Headquarters Supreme Allied Commander Transformation Norfolk, Virginia



REQUEST FOR INFORMATION RFI-ACT-SACT-23-42

AMENDMENT#1

This document contains a Request for Information (RFI) Call for Nations and Industry input to provide elements of NATO's

Education, Training, Exercises and Evaluation (ETEE) Functional Services (FS) Capability

Those wishing to respond to this RFI should read this document carefully and in its entirety, and follow the guidance provided.

This RFI is open to NATO Nations and Industry that originate or are chartered/incorporated within NATO Nations.

	Transformation RFI 23-42, Amendment #1 ral Information
Request For Information No.	23-42, Amendment #1
Project Title	Request for Nations and Industry input to provide elements of NATO's Education, Training, Exercises and Evaluation (ETEE) Functional Services (FS) Capability.
Due date for questions concerning requested information	1000 hours EST, Norfolk, Virginia, USA on 17 AUG 2023
Due date for submission of requested information	Lessons Learned: 1000 hours EST, Norfolk, Virginia, USA on 31 AUG 2023
	CT&E, Evaluations and E&IT: 1000 hours EST, Norfolk, Virginia, USA on 28 SEP 2023
Contracting Office Address	NATO, HQ Supreme Allied Commander Transformation (SACT) Purchasing & Contracting Suite 100 7857 Blandy Rd, Norfolk, VA, 23511-2490
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	ponses to this RFI must be sent <u>via email</u> to f contact listed above.

1 INTRODUCTION

1.1 **Summary.** Headquarters Supreme Allied Commander Transformation (HQ SACT) is issuing this Request for Information (RFI) in order to engage with Nations and Industry. The objective of this RFI is to identify existing and/or emerging technologies, systems and services in the area of Education, Training, Exercises and Evaluation (ETEE) Functional Services (FS). Identification of these capabilities will be used to support the NATO Governance decision-making on Common-Funded Capability Development.

1.2 This in an RFI **ONLY**. 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; therefore, HQ SACT will not accept unsolicited proposals in respect to this RFI.

1.3 The purpose of this RFI is to involve Nations and Industry, through collaboration, in the development of the final set of ETEE FS Capability Requirements (CRs), the Capability Architecture, and to identify potential existing solutions for the ETEE FS Capability.

1.4 HQ SACT does not make any commitment to procure any of the systems, products or services 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. Further, respondents are advised that HQ SACT will not pay for any information or administrative costs incurred in responding to this RFI. The costs for responding to this RFI shall be borne solely by the responding party. Not responding to this RFI does not preclude participation in any subsequent RFP, if issued in the future.

2 PROGRAMME DESCRIPTION

2.1 **Background.** NATO ETEE FS enable the Alliance to conduct the full range of NATO ETEE activities and events to support the NATO ETEE roles and responsibilities and to, ultimately, improve Alliance readiness and operational effectiveness.

2.2 **Current State.** NATO ETEE FS currently consist of a number of disparate, standalone and stove piped systems and prototypes across the various areas of ETEE i.e., Education and Individual Training (E&IT), Collective Training & Exercises (CT&E) and Evaluations as well as the associated Lessons Learned (LL) systems.

2.3 **Desired End State.**

a. NATO ETEE FS shall be compliant with applicable C3, CIS Security, Information Management, NISP and STANAG requirements¹.

¹ Applicable sections of these documents are referenced in the Service Policy views in Annex A. The documents can be made available if necessary.

b. NATO ETEE FS shall also ensure data and information exchange with relevant services provided by other capabilities, both current and those currently under development, and commercial services, as necessary.

c. NATO ETEE FS shall provide:

• A coherent federated enterprise architecture that allows 'plug-andplay' interoperability across potentially diverse applications;

• Simultaneous collaborative working environments regardless of location;

• Common data repositories that aggregate local and global data, support automated data exchange and allow personnel across the NATO Enterprise to access, generate, organize, retrieve, exploit, store and dispose of associated data and information;

- Expandable capability and capacity; and
- Full lifecycle support.

2.4 **Programme Status**

a. At this time, a Capability Programme Plan (CPP) is under development which aims to direct the necessary actions across the NATO-recognised lines of development including: doctrine, organization, training, materiel (including software), leadership, personnel, facilities and interoperability.

b. The CPP will consist of a rigorous Analysis of Alternatives (AoA) intended to assist decision makers in the selection of a solution that offers the Alliance the most value for money. These solutions are informed by this RFI and consider the full spectrum of possible alternatives including considerations of "Adopt"-ing a solution, "Buy"-ing (acquiring a solution from industry), or "Create"-ing (developing a solution bespoke to NATO), known as ABC. Options are evaluated along the lines of operational effectiveness, risk, timeline and life cycle costs.

3 HQ SACT FRAMEWORK FOR COLLABORATIVE INTERACTION

3.1 ACT has implemented a Framework for Collaborative Interaction (FFCI) to increase opportunities for industry to contribute to ACT's capability development efforts through collaborative work. Extensive information on the HQ SACT FFCI initiative can be found on the ACT website being developed to support FFCI projects at http://www.act.nato.int/ffci.

3.2 No FFCI agreement is required to respond to this RFI. However, the principles underlying the FFCI initiative apply to this RFI.

4 REQUESTED INFORMATION

4.1 This RFI will be conducted in three (3) distinct phases:

a. <u>Phase I</u>: The first phase consisted of an "Industry Day" held 11 – 13 JUL 2023 at the Joint Force Training Centre (JFTC) in Bydgoszcz, POL. This event was an open Question and Answer (Q&A) session during which stakeholders were available to discuss and answer questions on the initial draft CRs and Capability Architecture². The goal of this event was to engage with Industry and Nations in an effort to finalise the CRs and Capability Architecture such that they are relevant and clear not only to stakeholders but also to potential vendors and suppliers.

NOTE: While participation in Phase I was encouraged, it is **NOT** required for participation in Phase II.

b. <u>Phase II</u>: Based on the discussions and inputs provided during Phase I, the CRs and Capability Architecture have been revised and are included at Annex A. Additionally, a survey (included at Annex B) has been developed to allow Nations and industry to provide information on, and to self-evaluate, potential solutions for consideration to meet the operational requirements for NATO's future ETEE FS capability.

The survey will allow respondents to provide a brief overview of their capability, to complete a self-assessment of their capability against the CRs and to provide initial project estimates³. The information collected in this survey will be used to support identification of participants for Phase III, to inform the AoA for the CPP and to help establish funding and programme tolerances relating to cost, scope, schedule, performance and risk for future potential acquisition activities.

The **required responses for Phase II** shall include survey responses for potential solutions. Responses shall not contain any classified information. For the survey, information shall be entered into the Microsoft Excel spreadsheet included at Annex B. The information provided in the survey shall include:

- A Capability Overview,
- A Capability Requirements Self-assessment, and
- Initial project estimates

Responses for capabilities related to Lessons Learned will be required earlier that those for capabilities related to CT&E, Evaluations and E&IT due to the scheduling of Phase III events. If your capability covers multiple areas, e.g., Lessons Learned

² The Capability Architecture is in accordance with the NATO Architecture Framework (NAF), Version 4.

³ The estimates provided in the initial project estimates are intended to be rough order of magnitude (ROM) estimates and are <u>NON-BINDING</u>. Range estimates are acceptable.

and CT&E, responses may be divided, if possible. If it is not possible to do so, please ensure your full submission is received by the Lessons Learned deadline (refer to Paragraph 4.4).

NOTE: Participation in Phase II is **mandatory** for potential selection for participation in Phase III. Participants for Phase III will be selected based on an analysis of the responses received in Phase II.

NOTE: Combined responses from industries, Nations, industries and Nations, etc., to fulfil all or sections of the requirements will be acceptable in Phase II.

b. **Phase III:** Phase III will consist of two (2) events.

• Phase IIIa. This event will consist of trials and demonstrations of potential lessons learned solutions and is currently scheduled to be held 3 – 5 OCT 2023 at the Joint Force Training Centre (JFTC) in Bydgoszcz, POL. As noted previously, participants for Phase III will be selected based on an analysis of the responses received in Phase II.

• Phase IIIb. This event will consist of trials and demonstrations of potential CT&E, Evaluation and E&IT solutions. It is currently planned for January 2024 in Great Britain. The exact dates and location will be provided to those selected to participate in the event.

The **required responses from selected participants for Phase IIIa** shall be confirmation of intention to participate in the trials and demonstrations currently scheduled to be held 3 - 5 OCT 2023 at JFTC in Bydgoszcz, POL. The response shall include your intent to participate in the demonstrations, the expected number of participants from your organisation and any specific requirements for demonstrating potential solutions.

NOTE: The dates and/or location for Phase IIIa are subject to change. A decision confirming the dates and location will be made at the end of the response period for Lessons Learned submission. Selected participants will be notified via the POCs provided (refer to Paragraph 4.1.a) of the confirmed dates and location, as well as specific information for the event.

The **required responses from selected participants for Phase IIIb** shall be confirmation of intention to participate in the trials and demonstrations in January 2024 (dates and location to be confirmed). The response shall include your intent to participate in the demonstrations, the expected number of participants from your organisation and any specific requirements for demonstrating potential solutions.

NOTE: Combined demonstrations from industries, Nations, industries and Nations, etc., to fulfil all or sections of the requirements will be acceptable in both Phase IIIa and Phase IIIb.

4.2 **Eligibility to Respond.** Only NATO Nations and Industry that originate or are chartered/incorporated within NATO Nations are eligible to respond to this RFI. Companies from Partner Nations who want to participate should partner with a primary company headquartered within a NATO Nation.

4.3 **Responses to the RFI.** The response(s) to this RFI may be submitted via e-mail to <u>all</u> the POCs listed on page 2 of this RFI.

4.4 **Response Dates.**

a. Responses for Phase II of this RFI relating to Lessons Learned must be received by 1000 hours EST, Norfolk, Virginia, USA on 31 AUG 2023.

b. Responses for Phase II of this RFI relating to CT&E, Evaluations and E&IT must be received by 1000 hours EST, Norfolk, Virginia, USA on 28 SEP 2023.

NOTE: As stated previously, if your capability covers multiple areas, e.g., Lessons Learned and CT&E, responses by be divided, if possible. If it is not possible to do so, please ensure your full submission is received by the Lessons Learned deadline.

c. The response date for Phases IIIa and IIIb will be set once participants are selected.

4.5 **Clarifications and Questions.**

a. Inquiries of a technical nature about this RFI shall be submitted by e-mail to <u>all</u> the POCs listed on page 2 of this RFI. Inquiries must be received by 1000 hours EST, Norfolk, Virginia, USA on 17 AUG 2023. Questions shall not contain proprietary and/or classified information.

b. Answers will be posted on the HQ SACT P&C website at: <u>www.act.nato.int/contracting</u>.

c. HQ SACT reserves the right to seek clarification on any submission.

4.6 **Intent/Objectives.** The intent of this RFI is to involve Nations and Industry, through collaboration, in final development of the ETEE FS CRs and Capability Architecture. The objective is to identify potential solutions for the ETEE FS Capability.

4.7 **Expected Benefits to Respondents.** National and Industry participants will have the chance to propose and demonstrate state-of-the-art systems, products and services in the area of ETEE FS to NATO.

4.8 **Expected Benefits to NATO.** The expected benefits include collaboration with Nations and industry in the finalisation of the ETEE FS CRs and Capability Architecture, and the identification potential state-of-the-art solutions for the ETEE FS Capability.

Additionally, information collected in Phase II will help establish funding as well as programme tolerances relating to cost, scope, schedule, performance and risk for future potential acquisition activities.

4.9 **Classified Information.** NATO information that is CLASSIFIED is not included herein but can be passed to authorized industry recipients with appropriate clearances and control measures.

4.10 **Proprietary information.** Proprietary information, if any, should be minimized and clearly marked as such. HQ SACT will treat proprietary information with the same due care as the command treats its own proprietary information, and will exercise due caution to prevent its unauthorized disclosure. Please be advised that all submissions become HQ SACT property and will not be returned.

5 NON-DISCLOSURE PRINCIPLES AND/OR NON-DISCLOSURE AGREEMENT WITH THIRD PARTY COMPANY

5.1 Please be informed that HQ SACT may contract a company to conduct the AoA investigation in support of this project. HQ SACT will follow nondisclosure principles and possibly conclude a Non-Disclosure Agreement (NDA) with that company to protect submitted information from further disclosure. As the third party beneficiary of this nondisclosure, this RFI serves to inform you of how HQ SACT plans to proceed and of HQ SACT's intent to protect information from unauthorized disclosure, requiring the third party company to protect the disclosed information using the highest degree of care that the company utilizes to protect its own Proprietary Information of a similar nature, and no less than reasonable care. This includes the following responsibilities and obligations:

a. The third party company receiving the information shall not, without explicit, written consent of HQ SACT:

• Discuss, disclose, publish or disseminate any Proprietary Information received or accessed under nondisclosure principles and subject to an NDA, if an NDA is concluded;

• Use disclosed Proprietary Information in any way except for the purpose for which it was disclosed in furtherance of the goals of the instant project, collaboration, activity or contract; or

• Mention the other Party or disclose the relationship including, without limitation, in marketing materials, presentations, press releases or interviews

b. Exceptions to Obligations. The third party company receiving the information may disclose, publish, disseminate, and use Proprietary Information:

• To its employees, officers, directors, contractors, and affiliates of the

recipient who have a need to know and who have an organizational code of conduct or written agreement with the recipient requiring them to treat the disclosed Proprietary Information in accordance with nondisclosure principles and the NDA (if executed);

• To the extent required by law; however, the company receiving the information will give HQ SACT prompt notice to allow HQ SACT a reasonable opportunity to obtain a protective order or otherwise protect the disclosed information through legal process; or

• That is demonstrated in written record to have been developed independently or already in the possession of the company receiving the information without obligation of confidentiality prior to the date of receipt from HQ SACT; that is disclosed or used with prior written approval from HQ SACT; obtained from a source other than HQ SACT without obligation of confidentiality; or publicly available when received.

c. Any response to this RFI is considered to establish consent to this process. A copy of the NDA, if or when concluded, can be provided on request.

6 EXCEPTIONS TO OBLIGATIONS

6.1 The third party company receiving the information may disclose, publish, disseminate, and use Proprietary Information:

a. To its employees, officers, directors, contractors, and affiliates of the recipient who have a need to know and who have an organizational code of conduct or written agreement with the recipient requiring them to treat the disclosed Proprietary Information in accordance with nondisclosure principles and the NDA (if executed);

b. To the extent required by law; however, the company receiving the information will give HQ SACT prompt notice to allow HQ SACT a reasonable opportunity to obtain a protective order or otherwise protect the disclosed information through legal process; or

c. That is demonstrated in written record to have been developed independently or already in the possession of the company receiving the information without obligation of confidentiality prior to the date of receipt from HQ SACT; that is disclosed or used with prior written approval from HQ SACT; obtained from a source other than HQ SACT without obligation of confidentiality; or publicly available when received.

6.2 Any response to this RFI is considered to establish consent to this process. A copy of the NDA, if or when concluded, can be provided on request.

7 ORGANIZATIONAL CONFLICTS OF INTEREST

7.1 As Procurement/Contracting involves the expenditure of funds allocated by the member nations, we must always strive to maintain trust in and preserve the integrity of this Headquarters' procurement procedures. It is essential that our procedures facilitate transparent and robust competition from industry. Contractor and subcontractor personnel performing work under an HQ SACT contract may receive, have access to, or participate in the development of sensitive information relating to source selection methodology, cost or pricing information, budget information, and future specifications, requirements or Statements of Work or perform evaluation services that may create a current or subsequent Organizational Conflict of Interests (OCI). Similarly, companies responding to an HQ SACT RFI may create a subsequent OCI determination when pursuing future NATO contracts generated from that RFI. Each individual contracting situation will of course be examined on the basis of its particular facts and the nature of any proposed contract. The exercise of common sense, good judgment, and sound discretion is required in both the decision on whether a significant potential conflict exists and, if it does, the development of an appropriate means for resolving it. In anticipation of a future OCI determination, any company either awarded an HQ SACT contract or responding to an HQ SACT RFI while also anticipating bidding on future NATO contracts relating to this work, should consider having a mitigation plan in place to address or mitigate any OCI concerns now or in the future.

8 FOLLOW-ON

8.1 Any and all information provided as part of the submission in response to this RFI may be considered in developing any future HQ SACT requirements.

8.2 The data collected in response to this RFI will be used to develop a report to inform the ETEE FS CPP. The report will provide an assessment to support a decision as to whether NATO should pursue an ABC approach to meet ETEE FS requirements.

8.3 In the event that there is a competitive bidding process later as part of NATO Common Funded Capability Development, the provision of data, or lack of, will not prejudice any respondent.

9 SUMMARY

9.1 The purpose of this RFI is to involve Nations and Industry, through collaboration, in final development of the ETEE FS Capability CRs and Capability Architecture, and to identify potential solutions for the ETEE FS Capability. HQ SACT has not made a commitment to procure any of the systems, products or services 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 emphasised that this is an RFI only, and not an RFP of any kind. Thank you in advance for your time and submission to this RFI.

Education, Training, Exercises and Evaluations (ETEE) Functional Services (FS)

Capability Architecture Volume



Version 4.0

Products are in **DRAFT** form and have yet to be fully vetted and peer-reviewed.

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C1 – Capability Taxonomy (CT&E)

NAFv3: NCV-2

The C1 Viewpoint is concerned with the identification of capabilities, and their organization into specialization hierarchies (taxonomies) independent of their implementation. This view identifies required capabilities relevant to Collective Training and Exercises (CT&E), and organizes the capabilities into a specialization hierarchy.



C1 – Capability Taxonomy (Evaluations)

NAFv3: NCV-2

The C1 Viewpoint is concerned with the identification of capabilities, and their organization into specialization hierarchies (taxonomies) independent of their implementation. This view identifies required capabilities relevant to Evaluations, and organizes the capabilities into a specialization hierarchy.



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Visualisations

Product Development and Dissem ination

NAFv3: NCV-2

C1 – Capability Taxonomy (Lessons Learned)

The C1 Viewpoint is concerned with the identification of capabilities, and their organization into specialization hierarchies (taxonomies) independent of their implementation. This view identifies required capabilities relevant to NATO Lessons Learned (LL), and organizes the capabilities into a specialization hierarchy.



C1 – Capability Taxonomy (E&IT)

NAFv3: NCV-2

The C1 Viewpoint is concerned with the identification of capabilities, and their organization into specialization hierarchies (taxonomies) independent of their implementation. This view identifies required capabilities relevant to Education and Individual Training (E&IT), and organizes the capabilities into a specialization hierarchy.





C2 – Enterprise Vision

NAFv3: NCV-1

The C2 Viewpoint is concerned with scoping the architecture effort and providing the strategic context for the capability described in the architecture. This view describes the vision and goals for the capability. It presents the elements of the ETEE FS Capability Programme and their relationships, and serves to facilitate the understanding of the Programme and the traceability among elements by scoping the architecture effort and providing the strategic context for the capabilities described in the architecture.



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	Capabilit	y Develo	pment Timeline
1	CPP	Project	Delivery & Acceptance
l	СРР	Proposals	IOC EOC FOC

C3 – Capability Dependencies

NAFv3: NCV-4

The C3 Viewpoint is concerned with identification of dependencies between capabilities, and defining the logical composition of capabilities (i.e., capability clusters). This view includes all identified dependencies for the ETEE FS Capability.



Commercial Training Management Systems (TMS)
Commercial Financial Management Systems
Commercial Virtual Meeting Platforms
Commercial Event Management Platforms
Commercial Training Development Services/Tools
IT Service Management (ITSM)

	Relevant Workst	rands	
>	NATO Digital Transformation	NATO 2030 – Digital Backbone	NATO Cloud Vision and Strategy
	Data Exploitation	NATO Digital Workplace (NDW)	NATO Public Key Infrastructure (NPKI)

C3 – Capability Interdependencies

NAFv3: NCV-4

The C3 Viewpoint is concerned with identification of dependencies between capabilities, and defining the logical composition of capabilities (i.e., capability clusters). This view includes the overlaps, i.e., interdependencies, in required functionalities identified between the ETEE FS Capability and other Capability Development Programmes currently in use or in development.

Information Management for Capability Development (IMCD)	Next Generation Modeling and Simulation (NexGen M&S)		Information Environment Assessment (IEA)	Strategic Political a Assisted Decision (PM-ADM
Lessons Learned Data Management Data Integration Data Storage Data Exploitation Data Exchange	Exercise Planning Exercise Conduct Data Management Data Integration Data Storage Data Exploitation Data Exchange Reporting		Data Management Data Integration Data Storage Data Exploitation Data Exchange	Data Manager Data Integrat Data Storag Data Exploita Data Exchar
	ETE	E	FS	
Programming/Scheduling Planning Event Management Data Management Data Integration Data Storage Data Exploitation Data Exchange Reporting	Data Management Data Integration Data Storage Data Exploitation Data Exchange		Event Management Personnel Training Data Management Personnel Training Data Integration Personnel Training Data Exchange	Exercise Cond
Wargaming	INTEL and ISR Functional Services		HRSD (SHAPE)	BMD ETEE (N



C4 – Standard Processes (CT&E)

NAFv3: NCV-6

The C4 Viewpoint is concerned with identification of enduring tasks and standard activities relevant for the architecture. This view model describes the recurring Collective Training and Exercises (CT&E) stakeholder processes that ETEE FS will support.

CT&E Processes

Exercise Programming	Exercise Planning and Managemer	nt	
NATO and National Exercise Alignment	Exercise Initiation	Exercise Planning	Exercise Conduct
MTEP Development	Exercise Initiation Development, Approval and Promulgation	OCE Guidance Development, Approval and Promulgation	Exercise Orders (EXORDs) Development Approval and Promulgation
Exercise Guidance Development, Approval and Promulgation	OSE Guidance Development, Approval and Promulgation	TO Development, Approval and Promulgation	Event Management
Exercise Requirements Development, Approval and Promulgation	Initial EO Development and Promulgation	Setting Development, Approval and	Conduct of Training Blocks
Capability Development Integration		Promulgation	Exercise Coordination and Deconfliction
Experimentation Integration		Scenario Development, Approval and Promulgation	During-Exercise Observations
Wargame Integration	Exercise Specification	MEL/MIL Development, Approval and Promulgation	After Action Reviews
Exercise Programming	Final EO Development, Approval and Promulgation	Site surveys – Data Collection	
MTEP Development, Approval and Promulgation	Site surveys – Data Collection	EXPLAN Development, Approval and Promulgation	
CTS POW Development, Approval and Promulgation	EXSPEC Development, Approval and Promulgation	Support Requirements Development, Approval and Promulgation	
MTEP OTP & NNE Portion Development, Approval and Promulgation		Event Management	
CT&E Directive Development, Approval and Promulgation			
SGE Development, Approval and Promulgation (as required)			



C4 – Standard Processes (Evaluations)

NAFv3: NCV-6

The C4 Viewpoint is concerned with identification of enduring tasks and standard activities relevant for the architecture. This view describes the recurring Evaluation/Verification stakeholder processes that ETEE FS will support.

Evaluation/Verification Processes Evaluation Programming Evaluation Planning & Management Evaluation Analysis and Reporting Performance and Trend Assessment Identification of Evaluation/Observation Development, Approval and Promulgation of Requirements Specific and Detailed Evaluation Designs Prepare and Issue Deliverables Prioritise Evaluation/Observation Requirements Support to Certification Development, Approval and Promulgation of Specific Evaluation Directive (SED) Align Evaluation/Observation Requirements with Development, Approval and Promulgation of Resources SACEUR's Annual Evaluation Report (SAER) Development, Approval and Promulgation of Support Requirements Synchronise Evaluation/Observation Activities Transition Relevant Findings and Key Observations with MTEP to NATO LL Process Evaluation Coordination and Deconfliction **Observations** Development, Approval and Promulgation of Evaluation Schemes Populate Daily Situation Reports

Contribution to Verification
Input of Evaluation, CFIT and other ETEE reports into RRT/eRRS
Prioritisation of sites for CFIT visits
Exploitation of RRT/eRRS data
Support to SACEUR's visibility on Force Readiness

C4 – Standard Processes (Lessons Learned)

The C4 Viewpoint is concerned with identification of enduring tasks and standard activities relevant for the architecture. This view describes the recurring Lessons Learned stakeholder processes that ETEE FS will support.



NAFv3: NCV-6

C4 – Standard Processes (E&IT)

NAFv3: NCV-6

The C4 Viewpoint is concerned with identification of enduring tasks and standard activities relevant for the architecture. This view describes the recurring Education and Individual Training (E&IT) stakeholder processes that ETEE FS will support.

evelopment Proc	esse	S					
Strategic Tr	raining	Plan Development		Tr	raining Requirements An	alysis (1	TRA) Development
Annual Discipline	Confer	ence (ADC) Managemen	t		Training Needs Analys	is (TNA)) Development
Systems Approach	i to T	Training (SAT)					
Analysis	Des	sign	Developn	nent	Implementation	۱	Evaluation
Performance Objectives		Training Solution		seware	Course Planning		Course Evaluation
(PO) Development, Approval and		Creation		nt, Approval nulgation	Course Preparation	n	Feedback for Training
Promulgation		Course Control Document (CCD) III			Course Close-out		Improvement
Course Control Document (CCD) I & II	Dev	velopment, Approval and Promulgation					
Development, Approval and Promulgation							
roduction Diamair							
roduction Plannir	ng						
roduction Plannir	ng	Programming Contractions	ourse	Course Co	nduct	Eva	luation
Demand Capture		Iterations			nduct f Course Iterations		ITEP Execution Report
Demand Capture			pproval and	De livery o			
Demand Capture Consolidated Demand Development, Approval an		Iterations	pproval and	Delivery or Event	f Course Iterations Management Course Completion /		ITEP Execution Report evelopment, Approval and
Demand Capture Consolidated Demand Development, Approval an		Iterations	pproval and	Delivery or Event	f Course Iterations Management		ITEP Execution Report evelopment, Approval and
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Demand Capture Consolidated Demand Development, Approval an Promulgation	nd	Iterations	pproval and	Delivery o Event Issuance of 0 Certifica	f Course Iterations Management Course Completion /		ITEP Execution Report evelopment, Approval and
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NAFv3: NONE

C8 – **Planning Assumptions**

The C8 Viewpoint is concerned with identification and description of assumptions that have been made for the implementation of the capability. This view identifies assumptions for the ETEE FS Capability, relevant for the architecture, and includes both constraints for, and benefits of, capability implementation.

Assumption

The ETEE FS capability will provide real-time situational awareness of education and training (E&T) levels.

The ETEE FS capability will provide common data sets to support NATO ETEE functions and outputs more effectively and efficiently.

The ETEE FS capability will provide the capacity and flexibility to support current and future E&T planning, development and execution requirements.

The ETEE FS capability will enable more efficient exchange and exploitation of E&T information and data.

The ETEE FS capability will be in line with current NATO Standardisation Agreements (STANAGs), NATO security policies and NATO information management policies.

During development of the ETEE FS capability, interdependent programmes will be monitored and capabilities developed with respect to common functionalities will be ma duplication of efforts.

	Benefit	Constraint
	х	
	Х	
	Х	
	х	
		х
nade use of in order to avoid	х	х

Cr – Capability Roadmap

NAFv3: NCV-6

The Cr Viewpoint is concerned with the representation of the actual or estimated availability of capabilities over a period of time. This view describes the capability phasing increments and integration plan, to include projects associated with the capability increments.

A Capability implementation plan and phased replacement schedule will be developed for the CPP following the AoA.

S1 – Service Taxonomy

NAFv3: NSOV-1/NAV-2

The S1 Viewpoint is concerned with the identification of service specifications, and their organization into specialization hierarchies (taxonomies). This view shows the main service specifications, organized into specialization hierarchy elements, relevant for the architecture. The services shown with a solid line are in accordance with the NATO C3 Taxonomy, Baseline 6. The services shown with a dashed line are not included in the C3 Taxonomy and may be proposed as additions to the Taxonomy if validated.

	E&IT Services
	Training Requirements Management Services Training Design Services
	CT&E Services
	Objectives Management Services MEL/MIL Management Services Setting Management Services Setting Management Services
Ì	Evaluation Services
	Objectives Management Services
	Lessons Services
	Lessons Management Services
_	
	COI-Specific Services
	Air Domain Services Land Domain Services Maritime Domain Services Services Functional Services Functional Services Functional Services Functional Services Functional Services
Ì	COI Enabling Services
	Operations Planning Services Services Services Simulation Services
	Core Services
	Business Support Services
	Communication and Collaboration Services Management Services (Data Insight Services) ERP Services Geospatial Services Programming Services Data Collection Services
	Platform Services
	Composition Services Data Platform Services Mediation Services Web Platform Services Information Services Middle ware Services
	Infrastructure Services
	Infrastructure Infrastructure Infrastructure

Quality Assurance Services	
Event Management Services	

S4 – Service Functions

The S4 Viewpoint is concerned with the definition of the behaviour of a service in terms of the functions it is expected to perform. This view lists the required service functionalities and service provision aspects, in the form of capability requirements (CRs), for the ETEE FS Capability. The first three tiers of the CRs define the scope of the capability, while tiers 4 and 5 provide further definition. The CRs are prioritized using the MoSCoW prioritisation method to identify the criticality of the requirements.

		CR ID			
Tier 1	Tier 2	Tier 3	Tier 4 Tier 5	Requirement Statement	Priority
1.0				ETEE FS shall facilitate programming of NATO ETEE events and activities within different security domains without provider support.	Must
	1.1			ETEE FS shall facilitate NATO Collective Training and Exercises (CT&E) and Evaluations/Verifications programming within different security domains without provider support.	Must
		1.1.1		ETEE FS shall facilitate programming of NATO Exercises.	Must
			1.1.1.1	ETEE FS shall facilitate the collection of NATO and National exercise plans.	Must
			1.1.1.2	ETEE FS shall facilitate the collection of NATO CT&E requirements.	Must
			1.1.1.2	1 ETEE FS shall facilitate the prioritisation of NATO CT&E requirements.	Must
			1.1.1.3	ETEE FS shall facilitate the management of NATO Exercise programme plans as defined in CR 4.5.	Must
			1.1.1.3	1 EETE FS shall be capable of identifying scheduling conflicts automatically in NATO Exercise programme plans.	Must
			1.1.1.3	2 EETE FS shall be able to provide visualizations of NATO Exercise plans in user-defined formats.	Must
			1.1.1.4	ETEE FS shall facilitate the management of NATO Collective Training Support requirements as defined in CR 4.5.	Must
			1.1.1.5	ETEE FS shall facilitate the management of the Open to Partners and Non-NATO Entities (OTP & NNE) portion of the MTEP as defined in CR 4.5.	Must
		1.1.2		ETEE FS shall facilitate the programming of NATO Evaluations/Verifications.	Must
			1.1.2.1	ETEE FS shall support the collection of NATO Evaluation/Verification requirements.	Must
			1.1.2.1	1 ETEE FS shall facilitate the prioritisation of NATO Evaluation/Verification requirements.	Must
			1.1.2.2	ETEE FS shall facilitate the management of NATO Evaluation/Verification programme plans as defined in CR 4.5.	Must
			1.1.2.2	1 EETE FS should be capable of automatically identifying scheduling conflicts in NATO Evaluation/Verification programme plans.	Should
			1.1.2.2	2 EETE FS should be capable of providing visualizations of NATO Evaluation/Verification programme plans in user-defined formats.	Should
	1.2			ETEE FS shall facilitate NATO Education and Individual Training (E&IT) programming within different security domains without provider support.	Must
		1.2.1		ETEE FS shall facilitate the identification of NATO E&IT training requirements.	Must
			1.2.1.1	ETEE FS shall facilitate the collection of training requirements.	Must
			1.2.1.2	ETEE FS shall facilitate the alignment of training requirements with available training opportunities.	Must
			1.2.1.3	ETEE FS shall facilitate the management of Training Requirements Analysis (TRA) reports as defined in CR 4.5.	Must
		1.2.2		ETEE FS shall facilitate the analysis of training requirements.	Must
			1.2.2.1	ETEE FS shall facilitate the management of training analysis products as defined in CR 4.5.	Must
		1.2.3		ETEE FS shall facilitate the design of training solutions.	Must
			1.2.3.1	ETEE FS shall facilitate the management of training design products as defined in CR 4.5.	Must
		1.2.4		ETEE FS shall facilitate the management of training solutions.	Must
			1.2.4.1	ETEE FS shall facilitate the management of training support products and materials as defined in CR 4.5.	Must
			1.2.4.2	ETEE FS shall facilitate the programming of training solutions.	Must
2.0				ETEE FS shall facilitate management and execution of NATO ETEE events and activities within different security domains without provider support.	Must
	2.1			ETEE FS shall facilitate the management and execution of NATO Exercises within different security domains without provider support.	Must
		2.1.1		ETEE FS shall facilitate the management of CT&E planning products as defined in CR 4.5.	Must

NAFv3: NSOV-3

		CR ID)		Deminent Chatemant	Duri a uri ta u
Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Requirement Statement	Priority
			2.1.1.1		ETEE FS shall be capable of exchanging exercise planning data with external tools and services.	Must
		2.1.2			ETEE FS shall facilitate the management of setting data as defined in CR 4.5.	Must
			2.1.2.1		ETEE FS shall allow authorised users to create setting data in in a single source system.	Must
			2.1.2.2		ETEE FS shall allow initialisation of a specific scenario based on a setting.	Must
			2.1.2.3		ETEE FS shall allow visualisation of setting data in user-defined formats.	Must
		2.1.3			ETEE FS shall facilitate the management of scenario data as defined in CR 4.5.	Must
			2.1.3.1		ETEE FS shall allow authorised users to create scenario data in in a single source system.	Must
			2.1.3.2		ETEE FS shall allow visualisation of scenario data in user-defined formats.	Must
		2.1.4			ETEE FS shall facilitate the management of CT&E objectives as defined in CR 4.5.	Must
			2.1.4.1		ETEE FS shall allow authorised users to track CT&E objective implementation during exercise design and scripting.	Must
			2.1.4.2		ETEE FS should allow authorised users to view real-time CT&E objective implementation data in configurable dashboards.	Should
		2.1.5			ETEE FS shall facilitate the management of Exercise content as defined in CR 4.5.	Must
			2.1.5.1		ETEE FS shall be capable of exchanging exercise design data with external tools and services.	Must
		2.1.6			ETEE FS shall facilitate the execution of NATO Exercises.	Must
			2.1.6.1		ETEE FS shall facilitate the dynamic management of Exercise events.	Must
			2.1.6.2		ETEE FS shall be able to provide a real-time customisable Exercise Control (EXCON) Common Operational Picture (COP).	Must
				2.1.6.2.1	ETEE FS shall be able to display the current exercise picture.	Must
				2.1.6.2.2	ETEE FS should be able to display pending exercise events in accordance with user-defined criteria.	Should
				2.1.6.2.3	ETEE FS should be able to provide geographical overlays for displays in accordance with Open Geospatial Consortium (OGC) standards.	Should
			2.1.6.3		ETEE FS shall allow authorised users to track real-time objective achievement during exercise execution.	Must
				2.1.6.3.1	ETEE FS should allow authorised users to view real-time CT&E objective achievement results in configurable dashboards.	Should
			2.1.6.4		ETEE FS shall allow real-time collection of observations in user-defined formats.	Must
		2.1.7			ETEE FS shall facilitate the real-time exploitation of CT&E data as defined in CR 4.4.	Must
	2.2				ETEE FS shall facilitate the management and execution of NATO Evaluations within different security domains without provider support.	Must
		2.2.1			ETEE FS shall facilitate the management of Evaluation design.	Must
			2.2.1.1		ETEE FS shall facilitate the management of Evaluation design requirements as defined in CR 4.5.	Must
			2.2.1.2		ETEE FS shall facilitate the management of Evaluation Objectives as defined in CR 4.5.	Must
				2.2.1.2.1	ETEE FS shall allow authorised users to track Evaluation Objective implementation during exercise design and scripting.	Must
				2.2.1.2.2	ETEE FS should allow authorised users to view real-time Evaluation Objective implementation data in configurable dashboards.	Should
			2.2.1.3		ETEE FS shall facilitate the management of Evaluation content as defined in CR 4.5.	Must
		2.2.2			ETEE FS shall facilitate the execution of NATO Evaluations.	Must
			2.2.2.1		ETEE FS shall facilitate the dynamic management of NATO Evaluations.	Must
			2.2.2.2		ETEE FS shall allow authorised users to track Evaluation Objective achievement during exercise execution.	Must
				2.2.2.2.1	ETEE FS should allow authorised users to view real-time Evaluation Objective achievement results in configurable dashboards.	Should
			2.2.2.3		ETEE FS shall allow real-time collection of evaluation data in user-defined formats.	Must
		2.2.3	1		ETEE FS shall facilitate the exploitation of Evaluation data as defined in CR 4.4.	Must

		CR ID				Different
Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Requirement Statement	Priority
	2.3				ETEE FS shall facilitate management, execution and implementation of NATO Lessons Learned from NATO operations, missions and activities, as defined in the NATO Lessons Learned Policy, within different security domains without provider support.	Must
		2.3.1			ETEE FS shall facilitate the management of Lessons Collection Plans as defined in CR 4.5.	Must
		2.3.2			ETEE FS shall allow real-time collection of observations in user-defined formats.	Must
			2.3.2.1		ETEE FS shall allow users to submit observations anonymously in accordance with user-defined authorisation policies.	Must
			2.3.2.2		ETEE FS shall allow authorised users to manage observations as defined in CR 4.5.	Must
		2.3.3			ETEE FS shall facilitate the identification and documentation of lessons.	Must
			2.3.3.1		ETEE FS shall allow authorised users to manage lessons as defined in CR 4.5.	Must
			2.3.3.2		ETEE FS should be capable of employing Artificial Intelligence (AI) / Machine Learning (ML) to identify and recommend relevant custodians and tasking authorities from user- designated repositories automatically in accordance with user-defined criteria.	Should
			2.3.3.3		ETEE FS shall allow authorised users to track the progression of lessons though the Lessons Learned process.	Must
				2.3.3.3.1	ETEE FS should allow authorised users to view real-time progression status of lessons in configurable dashboards.	Should
		2.3.4			ETEE FS shall allow authorised users to plan remedial actions.	Must
			2.3.4.1		ETEE FS shall allow authorised users to manage remedial actions as defined in CR 4.5.	Must
			2.3.4.2		ETEE FS shall allow authorised users track the implementation of remedial actions.	Must
				2.3.4.2.1	ETEE FS should allow authorised users to view real-time status of remedial actions implementation in configurable dashboards.	Should
		2.3.5			ETEE FS shall facilitate the exploitation of observation and lessons data as defined in CR 4.4.	Must
		2.3.6			ETEE FS shall facilitate the dissemination of Lessons Learned products as defined in CR 4.5.	Must
	2.4				ETEE FS shall facilitate the management and execution of NATO Education and Individual Training (E&IT) within different security domains without provider support.	Must
		2.4.1			ETEE FS shall facilitate training management.	Must
			2.4.1.1		ETEE FS shall allow authorised users to schedule training solutions.	Must
			2.4.1.2		ETEE FS shall allow authorised users to manage Individual Training Plans (ITPs) based on user-defined criteria.	Must
			2.4.1.3		ETEE FS shall allow authorised users to manage learning paths without provider support.	Must
			2.4.1.4		ETEE FS shall allow authorised users to track student progress.	Must
			2.4.1.5		ETEE FS shall allow authorised users to manage testing and assessment material without provider support.	Must
		2.4.2			ETEE FS shall provide a repository of course and course iteration information.	Must
			2.4.2.1		ETEE FS shall allow users to access the repository based on user-defined permissions.	Must
			2.4.2.2		ETEE FS shall allow authorised users to manage templates within the course repository.	Must
			2.4.2.3		ETEE FS shall allow authorised users to manage information within the course repository.	Must
			2.4.2.4		ETEE FS shall allow users to search and filter repository data as defined in CR 4.5.4.5.	Must
			2.4.2.5		ETEE FS shall allow authorised users to customise the repository user interface without provider support.	Must
			2.4.2.6		ETEE FS shall be able to send notifications of changes or updates to course information or status automatically based on user-defined criteria.	Must
			2.4.2.7		ETEE FS shall allow authorised users to send manual notifications of changes or updates to course information or status.	Must
			2.4.2.8		ETEE FS shall be able to validate course repository inputs automatically based on user-defined criteria.	Must
		2.4.3			ETEE FS shall facilitate the exploitation of individual training execution data as defined in CR 4.4.	Must
	2.5				ETEE FS shall facilitate NATO Quality Assurance management within different security domains without provider support.	Must
		2.5.1			ETEE FS shall facilitate NATO Institutional Accreditation management.	Must

		CR ID)		Bequirement Statement	Driority
Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Requirement Statement	Priority
			2.5.1.1		ETEE FS shall allow authorised users to manage Institutional Accreditation requirements without provider support.	Must
			2.5.1.2		ETEE FS shall allow institutions to submit accreditation requirements electronically, to include supporting documentation.	Must
			2.5.1.3		ETEE FS shall facilitate the exploitation of institutional accreditation data as defined in CR 4.4.	Must
			2.5.1.4		ETEE FS should be able to notify institutions automatically of changes in accreditation status in accordance with user-defined criteria.	Should
			2.5.1.5		ETEE FS should be able to notify institutions automatically of pending accreditation status requirements in accordance with user-defined criteria.	Should
		2.5.2			ETEE FS shall facilitate NATO Course Certification (NCC) management.	Must
			2.5.2.1		ETEE FS shall allow authorised users to manage course certification requirements without provider support.	Must
			2.5.2.2		ETEE FS shall allow institutions to submit course certification requests electronically, to include required supporting documentation.	Must
			2.5.2.3		ETEE FS shall allow authorised users to adjudicate course certifications requests.	Must
			2.5.2.4		ETEE FS should be able to notify institutions automatically of changes in certification status in accordance with user-defined criteria.	Should
	2.6				ETEE FS shall facilitate management of internal business processes within different security domains without provider support.	Must
		2.6.1			ETEE FS shall allow authorised users to define process requirements without provider support.	Must
		2.6.2			ETEE FS shall allow authorised users to manage processes without provider support.	Must
		2.6.3			ETEE FS shall allow authorised users to implement processes without provider support.	Must
		2.6.4			ETEE FS shall allow authorised users to automate and digitize processes without provider support.	Must
	2.7				ETEE FS shall facilitate event coordination and management within different security domains without provider support.	Must
		2.7.1			ETEE FS shall facilitate event scheduling.	Must
			2.7.1.1		ETEE FS shall allow authorised users to duplicate past events, to include all information and supporting files.	Must
			2.7.1.2		ETEE FS shall allow authorised users to manage event requirements.	Must
				2.7.1.2.1	ETEE FS shall be able to identify event requirements automatically based on user-defined criteria.	Must
			2.7.1.3		ETEE FS shall be able to identify scheduling conflicts automatically.	Must
			2.7.1.4		ETEE FS shall allow authorised users to manage event calendars.	Must
			2.7.1.5		ETEE FS shall allow authorised users to manage event specific landing/web site.	Must
		2.7.2			ETEE FS shall facilitate event management.	Must
			2.7.2.1		ETEE FS shall provide dynamic and customisable online registration options.	Must
			2.7.2.2		ETEE FS shall allow authorised users to manage attendee accounts as defined in CR 4.1.2.	Must
			2.7.2.3		ETEE FS shall allow event attendees to manage their accounts as defined in CR 4.1.3.	Must
			2.7.2.4		ETEE FS shall allow authorised users to manage specific aspects of an event.	Must
				2.7.2.4.1	ETEE FS shall allow authorised users to manage tasks associated with an event.	Must
				2.7.2.4.2	ETEE FS shall allow authorised users to manage financial aspects of an event.	Must
				2.7.2.4.3	ETEE FS shall allow authorised users to manage resource allocation for an event.	Must
	1			2.7.2.4.4	ETEE FS shall allow authorised users to manage the security aspects of an event.	Must
				2.7.2.4.5	ETEE FS shall allow authorised users to manage support requirements for an event.	Must
	1					Must
	1				ETEE FS shall allow authorised users to manage the marketing aspects of an event.	Must
	1		1		ETEE FS shall be able to identify conflicts in event plans and schedules automatically in accordance with user-defined criteria.	Must

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		CR ID)		Requirement Statement	Priority
Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Requirement Statement	Thomy
				2.7.2.4.9	ETEE FS shall allow authorised users to manage event completion requirements, to include completion certificate submission and attendee accreditation/certification, as appropriate.	Must
			2.7.2.5		ETEE FS shall provide dynamic and customisable event survey options.	Must
			2.7.2.6		ETEE FS shall facilitate the exploitation of event data as defined in CR 4.4.	Must
		2.7.3			ETEE FS shall facilitate project management.	Must
3.0					ETEE FS provision shall include necessary electronic manuals and guides for each service and application, by version.	Must
	3.1				ETEE FS provision shall include electronic User manuals and guides for each service and application, by version.	Must
	3.2				ETEE FS provision shall include electronic Technical Administrator manuals and guides for each service and application, by version.	Must
	3.3				ETEE FS provision shall include electronic Functional Administrator manuals and guides for each service and application, by version.	Must
	3.4				ETEE FS provision shall allow for customer review and assessment of training manuals and guides prior to acceptance.	Must
	3.5				ETEE FS should include a help function for each service and application.	Should
	3.6				ETEE FS should include a training mode for each service and application.	Should
4.0					ETEE FS shall facilitate seamless collaboration among ETEE Stakeholders regardless of security domain, device or location (static or deployed).	Must
	4.1				ETEE FS shall be accessible by ETEE Stakeholders regardless of security domain, device or location (static or deployed) in accordance with NATO security policies.	Must
		4.1.1			ETEE FS shall have a means to reliably identify and authenticate persons with authorised access.	Must
			4.1.1.1		ETEE FS shall be capable of identifying duplicate user accounts automatically.	Must
		4.1.2			ETEE FS shall allow authorised users to manage user accounts without provider support.	Must
			4.1.2.1		ETEE FS shall allow authorised users to manage user account information requirements without provider support.	Must
			4.1.2.2		ETEE FS shall allow authorised users to manage user roles, groups and permissions without provider support.	Must
				4.1.2.2.1	ETEE FS shall allow authorised users to create authorization policies without provider support.	Must
			4.1.2.3		ETEE FS shall allow authorised users to manage password requirements in accordance with NATO policy without provider support.	Must
			4.1.2.4		ETEE FS shall allow authorised users to limit concurrent sessions by a single user.	Must
			4.1.2.5		ETEE FS shall allow authorised users to monitor sessions by specific users.	Must
			4.1.2.6		ETEE FS shall allow authorised users to track user accounts and disable when no longer required.	Must
		4.1.3			ETEE FS shall allow users able to manage information associated with their account in accordance with user-defined requirements.	Must
	4.2				ETEE FS shall facilitate synchronous and asynchronous collaboration among ETEE Stakeholders by security domain, regardless of device or location (static or deployed) in accordance NATO security policies.	Must
		4.2.1			ETEE FS shall be capable of real-time session sharing with text, audio and video.	Must
		4.2.2			ETEE FS shall be capable of recording sessions with text, audio and video.	Must
		4.2.3			ETEE FS shall facilitate communication among ETEE Stakeholders regardless of security domain or location (static or deployed) within the scope of existing NATO security policies.	Must
		4.2.4		1	ETEE FS shall allow authorised users to manage collaboration areas without provider support.	Must
			4.2.4.1		ETEE FS shall allow authorised users to manage access requirements to collaboration areas without provider support.	Must
			4.2.4.2		ETEE FS shall allow authorised users to assign collaboration area access rights to specific roles and groups without provider support.	Must
	4.3			1	ETEE FS shall facilitate the creation of configurable / customizable displays (dashboards).	Must
		4.3.1			ETEE FS application displays shall be optimised for the device in use (e.g., phone, tablet, laptop, desktop, etc.).	Must
		4.3.2			ETEE FS applications shall provide the same displays regardless of security domain.	Must
	1	4.3.3	1	1	ETEE FS applications shall provide Barrier Free Access in accordance with relevant international standards.	Must

		CR ID			Dequirement Statement	Duiouit
·1	Tier 2	Tier 3	Tier 4	Tier 5	Requirement Statement	Priori
		4.3.4			ETEE FS applications shall support inclusion of external links in user displays.	Must
			4.3.4.1		ETEE FS shall allow authorised users to manage external links in application displays without provider support.	Must
		4.3.5			ETEE FS applications may be capable of supporting NATO approved languages other than English (UK) for user displays.	Could
	4.4				ETEE FS shall facilitate data exploitation in accordance with the NATO Data Exploitation Framework Policy.	Must
		4.4.1			ETEE FS shall be capable of extracting data from data repositories.	Must
			4.4.1.1		ETEE FS shall be capable of extracting data from repositories automatically.	Must
				4.4.1.1.1	ETEE FS should be capable of employing Artificial Intelligence (AI) / Machine Learning (ML) to identify relevant data from user-designated repositories automatically in accordance with user-defined criteria.	Should
			4.4.1.2		ETEE FS shall allow authorised users to extract data from repositories manually.	Must
			4.4.1.3		ETEE FS shall be capable of automatically integrating and consuming data extracted from repositories.	Must
			4.4.1.4		ETEE FS shall be able to automatically determine and assess the authority of the source and integrity of data.	Must
		4.4.2			ETEE FS shall be capable of automatically integrating data from external tools and services.	Must
		4.4.3			ETEE FS shall allow authorised users to collect real-time, on-site data in user-defined formats.	Must
		4.4.4			ETEE FS shall enable real-time exploitation of data.	Must
		4.4.5			ETEE FS shall facilitate data analysis.	Must
			4.4.5.1		ETEE FS shall be capable of automated data analysis in accordance with user-defined criteria.	Must
			4.4.5.2		ETEE FS shall allow authorised users to perform data analysis manually.	Must
			4.4.5.3		ETEE FS shall be capable of analysing data using Artificial Intelligence (AI) in accordance with extant NATO AI Policy.	Must
			4.4.5.4		ETEE FS shall be capable of analysing structured data.	Must
			4.4.5.5		ETEE FS shall be capable of analysing unstructured data.	Must
			4.4.5.6		ETEE FS shall be capable of analysing complex data.	Must
			4.4.5.7		ETEE FS shall be capable of analysing dynamic data.	Must
			4.4.5.8		ETEE FS shall allow authorised users to define custom models to analyse data.	Must
			4.4.5.9		ETEE FS shall allow authorised users to store and reuse analyses.	Must
		4.4.6			ETEE FS shall provide dynamic, customizable reporting tools.	Must
			4.4.6.1		ETEE FS shall allow authorised users to create specific analysis reports based on customer requirements, as defined in CR 4.5.	Must
			4.4.6.2		ETEE FS should allow authorised users to view analysis results in configurable dashboards.	Shoul
	4.5				ETEE FS shall facilitate the management of ETEE data and information in accordance with NATO security, information management and data retention policies and STANAGs.	Must
		4.5.1			ETEE FS shall facilitate the management of data and information.	Must
			4.5.1.1		ETEE FS shall allow authorised users to create data and information.	Must
				4.5.1.1.1	ETEE FS shall be able to identify duplicate data and information automatically in accordance with user-defined criteria.	Must
				4.5.1.1.2	ETEE FS shall allow authorised users to manage ownership of data and information.	Must
				4.5.1.1.3	ETEE FS shall allow authorised users to manage custodianship of data and information.	Must
				4.5.1.1.4	ETEE FS shall allow authorised users to manage classification of data and information.	Must
			4.5.1.2		ETEE FS shall allow authorised users to review data and information.	Must
			4.5.1.3		ETEE FS shall allow authorised users to modify data and information.	Must
				4.5.1.3.1	ETEE FS shall allow multiple users to edit data and information simultaneously.	Must

		CR ID			Doguiroment Statement	Driority
Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Requirement Statement	Priority
				4.5.1.3.2	ETEE FS shall be capable of logging modifications made to data and information by specific users.	Must
				4.5.1.3.3	ETEE FS shall be capable of identifying conflicts in modifications made to data and information.	Must
				4.5.1.3.4	ETEE FS shall allow authorised users to audit modifications made to data and information by specific users.	Must
			4.5.1.4		ETEE FS shall allow authorised users to dispose of data and information.	Must
				4.5.1.4.1	ETEE FS shall allow authorised users to delete data and information.	Must
				4.5.1.4.2	ETEE FS shall support transferring data and information to the NATO Archives in accordance with NATO information management and data retention policies.	Must
				4.5.1.4.3	ETEE FS shall allow authorised users to recover previously stored versions of data and information.	Must
		4.5.2			ETEE FS shall facilitate the management of metadata in accordance with NATO policies, directives and STANAGs.	Must
			4.5.2.1		ETEE FS shall allow authorised users to manage metadata requirements without provider support.	Must
			4.5.2.2		ETEE FS shall allow authorised users to manage metadata sources without provider support.	Must
			4.5.2.3		ETEE FS shall be able to populate specified metadata fields automatically in accordance with user-defined criteria.	Must
			4.5.2.4		ETEE FS shall allow authorised users to manage metadata in bulk in accordance with user-defined criteria.	Must
			4.5.2.5		ETEE FS shall be able to retain metadata values upon import and export of objects.	Must
		4.5.3			ETEE FS shall facilitate the dissemination of data and information across security domains in accordance with NATO security, information and data management policies.	Must
			4.5.3.1		ETEE FS shall be capable of disseminating data and information automatically in accordance with user-defined criteria and NATO security policies.	Must
			4.5.3.2		ETEE FS shall allow authorised users to disseminate information and data and information manually in accordance with NATO security policies.	Must
			4.5.3.3		ETEE FS should allow authorised users to redact and partially disclose data and information.	Should
		4.5.4			ETEE FS shall facilitate data and information storage in accordance with NATO information management and data security policies and STANAGs.	Must
			4.5.4.1		ETEE FS repositories shall have a scalable capacity.	Must
			4.5.4.2		ETEE FS repositories should be cloud based.	Should
			4.5.4.3		ETEE FS shall allow users to store classified and unclassified data and information based on user specified data formats.	Must
				4.5.4.3.1	ETEE FS shall allow authorised users to migrate data and information from existing repositories.	Must
				4.5.4.3.2	ETEE FS repositories shall be able to synchronize data and information across security domains in accordance with NATO security policies.	Must
			4.5.4.4		ETEE FS shall allow authorised users to create logically separated information environments within the repositories without provider support.	Must
			4.5.4.5		ETEE FS shall allow users to search and filter repository data and information.	Must
				4.5.4.5.1	ETEE FS shall allow users to perform searches based on free text (key word search).	Must
				4.5.4.5.2	ETEE FS shall allow users to perform searches based on structured Metadata.	Must
				4.5.4.5.3	ETEE FS shall allow users to perform searches based on Semantic Search.	Must
				4.5.4.5.4	ETEE FS shall allow users to order search results based on user-selected criteria.	Must
				4.5.4.5.5	ETEE FS shall allow users to filter search results based on multiple user-selected criteria.	Must
				4.5.4.5.6	ETEE FS shall allow users to refine searches according to multiple user-selected criteria.	Must
				4.5.4.5.7	ETEE FS shall allow users to make use of predicted search terms.	Must
				4.5.4.5.8	ETEE FS shall allow authorised users to limit search results based on user roles and permissions.	Must
			4.5.4.6		ETEE FS shall allow users to retrieve data and information in accordance with user roles and permissions, and NATO security and information management policies.	Must
5.0					ETEE FS provision shall include lifecycle management of applications and services.	Must
	5.1				ETEE FS provision shall include change management processes.	Must
		5.1.1			ETEE FS shall be able to respond to changing resource demands with no effect on the end user.	Must

		CR ID			Demuinement Statement	Duiouitu
Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Requirement Statement	Priority
			5.1.1.1		Reconfiguration of ETEE FS applications shall be within an agreed period as defined in the Service Level Agreement (SLA).	Must
			5.1.1.2		Requests for additional ETEE FS capacity shall be able to be fulfilled directly or within an agreed period, as defined in the Service Level Agreement (SLA), without extensive redesign or reconfiguration.	Must
			5.1.1.3		Provisioning and de-provisioning of ETEE FS resources shall be completed within an agreed period as defined in the Service Level Agreement (SLA).	Must
		5.1.2			ETEE FS shall be able to respond to new business requirements with no effect on the end user.	Must
			5.1.2.1		New ETEE FS applications shall be able to be implemented without affecting the rest of the operating environment.	Must
			5.1.2.2		Individual ETEE FS applications shall be able to be adapted or upgraded without affecting the rest of the operating environment.	Must
			5.1.2.3		Individual ETEE FS applications shall be able to be removed without affecting the rest of the operating environment.	Must
		5.1.3			ETEE FS shall allow authorized users to manage change requests without provider support.	Must
			5.1.3.1		ETEE FS shall allow users to submit change request proposals to NATO change management authorities.	Must
			5.1.3.2		ETEE FS shall allow NATO change management authorities to submit change request proposals to the provider.	Must
			5.1.3.3		Responses to ETEE FS change requests shall be provided within an agreed period as defined in the Service Level Agreement (SLA).	Must
			5.1.3.4		Status updates for ETEE FS change requests shall be provided at agreed intervals as defined in the Service Level Agreement (SLA).	Must
			5.1.3.5		Implementation of approved changes shall be in accordance within agreed periods, based on the extent of the change(s), to be defined in the Service Level Agreement (SLA).	Must
		5.1.4			User acceptance testing of new or updated ETEE FS applications shall be conducted prior to implementation.	Must
		5.1.5			Security testing of new or updated ETEE FS applications shall be conducted prior to implementation.	Must
	5.2				ETEE FS provision shall include incident management processes.	Must
		5.2.1			ETEE FS shall be capable of automatic issue notification.	Must
		5.2.2			ETEE FS shall allow users to submit issue notifications (trouble tickets) in accordance with service provider processes.	Must
		5.2.3			ETEE FS shall be capable of automatically issuing incident status notifications in accordance with service provider processes.	Must
5.0					ETEE FS provision shall include lifecycle management of applications and services.	Must
	5.3				ETEE FS service performance shall be in accordance with Key Performance Indicators as defined in the Service Level Agreement (SLA).	Must
	5.4				ETEE FS shall comply with the principles of provision, use and control of services provided within NATO, outlined in the Alliance Consultation, Command and Control (C3) Policy (C-M(2015)0041-REV2), as applicable.	Must
		5.4.1			ETEE FS shall be provided as a modular service.	Must
		5.4.2			ETEE FS shall employ agreed standards and profiles, defined in the NATO Interoperability Standards and Profiles (NISP), to control the exchange of information, and to ensure interoperability, with identified tools and services.	Must
		5.4.3			ETEE FS provision shall include accreditation, or a plan to achieve accreditation, in accordance with NATO security policies.	Must
		5.4.4			ETEE FS shall reside on NATO CIS infrastructure.	Must
		5.4.5			ETEE FS shall be able to be hosted within the NATO Enterprise's shared cloud-computing infrastructure in accordance with the NATO Cloud Computing Policy.	Must
		5.4.6			ETEE FS provision shall employ green standards and industry best practices for ICT applications and services.	Must
		5.4.7			ETEE FS shall allow for the establishment and management of privileged user accounts in accordance with NATO policy without provider support.	Must

HQ Supreme Allied Commander Transformation

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C1-S1 – Capability to Service Mapping (CT&E)

The C1-S1 Viewpoint is concerned with identification and description of services that enable capabilities. This view contains the service specifications and capabilities relevant for Collective Training and Exercise (CT&E), and associates the services to capabilities they enable. The services shown with a solid line are in accordance with the NATO C3 Taxonomy, Baseline 6. The services shown with a dashed line are not included in the C3 Taxonomy and may be proposed as additions to the Taxonomy if validated. Services greyed out are not applicable to the CT&E capabilities.



NAFv3: NSOV-3

ETEE Functional Services	L.	Related Services
		()
Quality Assurance Services		Event Manageme Services
n) (s	vices
Training Evaluation Services	(Environmental Functional Service:	Data Collection Serv
	5 Fi	/_
Aanagemer	ist ics al Services	

C1-S1 – Capability to Service Mapping (Evaluations)

The C1-S1 Viewpoint is concerned with identification and description of services that enable capabilities. This view contains the service specifications and capabilities relevant for NATO Evaluations, and associates the services to capabilities they enable. The services shown with a solid line are in accordance with the NATO C3 Taxonomy, Baseline 6. The services shown with a dashed line are not included in the C3 Taxonomy and may be proposed as additions to the Taxonomy if validated. Services greyed out are not applicable to the NATO Evaluations capabilities.



NAFv3: NSOV-3

ETEE Functional Services	Related Services
Quality Assurance	Event Management
Services	Services
Training Evaluation	Environmental
Services	Functional Services
Aanagement	ist ics
vices	al Services
HQ Supreme Allied Commander Transformation

ANNEX A to RFI-ACT-SACT-23-42, Amendment 1

C1-S1 – Capability to Service Mapping (Lessons Learned)

The C1-S1 Viewpoint is concerned with identification and description of services that enable capabilities. This view contains the service specifications and capabilities relevant for NATO Lessons Learned, and associates the services to capabilities they enable. The services shown with a solid line are in accordance with the NATO C3 Taxonomy, Baseline 6. The services shown with a dashed line are not included in the C3 Taxonomy and may be proposed as additions to the Taxonomy if validated. Services greyed out are not applicable to the NATO Lessons Learned capabilities.



NAFv3: NSOV-3

		Event Management Services		Environmental Functional Services				Training Evaluation Services Services	
Related Services	ervices				ETEE Fun	ETEE Functional Services	ces		

NAFv3: NSOV-3

C1-S1 – Capability to Service Mapping (E&IT)

The C1-S1 Viewpoint is concerned with identification and description of services that enable capabilities. This view contains the service specifications and capabilities relevant for Education and Individual Training (E&IT), and associates the services to capabilities they enable. The services shown with a solid line are in accordance with the NATO C3 Taxonomy, Baseline 6. The services shown with a dashed line are not included in the C3 Taxonomy and may be proposed as additions to the Taxonomy if validated. Services greyed out are not applicable to the E&IT capabilities.



L1 – Node Types (ACT)

NAFv3: NAV-2

The L1 Viewpoint is concerned with the identification of nodes and their organization into specialization hierarchies (taxonomies). This view identifies and defines the general ETEE FS users and roles for ACT.

HQ SACT				
Administrator 🖁	Analyst 🖁	Coordinator 📩	Designer	Å
Developer 🖁	Evaluator 🖁	General User 📩	Manager	ţ
Plann	er 🚶 Program	mmer 🕇 🦳 SME	Å	
Joint Warfa	re Centre	(JWC)		
Administrator 🖁	Analyst 🖁	Coordinator 🖁	Developer	Å
General User 🕇	Manager 🖁	Operator 🖁	Planner	Å
SME	۲echn گ	ician 👗 🛛 Web Ma	ster X	
Joint Force	Training C	entre (JFTC	:)	
Administrator 🖁	Analyst 🖁	Coordinator 🖁	Developer	Å
General User 👗	Manager 🖁	Operator 🖁	Planner	Å
SME	t Techn	ician 🕺 Web Ma	ster X	
Joint Analys Centre (JAL		ssons Learn	ed	
Administrator Å	Analyst 🖁	General User 👗	SME	ţ

Role	Definition
Administrator (Local)	Oversees files, directories, services, and oth groups, rights, and permissions.
Analyst	Conducts analyses on data, potentially in sp
Coordinator (Director)	Oversees the planning, organisation and exercise resource allocation, tasks, etc. May also be
Designer	Responsible for designing a specific aspect of entity.
Developer	Responsible for developing or scripting a spo may vary by entity.
Evaluator	 Examines entities, activities, capabilities criteria. Collects qualitative and quantitative dat
General User	A user not assigned a specific role or function general staff offers, etc.
Manager	Responsible for managing a specific aspect of entity.
Operator	Manages the operation of a specific system
Planner	Responsible for planning a specific aspect of
Programmer	Responsible for the programming of ETEE re
Subject Matter Expert (SME)	Expert in a specific functional or operationa activity.
Technician	Responsible for installing, integrating, deplo of an organization's IT infrastructure. May a
Web Master	Responsible for maintaining a specific webs

her resources on the local device. Manages local users, user

pecific areas, associated with an event or activity.

Recution of an event or activity, to include schedule, e referred to as a Director.

of an event or activity. Specific designers may vary by

pecific aspect of an event or activity. Specific developers

s and/or performances against defined standards or

ta to support decision-making processes.

ion, e.g., Leadership / Decision-makers, COI members,

of an event or activity. Specific managers may vary by

or service.

of an event or activity. Specific planners may vary by entity.

related events or activities.

al area(s). Contributes to a specific aspect of an event or

oying and maintaining hardware and software components also be referred to as an Engineer or Integrator.

site.

L1 – Node Types (ACO)

NAFv3: NAV-2

The L1 Viewpoint is concerned with the identification of nodes and their organization into specialization hierarchies (taxonomies). This view identifies and defines the general ETEE FS users and roles for ACO.

CHADE	Role	Definition
SHAPE	Administrator (Local)	Oversees files, directories, services, and other groups, rights, and permissions.
Administrator Å Analyst Å Coordinator Å Designer Å	Analyst	Responsible for conducting analyses on data, activity.
Developer Å Evaluator Å General User Å Manager Å	Coordinator (Director)	Oversees the planning, organisation and exect resource allocation, tasks, etc. May also be re
Planner Å Programmer Å SME Å	Designer	Responsible for designing a specific aspect of entity.
Component Commands	Developer	Responsible for developing or scripting a spec may vary by entity.
Administrator 🕻 Analyst 🏌 Coordinator 🟌 Designer 🟌	Evaluator	 Examines entities, activities, capabilities a criteria. Collects qualitative and quantitative data
Developer $\mathring{\lambda}$ Evaluator $\mathring{\lambda}$ General User $\mathring{\lambda}$ Manager $\mathring{\lambda}$	General User	A user not assigned a specific role or function general staff offers, etc.
Planner Å Programmer Å SME Å	Manager	Responsible for managing a specific aspect of entity.
	Planner	Responsible for planning a specific aspect of a
Joint Force Commands	Programmer	Responsible for the programming of ETEE rela
Administrator 🕻 Analyst 🚶 Coordinator 🟌 Designer 👗	Subject Matter Expert (SME)	Expert in a specific functional or operational a activity.
Administrator A Analyst A Coordinator A Designer A		
Developer $\mathring{\lambda}$ Evaluator $\mathring{\lambda}$ General User $\mathring{\lambda}$ Manager $\mathring{\lambda}$		
Planner Å Programmer Å SME Å		

ner resources on the local device. Manages local users, user

a, potentially in specific areas, associated with an event or

ecution of an event or activity, to include schedule, referred to as a Director.

of an event or activity. Specific designers may vary by

becific aspect of an event or activity. Specific developers

s and/or performances against defined standards or

ta to support decision-making processes.

on, e.g., Leadership / Decision-makers, COI members,

of an event or activity. Specific managers may vary by

f an event or activity. Specific planners may vary by entity. elated events or activities.

al area(s). Contributes to a specific aspect of an event or

L1 – Node Types (ETFs)

The L1 Viewpoint is concerned with the identification of nodes and their organization into specialization hierarchies (taxonomies). This view identifies and defines the general ETEE FS users and roles for Education and Training Facilities (ETFs), such as, but not limited to, NATO School Oberammergau (NSO), NATO Defence College (NDC), NCIA Academy (NCI Ac), NATO accredited Centres of Excellence (COEs), NATO-recognised Partner Training and Education Centres (PTECs) and National/Multinational institutions from NATO and partner Nations and Non-NATO Entities (NNEs) in accordance with extent ETEE policy. Note that not all roles will be applicable to all ETFs.

Education and Training Facilities (ETFs)

Administrator 👗	Advisor Å	Coordinator 🟌	Course Administrator
Course Å Developer Å	Course Scheduler	Curriculum Å	Data Analyst 👗
General User 🕇	Instructional Designer	Instructor / Å	Manager 🖁
QA Officer 📩	SME Å	Student Administrator	Training Analyst रै

Role	Definition
Administrator (Local)	Oversees files, directories, services, and oth groups, rights, and permissions.
Advisor	 Gives advice in a particular field. Assists students in planning a course of
Coordinator (Director)	Oversees the planning, organisation and exa allocation, tasks, etc. May also be referred
Course Administrator	Supports course set-up and delivery.
Course Developer	Develops a course in conjunction with the C Designer.
Course Scheduler	Manages the annual course calendar.
Curriculum Planner	Plans and manages a set of related courses.
Data Analyst	Compiles training statistics.
General User	A user not assigned a specific role or function general staff offers, etc.
Instructional Designer	Ensures quality and quantity control of train training solutions). May also be referred to
Instructor / Lecturer	Gives one or more lectures in a course itera
Manager	Responsible for managing a specific aspect
Quality Assurance (QA) Officer	Ensures courses and instruction meet set st
Student Administrator	Manages student registrations and in proce
Subject Matter Expert (SME)	Expert in a specific functional or operationa the preparation and execution of a course in the preparation and execution and execution of a course in the preparation and execution and execution of a course in the preparation and execution and execution of a course in the preparation and execution and e
Training Analyst	Conducts needs assessments and develops

NAFv3: NAV-2

her resources on the local device. Manages local users, user

f study.

xecution of a training event, to include schedule, resource I to as a Director.

Course Coordinator/Director and the Instructional

ion, e.g., Leadership / Decision-makers, COI members,

ining (i.e., development, management and provision of to as a Course Designer.

ation.

of a training event. Specific managers may vary by entity.

tandards.

essing.

al area(s). Provides support in their area of expertise for iteration.

measurement instruments for training.

L1 – Node Types (Other)

NAFv3: NAV-2

The L1 Viewpoint is concerned with the identification of nodes and their organization into specialization hierarchies (taxonomies). This view identifies and defines additional ETEE FS users and roles for other ETEE stakeholders not previously defined.

thor		Role	Definition
other		Application Manager	Responsible for managing the application life
Department f Head Authority	Course OPR 🕺 Student / 🕺	Course Officer of Primary Responsibility (OPR)	Role in accordance with Bi-SC Directive 075-0
Event $\mathring{\lambda}$ Event $\mathring{\lambda}$ Manager $\mathring{\lambda}$ Planner $\mathring{\lambda}$	Event $\mathring{\mathcal{K}}$ Event $\mathring{\mathcal{K}}$ Coordinator $\mathring{\mathcal{K}}$ Participant $\mathring{\mathcal{K}}$	Data Entry Manager	Responsible for managing organisational info accurate data on relevant systems and in orga
		Database Manager	Responsible for managing assigned databases
NCS/NFS HQs*	National HQs	Department Head	Role in accordance with Bi-SC Directive 075-0
Exercise Coordinator	Data Entry Manager	Event Coordinator	Oversees the planning, organisation and exect allocation, tasks, etc.
	Exercise P	Event Manager	Responsible for managing a specific aspect of
General User 🚶	Coordinator A	Event Participant	Participates in an event as an event sponsor,
SME Å	General User 👗	Event Planner	Responsible for planning a specific aspect of a
Staff Training *		Exercise Coordinator	Oversees the planning, organisation and exec allocation, tasks, etc.
		General User	A user not assigned a specific role or function general staff offers, etc.
lost Nation/	NATO HQ	Requirements Authority	Role in accordance with Bi-SC Directive 075-0
mplementing Entity	Data Entry Manager	Staff Training Coordinator	Oversees the planning, organisation and exect schedule, resource allocation, etc.
Application Application	Exercise 📍	Student / Trainee	Attends a course or training event.
Database Å Manager Å	Coordinator ^ General User 🖁	Subject Matter Expert (SME)	Expert in a specific functional or operational a the preparation and execution of a course ite
General User 🕺	General Oser A	System Administrator	Responsible for the upkeep, configuration and
General User A	(SME Å	Technician	Responsible for installing, integrating, deploy of an organization's IT infrastructure. May als

*Not previously defined in the architecture.

fecycle within the enterprise.

-007.

formation, to include inserting, updating and maintaining rganisational archives.

ses.

-002.

ecution of an event, to include schedule, resource

of an event.

r, supporter, vendor or attendee.

f an event.

ecution of an exercise, to include schedule, resource

on, e.g., Leadership / Decision-makers, COI members,

-002.

ecution of a HQ's staff training requirements, to include

al area(s). Provides support in their area of expertise for teration.

and reliable operation of the ETEE FS system(s).

bying and maintaining hardware and software components also be referred to as an Engineer or Integrator.

L2 – Logical Scenario (CT&E)

NAFv3: NOV-2

The L2 Viewpoint is concerned with identifying key or aggregated interactions between nodes. This view identifies nodes and defines logical flows (e.g. logical flow of information), independent of their implementation, which are relevant for NATO Collective Training and Exercises (CT&E).

L2 – Logical Scenario (Evaluations)

NAFv3: NOV-2

The L2 Viewpoint is concerned with identifying key or aggregated interactions between nodes. This view identifies nodes and defines logical flows (e.g. logical flow of information), independent of their implementation, which are relevant for NATO Evaluations.

L2 – Logical Scenario (Lessons Learned)

NAFv3: NOV-2

The L2 Viewpoint is concerned with identifying key or aggregated interactions between nodes. This view identifies nodes and defines logical flows (e.g. logical flow of information), independent of their implementation, which are relevant for NATO Evaluations.

L2 – Logical Scenario (E&IT)

NAFv3: NOV-2

The L2 Viewpoint is concerned with identifying key or aggregated interactions between nodes. This view identifies nodes and defines logical flows (e.g. logical flow of information), independent of their implementation, which are relevant for NATO Education and Individual Training (E&IT).

L2 – Logical Scenario (E&IT QA – Institutional Accreditation)

NAFv3: NOV-2

The L2 Viewpoint is concerned with identifying key or aggregated interactions between nodes. This view identifies nodes and defines logical flows (e.g. logical flow of information), independent of their implementation, which are relevant for NATO Education and Individual Training (E&IT) institutional accreditations.

L2 – Logical Scenario (E&IT QA – Course Certification)

NAFv3: NOV-2

The L2 Viewpoint is concerned with identifying key or aggregated interactions between nodes. This view identifies nodes and defines logical flows (e.g. logical flow of information), independent of their implementation, which are relevant for NATO course certifications.

L3 – Node Interactions

NAFv3: NOV-2, 3

The L2 Viewpoint is concerned with identifying all relevant interactions between nodes. Views in this Viewpoint include nodes relevant for the architecture, include all logical flows (e.g. logical flow of information) between nodes relevant to the architecture, include all logical flows (e.g. logical flow of information) between nodes relevant for the architecture, include all logical flows (e.g. logical flow of information) between nodes relevant for the architecture, include all logical flows (e.g. logical flow of information) between nodes relevant for the architecture, include all logical flows (e.g. logical flows in this Viewpoint include nodes relevant for the architecture, include all logical flows (e.g. logical flows) between nodes relevant to the architecture, include all logical flows (e.g. logical flows) between nodes relevant to the architecture, include all logical flows (e.g. logical flows) between nodes relevant to the architecture, include all logical flows (e.g. logical flows) between nodes relevant to the architecture, include all logical flows (e.g. logical flows) between nodes relevant to the architecture, and the architecture, and the architecture is a construction of the architecture is a construction of the architecture is a construction.

L2-L3 – Logical Concept Viewpoint (Architecture Domains)

NAFv3: NOV-1

The L2-L3 Viewpoint is concerned with providing an executive level communication of the architecture purpose, scope and context. This view shows the main elements in scope of the architecture description and the main interactions of these elements. The following model illustrates the architecture domains (Technology, Application, Business and Information) of the ETEE FS Capability.



L2-L3 – Logical Concept Viewpoint (Business and Information Domains) NAFV3: NOV-1

The L2-L3 Viewpoint is concerned with providing an executive level communication of the architecture purpose, scope and context. This view shows the main elements in scope of the architecture description and the main interactions of these elements. The following model illustrates the Business and Information Domains of the ETEE FS Capability. It displays the overarching business processes and activities (defined in the L4 Viewpoints), management, organisation, and linkage with ETEE information, i.e., work products and data. NATO ETEE and Lessons Learned policies, Bi-SC training directives and ACO directives define the relevant work products.



L2-L3 – Logical Concept Viewpoint (Application Domain)

NAFv3: NOV-1

The L2-L3 Viewpoint is concerned with providing an executive level communication of the architecture purpose, scope and context. This view shows the main elements in scope of the architecture description and the main interactions of these elements. The following model illustrates the Application Domain Architecture of the ETEE FS Capability. The applications represent user-facing CIS capabilities focused on the performance of singular or multiple related tasks through the provision of functionally by specifically designed computer software components. They provide the logical interface between human and automated activities, and can be executed on user equipment. In the context of the NATO C3 Taxonomy, user applications are defined just up to a level of detail enough to describe what they need to do in order to manage data ("process information products") and to present information to the human and computer actors in the enterprise ("support business processes"). The applications shown with a solid line are in accordance with the NATO C3 Taxonomy, Baseline 6. The applications shown with a dashed line are either changes to what is currently included in the Taxonomy, or are not included in the C3 Taxonomy. These may be proposed as additions/changes to the Taxonomy if validated. Additionally, the application areas in the model for E&IT, Evaluation and Lessons Learned are not included in the C3 Taxonomy, and those for CT&E differ from those currently in the C3 Taxonomy.



L2-L3 – Logical Concept Viewpoint (Technology Domain)

The L2-L3 Viewpoint is concerned with providing an executive level communication of the architecture purpose, scope and context. This view shows the main elements in scope of the architecture description and the main interactions of these elements. The following model illustrates the Technology Domain Architecture of the ETEE FS Capability and describes the technology services, node, functions and network infrastructure needed to support the applications, information/data, and interface requirements established in the Application, Information, and Business layers of the architecture. The services shown with a solid line are in accordance with the NATO C3 Taxonomy, Baseline 6. The services shown with a dashed line are not included in the C3 Taxonomy and may be proposed as additions to the Taxonomy if validated.



NAFv3: NOV-1

L4 – Logical Activities (CT&E, Evaluations and Lessons Learned)

NAFv3: NOV-5

The L4 Viewpoint is concerned with the identification of logical (i.e. implementation independent) activities, grouping and composition of these activities, and logical flows between the activities. This view provides a composition of the standard CT&E, Evaluation and Lessons Learned activities, to include links to external supporting capabilities, which are relevant to the architecture.



L4 – Logical Activities (E&IT)

NAFv3: NOV-5

The L4 Viewpoint is concerned with the identification of logical (i.e. implementation independent) activities, grouping and composition of these activities, and logical flows between the activities. This view provides a composition of the standard E&IT activities, to include links to external supporting capabilities, which are relevant to the architecture.



L7 – Logical Data Model (CT&E)

NAFv3: NOV-7

The L7 Viewpoint is concerned with identifying information elements, and describing their relationships. Views in this Viewpoint identify information elements relevant for the architecture and may identify relationships between information elements, identify attributes of information elements and associate attributes with data entities.

L7 – Logical Data Model (Evaluations)

NAFv3: NOV-7

The L7 Viewpoint is concerned with identifying information elements, and describing their relationships. Views in this Viewpoint identify information elements relevant for the architecture and may identify relationships between information elements, identify attributes of information elements and associate attributes with data entities.

L7 – Logical Data Model (Lessons Learned)

The L7 Viewpoint is concerned with identifying information elements, and describing their relationships. Views in this Viewpoint identify information elements relevant for the architecture and may identify relationships between information elements, identify attributes of information elements and associate attributes with data entities.



L7 – Logical Data Model (E&IT)

NAFv3: NOV-7

The L7 Viewpoint is concerned with identifying information elements, and describing their relationships. Views in this Viewpoint identify information elements relevant for the architecture and may identify relationships between information elements, identify attributes of information elements and associate attributes with data entities.

L8 – Logical Constraints

NAFv3: NOV-6A

The L8 Viewpoint is concerned with identification and description of operational or business rules relevant for the architecture. This view lists the regulatory requirements, traced to applicable CRs, which are relevant to the ETEE FS Capability.

Policy	Title	Location in Document	Policy Text	CR ID
AC/322-D(2017)0027	NATO Information and Knowledge Management Policy	Para. 10	Information is a corporate resource and shall be managed and preserved as such to support NATO's missions, consultation, decision-making processes, and operational requirements by organising and controlling information throughout its life cycle regardless of the medium and format in which information is held.	
				45442
AC/322-D(2017)0027	NATO Information and Knowledge Management Policy	Para. 11	Information shall have an originator, and clearly defined ownership and custodianship assigned throughout its life cycle.	4.5.1.1.2
AC/322-D(2017)0027	NATO Information and Knowledge Management Policy	Para. 13	Information shall be managed with an emphasis on the 'responsibility-to-share' balanced by the	
AC/322-D(2017)0027	NATO Information and knowledge Management Policy		security principle of 'need-to-know', and managed to facilitate access, optimise information sharing and re-use, and reduce duplication, all in accordance with security, legal and privacy obligations.	4.5
AC/322-D(2017)0027	NATO Information and Knowledge Management Policy	Para. 14	Information shall have standardised structures and consistent representations to enable	4.5.2
			interoperability, cooperation and more effective and efficient processes.	4.5.3
				4.5.4.3
AC/322-D(2017)0027	NATO Information and Knowledge Management Policy	Para. 15		
AC/322-D(2017)0028-REV1	NATO Data Management Policy	Para. 10		
		sharing and re-use, and reduce duplication, all in accordance with security, legal and privacy obligations.Para. 14Information shall have standardised structures and consistent representations to enable interoperability, cooperation and more effective and efficient processes.Para. 15Information shall be protected by applying the principle of Information Assurance, which is described as the set of measures to achieve a given level of confidence in the protection of information, communication, and other electronic and non-electronic systems, and the information that is stored, processed or transmitted in these systems with respect to confidentiality, integrity, availability, non-repudiation and authentication.Para. 10Specific processes shall be put in place for accessing, using, sharing and protecting data as a corporate asset. Its value is increased through the widespread and appropriate use of high quality data. Its value is diminished through misuse, misinterpretation or unnecessary access restrictions.Para. 11Organisations shall ensure that data is advertised and can be discovered by users and applications, and that duplication of existing data is minimized.Para. 12Data shall be accessible in a shared networked environment to users and applications, unless policies, regulations, or other security means prohibit such access. Data repositories shall be managed, provisioned and administered across the data life-cycle in accordance with NATO		
			data. Its value is diminished through misuse, misinterpretation of unnecessary access restrictions.	4.5.3
				4.5.4.3
AC/322-D(2017)0028-REV1	NATO Data Management Policy	Para. 11		4.5.4.5
AC/322-D(2017)0028-REV1	NATO Data Management Policy	Para. 12	policies, regulations, or other security means prohibit such access. Data repositories shall be	
			policies [To include policies and directives related to the appraisal, retention and long-term preservation, currently available in C-M(2002)49, C-M(2002)60, C-M(2011)0043; C-M(2009)0021 and AC/324-D(2014)0008], standards and best practices.	
AC/322-D(2017)0028-REV1	NATO Data Management Policy	Para. 13	Data of permanent value shall be retained and archived, whilst data of temporary value shall be	
			Information shall be protected by applying the principle of Information Assurance, which described as the set of measures to achieve a given level of confidence in the protection information, communication, and other electronic and non-electronic systems, and information that is stored, processed or transmitted in these systems with respect confidentiality, integrity, availability, non-repudiation and authentication. Specific processes shall be put in place for accessing, using, sharing and protecting data a corporate asset. Its value is increased through the widespread and appropriate use of high quadata. Its value is diminished through misuse, misinterpretation or unnecessary access restriction and that duplication of existing data is minimized. Data shall be accessible in a shared networked environment to users and applications, un policies, regulations, or other security means prohibit such access. Data repositories shall managed, provisioned and administered across the data life-cycle in accordance with NV policies [To include policies and directives related to the appraisal, retention and long-to preservation, currently available in C-M(2002)49, C-M(2002)60, C-M(2011)0043; C-M(2009)0 and AC/324-D(2014)0008], standards and best practices.	4.5.4.5
			practices.	4.5.4.6

Policy	Title	Location in Document	Policy Text	CR ID
AC/322-D(2017)0028-REV1	NATO Data Management Policy	Para. 14	Organisations shall allow users and applications to exchange, understand and interpret data, both structurally and semantically and to determine how it may be used for their specific needs. XML	4.4
			shall be used as a syntax for data exchange.	4.5.2
				4.5.3
				4.5.4.3.1
				4.5.4.3.2
AC/322-D(2017)0028-REV1	NATO Data Management Policy	Para. 15		4.1.1
			handling of data. Users and applications shall have the ability to determine and assess the authority of the source and integrity of the data.	4.4.1.4
				4.5
				4.5.1
AC/322-D(2017)0028-REV1	NATO Data Management Policy	Para. 16	Users and applications shall have the ability to measure, assess, and ensure data to be fit for purpose and fit for use.	4.4.1.4
AC/322-D(2017)0028-REV1	NATO Data Management Policy	Para. 19	Critical data shall be consistently defined, stored and managed to provide a single point of	4.5.1.4
			reference across the NATO Enterprise.	4.5.4
				4.5.4.6
AC/322-D(2017)0028-REV1	NATO Data Management Policy	Para. 21	description of the structure and the content of data and information, to provide sufficient details for authenticity, pedigree, protection, security classification, and access control, to facilitate the identification of ownership and custodianship, to facilitate retention and disposition and long-term preservation, and to support system interoperability and information exchange.	4.4.1.4
				4.5.1.1.2
				4.5.1.1.3
				4.5.1.1.4
				4.5.2 4.5.3
				4.5.3.1
				4.5.3.2
				4.5.4
				4.5.4.5.2
AC/322-D(2017)0028-REV1	NATO Data Management Policy	Para. 22	Any data and information exchanged on NATO systems shall be accompanied with an approved core set of metadata [Implementation directive(s)/guidance shall provide details for a core set of metadata (currently the NATO Core Metadata Specification - NCMS).].	4.5.2
AC/322-D(2017)0028-REV1	NATO Data Management Policy	Para. 23	Various communities of interest shall use metadata schemas that are aligned with the NATO core metadata. Metadata schemas shall be registered and permanently updated in a common repository [Implementation directive(s)/guidance shall provide details for a metadata repository (currently the NATO Metadata Registry and Repository – NMRR).].	
AC/322-D(2017)0028-REV1	NATO Data Management Policy	Para. 24	In principle, metadata and its metadata schema should be unclassified, visible to, accessible and exchangeable by all authorised users and systems. As a consequence, metadata may have a different classification level from the data or information that it is associated with.	

Policy	Title	Location in Document	Policy Text	CR ID
AC/322-D(2017)0028-REV1	NATO Data Management Policy	Para. 25	Metadata shall evolve and be persistently associated with the data and information throughout their life-cycle. Metadata of records shall be maintained for long-term preservation beyond the destruction of the record itself.	
AC/322-D(2017)0028-REV1	NATO Data Management Policy	Para. 26	Metadata shall support a coherent and standardised approach to marking, labelling and binding of metadata to data and information.	4.5.2
AC/322-D(2017)0028-REV1	NATO Data Management Policy	Para. 27	The capture of metadata shall be automated where possible. To ensure both human-readable and machine-readable metadata, XML shall be used as the primary language to structure metadata.	4.5.2
AC/322-D(2017)0028-REV1	NATO Data Management Policy	Para. 28	Data management principles related to visibility, accessibility, interoperability, quality, assurance and security shall apply to metadata management.	4.5.2
AC/322-D(2019)0038 (INV)	CIS Security Technical and Implementation Directive for the Security of Web Applications	Para. 12	The identified set of security requirements shall be accounted for in the design, implementation, and future enhancements of the web application solution, given the specific technology chosen.	5.4.3
AC/322-D(2019)0038 (INV)	CIS Security Technical and Implementation Directive for the Security of Web Applications	Para. 13	Security testing, validation and accreditation shall be conducted in accordance with References G and H, and shall consider the guidance of References I, J, and K.	5.4.3
AC/322-D(2019)0038 (INV)	CIS Security Technical and Implementation Directive for the Security of Web Applications	Para. 14	The CISP shall operate the web application and supporting infrastructure as per References A, G, and H to ensure security is upheld.	5.4.3
AC/322-D(2019)0038 (INV)	CIS Security Technical and Implementation Directive for the Security of Web Applications	Para. 7	The CISP, in coordination with the CISOA and subject to approval by the SAA, shall conduct an assessment to determine the web application security level requirements for each web application and any additional security measures.	
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID CM3-2	New or modified versions of software are checked for integrity and for malware before being introduced to the CIS.	5.1.5
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID EA3-1	Comprehensive CIS Security role focused education is provided to privileged users and CIS Security personnel.	3.2 3.3
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM10-1	Administrator responsibilities are divided into three Tiers as per AC/322-D(2015)0029.	5.4.7
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM10-4	Administration is not allowed from standard user accounts.	5.4.7
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM10-5	A privileged user working on several Tier have an account dedicated to each Tier and are only administrator of their administration computer when needed, not by default.	5.4.7
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM10-7	Privileged user's privileges are defined and current status can be determined.	5.4.7
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM10-8	Privileges for privileged users are reviewed periodically and when an administrator changes roles.	5.4.7
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM10-9	Administrator privileges are managed to ensure least privilege.	5.4.7
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM10-10	The number of administrator privilege accounts is limited to the absolute minimum required.	5.4.7
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM11-1	Session lock is implemented after a certain period of inactivity as agreed by the SAA	5.3
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM11-2	Concurrent sessions to a service by a single user are limited and monitored to prevent masquerading.	4.1.2.4 4.1.2.5
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM12-1	Editors or administrators of publicly accessible websites or portals use multi-factor authentication, if available. If multi-factor authentication is not available, the passwords used are at least 16 characters long while using a minimum of 4 types of keyboard characters.	4.1.2.3
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM12-2	Editors are designated, authorized and trained to publish publicly accessible information.	3.2

Policy	Title	Location in Document	Policy Text	CR ID
				3.3
				4.1.2.2
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM12-3	Passwords for users of publicly accessible websites, if used, meet the requirements of section IAM4, Password based Authentication.	4.1.2.3
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM12-4	The requirements for passwords of publicly accessible websites, when used in conjunction with another authentication factor, will be agreed by the SAA	4.1.2.3
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM4-1	The password composition policy requires users to choose a password at least 12 characters long while using a minimum of 3 of the 4 types of keyboard characters.	4.1.2.3
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM4-2	Commonly used passwords and substrings (e.g. "1234" or keyboard patterns) are banned by using password blacklists.	4.1.2.3
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM4-6	Password reuse is prohibited for 10 generations (i.e. users cannot re-use their last 10 passwords on a system).	4.1.2.3
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM4-7	Users have the ability to change their passwords in compliance with the requirements of IAM4-6.	4.1.3
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM8-4	Inactive accounts are disabled within 90 days.	4.1.2.6
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM8-6	Service Accounts are tracked, disabled when no longer required and subject to the requirements of privilege user access controls.	4.1.2.6
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM9-3	Access profiles and their associated access rights are defined.	4.1.2.2
				4.1.2.2.1
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM9-4	The principle of Least Privilege applies: Users have the minimum set of permissions to accomplish	4.1.2.2
			their work tasks.	4.1.2.2.1
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM9-5	Normal users do not have local admin privileges (Tier 2) on their workstations.	4.1.2.2
				4.1.2.2.1
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM9-6	User access permissions can be determined.	4.1.2.2
				4.1.2.2.1
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID IAM9-7	User access permissions are reviewed when a user changes roles.	4.1.2.2
				4.1.2.2.1
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID PSW2-1	The authenticity and integrity of software and firmware are verified before installation.	5.1.5
AC/322-D/0048-REV3 (INV)	Technical and Implementation Directive on CIS Security	Requirement ID PSW4-5	Application are security tested before the service is made available.	5.1.5
AC/322-D/0052-REV2	Primary Directive on INFOSEC	Para. 23	system users shall only be given privileges and authorisations they require to perform their tasks	4.1.2.2
			and duties	4.1.2.2.1
				5.4.2
AC/322-D/0052-REV2	Primary Directive on INFOSEC	Para. 42	Where access by non-NATO nationals to NATO communication and information systems (CIS) is authorised in support of NATO Operations, Training, Exercises, Transformation and Cooperation (OTETC) (Enclosure "B" to C-M(2002)49 refers), measures shall be applied to restrict access to the NATO classified information required to support the mission.	

Policy	Title	Location in Document	Policy Text	CR ID
AC/35-D/2006	Directive for NATO on Security in Relation to Non-NATO Entities	Para. 70(e)	the CIS shall be security accredited with access by an NNE in scope, considering potential impact on other interconnected CIS	5.4.3
AC/35-D/2006	Directive for NATO on Security in Relation to Non-NATO Entities	Para. 70(f)	Measures shall be applied to restrict access to CIS by an NNE individual to only the NATO Classified Information required for the individual to support NATO.	4.1.1
AC/35-D/2006	Directive for NATO on Security in Relation to Non-NATO Entities	Para. 72	Interconnection of NATO CIS with an NNE CIS shall be security accredited in accordance with the C-M(2002)49-REV1 and supporting directives.	5.4.3
AdatP-5636 Ed. A Ver. 1	NATO Core Metadata Specification (NCMS)	Para. 1.3	All NATO information and any other information resource handled by information communication systems within the Alliance need to be accompanied by metadata to describe the resource and support its consistent and appropriate handling.	4.5.2
AdatP-5636 Ed. A Ver. 1	NATO Core Metadata Specification (NCMS)	Para. 2.2	Any newly developed COI metadata specifications shall extend the NCMS with the COI-defined	4.5.2
			metadata elements rather than overlapping or having no connection.	4.5.2.2
AdatP-5636 Ed. A Ver. 1	NATO Core Metadata Specification (NCMS)	Para. 2.4	COI metadata elements must be mapped to elements defined in the NCMS, and aligned with the	4.5.2
			roles defined in the NIMP and Primary Directive on Information Management (PDIM).	4.5.2.2
C-M(2002)49-REV1	Security within the North Atlantic Treaty Organization	Enclosure E, Para. 2	Classified information shall be protected throughout its life cycle to a level commensurate with its	4.1
	(NATO)		security classification	4.1.1
				4.2
				4.5
C-M(2002)49-REV1	Security within the North Atlantic Treaty Organization (NATO)	Enclosure E, Para. 5	The physical and CIS security provided to the information in storage, transfer and transmission, its circulation, destruction and the Personnel Security Clearance (PSC) required for access shall be determined by the security classification assigned.	4.1.1
C-M(2002)60	The Management of Non-Classified NATO Information	Para. 5	All NATO information requires protection to ensure its integrity and availability.	4.1
				4.1.1
			Information required for the individual to support NATO. Interconnection of NATO CIS with an NNE CIS shall be security accredited in accordance with the -M(2002)49-REV1 and supporting directives. III NATO information and any other information resource handled by information communication ystems within the Alliance need to be accompanied by metadata to describe the resource and upport its consistent and appropriate handling. Any newly developed COI metadata specifications shall extend the NCMS with the COI-define netadata elements rather than overlapping or having no connection. COI metadata elements must be mapped to elements defined in the NCMS, and aligned with the oles defined in the NIMP and Primary Directive on Information Management (PDIM). COI metadata elements must be mapped to elements defined in the NCMS, and aligned with the oles defined in the NIMP and Primary Directive on Information Management (PDIM). COI metadata is protected throughout its life cycle to a level commensurate with it ecurity classification The physical and CIS security provided to the information in storage, transfer and transmission, it irculation, destruction and the Personnel Security Clearance (PSC) required for access shall be letermined by the security classification assigned. III NATO information requires protection to ensure its integrity and availability. When non-classified NATO information is stored, processed or transmitted electromagnetically ecurity measures are required to ensure its integrity and availability and also, in the case of NATE INCLASSIFIED information, its confidentiality.	4.2
				4.5
				5.3
C-M(2002)60	The Management of Non-Classified NATO Information	Para. 19	When non-classified NATO information is stored, processed or transmitted electromagnetically,	4.1
				4.1.1
				4.2
				4.5
				5.3
C-M(2002)60	The Management of Non-Classified NATO Information	Para. 21	there shall be a means to control the connection of systems handling NATO information.	5.4.2
C-M(2002)60	The Management of Non-Classified NATO Information	Para. 21(a)	The security measures for all systems handling NATO UNCLASSIFIED information shall include, where required by paragraph 19, a means to reliably identify and authenticate persons with authorised access to NATO UNCLASSIFIED information	4.1.1
C-M(2002)60	The Management of Non-Classified NATO Information	Para. 21(b)	The security measures for all systems handling NATO UNCLASSIFIED information shall include, where required by paragraph 19, a means to control authorised access to only those persons with a need-to-know.	4.1.1

Policy	Title	Location in Document	Policy Text	CR ID
C-M(2007)0118	2007)0118 The NATO Information Management Policy Para. 10 Information shall be protected by applying the principle of Information Assur-	Information shall be protected by applying the principle of Information Assurance	4.1	
				4.1.1
				4.2
				4.5
				5.3
C-M(2007)0118	The NATO Information Management Policy	Para. 5	Information is a corporate resource and shall be managed as such to support NATO's missions, consultation, decision-making processes, and operational requirements by organising and controlling information throughout its life cycle regardless of the medium and format in which the information is held.	4.5
				4.5.1
				4.5.4
C-M(2007)0118	The NATO Information Management Policy	Para. 6	Information shall have an originator, and clearly defined ownership and custodianship assigned	4.5.1.1.2
, , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , ,		throughout its life cycle.	4.5.1.1.3
C-M(2007)0118	The NATO Information Management Policy	Para. 8	Information shall be managed with an emphasis on the 'responsibility-to-share' balanced by the	4.1.1
			security principle of 'need-to-know', and managed to facilitate access, optimise information sharing and re-use, and reduce duplication, all in accordance with security, legal and privacy obligations.	4.5
				4.5.1
				4.5.3
				4.5.4
C-M(2007)0118	The NATO Information Management Policy	Para. 9	Information shall have standardised structures and consistent representations	4.5.2
				4.5.3
				4.5.4.3
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 13(a)	Information is a corporate resource and shall be managed as such to support NATO's missions, consultation, decision-making processes, and operational requirements by organising and controlling information throughout its life cycle regardless of the medium and format in which the information is held.	
				4.5.1
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 13(b)	Information shall have an originator, and clearly defined ownership and custodianship assigned throughout its life-cycle	4.5.1.1.2
				4.5.1.1.3
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 13(d)	Information shall be managed with an emphasis on the 'responsibility-to-share' balanced by the security principle of 'need-to-know', and managed to facilitate access, optimise information sharing and re-use, and reduce duplication, all in accordance with security, legal and privacy obligations	

Policy	Title	Location in Document	Policy Text	CR ID
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 13(e)	Information shall have standardised structures and consistent representations to en	4.5.2
		interoperability, cooperation and more effective and efficient processes	interoperability, cooperation and more effective and efficient processes	4.5.3
				4.5.4.3
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 13(f)	Information shall be protected by applying the principle of Information Assurance	4.1
				4.1.1
				4.2
				4.5
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 20	In order to use information effectively and efficiently, it must be organised in a standardised way	4.1
			that makes the information easily discoverable and accessible, and must be managed as a	4.5.2
			corporate resource.	4.5.3
				4.5.4.3
				4.5.4.5
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 21(a)	Metadata elements shall be in line with relevant NATO policies, directives and standards	4.5.2
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 21(a)(i)	Metadata elements shall, as a minimum, provide for the identification of ownership an	4.5.1.1.2
			custodianship	4.5.1.1.3
C-M(2008)0113 (INV)	2008)0113 (INV) The Primary Directive on Information Management Para. 21(a)(ii) Metadata elements shall, as a minimum, provide sufficient details for protection control	Para. 21(a)(ii)	Metadata elements shall, as a minimum, provide sufficient details for protection and access	4.1.1
		control	4.4.1.4	
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 21(a)(iii)	Metadata elements shall, as a minimum, facilitate retention and disposition	4.5.1.4
				4.5.4
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 21(a)(iv)	Metadata elements shall, as a minimum, support re-usability and comprehensibility	4.4.1.4
				4.5.2
				4.5.2.5
				4.5.4.3.1
				4.5.4.3.2
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 21(a)(v)	Metadata elements shall, as a minimum, provide for the discoverability of information	4.5.4.5
				4.5.4.5.2
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 21(b)	NATO civil and military bodies shall define permissible values for the metadata elements in, inte alia, controlled vocabularies, taxonomies, ontologies or topic maps	4.5.2
				4.5.2.2
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 21(c)	NATO civil and military bodies shall describe and categorise their information assets by maintaining	4.5.2
			the required metadata elements using agreed permissible values	4.5.2.2
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 21(d)	NATO civil and military bodies shall ensure publication of metadata	4.5.2
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 23(a)	In order to optimise information sharing and re-use, NATO civil and military bodies shall develop, maintain and use interoperable information holdings	4.5.4.3
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 23(b)	In order to optimise information sharing and re-use, NATO civil and military bodies shall develop	4.5

Policy	Title	Location in Document	Policy Text	CR ID
			and apply standards and mechanisms to control versions, expiration, supersession and dependencies of information.	4.5.1
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 25(a)	The systems and services described in the architecture and implemented in the infrastructure shall ensure easy access to information respecting restrictions imposed for security or sensitivity reasons	
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 25(b)	The systems and services described in the architecture and implemented in the infrastructure shall ensure the timely availability and dissemination of accurate information to users, organisations and systems	4.5.3
				4.5.3
				4.5.3.1
				5.3
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 25(c)	The systems and services described in the architecture and implemented in the infrastructure shall	
			enable use, re-use, fusion and exchange of information by both people and systems	4.5.3
				4.5.4.3.1
				4.5.4.3.2
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 25(d)	The systems and services described in the architecture and implemented in the infrastructure shall allow for effective and efficient discoverability of relevant information	4.5.4.5
C-M(2008)0113 (INV)	The Primary Directive on Information Management	Para. 29(e)	NATO civil and military bodies shall comply with NATO retention and disposition policies, directives and guidelines [e.g., C-M(2009)0021 (INV), C-M(2011)0043, AC/35-D/2002-REV4, AC/324- D(2012)0003 and AC/324-D(2014)0008-REV1]	4.5.1.4
				4.5.4 4.5.4.6
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 2, Para. 6	All NATO apportioned ICT capabilities shall be defined and provided as services	5.4.1
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 5, Para. 15	Service specifications shall define the detailed design characteristics of Core and COI services and shall include Service Interface Profiles (SIPs), to ensure the achievement of interoperability across services provided through NATO funded, multi-National and National programmes.	5.4.2
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 8, Para. 12	The chosen alternative must be tested and accredited or have a clear path to being tested and accredited by NATO	5.4.3
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 8, Para. 13	The solution shall be built in a modular fashion	5.4.1
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 10, Para. 14	All future ICT solutions within the NATO Enterprise should use the NATO Enterprise's cloud infrastructure rather than deploying distinct additional infrastructures	5.4.5
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 10, Para. 18.1	ICT solutions will be designed with the expectation that the infrastructure has already been designed and will be provisioned, when needed.	5.4.4
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 10, Para. 19	Application development shall use a shared cloud infrastructure and shall access that infrastructure through a service interface.	5.4.5
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 11, Para. 13	C3 Capabilities and ICT services shall be acquired and sustained by utilising green manufacturing standards and industry best-practices (e.g.: The US ENERGY STAR certification ; the EU Eco-design Directive (2009/125/EC)	

Policy	Title	Location in Document	Policy Text	CR ID
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 11, Para. 17	ICT Services shall be designed to achieve a paperless environment	2.1.4.2
				2.1.6.3.1
		2.2.1.2.2		
				2.2.2.2.1
				2.5.1.2
				2.5.2.2
				4.3
				4.4.6.2
				4.4.6.2
				4.4.6.2
				4.4.6.2
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 11, Paras. 18 - 19	Collaboration tools and virtualisation are enhanced and exploited to the highest possible extent in	
			order to reshape NATO business processes aiming at the reduction of resource-intensive activities	1.2
			(e.g. business travel for meetings)	2.1
				2.2
				2.3
				2.4
				2.5
				2.6
				4.1
				4.2
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 12, Paras. 9 - 12	New applications shall have both IPv4 and IPv6 software interfaces for data transfer and name-to- address resolution.	4.5.3
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 13, Para. 10	Specific processes shall be put in place for accessing, using, sharing and protecting data.	4.1
				4.4
				4.5
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 13, Para. 12	Data shall be accessible in a networked environment to users and applications.	4.5
				4.5.1
				4.5.3
				4.5.4
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 13, Para. 14	XML shall be used as a syntax for data exchange	4.5.3
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 13, Para. 15	Users and applications shall have the ability to determine and assess the authority of the source and integrity of the data.	4.4.1.4

Policy	Title	Location in Document	Policy Text	CR ID
description of the structure and the content of data and information, to for authenticity, pedigree, protection, security classification, and access	Metadata shall be defined to allow discoverability of data and information, to enable the	4.4.1.4		
			description of the structure and the content of data and information, to provide sufficient details for authenticity, pedigree, protection, security classification, and access control, to facilitate the identification of ownership and custodianship, to facilitate retention and disposition and long-term preservation, and to support system interoperability and information exchange	4.5.1.1.2
				4.5.1.1.3
				4.5.1.1.4
				4.5.2
				4.5.3
				4.5.3.1
				4.5.3.2
			4.5.4	
				4.5.4.5.2
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 13, Para. 24	Metadata and its metadata schema should be unclassified, visible to, accessible and exchangeable by all authorised users and systems (Metadata may have a different classification level from the data or information that it is associated with)	
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 13, Para. 27	XML shall be used as the primary language to structure metadata	4.5.3
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 13, Para. 28	Data management principles related to visibility, accessibility, interoperability, quality, assurance and security shall apply to metadata management.	4.5.2
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 13, Paras. 11 - 16 - 18	Data shall be advertised, discoverable and assessable by users and applications. New programs shall search for existing data elements before creating new data elements	4.5.4.5
				4.5.4.6
C-M(2015)0041-REV2	Alliance Consultation, Command and Control Policy	Annex 13, Paras. 13 - 19	Data of permanent value shall be retained and archived, whilst data of temporary value shall be destroyed when no longer needed. Critical data shall be consistently defined, stored and managed to provide a single point of reference.	4.5.1.4
				4.5.4

Lr – Lines of Development

NAFv3: NPV-2

The Lr Viewpoint is concerned with identifying and defining logical threads (lines of developments) for a set of projects and/or programmes. The Gantt Chart in this view enables project management and control for the projects identified for the ETEE FS Capability. It identifies project deliverables and associated project milestones, project dependencies and project milestone dependencies.

Lines of Development, i.e., project schedules, will be developed for the CPP.

