Headquarters Supreme Allied Commander Transformation
Norfolk Virginia

REQUEST FOR INFORMATIONRFI-ACT-SACT-21-86

This document contains a Request for Information (RFI) Call to nations in support of NATO's Information Management for Capability Delivery (IMCD).

Nations and Suppliers wishing to respond to this RFI should read this document carefully and follow the guidance for responding.

General Information	
Request For Information No.	RFI-ACT-SACT-21-86
Project Title	Request for Nations and Industry input to provide elements for NATO's Information Management for Capability Delivery (IMCD)
Contracting Office Address	NATO, HQ Supreme Allied Commander Transformation (SACT) Purchasing & Contracting Suite 100 7857 Blandy Rd. Norfolk, VA, 23511-2490
Contracting Points of Contact	1. Ms Tonya Bonilla e-mail: tonya.bonilla@act.nato.int Tel: +1 757 747 3575 2. Ms Catherine Giglio e-mail: catherine.giglio@act.nato.int Tel: +1 757 747 3856

1. Description

1.1. HQ Supreme Allied Commander Transformation (HQ SACT) is issuing this Request for Information (RFI) announcement on behalf of the Capability Development Division.

1.2. This is a Request For Information (RFI) only. The scope of this RFI is to involve Nations and industry through collaboration, in an examination of available capabilities related to Orchestration, Portfolio, Programme and Project Management (P3M), Analysis, Configuration and Change Management, Knowledge Integration, Requirements management, Architecture Management and Lessons Learned related tools, with a focus on technologies, products, services and all functions that could enable the planning and delivery aspects of the capability life cycle.

1.3. This RFI DOES NOT constitute a current Request for Proposal (RFP) nor a commitment to issue a future RFP. HQ SACT is not seeking proposals at this time, and will not accept unsolicited proposals in respect of this RFI. Respondents are advised that HQ SACT will not pay for any information or administrative costs incurred in responding to this RFI. All costs for responding to this RFI shall be borne solely by the responding vendor. Not responding to this RFI does not preclude participation in any future RFP when issued.

1.4. Any future RFP that may be released shall be listed on the HQ SACT Purchasing and Contracting website (https://act.nato.int/contracting). Vendors are responsible for monitoring this site for additional information on this requirement.

2. Vision

The Information Management for Capability Delivery (IMCD) Programme will facilitate the management and exchange of authoritative, trusted information amongst NATO Enterprise

stakeholders involved in the execution of effective governance, management, monitoring, and execution of common funded capability delivery, with the aim to improve the decision-making process, through a coherent DOTMLPFI[1] approach.

3. Background

3.1. The IMCD programme aims to address the modern information management and information sharing challenges facing NATO's capability development stakeholders, and in particular the exchange of authoritative, trusted information required for the effective governance, management, monitoring, and execution of common funded capability development.

3.2. The Capability Division is seeking contractor support to discover that which is immediately available, the art-of-the-possible and state-of-the-art with respect to technologies, products or services, as well as their integration, in the followings areas:

3.2.1. Orchestration: Provides the stakeholders with the ability to direct, coordinate, and monitor the execution of The Model across all programmes by facilitating the prioritization, alignment, de-confliction, coordination, and synchronization of efforts in the area of capability delivery;

3.2.2. P3M: Provide stakeholders with the ability to direct, coordinate, and monitor the execution of capability delivery across all programmes by facilitating the prioritization, alignment, de-confliction, coordination, and synchronization of efforts in the area of capability delivery through the functionalities described in annex A.

3.2.3. Analysis: The Analysis Function refers to structured qualitative and quantitative practices that identify operational needs, determine integrated DOTMLPFI solutions and inform development processes to support the efficient, effective delivery of capabilities and stakeholder value. Further details can be found in annex A.

3.2.4. Configuration and Change Management. Establishes and maintains consistency of P3M information, requirements, architectures, and lesson learned throughout the capability lifecycle by supporting the execution of configuration management (CM) planning, configuration identification, configuration control (CC), configuration status accounting, and configuration verification and audit[2]. Ensures that changes are planned, analyzed, understood, and implemented in accordance with the best practices[3]. It supports the identification and description of the change, the analysis of the impact of it and the associated cost and benefits, its prioritization and authorization, and its implementation in a way that preserves integrity and consistency of the programme/capability configuration.

3.2.5. Knowledge Integration. Provides users the ability to capture/create information in standard, structured way, to share it and make it discoverable, to collaborate, and generate reports (including dashboards, scorecards, etc.). Furthermore, this function provides the user with the ability to aggregate report data according to configurable

[1] Doctrine, Organization, Training, Materiel, Leadership, Facility, Interoperability
[2] Based on ISO 10007:2017
[3] E.g. ISO 9001:2015

rules to support hierarchical reporting and data analysis and to filter and query reporting data according to customizable search criteria. The function maximizes automation of routine reports whilst allowing the users to create new custom views based on ad hoc queries.

3.2.6. Requirements management: Support the elicitation, documentation, validation, and negotiation of requirements through the entire lifecycle of the capabilities; ensure traceability among requirements (any level and type), architectures, and programmes/projects;

3.2.7. Architecture management: Enables the management of architectures across all capabilities and levels (Enterprise, Capability, and Project) in support of design and requirement definition;

3.2.8. Lesson learned: Enables identification, staffing, documentation, analysis, decision support, tracking, storage and retrieval of Lesson Learned and associated recommendations;

in order to support NATO's Managing Authorities, Advisory Bodies and Governance for the development of capabilities.

4. Current Status

4.1. It was decided that IMCD should transition towards the stage intended to define and describe the capability changes through a Capability Programme Plan (CPP). This phase of the NATO Common-Funded Capability Delivery Governance Model (CFCDGM) examines and confirms the means and methods that are best suited to deliver the Capability within scope, cost and schedule and establish a programme to deliver capabilities and to drive the transformational change.

4.2. Amongst other aims, the CPP is intended to determine the viability of a range of potential courses of action to address the requirement, including consideration of the possibility of "Adopt"-ing (an existing solution already in-service by Nations), "Buy"-ing (acquiring a solution from industry), or "Create"-ing (developing a solution bespoke to NATO), or a combination thereof. In the case of Buy or Create, solutions could either be delivered through a NATO agency or a Nation being the Host Nation. Courses of action allow meeting the requirement through any of the NATO-recognized lines of development including doctrine, organization, training, materiel (including services), leadership, personnel, facilities and interoperability. The viability of the courses of action comprises an assessment of the effectiveness, affordability, and risks (including technical maturity).

4.3. To apply due diligence in discovering courses of action in support of the CPP, a RFI is necessary to 'test the market' and determine relevant technologies and products or services that may exist or could be created within Nations and commercial market (as part of the consideration of "Adopt, "Buy or Create"). This request intends to identify prospective (sub-) systems or products/services for which the team may need to conduct additional in-depth discussions. This is not a formal request for submissions as part of a procurement; it is intended to determine whether any possible systems or products exist, which should be identified during the development of the CPP.

4.4. **Intent/Objectives:** To support the transformational change, the CPP needs a robust assessment of potential courses of action across Adopt, Buy, and Create. This RFI is intended to provide Nations and industry an opportunity to provide data that would allow NATO to determine potential benefits they might receive from a product or service.

4.5. **Expected benefits to respondents:** Nations and industry participants will have the chance to reveal state-of-the-art technologies and products to NATO.

4.6. **Expected Benefits to NATO:** Exposure to, and understanding of, emerging technological drivers.

4.7. **Expected input from Nations/industry/academia:** Expected input to this RFI is Nations and industry perspective on relevant current, emerging and future technologies and products, and Rough Order of Magnitude (ROM) costs for investment and yearly O&M.

5. Requested Information

5.1. White Paper. Vendor companies and organizations are invited to provide a white paper on their capabilities related to Orchestration, Portfolio, Programme and Project Management (P3M), Analysis, Configuration and Change Management, Knowledge Integration, Requirements management, Architecture Management and Lessons Learned with a focus on technologies, products, services and all functions that could enable the planning and delivery aspects of the capability life cycle. The white papers shall be due by September 1st 2021.

5.2. Information in the white papers may be considered in developing any potential final Statement of Work requirements.

5.3. Proprietary information, if any, should be minimized and clearly marked as such.

5.4. All submissions become HQ SACT property and will not be returned.

5.5. HQ SACT shall be permitted to disclose Product information to third party developmental and analytical services providers, provided such providers shall be subject to confidentiality agreements. Either Party may disclose Confidential Information of the disclosing Party to those Affiliates, agents and consultants who need to know such information to accomplish the purposes of the programme (collectively, "Permitted Recipients"); provided that such Permitted Recipients are bound to maintain such Confidential Information in confidence.

5.6. The white papers shall be in Microsoft Word for Office compatible format, and shall not contain classified information. The white papers shall address, at a minimum, the following:

- For Nations:

    1) What is the name and the purpose of your similar national capability (as product or service)?
    2) Why/Where/How do you think that your national capability could be used by NATO to enhance its capability?
    3) With regards to an "Adopt solution", are you able to provide your national capability as a turnkey solution delivered, managed and maintained by yourselves?

If yes, can you briefly explain the organisational framework needed to accomplish this?

4) With regards to a "Buy or Create solution", would your Nation be willing to take the responsibility of a Host Nation on behalf of NATO?
5) What is ROM investment and yearly O&M costs for your National solutions?
6) What is ROM development schedule for your National solutions?
7) If we have follow-on questions regarding your national capability, to whom should we direct them? Who is your Point of Contact on this RFI?

- For Industry:

1) What is the name and the purpose of your product or service?
2) Please give a brief overview of your product's or service's capabilities and technical maturity.
3) If your product or service is a software-oriented solution, provide an overview of your system's architecture.
4) Is your product or service included in the NATO Approved Fielded Product List?
5) Why/Where/How do you think that your product or service could be used by NATO to enhance its capability?
6) Are you able to provide your product or service as a turnkey solution delivered, managed and maintained by yourselves? If yes, can you briefly explain?
7) What is ROM investment and yearly O&M costs for your product or service?
8) What is ROM implementation schedule estimate?

5.7. White Paper Addendum. The white paper shall include the following information in a separate attachment.

- Company or organization name
- Complete mailing address
- Overnight delivery address (if different from mailing address)
- Phone number
- Fax number
- E-mail address of designated point of contact

5.8. Presentation. Selected RFI vendor responders may be asked to provide one-hour, presentation based on their white papers to Capability Division and HQ SACT Contracting personnel.

6. Questions

6.1. Questions of a Technical Nature about this RFI announcement and white paper shall be submitted by e-mail only to aforementioned POCs. Accordingly, questions in an e-mail shall NOT contain proprietary and/or classified information. NATO does not guarantee that questions received after September 1st 2021 will be answered.

7. Response Date

7.1. White papers are due no later than September 1st 2021, 0900 EST. Responses shall be

submitted via e-mail only (on company letterhead) to:

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ACT Contracting Officer
Allied Command Transformation (ACT)
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And

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ACT Contracting Officer
Allied Command Transformation (ACT)
NATO/HQ SACT
Tel: (757) 747-3856
E-mail: Catherine.giglio@act.nato.int

8. Summary

8.1. THIS IS A REQUEST FOR INFORMATION (RFI) ONLY with the purpose of involve Nations and industry in an examination in an examination of available capabilities related to NATO IMCD, with a focus on technologies, products, services and all functions that could enable the planning and delivery aspects of the capability life cycle. The information provided in this RFI is subject to change and is not binding on HQ SACT. HQ SACT has not made a commitment to procure any of the items described herein, and release of this RFI shall not be construed as such a commitment, nor as authorization to incur cost for which reimbursement will be required or sought. It is emphasized that this is a RFI, and not a RFP of any kind.

9. Place of Performance

9.1. North Atlantic Treaty Organization Supreme Allied Commander Transformation, Headquarters (HQ SACT) 7857 Blandy Road, Suite 100 Norfolk, VA 23551-2490

1. Architecture Context

1.1. The IMCD is a complex business information management and sharing challenge, with many mechanisms that need to be overcome:

1.2. The number of stakeholders, each with a different role and information requirements. Stakeholders range from The Model entities (Governance, Advisory, Capability management Authority (CMA)) to other organizations with a stake in the capability development (e.g. NATO C3 Board, Joint Analysis and Lessons Learned Centre (JALLC)). Furthermore, inside each organization there are elements dealing with diverse aspects of the capability delivery process, thus requiring access to different aspects of the IMCD information pool. Figure A-1 illustrates the main stakeholders of IMCD. It is important to highlight that each stakeholder interacts with IMCD in different high level roles (e.g. Allied Command Transformation (ACT) roles are: CMA senior representative, Capability management Function (CMF) representative, Programme Management Office (PMO), Capability Monitor, Programme Director, Project Coordinator, Requirement Manager, Requirement Engineer, Quality Analyst, Traceability Analyst, etc.). At least one – but more often multiple – individual for each role had to be interviewed.

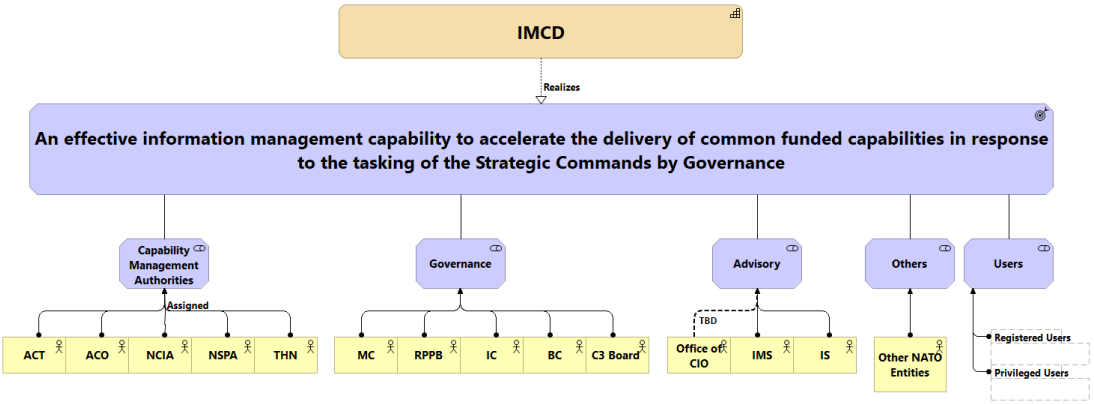

Figure A-1: IMCD Stakeholders

2. Information types, their location on different systems and networks, and difference in their representation (formats):

2.1. Portfolio and Programmatic data: Capability programmes are still managed with ad hoc solutions mainly based on Microsoft® Office documents stored in Microsoft® SharePoint sites or across locally shared directories. Programmatic information is shared 'manually' with other entities when Model documents are produced (i.e. sending CRB, CPP submissions via email) and thus represent only a snapshot of the programme at the time the document was submitted to governance. Other documents, such as Governance decisions (MC/RPPB/IC/BC decision sheets) are published to NATO HQ internal networks and not readily available to those who do not have the domain specific access.

2.2. Project data: Capability projects are currently tracked across multiple, disparate systems in including, but not limited to national systems, ACO's PITT[4], ACT's Information Hub and CPMIS[5], NCI Agency's NCI Agency's EBA (including EPM[6]), and IS-NOR's CIRIS[7]. These systems may be considered sufficient in many aspects for local or stove piped processes, however in a broader information sharing paradigm such as IMCD is enabling, these disparate systems (and moreover their lack of interfaces to automatically share data) do not enable real-time collaboration. They also lack the ability to correlate (connect) project data with other capability development information (e.g. across capability development programmes, requirements, and architectures).

2.3. Requirements. NATO capability development requirements have historically been produced and maintained in MS Office documents, with the exception of some Host Nations which use professional requirements management tools. Each organisation (e.g. ACT, ACO, NATO Agencies) has had to adopt its own standalone approach to requirements development and management tooling, moving away from entirely manual requirements engineering processes. However, there is currently no Enterprise-wide repository for capability development requirements (regulatory, operational, capability and project-level).

2.4. Architecture. There is no Enterprise-wide logical repository for capability architectures. Each architecture is stored in standalone repositories, as well as in multiple file formats such as CVS, Excel, Open Exchange XML, ARCHI and ARIS. This is a sub-optimal solution for configuration management, and it does not allow to maintain an overarching view across all capabilities (enterprise coherence).

2.5. Lesson learned. A NU and NS SharePoint portal allows to store and perform basic queries on observations, lessons identified, lessons learned, and best practices, including their associated recommendations.

2.6. The Model artifacts. The ACT PMO Information Hub is providing a centralized location to access documents in support of the CMF and the official Model documents (ORS, CRB, CPP, etc.). The information is also stored in several other repositories (PITT, EDMS, and SharePoint). In this case, the information is not connected to other aspects of capability development, thus it is not currently possible to easily locate related information[8].

2.7. Figure A-2 below illustrates the main functions of IMCD and their decomposition in sub-functions.

[4] Project Implementation Tracking Tool (PITT)
[5] Capability Package Management Information System (CPMIS) – now largely a legacy capability with the introduction of, and migration to the ACT iHub
[6] Enterprise Project Management (EPM)
[7] Common Funded Integrated Resource Information System (CIRIS)
[8] e.g. given the tolerances stated and approved by governance in a CPP it is not possible to see how the programme is currently performing

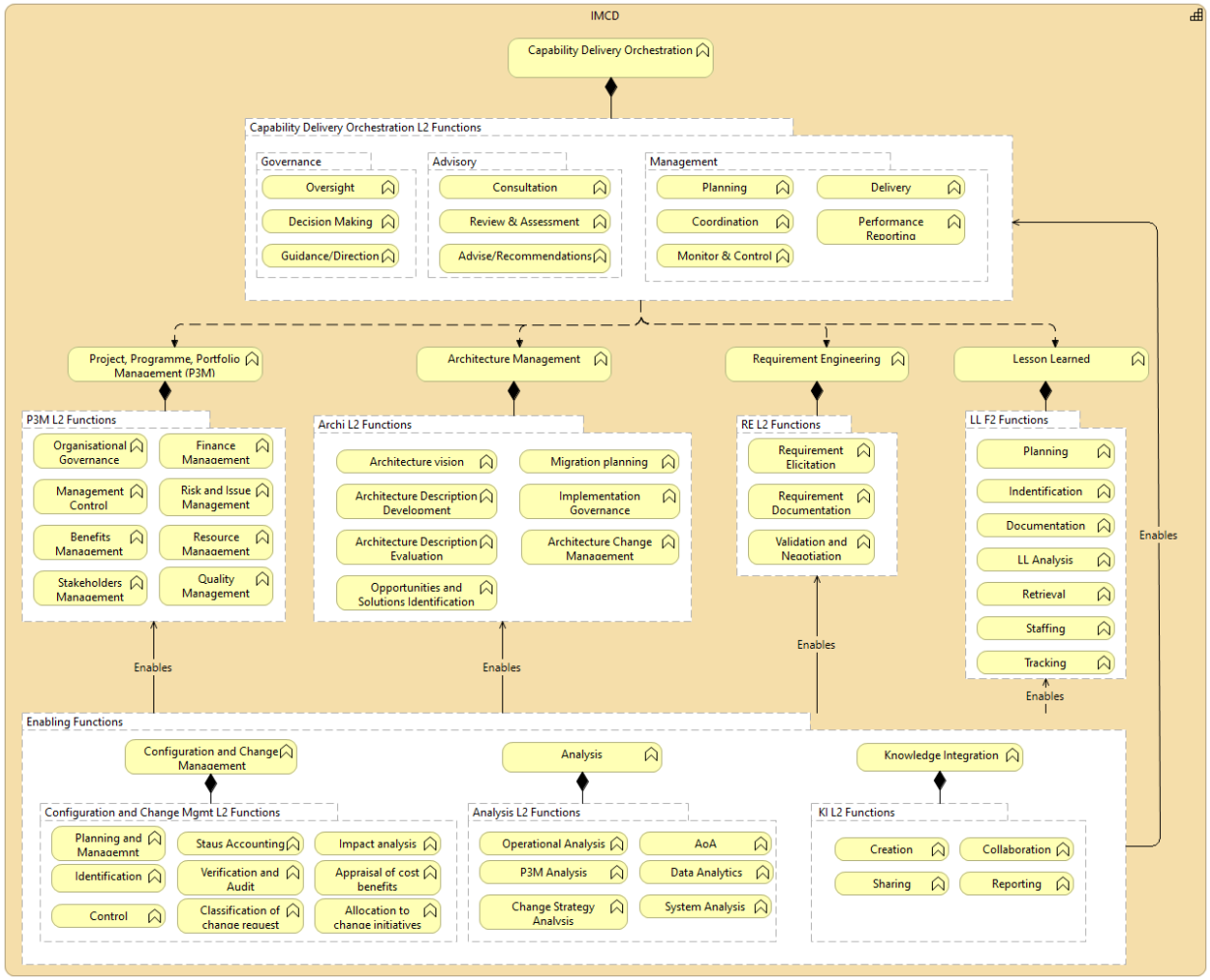

Figure A-2: Functions supported by IMCD

3. Main functions that IMCD will support:

3.1. Capability Delivery Orchestration. Provides the stakeholders with the ability to direct, coordinate, and monitor the execution of The Model across all programmes by facilitating the prioritization, alignment, de-confliction, coordination, and synchronization of efforts in the area of capability delivery. The function ensures that the capability change initiatives that are going through the phases of The Model do not encounter bottlenecks due to multiple programmes entering the same phase or reaching the same gate at the same time. The orchestration function ensures that proper business intake analysis is performed to ensure that the amount of governance products being developed by each CMA are commensurate to the resources available. The function also supports the dynamic prioritization of ongoing activity, the monitoring of the execution of the overall process, and the early identification of potential delays.

3.2. Portfolio, Programme and Project Management (P3M). Provides critical information to support decision-enabling/delivery support for all change activities (capability

delivery programmes and projects). In IMCD, the structure of P3M functionality is based on the core perspectives of the P3M Maturity Model (P3M3)® (with quality management added for special emphasis):

3.2.1. Governance Management addresses development and maintenance of organizational controls that ensure the delivery of initiatives aligns with strategic direction, with attendant policies and procedures for ownership and control.

3.2.2. Management Control covers the internal controls used by initiatives to ensure the achievement of objectives within the tolerances and boundaries approved by governance.

3.2.3. Benefits Management focuses on ensuring that the organization defines and manages the value that it anticipates from the change initiative.

3.2.4. Risk Management is aimed at managing threats to, and opportunities enabled by, change initiatives throughout their lifecycles.

3.2.5. Stakeholder Management includes identification of, analysis and communications with stakeholders to achieve objectives in terms of support and engagement.

3.2.6. Finance Management ensures that the likely costs of the initiative are captured and evaluated within a formal business case and that costs are categorized and managed over the investment lifecycle.

3.2.7. Resource Management addresses the management of all types of resources required for delivery of the initiative, including human resources, infrastructure, information technology, and access to key assets and tools.

3.2.8. Quality Management focuses on assuring fit-for-purpose products and services throughout an initiative's lifecycle (including management products and end-item capabilities).

3.3. Architecture Management. Enables the management of architectures across all capabilities and levels (Enterprise, Capability, and Project) in support to design and requirement definition by providing the users with a single (Enterprise wide) virtual architecture repository[9]. It enables the users to perform modelling, architecture and design activities to ensure completeness, consistency and clarity of requirements and produce relevant NATO Architecture Framework (NAF) v4 perspectives in accordance with TOGAF methodology (reference G). It ensures the traceability:

3.3.1. Between architecture levels;

3.3.2. Between architectures and requirements;

3.3.3. Between architectures and programmes / projects.

3.4. Requirement Engineering. Enables users to conduct activities related to requirement engineering in accordance with relevant standards (ISO/IEC/IEEE 15288:2015, NATO Standardization Agreements (AAP-20, AAP-48)) and best practices recognized by Industry (e.g. International Requirement Engineering Board (IREB)), providing users

[9] The single (Enterprise wide) virtual architecture repository does not necessarily imply a centralized repository.

with a single (Enterprise wide) virtual architecture repository[10]. Specifically, it supports the elicitation, documentation, validation, and negotiation of requirements through the entire lifecycle of the capabilities by ensuring the traceability:

3.4.1. Among requirements of any level and type;

3.4.2. Between requirements and architectures;

3.4.3. Between requirements and programmes / projects.

3.5. Lessons Learned. Enables identification, staffing, documentation, analysis, decision support, tracking, storage and retrieval of Lesson Learned (LL) and associated recommendations.

4. Lists the IMCD supporting functions.

4.1. These functions integrate and support the functions listed above:

4.1.1. Analysis: The Analysis Function refers to structured qualitative and quantitative practices that identify operational needs, determine integrated DOTMLPFI solutions and inform development processes to support the efficient, effective delivery of capabilities and stakeholder value.

4.1.1.1. The Operational Analysis function determines capability needs in relation to the operational context, operational risk and the criticality of assigned missions. This analysis focuses on identifying desired effects, performance gaps in achieving those effects and the expected benefits of improved capabilities. Operational analysis provides the foundational understanding of the problem (or opportunity) space, as well as initial thoughts on the nature of the solution space.

4.1.1.2. The P3M analysis function provides a set of widely applicable analytical sub-functions that support P3M processes throughout the enterprise, from planning through execution. The sub-functions include Scope Analysis, Resource Analysis, Schedule Analysis, Cost Analysis, Risk & Issue Analysis, and Performance Analysis. The sub-functions represent generic management practices that may be invoked at any point in a change initiative lifecycle and at any level of the P3 hierarchy.

4.1.1.3. The Change Strategy Analysis focuses on the discovery or imagining of possible change initiatives that will enable the enterprise to address its operational needs. The analysis frames and evaluates possible courses of action (COAs) across all aspects of DOTMLPFI, defining the future and transition states needed to effect the necessary changes. The analysis provides context to requirements analysis and design definition for a given change initiative.

4.1.1.4. The Analysis of Alternatives (AoA) function compares the operational effectiveness, suitability, risk, and life cycle cost (or total ownership cost, if applicable) of different alternatives under consideration to address the

[10] The single (Enterprise wide) virtual requirements repository does not necessarily imply a centralized repository.

operational needs. The analysis support decision-makers in making trades among compared measures and identifying the preferred alternative(s). The AoA documents the rationale for identifying and recommending the preferred solution(s).

4.1.1.5. The Data Analytics function collects, integrates and processes data to discover useful information, inform conclusions and support decision-making via reporting and visualisation. The function allows users to conduct descriptive, diagnostic, predictive and prescriptive data analysis functions on a wide range of enterprise data related to common funded capability delivery.

4.1.1.6. The System Analysis function provides solution system data and information to support technical understanding and decision-making across the life cycle. The function provides quantitative assessments and estimations based on analyses such as cost analysis, affordability analysis, technical risk analysis, feasibility analysis, effectiveness analysis, and other critical quality characteristics. The results serve as input into various technical decisions, providing confidence in the adequacy and integrity of the system definition toward achieving an effective and efficient solution.

4.1.2. **Configuration and Change Management**. Establishes and maintains consistency of P3M information, requirements, architectures, and lesson learned throughout the capability lifecycle by supporting the execution of configuration management (CM) planning, configuration identification, configuration control (CC), configuration status accounting, and configuration verification and audit[11]. Ensures that changes are planned, analyzed, understood, and implemented in accordance with the best practices[12]. It supports the identification and description of the change, the analysis of the impact of it and the associated cost and benefits, its prioritization and authorization, and its implementation in a way that preserves integrity and consistency of the programme/capability configuration.

4.1.3. **Knowledge Integration**. Provides users the ability to capture/create information in standard, structured way, to share it and make it discoverable, to collaborate, and generate reports (including dashboards, scorecards, etc.). Furthermore, this function provides the user with the ability to aggregate report data according to configurable rules to support hierarchical reporting and data analysis and to filter and query reporting data according to customizable search criteria. The function maximizes automation of routine reports whilst allowing the users to create new custom views based on ad hoc queries.

[11] Based on ISO 10007:2017
[12] E.g. ISO 9001:2015

9.2. IMCD will be mainly employed in business support of NATO Enterprise. The desired effect and expected benefits are identified as:

- Desired Effects:
  - Provision of accurate, timely, reliable and authoritative management information relating to common funded capabilities, across all DOTMLPFI lines of development and throughout the capability delivery life cycle;
  - Facilitate effective capability delivery by allowing the Capability Management Authorities to coordinate the prioritization of capability delivery and, as required, to provide a coordinated Capability Management Authorities' perspective to Governance;
  - Support the application of a programmatic approach to capability delivery across all DOTMLPFI lines of effort, based on single project-level authorisations;
  - Support the use of programme and project level tolerances;
  - Support coordination of capability delivery information among all stakeholders using a single information management entry point per network to access the authoritative information;
  - Facilitate access to Governance layer products, screening reports from Advisory Entities and Governance Decision Sheets;
  - Facilitate routine reporting requirements to Governance;
  - Facilitate routine management reviews of common funded capabilities across cost, scope, schedule, performance and risk;
  - Enable coherence of architecture products;
  - Enable the identification of capability gaps across all capability lines of development;
  - Facilitate requirements management, traceability, quality assurance and dependency management for coherence in NATO capability delivery;
  - Maintaining a resilient single version of the truth that supports the turnover of staff, and more efficient and effective data management/interrogation;
  - Facilitate effective coordination among all stakeholders by supporting timely dissemination of analysed data/information regarding scope, timelines, and costs, using standard interfaces;
  - Facilitate risk management and tolerance consumption monitoring;
  - Facilitate the identification and direction of necessary adjustments to NATO capabilities;
  - Facilitate a common approach to the use of lessons identified/lessons learned across the capability delivery life cycle;
  - Development in response to changes in the strategic environment, if required;
  - Monitor, evaluate, and document the coherent implementation and the progress of change initiatives across NATO's capability development programmes;
  - Provide transparency to Governance on the development and submission of management products on time and within quality expectations;
  - Integration of legacy management information;

- Desired Benefits:
  - Enable informed decision making by nations at decision gates during capability lifecycle;
  - Creation of trust among the stakeholders;
  - Reduced cost, reduced risk and reduced time spent on development and implementation of solutions through the reuse of existing technology, applications and services;
  - Avoiding duplication of efforts.

9.3. The tasking recognizes the need to leverage information that is already available in existing systems to facilitate greater synergies and bring about more effective information coherence. Moreover there is a need to establish visibility of a common set of data that can be relied upon as a "*Single* [authoritative] *source of the truth*", to facilitate continuous, effective coordination and interaction between stakeholders, build an environment of trust and accountability, and support informed decision making by nations.

Annex B to
RFI-ACT-SACT-21-86

OPERATIONAL REQUIREMENT STATEMENT

Information Management for Capability Delivery (IMCD)

Date: 28 October 2019
Version: 2.0

TABLE OF CONTENTS

GENERAL REMARKS

This Operational Requirement Statement (ORS) captures an Enterprise wide need and is initialized by ACT. Therefore not all Elements of the ORS template are applicable.

The operational requirements in this document will be Baselined at Version 2 with the approval of this ORS by Governance.

1. GENERAL DESCRIPTION OF THE CAPABILITY REQUIREMENT

The Common Funded Capability Delivery Governance Model (CFCDGM, at Reference A) identifies the need for effective information management to accelerate the delivery of common funded capabilities. This will, in turn, improve the Alliance's collective performance and improve its overall agility and responsiveness. The model recognizes the need to leverage information that is already available in existing systems to facilitate greater synergies, bring about more effective information coherence, and establish visibility of a common set of data that can be relied upon as a "*Single* [authoritative] *source of the truth*". Furthermore, it clearly states the need to assess whether NATO's existing tools are sufficient to facilitate continuous, effective coordination and interaction between stakeholders, build an environment of trust and accountability, and support informed decision making.

Direction and guidance from the Military Committee (MC) at Reference B, and the Resource Policy and Planning Board (RPPB) at Reference C, reinforces the critical need for an improved information management capability that can support the execution of their Governance roles and responsibilities.

1.1. Overall Mission Area Description

An effective information management capability is required for use by all stakeholders of the Common Funded Capability Delivery Governance Model (hereafter referred to as the New Governance Model – NGM) across the NATO Enterprise; including but not limited to Governance[13], Management[14], and Advisory Entities[15]. The information management capability 'need' is applicable to both legacy and NGM information[16].

1.2. Concept of Operations

The aim is to improve the delivery of common funded capabilities through more effective coordination and interaction between NGM stakeholders. This will be achieved through facilitating, **effective information exchange** (improved transparency and reporting); **improved accuracy and visibility of information** (building trust); **improved coordination** with regard to Capability Programme Management execution (building collaboration and cooperation); and improving the **quality and integrity of all Management products**[17] through a coherent DOTMLPFI approach[18].

13 'Governance' refers to all actions and decisions by consensus by NATO Allies.
14 'Management' refers to actions taken by responsible and accountable authorities (e.g. Strategic Commands and host nations).
15 'Advisory Entities" include NATO International Staff and International Military staff (IS and IMS), who provide governance bodies with advice and recommendations.
16 While the scope of the NGM is limited to "*all new common-funded capabilities and programmes and to all future addenda to existing capability packages*", the information management capability must address both legacy (i.e. NSIP-funded CPs and projects managed under Bi-SC Directive 85-1) ***and*** NGM-scope programmes and projects (i.e. those managed under the NGM (Ref A, Para 13 refers).
17 Management products include the Operational Requirement Statement (ORS), Capability Requirement Brief (CRB), Capability Programmes Plan (CPP), Project Proposal (PP) and Capability Acceptance Report (CAR), as well as any other applicable and relevant documents which support NATO's Common Funded Capability Development and Delivery.
18 Doctrine, Organisation, Training, Materiel, Leadership, Personnel, Facilities and Interoperability.

1.3. Threat

Failure to address the information management capability needs of stakeholders as articulated in References A through E will result in:

1.3.1. A continued lack of transparency in the information that the nations are using to make decisions, which could impede an informed decision by governance;

1.3.2. Continuing issues with programme management performance, including but not limited to the inability to effectively control, monitor and report on programme cost, scope, schedules, tolerances and risks and a lack of cross-programme dependency management;

1.3.3. A lack of effective collection, analysis, documentation and management of requirements over the life cycle with resulting delays in delivering the common funded capabilities that NATO requires to meet its LoA;

1.3.4. Persistence of multiple information sources and a continued shortfall in stakeholder access to accurate, timely and authoritative capability life cycle management information;

1.3.5. The inability to support the definition of business strategies, and to assess the complexity, feasibility, cost and dependencies of strategic change initiatives;

1.3.6. Unsatisfactory coordination between all stakeholders.

1.4. Supported Missions

The proposed information management capability will support and enable the implementation of the Common Funded Capability Delivery processes[19].

1.5. Description of the Shortfalls / New Operational Requirement

In general, the divergence of current information sources, unclear roles and responsibilities, a lack of common reporting, and a lack of transparency in processes related to capability development and delivery have all contributed to inefficient and ineffective capability life cycle management.

Governance, Management Authorities and the Advisory Entities require the ability to effectively coordinate and to manage, prioritize and deliver capabilities to the warfighters at the speed of relevance throughout the capability delivery life cycle, through achieving:

1.5.1. Visibility of capability programmes and their inter-dependencies [OR-1];

19 While the scope of the capability will be 'common funded capability development' it is recognized that it may be equally applicable to the management aspects of non-common funded capability development.

1.5.2. Visibility of the coordination and execution of processes between stakeholders [OR-2];

1.5.3. Traceability of requirements throughout the entire capability development life cycle [OR-3];

1.5.4. A common approach to risk management (threats and opportunities) and change management (tolerances) [OR-4];

1.5.5. Coherence of architecture products between stakeholders [OR-5];

1.5.6. Coherent modelling methods, tools and networks/locations for maintaining and sharing capability development information [OR-6];

1.6. Description of Desired Effects

The proposed information management capability will achieve the following effects:

1.6.1. Provision of accurate, timely, reliable and authoritative management information relating to common funded capabilities, across all DOTMLPFI lines of development and throughout the capability delivery life cycle [DE-1];

1.6.2. Facilitate effective capability delivery by allowing the Capability Management Authorities to coordinate the prioritization of capability delivery and, as required, to provide a coordinated Capability Management Authorities' perspective to Governance [DE-2];

1.6.3. Support the application of a programmatic approach to capability delivery across all DOTMLPFI lines of effort, based on single project-level authorisations [DE-3];

1.6.4. Support the use of programme and project level tolerances [DE-4];

1.6.5. Support coordination of capability delivery products[20] among all stakeholders using a single information management entry point per network to access the authoritative information [DE-5];

1.6.6. Facilitate access to Governance layer products[21], screening reports from Advisory Entities and Governance Decision Sheets [DE-6];

1.6.7. Facilitate routine reporting requirements to Governance [DE-7];

1.6.8. Facilitate routine management reviews of common funded capabilities across cost, scope, schedule, performance and risk [DE-8];

1.6.9. Enable coherence of architecture products [DE-9];

[20] Such as ORS, CRB, CPP, PP, RAP, CAR, DR.

21 Governance-level Products and Contents as defined in AC/335-D(2019)0004 (INV), Resource Policy and Planning Board – The Common Funded Capability Delivery Governance Model Operationalization, dated 21 March 2019 (Ref C).

1.6.10. Enable the identification of capability gaps across all capability lines of development [DE-10];

1.6.11. Facilitate requirements management, traceability, quality assurance and dependency management for coherence in NATO capability delivery [DE-11];

1.6.12. Maintaining a resilient single version of the truth that supports the turnover of staff, and more efficient and effective data management/interrogation [DE-12];

1.6.13. Facilitate effective coordination among all stakeholders by supporting timely dissemination of analyzed data/information regarding scope, timelines, and costs, using standard interfaces [DE-13];

1.6.14. Facilitate risk management and tolerance consumption monitoring [DE-14];

1.6.15. Facilitate the identification and direction of necessary adjustments to NATO capabilities [DE-15];

1.6.16. Facilitate a common approach to the use of lessons identified/lessons learned across the capability delivery life cycle [DE-16];

1.6.17. Development in response to changes in the strategic environment, if required [DE-17];

1.6.18. Monitor, evaluate, and document the coherent implementation and the progress of change initiatives across NATO's capability development programmes [DE-18];

1.6.19. Provide transparency to Governance on the development and submission of management products on time and within quality expectations [DE-19];

1.6.20. Integration of legacy management information [DE-20];

1.7. Description of Desired Benefits

The proposed information management capability will achieve the following desired benefits:

1.7.1. Enable informed decision making by nations at decision gates during capability lifecycle [DB-1];

1.7.2. Creation of trust among the stakeholders [DB-2];

1.7.3. Reduced cost, reduced risk and reduced time spent on development and implementation of solutions through the reuse of existing technology, applications and services [DB-3];

1.7.4. Avoiding duplication of efforts [DB-4];

1.8. Operational Risk Assessment

Not Applicable

1.9. Supporting Analysis

Not Applicable

1.10. NATO Enterprise Aspects

The NATO Enterprise Approach describes the requirement for standardized NATO C3 capabilities and interoperable Information and Communication Technology (ICT) services for the fulfilment of NATO's goals and objectives and for the conduct of NATO's daily business process activities, operation, training and exercises.

While the information management capability is primarily focused on improving NATO capability delivery, as set out in the NGM , it will also need to address Enterprise wide needs, and in particular support the establishment of a NATO Enterprise Architecture (EA) discipline as required by the Alliance C3 Strategy.

2. OPERATIONAL PERFORMANCE

The information management capability will support the information management needs and expectations of all stakeholders that will be identified in later stakeholder analysis (i.e. elicited during CRB and CPP development stages).

The definition of detailed performance parameters (including KPI) and constraints will be provided during the following stages of the NGM.

3. IN SERVICE SUPPORT

The In-Service support requirements of the proposed information management capability are:

3.1. Accessibility: The capability has to grant easy and simultaneous (filtered) access to information for stakeholders working at different security classification levels (NS, NR and NU) [OR-7];

3.2. Interoperability: The capability has to have the ability to exchange relevant data and information seamlessly between the various tools used by different stakeholders in accordance with Alliance C3 Strategy (Ref H) [OR-8];

3.3. Availability: N/A

3.4. Modularity, Flexibility, and Scalability: The capability must be responsive to evolving needs of any stakeholders [OR-9];

4. COMMANDER'S STATEMENT

Not Applicable

4.1. Operational Impact Statement

Not Applicable

4.2. Operational Requirements Prioritization

4.2.1. Recognizing the large scope of the task including the huge number of stakeholders, the information management capability development needs a prudent transition that is sympathetic to the resources available and stakeholder prioritization, which will be further described in the next stages of the NGM;

4.3. Delivery Timeline

The information management capability deliverable timelines will be defined during the next phases of the NGM.

5. ADDITIONAL INFORMATION FOR INITIAL ELIGIBILTY ASSESSMENT

Nations approved the NGM at the July 2018 Summit with expectations of implementing an information management capability[22] that would deliver the required coordination benefits.

This ORS is requesting approval to proceed to Stage 2 (Requirements Development) of the NGM and development of a detailed CRB, which is recommended to ensure sufficient funding is available for CPP development.

6. INDICATIVE INFORMATION FOR AFFORDABILITY ASSESSMENT

Not Applicable

7. Contacts

7.1 ORA/CUA Point of Contact

HQ SACT CMF Representative, DCOS CAPDEV Front Office
Mr. Jacques Matz, (jacques.matz@act.nato.int)

7.2 Capability Monitor (Proposed)

HQ SACT CAPDEV PMO Branch Head
Colonel Giorgio Piccirillo (ITA-A) (giorgio.piccirillo@act.nato.int)

22 PO(2018)0259, The Common Funded Capability Delivery Governance Model, dated 5 June 2018, Annex 1, No. 10

8. ANNEX:

A. Executive Summary

9. REFERENCES:

a. PO(2018)0259, The Common Funded Capability Delivery Governance Model, dated 5 June 2018.

b. IMSM-0158-2019 (INV), Military Committee Considerations and Guidance for the Implementation of the Common Funded Capability Delivery Governance Model, dated 12 June 2019.

c. AC/335-D(2019)0004 (INV), Resource Policy and Planning Board – The Common Funded Capability Delivery Governance Model Operationalization, dated 21 March 2019.

d. Terms of Reference Capability Management Authorities in the context of the Capability Management Function promulgated 20 September 2018.

e. Draft Overarching Directive for the management aspect of common funded capability delivery V1.0 dated 11 October 2018.

f. AC/322-N(2017)0074 , NATO Enterprise Architecture Directive, 12 June 2017.

g. C-M(2014)0061, NATO Enterprise Approach for the Delivery of C3 Capabilities and the Provision of ICT Services, 14 November 2014.

h. C-M(2018)0037, Alliance C3 Strategy, 13 July 2018.

i. C-M(2015)0041-REV2, Alliance C3 Policy, 20 December 2018.