

Communicator

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A stronger
DEFENCE
for NATO's skies



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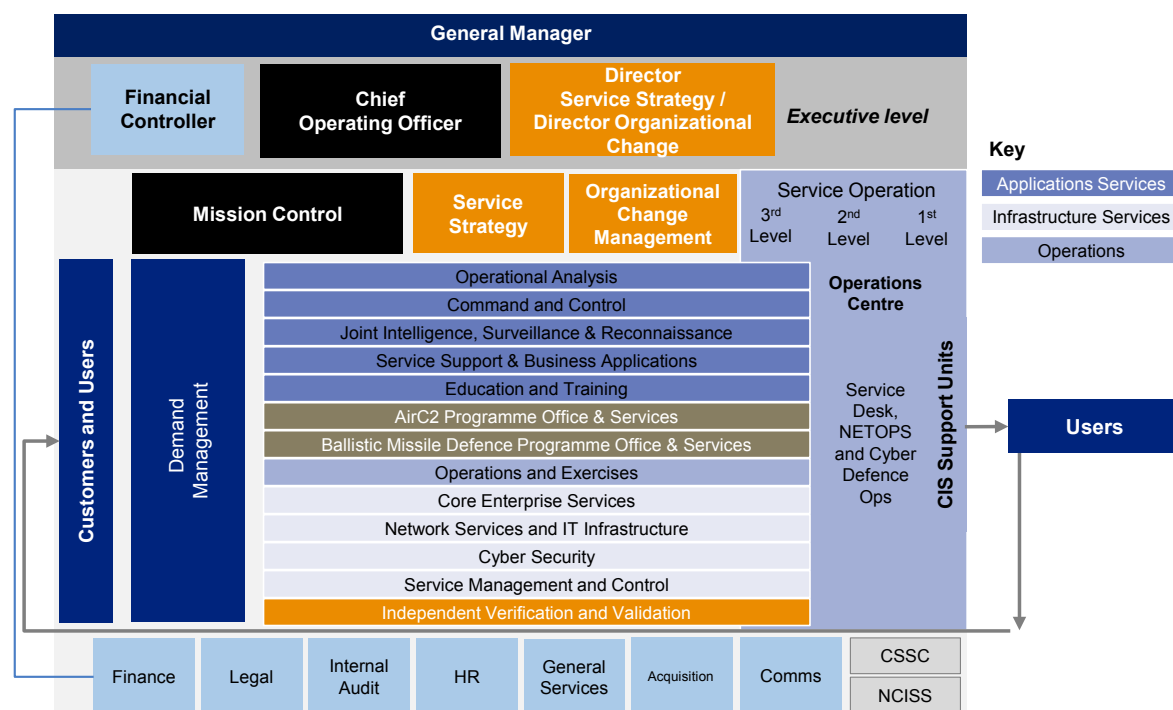
The NCI Agency Customer Service Catalogue: An enabler of transformational change

The NCI Agency Customer Services Catalogue (CSC) was instrumental in transforming the culture of the Agency's people, processes and use of its technology to achieve the intended outcome to becoming a service-based organization that is customer-focused. The CSC is the primary reference in development of the NCI Agency's Service Level Agreements, Programmes of Work and any other price proposals. The online CSC, under responsibility of the Demand Management (DM) Directorate, is derived from the Service Portfolio owned by Service Strategy Directorate and is closely linked to Demand Management's Demand Plan.

History of the NATO Communications and Information Agency

On 1 July 2012, under the charter of the NATO Communications and Information Organisation, the NCI Agency was formed out of five former NATO organizations: NATO Consultation, Command and Control Agency, NATO Communications and Information Systems Services Agency, NATO Air Command and Control System Management Agency, Active Layered Theatre Ballistic Missile Defence Programme Office, and elements of NATO HQ Information Communication, Technology Management. Each of these former Agencies was responsible for a specific area of Information Technology development, acquisition, service support and provision to the NATO Headquarters (NHQ), NATO Commands and the NATO Force Structure. The NCI Agency became the principal Communication Information Systems service provider for NATO, responsible for ensuring continuous CIS support to all ongoing operations in which NATO is engaged, as well as responding to SACEUR's needs and taking his stated priorities into account.

The Agency began restructuring the disparate entities in 2012, with the end goal of achieving economies of scale through co-location and partial centralization of functions, integrating the life cycle approach, sharing best practices, increasing commonalities and standardization, strong cooperation with relevant stakeholders, and



more effective governance. The first structural change established the directorates of Service Strategy, Demand Management, Service Support, Service Delivery and other substructure elements. Further restructuring of Service Support, Service Delivery, and substructure elements was necessary and three Directorates were created in 2014: Application Service, Infrastructure Service and Service Operations.

In order to transform to a service-based organization, the Agency was structured into thirteen Service Lines. In the new construct, each Service Line was given responsibility for the full life cycle of a group of services, aligned in accordance with the C3 Taxonomy. The Operations Centre was formed to provide a centralized Service Desk. The substructure of sectors and squadrons were reorganized into CIS Support Units and Elements to provide direct support to end users at our nineteen Agency locations.

The Agency needed to communicate these changes effectively to both its customers and internal Agency staff. The Director of Demand Management, Dr Velizar Shalamanov, would later fulfil this requirement by leading the development of the first the NCI Agency Customer Handbook in the 2014 Interim Customer Services Catalogue.

Development of the customer services catalogue

The foundations for development of CSC were laid through the NCI Agency Transition Program. The initial Consolidated Service Catalogue was published in September 2012, representing a collection of the catalogues of the merging organizations which then formed the NCI Agency. In 2013 the structural template for future NCI Agency Service Catalogues was published. The DM Transition Project took over later in 2013 to develop the 2014 Interim Customer Catalogue (ICC), which incorporated the new NCI Agency structure in the grouping and presentation of the services. At the end of 2014, the Agency published the 2015 Interim Customer Services Catalogue (ICSC), an agency-wide effort that successfully provided descriptions of the customer-facing services in a standardized format across the business

portfolios, with references to the budget codes as per the NATO Budget Committee Standard Service List and fixed service ID numbers.

In 2015, the CSC was digitalized and published on the Internet and made available on the NCI Agency website. The NCI Agency took the CSC to the next level of maturity by offering enhanced features to make customer requests easier through the interactive online Customer Request Form. Customers can access descriptions of NATO Software Tools linked to the service ID of the supporting services and submit requests for services, software, information, meetings, as well as compliment or complaints to the Agency using the Automated Customer Request Form.

What is the customer services catalogue?

The CSC is the primary reference in development of the NCI Agency's Service Level Agreements (SLAs), Programmes of Work (POW) and any other price proposals.

The CSC consists of the Customer Handbook and Customer-facing Services. The Customer Handbook provides answers to our customer's top questions, including information about our Service Lines, applicable policies, customer request procedures, support terms, and conditions and strategic partnership opportunities. The customer-facing services list corresponds with the service ID codes that are grouped into the five global service groupings and a detailed summary for each service describing its customer-facing attributes. The online CSC also includes the NATO Software Tools list that links directly to the Routine Delivery Portal and the automated Customer Request Form.

CSC enabling Agency transformation

CSC stakeholders engagement

Stakeholder engagement was the key management objective throughout the development of the CSC. Our stakeholder list included NCI Agency Customer Representatives for Allied Command Operations, Allied Command Transformation, the NATO Headquarters and NATO Support & Procurement Agency. NCI Agency Service Lines, Service Owners and Directorates each played a significant role in the development of the Customer Services Catalogue. We kept our



customers informed through formal letters and asked for their feedback at different stages of the developments of the CSC services and structure. We provided update briefings during our high-level Senior Customer-supplier Boards, Agency Supervisory Boards and working-level SLA kick-off meetings to show how the NCI Agency addressed their concerns.

The CSC team also met with internal Agency stakeholders from the Service Lines and CSUs to foster good working relationships and information sharing. The information about services, attributes and the knowledge of how we provided them, rested with the Service Owners and Operation Plans and Service Managers in these Agency entities. It was imperative that the ICSC development was an Agency-wide team effort.

Processes: Building the Agency team through CSC collaborative workshops

The initial approach of the Agency was to produce a CSC as a project deliverable. When funding was not obtained, the development and future of the catalogue was at standstill, while in high demand by the customers. Demand Management took on the responsibility of the delivering the CSC as a part of their mission. The DM-CSC team led the development of the ICC tasking the Service Delivery and Service Support elements of the Agency to provide information on the service descriptions and how we support and offer these services. For the development of the 2015 ICSC, DM Strategic Partnership and Customer Relationship Management Branch teamed up with the Service Strategy Directorate and encouraged more involvement from the new Service Lines and Directorates by hosting two Agency workshops which was the first collaborative effort made since the Agency completed its restructuring in May 2014.

The first workshop was held in June 2014 at the Agency Headquarters in Brussels, Belgium. The workshop aimed at sharing the ICSC improvement plan with key Agency stakeholders, improving the coherency between services in the catalogue and financial accountability of the services and validating the list of services the Agency was responsible for. SPCRM expectations to come up with recommended changes for the structure and content, as well as the detailed list of services through collaboration with the other Agency stakeholders was achieved. It laid the foundation needed to have a second successful workshop held again in Brussels for two days in August 2014.

The primary goal of the second workshop was to agree upon the list of Customer Services at the working-level before presenting it to the Executive Management Board for approval in September. This was not an easy task as there were 1,000 entries collected beforehand. Agreement also meant the Agency staff had to map these services to the NATO Budget Committee Standard Service List, deconflict and sort them according to the five Global Service

Groupings and identify budgeting codes for each service. The culmination of this collaborative effort was done through a final staffing and approval of the Customer Handbook and Detailed Service Descriptions of 124 services.

Technology

Recently, the Agency took a major leap forward in the way we present our services to our customers by hosting the CSC on the Communities of Interest (COI) cooperation portal (known as DNBL). The portal has helped to take the ICSC to the next level of maturity by offering a web-based CSC. It allows customers within various COI to quickly access information about NCI Agency services and to use filters to easily find relevant services.

The web-based CSC is derived from the paper (pdf) edition, and is also available under Agency Publications on the NCI Agency website.

Bringing Agency services into focus

The new web-based catalogue benefits the Agency in two major ways: the first and most prominent benefit being our transparency with customers, as the 2015 ICSC is the authoritative source of the description of the NCI Agency services. *"Web-based ICSC is clearly answering three of our customer's top questions: what is the NCI Agency, what services the Agency provides, and how to request these services,"* says Eric Lievre, Chief Strategic Partnership and Customer Relationship Management Branch, Demand Management Directorate. The second major benefit is that the portal is an accessible platform, as not all of our customers have access to NATO networks, it allows us to reach all of our customers. Digitalizing the CSC enables all Agency customers, industry partners, and staff to perform quick Internet searches for services the Agency offers.

In summary

Two years ago, DM took on the challenging task to publish the Agency's first Customer Services Catalogue without a firm Service Portfolio to reference and during the major transformation of the Agency. The NCI Agency has achieved a major milestone through an agency-wide effort in publishing an interactive web-based Customer Services Catalogue. The General Manager of the NCI Agency, Mr Koen Gijsbers, was charged with transforming the Agency to be more customer focused in the way products and services were delivered. Mr Gijsbers often compared this complex task to "changing the engine of a Boeing 757 airplane while still in flight." The successful publication of the CSC is an example of how we did just that.

- MAJ Starria Haigood and Agata Szydelko, Demand Management

SPECIAL THANKS TO THE FOLLOWING CONTRIBUTORS TO THE DEVELOPMENT OF THE CUSTOMER SERVICES CATALOGUE (IN ALPHABETICAL ORDER):

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Technology innovation: An operator's view

"Sixteen years ago, NATO came here in the aftermath of bloodshed and war. Today, Kosovo is a very different place. Peaceful, stable, increasingly prosperous... Every man and woman who has served under the KFOR flag has helped to change the course of history in Kosovo. And helped keep our neighbourhood stable. You have made a difference."

– NATO Secretary General Jens Stoltenberg

In 1999, NATO started its peace-support mission in Kosovo – also known as the Kosovo Force (KFOR) mission – as part of a wider international effort to bring peace and stability to the region. Fast forward to over a decade later and the security situation in Kosovo has vastly improved. Now the main focus of the KFOR operation is nation-rebuilding.

The NCI Agency and its predecessors have supported the KFOR mission since the very beginning. As the mission continues, so does the need for NATO's support. In early 2015, as the Agency prepared to support mobile users with software Applications (Apps) that run on mobile devices, KFOR has helped us to understand how to build and deploy mobile Apps that really add value to warfighters.

As IT becomes more mobile, and mobile Apps become more widespread, building mobile Apps for our users that can interface with data on NATO's classified networks and meet security requirements is a challenge that the Agency has to rise to. Over the last year the Agency has run an internal innovation initiative to address these challenges by developing a concept for building and deploying mobile applications.

As part of this concept development, the NCI Agency has developed an iPad App to support the Helicopter Operations (HeliOps) in Kosovo. The HeliOps App is the first mobile App from the NCI Agency to be tested in a NATO theatre.

Identifying a requirement

In Kosovo, air operations happen on a regular basis. However, before these operations begin, the helicopter crews must complete meticulous preflight planning. For example, a pilot needs to know where it is safe to fly and land in relation to natural or man-made obstacles. Traditionally, planning for air operations is done by using a variety of hardcopy maps, charts and documents; meaning that for one air operation, pilots would have to study several different charts and maps. If for any reason the situation changes in-flight, the helicopter crew would have to pull out their maps, charts

and documents again to make an entirely new plan. This entire process takes time – time that pilots don't always have, especially when they are flying in theatre. As a result, the appointed KFOR Chief Geo Officer recognized that this group of highly-mobile users needed an improved option that supports in-flight planning. From this requirement, the idea for the HeliOps App was born.

About the HeliOps App

The HeliOps App is a concept validation project, which was funded by the Agency's Innovation Programme, led by Service Strategy. It supplements the need for analogue maps, charts and documents by providing the helicopter crews with a user-friendly, all-in-one mobile planning application available on the iPad. The KFOR Chief Geo Officer, MAJ Martin Furo, describes the application as a highly-detailed and highly-specialized "Google Maps". Nowadays, each time a KFOR helicopter crew lifts off for a mission, they are able to access GPS-enabled moving maps with high-resolution aerial imagery, navigation charts and elevation data for the whole Kosovo territory. The HeliOps App, not only offers maps, it also integrates critical in-flight data. For example, preferred landing sites, emergency landing sites and even minefield locations. All this information is available in thematic layers and can be toggled on and off depending on the pilot's preferences or needs. In addition to this, the App offers a search function that allows pilots to search for any information required with a few taps of their finger. This is especially helpful in the event of an emergency landing, when pilots need to search for nearby emergency-landing sites, instead of having to manually search through hardcopy maps.

Next steps

Although the HeliOps App has been well received by the air operations community in KFOR, the work is not yet concluded. The Agency will continue to support the development of this concept validation project by capturing new requirements as well as using the valuable feedback from theatre to improve usability of the HeliOps App and processes the Agency has put in place to support it. From this, the NCI Agency is learning valuable lessons of how to develop, deploy and manage secure mobile Apps which connect to NATO's existing information systems.



In 2015, the NCI Agency Joint Intelligence, Surveillance, and Reconnaissance (JISR) Geospatial Service Branch shared the HeliOps App with KFOR. The HeliOps App is designed to aid pilots on their missions by providing detailed maps and geospatial information in a simple and user-friendly mobile application. In July, MAJ Martin Furo, the KFOR Chief Geo Officer, responsible for providing geospatial information and requirements for the application and the Agency's main stakeholder, sat down with Mr José Balsinhas, Senior Scientist, and Mr Nuno Figueiredo, Geo Scientist for the JISR Service Line, to discuss what makes the HeliOps App such an innovative and successful project, and how the continuous teamwork with the Agency has made a difference to KFOR mission.

How would you describe the support provided by the NCI Agency JISR Geospatial Services Branch to the KFOR Geo Section?

(KFOR) MAJ MARTIN FURO: If I may, before answering your question I'd like to take some time to explain why the NCI Agency JISR Geospatial Services Branch is a trustworthy partner and why its support is deemed critical for the maintenance of the KFOR Geospatial services.

As you know, operational support is without a doubt quite challenging and demanding task, which requires the ability to quickly react to new and urgent operational requirements. The truth is that despite the complexity of the tasks and its urgency, the Geospatial Services Branch has continuously delivered a remarkable quality of services over the years.

An example of one of these services is the KFOR road network layer for the App. We are talking about a very complex vector dataset that was produced by the NCI Agency with the aim of being used by the KFOR C2 systems, and to update the 50K scale topographic line maps. It can also be used as an overlay in products which require a high level of geospatial accuracy.

Also, the KFOR HeliOps App is in my opinion a success story that shows how – with the right commitment from both the operational community and the NCI Agency – new technologies can be introduced in operations quickly and efficiently.

(NCI AGENCY) MR JOSÉ BALSINHAS:

At the end of the day it's quality – we, as a team, have to strive for quality – because that's what makes us credible in terms of the services we can provide. Then we can really build a trusting relationship with our customer.

How did both the NCI Agency and the KFOR GEO Section approach creating this application?

(KFOR) MAJ MARTIN FURO: This project started back in March 2014 when my predecessor raised this requirement based on the user's needs, which he gathered from all the helicopter crews at the time. After that, the App development was rolled-out in KFOR with support of the NCI Agency JISR Geospatial Services Branch. So it's mainly the Agency's work. Our, [KFOR's], main tasks was to gather and validate requirements to support the roll-out, provide training, and to collect feedback and identify future enhancements.

(NCI AGENCY) MR JOSÉ BALSINHAS: Mobile applications were on our radar for quite some time. So, once we understood KFOR's needs, Mr John Teufert, our Branch Head, worked with the Agency's Service Strategy and Innovation Programme team. After that, our



top priority was to setup a team that could address the different challenges of mobile App development, using this particular project as a concrete use case; for example the technology to be used, user interface design, mobile device management, software development and security accreditation – these are issues for any mobile app for NATO.

As a pioneer project, we looked for best practices for mobile App developments. Some skillsets were not available within the Agency, so we brought in external experts in the areas of user interface design and mobile App development. We needed a lot of Agency expertise too – our own knowledge of interfacing to NATO systems such as Core GIS and the Core Enterprise Services Service Line addressed the challenges of mobile device management, and we needed accreditation of iOS devices at a NATO RESTRICTED level which was pursued by the Cyber Security Service Line.

Within the JISR Geospatial Services Branch, our approach is always to make sure that we engage with the user community from the very beginning of a project. Therefore, understanding the user's needs for the HeliOps App was done hand in hand with the KFOR GEO Section, as well as with the helicopter crews in theatre. Even after we had a general idea of what the HeliOps App functionality should provide, the detailed requirements had to be defined step by step with the users.

Most importantly, even once the requirements baseline was established, we didn't stop interacting with the users; we continued working with the KFOR Geo Section. They were fully involved in the definition of the Graphical User Interface (GUI), required data modelling activities, data preparation and the future update processes. The close interaction with the customer assures that the final concept will definitely meet the user's expectations!

How do you maintain open and effective communication between the KFOR GEO Section, the heliops community and the NCI Agency throughout the implementation and the operational use of this capability?

(KFOR) MAJ MARTIN FURO: Part of my job is collecting the helicopter pilots' feedback and communicating it to the NCI Agency. In KFOR, the helicopter crews are posted at the US Bondsteel Military Camp, so I take advantage of every opportunity to visit them and ask them about the application; for example if everything is working OK, if they have any feedback, require support/training and so on.



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In addition, I usually ask for feedback during the heli-meetings, organized by the KFOR J3 Air Chief, where all the helicopter crews gather to obtain information about ongoing as well as new operations. I usually use these meetings to introduce the HeliOps App to the newcomers and ask them for feedback on how the application works, whether problems occur and so on. Up to now we've gotten lots of positive and lots of innovative feedback on how to develop this application further.

(NCI AGENCY) MR JOSÉ BALSINHAS: In May 2015, we [the NCI Agency] visited KFOR. During the visit the NCI Agency staff and the KFOR Chief Geo Officer evaluated how the HeliOps App has been received. The team from the NCI Agency spoke with the heli-crews and also flew with them to understand how the App is now used in operations.

At a project management level, we spoke every week with the team in KFOR. To be successful in terms of theatre support you need to be completely engaged with the sponsor. You need to have weekly feedback – sometimes more than twice a week. For operational support, you need have this sense of urgency. We need to really understand the requirements of our users to continuously improve our services. This applies not only to the HeliOps App project but to all other geospatial support we do for NATO operational theatres.

What would you say is the key to the success of this application?

(KFOR) MAJ MARTIN FURO: It's very simple, fast and intuitive. It runs on iPad, which is generally well known as a user-friendly device. I have shown this application to many people. Not only to the helicopter crews but to a wide range of peacekeepers in KFOR. The first thing that they all say is that it [the App] is incredibly quick and reactive.

(NCI AGENCY) MR JOSÉ BALSINHAS: Both the NCI Agency and KFOR spent a lot of time on the planning phase of the project in order to get the Graphic User Interface (GUI) right. I mean a functionality can be complex, but the GUI needs to be simple and user-friendly, otherwise the user will never work with it. So it's important, – especially in mobile devices – that you get the interface right. Even if you need to spend significant time on this part – it's a must!

What is the workflow for operational support? How does the Agency ensure our customer's receive the right information at the right time?

(NCI AGENCY) MR NUNO FIGUEIREDO:

The App makes use of the recent accreditation for iOS devices up to NATO RESTRICTED. The data processing, transfer procedures and workflows are all clearly defined in a Security Operations Procedures (SecOps) and approved by KFOR.

When the heli-crews require data updates for the application, they send their requests for new maps/imagery or overlays to the KFOR Chief Geo Officer.

Once the data is available then the KFOR GEO Section provides it securely to the NCI Agency where it is processed by the NATO Core GIS system. The data is then transferred to the secure NATO App Store. Then a new version of the App containing the updated information is generated and made available to KFOR and the heli-crews. Users in KFOR can connect download the new version of the App that includes the new information requested by KFOR. The whole process only takes a few hours.

These procedures have been successfully tested several times over the last six months. Amazingly, we are able to complete this data update process within a couple of hours. Bottom line – we are using approved secure communications, but the heli-crews can download the new data wherever they are.

(KFOR) MAJ MARTIN FURO:

We received lots of positive feedback on how to improve this application further. Last May when I, together the NCI Agency, visited the Swiss helicopter crew, one pilot told us that the App is more than he could have wish for. Generally, for preflight preparations or in-flight operations, you need lots of analogue notes and maps such as tactical pilot charts, handbooks about the primary and occasional helicopter landing sites. Working with all of these analogue products inside helicopter while under stress, is not efficient. Rather than referring to hardcopy maps, logs, or handbooks, now the pilots can use all this information using the HeliOps App in digital format.



What are the long-term benefits of this application? How do you see it progressing in the future?

(NCI AGENCY) MR JOSÉ BALSINHAS: The data model can be easily expanded according to the needs of the operation; meaning that with minor modifications the App is able to provide additional data. More importantly, the Agency has developed critical knowledge on mobile App technologies' development and implementation. This knowledge can now be used across the NCI Agency to develop similar Apps for use in other military fields. This Innovation Programme project has shown what mobile technology can do for the users, and how to integrate it with NATO's existing communications and information systems.

We know NATO users will produce formal requirements for mobile NATO Apps in the future. What we have learnt through this Innovation Programme project really helps prepare the Agency for these technology challenges.

- JB, LS, MS



NCI Agency project reveals key lesson on strengthening NATO cyber defence

In a major step towards developing new models for NATO-industry cooperation on cyber defence, the NCI Agency recently conducted a Cyber Security Incubator Pilot project, and concluded that greater mutual understanding through real-time collaboration with industry can speed the integration of innovative solutions into the Alliance's cyber defences. Through the incubator, NATO, industry, and academic participants worked together on defining challenges and investigating innovative solutions in the areas of big data, data fusion, cyber defence situational awareness, and mobile security. This allowed the Alliance and its private sector partners to gain more clarity into the other's view on the specific cyber challenges relevant to NATO.

Speaking the same language

Demonstration projects and interactive workshops revealed a key initial lesson: it is imperative to "speak the same language" in order for NATO and industry to work together effectively on cyber defence. Different organizations or companies often attach different meanings to the vocabulary of cyber defence, including terms such as "incidents," "threats," or "assets". Discussion forums and side-by-side collaboration through the pilot led to better industry understanding of the terminology and concepts NATO uses when communicating its cyber defence requirements. It also opened the opportunity for industry to discuss gaps in their solutions with respect to NATO requirements, and to identify new ways to use existing solutions. The following efforts can make NATO networks more resilient in the face of cyber threats: sharper industry insight into NATO's cyber defence context, combined with better NATO understanding of industry solutions can create a virtuous cycle of efficient communication leading to faster development of cyber solutions more relevant to NATO's needs. This harnesses the widely-recognized idea in the high-tech sector that technology companies often improve their products alongside their customers.

NATO Industry Cyber Partnership

The combined dynamics of fast-evolving cyber tactics and dramatic growth in commercial innovation for military applications in the cyber domain have resulted in the need for new approaches to cyber defence. The Cyber Security Incubator Pilot project is one of NATO's first initiatives to address these trends and marks a significant milestone with the development of the new NATO Industry Cyber Partnership (NICP). Alliance leaders endorsed the NICP at the Wales Summit last year and launched it at the NATO Information Assurance Symposium (NIAS) 2014, recognizing that NATO and industry face shared risks in cyberspace, and that addressing these challenges requires new frameworks for action.

Incubator project

The NCI Agency developed the cyber security incubator concept with the aim of exploring a new model for cooperation between NATO and industry partners that could decrease the time to develop responses to NATO's cyber security challenges. The Incubator Pilot project identified an approach to bring rapid results from academia and industry to NATO. Discussions are underway to determine how this framework could be extended to integrate these ideas into NATO's IT environment in a timeframe that keeps pace with evolving cyber threats. This is likely to be the target of a second stage of the incubator.

- Jill O'Donnell, Industry Relations



Meet CSU Ramstein

CSU Ramstein is located in the province of Rhineland-Pfalz in the southwest of Germany. The Unit is hosted by the US Air Force who operate a large base at the location. The American presence in what is defined as the Kaiserslautern Military Community (KMC) totals approximately 13,000 military plus 9,000 DoD civilian service personnel, the number increasing to about 54,000 when families, retirees and dependents are included. Between HQ Air Command and CSU Ramstein, the 550 NATO employees are made up of personnel from 26 of 28 member Nations, giving the area an international flavour.

Day to day business

The main task for CSU Ramstein is to support HQ Air Command (HQ AIRCOM). HQ AIRCOM has two main priorities in peacetime: Air Policing and Ballistic Missile Defence (BMD). In times of crisis it is also in charge of Active Layer Theatre BMD (ALTBMD). AIRCOM currently has the additional task of providing 24/7 situational awareness for the Turkish Air Defence mission, known as Active Fence.

In support of the Active Fence mission HQ AIRCOM requires 24/7 support from the CSU, resulting in a 24/7 on-site presence of AirC2 technicians in order to react to incidents in the required timeframe. This service has been provided since January 2013, with technicians from other sections remaining on-call with a response time of 1 hour.

AirC2 Coordination

During the Lisbon 2010 Summit, the NATO Command Structure Review was launched, with HQ AIRCOM subsequently selected to be the Air Single Service Command (SSC), with Combined Air Operations Centres (CAOCs) and other air entities as subordinate elements. At the same time as the new command structure was being formed, Agency reform was ongoing, resulting in what is now the NCI Agency. With the implementation of new CSU structure it was recognized there was a coordination

function required across the AIRCOM's Area of Responsibility (CAOC Uedem, CAOC Torrejon and DACCC Poggio Renatico). In order to have a single focal point for AirC2 issues, the General Manager of the NCI Agency appointed CSU Ramstein as the AirC2 Coordinator for operational activities (but with the AirC2 and BMD Directorates maintaining programme control). Currently the AirC2 Coordinator role is performed by the CDR and DCDR. In the near future two posts will be filled to take on this coordination task.

In his AirC2 Coordinator capacity CDR CSU chairs a weekly VTC, with participants from the CAOCs/DACCC and their supporting CSUs as well as the wide Agency staff. In this forum issues are raised, discussed and actioned appropriately to ensure communications, information flow and baseline understanding of commons issues, challenges, and current status across the air enterprise.

Another important aspect of the AirC2 Coordination role is the production of a single Enterprise Air Service Level Agreements for local support. This will facilitate coordinated efforts across the air entities and synchronize the services provided by the Agency while streamlining coordination with the AIRCOM SLA manager located at Ramstein. This focused effort will improve communication, reduce conflicts and provide more efficient utilization of limited resources.





Projects supporting the future

Two significant products are currently being developed and implemented in support of AIRCOM, Air Command and Control Information System (AirC2IS) and Air Command and Control System (ACCS), which together will eventually replace Integrated Command and Control (ICC). AirC2IS is a Functional Area Service (FAS) designed to provide information to support the decision making process. AirC2IS is being developed to interface with ACCS, which brings together the command and control of all air operations (offensive, defensive and air support) under one umbrella for the first time. This represents a challenge for the CSU in transitioning support to these new systems but also an exciting opportunity to work with state-of-the-art technology.

With its role as Air SSC, HQ AIRCOM is also faced with some new requirements. Should one of the CAOCs be unable to fulfil their mission, HQ AIRCOM has to stand up a Static Air Defence Cell (SADC) within 5 days, allowing it to undertake the Air-Policing role of System Support Centre one or both of the CAOCs. This was successfully tested during a planned power outage at CAOC Uedem in October 2014. Another requirement is to stand up a Joint Force Air Component (JFAC) within 15 days, to support either a Small Joint Operation (SJO) or a Major Joint Operation

(MJO). To enable HQ AIRCOM to meet these requirements, the CSU established planning timelines and proven procedures to transform the HQ building built for peacetime into an operational capable environment. In any of these events an extensive amount of work is required to ensure the required work positions are available and ready to execute the mission.

CSU Ramstein is currently working with other parties in the implementation of several Urgent Requirement projects that will support HQ AIRCOM in declaring FOC as the Air SSC. The biggest challenge right around the corner is known as Urgent Requirement 5 (UR5). UR5 entails a major overhaul of the HQ building with substantial civil works and CIS upgrade projects, to include the replacement of hardware for the NS network to introduce a new virtual environment for client interfaces. This project – led by Host Nation Germany – will also result in minor works taking place in the HQ, putting extra strain on the CSU in order to sustain daily operations and exercise support during the renovation. Upon implementation of these projects, the CSU will be better postured to support HQ AIRCOM and NATO, not only for NATO Response Force scenarios but also for the newer concept of Very High Readiness Task Force, where the proposed response time is only 48 hours to establish a Joint Force Air Component.

- Torbjørn Skålvoll, AirC2 Principal Technician, CSU Ramstein



MS Office

The New NATO HQ: Communicators getting down to business

The challenge – Office 2013 roll-out

4,700 workstations to upgrade

2 network domains

180 applications to test

...and only one night to make it happen

A project team consisting of NATO HQ Executive Management / Information, Communication, Technology Management (ICTM) and NCI Agency CIS Support Unit Brussels supported by a Microsoft contractor, brought the NATO HQ a little bit closer to the new building on the night of 28 July 2015. At the New NATO Headquarters (NNHQ) the software baseline is MS Office 2013; at Current NATO Headquarters (CNHQ) it was MS Office 2007. Both, ICTM and CSU Brussels were faced with the challenge of upgrading all workstations to the new baseline by 1 August 2015. The transition itself is already complex enough and will have an impact on the business; therefore this project was more than an upgrade: ICTM and the NCI Agency both assessed this project as critical to ensure continuity of operations as we transition to NNHQ. But the success of this project is only one of the preconditions set to mitigate risk and enable a smoother transition.

The task and approach

The task was clear: upgrade more than 4,700 workstations and avoid negative impact on the business as much as possible. While previous projects had chosen for a roll-out in phases, the Agency chose a big-bang approach this time. A big-bang eliminates potential issues of operating two different versions, but requires working hand-in-hand across organizational boundaries towards a set date, be it for planning, preparation, installation, testing, training, communication and roll-out.

But it is more than a simple upgrade of software. In the project plan about 180 work items dealt with compatibility checks of related software like SharePoint farms or Planview, with MS Access database migration and template conversion – and last but not least, with a lot of additional effort, the old Office Communicator infrastructure was seamlessly migrated to the Office 2013 Lync messaging system, including the migration of contacts and groups – an activity that was initially assessed by Microsoft as not feasible in the NATO HQ environment. *“The fragmentation of the IT support into an infrastructure part managed by the NCI Agency, an application part managed by ICTM and a third part, mainly for MS Access databases that are not even supported by ICTM, but by the respective divisions, was the biggest challenge of the project”,* explains Andreas Zuendorf, Project Manager of the Office 2013 project.

Communication is the key

Unusual were training and communication aspects to be dealt with by the project. For communication not only classical ways like Office Notes, announcements on Minerva homepage or wall posters were used; for the first time ever users got the opportunity to inform themselves on the NATO corporate social network AGORA which included for example a news ticker and ensuring that no one misses the day, even the background picture of all workstations was used as communication channel.

Training

With over 100 VIPs using the system it was paramount that training requirements were beyond the normal level. Consequently ICTM offered not only dedicated training to Service Centre personnel as well as training material and briefings to all users, but also a very significant number of VIP training sessions for individuals or very small groups.

The project team

Multiple users across CNHQ expressed their satisfaction about the project, often in writing. There were some hiccups here and there, but compared to the size of the project, it was an outstanding success. This exemplary cooperation between the NCI Agency and ICTM could only be achieved with a great project team. The most significant team members were (in no particular order):

Steve McGill	ICTM	for supporting non-ICTM Testing, preparing the templates, taking care of a significant SharePoint issue and for application deployment support
Linda Levpuscek	ICTM	for testing and migrating Access applications
Lubomir Hornak	ICTM	for testing and application deployment support
Stefano Castellarin and Selim Armor	CSU Brussels	for preparing the whole deployment package inclusive Group Policies and working late to facilitate the deployment
Franky Alliet	CSU Brussels	for becoming the NCI Agency specialist for the new tool Lync and the ambition to migrate the Communicator groups/contacts
Service Desk	CSU Brussels	for answering all the additional calls from the user side
Matthias Weitzel	ICTM	for continuing project management work during the absence of the PM just before the roll-out
Andreas Zuendorf	ICTM	for managing the project
Christophe Troessaert	Microsoft	for Desktop Deployment Planning Services
Laurent Leclercq	Business Training	for the delivery of training sessions

The way ahead

The completed Office 2013 project is only one step of many to come towards the transition to NNHQ. The same kind of excellent cooperation and motivation is required to successfully upgrade the MS Exchange infrastructure, servers, databases and security systems on Minerva and LRE networks to standards that NATO will have at NNHQ. It will be a busy time until the move to NNHQ end of 2016, but ICTM and NCI Agency are well prepared, eager and on a very good way to make the transition as smooth as possible for all users at NATO HQ.

From left to right:

Matthias Weitzel, Franky Alliet, Lubomir Hornak, Andreas Zuendorf, Linda Levpuscek, Steve Verkercke (representing the Service Desk team), Steve McGill, Stefano Castellarin. Not on picture: Selim Armor (NCI Agency).



- Andreas Zuendorf, NATO HQ/ICTM

A stronger DEFENCE for NATO's skies

Anyone following the news will see regular (and increasing) reports of incursions into NATO airspace by Russian long-range aircraft. Approaching volumes not seen since the end of the Cold War, these flights sometimes cause dangerous civil air traffic incidents as these aircrafts are not in contact with national civil aviation authorities. It is therefore timely that NATO's new, advanced air command and control system has entered operations.

The principle of collective defence is enshrined in Article 5 of the NATO treaty signed in 1948. This is explicitly illustrated by the development of air command and control capabilities to support the Supreme Allied Commander in Europe in discharging his responsibilities for ensuring the integrity of NATO airspace. Since the middle of the last century, Nations have built up their own national air defence capabilities, but in the 1980s an ambitious programme was launched to bring the command and control of all air operations (namely air defence, air offensive and air support) across all NATO European Nations under the umbrella of one system – the NATO Air Command and Control System (ACCS), enabling NATO and the Nations to manage air operations both over NATO European territory and, when deployed, out of area.

The NATO Air Command and Control System Management Agency (NACMA) was formed on 7 January 1991. In May 1994, the North Atlantic Council approved the initial implementation of ACCS to a first level of operational capability (LOC 1) in both static and deployable configurations. The Invitation to Bid was issued in December 1996. The contract awarded to Air Command Systems International (ACSI) in July 1999 signalled not only the start of implementation, but also the culmination of an often intense debate over some difficult issues such as Industrial Benefit Sharing.

ACSI is a French-registered company formed by two shareholders, Raytheon in the USA and Thomson-CSF in France, and is supported by a large numbers of sub-contractors. The initial contract delivered the development and testing of the ACCS core software and the installation at four validation sites in Belgium, France, Germany and Italy. Once validated ACCS was to be replicated to sites in the remaining Nations in the programme.

Two of the principal features of the ACCS are its open architecture and the emphasis placed on off-the-shelf products. Both are intended to permit evolution of the system without the need for major developmental effort. Additional requirements for Theatre Missile Defence were addressed during the evolution of the programme.



Since 1999, NATO has changed, as have some of the requirements for ACCS with the initial roll-out to 10 Combined Air Operations Centres (CAOCs) being reduced to two, alongside a reduction in the number of National sites. This drove changes to the system architecture to ensure that the necessary redundancy was available. With the NATO Agency reform, the NCI Agency subsumed responsibility for the ACCS programme, which is now managed through the AirC2 Programme Office & Services (PO&S). In 2014 the NCI Agency General Manager, Mr Koen Gijsbers, signed the ACCS Provisional Software Acceptance, opening the road to the final NATO and National steps for the operational use of the system.

NATO ACCS automates, integrates, simplifies and streamlines air command and control within NATO's Area of Operational Responsibility. It allows the Alliance to develop situational awareness from Northern Norway to Eastern Turkey providing NATO and National Commanders with the right information at the right time to make the necessary decisions such as launching air intercepts in response to flights by Russian aircraft. ACCS was first activated in March 2015 in Italy and over the next months will be rolled out to more sites across NATO and the NATO Nations.



"This is a major step forward," said NATO Assistant Secretary General for Defence Investment Patrick Auroy; "I express my great appreciation to the Italian authorities and to NATO's Air Command and Control community, the [NCI Agency] and industry who made this possible. I look forward to the speedy activation of the next sites. This system is a good example of integrated national and NATO defence capabilities."

NATO's largest common-funded programme

Valued at over two billion Euro, NATO ACCS will cover 10 million square kilometres of airspace. It will interconnect more than 20 military aircraft control centres, providing a wide spectrum of modern tools to all NATO air operators and increasing the effectiveness of NATO air operations. NATO ACCS combines and automates the planning, tasking and execution of all air operations at the tactical level by integrating such functions as air mission control, air traffic control, airspace surveillance, airspace management, command and control resource and force management among other functionalities.

A new responsibility on the Agency

The Agency's AirC2 PO&S has been designated as the System Support Centre for NATO ACCS. Currently the Air C2 PO&S is building up its capability to perform system maintenance and support using a combination of NATO International Civilians and Military Staff. An early (and successful) demonstration of the Agency's ability to support the systems was the capability to satisfy SHAPE requirement for an essential "chat" functionality as part of the ongoing development of the system, with an internal Agency solution.

Following approval by the AirC2 Life Cycle Configuration Control Board in September 2014, the purchaser (AirC2 PO&S Brussels), the contractor (ACSI) and the developer (AirC2 PO&S in Glons) collaborated in the development of the capability. The development used the Agency's C2 Service Line's JCHAT Solution with an open-source chat server inside the ACCS architecture. The development team in Glons successfully met all project deadlines and achieved the necessary milestones for the implementation of the new capability. Following the Site Acceptance Test at Glons, ACSI, as the prime Contractor, accepted the software delivery as being ready for incorporation into its next baseline.

Italy takes pole position

Poggio Renatico, Italy, is the first ACCS site in NATO to achieve operational status. In addition to a static NATO air command and control centre, the site also hosts a deployable ACCS capability that SACEUR can use to conduct complex air operations. It is expected that this capability may also support NATO's Readiness Action Plan, if required.

On 17 June 2015, the first ever ACCS real-life air policing event was controlled using NATO ACCS. The order to take off was sent from the CAOC Torrejon, Spain, and was executed by two Eurofighter Typhoon aircraft controlled by the ACCS site in Poggio Renatico. *"This event is an important milestone for the entire NATO Integrated Air and Missile Defence community,"* said MGEN Bernhard Fürst, Vice Chairman of the NATO Air and Missile Defence Committee. Belgium took the first step in May towards an operational capability. Germany followed in June accepting the CAOC capability in Uedem with an Early Operational capability anticipated by the end of 2015.

Next step Uedem

ACCS entering into operations will also impact the Agency's local support units. CAOC Uedem will be the first to be equipped with the new NATO ACCS in order to perform its role in maintaining the integrity of NATO's airspace, including air policing in Northern Europe.

CSU Uedem is on a challenging, but exciting path to convert its manpower from legacy systems to the new ACCS capability, making it the first Agency Unit to support operations on NATO ACCS 24/7. Staff from CSU Uedem are in the process of being trained on NATO ACCS so that, from 1 October 2015, they will be in a position to provide level 1 on-site support of ACCS for the CAOC. CSU Uedem staff will then support the validation of the next tranche of ACCS software functionalities required to support CAOC operations which should culminate in the declaration of an Operational Capability by the Operational Authorities on 14 December. To prepare for this task staff from CSU Uedem will undergo training courses organized by the AirC2 PO&S under the ACCS contract. Second and third level support will be provided by AirC2 PO&S and the Contractor.

"I am extremely proud of the team effort across the Agency that is behind the successful momentum in the delivery of NATO ACCS," said Enzo Montalti, Director of the AirC2 PO&S at the Agency, *"I have no doubt we will deliver on our responsibilities."*

- AirC2 Team

Death by Meeting

The greatest myth that exists about meetings is that they are inherently bad.

Meetnapping:

The tendency to kidnap a colleague by forcing him to attend a useless meeting

As a business society, we've come to accept that meetings are unavoidably painful and unproductive-one of the necessary evils of organizational life. But the fact is, bad meetings are a reflection of bad leaders. Worse yet, they take a more devastating toll on a company's success than we realize.

Fortunately, for those organizations that are willing to challenge the notion that meetings are unfixable, it is possible to transform what is now tedious and debilitating into something productive, focused, even energizing. The key to improving meetings, however, has nothing to do with better preparation, agendas or minutes. To address the problem, leaders will need to take a contrarian view of meetings and apply a few basic guidelines.

The first step in transforming meetings is to understand why they are so bad. There are two basic problems. First, meetings lack drama. Which means they are boring. Second, most meetings lack context and purpose. They are a confusing mix of administrative, tactics, strategy and review, all of which creates unfocused, meandering and seemingly endless conferences, with little resolution or clarity.

Drama

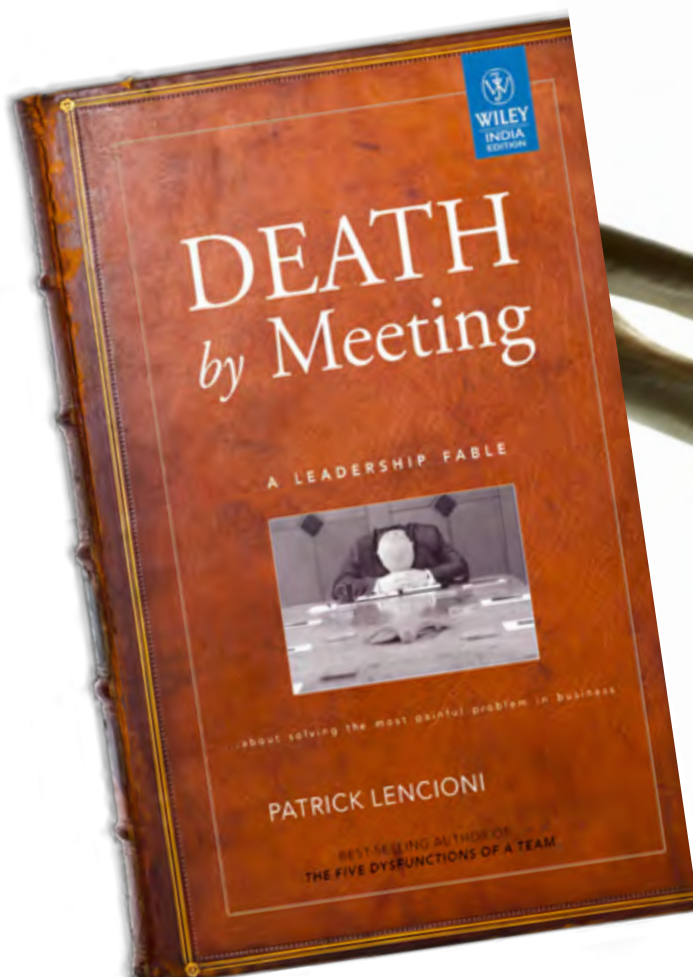
The key to making meetings more engaging - and less boring - lies in identifying and nurturing the natural level of conflict that should exist. One of the best places to learn how to do this is Hollywood.

Directors and screenwriters learned long ago that movies need conflict to hold the interests of their audiences. Viewers need to believe that there are high stakes on the line, and they need to feel the tension that the characters feel. What is more, they realized if they didn't nurture that conflict - or drama - in the first 10 minutes of a movie, audiences would lose interest and disengage.

Leaders of meetings need to do the same by putting the right issues - often the most controversial ones - on the table at the beginning of their meetings. By demanding that their people wrestle with those issues until resolution has been achieved, they can create genuine, compelling drama, and prevent their audiences from checking out.

Context and Purpose

Unfortunately, no amount of drama will matter if leaders don't create the right context for their meetings and make it clear to team members why the meeting is taking place, and what is expected of them. To create context, leaders must differentiate between different types of meetings. Too often, however, they throw every possible conversation into one long staff meeting. This creates confusion and frustration among team members who struggle to shift back and forth between tactical and strategic conversations, with little or no resolution of issues.





But be warned, by creating context, leaders might just have to have more meetings. That's right. More meetings. Not necessarily more time in meetings; but more different types of meetings for sure. In fact, teams should ideally be having four distinct meetings on a regular basis. These include the Daily Check-in, the Weekly Tactical, the Monthly Strategic and the Quarterly Off-site Review. The Daily Check-in is a schedule-oriented, administrative meeting that should last no more than five or 10 minutes. The purpose is simply to keep team members aligned and to provide a daily forum for activity updates and scheduling.

The Weekly Tactical is what most people have come to know as staff meetings. These should be approximately an hour in length, give or take 20 minutes, and should focus on the discussion and resolution of issues which effect near term objectives. Ironically, these work best if there is no pre-set agenda. Instead, the team should quickly review one another's priorities and the team's overall scorecard, and then decide on what to discuss during the remainder of the meeting. This will help them avoid wasting time on trivial issues and focus only on those issues that are truly relevant and critical. The key to making these tactical meetings work is having the discipline to identify and postpone the discussion of more strategic topics, which brings us to the third kind of meeting.

The Monthly Strategic is the most interesting kind of meeting for leaders, and the most important indicator of a company's strategic aptitude. It is the appropriate place for big topics, those that will have a long-term impact on the business. These issues require more time and a different setting, one in which participants can brainstorm, debate, present ideas and wrestle with one another in pursuit of the optimal long-term solution. Each strategic meeting should include no more than one or two topics, and should allow roughly two hours for each topic. The Quarterly Off-Site Review is an opportunity for team members to step away from the business, literally and figuratively, to reassess a variety of issues: the interpersonal performance of

the team, the company's strategy, the performance of top-tier and bottom-tier employees, morale, competitive threats and industry trends. These can last anywhere from the better part of a day to two full days each quarter.

The Commitment

One of the keys to making this four-pronged meeting structure work is to overcome the most common objection of corporate leaders, "How am I going to get my work done if I'm spending all of my time in meetings?" There are two ways to answer this. First, adding up all of the time that these meetings require amounts to approximately twenty percent of a leader's time. Ironically, most leaders spend even more time on meetings anyway, particularly if they factor-in "sneaker time" which accounts for the hours of sending e-mail, leaving voicemail and roaming the halls to clarify issues that should have been made clear during a meeting in the first place.

Second, leaders need to ask themselves a basic question.

"What is more important than meetings?" If they say "sales" or "email" or "product design," then maybe they should reconsider their roles as leaders and go back to an individual contributor position. If you think about it, a leader who hates meetings is a lot like a surgeon who hates operating on people, or a symphony conductor who hates concerts. Meetings are what leaders do, and the solution to bad meetings is not the elimination of them, but rather the transformation of them into meaningful, engaging and relevant activities.

Death by Meeting:

A Leadership Fable...About
Solving the Most Painful
Problem in Business

Patrick M. Lencioni

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March 2004, Jossey-Bass

Have you read a good book lately?
Tell us about it. Email us at:
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Our top leaders are sharing one single office



While the Agency continues to embrace a new organizational development plan, the NCI Agency General Manager, Mr Koen Gijsbers and the Directors have begun to implement the New Ways of Working initiative, using one single boardroom in The Hague and Brussels.

Supporting a collaborative workspace

The concept behind New Ways of Working (NWOW) is simple; it's a practical and innovative approach that fosters collaboration, innovative thinking, and transparency. As the General Manager explains, at its core NWOW is the belief that by working in an open and collaborative environment, employees will improve both their professional relationships and their efficiency; *"The so-called new ways of working (agility, flextime, possibility to work from home, etc.) is: personal accountability, trust, empowerment of managers and staff, and freedom at all levels to optimize the way we work."*

In an effort to lead by example, the Agency's top leaders in The Hague and Brussels have vacated their private offices and moved

Pilot in The Hague and Brussels

The initiative started last April with a pilot in The Hague, when the General Manager, the Director of Strategy and the Director of Application Services, and any visiting Directors, began working together in one single office.

As the initiative proved successful in The Hague, the same pilot was launched in Brussels. Since the end of August, our executive management team in Brussels have shared the same office. After adjusting to the change, the Directors stated that the experience was at first different than what they were used to, but they recognized that after a few days of working in close proximity, they were able to solve daily issues and concerns more quickly.



into one single boardroom. This concept allows Directors, the Chief of Staff, and the GM to collaborate on the big decisions that shape the Agency, and in turn NATO's IT.

The current buildings in Brussels and The Hague were not originally designed to handle this new concept. As a result, the Agency's Facilities team planned and implemented a new design.

One consequence the Director's noticed is the hesitation staff feel about entering the shared office – a practice they would like to mend. The Directors and the General Manager operate with an open-door policy, meaning any staff member is welcome to come visit the shared boardroom. Should the staff member require a private conversation, they are free to meet with their Director in one of the private break-out rooms.

Next steps

While both the pilots in The Hague and Brussels were a success there is still work to be done. Human Resources is now preparing a Directive on teleworking, which will form one of the planks of the Agency's New Ways of Working Programme. Key aspects of implementing New Ways of Working Agency-wide is also being studied by staff taking part in the Management Excellence Programme.

Similarly, the General Manager has encouraged all Commanders and Service Line Chiefs to conduct their own pilots to see what aspects of NWOW will be particularly suited to their teams; the Command and Control Service Line is one service line that is planning on doing such a trial.

This is the first step of our New Ways of Working journey, more to come in the following months!



Maritime C2 adventure: Dr Yes, sir

I twisted and banged my side on the wall. I sat up and smashed my head on the bed above me. "Welcome to the US Marine Corps Hotel!" That was the welcome I received upon waking up after my first night on board the USS San Antonio in a bed that I would have struggled to fit into even during my younger fitter days in the Polish Navy. It was happening all over again.





Less than 2 years since I was sent on board the command ship for STRIKFORNATO (the French ship *Tonnerre*) after their Maritime C2 systems encountered difficulties at sea, the same thing was happening again.

The last time I was sent to Toulon in the South of France, where I was collected by Special Ops on board a Zodiac class ship and raced across the open sea to catch up with the STRIKFORNATO (SFN) Command Ship, where upon arrival I had to climb up a 30 feet rope ladder to get on board; all those hours in the gym finally paying off. This time it was just as intense.

The adventure began some weeks before. Sitting in the NCI Agency Maritime C2 Office in Mons, it was business as usual – preparing for participation at CWIX, performing System Acceptance testing for the forthcoming releases of Maritime Command & Control Information System (MCCIS), putting the finishing touches to the latest version of BRITE-MSA, starting up our new Mine Warfare Tools project and providing third-line support for NATO and Nations, to name just a few of the items on our work stack. Then came the call.

The BALTOPS exercise was gathering pace when the formal request for support arrived. Rather unsurprisingly, the Maritime exercise requested support from the Maritime support team. They came to the right place.

What was immediately clear was that, as a minimum, the SFN Command Ship, the *USS San Antonio*, would need a fully configured and operational version of Maritime Command & Control Information System. A check of the ship's current location and planned route showed that the only remaining option was to send a pre-configured MCCIS deployable kit to a port near to where the ship would pass, and then have someone accompany the kit on board to finalize the setup; that someone was me.

My leave was immediately cancelled, which was completely understandable, given the importance of the task. The whole maritime team began the process of preparing the hardware, software, configuration and logistics required for such a task. Then I waited – waited for the call to tell me when the ship would pass by the port of Den Helder in the North of the Netherlands. The call came on a Monday afternoon, giving the location of the pickup and, what later transpired to be a fairly liberal estimate of the pickup.

Tuesday night in my hotel room in Den Helder was a difficult time. Sitting, waiting, brain racing through all the options, all the combinations and permutations of what could happen, all the things that I might have to do, all the things that could go wrong, despite the immaculate and detailed planning from the whole team. After all, I was being asked to get on board a small pilot tugboat called *Zeemeeuw* with a piece of equipment weighting more than 130kg to be taken the open sea in the middle of the night to climb on board a giant San Antonio Class LPDM.

Morning came – the ship did not. After arriving at the Naval Base and meeting the Logistics POC with the MCCIS deployable kit, we drove to the end of a pier. As per my instructions, I waited at 11 a.m. on the Wednesday morning, outside, exposed to the elements, the winds swirling, with the MCCIS deployable kit beside me, without so much as even a toilet in sight. The hours passed.

At 10 p.m., there was still no word from the ship. The best information I had was that there was a 60% chance that the ship would arrive before 1 a.m. the next day. I waited. Then, at just before 11 p.m. things started to happen. I was instructed to move the deployable kit, all 130kg of it, on board the pilot class ship waiting to take me

to the *USS San Antonio*, currently still sailing towards Europe. Then we set off – off into the darkness of the open sea, making a course to the command ship. My colleagues all the while tracking my route using the systems back in the office and further afield. After an hour, the pilot of my ship made contact with the *USS San Antonio*. We were close – but not close enough.

Apparently those on board the command ship could see us through night vision sensors, but to us, there was just darkness. When we were within a few dozen meters, the command ship lit up like a football pitch during a Champions League game. There she was – huge. A floating mountain of steel towering above us. My pilot glanced at me and smiled, “Good luck.”

And then once again, for the second time in two years I found myself climbing up a 30 feet rope ladder attached to a NATO command ship, floating around at night in the sea. Except this time, when I reached the summit I was greeted by the Military Police pointing guns at my head. Once I had identified myself and changed my underwear, the deployable kit was lifted on board by a crane, it was 2 a.m. Time to get to work.

After finally completing the MCCIS configuration, setting up a broadcast from MARCOM and other locations to the ship and testing that all was working as it should, it was time to get a couple of hours sleep. I was introduced my sleeping quarters. Managing just about to squeeze myself into the tiny space designed for young US Marines, half my age (and in all honesty, in most cases, half my size), after two hours I woke up when I twisted and banged my side on the wall, and then sat up and banged my head on the bed above me. You know the rest.

Two days later, and having spent most of the time on board performing more checks and supporting, not only NATO Maritime systems, but many other systems too, the ship docked in Gdynia, Poland.

After a quick visit to MediaMarkt to purchase some missing connectors and adaptors, which I returned to the grateful crew, my mission was a success. More importantly, our customers were delighted – again. But there was no time to celebrate, I raced off to collect my rental car and then to the airport to collect my colleague who was accompanying me on my next mission.

– Marc Atkins on Robert Golebiewski's adventure



Transforming NATO's C4ISR education and training



With NATO moving away from operations to focus on preparedness, and with the NCI Agency introducing NATO's largest IT modernization initiative ever, the need for training will only increase – but the training budget will remain fixed.

From his office in The Hague, Netherlands, Mr Jean-Paul Massart, Chief of the Education and Training Service Line (E&T SL), shapes the future of the NCI Agency's education and training. Along with his team of 145 dedicated civilian and military staff located in The Hague, Mons, Glons and Latina, he is responsible for the support, management and execution of C4ISR and IT individual and support to collective training for the NATO Command Structure and NATO National entities as well as the Agency's internal training. The Service Line supported over 8,000 students in 2014 and 2015 it looks like they will exceed that. It is up to Mr Massart and his team to determine how to solve this challenge by transforming and economizing the Agency's education and training procedures while still benefiting the Agency and NATO as a whole.

New infrastructure, same quality

In 2012 several NATO IT entities merged to form the NCI Agency. In 2015, the Agency is making a similar merger, but this time with NATO's IT education and training. Under Mr Massart's supervision, the disparate NATO IT schools will consolidate to form a federated NATO IT School. For the first time since its formation, the Agency will have one training academy with a cohesive team that will work together to produce targeted CIS and C4ISR training to all NATO staff and forces.

In the coming years, the NATO CIS School (NCISS) in Latina, Italy, will move to Oerias, Portugal, where it will become a training hub for the new NCI Agency School. As Mr Massart explains, the move of the school from Latina to Oerias is a once in a generation opportunity to transform the way the Agency provides education by taking advantage of new technology; *"the political choice of moving is now going to be coupled with technological uplift and an opportunity for synergies for the Agency and that together provides us the opportunity to really make a change. While the relocation of the NATO CIS School was a political decision, it is a reflection of the Agency's motto of 'One Team, One Mission'."*



The federated school offers more than a new location; on top of leveraging new technologies, the NCI Agency School will also have the benefit of allowing the E&T SL to manage and control the quality of every IT course offered by NATO; *"A federated school allows us to make sure that the training quality across the organization remains at a certain constant level. To do this we will leverage the NATO Training Facility certification that NATO CIS School in Latina received from Allied Command Transformation, we are now going to expand that quality mark across the entire Agency."* Every step – from the instructor's qualifications, to the method of delivery – will be quality controlled by the E&T SL, which in turn benefits the students.

By expanding and enforcing standards across the Agency, the E&T SL ensures that any training offered by the Agency will meet the standards set by ACT; *"We are not just providing a certificate of attendance; we are providing a certificate whereby we testify that the person that did the course is now qualified to perform the actions and skills that are required as a result of that course,"* explains Mr Massart. Essentially the Agency will not just operate as the go-to place for education, but it will also act as a "quality control board" for any CIS training throughout NATO.

Leveraging partnerships

The E&T SL operates under the motto smarter training for a smarter defence. As their motto suggests, in order to provide more training with a fixed budget the E&T SL is designing a smarter system for providing and supporting training by leveraging partnerships with NATO Nations' national training infrastructure. Through this system national entities could be certified to execute the NATO training courses under the direction and supervision of the E&T SL; *"While the national instructors and their facilities will focus on the delivery of the NATO course, our focus with the national entities in that case will be quality control."*

The E&T SL have already begun practicing this type of partnership with great success. This year the Agency is starting a cyber security course in Latina that will cooperate with a Cyber Range organized by the Estonian Ministry of Defence. For the first half of the course, students learn the theoretical knowledge of cyber defence; afterwards, they connect to the Cyber Range in Estonia where Estonian technicians act as "bad guys" and try to hack through the students' cyber defences or form the infrastructure and scenario necessary to enhance the students participation. For Mr Massart the added value of partnerships is clear, *"This type of partnership whereby each entity uses its strength together is going to increase benefits for less money and is effectively a win-win for everybody."*

Mr Massart's vision also sees the Agency partnering with industry in the future; *"For certain technology and skills it will be difficult for us to maintain knowledge and comprehension of all of those materials in rapidly changing environments, so we might outsource to industry specific courses where we find they are better suited to accommodate our needs. It would be our course, under our control, under our quality – but performed by industries that are better suited for that – and I am thinking of cyber area where this might fit but we will expand into other areas as well."*

Through these types of partnerships it becomes clear that the Agency is transforming from the traditional location-based training facility, where all training is done in one location, to a NATO training cloud, where training can be done from several locations – including the new school in Oerias. Part of effectively providing a NATO training cloud is by innovating the way the Agency facilitates its training by taking advantage of technological and pedagogical advances.



Internal Training in Numbers

All internal trainings managed by the Education & Training Service Line





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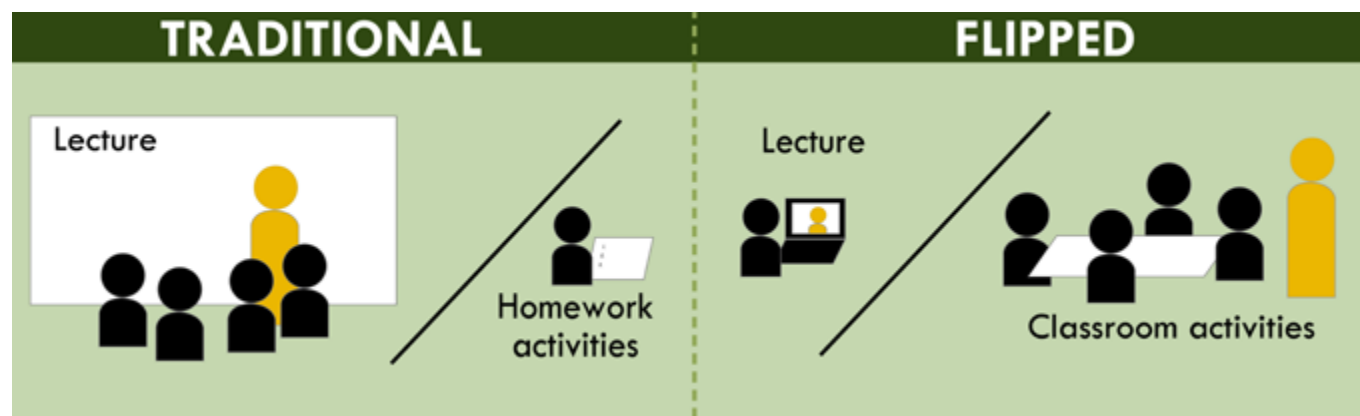
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Using new advances

Providing effective training to an organization as vast and diverse as NATO requires innovating new practices that efficiently deliver quality training to a large amount of people. Mr Massart's approach is to leverage new technologies in the classroom, so the student has the best learning experience available. He will do this by analyzing every course to determine if and how technology can benefit the student.

The idea of asynchronous training is based on the flipped classroom model – a practice gaining momentum at Stanford, Harvard University and other top universities around the globe. In a traditional classroom the teacher provides multiple students with theoretical knowledge, and the student is left to do the more

While some companies have approached technology for education and training in an "all or nothing" way, Mr Massart is explicit in how he will introduce technology; *"We're still in need of a classroom, but we are going to use the instructor in a much more applied way and the students will now be able to use the social interactions to increase their learning. This is the flipped classroom, where we will completely turn around how we used to do training compared to how we will be doing it. We are going to combine that science and research together with the opportunity we have to change the classroom to really make NATO benefit from this flipped classroom approach. This "blended training" approach means also that we are going to need our professional instructors more than ever."*



practical – and often more difficult – work at home without any direction or help. The flipped classroom takes the opposite approach by using technology.

With the flipped classroom model, the student learns the theoretical knowledge through online videos and documents, which allows the student to watch, re-watch and learn the theoretical knowledge at their own pace. Then they meet with the instructor to learn the more difficult practical information. The benefit of the flipped classroom is twofold: it economizes the Agency's budget – students could do half the class from any location, therefore cutting down on travel time – and it also ensures the student gets the most out of their training by having continual access to the information should they ever need a "refresher."

The future of NATO's C4ISR training

Training is crucial to every organization, but when an organization needs to adapt to changing technologies and the changing political landscape – like NATO does – the need for effective training becomes even more important; *"Clearly in the phase that we're in post-Afghanistan, we are moving away from operations and we're now in an era where preparedness is the magic word, and for preparedness training plays an important role. The Connected Force Initiative is an approach where the nations undertake this training challenge together and indeed by connecting and sharing and combining their assets will look at a cost effective way to improve their training. Training is at the heart of that, and that's why we talk about smarter training for smarter defence."*

In order to provide high quality training at a fixed budget Mr Massart and his E&T SL team are leveraging everything they can, from technology, to new locations and a modernization in the way we deliver training; all in the effort to reach the E&T SL's ambition of becoming NATO's central IT training hub.

Education

TWO COOKS, ONE KITCHEN

Major General (MGEN) Thomas Franz, outgoing Commander of the NATO Communications and Information Systems Group, talks about how the Group and the NATO Communications and Information Agency work as partners, including in support of the Alliance's Readiness Action Plan, a top priority for the Alliance ahead of next year's Summit.

As part of the Readiness Action Plan NATO has conducted and will conduct a large number of exercises. This will include, from 3 October to 6 November, Trident Juncture – a series of sea, air and land manoeuvres that have been described as "NATO's most ambitious exercise for over a decade." A key step in the preparation for this major event was Steadfast Cobalt, the largest test to date of NATO's deployable communication and information systems, held in Poland in July. The aim of the exercise was to test and validate the readiness of NATO's communications infrastructure to support the NATO Response Force.

Are we ready?

Speaking on location, during the exercise, MGEN Franz talks about the readiness of NATO communication and information systems, and the strong partnership between the CIS Group and the NCI Agency.

Q: Major General, to begin with perhaps a controversial question – is NATO CIS ready for the challenges of the Readiness Action Plan (RAP)?

MGEN Franz: We have to be clear on what we mean by NATO CIS. When we look at the CIS owned and operated by NATO we are – in principle – ready for the RAP. In principle, because there are still things to do. On the static network side – owned and operated by the NCI Agency – the IT modernization programme is very important. The current architecture is not state of the art and too personnel-intensive. Furthermore we still do not have some of the 24/7 services we need. This is a result of the changed security situation and the need to adapt our CIS posture to this situation. It is more a question of availability of funds and resources than a

technical challenge. For the deployable we are almost there. But here, like on the static side, the deployable assets have to be at a much higher readiness state. And again, we come to a question of resources. We will know in the next 1.5 years if we have sufficient resources to maintain the high readiness state, particularly in the standby phase. In terms of technology and equipment, it is more a question of quantity than quality. The quality of what we have, and what we are receiving is quite good (for example Dragonfly), but we do have a problem with quantity.

Trident Juncture 2015 will demonstrate NATO's new increased level of ambition in joint modern warfare and will showcase a capable, forward-leading Alliance equipped with the appropriate capability and capacity to meet present and future security challenges. More than 12 major international organizations, aid agencies and non-governmental organizations, such as the EU and AU will also participate in the exercise.

For more on the exercise see: <http://www.jfcbnato.int/trident-juncture.aspx>



it's all about collaboration



There are some technology challenges – the equipment we are receiving now was designed some 7 to 8 years ago. It is still good. But in the meantime the requirement has evolved. So we may have to adjust on the technical side – for example to be able to connect more end-users. We may also need something in between a Dragonfly and a theatre liaison kit, to provide support for a brigade headquarters, say 20 to 30 workstations. This is a new requirement – the systems we have today, either don't have the capacity or are overkill. This is also why we need to continue to work to speed NATO IT procurement – the time between requirements setting and delivery should not be 7 to 8 years!

Last but not least we have also made very good progress – and this exercise verified that – in terms of organization and process. The Signal Support Group concept, the Mission Information Room and the Deployable Networks Operations Centre mean that we have the right organization and processes in place. But – and this important – NATO CIS is much broader than just the networks owned and operated by NATO!

If we look at the interconnections between NATO and national networks, the networks of the national units that make up the NATO Response Force, then we still have more to do on interoperability. We have a guiding blueprint – Federated Mission Networking. And all Nations have agreed that interoperability is the key to success be it assurance or operations. Now is the time to really put this into practice.

This is important because I don't think this Alliance (and the 28 Nations) can afford any more using resources in anything but the most efficient way. It is much cheaper to agree on standards and avoid procurements that prevent interoperability. If we don't have interoperability multinational operations either will not be successful or they will be unnecessarily expensive.

Q: Some people have described the relationship between the CIS Group and the NCI Agency as “two cooks, 1 kitchen.” Would you say that this is an accurate description?

MGEN Franz: Indeed it is a nice picture. But in any good restaurant there is always a chief cook. And to my mind that is the Agency – some people use the words “technical authority.” I like to say operating authority or configuration management. This does not mean that the Agency has to do everything by itself. In a deployed operation the Agency will have to delegate to CIS Group, specifically the

Signal Support Group, to allow them to do their work on the ground. Not independently of course, under the guidance provided. In this area we have made good progress and this exercise has proved that. I do understand that the operating authority may hesitate to delegate some tasks, but on the other hand my operators now have much more skill.

Both established as a result of NATO reform in 2012, the NCI Agency and the NATO CIS Group have distinct, but intertwined responsibilities. The NCI Agency is the architect for NATO CIS and is responsible for operating and defending NATO's networks and the acquisition of new capabilities, including air and missile defence. The CIS Group, operating directly under SACEUR's command is responsible for manning and operating deployable networks in support of NATO operations and missions.

We also need to remember that in many situations, especially in an operation or deployed environment, we will have more cooks – the Nations who will federate their networks.

Q: What do you see as the key areas for the future?

General Franz: Three points. We need to keep on promoting the Federated Mission Networking Concept; proven in Afghanistan this is how we will be able to interface with Nations in a deployed environment. Second, cyber defence. Thinking very hard about how we to continue to evolve NATO's capability. This is my point of view only, but perhaps the notion of active defence should be discussed. Finally, I think it is important that Nations realize that the Readiness Action Plan, the enhanced posture and the higher level or readiness – that this is not for free. Steadfast Cobalt – and I expect Trident Juncture – will show that the two cooks are very effective, and can efficiently cook up what NATO needs in terms of CIS. But the increased demands placed on NATO CIS, including the high readiness state, will have a resource impact.

New Commander, NATO CIS Group

MGEN Walter Huhn was appointed Commander NATO CIS Group and Deputy Chief of Staff CIS and Cyber Defence SHAPE in July 2015. Prior to his current assignment he was the Senior Political Military Adviser, Permanent Representation of Germany to the EU. He has also served on the Permanent Mission of the Federal Republic of Germany to the UN, including Germany's membership in the UN Security Council. He held the position of Head Crisis Management Branch, Policy Planning and Advisory Staff, Federal Minister of Defence; and in 2009 he served as its Deputy Director. He then served as the Senior Military Adviser in the Crisis Management and Planning Directorate, European External Action Service.

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The new Human Resources Catalogue of Services



We are pleased to announce the delivery of the first NCI Agency Human Resources (HR) Services Catalogue. Our goal is to provide the Agency with a comprehensive resource from which staff members can retrieve timely information and access direct guidance. Through this effort, the Human Resources team intends to forge a more proactive way of doing business by providing the Agency with greater transparency into its process and services-based functions. The catalogue is a result of a collective effort from HR. It is a "living document" that will evolve as we add new services and update the existing ones, as well as responding to your welcome feedback.

In addition to providing greater transparency into HR services as a whole, we are taking this one step further by assembling the catalogue into two main functional sections: service topics for all NCI Agency staff members, and service topics aimed toward staff

members who provide a management function. During the development of the catalogue, it was assessed that a significant number of HR services are focused on management-level functions which clearly warranted attention to the detailed, process-based services we so often receive inquiry on. To that end, it is for the benefit of the Agency that this catalogue highlight the concept of self-service by including direct links to HR forms, Agency Directives and references – as well as email links to the correct POC mailbox for each service topic.

We encourage the opportunity to discuss any service topics which may require additional clarity and even suggestions for service topics which have not been addressed. Please feel free to contact Sebastien Cajgfinger at strategy.hr@ncia.nato.int.

New Commanders



COL Earl S. Nakata, CSU Mons Commander

On 25 June, Director of Service Operations, BGEN Luigi Tomaiuolo, presided over a Change of Command Ceremony at CSU Mons. During the ceremony COL Earl S. Nakata assumed command from outgoing commander COL Frank J. Gonzales who has served as CSU Mons Commander for the last three years.

COL Nakata's military career began in November 1984 as a Tactical Microwave Satellite Communications Repairman in the US Army Reserves, and in June 1990 he began his active duty service. During his career, COL Nakata has served in a variety of leadership positions including Commander of "A" Company; Assistant Brigade S3/Deputy Brigade Commander; Secretary General Staff, US Army Japan and more.



LTC Grzegorz Bednarski, CSU Brunssum Commander

On 9 July, COL Manfred Krätzig, German Air Force, officially handed over his command of the NCI Agency CSU Brunssum to LTC Grzegorz Bednarski.

LTC Bednarski hails from Poland and was commissioned a Signal Officer in 1997 from the Military University of Technology in Warsaw with a Master's Degree in Engineering. Before assuming the position of Commander of CSU Brunssum, he served as the Commander of Command Staff Group at CSU Brunssum.



COL Nurhilal Capci, CSU Izmir Commander

On 14 July, a Change of Command Ceremony took place at NCI Agency CSU Izmir during which the Unit Commander COL Askin Simseker welcomed his successor, COL Nurhilal Capci.

Over the course of his 28 year career, COL Capci has served in a number of positions. For his last assignment, COL Capci served as the General Secretary of the Third Turkish Army from 2011 - 2014. Prior to this, he was the CIS Head for the CIS Division in SHAPE from 2008 - 2011. Before 2008, COL Capci held various positions within the Turkish Army. He is a graduate of the Army War College (1987).



CPT Axel Haas, CSU Uedem Commander

On 22 September, LTC Christoph Kühn officially handed over his command of the CSU Uedem to CPT Axel Haas.

Throughout his career, CPT Haas has occupied a wide range of posts related to the IT field. Before his assignment as Commander of CSU Uedem, CPT Haas served in the Joint Strategic Reconnaissance Command CNO Branch, where his main duties were in the field of conceptual development. In addition to other positions, he served as the Section Head for CIS at the CIMIC Centre for Excellence in The Hague.



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