NATO Policy for Standardization

2018 International Standardization Workshop
October 30 – November 1, 2018
Tysons, Virginia - USA
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• Introduction
• NATO Standardization Policy
• Guiding Principles
• Policy Implementation
• Conclusions
• Quiz
In the museum of Elefsis a stele of the 4th century BC is kept, discovered by D. Philios in 1894. Its text refers to a decree concerning the manufacture of bronze fittings known as “empolia” and “poloi” to be used for the assembly of the column drums (as shown in this picture) and the erection of the Philonian Stoa, named after the architect Philon, a portico in front of the much older building, the Telestirion. The decree comprises strict technical specifications, and, therefore, constitutes one of the oldest European standards.
1. Air and Missile Defence;

2. Aviation Planning;

3. Armaments;

4. Civil Emergency Planning;

5. Consultation, Command and Control;

6. Cyber Defence;

7. Force Planning;

8. Intelligence;

9. Logistics;

10. Medical;

11. Nuclear Deterrence;

12. Resources;

13. Science and Technology;

14. Standardization and Interoperability.
Aim: The policy steers Alliance standardization activities to support developing, maintaining and enhancing interoperable capabilities for missions and operations in support of Alliance core tasks. Agreed by the NAC in May 2016.

(1) PO(2016)0315
ENSURING A MISSION READY ALLIANCE

Aim:
The policy steers Alliance standardization activities to support developing, maintaining and enhancing interoperable capabilities for missions and operations in support of Alliance core tasks: Collective Defence, Crisis Management, and Cooperative Security.

Keeping the Alliance ready through continuous transformation and adaptation

NATO Defence Planning Process

Smart Defence

Connected Forces Initiative

Assess the Future

Identify Future Requirements

Inform and Integrate

NATO Forces 2030

NATO Military Transformation

NATO Forces 2020

RAP

 Capability Roadmaps / Priorities
POLICY GUIDING PRINCIPLES

- Overarching and Systemic Approach
- Terminology
- Timeliness of Standardization
- Consistency and Coherence
- Commitment to Implementation
- Use of Civil Standards
- Transparency
OVERARCHING AND SYSTEMIC APPROACH

4 phases:

- definition of requirements,
- development of solutions,
- their implementation and
- validation

Feedback on fulfilling the IRs

Traceability between interoperability requirements and standardization documents

Top-Down Solutions to IRs (NDPP, OPP, other initiatives)

Bottom-Up Solutions to IRs (LL Exercise, Evaluation)
Standardization solutions to interoperability requirements shall be implemented at the earliest practicable time.

Allies and NATO Bodies should direct efforts to speed the accomplishment of standardization objectives that directly enhance the interoperability of identified capabilities.

Developing and implementing standards before crises emerge is essential to rapid response and reinforcement of Allies.

To meet urgent requirements, standardization documents shall be developed and implemented using an accelerated procedure.
### Implementation of standards is essential to adaptation and transformation of the Alliance

| A complete picture and periodic qualitative and quantitative assessments of implementation, including by Partners, are required | Implementation of standards is the indispensable national contribution to NATO standardization | Implementation of standards by individual Allies is a relevant and useful output metric offering a qualitative indication of the development of the interoperable capabilities needed to bolster Alliance readiness and responsiveness | NATO shall promote transparent national implementation of standards with the understanding that standardization is, in principle, voluntary for Nations and that implementation is a national decision with importance for NATO’s ability to fulfill its missions |

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Interoperability can cost as much as **40%** of the acquisition and maintenance budget.
Standardization activity shall be transparent through reports and the widest participation of all stakeholders and subject matter experts both internal and external to NATO.

NATO shall involve Partners and promote cooperation with civil standards developing organizations (SDO’s) and other interested parties.

Interoperability with Partners must be supported to the maximum extent possible, including through the release of appropriate documents and NATO standards.

The security classification of classified NATO standardization documents shall be kept at the lowest level possible in order to allow for distribution to the widest possible audience.
USE OF CIVIL STANDARDS

- NATO shall only develop a standard where no suitable non-NATO standard exists.
- Using civil standards is preferred to using national defence standards.

NATO shall adopt and refer to suitable non-NATO standards (civil standards and national defence standards) in lieu of developing NATO standardization documents to the maximum extent.

Non-NATO standards shall be selected for NATO’s use based on their utility for the NATO standardization requirement, broad acceptance, accessibility and technical excellence.

- NATO will fully exploit mature national defence standards.
Standardization is a shared responsibility among all stakeholders involved in NATO standardization processes.

A consistent and coherent approach to standardization shall be applied between stakeholders using NATO processes and standardization management tools under the cognizance of NATO Standardization Office (NSO).
ROLES AND RESPONSIBILITIES

Top-Down Solutions to IRs (NDPP, OPP, other initiatives)

- Make standardization proposals
- Provide subject matter experts (SMEs) to develop NATO standardization documents
- Ratify STANAGs within the agreed timelines
- Implement standards in accordance with their ratification responses and agreed capability targets, in the most expeditious manner in response to Alliance needs.

Allies (NATO Nations)

The training of national forces to NATO standards to meet the full range of Alliance missions remains a priority for, and responsibility of, individual Allies.
Encouraged to send SMEs to those activities and may make standardization proposals

Invited and encouraged to adopt and implement standards when appropriate

NATO Partners

Fully transparent adoption of NATO standards, and training of national forces to those standards, is of particular importance for capabilities to be integrated in NATO training and exercise events, NATO partnership programmes and NATO led-operations.
Allies and Partners are encouraged to incorporate this policy into relevant national policy and guidance to the maximum extent.

What is required by Nations – The GRC Approach
POLICY IMPLEMENTATION
THE GRC APPROACH

Level of Ambition

- **Willingness to adopt changes** and harmonize policies and strategies
- **Defence, Security, Development, Industrial** and Commercial Strategies “in place”
- **Resources**
- **Commitment to NATO vision and objectives**
  - **Harmonization** of defence planning priorities
  - **Synchronization** between NATO and National capabilities development process
- **National Standardization Policy and Strategy**
POLICY IMPLEMENTATION
THE GRC APPROACH

Level of Ambition

• Adoption of the best practice model in standardization governance
• Communication and Awareness Plans
• National Education and Training Programmes
• National Standardization Management tools in place
• NATO Standards Implementation Tracking Mechanisms in place
• Conformity Assessment Mechanisms in place
• Mutually recognized certification of products within Defence and Security Sectors
• Collaboration with National SDO
STANAG 4193
IFF MOD 5

CRR 2017:
IFF MOD 5 Major Capability Requirement

National Interoperability by “design” or “Born Interoperable” mechanism

Introduction of Interoperability and Standardization Requirements as an integral part of the Defence Planning
If, for the specification of the capability of a defence product or a service, standards or standard-like documents of different domains or origin are available and deemed suitable by the Purchasing Authority, they shall be selected and used in the following order of preference:

a) Standards and other standard-like documents, which are referenced in laws, ordinances and statutory provisions;

b) International Military Alliances Standards (e.g. NATO Allied Publications and associated Standardization Agreements (STANAG));

NOTE For NATO nations this applies if the standards are ratified (without reservations) with the intention of implementation for e.g. achieving the required interoperability between forces.

c) National civil standards, transposing European standards (e.g. BS EN, NF EN, DIN EN,...);
Assess standardization requirements throughout the capability life cycle.
Assess Impact of Operational Standards to Materiel ones and vice versa
National ETEE – SAVE Mechanisms in place

- Defense Planning: Top-Down
- Standards Production
- Lessons Learned – Users Feedback
- Standardization Shortfalls
- Using Standards

NATO + OTAN
Policy Implementation

The GRC Approach

Common approach with Quality Pillars

- **Metrology**: Establishment of accurate, reliable, traceable measurements (Basis for performance requirements in standards)
- **Accreditation**: Demonstration of competence of testing and calibration laboratories, certification bodies and inspection bodies
- **Standardization**: Standards facilitate trade, provide basis for technical regulation. Developed by international, regional or national standards bodies
- **Conformity assessment**: Sampling, inspection, testing, certification
- **Legal metrology**: (Consumer protection, fair weights and measures in trade)
- **Efficient trading system**: Reduction of unnecessary variety, interoperability, economies of scale, quality assured, consumers empowered to demand fitness-for-purpose products and services that conform to standards
Promising National Triangle

Defence Standards
Civil Standards
Dual Use Standards

National SDO,
Quality Organizations

Academia

Civil Standards Training

National Industry, SMEs,
Market
POLICY IMPLEMENTATION
THE GRC APPROACH

**Education-Training**
- Quality is not an act, it is a habit
- Build Culture / Mind - Set

**“Extroversion” Culture**
- Think out of the box, beyond “the walls”
- Communicate - promote

**Determination**
- We shall either find a way or make one

**“Business” Philosophy**
- Be competitive as in the business world
- Seek for quick wins and clusters
CONCLUSIONS

EUROPEAN DOMAIN

MINISTRIES PUBLIC SECTOR – SERVICES

INTERNATIONAL INDUSTRY

ARMED FORCES

NATIONAL INDUSTRY

SECURITY FORCES

NATIONAL QUALITY ORGANIZATIONS

GREEK INTEROPERABILITY CENTRE
Drafting, Production and Maintenance of NATO Standards Course - NMIOTC USB with Course Material

2019 Course Schedule: 4th Iteration June 24-28
5th Iteration Sep 30 - Oct 4
The NATO Standardization policy steers Alliance standardization activities to support developing, maintaining and enhancing interoperable capabilities for missions and operations in support of Alliance core tasks. **The NATO core tasks defined at the NATO Strategic Concept are:**

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The NATO Policy for Standardization focuses on 7 key principles. **Select three that apply from the following list:**

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