The key to C4ISR Interoperability

Partnering with Nations to achieve Connected Forces and NATO 2020 goals more efficiently
At a Glance

An integral part of the Alliance structure, the NATO Communications and Information (NCI) Agency connects NATO, Nations and their forces; we are responsible for running and defending NATO’s networks. We also provide the technology for 9 of NATO’s 11 priority capability projects, including missile and air defence. 80% of our work is done through contracts with National industries. We are the procurement authority for some 60% of NATO’s security investment programme, and have long-running expertise in complex acquisitions of advanced technology.

Agency staff have supported every single Alliance operation and mission since IFOR, and today are deployed with NATO forces from Afghanistan to Ocean Shield. Under the Customer Funding regime, our expertise is available to both Allies and Partners.

This brochure briefly outlines how the Agency can assist both Allies and Partners in national capability development, highlights some of our key projects, and provides points of contact for further information.

Agency Reform

The NCI Agency was established on 1 July 2012 as a result of the merger of the NATO Consultation, Command and Control Agency (NC3A), the NATO ACCS Management Agency (NACMA), the NATO Communication and Information Systems Services Agency (NCSA), the ALTBMD Programme Office and elements of NATO HQ Information Communications and Technology Management (ICTM). The merger reduces management overhead, but more importantly, the ‘whole is greater than the sum of its parts.’ NATO now has a one-stop-shop providing a full life-cycle approach to communications and information services: from analysis and concept development, through experimentation and capability development, to operations and maintenance for both missions and exercises. Greater efficiency and effectiveness enables significant savings.

Our Services

- Cost competitive provision and maintenance of NATO common-funded capabilities for National purposes;
- Multiyear Programmes of Work: bilateral frameworks providing both the Customer and the Agency with a pragmatic tool allowing for clear planning of activities in the next three to five years. Neither exhaustive nor mandatory, it does not involve funds commitment. It is mainly focused on validating ‘true’ and secure interoperability between national capabilities and NATO systems;
- Multilateral frameworks and projects in direct support of the Smart Defence and Connected Forces initiatives;
- Benefiting from economies of scale and NATO C4ISR acquisition expertise for national procurements;
- Robust Programme, Portfolio and Project management for complex C4ISR acquisition, as well as delivery of capabilities into operational theatres;
- Collective and individual Education and Training across
a wide range of IT-related specialization including on-site training at the NATO CIS School, remote user training at user sites, computer-based training services and planning in support of NATO exercises and operations;

• **Independent Test and Validation** supporting the engineering life-cycle, interoperability testing and operational certification, on a consolidated, networked infrastructure including NATO, national and industry capabilities;

• **Subject matter expertise** consultancy and support, covering topics such as Operational Analysis, Defence Planning, Enterprise Applications, Command & Control, Joint ISR, CIS security, Counter-IED, and C4ISR architecture design, as well as expertise in areas such as Contracting, Human Resources, and Programme, Portfolio and Project management;

• **Access to over 60 years of coalition C4ISR expertise**, lessons learned and best practices.

### Examples of work with Allies and Partners

#### NATO software for nations’ use

Building on the Agency support to the Afghanistan Mission Network and in alignment with the Federated Mission Network, the NCI Agency and nations are currently engaged in an effort to determine how, in the spirit of Smart Defence, advanced software solutions developed for NATO operations through Common Funding can be made more easily available to nations for national use, in order to lower national capability development costs and improve coalition interoperability. The Feasibility Study for Smart Defence multinational Cooperation on NATO Software Tools (NST) was successfully completed by 11 Allies and the NCI Agency, with the Feasibility Report released in November 2013. The report recommended setting up a multinational project to enable interoperability through supporting the nations in the use of NATO software tools for multinational purposes. Subsequently, 8 Allies engaged in the Project Preparation Stage focused on 3 key deliverables: NST Communications and Information (C&I) Partnership, NST 2015 Programme of Work and NST Governance. The NST C&I Partnership is expected to be launched mid-2015.

#### Multinational development of advanced technology

NATO’s ability to deliver cost effective and agile capabilities suited to the operational and economic environments will be a challenge to the Alliance for the coming years. The NCI Agency is committed to play a significant role in assisting Allies and Partners in realizing their NATO Force 2020 ambitions. In 2013, five founding nations launched the Multinational Cyber Defence Capability Development Project (MN CD2), supported by the NCI Agency in the framework of Smart Defence. Under the project Canada, Denmark, Netherlands, Norway and Romania cooperate on the development of improved means of sharing technical information, and shared awareness of threats and attacks. Project expansion with cooperation on advanced cyber defence sensors is underway. Additional initiatives include for example countering Improvised Explosive Devices and Civil Military Interoperability, as well as supporting Defence Planning and Analysis.

#### Implementation of the NATO solution in Multinational Organizations

The First German Netherlands Corps (1GNC) has found a strategic partner in the NCI Agency to implement the NATO solution in the Corps for their NRF 2015 rotation. Highly motivated, the 1GNC decided to start with the implementation of information management tools; the project is already in execution. The ambition of this programme is to move from core to functional services, starting with the Land Command and Control Information System (LC2IS), and expanding to the full set of Functional Services. This could result in a similar implementation across the full community of the NATO Rapid Deployable Corps (NRDC) in the
coming years. STRIKFORNATO is the first MOU Organization that signed a Service Level Agreement with the Agency to get NATO services in 2013.

Test and re-use of NATO solutions by Partners (Finland, Sweden)

Highly satisfied with the success of the 2012 Programme of Work (POW) with the Agency in capability testing and evaluation, Finland requested authorization to re-use a number of NATO capabilities in a national context: ICC (Command and Control), TOPFAS (Operational Planning), LOGFAS (Logistics), and JDARTS (Defence Planning). Sponsored by Norway and Germany, the authorization was granted in May 2013 by the NATO C3 Board. The first implementation will be ICC, which services are expected to be used in Finland. In the meantime, Sweden has consolidated its partnership with the NCI Agency through the implementation of the Multiyear Programme of Work. Furthermore, the Agency supported the SILK Afghanistan project, which successfully ensures high-speed internet access to 9 Afghan universities; provided Distributed Networked Battle Labs (DNBL) support to Mongolia, enabling access to the Distributed Network for Testing, Verification and Validation; and successfully supported the Regional Summer School on Cyber Defence for South East Europe in Ohrid, led by Slovenia.

Enabling Joint ISR

One of the key shortfalls identified in the Alliance’s Libya campaign was on intelligence, surveillance and reconnaissance (ISR) capabilities; at the Chicago Summit, a number of Allies have launched an important initiative to improve Joint ISR more broadly. The initiative leverages the work done by the multinational MAJIC effort, in which the NCI Agency is a partner. The Agency plays a key role as an honest broker between nations and industry to establish and validate standards for information-sharing that allow for more efficient and effective use of costly capabilities. The Balkan Regional Approach to Air Defence (BRAAD) Pre-Acquisition Study is an example of a project supporting the development of the regional air defence capabilities for NATO and Partner Nations in the Balkan area.
Priority Projects

Connecting NATO and operations
When the Patriot batteries deployed to Turkey as part of Active Fence, NCI Agency staff worked together with the NATO CIS Group intensely over the Christmas period to ensure that the batteries could be connected to NATO command and control networks. Similar support is provided to all NATO operations, ranging from Ocean Shield to ISAF; the responsibility for keeping NATO connected that the NCI Agency has goes all the way up to the Secretary General’s and SACEUR’s desktop and mobile devices. Additionally, the Federated Mission Network (FMN) will leverage the interoperability gains achieved with the Afghanistan Mission Network (AMN) for future operations, and will be a key enabler for the Connected Forces Initiative. The FMN concept also sets a vision for the long term evolution of mission networks.

Cyber Defence
Against the background of rapidly developing technology, NATO is advancing its efforts to confront the wide range of cyber threats targeting the Alliance’s networks on a daily basis. The NCI Agency is responsible for both defending the Alliance’s networks 24/7 and the procurement and development of new cyber capabilities. Networks know no borders and Cyber Security cannot be a purely national task, therefore the Agency’s expert are in daily contact with national centres to share awareness of emerging threats.

Ballistic Missile Defence
NATO is developing a capability to protect the Alliance’s European populations, terrorist and forces against ballistic missile attacks, as decided at the Lisbon Summit in November 2010. The NCI Agency is responsible, in partnership with industry, for delivering the command and control system that links national sensors and shooters into a whole that is greater than the sum of its individual parts. In March 2013, the first European theatre missile interceptor system achieved NATO interoperability. This successful test is a milestone as it broadens the range of capabilities available for use in NATO’s missile defence.

Future Air Defence
In order to meet the evolving character of Alliance operations, the future NATO Air Command Control System (ACCS) is a fully integrated Air Defence System across continental NATO Europe and Iceland that will replace a number of existing systems, and provides NATO’s first deployable capability for Air Command and Control in operational theatres. The management of ACCS, NATO’s largest common funded programme, is executed by the NCI Agency.
As host nation the Agency streamlines the procurement and ensures the capability to meet emerging operational requirements, such as those associated with missile defence when creating the ACCS based NATO Integrated Air and Missile Defence system.

**IT modernization**
The Agency is currently working with stakeholders and resource committees on a fundamental modernization of NATO’s IT infrastructure, helping to significantly lower costs, improve resilience and disaster recovery as well as further strengthening the Alliance’s ability to defend against cyber attacks. The project will also bring significant benefits to Alliance IT users, including greater reliability, mobility and security.

**Working with national Industries**
Approximately 80% of the work done in the area of NATO communications and information systems (CIS) is done through contracts with national industries, mostly managed by the Agency as being the primary Host Nation and Procurement Agency for CIS projects under the NATO Security Investment Programme (NSIP), funded by the 28 NATO nations. As the Agencies have been streamlined, this allows for easier interaction of national industries with NATO, making business with NATO easier and reducing the costs. In the area of communications and information, there is now a one-stop-shop as opposed to five different bodies.

Recent major contracts with industry include the Active Network Infrastructure for the new NATO Headquarters (August 2013), contracts to upgrade the NATO SATCOM Ground Stations (SGS) and centralize control and management of NATO’s SATCOM services (July 2013), the NATO Computer Incident Response Capability (NCIRC) contract, and a contract for a major missile defence upgrade (June 2013), NATO’s largest common-funded security investment in 2013.

**Customer Testimonials**
“Cyber is the area where the defence is vastly more complex and costly than the offence. This project is a game changer through which we can help each other to help ourselves,” said VADM Robert Davidson, Military Representative of Canada to NATO.

“We faced some challenges including a major earthquake and adverse weather, however, we were able to complete all the essential preparations on time,” said LTC Sebastiano Franco, DACCC CSS Acting Director at Poggio Renatico. “We experience excellent collaboration with the Agency and Host Nation on the CIS elements and necessary NATO connectivity which will be completed shortly.”
Key Facts NCI Agency

Fostering national engagement with the Agency on either a bilateral or multilateral basis with the following results:

• **19 Memorandum of Understanding/Agreement** signed between nations (16 NATO and 3 Partner Nations) and the NCI Agency, leading to more than 100 active bilateral (BL) projects to provide comprehensive services in areas such as Cyber Defence, Defence Planning, Command & Control, Training and Exercise Support, Communications, Core services, and Joint ISR. Moreover, Cooperation Agreements have been established with 4 national public Research & Development organizations.

• **Proven cooperation models** with the implementation of Multiyear Programmes of Work with Nations: four signed (Denmark, Finland, United Kingdom and Sweden) and four in negotiation (Bulgaria, Italy, Poland, and Romania).

• **8 ongoing multinational projects** supporting all 28 NATO Nations addressing areas such as Cyber Defence, Joint ISR, and Air Surveillance and Communication.

• **Employing the model of mixed funding** (common and national) for projects as replication of ACCS Software Based Element (ASBE), Maritime Command & Control Information Services (MCCIS), Maritime HF Communications (BRASS), where nations invite the Agency to function as executive body for them as a host nations, and even propose multilateral approaches.
Connected Forces
NATO will need to remain capable of performing its core tasks and of maintaining its forces at a high level of readiness. To help achieve this the Agency supports Allied leaders with the goal of NATO Forces 2020': modern, tightly connected forces that are properly equipped, trained, exercised and led. The Connected Forces Initiative (CFI) will help maintain NATO’s readiness and combat effectiveness through expanded education and training, increased exercises and the better use of technology.

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