



8 - 10 NOVEMBER 2022, THE NETHERLANDS

# Executing C2 in a Multi-Domain Environment

Who is in Command and Who do We Control?







#### **DISCLAIMER**

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## **AGENDA**

#### **TUESDAY 8 NOVEMBER 2022**

17:00 Walk-in + badging

18:00 - 20:00 Icebreaker (KEK Building nr B.22 - Majoor Jan Linzel Complex

(MJLC))

#### **WEDNESDAY 9 NOVEMBER 2022**

08:00	Walk-in + badging
09:00	Opening Remarks Day 1 Director NATO C2COE
09:20	Keynote Lt Gen Julazadeh (ACT)
09:30	Tim Sweijs - Future of the conflict and C2
10:30	Bob Gregg - ACT view on MDO and C2
11:00	Coffee Break
11:30	Arne Norlander - C2 in a cognitive environment (MDO)
12:30	Lunch Break
13:30	Per Wikberg - Governance of Future C2 Capability
14:15	Wg Cdr James Lapsley - DDA and integration of MDO Aspects
15:00	Coffee Break
15:15	Mr. Jamie Meighan - MDO Education and Training- Dealing with complexity
16:00	Wrap-up + Closing Remarks Day 1

#### **THURSDAY 10 NOVEMBER 2022**

08:30	Walk-in
08:50	Opening remarks Day 2 VADM Boudewijn Boots (NLD D-CHOD)
09:00	Aletta Eikelboom - Harmonization in MDO
10:00	Alex Kalloniatis - Achieving Multi-Domain in the 5th Gen HQ
11:00	Coffee Break
11:30	LTG (ret) Ben Hodges / LTG (ret) Philippe Stoltz - MDO in NATO JHQ
	results and Lessons Learned
12:30	Lunch Break
13:30	MajGen (ret) Roger Lane - MDO a change in mindset:
	Synchronisation challenges
14:30	Break
15:00	LtCol Frank Gubbels - Relationships and Authorities
16:00	Wrap-up + Closing Remarks Day 2



#### LT GEN DAVE JULAZADEH

#### **DEPUTY CHIEF OF STAFF, CAPABILITY DEVELOPMENT, SACT**

Keynote speech

The intent of the keynote speech is to go over Multi-Domain Operations and the unique command and control challenges we face throughout the spectrum of competition, in an era of continuous competition featuring a daily barrage of cyberspace attacks and information operations campaigns from a variety of competitors. This competition occurs well before any formal declarations of war and before NATO's formal operations planning process begins. In order to maintain credible deterrence and ensure the Alliance wins future fights, we must create and synchronize effects across ALL domains and throughout the spectrum of competition.

Lt. Gen. Dave Julazadeh is the Deputy Chief of Staff, Capability Development, Headquarters Supreme Allied Command Transformation (SACT), Norfolk, Virginia. He is responsible for developing operational and strategic capability requirements on behalf of 30 North Atlantic Treaty Organization nations. Additionally, he serves as SACT's Innovation Representative, Air Domain cross-functional Champion, and Champion for NATO's Command and Control, Cooperative Cyber Defense and Joint Air Power Competence Centers of Excellence.



Lt. Gen. Julazadeh has served in Air Force Command, Headquarters Air Force, Headquarters NATO, Headquarters U.S. Central Command, Headquarters U.S. European Command, and Office of the Secretary of Defense staff positions. He has commanded at the flight, squadron, and twice at the wing level. Prior to his current assignment, Lt. Gen. Julazadeh served as Chief of Staff, Headquarters USEUCOM, Patch Barracks, Stuttgart, Germany.

#### **MR. TIM SWEIJS**

#### **DIRECTOR OF RESEARCH, HCSS**

Future of the conflict and C2

Mr Tim Sweijs will cover the future of Command and Control in conflict situations from a civilian perspective. Using new media to effectively achieve results in modern day warfare demands change of mindset.

Dr. Tim Sweijs is the Director of Research at The Hague Centre for Strategic Studies and a Senior Research Fellow at the Netherlands' War Studies Research Centre. He is the initiator, creator and author of numerous studies and methodologies for research projects in strategic foresight, conflict analysis & early warning, defence planning, and strategy and capability development.



Tim serves as an Adviser Technology, Conflict and National Interest to the UK Government's Stabilisation Unit as well as a Research Affiliate at the Center for

International Strategy, Technology and Policy in the Sam Nunn School of International Affairs at the Georgia Institute for Technology. His work is multidisciplinary in nature and straddles political science, strategic studies and war studies. Tim has advised international organisations, governments and defence departments across the globe. He has provided expert testimony to the United Nations Security Council, the European Parliament, the Dutch Parliament, as well as to NATO's Parliamentary Assembly. He teaches an advanced graduate and executive course on the future of war.

Tim holds degrees in War Studies (PhD, MA), International Relations (Msc) and Philosophy (BA) from King's College, London and the University of Amsterdam.

## MR. ROBERT J. GREGG, JR.

# ALLIED COMMAND TRANSFORMATION, OPERATIONAL COMMAND AND CONTROL DEPUTY BRANCH HEAD

ACT view on MDO and C2

Bob Gregg has served as the deputy branch head for Operational Command and Control at NATO's Allied Command Transformation (ACT) in Norfolk, Virginia for the past 11 years. Mr. Gregg previously served for five years as an Operations Research Analyst at ACT in the Defence Planning Subdivision. His current projects include Multiple Domain Operations and Cross Domain Command and Control.



Mr. Gregg has a Bachelor's Degree in Government and Foreign Affairs from the University of Virginia

and a Master's Degree in Operations Research and Systems Analysis from the Naval Postgraduate School. He served as a Federal Executive Fellow at RAND in Santa Monica. California.

Mr. Gregg served in the United States Navy for 22 years and retired with the rank of Commander. He was a Surface Warfare Officer. Mr. Gregg also worked in the private sector for two years as an operations research analyst, requirements manager and management consultant.

#### MR. ARNE NORLANDER

#### FOUNDER, CEO AND CHIEF SCIENCE OFFICER AT NORSECON

C2 in a cognitive environment

Mr. Arne Norlander will present a scientific approach to the future of conflict from Command and Control perspective. Especially focusing on C2 in a cognitive environment while taking psychological factors of individuals into account.

Arne Norlander, PhD has over twenty years of experience as a leader and expert in strategic security, defence and government R&D, including positions as Staff Officer, Senior Scientist and Research Director at senior and executive levels in the Swedish Defence Research Agency and the Swedish Armed Forces Defence Staff.

Development, and Innovation Management.

Defence Staff.

Dr. Norlander is the Founder, CEO and Chief Science Officer at NORSECON AB, a consulting firm in Science, Engineering, Technology Foresight, Leadership, Concepts, Capabilities and Organizational



Dr. Norlander has delivered more than seventy scientific publications and lectures regularly on science, technology and policy matters. He is active as a researcher, analyst, author and scholar, and his research work has been recognized for its significant international impact. His current research interests are: Cognitive Systems; Complex Adaptive Systems; Cyber-Physical Systems; Human-Technology-Organization; Artificial Intelligence; Cyber Security; Business agility; Innovation and R&D management; International Security and Defence Policy.

Dr. Norlander holds Masters, Licentiate and Doctoral degrees from Linköping University and diplomas in strategic leadership and innovation management from the Stockholm School of Economics. He is also a graduate in War Science, National Security, Strategy and Leadership from the Swedish Defence University.

#### MR. PER WIKBERG

#### SENIOR SCIENTIST AT FOI (SWEDISH DEFENCE RESEARCH AGENCY)

Governance of Future C2 Capability

The presentation will give an overview of the work of NATO HFM RTG 342. The work of the RTG is based on the observation that earlier C2 transformation initiatives have mostly disappeared, leaving little visible trace remaining and leading to the conclusion that C2 is a capability that needs to be governed. The RTG explores the possibilities for developing a type of COBP for C2 lifecycle capability, taking into account the Future Security Environment and the multifaceted aspects of C2. Such a guideline must also address the challenges identified in earlier C2 transformation endeavours as well as potential workable solutions. This presentation will outline some of the team's preliminary findings.

Dr. Wikberg started his career as an Army officer in 1986 at the Norrland Dragoon Regiment, currently the Army's Ranger Battalion. Where he, besides as his work as platoon commander, received a Bachelors degree in Work and Organizational Psychology in 1992 and subsequently joined the PhD program in Psychology which resulted in a Licentiate degree in Psychology in 1997 and a PhD in Cognitive Systems in 2007.



His primary research interest has been the methodological problems associated with empirical

studies in large and complex settings in the context of organizational development. The research has in general been interdisciplinary and has been carried out in national and international studies focusing on a wide variety of issues such as decision-making, situation awareness, information management, CBRN-response, self-synchronization, suicide bombers etc. Within this work, Dr. Wikberg has acted as experiment lead, exercise controller, data collection coordinator and After Action Review (AAR) mediator in numerous exercises and experiments with different civil agencies and military units, in field exercises as well as command post exercises at different levels of command and control. Science, National Security, Strategy and Leadership from the Swedish Defence University.

#### MR. JAMIE MEIGHAN

#### ENTREPENEUR, CONSULTANT, EDUCATOR, ISR SME

MDO Education and Training- Dealing with complexity

Mr. Jamie Meighan will elaborate on his experiences of teaching Multi-Domain Strategy at the Multi Domain Operations Strategist Course at Maxwell AFB and it's integration into military education.

Jamie Meighan is a recently retired British Royal Air Force Officer, having spent 22 years as an ISR SME and Airborne Specialist, with time on the MQ-9 REAPER RPAS amassing 1000 hrs. In his career he served on exchange with US Central Command, forming part of the C-ISIL campaigning team, an instructor on the Multi Domain Operations Course at Maxwell AFB, and more recently as an advisor to the United Nations on ISR. He now runs a startup looking at Defence Circular Economy and Sustainability with focus on supply chains and resiliency, in addition to supporting NATO Exercises and strategic thinking as a consultant.



He has published on MDO as well as Russian A2AD and he recently rejoined the RAF as a reservist and is now involved in the development of UK planning Courses at the Permanent Joint HQ in Northwood.

#### MS. ALETTA EIKELBOOM

#### CONSULTANT EXPERTISE GROUP FOR MILITARY OPERATIONS AT TNO

Harmonization in MDO

MDC2 requires harmonization between and among military and civilian actors. It also requires the integration of information originating from many different sources and across multiple operating areas, to make sense of the situation. In the presentation I will share some insights on harmonization and on how to support decision makers with the conceptual integration of information.

Aletta Eikelboom has worked with the Netherlands Organisation for Applied Scientific Research (TNO) since 2004. She mainly works for the Ministry of Defence, especially the Royal Netherlands Army. With a background in artificial intelligence and cognitive psychology, her work as a scientist and senior consultant is focused on the topics Al and operations, command and control, decision-making, intelligence. She has executed several TNO projects within these domains as project leader and as project team member. These projects were always executed in multidisciplinary teams with colleagues from multiple departments.



In 2017 she became program manager of a research program focussed on the impact of AI and robotic systems on the people that have to work with this new technology. This program explicitly looks at future technology which is analysed and discussed by a multidisciplinary team of (senior) scientists. Advised by these experts and in close collaboration with the Ministry of Defence, Aletta successfully set the course for this program in which both operational and scientific relevant research is conducted.

Next to her work for TNO, she is also a reserve officer in the rank of major. As a reserve officer she is permitted to work as operational analyst within a staff on taskforce level or higher, where she works as a direct advisor to the command team. As operational analyst she has been deployed to Afghanistan twice.

#### MR. ALEX KALLONIATIS

#### SENIOR DEFENCE OPERATIONS ANALYST

Achieving Multi-Domain in the 5th Gen HQ

Successful conduct of Multi-Domain Operations requires a bringing together of expertise of unparalleled diversity in order to provide for successful manoeuvre across the traditional physical domains of land, sea and air, as well now as cyber, space, the electromagnetic spectrum, and influence in the adversary environment. Modern headquarters already struggle to ramshackle the 'C2' of these effects into the NATO staff system, with its five alphabetic (J, G, S, N, A) and 10 numerical (0-9) labels, let alone give space for future domains and the effects required to achieve dominance therein. Compounding the headquarters design is a binary paradigm of expertise, the Generalist vs Specialist dichotomy.

In this presentation, dr Kalloniatis will take a deep-dive in the question on how to achieve Multi-Domain in the Fifth Generation Headquarters. The progress and challenges will be outlined.

Alexander C. Kalloniatis completed a PhD in theoretical physics in 1992 and undertook research in particle physics with some 50 research publications in the field, until joining the Defence Science and Technology Group in 2005. He has focused on command and control, including analysis of historical and contemporary operations, supporting the evolution of key Australian Defence Force headquarters, future concepts and mathematical modelling using network theory and dynamical systems. In recent years through Australia's Joint Operations Command modernisation 'Plan MURA', he



has led work achieving changes in Australian Defence Force C2 structures. In late 2021 he was awarded the Minister for Defence Science & Industry Award for Achievement in defence Science.

# LTG (RET) BEN HODGES

#### **ACO SENIOR MENTOR**

Senior Mentor Program: C2 in NATO excersises, the challenges for the commander

The NATO Senior Mentors will present from their experience as senior mentors within NATO in exercises. They elaborate on C2 in a multi domain environment, and how there are different approaches to C2 in these exercises. Resulting from this, their lessons learned are shared with the audience. LTG Hodges will aim his presentation (together with LTG Stoltz) around the question on how NATO C2 can adapt to allow SACEUR, as the ACO supported Commander, to implement DDA plans against both Russia and Terror Groups, at 360 degrees, inside and outside his AOR, in peace, crisis and conflict?

Lieutenant General (Retired) Ben Hodges, the former Commanding General of US Army Europe, is now Senior Advisor to Human Rights First, a non-profit, nonpartisan international human rights organization based in New York, Washington D.C., and Los Angeles. Prior to joining Human Rights First, he held the Pershing Chair in Strategic Studies at the Center for European Policy Analysis (CEPA). General Hodges serves as NATO Senior Mentor for Logistics, he consults for several companies on Europe, NATO, and the European Union, and he is co-author of the book Future War and the Defence of Europe, published by Oxford University Press.



He retired from the U.S. Army in January 2018 and lives today with his wife in Frankfurt, Germany.

# LTG (RET) PHILIPPE STOLTZ

#### **ACO SENIOR MENTOR**

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As a former General Officer with NATO (vice COSShape) and French Armed Forces operational experience, Lieutenant General (ret) Philippe Stoltz provides coaching and advice to NATO and national commanders and staffs on the conduct of operations, including leadership and staff functionality through participation in experimentation, seminars, courses and exercises, including the preparation for NATO-led operations.



Lieutenant General Philippe Stoltz was born on 16 November 1955 in France. He is a graduate of

the École Spéciale Militaire at Saint-Cyr and the French War College. He graduated with distinction from the French War College, which he attended from 1989 to 1991. His former duties include Chief of Staff, Djibouti French Combined Headquarters (1998-2000); Chief of Operations and Chief of Staff, Special Operations Command (2000-2003); Commander Special Land Forces Brigade in Pau (2003- 2005). Lieutenant General Stoltz also served as Deputy Commander Land Forces Command in Lille before being transferred to Marseille to take command of Land Force Headquarters N°3 from 2007 to 2009. In August 2008 he was assigned as deputy Commander KFOR, bringing him back for a tour of duty to Kosovo, where he had already had served as the Commander of Multinational Task Force North in 2005. In July 2009, Lieutenant General Stoltz was assigned Commander of Allied Joint Force Command Lisbon.

# MAJ GEN (RET) ROGER LANE CBE FCMI

ROGER LANE CONSULTING LTD.

Orchestrating and Synchronizing in MDO

Roger Lane presents a personal view on Multi-Domain Operations, which requires a change in mind-set and presents unique synchronisation challenges.

Roger Lane spent 35 years in the UK Royal Marines and in NATO appointments, from covert counterterrorism to UK Task Force Commander in Op ENDURING FREEDOM; Commander UK/Netherlands Landing Force; Deputy Commander NRDC-Italy and Deputy Commander Operations in HQ ISAF, where he represented NATO in the Afghan National Security Council and in 3 of the G8 pillars (Disarmament of Illegally Armed Groups; Counter-Narcotics and Afghan National Army Reform) as well as having command of 12000 troops from 37 nations.



He was a NATO Senior Mentor, supporting Operational HQs, for 6 years, as well as deploying as a civilian to Iraq, Afghanistan and Somalia on capacity-building projects. In Somalia, he was the President's Senior Security Advisor, where he co-authored its first National Security and Stabilisation Plan and Counter-IED strategy, as well as developing a new indirect fire policy for AMISOM to reduce civilian casualties. Since 2014, he has supported NATO's JWC to build an OPFOR capability and advises the Centre on exercise design, development and delivery. In conjunction with Calian Europe, he also provides Battle Staff Training support to SHAPE, the JFC's and other HQs, as well as developing scenarios to address contemporary and future challenges for NATO.

In the commercial part of his business, he focuses on coaching organisational change and leadership development, where he is an accredited facilitator, including in neuro-scienced based profiling and natural linguistics programming tools. His company is offering simulation support to militaries, civil emergency response training and exercises as well as providing rich Information Environments to align words with deeds.

He is published on the challenges of multi-national command.

#### LTCOL FRANK GUBBELS

#### **SECTION HEAD NATO C2COE**

Understanding "supported-supporting" relationships: C2 not for unicorns?

"All operational commanders must be prepared to fulfil supported and supporting responsibilities" (Joint C2 CONOPS 20 December 2019, page 4.). This principle is presented as a collegial effort to swiftly react to operational developments and switch main efforts between missions. It breathes harmony and synergy. It seems a solution to the traditional C2 relationships which appear rigid. Is it just an impression that relationships between military forces are more and more described in terms of "supported-supporting"? Isn't it the ideal approach to C2 in MDO? But what does "supported- supporting" really entail? What does it mean in operations? What is the impact on staffs and what are the requirements? Where are the positive testimonies supporting its use? Where is the "supported-supporting" handbook? As part of the ongoing NATO C2 relationships and authorities study LCOL Gubbels dived into the scarce sources regarding "supported-supporting" relationships. In his last briefing as an active officer he will express his deviant opinion on the assumed magic of these relationships. Are there more of his breed in the audience?

As a marine-officer, Frank had a wide range of positions, mostly in the field of logistics but his tours also included stints as an infantry and heavy weapons company commander. In a later stage, he guaranteed the smooth procurement of the Viking All Terrain Carrier and led the SAP software implementation in the NLD Marine Corps. In his latest position at the NATO C2COE he covered all areas but especially focused on concepts and doctrine. His deployments besides many winters in Norway, included the UN mission in Cambodia and the NATO Training Mission in Afghanistan. His motto's: stay curious! It is the people, st..d





#### 1. Meeting Location

The seminar will be hosted from 8 to 10 November 2022 in The Hague, the Netherlands, at the Majoor Jan Linzel Complex (MJLC), Brasserskade 227A, 2497 NX The Hague, +31 (0)889 566 422.

#### 2. Schedule

An updated agenda and speaker list will be published on www.c2coe.org/seminar

- On Tuesday 8th November 2022 from 18.00 20.00 a hosted icebreaker (social event) will be organized at the MJLC.
- The seminar days are the 9th and the 10th of November, 2022 with a daily program 08:30 until 16:30. Hosted lunches (included in the conference fee) will be served at the restaurant on the MJLC from approximately 12.30 up to 13.30. Small refreshments will be served during breaks

#### 3. Travel Arrangements

Travel arrangements to and from the Hague and the booking of hotel accommodation are the individual responsibility of each participant. If traveling by air, the recommended airports for arrival are:

- Rotterdam The Hague Airport,
   Airportplein 60, 3045 AP Rotterdam (NLD),
   www.rotterdamthehagueairport.nl,
   https://goo.gl/maps/7z69vaiYhKrHcX1j8
- Amsterdam Schiphol Airport

  AMS Location: Amsterdam, Evert van de Beekstraat 202, 1118 CP Schiphol (NLD),

  www.schiphol.nl,

  https://goo.gl/maps/Qt9MWsY1AdasmesW6

#### **Public transport:**

From both Rotterdam the Hague Airport and Schiphol, take the train to Delft trainstation. From here you can take EBS bus nr 60 (Nootdorp) to busstop Defensie and walk (4 minutes) to the Complex. For general information, timetable and booking a train tickets, please visit the following website:

#### Arriving by car.

We suggest you to use Google maps or any other navigation service for optimal route suggestions.

Navigation address: Brasserskade 227a, 2497 NX Den Haag. There is free parking at the Majoor Jan Linzel Complex, although parking spaces are limited. The Riva Hotel has on-site parking lots which guests can use free of charge.

#### 4. Hotel Accommodation

For hotel accommodation the NATO C2COE recommends Riva Hotel, just opposite the street.

Riva hotel, Brasserskade 221, 2497 NX The Hague, tel. +31 (0)70 891 886, www. rivahotel.nl, https://g.page/rivahotel

Cost indication: € 102,= - € 224,= excluding breakfast.

Participants are requested to make their own reservations. Booking and payment of the rooms is the responsibility of each participant. The NATO C2COE cannot guarantee the availability of rooms and rate after the number of reserved rooms has been reached.

Should there occur any booking problems or any questions, please notify one of our POC's as mentioned at the end of these instructions. Participants are free to choose another hotel.

For Dutch military participants there is also accommodation at the MJLC. Bookings can be done via the DUTCH MOD-systems.

#### 5. Seminar fee

The participants fee is set at € 175,= . The fee will cover lunch on both days and refreshments during the breaks. The seminar fee must be credited in advance by the participant or his/her Unit/Organization to the NATO C2COE bank account, NLT 25 October 2022, by bank transfer, using the following references:

Bank name : ABN AMRO

IBAN : NL82 ABNA 0615904270

BIC/SWIFT : ABNANL2A

• Beneficiary : NATO Command and Control Centre of Excellence

It must include the following information:

Full participant name

Nationality

Name of the event (2022 NATO C2COE seminar)

Payment by card at the event itself is possible. If you would like to use this method of payment, please inform us by sending an email to seminar@ c2coe.org NLT 25 October 2022.

#### 6. Dress code

Dress code for the seminar is Service Dress (military) or business (civilian). For the icebreaker - smart casual is appropriate.

#### 7. Language

English will be the working language of the seminar. Interpretation service will not be provided.

#### 8. Spouses and Partners

The NATO C2COE will not arrange any program for accompanying spouses and partners. Neither will the centre provide any transportation or other logistical support to accompanying spouses and partners, nor will the Centre bear the costs associated with their attendance at possible social events.

#### 9. Medical Support

Medical support is available. Call 1-1-2 for emergencies.

#### 10. Security

Please be aware that security measures during the seminar are as follows:

- Photography is not allowed on the MJLC, please check with any of the POCs when there is a need to take a photo. Official photo's, including the group photo, will be published on www.c2coe.org afterwards.
- During the in-processing, you will receive a seminar badge. The badge must be worn visible at all times during the seminar and the icebreaker.
   You have to carry a national ID card or passport at all times, as obliged by national law.
- No supporting materials (e.g. presentations, documents etc.) which
  you intend to use during the meeting should be exceeding the level
  of "NATO UNCLASSIFIED". We would also like to stress that this event
  is rubricated as such, meaning the discussions remain on the level of
  NATO UNCLASSIFIED. If needed, a NATO SECRET meeting room is
  available

#### 11. Point of Contacts

Points of contact for seminar related issues and registration.

Any questions and/or request for information can be forwarded to the POCs:

- LTC Paul Serné (NLD A),
   +31 (0) 6 3024 1446,
   pa.serne@mindef.nl
- MAJ Bert Bouchier, (NLD AF),
   +31 (0)6 2330 6266,
   hj.bouchier@mindef.nl









