reconnaissance (ISR) capabilities and comprehensive intelligence arrangements is increasingly important. These are essential to enable timely and informed political and military decisions. We have established the capabilities necessary to ensure our responsiveness is commensurate with our highest readiness forces."*

(NAC; Warsaw Summit Communiqué; 09 July 2016; PR/CP(2010)0155)

As head of Allied Command Operations (ACO), responsible for overall command of NATO military operations and the provision of advice to NATO's Military Committee and the North Atlantic Council, Supreme Allied Commander Europe (SACEUR) has a distinct requirement for Situational Awareness. The ability of ACO's strategic level HQ, SHAPE, to provide SACEUR with timely and effective Indications and Warning (I&W) and JISR capabilities to enable this is of particular importance in this regard.

In order to support SHAPE's continuous efforts to enhance SACEUR's Situational Awareness, the JALLC was tasked by Supreme Allied Commander Transformation (SACT) to assess the future development of the I&W and JISR capability at SHAPE.



recommendations on the way ahead for SHAPE's approach to enhance SACEUR's Situational Awareness.

The project team reviewed relevant documentation, conducted interviews with identified stakeholders, and participated in a number of relevant conferences and workshops to generate an evidence-based analysis of SHAPE's I&W and JISR capability. Based on the project team's findings and conclusions, the JALLC was then able to make



**"Our ability to understand, track, and, ultimately, anticipate the actions of potential adversaries through ISR capabilities and comprehensive intelligence arrangements is increasingly important."**



JALLC PROJECT FACTSHEET

## Project Key Terms

Within NATO, certain key terms regarding Intelligence are often used. But what do these key terms mean? Below we have set out some of the key terms from the project that are useful to understand in the context of this report.

### What is Situational Awareness?

According to NATO's Glossary of Terms and Definitions (AAP-006), NATO defines Situational Awareness as: the knowledge of the elements in the battlespace necessary to make well-informed decisions. Establishing and maintaining Situational Awareness is crucial when it comes to NATO's posture in a crisis or during missions and operations.

### What is I&W?

Indications and Warning (I&W) refers to the monitoring of defined indicators and the provision of warnings to relevant NATO authorities in case of changes in indicators to support effective decision making. These intelligence activities are intended to facilitate the detection and reporting of time-sensitive intelligence information regarding developments that could involve a threat to NATO.



### What is JISR?

Joint Intelligence, Surveillance and Reconnaissance (JISR) is vital for all military operations. It provides information and intelligence to decision-makers and action-takers, helping them make informed, timely, and accurate decisions. Although surveillance and reconnaissance can answer the questions: *What? When? and Where?* the combined elements from various intelligence sources and disciplines provide the answers to: *How? and Why?* When all of the answers to the questions are combined, you create JISR.

You can find out more about NATO's JISR capability on the NATO website and at: [http://www.nato.int/cps/en/natolive/topics\\_111830.htm](http://www.nato.int/cps/en/natolive/topics_111830.htm).



## Project Team

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