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Allied Command Transformation

Norfolk, Virginia | USA

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NATO-ACCREDITED CENTRES OF EXCELLENCE

2022 CATALOGUE

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NORTH ATLANTIC TREATY ORGANISATION

SUPREME ALLIED COMMANDER TRANSFORMATION



I am pleased to present the 2022 Catalogue of NATO-accredited Centres of Excellence (COEs), which lists 28 accredited COEs, with a further COE currently under development.

NATO-accredited COEs are capacity multipliers. They contribute to enhancing NATO by providing expertise in all four pillars (Education & Training, Exercise and Evaluation; Analysis & Lessons Learned; Doctrine Development and Standardization; Concept Development and Experimentation). They promote innovation, through experimentation and recommendations, and improve interoperability with Allies and Partners.

In 2021, they demonstrated their ability to adapt to the challenges posed by the COVID pandemic, contributing to ensure the Alliance remained resilient and active throughout. 2022 will see the implementation of the NATO Warfighting Capstone Concept, ACT's vision for the future of the Alliance's Warfare Development. All NATO-accredited COEs have a role to play in the Warfare Development Agenda, our roadmap for the coming years, to help us understand the security environment, decide quicker, and be stronger together. My intent is to rely increasingly on the expertise of the COEs by involving them more closely in our work.

The Centres of Excellence cover a wide range of areas, each focusing on a specific field of expertise to complement NATO's capabilities. I welcome the progress made on the accreditation process for the future Space COE, which should be completed in 2022. The interest shown by the Nations demonstrates once again the relevance of the NATO-accredited COE concept. The discussions concerning a future centre focused on climate are emblematic of our enduring efforts to address new challenges.

I thank all NATO and Partner countries who by committing personnel and resources contribute to the growth and continued success of the COEs. I look forward to another year of great achievements.

Philippe Lavigne
General, French Air Force
Supreme Allied Commander Transformation

What is a NATO-accredited COE?

Definition

A NATO-accredited Centre of Excellence (COE) is a multi-nationally or nationally established and sponsored entity, which offers recognized expertise and experience within a defined subject matter area to the benefit of the Alliance within the four pillars of NATO's COE program. A COE is not a part of the NATO Command Structure (NCS) or of other NATO entities, but forms part of the wider framework that contributes to the functioning of the Alliance.

Background

The idea for NATO-accredited COEs originated in MC 324/1, "The NATO Military Command Structure," dated 14 May 2003. The Military Committee (MC) refined this idea into the MCM-236-03; "MC Concept for Centres of Excellence (COE)" dated 04 December 2003. Once the idea and the concept were firmly established, the accreditation criteria were defined. In 2004, IMSM-0416-04, "NATO COE Accreditation Criteria" was agreed on and the first NATO COE was formally accredited on 01 June 2005. MCM-236-03 has been superseded by MC 0685 (Military Committee Policy For Centres Of Excellence) dated 12 February 2020; the NATO COE Accreditation Criteria policy is currently under review.

Principles

- No cost to NATO;
- Conform to NATO procedures, doctrines and standards;
- No duplication with existing assets;
- Relationships with Strategic Commands through Memorandum of Understanding agreements;
- Relationships with partners are supported and encouraged.



Pillars

Not every organization can become a NATO-accredited COE. In order to become a COE, expertise must be demonstrated in the following pillars:

- Education, Training, Exercise and Evaluation;
- Analysis and Lessons Learned;
- Concept Development and Experimentation;
- Doctrine Development and Standards.

Bottom Line

There are many reasons why a Nation or Nations, as Framework Nation, decide to offer a Centre of Excellence to NATO. One of the most common reasons is to contribute to NATO whilst at the same time directly benefiting one or more Nations. The number of NATO COEs is growing. Through the MC Concept and the NATO accreditation criteria, COEs have proven to be a successful and enduring model for strong multinational solutions. As a result, the NATO Command and Force Structures are supported by a robust network of COEs, which are nationally or multi-nationally managed and funded and open for participation by NATO and Partner Nations.

HQ SACT Coordination with COEs



There are many key documents when it comes to working with COEs. Several of them are summarized in page 7, however HQ SACT Directive 80-03 – HQ SACT Coordination of NATO COEs (12 November 2021) perhaps has the greatest influence in shaping the day-to-day interactions between HQ SACT and NATO-accredited COEs. This directive provides the policy, guidance and responsibilities for the coordination of NATO COEs in HQ SACT.

HQ SACT Directive 80-03 defines the responsibilities of:

- Deputy SACT - assigned as HQ SACT's strategic Focal Point of Contact (FPOC) for all COEs and SACT's direct supervisor for the assigned ACT COE Flag Officer/General Officer (FOGO) Champions;
- Chief of Staff (COS) - who provides overall governance in accordance with BI-SC Dir 080-001, and is assigned as HQ SACT's strategic level coordinator for COE output in balance with HQ SACT's Programme of Work;
- COE FOGO Champions - who act as the strategic POC to their allocated COEs, and provide direction and guidance as required and ensure their COEs' activities remain in line with ACT's Warfare Development agenda;
- Subject Matter Experts (SMEs) - a staff officer, preferably with subject matter expertise in the specialty of the COE, assigned to support the FOGO Champion and liaise directly with their COE and provide functional coordination of the COE's products and services;
- COE Programme Development (CPD) Branch - responsible, on behalf of SACT, for the coordination of all NATO-accredited COEs, the initial accreditation process and subsequent periodic assessments of NATO COEs;
- Legal Advisor – provides legal support to CPD in the process of developing Memoranda of Understanding (MOUs) and Notes of Joining (NOJs), providing certified copies maintaining a library of all official legal documents pertaining to the NATO COEs.

More information about these responsibilities, including the reference document, are available on TRANSNET's COE Community of Interest portal (page 10).

In 2021 the COE community has continued to prove to be effective, adaptable and resilient in support of the Alliance's requests, which remain the first priority for NATO-accredited COEs.

Despite the effects of the pandemic, due to the close cooperation with ACT and thanks to the adoption of innovative solutions, the COE's overall programme of work noticed again an increase in the requests for support to NATO.

To consolidate and strengthen even more the successes achieved in the past years, ACT has developed the "Annual Report of the COEs (ARC)", essential to properly inform NATO HQs and to share information among all the COEs. ACT has also proposed the revision of the COEs accreditation and periodic assessment criteria, to update the mandatory and highly desirable conditions required to receive and maintain NATO accreditation.

In 2021, the COE network has expanded further with the accreditation of the MGEOMETOC COE, in Lisbon, Portugal, and the inauguration of the IAMD COE in Chania, Greece. The implementation of the NATO Warfighting Capstone Concept, through the Warfare Development Agenda (WDA) will represent ACT's main focus for 2022. COEs' contribution to the several lines of delivery identified in the WDA will be ever more important for the adaptation of the NATO's Military Instruments of Power and, more broadly, for a stronger Alliance.

I thank all the COE Directors and their teams for their dedicated work, and I invite them to remain proactive and creative in bringing up ideas and proposals to keep on promoting their excellent contribution to the Alliance.



Paolo Ruggiero

General, Italian Army

Deputy Supreme Allied Commander Transformation

COE Programme Development Branch in 2021

In 2021, the CPD Branch further adapted its way of working and connecting with the NATO-accredited Centres of Excellence during the ongoing COVID-19 pandemic restrictions.

- Instead of on-site visits being required for every assessment, the branch conducted half of the periodic assessments virtually in order to recover the assessment schedule that had greatly been impacted in 2020 due to travel restrictions.

- In order to ensure consistent and effective communication with COEs, CPD hosted or facilitated numerous virtual conferences. This included conveying strategic intent at meetings between the Deputy Supreme Allied Commander Transformation, ACT Flag Officers/General Officers and COE Directors, down to working-level meetings concerning the four pillars, communications, and the Programmes of Work.

Internally, the CPD Branch continued to develop new tools such as a revised Request for Support (RfS) tool plus other online tutorials. The aim is to enhance the COEs' visibility in ACT while promoting them externally to increase overall understanding of their value. The new version of the RfS tool, developed and implemented by summer 2021, not only addresses technical challenges but also facilitates communication between NATO and COEs with a more user-friendly interface. These promotional activities continue to increase overall awareness of these vital centres within the Alliance, while reinforcing the bridge between NATO and their unique expertise.

Despite COVID restrictions, the Republic of North Macedonia's (MKD) military integration process remained on track through 2021, with its successful conclusion at the Final Integration Conference and Joint Declaration Signing Ceremony held in November in Skopje, attended by SACT accompanied by the MKD Chief of Defence.

COE PERIODIC ASSESSMENTS IN 2021

With the COVID situation easing since summer, CPD has been able to reinitiate onsite periodic assessments. Although it is recognised that virtual assessments are not as comprehensive in terms of confirming physical facilities and re-establishing personal engagements with the Director and staff, they proved to be effective and have enabled a satisfactory appreciation of the COEs' activities and effectiveness achieved.

In 2021, the 10 periodic assessments (five virtual and five onsite) conducted were:

COE	M&S	JCBRN Def	MP	CSW	C2	SFA	SP	CCOE	MILMED	CI
Month Type	Apr Virtual	May Virtual	May Virtual	Jun Virtual	Jun Onsite	Sep Onsite	Sep Virtual	Sep Onsite	Oct Onsite	Nov Onsite



NATO Centres Of Excellence – Key Documents

As well as HQ SACT Directive 80-3 (discussed on page 5), key documents regarding COEs are the following:

MC 0685 – Military Committee Policy For Centres Of Excellence (04 December 2019)

- This fundamental policy document, agreed by the Nations in December 2019, replaced the original MC Concept from 2003 that describes the arrangements for NATO-accredited COEs.
- It covers the definitions, principles, accreditation, further development, relationships, interactions, and legal arrangements that apply to the Military Committee Policy for COEs.
- The Policy confirms that, in accordance with MC 0324/3 - The NATO Military Command Structure, the Supreme Allied Commander Transformation (SACT) is the coordinating authority for the NATO COEs.

IMSM-0416-04 –NATO Centres Of Excellence Accreditation Criteria (11 June 2004)

Based upon the original MC Concept for NATO COEs (2003), this International Military Staff Memorandum defines the criteria to be used in the assessment of a COE for accreditation within the NATO COE network.

- It describes the criteria to be applied during the initial accreditation of a COE, and thereafter during periodic assessments, in terms of mandatory and highly desirable categories.
- It further describes the assessment process to be employed in accordance with these criteria.
- With the publication of MC 0685, a review of the criteria is currently underway with a revision to this key document expected in 2021.

BI-SC DIR 080-001 – Bi-Strategic Command Directive For The Coordination Of NATO Centres Of Excellence (18 June 2020)

This directive, revised in early 2020 to reflect MC 0685, describes the relationship between HQ SACT (supported Command) and SHAPE (supporting Command) in their interaction with the NATO COEs.

- It defines responsibilities with regard to the COEs and the management processes used to maximise the benefits provided by the COEs to the Alliance.
- It further sets out the key processes and battle rhythms used to manage and synchronise all COE coordination activities along with roles and responsibilities.

HQ SACT Directive 80-05 - NATO Centres Of Excellence Establishment And Accreditation Process (24 January 2020)

- This directive describes the establishment and accreditation process of a NATO Centre of Excellence (COE) for HQ SACT.
- It defines the roles and responsibilities of HQ SACT staff for each stage of the COE establishment and accreditation process.
- It also identifies the anticipated interactions between HQ SACT staff and other COE stakeholders within NATO and NATO related entities, including National Liaison Representatives (NLRs) to HQ SACT.
- It sets out the COE establishment and accreditation process that consists of nine formal steps with the responsibilities of the involved HQ SACT branches explained within each.
- Additional steps, related to the coordination and validation of the COE Concept or MOUs, may be initiated by HQ SACT in coordination with SHAPE and/or the NATO HQ International Staff (IS) / International Military Staff (IMS) as necessary.

COE Frequently Asked Questions

Are COEs part of NATO? The Military Committee (MC) Policy MC 0685 (Military Committee Policy for Centres of Excellence) states, "A COE is a multi-nationally or nationally established and sponsored entity, which offers recognized expertise and experience within a defined subject matter area to the benefit of the Alliance within the four pillars of NATO's COE program." We may say that NATO-accredited COEs have one foot within NATO (because they are "part of the wider framework that contributes to the functioning of the Alliance") and they have one foot outside NATO (because they are "not part of the NATO Command Structure or of other NATO entities"). This gives COEs greater flexibility in the relationships with other international and civilian entities.

Where does the COE idea come from? Can NATO "initiate" a COE? As per MC 0685, "A NATO Nation may decide to offer a COE to NATO by formally presenting the offer to the [Chairman of the Military Committee]. That could either be in response to an MC endorsed list or by its own initiative. The MC may, based upon SACT's advice coordinated with SACEUR, accept the offer and task ACT accordingly to proceed with the development as set forth in this Policy."

What is the difference between a NATO-accredited COE and any other COE? As per MC 0685, a NATO-accredited COE (also referred to as a "NATO COE") is a COE that has been established by Nation(s), has received MC endorsement, and has received subsequent North Atlantic Council (NAC) approval. Only when these steps are complete can a COE be called a 'NATO-accredited COE'. Further, "Once accredited, the NAC may grant a COE international status under the Paris Protocol." If NAC approval has not been granted, then it is not a NATO-accredited COE.

Can NATO task the COEs? No, NATO cannot task the COEs, because they are not under command authority of SACT. However, in accordance with MC 0685, "COEs have a functional relationship with HQ SACT and are, consistent with their accreditation, expected to prioritize NATO requests, act as a primary advisor to the NCS in their area of expertise when applicable and have responsibility to support within their means and capabilities, subject to the approval and allocation of resources by their Steering Committee.

How does NATO request COE products and services? NATO can request support from a COE by submitting a request through the Request for Support Tool in TRANSNET. This is a process within the COE POW Development Cycle (page 11).

Can Nations join/withdraw from a COE after it is NATO-accredited? Yes, they can. The addition of any new Sponsoring Nation to a COE is done through a Note of Joining, to be signed by the joining Nation and the already participating Sponsoring Nation(s). Unless otherwise specified, the Note of Joining will come into effect on the date of the last signature. Any Sponsoring Nation may withdraw from the COE giving the twelve months written notice to all other Sponsoring Nations and by informing the Director and Steering Committee in writing.

Are NATO-accredited COEs eligible for Common Funding? As per MC 0685, "COE infrastructure, operating and maintenance costs are the responsibility of the Sponsoring Nations…Exceptional eligibility for Common Funding may be established by the appropriate NATO resourcing authority…"

Can Partner Nations join COEs? No, but Partner Nations can contribute to NATO-accredited COEs' activities as Contributing Partners, which means that they will be able to provide inputs and have access to COE's products and services; however, they will not have voting rights in the Steering Committee. These relationships should be managed by the COEs on a case by case basis, taking security aspects into account.

Can COEs engage with non-military entities, such as industry and academia? Yes they can, moreover they are encouraged to do so. These relationships are managed by the COEs on a case by case basis, taking security aspects into account.

Where can I find more information about the COEs? There are multiple sources available, depending on exactly what you are looking for:

- COE-specific - Each COE has its own homepage listed in this catalogue.
- COEs in general – ACT's website for COEs is https://www.act.nato.int/centres-of-excellence.
- COEs – detailed information. This is contained in HQ SACT's information portal called TRANSNET (more information on page 10).

COE Management Framework

COE Steering Committee

The Steering Committee (SC) is the highest decision making level within a COE. It is the main body for guidance, oversight and decisions on all matters concerning the administration, policies and operation of a NATO-accredited COE. The SC is responsible for the direction, guidance and supervision of the COE. It approves the Program of Work (POW) and the budget, and supervises their execution. The Terms of Reference of each NATO-accredited COE's SC are laid down in their Operational Memorandum of Understanding (MOU).

The SC consists of one representative from each Sponsoring Nation. The SC Chair comes from the Framework Nation (FN), and is not identical with the representative of the FN. Routine meetings of the SC take place at least once a year, and the Chairman of the SC may call additional meetings. Normally, the SC makes decisions by consensus of the representatives. During these meetings, several individuals and groups may be present, but do not have a vote:

- The SC Chair;
- The COE Director (defined below);
- HQ SACT's assigned Subject Matter Expert (SME) is invited to participate, normally to advise the SC on NATO entities' requirements and priorities;
- Other representatives as invited by the SC may attend in an advisory capacity.

The responsibilities and tasks of the SC may include:

- The consideration and approval of additional in-year requests for the POW and possible amendments to the budget;
- Review the budget report and approve the annual Financial Statement;
- Provide guidance on the functional relationships of the COE with other organisations and nations;
- Review and amend the Concept of the COE;
- Propose changes to the MOU and its Annexes.

Directors Conference

The Conference:

The NATO-accredited COE Directors' Conference is an annual event hosted by a different COE each year. The aim of the conference is to provide a primary venue to foster interaction between COE Directors and, upon invitation, equivalent representatives from NATO bodies and multinational organizations. Objectives include informing all participants of recent developments regarding the NATO-accredited COEs and allowing comparison of experiences and the sharing best practices, as well as creating a forum to discuss mutual support and cooperation. Representatives of NATO Headquarters and Strategic Commands are also provided the opportunity to provide strategic orientation in order to inform the debate, however the conference is driven and steered by the Directors.

The Chairman:

The Conference Chair is a Director selected amongst his/her peers for a period of one or two years (according to their availability). The responsibilities of the Chair include:

- To call representatives and/or specialists to attend the conference, once attendance is approved by COEs' Directors;
- To set the conference topics and agenda;
- To chair the conference in accordance with the respective agenda;
- To promote and foster open discussion amongst members;
- To facilitate negotiation in order to achieve consensus;
- To communicate the Conference results;
- To represent the Directors collectively to relevant authorities when requested and agreed by all of them.

Requesting COE products and services

HQ SACT coordinates the submission of NATO Requests for Support (RfS) to the COE Programmes of Work (POW). This process is called the "RfS Process". The overall aim of the process (managed by the CPD Branch) is to optimize the use of the COEs, and to prioritize requests when required. In an effort to streamline the process and better use the resources available to the COEs, requestors (including the NATO Command Structure) should primarily use the "RfS Tool" that is available 24/7 on TRANSNET.

TRANSNET (including access to COEs)

TRANSNET is an unclassified restricted access site available via the internet. The aim of the NATO TRANSNET Portal is to foster collaboration and create an internet accessible forum for Communities of Interest (COI) to come together and share knowledge and expertise. Access to TRANSNET is for individuals from NATO, NATO nations, MOD/DOD, NATO Partners, commercial/industry entities and others that have a standing business case with NATO. The TRANSNET Portal is password protected, so an account must be created. Please follow the steps below to sign up for TRANSNET and request access to the COE COI:

1. Go to https://transnetportal.act.nato.int/Pages/home.aspx;
2. Click on "Register" and provide your information. Commercial email accounts like Gmail, Yahoo, Hotmail or AOL will not be accepted. Only official military/government/organizational email addresses containing the requestor's name will be accepted. After providing your personal information, at the end please write your justification for asking access to the TRANSNET Portal;
3. Once your sign up request is approved by the TRANSNET administrator, login and go to your home page;
4. Click on the "Request Community Access" button;
5. From the list of available COIs, you can find Centre of Excellence (COE) COI;
6. Click on the "Request Access" button;
7. In the "COIs Requested" part, find "READ – COE" and add it to your wish list. Please provide justification for joining this COI;
8. Click on "Save" and your request will be sent to CPD Branch for approval.

Once your request is approved you will be able to view the content in the COE COI, including COE POWs and the RfS Tool.

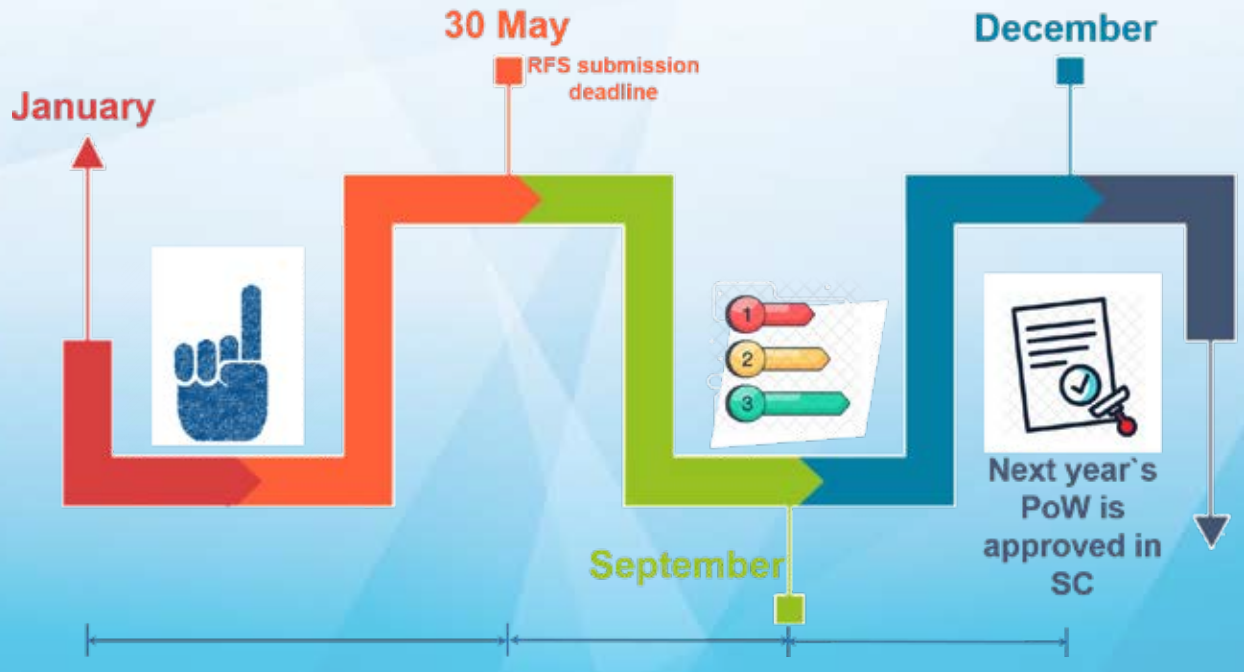
Centres of Excellence Community of Interest

One of the major advantages of joining the COE COI is that it is intended to be a "one-stop shop" for NATO-accredited COEs. Some of the content includes links to all of the COEs (and their POW if classification permits), key events, contacts, documents, and references. If an organization is considering becoming a NATO-accredited COE, there is a section on the requirements for establishment. One of the greatest benefits, however, is the ability to submit requests for support from NATO-accredited COEs. This resource is found under the "COE POW and RfS Tool" tile.

Requests for Support

The RfS tool is meant to serve as a constantly available coordination tool between two or more stakeholders. It identifies the requesting organization, the COE(s) requested to support, a high-level description of the request, and associated timeline. Although requests should usually be entered before June for work to be carried out in the subsequent year (based on the COE POW cycle), out-of-cycle requests may be carried out if sufficient capacity/resources exist. Users unfamiliar with the RfS Tool should contact the CPD Branch for assistance, but in general, the following steps are required in order to request support from NATO-accredited COEs:

1. The requestor submits the request in the RfS Tool (note: prior discussions with the COE(s) via phone or email can be helpful in determining specific resource requirements and for crafting the request);
2. The COE(s) evaluates the request to determine appropriate expertise and available resources;
3. COE(s) provide feedback via the RfS Tool response;
4. HQ SACT provides validation and prioritization (if required) of the RfS and coordinates with the potentially affected stakeholders;
5. The COE SC either accepts or rejects the RfS for the COE POW;
6. If the RfS is accepted, the COE POW is updated;
7. The COE develops the product, and formally closes the loop with the requestor;
8. Once the request is complete, the requestor informs the HQ SACT RfS Manager; the RfS Manager will update the RfS tool accordingly.



Promotional Tools

The NATO-accredited COE annual catalogue has become one of the most popular vehicles for the promotion of the centres' expertise within NATO bodies as well as among other stakeholders. This success relies on the significant efforts made by the COE community to face current challenges through innovative initiatives that maintain their diverse expertise for the benefit of the Alliance. More specifically, the COVID-19 pandemic has highlighted the requirement and utility of using of online solutions, and has prompted CPD to initiate its own programme of virtual solutions.

The primary objective is to facilitate the understanding of exactly what the NATO COEs are and their value to the Alliance. Further the promotional tools also explain their creation and, most importantly, how their support is requested. A further line of effort will be to revive the ACT e-learning portal part dedicated to the COEs including the related links to COE courses.

Promotional activities were oriented in three directions:

CPD tutorials

The CPD branch, in collaboration with ACT's Modelling & Simulation Training Technologies (MSTT) Branch, has developed an initial batch of tutorials that respond to simple frequently asked questions (FAQs) questions such as "What is a COE?", "How does the idea of creating an accredited Centre of Excellence start?" or "What is the establishment and accreditation process of a COE?"

Those tutorials are aimed at audiences that wish to gain an increased knowledge of the NATO-accredited COEs' missions and activities.

"COE 101" Webinar

Despite previous initiatives, such as the COE Marketplace held at NATO HQ in 2019, unfortunately it is evident that there is still a general lack of awareness of the NATO COEs and their overall benefits and value across the NATO Command and Force Structures and NATO Headquarters.

CPD therefore developed an online webinar in an attempt to address the situation and reach a staff-level audience from across the Alliance. It presents the basic facts and figures of the COEs' with the aim of stimulating the interest of potential requestors from across NATO. The online webinar will be repeated at regular intervals in an attempt to further increase the visibility of the COEs.

ACT Communications branch video animation

Designed by ACT Communications Branch at the request of DSACT, this animation aims, in addition to the "COE 101" Webinar, to draw the COEs "out of the shadow" for some people in NATO various communities of interest and for a wider public audience.

This short animation (2 minutes) will be displayed through NATO social networks and can be used by the COEs as an open source.

Video: "What is a COE?"
(https://media.act.nato.int/record/~eda5a8a075)

Video: "COEs - Catalysts for change"
(https://media.act.nato.int/record/~ddc92aa3ff)

COE e-Learning programme

ACT's Joint Advance Distributed Learning (JADL) site contains an area dedicated to COE-courses hosted by ACT's MSTT Branch.

- This area is structured with separate areas where each COE can organize its own subject matter expertise domain. It is the responsibility of each COE to request their own area through the MSTT Branch.

These individual areas provide twin benefits for each COE:

- It provides the Centre the opportunity to reach a large number of potential students within NATO, by providing useful information and contact details.
- When provided with a separate area, a COE can request support from the MSTT Branch to develop and improve its own JADL competency.

COEs Undergoing the NATO Establishment and Accreditation Process

NATO Space COE

Per its vision, the NATO Space COE will be the catalyst for the comprehension, improvement, and transformation of Space Power by delivering effective and efficient solutions and providing relevant expertise to the benefit of NATO and its Allies.

The center will provide knowledge, analysis, and products covering the three operational functions (Space Domain Awareness (SDA), Operational Space Support (OSS), and Space Domain Coordination (SDC)), stimulate Space expertise sharing and interoperability, and constitute a bridge between NATO and all relevant national and international Space organisations from various sectors (Defence, Civil, Industry, and Research).

The NATO Space COE will focus on key roles of NATO pertaining to Space. In particular, it will address the 12 requirement associated with the four pillars. To that end the NATO Space COE will act as a dedicated hub for the development and management of collective shared knowledge, LL, and military expertise on Space-related topics. It will also provide Space expertise, and contribute to the LI/LL process related to measures undertaken by Nations in Space defence-related situations.

Located in Toulouse, France, at the heart of a valuable Space ecosystem, the NATO Space COE will be able to take advantage of worldwide Space resources and expertise to monitor the latest trends, detect technological breakthroughs, assess their consequences, and leverage their benefits for NATO, Allies and partners.

All of this will result in the ability to :

- Deliver effective solutions through independent analysis and critical thinking;
- Provide a unique expertise on combined joint activities in Space and be an open venue to collaborate for NATO, Allies, and partners, by developing, accumulating, and harmonizing knowledge, and creating and disseminating products;
- Act in consultation with NATO as an autonomous incubator for the Space Domain, connected to the other domains, devoted to meet and anticipate the Alliance's needs;
- Contribute to the development of the Space community of interest by engaging relevant stakeholders within and outside of NATO.

Consistent with the Overarching Space Policy, the NATO Space COE, support NATO to accelerating its work, deepening and expanding its use of the Space Domain, securing access to the Space services, products, and capabilities that are essential for the conduct of the Alliance's operations, missions, and activities.

NATO AIR OPERATIONS
CENTRE OF EXCELLENCE
(AO COE) - CASPOA

Director's Message

After the beginning of a global pandemic, I was convinced about the excellence provided by the Air operations CoE, CASPOA, and its personnel for many years. We support political end states with joint military effects by leading and evolving to understand and dominate in Air Operations (AO). I have watched and I have truly understood the continuing excellence of this accomplished, professional Centre and its peerless cadre as they have faced multiple NATO challenges: day-to-day maintenance of Air C2 courses, development of Air C2 systems, analysis of lessons from recent air operations, support of Joint Air Power doctrine development. However, in order to face the future, we must make concrete advantages of the emerging disruptive technologies in the vast domain of the Air Operations. Digital transformation and artificial intelligence are right now real game changers. We must take into account these new phenomena and especially determine the place of human in the operation loop. The Air Operations CoE will continue using its robust, eclectic Program of Work, 20+-years of organizational experience and deep operational background to support NATO and its partners. Now and into the future, technically and operationally, we will provide premier capabilities across the Air Operations domain.



COL Emmanuel SINGARAUD



Mission Statement

To enhance air operations effectiveness across NATO Command Structure (NCS), NATO Force Structure, with NATO partners and to support development of air operations capabilities, concepts, doctrine and experimentation.

Who We Are / What We Do

The Air Operations CoE, a multi-national manned, French funded organization, draws on experience and skills within air operations, technical simulation and Air C2 systems domains. AO CoE manning includes highly–trained resident officers from the French Air Force, Army and Navy, as well as Italy and the United States, in order to provide a diverse, joint and combined air operations perspective to all AO CoE activities.

Vision

By continually reflecting on, improving, and even evolving our Air Operations focused mindset, the center aspires to provide NATO with primary tactical training and expertise in the Air Operations domain and to cover the full-spectrum of NATO's Air Operations discipline through courses listed in NATO's Education and Training Opportunities Catalog (ETOC). Working closely with ACO and ACT, AO CoE provides world-class education and training to joint, multi-national warfighters who plan, task, command and control air operations. These warfighters contribute to C2 experimentation in the technical realm as well as concept and doctrine development, shaping the future of the Multi Domain Operations.



2021 / 2022

Major products and Activities in 2021

- delivered over then 51 training events and welcomed roughly 840 students ;
- designed, planed and implemented the JFAC HQ C² preparation, code name AIREX, for French NRF certification which consisted in a multi-national operation divided into 2 phases: 2 weeks of AOPG and 2 weeks of CAX, AO-CoE provided 35 EXCONers out 75. That training required a workload equivalent to 10 months of usual E&T activities;
- continued to seek to understand and document Air C2 beyond 2022, the tools, structure and capabilities, as well as possible roadblocks and pitfalls as AO CoE progresses towards that point;

- contributed to future Air C2 systems development, test and evaluation;
- focused on the integration of multi-domain strategy and thinking into all AO CoE courses;
- provided guidance for the Allied Command Operations joint targeting community both as an SME and training provider, but at a smaller level than usual because of AIREX workload;
- contributed to planning and testing of the E-JFAC concept/integration of AI within the JFAC/ETEE, specifically hosting companies, who observed current ExCon tasks in order to find the most profitable ideas for AI integration;



- continued to collaborate with the NATO Scientific Technology Organization (STO) through membership in the NMSG;
- supported SHAPE and AIRCOM in capturing training requirements, offering optimal training opportunities and cooperating with NCIA, the NCS and ACT.

Major products and activities in 2022

As for major activities scheduled for 2022, AO CoE will:

- deliver over than 60 training events and welcome roughly 800 students;
- design, plan and implement a new multi-nation 10-day Air C2 JFAC theatre level computer assisted exercise;
- research, document and validate the Air C2 tools and capabilities of tomorrow. The near-term goal is to identify where AO CoE should use its capabilities and resources to accelerate their adoption. This includes contributing to the testing and evaluation of future Air C2 systems and structures;
- experiment with and assess the impact of Multi-Domain Operational thinking on the current Air C2 paradigm;
- provide guidance for the Allied Command Operations joint targeting community both as an SME and training provider;
- proceed with testing and further concept development of the E-JFAC concept/integration of AI within the JFAC/ETEE;
- continue to collaborate with the NATO Scientific Technology Organization (STO) through membership in the NMSG;
- continue to support SHAPE and AIRCOM in capturing training requirements, offering optimal training opportunities and cooperating with NCIA, the NCS and ACT.



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CIVIL-MILITARY COOPERATION
CENTRE OF EXCELLENCE
(CCOE)

Director's Message

In times of rising global challenges and growing competition, NATO recognizes that a comprehensive approach is necessary for a credible deterrence and defence mission of the Alliance. Civil-Military Cooperation (CIMIC) is a military joint function that supports the achievement of all NATO core tasks in peace, crisis and conflict, by integrating the understanding of the civil environment and enabling, facilitating and conducting Civil-Military Interaction (CMI). In order to support the CIMIC transformational, educational and operational requests of the NATO Strategic Commands, the CCOE Sponsoring Nations, NATO Customers, and other customers, the CCOE's fundamental and enduring purpose remains to provide up-to-date and relevant Subject Matter Expertise in the field of CIMIC.



COL Frank van BOXMEER, MSc

Mission Statement

The CCOE provides Subject Matter Expertise in NATO Civil-Military Cooperation and Civil-Military Interaction to support the transformational and operational requests of the NATO Command Structure, Sponsoring Nations, and other customers.

Who We Are / What We Do



On the 31st of July 2007, the CCOE was activated as a NATO accredited Centre of Excellence, now located in The Hague, Netherlands. The CCOE is the recognised asset to assure NATO Nations' and Partners' access to up-to-date knowledge and expertise in the field of CIMIC & CMI and to promote NATO's role in the area of transformation and innovation to external audiences. The CCOE is NATO Department Head for CIMIC & CMI (including Civil Preparedness) and a NATO accredited Education & Training Facility. Based on the NATO-EU joint declarations regarding intensifying cooperation, the CCOE became the European Union Discipline Leader (EU DL) for CIMIC in 2017 and a member of the European Security Defence College in 2020. CCOE's program of work, coordinated and consistent with NATO efforts, is guided by 1. Education and Training, 2. Lessons Learned and Analysis 3. Concept Development and Experimentation and 4. Doctrine Development and Standards.

Vision

The CCOE acts as the recognised hub of knowledge and expertise in CIMIC & CMI and as a unique platform for cooperation and partnership. Therefore the CCOE is the preferred network campus to connect people, share collective knowledge and gain unity of purpose in the field of Civil-Military Cooperation and Civil-Military Interaction.

2021 / 2022

Education and Training

The Training & Education (T&E) Branch functions as the COE's accredited Education and Training Facility (ETF) for CIMIC & CMI and uniquely combines the expertise of the CCOE in their landscape. The CCOE is also the Department Head for the CIMIC & CMI Discipline. This setting facilitates the immediate alignment of CIMIC & CMI courses to NATO's training requirements, its operational environment and present-day security challenges.



In 2022 the CCOE will execute their Annual Discipline Conference (ADC) together with the Military Contribution to Peace Support (MC2PS) ADC on 7- 9 of June. It will be unique that two Disciplines execute their ADC's at the same time and are able to address challenges and emphasise on related Discipline topics like Comprehensive Approach and Cross-Cutting Topics. After all, both share the same Requirement Authority, SHAPE PD and J9.

Lessons Learned and Analysis:

CCOE implemented a comprehensive Lessons Learned (LL) concept that supports the CIMIC community by providing observations and lessons which foster capability improvement, thus enabling transformation. In 2022 CCOE's Lessons Learned & Analysis Branch (LL&A) will focus on lessons and best practices that support the development of the CIMIC Analysis & Assessment capability:

- Observation collection in NATO exercises with focus on Analysis & Assessment of the Civil Environment (e.g. STJU 2022);
- Collection of CIMIC related observations in Non-NATO exercises (e.g. VIKING 2022);
- Support to capability development: CIMIC Analysis & Assessment;
- Support revision of CCOE's course landscape (focus: NATO CIMIC Liaison Course);
- Support AJP 3.19 revision process;
- Provide CIMIC SME to Federated Mission Networking CIMIC Meeting;
- Provide CIMIC SME to NATO SHIPPING Working Group.



Concept Development and Experimentation:

CCOE's Concepts, Interoperability, Capabilities (CIC) Branch supports the continuously evolving, adapting and innovating CIMIC capability, including academic studies, concept development, process development and doctrine/document development.

Actual topics include:

- Continuous work on a CIMIC Analysis & Assessment Concept as a cornerstone for the development of the CIMIC Analysis & Assessment capability (SHAPE J9 Strategic Initiative 5);
- Contribution to the development of the Warfighting Development Imperatives (especially Layered Resilience and Cognitive Superiority).

Doctrine Development and Standards:

The CCOE is the custodian for AJP 3.19 ALLIED JOINT DOCTRINE FOR CIVIL-MILITARY COOPERATION and works to ensure the appropriate reflection of CIMIC & CMI aspects in related doctrine and publications.

The CIC doctrine team supports the development of policies, strategic directives and documents for the strategic, operational and higher tactical level, which include or relate to CIMIC & CMI. Examples are the CIMIC Functional Planning Guide, the CIMIC Tactical Planning Guide, CIMIC Tactics, Techniques and Procedures.



The CCOE edits publications that vary from academic books to more practical applications, such as the CIMIC Handbook (https://www.handbook.cimic-coe.org/) and other semi-formal publications (handbooks, Makes-Sense booklets and info/fact sheets).

The most prominent ongoing standardisation project is the "US Civil Affairs Euro-NATO CIMIC Synchronisation project", which aims to be the nucleus for a long term interoperability initiative.

"CIMIC in support of Special Operations Forces" is a second project initiated in that framework.

Furthermore, the CCOE works to ensure the appropriate inclusion of CIMIC aspects to Cross-Cutting Topics and emerging topics and the inclusion of those topics in CIMIC & CMI.

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CENTRE OF EXCELLENCE COLD WEATHER OPERATIONS (COE-CWO)

Director's Message

Centre of Excellence Cold Weather Operations (COE-CWO) experience a greater interest of NATO countries capability development within CWO. The overall attention towards the areas of the High North and the Arctic definitely runs alongside focus towards other regions in the world. The ACT Strategic Foresight Analysis on the region contributed to a regional perspective with current and future challenges to NATO, also to include the growing effects of climate changes.

NATO countries will benefit of sustainment and further development of cold weather capabilities in order to see joint forces capable of mastering such an environment. The overall approach must be to operate and fight at a level where the cold weather environment will be our advantage and not our enemy.

COE-CWO will support NATO nations further development of capabilities through our expertise and experience within COE four pillars of transformation. Key product of 2022 will be the concept development of "Concept for Joint Operations in Cold Weather Environment".



COL Jo HAUGOM

Mission Statement

Support NATO and Partner nations in improving their ability to conduct operations in cold weather environments, through the provision of subject matter expertise within all aspects of cold weather operations.



Who We Are / What We Do

COE-CWO is a single nation Centre of Excellence based in Elverum, Norway. We are network based and output focused.

Situated on NATO's northern flank, the Centre has deep knowledge and experience from operating under harsh winter conditions.

We share our experience to the best of the Alliance, through offering education and training opportunities, doctrine and concept development work, and through sharing lessons identified and best practice.

In order to provide the best available support to the Alliance, the Centre draws on resources from its network organization that encompass the entire Norwegian Armed Forces.

Additionally, our Community of Interest comprises nations and organizations that bring in valuable perspectives and relevant competence, making our source of knowledge comprehensive and multinational.

Vision

Providing recognized expertise and experience, COE-CWO aims to be NATO and Partner nations' preferred Subject Matter Expert within all aspects of operations in cold weather environments.

2021 / 2022

The 2021-2022 main lines of effort

1. Joint concept for operations in cold weather environments
   - Project lead
2. Diamond-nominated event: Cold Weather Operations Conference 2021
   - Organizer and host



3. ATP 3.2.1.5 - Conduct of Land tactical operations in cold weather environments

- Custodian

4. Tailored training for NATO and Partner nations
    - Organizer and host of webinars, courses and training programs.



Education, Training, Exercise and Evaluation

- Support Joint Warfare Centre (JWC) Exercise Steadfast Jupiter 2021;
- Organize and host Staff officers' CWO planning webinars;
- Coordinate and deliver CWO training and exercise opportunities in Norway for Allied forces;
- For more information on our Cold Weather Operations course-package, see the QR-code below.

Analysis and Lessons Learned

- Contributions to development of US Army Arctic Brigade concept;
- Contributions to JALLC via NATO Lessons Learned Portal on best practices within cold weather injuries;
- Organizing Lessons Learned specific training with support from JALLC's Advisory and Training Team (JATT).

Doctrine Development and Standardization

- Custodian of Land CWO doctrine - ATP 3.2.1.5 - Conduct of land tactical operations in cold weather environments;
- Support development of Land MW doctrine - ATP 3.2.1.3 - Conduct of land tactical operations in mountainous environment;
- Member of Specific Environment Panel (SEP) under Land Operations Working Group (LOWG).



Concept Development and Experimentation

- Project lead for Joint CWO concept – Joint concept for operations in cold weather environments:

  Aim: Ensure the alliance has the best solutions for operating in this environment;

  Purpose: Reducing risk to force and risk to mission, more efficient preparations, more forces that are cold weather capable and strengthening the interoperability among allied forces.
- Support development of NATO MW concept.

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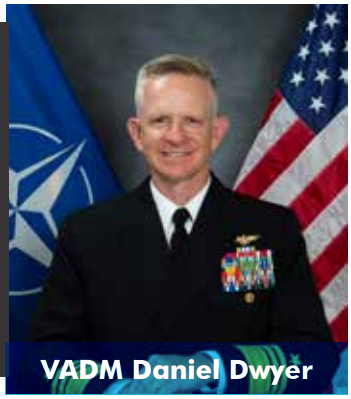
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COMBINED JOINT OPERATIONS FROM THE SEA CENTRE OF EXCELLENCE (CJOS COE)

Director's Message

As the NATO COE dedicated to developing Alliance maritime warfare capability, CJOS COE provides maritime foresight, brings a military maritime focus to innovative technological ideas, and acts as a conceptual transatlantic bridge. We focus on NATO being 'ready to fight and win' in the North Atlantic. 2022's ambitious program of work will focus on Multi-Domain Integration from a maritime perspective, Alliance amphibious capability, harnessing innovative technology in the maritime domain, and analysis of our competitors' maritime capabilities, all of which support the Alliance's warfare development priorities. Alliance interoperability and integration is one of our highest priorities and is at the heart of everything we do. CJOS COE is aligned with JFC Norfolk and US SECOND Fleet under one commander, creating a powerful nexus which, in partnership with our nations, will drive the necessary progress in 'Turning Allied Maritime Potential into Reality'. If you have a challenge in the maritime environment that you think we could help with, we want to hear from you.



VADM Daniel Dwyer

Mission Statement

To support the Sponsoring Nations (SNs) and NATO in improving their ability to conduct Allied combined joint operations from the sea in order to counter current and emerging maritime global security challenges.

Who We Are / What We Do

CJOS COE is a small but dynamic and well-connected COE based in Norfolk, Virginia, that provides a maritime focus for Alliance warfare development, act as a conceptual trans-Atlantic bridge for the Alliance Maritime Enterprise, drives maritime interoperability and integration and supports the four pillars of NATO transformation. The Centre draws on knowledge and capabilities of Sponsoring Nations, Allied Command Transformation (ACT), U.S. SECOND Fleet, Joint Force Command Norfolk, and other neighbouring U.S. commands, to drive maritime warfare development.

Vision

Working closely with partners and stakeholders from international militaries, governments, non-governmental agencies, industry, and academic communities of interest, CJOS COE aims to be the Alliance's source of expertise in the conduct of combined and joint operations in the maritime environment.

2021 / 2022

1. Drive Interoperability, Integration, and Force Development:

- Secretary position on the Multinational Maritime Information Services Interoperability Board (M2I2);
- Chair for Interoperability and Integration Action Group (I2AG);
- Chair of the MAROPS Working Group;
- Liaison to Naval Warfare Development Command (NWDC);
- Allied Interoperability and Integration Guide publishers;
- Maritime ISR Doctrine;
- Coastal Defence Study support;
- Maritime Level of Effort (MLoE) study lead;
- Integrated Air Missile Defense (IAMD) participants;
- Collaboration with Romanian National Defense University;
- Maritime Enterprise Advisory Board (MEAB) Working Group;
- Support to ACT's NWCC follow-on activities;
- Support NATO Defense Planning Process;
- Support JFCNF initial Force Structure Analysis (iFSA) development;
- NATO All Dimension ASW Concept;
- Lessons Learned Process and Analysis;
- Missile Deterrence and Defense wargaming and simulation support;
- BALTOPS support;
- Support to SECOND Fleet Allied Interoperability and Integration;





- NATO Interoperability, Evaluation, and Certification;
- Interoperability considerations on the Employment of Command and Control Systems;
- GRF 2022 Allied Interoperability Employment;
- Provide subject matter expert to support NATO exercises;
- CJOS engagement with National Defense Universities;
- Support to Education and Training Activities.

2. Multi-Domain Integration:

- Support JFCNF MaOC development;
- Artificial Intelligence (AI) and Maritime ISR implications;
- Support JFCNF STDE24 Planning and execution;
- Maritime Security Regimes Round Table (inc. Working Groups);
- Support to JFCNF DDA Activities;
- Impact of Danube Delta and Danube River.

3. Support the Alliance's Development and Integration of Amphibious Capabilities:

- AMPHIBOPS Working Group;
- Joint Combined Sea Basing Working Group;
- NATO Amphibious Leaders (NALES);
- NATO ATF Concept;
- Future NATO Surface Connectors;
- Participation in Campaign Plan for Amphibious Operations Training (CPAOT).

4. Support the Alliance's Development of Innovative Technologies:

- Maritime Unmanned Systems Tactical Doctrine Development;
- ASW Barrier Smart Defense Initiative (SDI);
- Manned-Unmanned Teaming in Joint Operations: A C2 perspective;
- Cooperative ASW C2;
- Dynamic Messenger (DYMS) 22 support to unmanned systems.

5. Deepening Our Understanding of Challenges and Our Competitors in the Maritime Domain:

- 'Cutting the Bow Wave' yearly CJOS magazine;
- Strategic Lines of Communication (StLOC) Study;
- Support to Cold Weather Operations;
- NATO maritime activity in the Arctic;
- Long Term Military Transformation;
- China's influence in the Mediterranean;
- Chinese Maritime Strategy;
- Terror Groups in the Maritime Domain.



6. Supporting Administrative Activities

- COE Support to NATO as Department Head;
- Dean of COE Directors;
- ACT Centres of Excellence Programme Development (CPD) Branch Coordination.

In executing these Lines of Effort, CJOS COE supports the four NATO pillars: Education & Training, Analysis & Lessons Learned, Concept Development &Experimentation, and Doctrine Development & Standards.

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COMMAND AND CONTROL CENTRE OF EXCELLENCE (C2COE)

Director's Message



COL Mietta GROENEVELD

Command and Control enables NATO to orchestrate its international capabilities. How does it work? Which are the best practices within the Alliance? How to adapt to ever changing circumstances? At the NATO Command and Control Centre of Excellence we work on answering these questions. We are "Catalysing C2", which means that we research, experiment, evaluate, analyse and publish specific C2 topics". By doing so we continuously support NATO transformation.

Mission Statement

The NATO C2COE will support NATO, nations and international institutions/organisations with applicable knowledge on Command and Control at the operational level.

Who We Are / What We Do

The NATO C2COE is a multinational organization designed to permanently focus on specific areas of C2, primarily at the operational level. These three specific areas are:

- C2 processes and structures;
- Information and knowledge management (IM and KM);
- Human factors including leadership.

By concentrating purely on these C2 aspects, the NATO C2COE is unique; no other NATO related organisation focusses exclusively on the joint function C2. It gains its expertise by assessing and evaluating C2 aspects during missions, exercises and experiments.



These assessments and insights from the real world on all aspects of C2 in a joint, interagency and combined environment are the basis for further analysis which includes publications/books study and peer-to-peer discussions. The final results support concept development, doctrine and policy development, education and training, and requirements definition.

Vision

NATO C2COE catalyses C2 by capturing, creating, assessing and distributing C2 knowledge. The joint and multinational capacity of NATO C2COE and its partners will lead to robust and applicable knowledge.

2021 / 2022



In 2020/2021 the NATO C2COE worked hard to provide clarity on the term Multi-Domain Operations (MDO) and the MDO C2 concept. On request of the Allied Command Transformation the Centre analysed the theory and hierarchy of Multi-Domain Operations C2 and related terms and concepts such as Hybrid Warfare, Comprehensive Approach and Joint. Insights were forwarded as a whitepaper, comments in the AJP-1 review process and lectures during TIDE Sprint and a meeting with and a lectures to students of the German Staff College. In 2022 the efforts on the MDO topic will continue through several ACT-led and own projects.

The Centre furthermore finalised and distributed results of its nearby and more distant future oriented, conceptual work. The two "Future of the Command Post studies" dealt with the attitude of current leadership for automated decision-making support and explored the impact of technology developments on future staff work. The MDO C2 Demonstrator (MDOC2D) project raised the awareness of senior national and NATO leadership of the potential of currently available or emerging technology to support a commander in the Military Decision Making Process (DMP).

Together with JWC Stavanger and JALLC two revisions of the NFS JTF HQ Handbook were executed to reflect the latest insights and observations from NATO exercises executed by the NFS JTF HQs. The third 2020 edition updated concepts to reflect latest NATO policy and doctrine, and incorporated additional considerations on Supported Supporting Interrelationships (SSI). The NATO C2COE will continue this close cooperation with JWC Stavanger and, following the nature of the Handbook as a living document, the next revision will be conducted in 2022, with the fourth edition of the document expected to be released during that same year.



Now the major NATO exercises are starting up again after the COVID19-pandemic, the NATO C2COE will continuously provide support to the STEADFAST-series exercises in the phases IIB and IIIB, with C2 SMEs. Main activities are aimed at the training audience as part of the JWC Stavanger training teams.

In 2020 the NATO C2COE continued to take up its role as Department Head for the Operations Planning Operations Assessment and Alternative Analysis Discipline within Global Programming in order to coordinate and improve NATO's education and training (E&T) within these fields. It culminated in the first Annual Discipline Conference in December.

In order to professionalize the E&T-solutions/products a temporarily E&T section was established. It will capture the Centre's (applicable) knowledge on C2. An evaluation is foreseen in 2022.

The Centre is actively searching for the use of alternative tools for distributing knowledge. One initiative is the launch in 2020 via common podcasting platforms of six recordings in a series called "C2 and Beyond". These podcasts are followed by three additional episodes in 2021.



In 2021, just like 2020, the NATO C2COE organised a well-received, in-house developed C2 webinar, as the physical event, the seminar was cancelled due to COVID-19. Their aim is to inform and challenge participants on the arguments and theory surrounding MDO and multi-domain C2 (MDC2) by providing the latest insights and perspectives on C2 in a layered operating environment.

The NATO C2COE will interact and collaborate with ACT in the on-going development and future implementation of the Warfare Development Agenda (WDA) derived from the NATO Warfighting Capstone Concept (NWCC) especially with regard to Cross Domain C2 and future leadership development.

And above all… in 2022 we will celebrate our 15th anniversary!

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CENTRE OF EXCELLENCE FOR OPERATIONS IN CONFINED AND SHALLOW WATERS (COE CSW)

Director's Message

Without doubt, confined and shallow waters are a highly relevant part of the global commons in many aspects. They are affecting a majority of the world's population as hubs of transport, trade, livelihood, and nutrition source, to name just a few. Confined and shallow waters show inherent characteristics of competing interests from different national, economic and individual actors, combined with dense activity patterns and complex environmental conditions. The resulting challenges are affecting maritime endeavours, general military and security-related operations, and legal aspects and policy-making alike.

Addressing such challenges, COE CSW supports the Alliance's mission efforts and interoperability, utilising knowledge gained through the plethora of our activities and projects. We are engaged in a wide range of actions from developing warfare capabilities and discussing operational maritime law issues through to the level of supporting strategic decision making.

It is my firm intention to continue in progress with my team in 2022, and to deliver tangible high-quality products and relevant service to our customers within NATO and beyond.



RADM Henning FALTIN

Mission Statement

The COE CSW mission is to provide joint and combined subject matter expertise in the range of operations in CSW in order to support the Alliance, our participating nations and other customers thus contributing to NATO transformation and enhancing the interoperability amongst the allies and partners.



Who We Are / What We Do

The COE CSW was established in 2007 and accredited by NATO in 2009. Drawing upon navies' experiences in confined and shallow waters operations, bringing together this unique expertise from different nations and thus creating synergy in a relevant field of competence is an excellent way to advance NATO's transformational efforts in areas such as the unique and extremely demanding operational environment of CSW. Our multinational team of subject matter experts covers the pertinent warfare areas and supports NATO in the entire COE work spectrum to support transformation in general, and warfare capability development in particular.

Vision

As the very hub of knowledge, the COE CSW is recognised as an essential provider of competence and a tangible supporter to the Alliance, the participating nations, and other customers.

- We are an indispensable element of NATO Transformation by generating synergies and sharing best practices in a multinational environment.
- We are playing the key role in advancing the joint and combined understanding of specific challenges related to operations in CSW, as well as in driving forward the development of high standard warfare capabilities and skills.

2021 / 2022

- Having finished the NATO Smart Defence Project 1.1044 "FIT FOR CSW" (Flexible and Interoperable Toolbox meeting the Future Operational Requirements in Confined and Shallow Waters);
- Having developed the 2nd edition of the COE CSW Study Paper "Prospective Operations in Confined and Shallow Waters", moving on to the 3rd edition;
- Promoting global Maritime Security by organising side events within the Munich Security Conference (MSC) and through related project work;
- Working in a range of NATO Working Groups (WG), e.g. the Maritime Operations WG (MAROPS WG), the Allied Joint Operational Doctrine



WG (AJOD WG), Force Protection WG (FP WG); Counter-Improvised Explosive Devices Working Group (C-IED WG), NATO Electronic Warfare WG (NEWWG), Amphibious Operations Working Group (AMPHIBOPS WG), Naval Mine Warfare Working Group (NMWWG), NATO Specialist Team on Mission Modularity (ST-MM), NATO Joint Capability Group Unmanned Aerial Systems (JCGUAS), NATO Counter-Unmanned Aircraft Systems WG (C-UAS WG); acting as official liaison between AJOD WG and MAROPS WG;



- Contributing to the ACT led initiative to provide a C-UAS handbook for NATO C-UAS WG;
- Contributing to ACT's Smart Defence Initiative (SD 1.1271) Deployable ASW Barrier Operations;
- Supporting the NATO Maritime Unmanned Systems (MUS) Initiative as part of the Staff Advisory Groups (SAG) inside the Steering Board;
- Co-Sponsoring the NATO´s Industrial Advisory Group (NIAG) study on "Industrial perspective on NATO's military digital underwater communications capability and new fields of applications";
- Supporting the series of Robotic Experimentation and Prototyping Exercise augmented by Maritime Unmanned Systems (REPMUS) and the Dynamic Messenger series;
- Fostering a common understanding and the development of Operational Maritime Law, e.g. by our annual "Conference on Operational Maritime Law";
- Supporting NATO and maritime exercises including the conduct of Harbour Protection and Force Protection trials; providing Subject Matter Expertise and Education and Training support to NATO Headquarters and NATO and national schools;
- Supporting the implementation of Live Virtual Constructive – Training (LVC-T) in the Maritime Domain, collaborating with MARCOM and the NATO Modelling and Simulation Group;
- Analysing different aspects of maritime operations in CSW, e.g. the use of space assets, the design of coastal defence and the use of unmanned systems for different warfare areas;
- Supporting ACT Warfare Capstone Concept jump-starters by establishing own computer-assisted wargaming capabilities to train maritime staffs and support concept and doctrine development;
- Advocating the relevance of Electro-Magnetic Operations (EMO) in the maritime environment by support to doctrine developers, in NATO WGs and by lectures and syndicate support at the NSO;
- Supporting the NATO maritime Lessons Learned and Analysis process as well as the evaluation process of NATO Maritime Forces and NATO Response Forces (M) Headquarters;
- Acting as Department Head of the Maritime Operations discipline, translating NATO's maritime training requirements into individual and collective Education & Training solutions;
- Acting as Vice-Chairman in the Above Water Warfare- and Under Water Warfare Capability Group (NATO Naval Armaments Group);
- Acting as Deputy Chairman of the CME-Panel under the NATO C-IED WG and as official Liaison Element between C-IED WG, FP WG and MAROPS WG;

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COOPERATIVE CYBER DEFENCE CENTRE OF EXCELLENCE (CCDCOE)

Director's Message

The importance of cyberspace for our societies will only grow. At the same time, threats and vulnerabilities in cyberspace are becoming more sophisticated and complex. As a NATO-accredited cyber defence hub, the CCDCOE continues to expand its reach and pool of expertise to provide added value to the militaries of our member nations and NATO as an alliance from the strategic to the tactical level. The unique flagships of the CCDCOE have helped to build trust and collaboration in the cyber defence community, and these efforts must continue. It is our firm belief that the challenges in the cyber domain can only be tackled with an interdisciplinary approach, through cooperation among like-minded nations, engaging the military, academia, government and industry.



COL Jaak TARIEN

Mission Statement

The mission of the NATO CCDCOE is to support NATO and the Centre's member nations in the fields of cyber defence research, training and exercises by providing cyber defence expertise within the focus areas of technology, strategy, operations and law.

Who We Are / What We Do

The NATO Cooperative Cyber Defence Centre of Excellence (CCDCOE) is a NATO-accredited knowledge hub offering a unique interdisciplinary approach to the most relevant issues in cyber defence. The heart of the Centre is a diverse group of international experts from the military, government, academia and industry, currently representing 29 member nations.

- We help NATO and nations to understand and utilise cyberspace as a domain of operations.
- We research, train and exercise cyberspace defence and operations from all angles.
- We are a fundamental resource with a view on strategic, legal, operational and technical aspects of cyberspace operations and defence.

Vision

The CCDCOE maintains its position as an internationally recognised cyber defence hub, a premier subject matter expert and a fundamental resource in the strategic, legal, operational and technical aspects of cyber defence. The Centre offers thought leadership on the cutting edge of all aspects of cyber defence and provides a 360-degree view of the sector. The Centre encourages and supports the process of mainstreaming cybersecurity into NATO and national governance and capability within its closely connected focus areas of technology, strategy, operations and law.

2021 / 2022

The unique field of expertise of the NATO Cooperative Cyber Defence Centre of Excellence (CCDCOE) in the NATO framework of centres of excellence is in cyber defence, cyber security, and cyberspace operations. The NATO CCDCOE was established by seven nations and received its full accreditation by NATO in 2008 in the aftermath of the 2007 cyberattacks on Estonia. Since its founding, the CCDCOE has proven to be an internationally recognised cyber defence hub offering research, training and exercise in technology, operations, strategy and law.





With the annual cyber exercises Locked Shields and Crossed Swords, the CCDCOE provides an internationally recognised platform for intense training for cyber defenders and operators. Since its beginning in 2010, Crossed Shields has grown into the largest live fire cyber defence exercise worldwide. It is not only a technical exercise, it also trains strategic decision makers, legal experts, and media professionals. Crossed Swords, by contrast, is where operational aspects of cyberspace are trained and evaluated. Besides the technical challenges, an operational command and control element is incorporated to conduct the exercise mission. In 2021, all exercises were and in 2022 all exercises are planned to be delivered with the option for participants and organisers to take part or contribute remotely.

CyCon, the International Conference on Cyber Conflict, is the annual meeting place for the transatlantic cyber security community. The conference, taking place in Tallinn since 2009, attracts more than 600 participants every spring. In 2021, the first virtual CyCon drew over 800 viewers. CyCon's agenda includes high level political, military, academic, and private sector speakers, academic sessions and workshops. The interdisciplinary nature of the conference encourages research and discussion on the most topical technical, policy, legal and military issues related to cyberspace and its impact on our societies. Academic contributions are published in the conference proceedings. Conference recordings can be found on the Centre's YouTube channel. More information can be found at https://www.cycon.org/

The Tallinn Manual on International Law Applicable to Cyber Operations, the comprehensive analysis by international law scholars and practitioners on how international law regulates cyber operations, will be updated to reflect emerging State practice and developments in the field. The Tallinn Manual 3.0 process was launched in 2021 and the CCDCOE invites experts around the world to contribute through the Call for Contributions to the revision of this globally influential resource for legal and policy advisors dealing with cyber issues.

As of January 2018, the CCDCOE is responsible for identifying and coordinating education and training solutions in cyber defence for all NATO bodies across the alliance. The CCDCOE took on these new responsibilities with the status of Department Head for Cyber Defence Operations Education and Training Discipline, granted by the Supreme Allied Commander Transformation (SACT). The CCDCOE also provides a range of strategic, technical, operational and legal training. Detailed information and the course schedule can be found on our website.



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COUNTER - IMPROVISED EXPLOSIVE DEVICES
CENTRE OF EXCELLENCE
(C-IED COE)



COL José A. CRUZ MORO

Director's Message

Other than providing C-IED support to NATO and Sponsoring Nations on a daily basis, the main focus of the C-IED COE in 2022 is to continue with the institutionalization of C-IED within International community and making our analysis and studies to have impact in current scenario and AOOs.

Mission Statement

The mission of the C-IED COE is to provide subject matter expertise in order to support the Alliance, its partners, and the International Community in the fight against IEDs and to facilitate increased security of Allied Nations and all of the troops deployed in theatres of operations by reducing or eliminating the threats from improvised explosive devices used by terrorists or insurgents.



Who We Are / What We Do

The C-IED CoE is organized into three pillars: Attack the Network, Defeat the Device and Prepare the Force, and has a staff over 60 people, of which more than 40 are Subject Matter Experts in the field of C-IED. The C-IED COE is the natural venue for all C-IED issues within NATO area. Its director chairs and participates in related working groups of both NATO and the European Defence Agency (EDA), in order to create synergies between both organizations.

Vision

Our vision is to use a comprehensive and synergistic interagency approach fusing support from military personnel, law enforcement, police, the intelligence community as well as civilians from academia, and the research and technology industry to defeat both terrorist and insurgent networks that use IEDs as well as the IEDs themselves. Further, we want to ensure the IED environment is considered as an inherent part of future hybrid warfare scenarios and included in future planning processes at all levels.

2021 / 2022

1-Support to Concepts, Doctrine and Standardization Development

- Custodianship for STANAG 2294, STANAG 2295
- Keep on supporting the NATO Technical Exploitation Concepts development.
- Support Partner Nations in their CIED doctrine development process.
- Provide support to NATO Defence Against Terrorism Program of Work (DAT POW).
- Support the NATO Warfighting Capstone Concept
- Support the NATO C-UAS POW under Air and missile defence committee.
- Support the NATO Technical Exploitation Group
- Keep on supporting NATO Human Network Analysis in support of Targeting (HNAT) development.

2-Support to Lessons Learned and Analysis Activities

- Act as C-IED Community of Interest content manager on NATO Lessons Learned Portal (NLLP).
- Maintain and improve C-IED Lessons Learned process.

- Conduct a Lessons Learned workshop.
- Supervise the "out-of-the-theatre C-IED Lessons Learned process" and incorporate results of TTP analysis and LL in NATO training activities/solutions.
- Analyse new threats, trends, along with Tactics Techniques and Procedures (TTPs).
- Conduct technical and intelligence analysis in support of C-IED Community of Interest.
- Provide anticipatory analysis regarding Global IED threats and related Threat Networks.
- Conduct a C-IED Interagency Workshop.



3-Support to Technologies, Experiments and Information Management

- Assess technological developments to defeat the IED.
- Analyse current and emerging IED trends to identify potential solutions.
- Support C-IED enablers' concept of employment development and technical exploitation.
- Provide technical advice on explosive threat and C-IED technologies.
- Support NATO initiatives and work strands (RTO SCI 243, SCI 233, SCI 256).
- Collaborate with other organizations in R&D projects as industries and university: PRINSE project (Protection of infrastructures against explosions), BLADE project (Blast protective Walls using absorbing devices), SAFEDRONE project (detection of buried IEDs).
- Collect / assess / analyse information regarding C-IED to develop and maintain a C-IED Equipment Database.
- Conduct a Technological Workshop.
- Conduct a Technical Exploitation in Water Environment Seminar.

4-Support to Education & Individual Training

- Conduct the related tasks of Department Head for C-IED training within NATO.
- Develop, conduct and support courses in collaboration with NATO and other organizations.
- Develop a standardized CIED Common Training Model (CCTM) for partner training.
- Develop and conduct C-IED courses in support for partners (Non Classified, e.g. Defence Capacity Building activities).
- Organize and conduct C-IED related Mobile Training and Advisory Teams (MTT & MAT).
- Conduct Senior Leadership Seminars and / or Engagement (SLS & SLE) for NATO.
- Support NATO Command Structure (NCS) / NATO Force Structure (main) exercise.
- Develop Advanced Distributed Learning (ADL) tools in support of C-IED and courses.
- Support development electronic Military Training and Exercise Programme (E-MTEP), support and maintain Education & Training Opportunities Catalogue (ETOC) and Partnership Real-time Information, Management and Exchange System (ePRIME).
- Be the reference body for the training and education subject matter experts (SME's) for C-IED related activities.



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NATO COUNTER INTELLIGENCE CENTRE OF EXCELLENCE (NATO CI COE)

Director's Message

Today, more and more countries face complex and evolving security challenges. Extremist organizations employ radical tactics, and persistent and aggressive regimes leverage intelligence services to further their nefarious activities. These are just some of today's threats.
One of the pillars of geopolitical stability is NATO, which works to prevent the effects of such threats on a global scale. Counteracting them requires precise long-term planning, highly qualified human resources, and appropriate preventive actions. In this context, counterintelligence is an essential component of NATO's response, with the ability to swiftly detect and neutralize various threats. However, only "modern" counterintelligence capabilities, ready to operate in a rapidly changing environment – including the virtual realm – will effectively face off against current and future threats. The NATO Counter Intelligence (CI) COE is an essential component of the Alliance's efforts to limit the destructive influence of enemy intelligence services. It serves as a force-multiplier for the counterintelligence measures used in NATO operations, exercises, policies, concepts, and strategies and serves as a hub of resources, experts, and innovation to counter ongoing hostile actions and emerging cyber and hybrid intelligence threats.


COL Martin ACHIMOVIČ

Mission Statement

The NATO Counter Intelligence (CI) Centre of Excellence enhances counter-intelligence capabilities, fosters interoperability, and provides comprehensive expertise to the Alliance and its Nations to increase overall global stability and reduce the impact and scope of hostile intelligence efforts.



Who We Are / What We Do

The NATO CI COE is staffed by subject matter experts from eleven countries: Poland, Slovakia, Croatia, Czech Republic, Germany, Hungary, Italy, Lithuania, Romania, Slovenia, and the United States. France also participates as an observer nation. The Centre is headquartered in Kraków, Poland, but also has full access to the facilities at the Military Training Center in Lest, Slovakia.

The NATO CI COE undertakes efforts to harmonize NATO CI publications, integrate best practices, and serve as a hub for CI expertise, thereby enabling NATO CI forces to achieve the highest levels of interoperability and integration. A substantial part of the Centre's portfolio resides in education and training, as it provides a variety of CI-focused courses, seminars, conferences, and workshops. The intent is to establish a robust CI Community of Interest within the NATO Command Structure, NATO Force Structure, and NATO Nations.

Vision

The NATO CI COE acts as a catalyst for NATO adaptation and operations by supporting the development, promotion, and implementation of new policies, concepts, strategies, and doctrine that transform and enhance NATO CI capabilities and interoperability.

2021 / 2022

The NATO CI COE currently provides six highly specialized in-residence training courses conducted in Poland and Slovakia and one online solution for the NATO CI Community. The Centre also conducts Mobile Education and Training Team (METT) events and seminars based on requests from NATO Nations. The Centre supports the NATO CI Exercise STEADFAST INTEREST (STIN) with an expert training team, and continues cooperation with academia, other intelligence-related COEs, and NATO CI entities. The Centre is also developing new projects, such as a Pre-deployment Seminar for the





"enhanced forward presence" (eFP) and "tailored forward presence" (tFP) initiative, a NATO CI Investigations Course, and guidance for NATO CI operators when supporting Unmanned Aerial System (UAS) incident response.

The Centre recently completed the Allied Command Transformation (ACT) Quality Assurance (QA) accreditation process, and is awaiting an official decision to be designated as a NATO-approved education and training facility (ETF).

The NATO CI COE is also custodian of two major CI-related NATO publications: Allied Joint Publication (AJP) 2.2, Counterintelligence and Security Procedures, and Allied Intelligence Publication (AIntP) 19, Counterintelligence Tactics, Techniques, and Procedures. These two foundational documents are essential elements in shaping the operational CI environment of the Alliance. In addition to managing these core publications, the Centre contributes to the NATO doctrinal effort (either on its own initiative or by invitation) by providing comments, suggestions, assessments, compliance solutions, and expert knowledge to existing or revised NATO policies, doctrines, and procedures related to CI, and complementary functions like Security, Force Protection, Human Intelligence (HUMINT), etc.

A key aspect of the Centre's activities is enhancing NATO and National CI lessons learned (LL) capabilities and multinational interoperability by exchanging information, best practices, and sharing analytical products. The NATO CI COE provides expertise in CI courses and exercises and advice on NATO member requests for support. The Centre also provides a repository for International, National, and NATO shared CI information, analysis, and LL in close cooperation with the Joint Analysis and Lessons Learned Centre (JALLC). The NATO CI COE designs, develops, and delivers tailored training opportunities to enhance the knowledge and skills of NATO members' personnel in the analysis and LL domains.

Traditional methods by which CI operators execute their tasks require integrating with the latest technological innovations or organizational adaptation. One of NATO CI COE's main Concept Development and Experimentation (CD&E) tasks is to explore, conceptualize and experiment solutions to meet those requirements. In addition to recommending and supporting the implementation of solutions identified through the Concept Development & Experimentation (CD&E) process in CI-related doctrine, standards, and procedures, the NATO CI COE is also coordinating national and multinational efforts in the CD&E area to improve CI capabilities while saving resources and avoiding duplications. The NATO CI COE is constantly conceptualizing and developing a wide range of CI-related products and services for NATO, its member Nations, and other customers to improve and support NATO CI interoperability and capability as part of the overall NATO transformation process.



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CRISIS MANAGEMENT AND DISASTER RESPONSE
CENTRE OF EXCELLENCE
(CMDR COE)

Director's Message

Proudly forming part of the wider network of NATO Centres of Excellence (COE), the CMDR COE contributes to the Alliance's transformation and adaptation by serving as a hub of expertise and a platform for information, knowledge, and exchange of good practices in the Crisis Management and Disaster Response (CMDR) domain. The complex nature of the CMDR domain requires both a deep insight into what is already at hand, and a great foresight into what lies ahead. In such a complex security environment, collaboration is undoubtedly the key to success, and the CMDR COE makes dedicated efforts to establish constructive partnerships and to nourish the ever growing CMDR community of interest. We strive to provide conditions which will further enable a collaborative collective approach to CMDR, for we believe in its inclusive, transformative, and innovative potential. Meet Challenges, Seize Opportunities, Anticipate the Future!



COL Orlin NIKOLOV

Mission Statement

Being fully cognizant of the current security environment and its related imperatives, the Centre's objective is to act as a catalyst for the improvement of NATO's, NATO Nations' and Partners' capabilities in CMDR operations by placing utmost importance on the principles of Comprehensive Approach and on enhancing collaborative partnerships.



Who We Are / What We Do

The CMDR COE is a multi-national NATO military body sponsored by the Hellenic Republic, the Republic of Poland, Romania and the Republic of Bulgaria (Framework Nation). The Centre, located in Sofia, Bulgaria, currently has a 40-strong team of both civilian and military experts who continuously tackle a wide range of CMDR-related issues with the ultimate goal of supporting NATO's standardisation and transformation.

Strong partnerships and effective collaboration are critical for the successful achievement of the afore-mentioned goal. Hence, the Centre has forged excellent partnerships and systematically enhances its cooperation with key NATO and EU bodies, institutions, and agencies.

As a hub of expertise in CMDR, the Centre provides a wealth of information and expertise. Considering the nowadays challenges and intricate security environment globally, the CMDR COE places emphasis on innovative critical thinking on Crisis and Disaster management; Environmental risks; Climate change; Building resilience through Preparedness; Building Integrity; Modelling & Simulation and AI Technical architecture for Decision Makers and Gender Focal Points. Additionally, the Sofia-based COE serves as platform for key NATO events, as well as for numerous CMDR-related conferences, workshops, and trainings.

Vision

The Centre is determined to firmly establish and further sustain its position as an internationally recognised and highly respected body which provides value-added Education and Training products, research and analysis, strategic policy recommendations, and advice by means of concept experimentation and doctrine development.

2021 / 2022



The current global events bring to light the great importance of close cooperation, coordinated actions and interaction among key Crisis Management and Disaster Response (CMDR) stakeholders. Never before has the CMDR domain been changing in such a swift manner, nor have human organizations been so strongly interconnected.

Taking into account the intricate security environment at present, we place emphasis on innovative critical thinking,



close cooperation among governmental (civilian and military) and non-governmental organizations. We also believe in continuous transformation within the CMDR domain. With the objective to promote said values we co-organized and carried out events in cooperation with our long-term partners. The Centre's partnership with international organisations, governmental agencies and local authorities was further enhanced thanks to our participation through modelling and simulation of disaster and response efforts, decision-making support and initial surveillance by drone during workshops and joint trainings.

Following our top priority to provide expertise and advice in the field of crisis management and disaster response, our organisation participated in full support of the EADRCC Consequence Management Exercise "NORTH MACEDONIA 2021" via experts, IT equipment, modelling and simulation, MEL/MIL managing, evaluation, analysis, and lessons learned. Furthermore, the building of our Operation Laboratory, developed in software and hardware mode, represents another great achievement of CMDR COE. It contributes at present to the fulfilment of the Centre's operational and strategic aims, and it serves as an additional aid to our daily tasks.

With regard to the increasing demand for remote communication and education, we managed to conduct our scheduled courses online and in hybrid mode. Alongside our regular courses, available on https://www.cmdrcoe.org/menu.php?m_id=40, in June our Centre organized and delivered its first Senior Leaders Seminar (SLS) on Gender Perspectives. We conducted our first webinar on COVID-19 during which we presented our general findings on the topic.

Not only has our Centre successfully implemented and carried out the ambitious Programme of Work (PoW) 2021, but also plans an even more dynamic PoW for the following year. Moreover, we continue to improve our Internship Programme, while abiding by prevention and control protocols. We are certain that having skilful and highly-motivated young professionals on our team will play a significant role in the successful dealing with modern challenges and the transfer of knowledge between and among generations. What is more, we are proud to announce that we have managed to introduce a stipend for the interns selected to join our team.

We are knowledgeable about the complexity of the security environment at present and the growing need for active collaboration, innovation and flexibility. Therefore, we are extremely happy that, although 2021 proved to be quite challenging for the entire CMDR domain, we managed to stay united, respond effectively to this new type of crisis, and thus fulfil our mission to transform the multiple challenges to security into opportunities for a better future.



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CENTRE OF EXCELLENCE
DEFENSE AGAINST TERRORISM
(COE-DAT)

Director's Message



Terrorism is an important threat to NATO and its partners that continues to challenge our way of life. We can only hope to combat terrorism by coming together and sharing our experiences, best practices, and challenges. Understanding how other nations perceive and combat terrorism and comprehending the context within which terrorism gestates will generate fresh and comprehensive ideas to fight, prevent, and respond to terror. Even though the pandemic disrupted residential activities, we successfully conducted 2021's activities virtually. We hope to meet face to face again as soon as possible. The work we do on behalf of NATO is critical, thus, on behalf of our team I kindly invite you to communicate regularly with and ideally visit COE-DAT.

Mission Statement

COE-DAT provides key decision-makers with a comprehensive understanding to terrorism and Counter Terrorism (CT) challenges, in order to transform NATO and Nations of interest to meet future security challenges. This transformation is embedded into NATO's three declared core tasks of Collective Defence, Crisis Management, and Cooperative security.

Who We Are / What We Do



COE-DAT is a NATO accredited multi-national sponsored entity currently comprised of seven NATO nations (Germany, Hungary, Netherlands, Romania, Turkey, the United Kingdom, and the United States) with two more in the process of joining (Albania and Italy). COE-DAT is NATO's hub for all Terrorism, CT, and Defence Against Terrorism (DAT) education and training. COE-DAT provides three main services to NATO: the Department Head for Terrorism/CT/DAT Education and Training, an Education and Training Facility (focusing on both Alliance and Partner Nation needs), and as a think tank supporting the other two roles and NATO leadership.

Vision

An internationally recognized and respected resource for Defence Against Terrorism expertise for NATO, the hub of a wide network of international military, government, non-government, industry and academic communities of interest.

2021 / 2022



2021 Major Work Items

Department Head for CT

- Annual CT Discipline Conference 02-03 June 2021
- COE-DAT CT Long Range Planning Conference 23 June 2021

Education & Training:

- CT / Attack the Network 08-11 February 2021
- Defence Against Suicide Attack 15-19 March 2021
- Critical Infrastructure Protection from Terrorist Attacks 12-16 April 2021
- Efficient Crisis Management to Mitigate the Effects of Terrorist Activities 24-28 May 2021
- Terrorism and Media 20-24 September 2021
- Border Security, Refugees, and CT 27 September-01 October 2021
- Defence Against Terrorism 25-29 October 2021
- Terrorist Use of Cyberspace 15-19 November 2021

Transformation (Concept and Doctrine Development):

- Good Practices in CT Book Vol 2
- Workshop: Gender in Terrorism and CT: Data, Analysis, and Responses 15-17 June 2021
- Terrorism Experts Conference (TEC) and Executive Level Defence Against Terrorism Seminar 12-13 October 2021

Knowledge (Analysis and Lessons Learned):

- Critical Infrastructure Security and Resilience (CISR) book Vol 1 and 2
- Best Practices on Border Security in Contested Environments and CT
- Terrorism Threats during Peer to Peer Conventional Warfare
- Developments in Terrorism and CT During the Covid-19 Pandemic and Implications for the Future

2022 Major Work Items

Department Head for CT

- Annual CT Discipline Conference
- COE-DAT CT Long Range Planning Conference
- Training Needs Analysis / Training Requirements Analysis workshops

Education & Training:

Courses:

- Defence Against Terrorism 07-11 February 2022
- Efficient Crisis Management to Mitigate the Effects of Terrorist Activities 21-25 March 2022
- CT / Attack the Network 04-08 April 2022
- Terrorism and Media 09-13 May 2022
- Defence Against Suicide Attack 06-10 June 2022
- Terrorist Use of Cyberspace 19-23 September 2022
- Critical Infrastructure Protection from Terrorist Attacks 07-11 November 2022
- Border Security, Refugees, and CT 05-09 December 2022

Seminar:

- Defence Against Terrorism (Senior Commanders and Flag Officers)

Mobile Training Teams and Advanced Training Courses:

- African Union
- Kuwait
- BIH / NATO HQs Sarajevo

Transformation (Concept and Doctrine Development):

- Terrorism Experts Conference 18-19 October 2022
- Good Practices in Terrorism / CT Seminar
- Emerging Threats in Terrorism and CT
- Countering Terrorist Financing
- Partnership SOF Crisis Management in Terrorism Workshop

Knowledge (Analysis and Lessons Learned):

- CISR Book Vol 2
- Border Security in Contested Environments
- CISR / Advanced CISR course development
- Gender and CT Workshop
- Gender Sex-Disaggregated Data Research Analysis



The complete Event and Course Calendar can be found at our Website.

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NATO ENERGY SECURITY CENTRE OF EXCELLENCE (NATO ENSEC COE)

Director's Message

The NATO ENSEC COE is recognized hub of knowledge and expertise in Energy Security for the benefits of the Allies, Partner Nations and the NATO bodies in three main domains: awareness of energy developments with security implications for NATO; improving the energy efficiency of NATO military forces through proposing common standards, reducing dependence of fossil fuels, and demonstrating energy-efficiency solutions for the military. NATO's capacity to support national authorities in protecting critical energy infrastructure, as well as enhancing their resilience against energy supply distributions that could affect national and collective defense, including hybrid and cyber threats.



COL Darius UŽKURAITIS

Mission Statement

The mission of the ENSEC COE is to support NATO, Nations and Partners to meet the challenges of a dynamic energy security environment by addressing resilience, operational energy efficiency, and critical energy infrastructure protection.



Who We Are / What We Do

We, the NATO ENSEC COE, are a widely recognized international military organization that strives to provide qualified and appropriate expert advice on questions related to operational energy security. We offer technical, scientific and academic subject matter expertise on energy security that contributes to: risk assessment analyses; energy wise secure solutions for the development of environmentally friendly and efficient military capabilities; developing the Smart Defense Initiative; and Supports NATO Operations through targeted technical scientific assessment.

Vision

NATO ENSEC COE acts to be the recognized hub of knowledge and expertise in Energy Security within NATO, and to be a unique platform of cooperation and partnership in this area for Allies and Partner Nations.

2021/2022

Major Products and Activities

EXPERIMENTATION

- Experimentation campaign, in cooperation with the ITA Army, to verify the possibility to use an electric bike for military purposes and also try to define all military requirement for the future possible procurement;
- Hydrogen Fuel Cell experiment which primary objective is to analyze the tactical energy currents within a mobile logistical military unit and to develop reasonable and feasible scenarios where the experimental technology might apply its advantages for military missions;
- Helping develop concepts and doctrines for NATO with our expertize on energy security issues.

CONFERENCE

- International on-line conference on Climate Change and consequences to the NATO energy security in cooperation with the "Fondation pour la recherche Stratégique" in Paris to gather NATO and national experts to debate over the Alliance future regarding climate change issues.

EXERCISES

- Table Top Exercises on Critical Energy Infrastructure Protection in Ukraine – "Coherent Resilience 2020";
- Table Top Exercises on Critical Energy Infrastructure Protection in Lithuania – "Coherent Resilience 2021 Baltic".



TRAINING

- Advanced Energy Security Seminar in Baku, Azerbaijan;
- Maritime Security Courses and Exercises in MARSEC COE.

COURSES

- Baltic Defence College Operational Level Energy Security Course;
- Energy Efficiency in Military Operations Course in cooperation with NPS;
- Energy Security Strategic Awareness Course in NSO;
- Operational Level Energy Security Course in Turkish PfP training centre;
- Introduction to Energy Security (ADL course);
- Introduction to the NATO Energy Security Centre of Excellence (ADL course).

STUDIES AND RESEARCH

- Energy supply developments for military mobility until 2050 using synthetic and carbon free fuels;
- Challenges and risks of offshore wind farms for energy and military security;
- Climate change consequences on NATO and partner nations' energy policies and technological developments.

STRATEGIC ANALYSES

- Strategic analysis on the Key Minerals markets in the framework of the hybridization of the fighting aircraft, vehicle and warship powertrain. The study identify the energy dependency of the NATO Nations in short, medium and long term regarding the increase use of batteries in hybrid powertrains of new war materials;
- Energy supplies from Middle East and Logistic consequences for NATO;
- Impact of COVID-19 on NATO energy security – view on fuels, gas and renewable energy.

WEBSITE AND PUBLICATIONS

- In order to enhance the Energy Security awareness inside NATO, ENSEC COE hosts a website which includes the Centre's production - researches and studies, also articles about current relevant energy developments.



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NATO CENTRES OF EXCELLENCE
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MNE
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19
MKD
ALB
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TUR
1 Analysis and Simulation Center for Air Operations (AO) , Lyon
2 Civil-Military Cooperation (CCOE) , The Hague
3 Cold Weather Operations (CWO), Elverum
4 Combined Joint Operations from the Sea (CJOS), Virginia
5 Command & Control (C2), Utrech
6 Operations in Confined and Shallow Waters (CSW), Kiel
7 Cooperative Cyber Defense (CCD), Tallinn
8 Counter-Improvised Explosive Devices (C-IED), Madrid
9 Counter Intelligence (CI), Krakow
10 Crisis Management & Disaster Response (CMDR), Sofia
11 Defence Against Terrorism (DAT), Ankara
12 Energy Security (ENSEC), Vilnius
13 Explosive Ordnance Disposal (EOD), Trencin
14 Human Intelligence (HUMINT), Oradea
15 Integrated Air & Missile Defence (IAMD), Chania
16 Joint Air Power Competence Centre (JAPCC), Kalkar
17 Joint Chemical Biological Radiological & Nuclear Defence (JCBRN-D), Vyskov
18 Maritime Geospatial, Meteorological & Oceanographic (MGEOMETOC), Lisbon
19 Maritime Security (MARSEC), Istanbul
20 Military Engineering (MILENG), Ingolstadt
21 Military Medicine (MILMED), Budapest
22 Military Police (MP), Bydgoszcz
23 Modelling & Simulation (M&S), Rome
24 Mountain Warfare (MW), Begunje na Gorenjskem
25 Naval Mine Warfare (NMW), Ostende
26 Security Force Assistance (SFA), Rome
27 Space , Toulouse *Under Establishment Process
28 Stability Policing (SP), Vicenza
29 Strategic Communications (STRATCOM), Riga

EXPLOSIVE ORDNANCE DISPOSAL
CENTRE OF EXCELLENCE
(EOD COE)

Director's Message

Despite the COVID-19 crisis, the NATO EOD COE's contribution is still in high demand. The number of applicants for COE courses, amount of standardization tasks, execution of existing projects and implementation of new one is a sign of rising interest. Despite travel and assembly restrictions, we adapted to the situation and conducted some of the meetings, workshops, seminars and education through online tools.



COL Róbert CSÁSZÁR

Mission Statement

The EOD COE mission is to support and enhance the NATO transformation and operational efforts in the field of EOD.



Who We Are / What We Do

The EOD COE is recognized as the leader in its specialised field of EOD providing NATO, Sponsoring Nations and other military and civilian institutions with operational and transformational expertise. We represent a highly professional and very well established capability to influence across the NATO MILENG and EOD domain, as well as broader range of NATO programmes. With NATO as our primary customer, the COE already delivers valuable contribution to warfare development, especially in the areas of doctrine development and experimentation, education, training and exercises, and lessons learned.

In 2016, the EOD COE gained unconditional accreditation as a NATO Education and Training Facility and in 2019, based on the results of the Periodic Assessment, it was reaccredited as a NATO Centre of Excellence.

Vision

To be NATO's catalyst for improvement and transformation of EOD.



2021 / 2022

2021

- Delivery of nine iterations of the EOD specialized Education and Individual Training (E&IT) opportunities. Due to the COVID-19 countermeasures, the NATO EOD Staff Officer Seminar was developed and delivered online;
- Contribution to Collective Training and Exercises (CT&E), mainly Northern Challenge, Aegean Seal, Toxic Valley;
- Successful organization of the 8th Workshop 2021



and execution as the first online event for EOD operators and staff officers;

- Comprehensive work on the AJP-3.18 (Allied Joint Doctrine for EOD Support to Operations) revision as a custodian;
- Execution of the HME-B course and the MTT to Train the Trainers of Engineering and EOD Training Centre in Ramnicu Valcea, Romania;
- Preparation and successful execution of NATO EOD Demonstrations and Trials 2021.

2022

- Launch EOD/IEDD VR/XR Training and Combat Support Kit (ETACS) project;
- Organize the 9th EOD Workshop with overall theme "Cyber TECH in support of the EOD Training";
- Elaborate and submit a ratification draft of the AJP-3.18 (Allied Joint Doctrine for EOD Support to Operations);
- Ensure quality assurance through continuous improvement of E&IT;
- Contribute to EOD related CT&E (Northern Challenge, Ardent Defender, Toxic Valley);
- Conduct one iteration of the NATO EOD Staff Officer Training for Polish Armed Forces thru Mobile Training Team (MTT),
- Deliver seven iterations of the selected E&IT;
- Reopen the Former Warsaw Pact Ammunition Course for EOD operators to improve their knowledge.



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NATO HUMAN INTELLIGENCE CENTRE OF EXCELLENCE (NATO HUMINT COE)

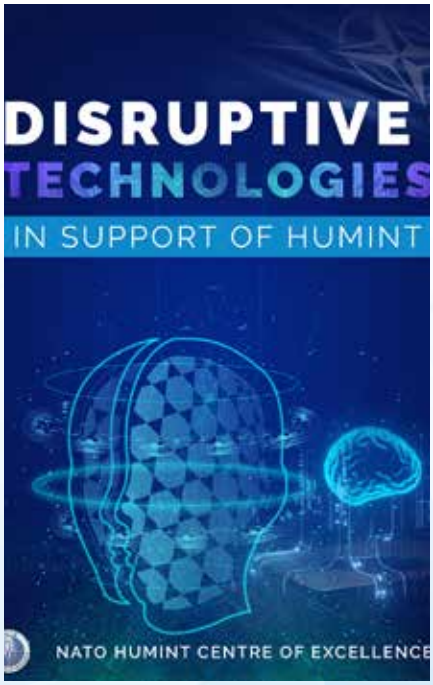
Director's Message

Notwithstanding the constant disruptions in everyone's daily battle rhythm since the beginning of the COVID-19 pandemic, the NATO HUMINT Centre of Excellence (HUMINT COE) adapted to the new "normal" and evolved with the purpose to maintain its capacity as the epicentre of HUMINT knowledge and expertise within the Alliance.
Additionally, while HUMINT in the cyber domain is being demystified, the supporting role of technology and Artificial Intelligence in enhancement of HUMINT employment in operations is analysed, HUMINT standards are being revised, new resident courses or Advanced Distributed learning solutions are developed, and last but not the least, best practices and lessons identified are collected and analysed in the attempt to better understand the impact of this global health crisis of our time to HUMINT employment in NATO operations.
The HUMINT COE will continue to aim for excellence in the pursuit of providing the highest quality services and products in response to the requirements and needs of the Alliance and to better adjust and transform NATO's response capacity to a highly dynamic threat environment.


COL Florin-Vasile TOMIUC

Mission Statement

HUMINT COE provides the highest quality services and products in response to the requirements and needs of NATO Command Structure, NATO Force Structure, NATO Nations and, when feasible, Partner Nations.



Who We Are / What We Do

HUMINT COE is an agile and resilient International Military Organization, providing quality support to NATO. Acting as a hub of HUMINT expertise, the Centre permanently seeks to enhance the HUMINT capability in NATO, in conjunction with stakeholders and various communities of interest within the NATO HUMINT Enterprise. HUMINT COE chairs the NATO HUMINT working groups, acts as custodian for HUMINT doctrines, conducts research and development projects and manages HUMINT Lessons Learned and Best Practices. In the area of Education and Training, the Centre is appointed as Department Head for HUMINT and delivers a large portfolio of certified courses as a NATO accredited Education and Training Facility.

Vision

HUMINT COE drives the transformation of the HUMINT capability in NATO based on lessons learned and best practices, coupled with integration of scientific research and modern technologies, innovative standards and effective, quality-based education and training, in order to keep Human Intelligence relevant in NATO and better answer the evolving operational environment requirements and challenges.

2021 / 2022

- HUMINT COE is the custodian for the HUMINT Doctrine, AJP-2.3, and the Doctrine for HUMINT Tactics, Techniques and Procedures, AIntP-05. In 2021, the Centre has managed to finalize the revision of AJP-2.3 and offer a good quality doctrine for ratification by Nations.

Apart from doctrines, HUMINT COE is the author of several handbooks and studies that support HUMINT activities at all levels. In 2021, HUMINT COE has managed to offer NATO Nations a mature version of the HUMINT Interrogator's Handbook, a due collection of expertise put together with multinational contribution.

- In the Concept Development & Experimentation area, HUMINT COE contributes to the NATO HUMINT adaptation to better answer the future operational environment,





by developing concepts and studies related to HUMINT agile structures, Artificial Intelligence in support of HUMINT operations and providing recommendations on the use of current technologies in HUMINT activities. Additionally, HUMINT COE supports the development of Human Capital, Education & Training portfolio, implementing Emerging & Disruptive Technologies in support of HUMINT, HUMINT involvement in Multi-Domain operations with extension to Cognitive/Information domain.

- HUMINT COE education and training program continues to contribute to Alliance needs for permanent development and preparation of a resilient HUMINT capability ready to deploy in support of NATO operations.

In 2021, HUMINT COE developed new courses as Advance Distribution Learning (ADL) solutions, and moved part of its E&T program into online. Therefore, from 2021, the HUMINT COE E&T portfolio includes: Legal Aspects of Interrogation (ETOC INT-HU-25465), Questioning Techniques (ETOC INT-HU-25467), Introduction to HUMINT Collator and Introduction to HUMINT. All the aforementioned online solutions were developed as prerequisite for the HUMINT COE resident courses.



Furthermore, the HUMINT COE E&T portfolio (6 resident courses as per 2020) added the Tactical Interrogation Course and NATO Advanced Course for HUMINT Operators, courses designed to align HUMINT COE E&T program with HUMINT Department Head (DH) recommendations on the matter.

- HUMINT COE actively employs its Lessons Learned (LL) pillar to ensure an effective identification and integration of lessons learned and best practices within HUMINT COE projects and in support of NATO HUMINT enterprise. As manager of HUMINT LL database on NATO LL Portal, HUMINT COE actively supports sharing, staffing and disseminating Lessons Identified and Best Practices to all NATO HUMINT stakeholders. Moreover, HUMINT COE conducts data collection, analysis and reporting from NATO ongoing operations, NATO Education, Training, Exercises and Evaluation activities, and various HUMINT related events. On request basis, HUMINT COE supports the SHAPE J7's Joint Evaluation activities on NCS/NFS Headquarters in Joint Exercises.
- The NATO HUMINT COE performance as Department Head for the Human area in the Intelligence discipline is oriented towards HUMINT E&T curricula enhancement, faculty development and modern E&T technologies integration. The spectrum of the HUMINT related courses is based on a sound vision that envelops the required knowledge and skills, and training responsibilities shared across the E&T continuum self-national-NATO.

In the area of NATO Human Capital Enhancement, the Centre is enrolled to provide support to the Strategic Leadership Initiative; related to this, the DH office conducts a study on selection activities and professional development in HUMINT.

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INTEGRATED AIR AND MISSILE DEFENCE
CENTRE OF EXCELLENCE
(IAMD COE)

Director's Message

The IAMD COE is an organization, born during the pandemic. No matter the numerous challenges we faced, the IAMD COE managed to successfully overcome all difficulties and became the 27th NATO-accredited COE on the 25th of January 21. Our first Lesson Identified is the need to adapt to current and unexpected emerging challenges. Much like dealing with the pandemic impacts in our daily routine, the evolving IAMD domain demands flexibility in order to achieve cost effective solutions and multinational cooperation, along with the ability to transform our thoughts, our tactics and our methods. The IAMD COE pursues innovation abiding by these ideas.



COL Evangelos TZIKAS

Mission Statement

The mission of the IAMD COE is:

a. To enhance the interoperability and support the development and exploitation of IAMD capabilities of NATO, NATO Nations and Partner Nations, based on modern requirements and a smart defence/multinational solutions mind-set.

b. To provide opportunities for comprehensive research, experimentation, doctrine and concept development, education and training and comprehensive analysis in support of the lessons learned process.

Who We Are / What We Do



The IAMD COE, located in Chania, Greece, was established on 08 April 2020. On 25 January 2021, the North Atlantic Council approved the accreditation of the IAMD COE as a NATO-accredited COE and its activation as a NATO military Body. The IAMD COE, led by a sense of duty and responsibility, focuses its efforts on broadening, to the greatest extent possible, the IAMD related field of knowledge, along with avoiding duplication of effort with similar institutions. This goal will be achieved by IAMD COE's steady presence and participation in relevant training, exercises, conferences, Working Groups and Committees, combined with the development of relationships with other entities (NCS entities, IOs, academia and industry).

Vision

The vision of the Centre is to act as an internationally recognized focal point for knowledge and expertise, which supports NATO transformation and capability development in a cooperative and cost-efficient way, in support of NATO Missions and Tasks, remaining committed to the Alliance's key values and principles.

2021 / 2022

The IAMD COE's efforts in the past year(s) are focused on 4 different branches:



Doctrine & Standardization (D&S) Branch

We held an advisory role in the JCG SBAMD and C-RAM High Visibility Project. Particularly, we contributed to the revision of the Capability Codes and Capability Statements (CC/CS) of the JCG SBAMD and submitted terminology proposals. We participated in the development of Key User Requirements (KUR) of the C-RAM High Visibility Project. We also participated in the revision of the AJP 3.3.5 (Allied Joint Doctrine Airspace Control). We joined the Quick Response Team (QRT), in the

NIAG Study Group 265. Furthermore, the D&S Branch aims to contribute in the revision of ATP-82 (Allied Doctrine for Ground-Based Air Defense) and to the production of the ATP 3.2.1.5 (Conduct of Land Operations in Cold Weather Environment).

Analysis & Lessons Learned (A&LL) Branch

We participated in seminars, conferences and working groups related to the Lessons Learned Community. We submitted the IAMD COE's observations regarding the COVID-19 pandemic, contributing to the development of pandemic related lessons learned. The IAMD COE intends to support NATO Operations by identifying, implementing and sharing Lessons Learned and Best Practices related to the IAMD Domain, through the development of a Community of Interest (COI), under JALLC. The continuous renewing of this database will ensure that its content will meet the Community's requirements and needs.

Education & Training (E&T) Branch



The establishment of the IAMD as a brand new NATO Education & Training (E&T) discipline was approved in early 2021. To fulfil the IAMD Discipline Strategic Training Plan (STP), the IAMD COE E&T Branch's main role is to support the Training Needs Analysis, Training Development and the Training Delivery to NATO and nations. The IAMD COE E&T Branch is involved in both core categories of training identified in NATO:

- Individual – courses, Mobile Training Teams (MTTs), Seminars, Common Education and Training- Programme (CET-P);
- Collective – support to NATO exercises (Ramstein Legacy/Century, Steadfast Alliance, Steadfast Defender, JPOW etc.).



Concept Development & Experimentation (CD&E) Branch

We participated in various CD&E events including seminars, working groups and conferences. We are a permanent member of the NATO C-UAS working group, supporting the Alliance's effort in the development of this new and critical capability. We analyzed the implications of Emerging and Disruptive Technologies in light of integration and interoperability and contributed to the development of the Alliance Future Surveillance and Control Initial Concept of Operations in terms of advice and inputs.

Finally, the CDE branch will support SACT and NATO members in the implementation phase of the NATO Warfighting Capstone Concept and its integration in the NATO Defence Planning Process. Furthermore, we will support the development of the Warfare Development Agenda and the Layered Resilience Concept. At the same time, its dedicated SMEs will continue to support IAMD COE's further involvement in NATO training and exercises implementation.

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JOINT AIR POWER COMPETENCE CENTRE (JAPCC)

Director's Message

The Joint Air Power Competence Centre provides world-class subject matter experts across a wide range of Joint Air & Space mission areas. As they have for the past 16 years, the JAPCC continues to lead NATO in the development of Concepts & Doctrine, Capability Development, Education & Training, Exercise Development & Execution, and Lessons Learned. The oldest accredited Centre of Excellence fuels innovation, delivers high quality products, and is the transformation engine for Air & Space Power.



GEN Jeffrey HARRIGIAN

Mission Statement

The JAPCC, as a team of multinational experts, is to provide key decision-makers effective solutions on Air and Space Power challenges, in order to safeguard NATO and the Nations' interests.



Who We Are / What We Do

NATO Air and Space Power is a major contributor to deterrence. Having access to the best technology is one thing, but NATO's real edge resides in the capability of its people. The ability to prevail in future conflict will be determined by the intellectual component – the ability to out-think any adversary will be decisive. The 'home' of the Intellectual Component for NATO Air and Space Power is the JAPCC – NATO's dedicated Air and Space Warfare Centre.

Rather than focussing purely on force structures, the JAPCC advocates the development of existing capabilities and the generation of new capabilities to support the concepts of force efficiency and force effectiveness.

Vision

Be NATO's catalyst for the improvement and transformation of Joint Air and Space Power, delivering effective solutions through independent thought & analysis.

2021 / 2022

The JAPCC features a variety of experienced Subject Matter Experts (SME) from all the services. With every task, their combined knowledge and experience contributes to transforming NATO Air and Space Power (A&S). They conduct collaborative research by leveraging their independent thoughts and a global network of experts across the military, academic and industrial spheres.

In 2021, besides Journals No.32/33 and many contributions to Exercises and Working Groups, there have been four major topics:



The NATO UNCLASS study of **Big Data Management in ISR and New Technology Trends** focuses on the challenge of understanding the significance of Big Data and managing it, so that NATO can exploit its potential and maintain information dominance. Starting with NATO ISR doctrine and C2 concepts, it offers a perspective of Big Data from which it is possible to better explore and identify the correct algorithms to produce useful intelligence.

This research combines a military approach with academic and scientific studies. The aim is to optimize ISR outcomes by rapidly visualizing the result of the fusion of enormous quantities of data collected by sensors to provide accurate and timely intelligence analysis. Big Data management is also interconnected with other emerging and disruptive technologies like Artificial Intelligence and Machine Learning. Their merging is what will become the real game-

changer in maintaining information superiority in the future.



Our new AD: Air Cdre Paul Herber

From Ground to Exosphere – 15-Years of The Joint Air Power Competence Centre provides an extensive overview of our achievements. This paper explains the NATO MC policy and ACT processes for COEs and describes what an organization must be capable of doing to be accredited by NATO as a COE. It has to contribute to one or more of four lines of transformation (e.g., Lessons Learned, Doctrine and Standardization) on behalf of the Alliance. The JAPCC does not just serve one, but all of them, across the entire spectrum of Joint A&S.

All-Domain Operations in a Combined Environment. The JAPCC has initiated an expansive new project entitled 'NATO Joint All Domain Operations' to emphasize the challenging reality of operating jointly in a combined environment across all domains. 'NATO' gives the combined environment sufficient priority, whereas 'JADO' emphasizes the problem of operating jointly while circumventing the structured ideas of domains, since it includes them all.

JADO is an evolution of the concept of Multi-Domain Operations (MDO). It incorporates the massive potential of a truly integrated force (the focus of MDO) and updates the concept by integrating crucial aspects of how NATO aspires to conduct future operations. Considering the entanglement of systems and interconnected capabilities spanning the domains, one might argue that our traditional structuring of services based on their principle operating domain may not be very useful in many future scenarios. The victor will likely emerge as the force able to manoeuvre easily in and through all domains in a synchronized manner at a speed that the opponent cannot match.

The JAPCC is well-positioned to collaborate, contribute, and help align priorities across the Alliance, enabling a more interoperable and effective all-domain fighting force.

The annual JAPCC conference themed "Delivering NATO Air and Space Power at the Speed of Relevance" attracted senior representatives from across NATO, such as the SACEUR, Gen Wolters, but also those from industry and academia.

If you would like to read more about these and other topics, visit our website where most of our products are available for download.



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JOINT CHEMICAL, BIOLOGICAL, RADIOLOGICAL AND NUCLEAR DEFENCE CENTRE OF EXCELLENCE (JCBRN DEFENCE COE)

Director's Message

The JCBRN Defence COE celebrated its 15-year anniversary on 26 October 2021. The Centre is and will continue to be the centre of gravity for CBRN defence-related expertise, experience and transformation within the Alliance without duplicating or competing with already existing NATO capabilities. This past year was productive even with the continued COVID-19 pandemic situation culminating with the successful ACT 3-year periodic assessment and 6-year quality assurance re-accreditation. In the upcoming year, the Centre will continue to strive:
-to be a NATO strategic CBRN defence "think-tank";
-to be a driver of CBRN defence-related analysis, insight and innovation;
-to be a focal point for CBRN defence-related outreach and cooperation;
-for continual improvement.


COL David MARTÍNEK

Mission Statement

The Centre provides advice in all CBRN defence-related areas; develops CBRN defence doctrines, standards and knowledge to support the improvement of interoperability and capabilities; provides opportunities to enhance education and training; contributes to the lessons learned processes; and within an approved Programme of Work, assists NATO, Sponsoring Nations and Partners in their CBRN defence related efforts including validation through experimentation and operational (technical and scientific CBRN Reachback) support.

Who We Are / What We Do

The Centre combines skills and expertise from more than 70 personnel from fourteen nations in the areas of CBRN concept and doctrine, capabilities development, defence planning, experimentation, training, exercises, education, lessons learned, reachback, modelling & simulation and operations support; acts as NATO Department Head for WMD/CBRN defence training and education; and acts as European Union Military Training Discipline Leader for WMD/CBRN. The Centre also forms the core of the NATO CBRN reachback capability providing timely, coordinated, authoritative and detailed technical and scientific support. Particularly, the Centre provides advice on CBRN hazards and defensive countermeasures, drawing upon remote expert sources of information. The Centre is also expanding outreach efforts beyond a purely military focus to civil-military, European Union, other international organizations, academia, industry cooperation and developing its Internship programme.

Vision

The JCBRN Defence COE leads institutional and operational efforts to support NATO capability development, mission effectiveness, and interoperability. Through the approved Programme of Work (POW), the JCBRN Defence COE strives to promote adaptive and innovative methods for preventing proliferation of Weapons of Mass Destruction (WMD) and protecting against CBRN incidents.



2021 / 2022

2021

- Organized annual JCBRN Defence COE conference focusing on CBRN defence resilience in light of NATO 2030 initiative and cooperation with the EU;
- Supported JCBRND-CDG and working panels including providing Chair of Doctrine and Terminology Panel and Training and Exercise Panel, and Joint Programme of Work custodian;
- Supported NATO review of 2009 Comprehensive, Strategic - Level Policy for Preventing the Proliferation of WMD and defending against CBRN threats;
- Continued and enhanced outreach, focusing support to Joint Declaration on EU – NATO cooperation including DG HOME CERIS, DG ECHO and FPI EU CBRN Risk Mitigation COE Initiative activities, and other CBRN events such as NCT Europe and CBRNe Summit Europe;
- Supported NATO CBRN defence doctrine and terminology development, and provided custodian for AJP-3.8 (Allied Joint Doctrine for Comprehensive CBRN Defence);
- Supported comprehensive civil-military CBRN capabilities discovery experiment;
- Acted as Department Head for NATO WMD/CBRND Education and Training (E&T) Discipline;

- Acted as EU military training Discipline Leader for WMD/CBRN;
- Supported NATO TRIDENT series exercises and multinational CBRN exercises;
- Supported lessons learned process in CBRN defence domain;
- Conducted JCBRN Defence COE courses, and hosted CBRN-Joint Assessment Team (JAT) Study Period;
- Conducted Kuwaiti Mobile CBRN Consequence Management (CM) course, and EU eNOTICE Joint Activity in conjunction with the Centre's CBRN CM course;
- Provided CBRN reachback, modelling and simulation, and completed the reachback enhancement project;
- Supported development of CBRN Reachback CONOPS;
- Conducted ACT 3-year periodic assessment and 6-year quality assurance re-accreditation;
- Completed the strategic gap analysis as a part of Centre's 15-year anniversary

2022

- Organize annual JCBRN Defence COE conference focusing on NATO 2030 Vision;
- Support JCBRND-CDG and working panels including providing Chair of Doctrine and Terminology Panel and Training and Exercise Panel, and Joint Programme of Work custodian;
- Support NATO ACDC revision of 2009 Comprehensive, Strategic - Level Policy for Preventing the Proliferation of WMD and defending against CBRN threats;
- Continue and enhance CBRN defence outreach, cross-functional efforts and community of interest outreach, focusing support to Joint Declaration on EU – NATO cooperation;
- Support doctrine and terminology development, and provide custodian for AJP-3.8 (Allied Joint Doctrine for Comprehensive CBRN Defence);
- Contribute to revision of CBRN defence requirements, concept development, planning documents and tactical procedures;
- Act as NATO Department Head for WMD/CBRN defence;
- Act as EU military training Discipline Leader for WMD/CBRN;
- Enhance e-learning to include advanced distributed learning (ADL);
- Support NATO TRIDENT series exercises, multinational CBRN exercises, and CLEAN CARE 2022 exercise;
- Conduct JCBRN Defence COE courses, and host CBRN-Joint Assessment Team (JAT) Study Period;
- Provide Qatari CBRN defence training in preparation for FIFA World Cup 2022;
- Provide NATO with CBRN reachback, modelling, simulation and operations planning support;
- Implement updated CBRN reachback CONOPS, when approved;
- Assess CBRN reachback enhancements during STEADFAST JUPITER 2022;
- Implement strategic gap analysis findings;
- Completion of the security enhancement project;
- Replacement of PC workstations with laptops and docking stations as part of remote and mobile office solution enhancement;
- Conduct JCBRN Defence COE courses.



Scan QR code to see JCBRN Defence COE Courses in 2022.

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MARITIME, GEOSPATIAL, METEOROLOGICAL AND OCEANOGRAPHIC CENTRE OF EXCELLENCE (MGEOMETOC COE)

Director's Message

The MGEOMETOC COE combines multiple knowledge to enhance environmental awareness and to improve operational effectiveness of the Alliance, Allied Nations and Partners. In 2021, the MGEOMETOC COE completed its accreditation as a NATO-affiliated entity. I am confident in the ability of the COE's team to consolidate our activities and projects to fully support the efforts of transformation of Maritime GEOMETOC in NATO and to aid the Sponsoring Nations. Furthermore, during 2022, we will continue the networking with the international community, with the aim of expanding the cooperation with other Allied Nations, Partner Nations and other Partners.



CAPT Fernando ARTILHEIRO

Mission Statement

The MGEOMETOC COE mission is to enhance the transformation efforts in the field of Maritime GEOMETOC to the benefit of the Alliance.



Who We Are / What We Do

The MGEOMETOC COE is an independent multinational entity, established on the 10th of September 2020, with the signature of the Operational Memorandum of Understanding by the four Sponsoring Nations, Portugal, Romania, Spain, and Turkey. After a rigorous process, on the 26th of August 2021, the MGEOMETOC COE was conferred with the NATO Accreditation and the activation as NATO Military Body by the North Atlantic Council. The MGEOMETOC COE is based on the knowledge and experience of the Portuguese Hydrographic Institute, recognized by its work of excellence and experience in ocean research over 60 years, observation, modelling and forecasting, mainly in geospatial information, meteorology and oceanography.

Our goals are to enable close cooperation between NATO and International Organisations within the agreed frameworks, in the development of an international collaborative partnership approach to transform Maritime Operations GEOMETOC Support capabilities and to foster continuous self-development of the NATO MARITIME GEOMETOC COE by conducting results-oriented research, studies, experiments, analysis, education and training, as well as by applying lessons learned and best practices.

Vision

The MGEOMETOC COE vision is to be an internationally recognized hub of expertise, working to expand the capabilities in the field of Maritime GEOMETOC.

2021 / 2022

Education and Training

- REP(MUS) 2022

Participate in the REP(MUS) 2022 exercise to offer experimental opportunities to Allied Nations and Partners (industry and academia) to the development of new GEOMETOC technological solutions.

- DYNAMIC MESSENGER 2022

Participate in the Dynamic Messenger 2022 exercise supporting HQ MARCOM to test, exercise and experiment the use of unmanned systems (all domains) in Maritime Operations. The exercise will support the development and improvement of concepts, procedures and tactics for the use of Maritime Unmanned Systems in crucial capability areas in the maritime domain such as MSO, ASW, Amphibious Ops, MCM, Harbour Protection and Force Protection.

- SMEs TO EDUCATION & TRAINING

Support HQ SACT to deliver the NATO GEOSPATIAL Orientation Course (2 editions).

Support HQ SACT to deliver the NATO METOC Orientation Course (1 edition).



Analysis and Lessons Learned

- METOC LESSONS LEARNED COI

Partnership with JALLC to create and coordinate the METOC Lessons Learned Community of Interest (METOC LL COI).

- Support NATO Covid 19 LL campaign (2022)

Support ACT efforts concerning the NATO Covid-19 Lessons Learned Campaign (2022).



- NATO Lessons Learned Conference (NLLC) 2022

MGEOMETOC COE LL POC Support to NLLC 2022.

- ACT Lessons Learned SPRING & FALL week 2022

MGEOMETOC COE LL POC Support to HQ SACT LL SPRING & FALL WEEK 2022.

Concept Development and Experimentation

- NCOP GEOMETOC WEB-SERVICES

Support STRIKFORNATO to implement, within the NATO IMETOC principle, the capability to use of GEOMETOC information web services, to build an operational Recognized Environmental Picture (REP) in the NATO COMMON OPERATIONAL PICTURE software (NCOP).

- FUTURE REA UNMANNED SYSTEMS

Analyse currently available Unmanned Systems, within allied nation's military and industry communities, to address Rapid Environmental Assessment (REA) operations. Explore R&D and exercise opportunities to develop with industry and academia concept demonstrators of future REA Allied capabilities.

- OPERATIONAL OCEAN FORECAST CATALOGUE

Collaborate with HQ SACT and HQ MARCOM to investigate new maritime tactical decisions aid tools, products, and services.

- OPERATIONAL UNDERWATER ACOUSTIC MODEL

Collaborate with HQ SACT and HQ MARCOM to investigate new maritime tactical decisions aid tools, products, and services.

- LONG TERM MILITARY TRANSFORMATION

Participate in the Foresight Perspectives Paper Development and Review – Black Sea.

- JOINT CONCEPT FOR OPERATIONS IN COLD WEATHER ENVIRONMENTS

Collaborate with Cold Weather Operations COE in the development to the Joint Concept for operations in Cold Weather Environments.

- LAYERED RESILIENCE CONCEPT (NWCC deliverable)

Collaborate with HQ SACT in the Layered Resilience Concept under the NWCC's Warfare Development Imperative for Layered Resilience.

Doctrine Development and Standards

- NetCDF NATO STANDARD

Study, design and propose the NetCDF format as a standard for transfer and storage of GEOMETOC information, ensuring interoperability under the IMETOC principle, accommodating both the METOC and Geospatial Communities.

- OCEAN CLIMATOLOGY DATABASE EVALUATION

Study and evaluate the relevance and strategic value of the present NATO Oceanographic Climatology Database (OCD) and propose, if feasible, the transformation of its custody from UK to MGEOMETOC COE. Propose a strategy to update the NATO OCD in order to be an added value for the use by NCS.

- ATP 32.1.5 - Conduct of Land Operations in Cold Weather Environments

Support Cold Weather Operations COE to the production of ATP 3.2.1.5.

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MARITIME SECURITY CENTRE OF EXCELLENCE (MARSEC COE)

Director's Message

The maritime domain is uniquely vulnerable to exploitation because of its vast expanse, ease of access, and jurisdictional gaps. Maritime Security issues are persistent and refuse to disappear, especially those affecting the movement of goods and people on the world's oceans. Countering trans-national crimes requires coordinated diplomatic, law enforcement, information sharing, military, safety, security, and economic efforts as well as multinational cooperation and public-private partnerships. Maritime Security Operations (MSO) 7 tasks are the backbone of the Military Contribution to Maritime Security; Support Maritime Situational Awareness (MSA), Support Maritime Counter-Terrorism (MCT), Contribute to Maritime Security Capacity Building (MSCB), Uphold Freedom of Navigation (FoN), Maritime Interdiction Operations (MIO), Fight Proliferation of Weapons of Mass Destruction and Protect Critical Infrastructure which are the centre of gravity for MARSEC COE Activities. Moreover, NATO MARSEC COE is ready to work with the Global Maritime Community of Interest (GMCOI).



CAPT Sümer KAYSER

Mission Statement

The mission of the NATO Maritime Security Centre of Excellence (MARSEC COE) is to expand the capabilities of NATO and Partner Nations by providing comprehensive, innovative, and timely expertise in the field of Maritime Security Operations (MSO).

Who We Are / What We Do



MARSEC COE is a dynamic and well-connected Centre of Excellence based in İstanbul/Türkiye. Its strategic location amongst NRDC-TUR, National Defence University Campus and co-location with Multinational Joint Warfare Center and MARCOM OSG SOCCE creates an intellectual and synergetic environment.

Strictly faithful to our motto "Working Together for Maritime Security", we are a multidisciplinary and interagency oriented organisation focusing on maritime security. We therefore reach out to other relevant institutions and actively link up with specialists from the military, academia, industry, and politics. You are more than welcome to bring in your expertise and join this unique global network tailored to our scope of work.

Vision

NATO MARSEC COE is to become an internationally well recognized focal point as well as comprehensive expertise and knowledge provider in the area of Maritime Security, thus expanding capabilities of NATO and Partner Nations.

2021 / 2022

- The COVID-19 pandemic crisis affected the 2021 MARSEC COE Programme of Work. MARSEC COE conducted its courses virtually in the first 5 months, however started to execute residential (with in-person participation) in the second half of the year.
- MARSEC Conference-21 and Official Inauguration Ceremony in June 2021 were the preliminary diamond and in person participation events. NSD-HUB Director's in person participation to MARSEC Conference-21 gives us a clear road map to organise our future events for African Union Countries. HUMINT COE Director's visit to MARSEC COE gives both COE to conduct joint activates in the future. Another Diamond Event





Black Sea Maritime Security Conference conducted with the participation of Türkiye, Romania, Bulgaria, Ukraine, Georgia.

- In this regard, MARSEC COE developed Projects and participated in activities in the context of COE Pillars:
- Education and Training
- NCAGS Course
- Counter Proliferation of WMD in MSO Course
- ISPS Course
- MSA Course
- Maritime Operational Awareness for Joint Operations Course
- Irregular Migration Course
- EXER MARSEC 21 EXPEC/IPC/MPC/FCC/MEL/MIL WS
- EXER MARSEC-21
- Analysis and Lessons Learned
- Maritime COEs' Lessons and Observations Analysis Forum
- Concept Development and Experimentation
- Concept Development of "Cyber Intelligence in MSO" and "Unmanned Systems in MSO" experimentation plan and objectives plan
- Doctrine Development and Standards
- NATO MSO Doctrine Development Plan



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MILITARY ENGINEERING CENTRE OF EXCELLENCE (MILENG COE)

Director's Message

The MILENG COE is the principle interlocutor and facilitator for Military Engineering interoperability within NATO. The COE is the main hub for information exchange between NATO and partner nations engineers and forms the principle conduit for face to face interaction from OR-6 to OF-6 level. We are dedicated to enhancing interoperability through standardisation, to deliver the required effects to the benefit of NATO. The organisation has been in existence since 1977, initially as the Euro NATO Training Engineering Centre (ENTEC) and since 2009 as the Military Engineering Centre of Excellence. We are based in Ingolstadt Germany and collocated with the German Military's Engineer Training Centre. Germany is the host nation, with 16 other sponsoring nations.



COL Thorsten LUDWIG



Mission Statement

MILENG COE provides a significant contribution with joint combined subject matter expertise to the various aspects of military engineering. This includes concepts, materiel, doctrine and capability development, education and training and the lessons learned process in order to support NATO's military transformation, the participants and other partners. Thus, enhancing the Alliance's military engineering capability and interoperability in order to improve the effectiveness of military engineering support to NATO's missions.

Who We Are / What We Do

The Military Engineering Centre of Excellence facilitates interoperability and standardisation within NATO's Military Engineering community. We achieve this via:

- Being the focus for NATO MILENG Doctrine development and assisting NATO in Concept and Policy development;
- Providing a hub for MILENG information and lessons exchange;
- Coordinating multi-national MILENG projects and experimentation on behalf of NATO;
- Delivering individual MILENG interoperability training to NATO staff and nations;
- Facilitating MILENG engagement within NATO.

The MILENG COE is the Department Head for MILENG Training and Education within NATO and is also a NATO Accredited Education and Training Facility. It also has a leading role as the workingbody for the NATO MILENG Working Group. The MILENG COE acts as custodian of Military Engineering related policies and doctrine, and provides essential SME support to staff ACT, ACO, NATO-HQ's, nations and numerous Standardisation Working Groups in regards with Military Engineering.

Vision

The Military Engineer Centre of Excellence is to sustain and improve on its already excellent reputation amongst NATO's military engineer community and beyond. Innovation is to be at the heart of everything we do. 'Continuous improvement' must be seen as normal business.

Our training should be at the cutting edge meeting the exacting requirements of our customers. In doing so I would expect our already strong course attendance rate to improve to 90% and beyond. We need to be seen as the first port of call for all NATO engineering interoperability RFIs. In addition, we must ensure that this information hub extends to our industry and academic partners.

I want to see the MILENG COE grow beyond its already impressive 17 sponsoring nations to eventually have representation from all those NATO nations that have Military Engineer Capability and principle partner nations.



2021 / 2022



Despite the impact of COVID 19, the MILENG COE has been able to maintain the majority of its outputs. Looking forward into 2022, our aim is to run as normal a training programme as possible whilst continuing to facilitate NATO MILENG meetings and conferences. The following major activities are planned for this period:

Training:

A full review has been conducted of our ADL courses in the first half of the year and a trial bridge assessment course will be conducted during the second half of 2021 to refine our training to deliver the outputs of the NATO Bridge Assessment Project. Details of our training courses can be found at the following link:

http://milengcoe.org/course/Pages/default.aspx

Course curriculum 2022

COURSE	DATE 1	DATE 2
MILENG Multinational Basic Course (MEMBC)	21 – 25 Feb	28 Nov – 02 Dec
MILENG Multinational Advisory Course (MEMAC)	21 – 25 Mar	10 – 14 Oct
NATO Tactical MILENG Course (NTMEC)	02 – 06 May	21 – 25 Nov
NATO Operational MILENG Course (NOMEC)	07 – 11 Mar	26 – 30 Sep
NATO Infrastructure In Support of Planning Course (NIASPC)	20 – 24 Jun	/
NATO Military Environmental Protection, Practices and Procedures Course (NMEPPPC)	25 – 29 Apr	/
Bridge Assessment Course (BAC)	16 – 20 May	24 – 28 Oct

NATO Event Facilitation:

EVENT	LOCATION	DATE
MILENG Information Exchange Seminar and Industry Day 2021	Ingolstadt, Germany	07-09 Dec 2021
21st Military Engineering Working Group	Ingolstadt, Germany	17-21 Jan 2022
22nd Military Engineering Working Group	Loutraki, Greece	13-17 Jun 2022
NATO Senior Joint Engineer Conference (NSJEC) 2022	Warsaw, Poland	19-20 Oct 2022
MILENG Information Exchange Seminar and Industry Day 2022	Ingolstadt, Germany	06-08 Dec 2022

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NATO MILITARY MEDICINE
CENTRE OF EXCELLENCE
(NATO MILMED COE)

Director's Message

The Centre of Excellence for Military Medicine (MILMED COE) is a multinationally sponsored entity, which offers recognised expertise and experience to the benefit of the Alliance, especially in support of transformation as part of NATO Command Arrangements. MILMED COE is recognized in NATO as a knowledge hub by providing military medical training, force health support, interoperability gaps elimination and lessons learned process.



BG Dr. Dirk-Friedrich KLAGGES, MD

Mission Statement

- The mission of the NATO MILMED COE is to support and assist the Strategic Commands, other NATO bodies, nations and other civil and military organizations by supporting the transformation of the Alliance and thereby improving medical support to operations and to provide subject matter expertise in the following areas:
- Medical training, exercises and evaluation leading to certification;
- Medical Lessons Learned;
- Standards development and custodianship;
- Deployment-related health surveillance.

Who We Are / What We Do

NATO MILMED COE is a hub of military medical knowledge, building a reliably accessible Community of Interest within its areas of expertise. MILMED COE is an essential part of NATO's transformation efforts by being a medical knowledge centre to the benefit of the entire Alliance. NATO MILMED COE, as a knowledge centre, remains an open institution that links military and civilian medicine together by collecting up-to-date medical knowledge and expertise from both communities, continuing to cooperate with the widest possible range of partners. NATO MILMED COE develops and implements projects to empower superior and effective medical support services across NATO, during missions abroad and in their home countries. NATO MILMED COE unites highly experienced medical professionals and it is composed of 5 branches: Support, Training, Lessons Learned and Innovation, Interoperability, Force Health Protection (FHP) Branch – a satellite branch located in a country other than the Framework Nation.



Vision

Further development of NATO medical support by innovation, experience, creating and sharing best practices. NATO MILMED COE aims to remain a hub of military medical expertise and a focal point of knowledge, providing invaluable training, education and deployment health surveillance capabilities, lessons learned databases and concept development support.

2021 / 2022

The NATO MILMED COE adapted well to the situation the COVID-19 pandemic presented, even if a considerable number of events and courses had to be cancelled or



postponed at the beginning, the COE used its robust, cloud-based IT systems to move a great portion of its activities to the online realm. In this vein, we place great emphasis on the implementation of online courses, conferences and meetings which makes it significantly easier for participants and applicants to participate, but still provides the same professional content as our live events. In the spring of 2022, the also postponed Vigorous Warrior exercise will take place, which will be held in the form of a Table-Top Exercise, and as a run-up to the live exercise iteration in 2023 in Italy.

We continue to be at the forefront of NATO's efforts against the pandemic, by having built up a community of subject matter experts involved in each nation's own response, and we organize regular meetings and provide an information-sharing portal for this community as well. We are also running the pilot for the COE-developed Near-Real-Time Surveillance Project, which is an electronic tool to provide early warnings for epidemiological or biological threats.

We are also actively collecting the observations and national Lessons of the pandemic and we are exploring practical solutions for collecting national observations in their native language assisted by machine-translation tools.

We remain a medical information HUB via our website, maintaining the medical STANAG Searching Tool, the Medical Messenger portal and multiple topical portals under our Medical Information Knowledge Management Portal on our Extranet.



NATO MILMED COE therefore remains an active and innovative Centre of Excellence which used the time during the first waves of the pandemic to develop tools and capabilities which function irrespective of the pandemic situation and also help in the Alliance's efforts against the pandemic. We remain NATO's open door for everything medical, and we invite you to explore more about us at

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NATO MILITARY POLICE
CENTRE OF EXCELLENCE
(NATO MP COE)

Director's Message

The NATO-accredited MP COE is a unique NATO Military Body which provides complex and effective work on all Military Police (MP) aspects across the full spectrum of NATO operations. With the armed forces as well as civilian organisations heavily engaged throughout the world, the need to prepare efficient military police officers and non-commissioned officers for multinational cooperation is becoming increasingly important. Therefore, the Centre not only offers a variety of MP-related courses and events to comply with those requirements but also prepares high quality products and provides additional opportunity to enrich knowledge of the worldwide MP Community of Interest (COI).



COL Mirosław ŁABĘCKI

Mission Statement

The NATO-accredited Military Police Centre of Excellence enhances capabilities of NATO MP, fosters interoperability, and provides subject matter expertise on MP activities in accordance with the Alliance's Strategic Concept.

Who We Are / What We Do

The MP COE is an international military organisation which develops and delivers subject matter expertise. In cooperation with other military and civil actors the Centre supports further transition and development of MP standards and capabilities in order to facilitate cooperation and interoperability of NATO nations, and their military police and gendarmeries in their role in the development of future capability in accordance with the NATO Strategic Concept across the full spectrum of operations.



The Centre focuses on but does not limit its activities to the cooperative facets of MP in support of the NATO Strategic Concept, and current or future operations in the following core areas:

- Doctrine, Concept Development and Experimentation;
- Education and Training;
- Research and Development;
- Analysis and Lessons Learned;
- Consultation.

Vision

As a Military Police think tank and motor for innovation, we build bridges between nations, organisations and institutions for further evolution of MP standards and capabilities to support cooperation and interoperability of NATO and partners.

2021 / 2022

Despite the constraints of COVID-19, the Centre was able to build on the experience of 2020 and continued to provide an adapted and streamlined support to the MP COI. In addition, the Centre took the opportunity to explore capabilities through online training in order to incorporate these insights into future projects in a post-COVID-19 world.

Among the variety of activities, the branches of the NATO MP COE carried out a number of courses and workshops, as well as organised conferences and delivered several studies/handbooks.

The Lessons Learned (LL) Branch, inter alia, has initiated and conducted



the project "Military Police Lessons Learned Research regarding COVID-19 Pandemic". This large-scale collection had gathered MP-related lessons, which were analysed and the results were distributed among the stakeholders of the LL COI. In 2021, the Centre organised training on the NATO LL Process and conducted workshops on Blended Learning Solutions as well as dedicated to the Military Police/Gendarmerie-type forces (MP/GTF) effort in training the police force in operations in order to provide subject matter expertise alongside academic environment and MP/GTF COI accordingly.

Then, the adverse circumstances forced the Education and Training Branch to continue all of its residential courses in an online mode. Additionally, NATO MP COE ADL (Advanced Distributed Learning) courses are available and highly appreciated. In addition to that, the Centre took the opportunity to expand training offer with a newly developed ADL course regarding Treatment and Handling of Captured Persons. Moreover, some members of the staff are heavily engaged in the Global Programming as part of the Department Head for Military Policing Discipline.

The Standardization and Transformation Branch continued support of the MP COI by reviewing and commenting on NATO doctrinal documents. The Branch prioritised the ATP 3.7.2 - MP Guidance and Procedures revision, contribution to the NATO Warfighting Capstone Concept and support of the Ukrainian Military Police Doctrine development. Besides that, its personnel supported provost marshals from different NATO structures in doctrinal issues and by organising the Provost Marshal Forum.



In 2022, the NATO MP COE is not going to slow down the pace and in addition to the previous offer, the Centre's staff will provide the MP COI with the latest event - MP Crime Investigation Forum. The event addresses another specific group of experts within the MP/GTF COI and is intended to deliver another platform for the exchange of information and expertise.

To sum up, the NATO MP COE has planned the following core events for 2022:

- NATO Military Police Lessons Learned Staff Officer Course;
- NATO Military Police Senior Officer Course;
- NATO Military Police Senior Non-Commissioned Officer Course;
- NATO Military Police Junior Officer Course;
- NATO Military Police Cyber Crime Investigation Course;
- NATO Military Policing Annual Discipline Conference;
- Annual MP Lessons Learned Conference;
- Provost Marshal Forum;
- MP Close Protection Forum;
- MP Crime Investigation Forum;
- MP Lessons Learned Workshop/Forum/Webinar.

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NATO MODELLING AND SIMULATION CENTRE OF EXCELLENCE (NATO M&S COE)

Director's Message

The NATO M&S COE is an international source of expertise with modelling and simulation and a catalyst for transformation, connecting NATO, government, academia, industry, and operational/training entities. The NATO M&S COE improves NATO and national M&S professionals through education and training; promotes cooperation and sharing between Nations and organizations; and contributes to the development of new M&S concepts and standards.



COL Michele TURI



Mission Statement

To support NATO, its Nations and Partner Nations by providing leadership, subject matter expertise, and technological capability in all aspects of M&S activities.

Who We Are / What We Do

An organization of experienced military leaders and "digital generation" talents from 4 NATO Nations, representing all domains with expertise in both combat and combat support roles, and in the application of modelling and simulations in support of military activities.

Vision

To contribute to NATO Transformation by enhancing operational effectiveness and resource management.

2021 / 2022

Major Products and Activities for 2021

EXPERIMENTATION AND RESEARCH

- Cloud-based simulation – further developed M&S as a Service (MSaaS) concept
- Concept Development activities
- Consolidation of the WISDOM (Wargame Interactive Scenario Digital Overlay Model) platform and completion of open source migration
- Research and Development activities on innovative and disruptive M&S technology
- Research and developments for Unmanned Autonomous multidomain Systems (UAxS) and support to Robotic Autonomous Systems (RAS) CD&E activities.

OPERATIONAL SUPPORT

- Wargaming, Decision Support and Analysis activities
- Establish an interoperability verification and certification process for NATO M&S
- Start to build up AI competences for future decision making support activities
- Support to NMSG Research and Experimentation activities



EVENTS AND EDUCATION TO PROFFESSIONALIZE NATO M&S

- NATO CA2X2 Forum 2021 – led NATO's annual M&S event for Military, Academia and Industry experts from more than 30 nations
- MESAS 2021 - led the annual conference to promote better use of M&S for autonomous systems in tomorrow's operating environment
- Provided M&S Courses from the beginner to advanced levels to over 100 participants from different Nations

Major Products and Activities for 2022

EXPERIMENTATION AND RESEARCH

- Use of M&S as key technology to implement "disruptive emerging technologies"
- Research and developments in support of the ACT Autonomy Programme and M&S for Robotics
- Modelling and Simulation as a Service (MSaaS). Development, experimentation and delivery of a Cloud-based platform (OCEAN)
- Support with M&S tools and Subject Matter Expertise for RAS, Synthetic Environment Concept Development, and Experimentation activities.
- Participation to NATO, international and national exercises to experiment the implementation of innovative M&S tools and services

OPERATIONAL SUPPORT

- Establish the interoperability verification and certification process for NATO M&S
- Use of WISDOM platform for NATO Exercises
- Support to the NATO's Audacious Wargaming Capability development team
- Support NMSG research, experimentation and demonstration activities

EVENTS AND EDUCATION TO PROFFESSIONALIZE NATO M&S

- Provide current M&S Courses
- Expand our course catalogue with NATO CAW (Computer Assisted Wargaming) Specialist Certification course
- Lead, Manage and Host Conferences, Workshops and Fora, including:

  - NATO CA2X2 Forum 2022 (Computer Assisted Analyses, eXercises and eXperimentation)

  - MESAS 2022 (Modeling and Simulation for Autonomous Systems)
- Participate in M&S related professional fora to share and maintain knowledge of current technology, enhance partnerships, and promote the NATO M&S COE



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NATO MOUNTAIN WARFARE CENTRE OF EXCELLENCE (NATO MW COE)

Director's Message

The NATO MW COE is an independent military organization, which can contribute to strengthening the resilience of the Alliance. As such it is paramount that the Centre is recognized as a leading institution in the area of Mountain Warfare. The Centre's basic task is to provide doctrinal documents such as standards, manuals and training activities, which are necessary to enable the establishment of Mountain Warfare capabilities at Alliance level. It is crucial that Member States recognize the NATO MW COE as an institution whose success can contribute to the achievement of the common goal, and that the knowledge acquired in the Centre can be used in a broader environment.

Over the past period, the Covid-19 pandemic has posed numerous challenges to the Centre and its ongoing work. In order to maintain the COE's efficiency and to continue to run its main projects, it was necessary to quickly adapt to the new situation by means of digitalization. This rapid adaptation has allowed us to prepare the 0.9 version of the NATO Mountain Warfare Concept, which was completed as a common project of the NATO MW COE and its Community of Interest.



COL Borut FLAJŠMAN

Mission Statement



The mission of the NATO MW COE is to assist NATO member countries, partners, other countries and international organizations to enhance mountain warfare capabilities through the following core areas:

- Development of mountain warfare-specific doctrine and tactics;
- Concept development and experimentation;
- Mountain warfare lessons learned process;
- Education and training.

Who We Are / What We Do

The NATO MW COE is a multi-nationally sponsored entity which offers recognized expertise and experience to the benefit of the Alliance, especially in support of its transformation endeavours. One mandatory purpose of the NATO MW COE is to provide tangible improvement in NATO's capabilities, thereby adding value.

It incorporates a professional core that ensures and develops the subject matter expertise to meet the requirements of mountain warfare challenges. This enhances the ability of individuals and military units to engage in mountain warfare, as well as the Alliance's readiness to operate in the mountain environment.

Vision

The vision of the NATO MW COE is to be the hub for mountain warfare expertise in the NATO community.

2021 / 2022

Doctrine and standardization:

2021

- Finalizing Study Draft of ATP 3.2.1.3 (Conduct of Land operations in Mountainous Terrain) as custodian;
- Starting Revision of ATrainP-6 (Mountain Warfare Education and Training) as custodian;
- Conducting the 3rd NATO Mountain Warfare Congress, presenting state-of-the-art Personnel Recovery in Mountainous Terrain to the community of interest at a level of excellence.





Main effort 2022:

- Complete Final Draft and Ratification Draft of ATP 3.2.1.3 and accompany the ratification process.

Concept Development & Experimentation:

Core Tasks:

- Conducting research and experiments and proposing solutions on the basis of these activities;
- Cooperation with the relevant internal and external entities.

2021:

- The Mountain Warfare Concept 0.9 (Refinement &Validation phase);
- Computer-Aided Exercise with the Modelling and Simulation COE from Rome, Italy and with the SVN Armed Forces simulation centre (related to the MW Concept);
- External cooperation with civilian companies;
- Battle Dress Uniform for Mountain Warfare – research kick-off.

2022:

- Updating and presenting the NATO MW Concept 0.9 within the NATO Community;
- Cavalry support to MW Ops (Pre-Initiation Phase as a new project);
- Vertical Manoeuvre in the Mountain Environment (Pre-Initiation Phase);
- Cooperation with the CWO COE (custodian) in order to develop the Concept of Cold Weather Operation;
- Battle Dress Uniform for Mountain Warfare – determine a prototype.

Education and Training:

2021:

- MW Small Units Leader Courses (MW SULC) in summer and winter conditions were conducted as a residential course in the NATO MW COE and as a METT course in Poland;
- We successfully conducted a pilot course: MW Staff Officer Course;
- Two e-learning courses were developed (https://e-learning.mwcoe.org/). Both are available on our platform, namely Basic Mountain Environment Characteristics and Combat Functions in Mountain Warfare.

2022: We plan (https://www.mwcoe.org/education-and-training/et-catalog/):

- Small Units Leader Courses (winter/summer and METT);
- Staff Officer Course;
- Active participation in MW exercises in several countries, and
- Executing the Movement in Mountain Operations seminar in Romania.

Lessons Learned:

In 2021, the fourth pillar, the Lessons Learned Branch, was established in the MW COE. Our mission is to become a hub for the MW Lessons Learned Community of Interest. Our focus in the near future will be on the Lessons Learned portal (https://www.mwcoe.org/lessons-learned-portal/introduction-lessons-learned/), where we want to gather personnel who are dealing with the LL process in mountain warfare related units.

One of the first activities was the Lessons Learned Workshop which was organized in November 2021 in Bled, Slovenia, with the support of the NATO Joint Analysis Lessons Learned Centre (JALLC). The aim of the WS was to educate and familiarize our COI with the LL process.

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NATO NAVAL MINE WARFARE
CENTRE OF EXCELLENCE
(NATO NMW COE)

Director's Message

Naval Mine Warfare is as relevant as ever. Modern sea mines are becoming more and more complex and sophisticated. At the same time, the threat of maritime improvised explosive devices has to be taken into account. Meanwhile, the Allies sea mining capabilities receive limited attention.
The present generation of mine countermeasure vessels will be replaced over the course of the next 10 to 15 years. Implementing the use of new innovative technologies, these capabilities will differ significantly from the current means and will include remote controlled or autonomous vehicles, and other revolutionary systems to be deployed.
These new capabilities require new doctrine and tactics, planning and evaluation algorithms, tools, and education and training of personnel. The NATO Naval Mine Warfare Centre of Excellence aims to guide and support the development of all that which is essential to take NATO's Naval Mine Warfare capabilities into the next era.


CDR Herman LAMMERS

Mission Statement

To assist NATO, Nations, Partners and other bodies by supporting the NATO transformation and operational efforts; NATO's capability development process; mission effectiveness and interoperability by providing comprehensive expertise on Naval Mine Warfare.





Who We Are / What We Do

NMW has some specific characteristics that makes it an atypical warfare area, very different from the other warfare's. The two main reasons for this are the operating environment and the characteristics of the threat.

Even in modern ages, sea mines remain a threat for naval warfare. Their impact is exponential in comparison to the minelaying effort, reaching far more targets then only military.

The NATO NMW COE emerged from the Belgian-Netherlands Naval Mine Warfare School EGUERMIN, which has been recognised and respected by many NATO countries as an institution in the field of NMW since the mid-1960s.

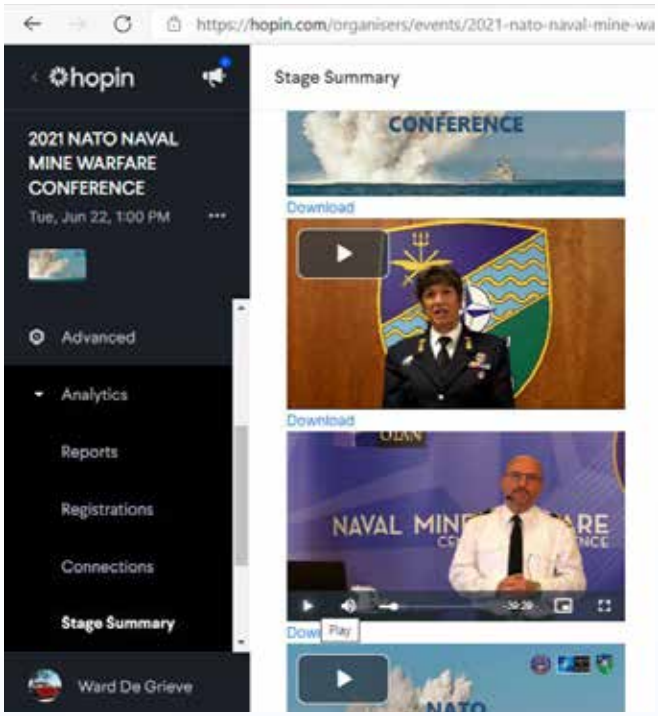
The NATO NMW COE is not only based on experiences, but is at the forefront of the developments in the NMW domain. Our focus is on Concept Development and Experimentation, Doctrine and Standardisation, Lessons Learned and Analysis and finally Education and Training.

Vision

The NATO Naval Mine Warfare Centre of Excellence is the recognised hub of knowledge and expertise in Naval Mine Warfare for NATO, Allied and Partner nations and their associated research institutes in support of NATO transformation.

2021 / 2022

The COVID-19 again disrupted our activities in 2021, but luckily less than the year before. Virtual conferences and meetings have become part of our daily lives, and are the first way to interact with each other nowadays. The 2021 BI-SC NATO Naval Mine Warfare Conference was a perfect example of this new way of interacting with each other. Despite some limitations the NMW COE continued to:



- Support and augment Allied Maritime Command Exercise DYNAMIC MOVE during preparation and execution.
- Participate in Concept Development and Experimentation initiatives and campaigns for future Naval Mine Warfare capabilities, like during exercise REP (MUS).
- Support NCIA in modernization of the legacy Planning and Evaluation software MCM EXPERT, and provide masterclasses to train the trainers.
- Requests for support from NATO Command and Force Structure: NATO Defence Planning Process (NDPP), Support to Allied Command Transformation's Focus Areas, NATO Warfighting Capstone Concept.
- Continue to be NATO's central hub leading and supporting various activities related to adapting the legacy MCM Planning and Evaluation process with regard to modern systems.
- Actively contribute to the NATO Doctrine and Standardisation process, by participating in or leading various working groups.
- Supported the NATO NMW Principle Warfare and Staff Officers' courses at EGUERMIN.

All these activities will continue in 2022.

Making best use of modern communications possibilities and opportunities, the NMW COE Staff remains accessible and is actively involved in sharing scarce NMW knowledge and expertise.



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NATO SECURITY FORCE ASSISTANCE CENTRE OF EXCELLENCE (NATO SFA COE)

Director's Message

Despite the global pandemic, the NATO SFA COE was able to fulfil the tasks assigned, demonstrating resilience, determination and flexibility with positive energy and a desire to emerge. The ability to think outside the box, the courage to explore uncharted territories and the proactive posture allow the Centre to be a point of reference on SFA and build a great Community of Interest.
We are inclined to step up cooperation with Academia, because we have found that very useful towards stimulating innovation within our military organization.
Moreover, I am fully committed to improve the Centre's organization, prioritizing relevant tasks, streamlining redundant processes and reinforcing as much as possible the four pillars of NATO's transformation.



COL Massimo DI PIETRO

Mission Statement

The mission of the Security Force Assistance Centre of Excellence (SFA COE) is to improve the effectiveness of the Alliance in promoting stability and reconstruction efforts for conflict and post-conflict scenarios through research, education, training and doctrine activities, as well as to provide a unique capability to the Alliance, NATO Partners and International Organizations in the field of SFA.



Who We Are / What We Do

The NATO SFA COE is a multinational organization sponsored by Albania, Italy (FN), and Slovenia. It is committed to providing a unique capability to the Alliance and NATO Partners in the field of Security Force Assistance through the sharing of expertise and knowledge, while cementing the varied skills required to accomplish the numerous tasks, missions and challenges that the COE faces as a team.

The strength of the Centre is based on the inseparable connection established with a heterogeneous domain consisting of an academic sphere, NCS and NFS, IOs, COEs, think tanks and research institutes. The COE's comprehensiveness is the critical aspect of its approach in developing projects and related activities carried out along three lines of effort: Policy, Human Capital, and Support to the Operations.

Those multiple connections guarantee an out-of-the-box perspective in analysis and research and in the development of the yearly Program of Work.

Vision

The SFA COE is to be an internationally recognized focal point to expand the capabilities of NATO, Nations and other partners by providing comprehensive expertise and support in the area of Security Force Assistance.



2021 / 2022

Along the 4 pillars of transformation, the SFA COE is conducting a variety of activities, such as:

Doctrine Development & Standards

The Centre plays an important role in the development of the AJP-3.16 for SFA or NATO doctrines related to SFA, and is also supporting the implementation of NATO standards and procedures by:

-Developing a SFA Planning Guide to support the planning process for NATO's Crisis Response Operations.



- Developing a SFA terminology to integrate the NATO AAP-15.

Education and Training

The Centre delivers NATO selected courses, such as:

- the ADL 362 "Introduction to SFA," that introduces the NATO SFA Concept and the AJP-3.16.

- the "SFA Operators course," that aims to improve the competency and effectiveness when working in defence capacity building missions.

- the "Institutional Advisor course," that aims to develop skills at Host Nation's institutional level in supporting their Local Forces (LF).

Moreover, the Centre supports major NATO exercises (e.g. STEADFAST JACKAL and STEADFAST JUPITER), and in pre-deployment training events at JFTC and cooperates with JWC.

Concept Development and Experimentation

The Centre:

- Supported the development of the Interoperable Multinational Resident Advisor Capacity (IMRAC) by identifying a NATO Strategic Advisor profile and by preparing a NATO selected course for Institutional Advisors.

- Is developing a Study Paper on the implementation of the NATO SFA Concept within the NATO Command Structure.

- Is developing the SFA Operators Profile with the aim to provide NATO with an Analysis Report to improve and standardize the NATO recruitment, selection, and training procedures and to increase the skills for NATO personnel involvement in SFA activities.

- Planned, edited and published the book entitled "Promoting the Rule of Law and Good Governance-SFA Implications in International Initiatives," with the aim of promoting the knowledge of International Humanitarian Law (IHL), UN Resolutions, and good governance in SFA activities.

- Has planned and is in the process of editing the publication entitled "Insights on Strategic Advising for SFA", as a tool for personnel involved in an advisory role in NATO operations where capacity building activities are undertaken.

Analysis and Lessons Learned

The Centre works closely with NATO to implement a gap analysis and cultural awareness process in the SFA field through the application of the NATO Lessons Learned (LL) policy; participates in the NATO JALLC LL workshop and attends the main NATO LL events. To date, the Centre has hosted LL initiatives and produced reports/articles.



Plans for 2022:

The COE plans to continue to further its objectives through the development of the following new projects, included in the POW 2022:

- SFA metrics for Planners (MOP and MOE).

- Enhancement of the SFA Advisor's skills.

- Wider participation in NATO / Multinational Exercises to allow for the implementation of the SFA concept inside NATO's strategic-to-operational level planning.

- The Editing of "SFA Papers" with the contribution of international experts.

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NATO STABILITY POLICING
CENTRE OF EXCELLENCE
(NATO SP COE)

Director's Message

After the first six years of activity, the NATO Stability Policing Centre of Excellence (NSPCoE)'s Strategic Plan 2022-2024 will guide the overall direction of the Centre for the next triennium. This period will endow the COE with a solid base to establish its position, attaining ambitious goals.
The focus has progressively moved towards a consolidation within the wider Community of Interest, both inside and outside NATO, and connection with external partners in the field of Stability Policing (SP). Quality is one of the Centre's main features and chief instrument to reach such a goal.
The following End-State represents the NSPCoE's ambition, which we will strive to achieve over the next three-year period:
"The NSPCoE is leading the efforts of the Alliance and of the community of interest and in the field of SP. It aims at taking stock of the experience developed so far, consolidating and refining on-going activities, and developing a future-proof structure, adaptive to changes, outward looking, with a keen eye on research and development, for the benefit of NATO, International Organisations and any relevant external partner".



COL Giuseppe DE MAGISTRIS

Mission Statement

The mission of the NSPCoE is to be an internationally recognized focal point and a hub of expertise for a Community of Interest in the field of SP, which is a set of police related activities intended to reinforce or temporarily replace the indigenous police forces of an unstable area in order to contribute to the restoration and/or upholding of the public order and security, rule of law, and the protection of human rights (AJP 3-22).



Who We Are / What We Do

The NSPCoE was formally established on 9 April 2015, upon the entry into force of the two Memorandums of Understanding ruling the internal functioning of the NATO SP COE, the chain of command, the external relations and the functional relationship with ACT. The early Parties were Italy, as the Framework Nation, and the Czech Republic, France, Netherlands, Poland, Romania, Spain, Turkey, as the Sponsoring Nations, as well as the Allied Command Transformation (ACT). On 4 October 2018, Greece joined the Centre.

Vision

To operate as a prime mover to increase contribution to NATO stabilization and reconstruction efforts in conflict and post-conflict scenarios; to provide an unique capability to the Alliance and its member States, as well as NATO partners and International Organizations in the area of SP.

2021 / 2022

Major Products and Activities for 2021

Despite Covid-19 challenges throughout 2021, the Centre undertook numerous initiatives, thus fulfilling its mission and vision as well as supporting the Alliance to the utmost extent possible, inter alia, as follows:

Concept Development&Experimentation, supported:

- Contributing to Intermediate Force Capabilities (IFC) and Layered Resilience (LR) Concepts, the latter within Warfighting Development Agenda's (WDA) efforts;
- Drafting:

  - Framework Concepts on SP contribution in Counter – Insurgency (COIN) and Counter-Terrorism (CT);

  -"Applicable legal framework for SP in NATO land operations" essay;



Standardization & Doctrine Development:

- Leading the Writing Team for ATP-103 Replacement & Reinforcement of Indigenous Police Forces (moving to Study Draft by the end of 2021);
- Contributed to the review of:

  -11 NATO doctrinal publications;

  -Implementation Plans/PoW of Technical Exploitation (TE) and Battlefield Evidence (BE) policies;

Education & Training (E&T):

- Delivered:

  -Three courses in on-line/synchronous mode and two residential courses;

-1st iteration of Institutional Advisor Seminar jointly with Security Force Assistance CoE;

- Development of:
  - -"Police Capability Building in Post Conflict Country" residential course;
  - -"SP Contribution to Cultural Property Protection in NATO Operations" e-learning course;
  - -Upon NATO HQ's request, "Battlefield Evidence Institutional Level Course" for NATO Partners;
- Joined the ACT JFD Strategic Leadership Initiative "Development of a reference curriculum" sub-working group;
- Supported planning process and execution phases of following NATO/multinational exercises:
  - -STEADFAST JACKAL-21;
  - -SHARP LYNX-21;
  - -JFC-Np Noble Bonus-21.

LL&Analysis:

- Expanding LL SP Community of Interest (CoI);
- Furthering the cooperation with Special Inspector General for Afghanistan's Reconstruction (SIGAR);
- Supporting NATO SP COE trainings and doctrinal endeavours;
- Contributing with SP and LL expertise to exercises;
- Supporting ACT & JALLC in Resolute Support Mission and Technical Exploitation LL projects.

Finally, the NSPCOE hosted the 2021 NATO COE Directors' Conference and supported NATO School Oberammergau and Joint Forces Training Centre's (Bydgoszcz – POL) training activities (and other numerous national training facilities).

Major Products and Activities for 2021

NSPCoE will keep striving to support the Alliance as well as to finalise ongoing/launch the following workstreams:

- ATP-103;
- NATO TE/BE policies' implementation Plan of the PoW;
- "Applicable legal framework for SP in NATO Land operations" essay;
- COIN & CT Framework Concepts;
- "Rules of Engagement and Use of Force by SP officers in NATO Land operations" essays;
- Supporting from SP viewpoint main ACT projects, including WDA, and IFC and LRC Concepts, and 12 doctrinal publications under review;

Hosting:

- Trafficking in Human Beings Conference;
- "The Assessment of Spoiler Threats Doctrine Forum" to shape a possible common tool;
- Workshops on terminology, on essays under development and on LL matters;
- Delivering the Centre's training portfolio;
- Finalizing the two courses under development;
- Supporting main NATO Exercises' planning process and execution;
- Broadening the SP LL CoI;
- LL-Analysis of NATO Missions from SP perspective.



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NATO STRATEGIC COMMUNICATIONS
CENTRE OF EXCELLENCE
(StratCom COE)

Director's Message

As today's information environment is highly weaponized, it inevitably contributes to the emergence of various actors aiming to use information manipulation to undermine public trust in democratic institutions, deepen unhealthy polarization and gain geopolitical influence by affecting the trust in military and governmental institutions and their actions. Aggravation of these issues requires in-depth understanding of methodologies applied by malicious actors, as well as knowledge of complex communications processes and narratives' formation processes for NATO and its nations to operate effectively. NATO Strategic Communications Centre of Excellence works to deliver up-to-date digital environment analysis, with particular focus on emerging technologies and AI, to provide comprehensive and practical knowledge base to those working in the field of strategic communications. Expertise in strategic communications allows the COE to contribute to the development of NATO doctrines and form research-based framework for Alliance's operations. The COEs expertise has formed by combining knowledge from private, public and academic sectors and successfully applying research in recognizing and managing emerging threats in the information environment.



Mr. Jānis SĀRTS

Mission Statement

The Centre's mission is to support NATO's strategic communications capability and contribute to the Alliance's communication processes by providing comprehensive analysis, timely advice and practical support.

The Centre's aim is to contribute substantially to the improvement of NATO, NATO Allies' and NATO Partners' strategic communication capabilities through research, analysis, concept development, experimentation, doctrine development, standardisation and case studies, furthermore investing into the continuing development of strategic communications education and training.

Who We Are / What We Do



During its first 7 years of full operational capability the NATO StratCom COE has established itself as one of the primary research and fusion hubs on the subjects of strategic communications, countering disinformation, revealing trends in digital security and understanding hostile actor strategies, tactics, methodologies and techniques in the transatlantic area. Our international team of experts conducts research in response to the needs of NATO and the governments of participating nations, designs programmes to advance the development of NATO military doctrine, and provides comprehensive analysis and practical support for decision makers in the Alliance. The COE covers strategic communications and all its core communication capabilities and functions: Information Operations, Psychological Operations, Public Diplomacy, Public Affairs and Military Public Affairs.

Vision

The Centre's vision is to address identified shortfalls and provide modern solutions to emerging challenges in the field of strategic communications. This is done by pooling resources, sharing best practices, experimentation, building networks of experts, and providing platforms for debate, as well as by monitoring and evaluating the revolution in the current information environment driven by a rapid expansion of technology that has substantial impact on the cognitive domain.



2021 / 2022

In 2021, NATO StratCom COE continued its operations in a hybrid format effectively adapting its event management and research production strategy to the requirements of national and international restrictions aiming to control the spread of COVID-19.

Altogether, NATO StratCom COE has organized 4 on-site and 23 online events in 2021 with an aim to support global efforts in countering disinformation and misinformation, as well as to reach multiple stakeholder groups and to boost the engagement of interested audiences through various social media platforms. The Centre's main aim was to facilitate general

knowledge of strategic communications, raise awareness of information manipulation tools and recognition mechanisms, as well as contribute to the analysis of the digital environment and its imposed threats and benefit to the critical thinking and media literacy.
The Centre was carrying out a number of research projects that took into account cases of COVID-19 disinformation, misinformation and other hostile activities in the Digital Domain.
The COE provided an update on identified patterns in disinformation activities and systems. The Centre's subject matter experts were fully committed and involved in numerous projects designated for the development of the NATO StratCom COE mind set, processes, and related functions and capabilities as well as events organised by the StratCom, Military PA, PSYOPS, and InfoOps communities of interest.
Being the custodian for the Allied Joint Doctrine for Strategic Communications (AJP-10), the Centre developed a final draft version ready for ratification. Having also taken over the custodianship for the development of a completely new NATO doctrine on Military Public Affairs and continuing to contribute to all top-level doctrine reviews, the NATO StratCom COE remains at the forefront of implementing strategic communications holistically into the Alliance' doctrinal architecture.

Education & Training (E&T):

The Centre's subject matter experts were fully committed and involved in numerous projects designated for the development and improvement of NATO StratCom Education and Training solutions. In 2021, the COE provided online course "Introduction to Strategic Communications", as well as a residential course "Online and Social Media Analysis".
The Centre also supported NATO major exercises, like STEADFAST JUPITER, and NATO certified Strategic Communications courses in NATO School Oberammergau and other E&T facilities.
Performing the role of the Department Head for NATO StratCom Discipline Education and Training, the Centre organized the Annual Discipline Conference and Training Needs Analysis workshops to tackle the education and training gaps, as well as participated in the course design and development processes.

LL&Analysis:

In 2021, the Centre participated in regular NATO LL community meetings organized by HQ SACT, as well as the NATO LL Conference. The Centre also participated in the NATO Counter Hybrid Support Team in Lithuania, supported the development of the report on possible hybrid campaign scenarios, existing and potential risks and offered recommendations on strategic communications.
In 2021, the Centre published more than 30 reports on strategic communications, information environment influence, mis- and disinformation, robotrolling and other issues.

As for the 2022, the NATO StratCom COE will continue its work according to the Program of Work 2022 thus strengthening StratCom Capabilities of NATO, its Allies and Partners through research, analysis, concept and doctrine development, experimentation, standardization and case study analysis process. A special focus and an in-depth analysis will be put on emerging trends in strategic communications, information environment assessment, as well as impact of AI technologies on the information environment. The Centre will contribute to continuous development of StratCom education and training, sharing its knowledge through organizing, delivering and mentoring StratCom related courses and seminars. The Centre will also continue issuing the academic journal "Defence Strategic Communications".

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Current COE Status & Location

Centre of Excellence (COE)	FN	Sponsoring/ Partner Nations	Location	Accreditation Date
Air Operations (AO)	FRA	FRA	Lyon Mont Verdun, FRA	18-Feb-08
Civil-Military Cooperation (CCOE)	NLD & DEU	DEU, HUN, ITA, LVA,NLD, POL, SVN	The Hague, NLD	31-Jul-07
Cold Weather Operations (CWO)	NOR	NOR	Elverum, NOR	31-Jul-07
Combined Joint Operations from the Sea (CJOS)	USA	CAN, ESP, FRA, GBR, GRC, ITA, NLD, NOR, PRT, ROU, TUR, USA	Norfolk, USA	14-Dec-06
Command and Control (C2)	NLD	ESP, NLD, TUR, USA	Utrecht, NLD	04-Apr-08
Confined and Shallow Waters (Operations In) (CSW)	DEU	DEU, DNK, EST, GRC, ITA, LTU, NLD, POL, TUR	Kiel, DEU	03-Mar-09
Cooperative Cyber Defence (CCD)	EST	BEL, BGR, CAN, CZE, DEU, DNK, ESP, EST, FRA, GBR, GRC, HRV, HUN, ITA, LUX, LTU, LVA, MNE, NLD, NOR, POL, PRT, ROU, SVK, SVN, TUR, USA, AUT, CHE, FIN, SWE, ROK	Tallinn, EST	28-Oct-08
Counter Improvised Explosive Devices (C-IED)	ESP	CAN, CZE, DEU, ESP, FRA, GRC, HUN, NLD, PRT, ROU, TUR, USA, SWE	Madrid, ESP	14-Nov-10
Counter-Intelligence (CI)	POL & SVK	CZE, DEU, HRV, HUN, ITA, LTU, POL, ROU, SVK, SVN, USA	Krakow, POL	22-Feb-17
Crisis Management and Disaster Response (CMDR)	BGR	BGR, GRC, POL, ROU	Sofia, BGR	31-Mar-15
Defence Against Terrorism (DAT)	TUR	ALB*, DEU, GBR, HUN, ITA*, NLD, ROU, TUR, USA	Ankara, TUR	14-Aug-06
Energy Security (ENSEC)	LTU	DEU, EST, FRA, GBR, ITA, LTU, LVA, POL, TUR, USA, FIN, GEO	Vilnius, LTU	12-Oct-12
Explosive Ordnance Disposal (EOD)	SVK	CZE, HUN, POL, ROU, SVK	Trencin, SVK	28-Apr-11
Human Intelligence (HUMINT)	ROU	CZE, GRC, HUN, POL, ROU, SVK, SVN, TUR, USA	Oradea, ROU	29-Jul-10
Integrated Air & Missile Defence (IAMD)	GRC	BGR, CZE, GRC, ROU, TUR	Chania, GRC	Established, awaiting Accreditation

In Red: Partner Nations ***: In Process of Joining**

Current COE Status & Location

Centre of Excellence (COE)	FN	Sponsoring/ Partner Nations	Location	Accreditation Date
Joint Air Power Competence Centre (JAPCC)	DEU	BEL, CAN, CZE, DEU, DNK, ESP, GBR, GRC, HUN, ITA, NLD, NOR, POL, ROU, TUR, USA	Kalkar, DEU	01-Jan-05
Joint Chemical, Biological, Radiological and Nuclear Defence (JCBRN Defence)	CZE	CAN, CZE, DEU, FRA, GBR, GRC, HUN, ITA, POL, ROU, SVK, SVN, USA, AUT	Vyškov, CZE	31-Jul-07
Maritime Geospatial, Meteorological & Oceanographic (MGEOMETOC)	PRT	ESP, PRT, ROU, TUR	Lisbon, PRT	Undergoing Accreditation process
Maritime Security (MARSEC)	TUR	GRC, ROU, TUR	Istanbul, TUR	08-Jun-20
Military Engineering (MILENG)	DEU	BEL, CAN, CZE, DEU, DNK, ESP, FRA, GBR, GRC, HUN, ITA, NLD, NOR, POL, ROU, TUR, USA	Ingolstadt, DEU	09-Mar-09
Military Medicine (MILMED)	HUN	BEL,CZE, DEU, FRA, GBR, HUN, ITA, NLD, POL, ROU, SVK, USA	Budapest, HUN & Munich, DEU	12-Oct-09
Military Police (MP)	POL	BGR, CZE, DEU, GRC, HRV, HUN, ITA, NLD, POL, ROU, SVK	Bydgoszcz, POL	28-May-14
Modelling & Simulation (M&S)	ITA	CZE, DEU, ITA, USA	Rome, ITA	18-Jul-12
Mountain Warfare (MW)	SVN	DEU, HRV, ITA, POL, ROU, SVN, AUT	Begunje na Gorenjskem, SVN	27-Nov-15
Naval Mine Warfare (NMW)	BEL & NLD	BEL, ITA, NLD, POL	Ostend, BEL	17-Nov-06
Security Force Assistance (SFA)	ITA	ALB, ITA, SVN	Rome, ITA	30-Nov-18
Stability Policing COE (SP)	ITA	CZE, ESP, FRA, GRC, ITA, NLD, POL, ROU, TUR	Vicenza, ITA	09-Dec-15
Strategic Communications (STRATCOM)	LVA	CAN, DNK, DEU, EST, GBR, ITA, LTU, LVA, NLD, POL, SVK, USA, FIN, SWE	Riga, LVA	01-Sep-14

In Red: Partner Nations ***: In Process of Joining**

Nations Participating in COEs

	Country	Sponsoring Nation of	Framework Nation of
	**ALB**	DAT*, SFA	
	**BEL**	CCD, JAPCC, MILENG, MILMED, NMW	NMW
	**BGR**	CCD, CMDR, IAMD, MP	CMDR
	**CAN**	CCD, CJOS, JAPCC, JCBRN Defence, MILENG, STRATCOM	
	**CZE**	CCD, CI, C-IED, EOD, HUMINT, IAMD, JAPCC, JCBRN Defence, MILENG, MILMED, M&S, MP, SP	JCBRD Defence
	**DEU**	CCD, CCOE, CI, C-IED, CSW, DAT, ENSEC, JAPCC, JCBRN Defence, M&S, MILENG, MILMED, MP, MW, STRATCOM	CCOE, CSW, JAPCC, MILENG
	**DNK**	CCD, CSW, JAPCC, MILENG, STRATCOM	
	**ESP**	C2, CCD, C-IED, CJOS, JAPCC, MGEOMETOC, MILENG, SP	C-IED
	**EST**	CCD, CSW, ENSEC, STRATCOM	CCD
	**FRA**	AO, CCD, C-IED, CJOS, ENSEC, JCBRN Defence, MILENG, MILMED, SP	AO
	**GBR**	CCD, CJOS, DAT, ENSEC, JAPCC, JCBRN Defence, MILENG, MILMED, STRATCOM	
	**GRC**	CCD, C-IED, CJOS, CMDR, CSW, HUMINT, IAMD, JAPCC, JCBRN Defence, MARSEC, MILENG, MP, SP	IAMD
	**HRV**	CCD, CI, MP, MW	
	**HUN**	CCD, CCOE, CI, C-IED, DAT, EOD, HUMINT, JAPCC, JCBRN Defence, MILENG, MILMED, MP	MILMED
	**ITA**	CCD, CCOE, CI, CJOS, CSW, DAT*, ENSEC, JAPCC, JCBRN Defence, M&S, MILENG, MILMED, MP, MW, NMW, SFA, SP, STRATCOM	M&S, SFA, SP
	**LUX**	CCD	

*: In Process of Joining

Nations Participating in COEs

	Country	Sponsoring Nation of	Framework Nation of
	**LTU**	CCD, CI, CSW, ENSEC, STRATCOM	ENSEC
	**LVA**	CCD, CCOE, ENSEC, STRATCOM	STRATCOM
	**MNE**	CCD	
	**NLD**	C2, CCD, CCOE, C-IED, CJOS, CSW, DAT, JAPCC, MILENG, MILMED, MP, NMW, SP, STRATCOM	C2, CCOE, NMW
	**NOR**	CCD, CJOS, CWO, JAPCC, MILENG	CWO
	**POL**	CCD, CCOE, CI, CMDR, CSW, ENSEC, EOD, HUMINT, JAPCC, JCBRN Defence, MILENG, MILMED, MP, MW, NMW, SP, STRATCOM	CI, MP
	**PRT**	CCD, C-IED, CJOS, MGEOMETOC	MGEOMETOC
	**ROU**	CCD, CI, C-IED, CJOS, CMDR, DAT, EOD, HUMINT, IAMD, JAPCC, JCBRN Defence, MARSEC, MGEOMETOC, MILENG, MILMED, MP, MW, SP	HUMINT
	**SVK**	CCD, CI, EOD, HUMINT, JCBRN Defence, MILMED, MP, STRATCOM	CI, EOD
	**SVN**	CCD, CI, HUMINT, JCBRN Defence, MW, SFA	MW
	**TUR**	C2, CCD, C-IED, CJOS, CSW, DAT, ENSEC, HUMINT, IAMD, JAPCC, MARSEC, MGEOMETOC, MILENG, SP	DAT, MARSEC
	**USA**	C2, CCD, CI, C-IED, CJOS, DAT, ENSEC, HUMINT, JAPCC, JCBRN Defence, M&S, MILENG, MILMED, STRATCOM	CJOS

	Country	Partner Nation of
	**AUT**	CCD, JCBRN Defence, MW
	**CHE**	CCD
	**FIN**	CCD, ENSEC, STRATCOM
	**GEO**	ENSEC
	**SWE**	CCD, C-IED, STRATCOM
	**ROK**	CCD



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