Zoltán SZENES
szenes.zoltan@uni-nke.hu

NATO SECURITY CHALLANGES AND STANDARDIZATION[1]

Abstract

The purpose of this paper is to justify the direct connection between NATO new security challenges and threats requesting new military capabilities and standardization. The major interrelations between the two issues are very clear: as better standardization as stronger NATO. The article discusses the current threats to Europe from East and South and reviews the new NATO programs (NATO Forces 2020, Smart Defence, Connected Forces Initiative, Readiness Action Plan) enhancing interoperability in the Alliance. The author argues for importance of standardization and explains the current NATO standardization system, functioning and results. The article is concluded with emphasizing the importance of standardization as a new potential for success in building better integrated NATO forces.

A NATO biztonsági kihívások és a szabványosítás c. cikk célja, hogy bemutassa a közvetlen összefüggéseket a NATO új biztonsági kihívásai és fenyegetettségei, a szükséges új katonai képességek és szabványosítás között. Az alapvető összefüggések elég világosak: minél jobb a szabványosítás a szövetségben, annál erősebb a NATO. Az írás áttekinti Európa keleti és déli fenyegetettségét, bemutatja a NATO azon új programjait (NATO Erők 2020, Okos Védelem, Összekapcsolt Erők Kezdeményezés, Készenléti Akcióterv), amelyek a NATO szövetséges erők interoperabilitásának javítását célozzák. A szerző hangsúlyozza a szabványosítás fontosságát, leírja a NATO jelenlegi szabványosítási rendszerét, működését és eredményeit. Az írás azzal a következtetéssel zárul, hogy a szabványosítás a jövőben egy sikertényező lehet a jobban integrált NATO erők építésében.

Kulcsszavak: *NATO, new security challenges and threats, standardization, interoperability, standards, NATO Standardization Office ~ NATO, új biztonsági kihívások és fenyegetések, szabványosítás, együttműködési képesség, szabványok, NATO Szabványosítási Iroda*

---

[1] This article is based on the lecture provided at the international conference: *Global Supply Chain Standards & Solutions in practice of the National Defence of the Visegrad (V4) Countries.* Budapest: National University of Public Service, October 27, 2015) http://uni-nke.hu/uploads/media_items/leaflet-eng.original.pdf (15.03.2016)

INTRODUCTION

Today NATO face with threats from the East and the South. In 2014 Russia illegally occupied Crimea and launched aggression in Eastern Ukraine. The Russian politics is undermining decades of work by the international community to create a Europe (as it is stated in NATO Strategic Concept) *whole, free and at peace*.[2] And it is violating the principles of the international rules -based system: respect for borders, the equality of nations, and the settling of disputes by peaceful means. NATO Allies do not and will not recognise the annexation of Crimea. NATO believe that the full implementation of the Minsk Agreement represents the best hope for peace in Ukraine. Russia is a full party to the conflict and a signatory of the Minsk Agreement, and therefore carries a special responsibility to move from confrontation back to cooperation.

Russia has also supported the government of Syria since the beginning of the Syrian Civil War in 2011 politically and with military aid. Furthermore, Moscow provides direct military support for President Bashar al-Assad since 30 September 2015. Syria is fighting against numerous opposition factions, including a moderate opposition, extremist groups, terrorist organizations as Islamic State (ISIL) and the al-Qaida-linked Nusra Front which are banned in a range of countries including the United States and Russia led international coalition. Russia has been assisting the Syrian Forces in their anti-terror campaign, conducting airstrikes against ISIL targets in Syria and providing all necessary military support from military equipment through training to intelligence. The UN led Syria peace talks started this year and carry some hope for progress.

NATO is making efforts to cope with these security challenges and threats. NATO leadership is focusing on the implementation of Wales Summit decitions against Russian threats. USA is leading the coalition of countries to degrade and defeat ISIS. In the same time the Alliance is making efforts to build stronger and more integrated forces using the existing standardization system.

NATO POLICY AGAINST THE NEW THREATS

NATO is responding to the emerging hard security challenges and threats in the east and the south. The North Atlantic Council (NAC) had a Summit meeting in Wales in September 2014, where the Alliance reaffirmed its commitments to Article 5 of the founding treaty, which says that an attack on one Ally is an attack on all. And NATO member countries agreed to implement the largest increase in the defence posture since the Cold War.[3]

The centre piece of the Wales Summit is the *Readiness Action Plan* (RAP) [1] which is already under the implementation. As a result of the plan visible military presence has been increased in the Central and Eastern Europe, with a larger air policing operation,[4] greater troop numbers on the ground, and an enhanced maritime presence in the Baltic and Black Seas. NATO is setting up local command centres *in eight eastern Allies* (including Hungary). There was decision to double the size of NATO Response Force, with a Spearhead Force

---

[2] NATO Strategic Concept: Active Engagement, Modern Defence. 2010. p.2
http://www.nato.int/lisbon2010/strategic-concept-2010-eng.pdf (10.03.2016)
[3] Wales Summit Meeting. 05 Sept. 2014. http://www.nato.int/cps/ic/natohq/official_texts_112964.htm (12.02.2016)
[4] The Hungarian Air Force also contributed to the Baltic Air Policing Mission from September to December 2015. The Task Force (80 soldiers, 4 JAS-39 Gripen fighters) managed 25 scrambles with Russian war planes during a half year service.
http://www.mfa.gov.hu/kulkepviselet/BRUSSELS_NATO/en/en_Hirek/20160112_Grippen_home.htm (12.02.2016)

(VJTF), able to responding[5] to a crisis in any part of the Alliance at very short notice. In July 8-9 2016, NATO will convene its biennial summit to discuss the current security challenges facing the Alliance. Warsaw Summit comes at a crucial time[6] as major security concerns have emerged to both the east and the south of Europe. These threats have materialized in the form of a revanchist Russia, terrorist attacks on NATO members and continuing instability in the Middle East and North Africa. Consequently, NATO is working in parallel on long term future issues and the current crisis in Ukraine and the Middle East.

The situation in Ukraine is deteriorating.[7] Kiev finds itself on the brink of a political crisis in March 2016, and the war is still going on in the East. Two years after the Maidan revolution, Ukraine's slow pace of reform has without doubt created *public frustration*. The economy has tanked, corruption is very high, changes within the leadership and administration have been insufficient. If the internal crisis continues, Ukraine's backers (including NATO) will find themselves in trouble. The IMF has warned that a $40 billion bailout might be put at risk.[8] Meanwhile, *the conflict between government forces and Russia-backed separatists continues unabated* - and has worsened again in spring 2016. The war has caused more than 9,000 deaths in two years. OSCE international monitors say the fighting has recently reached levels not seen in months, with numerous ceasefire violations, including the use of heavy weaponry which should have been pulled back from the front line.

A deepening political crisis in Ukraine could threaten the Minsk ceasefire agreement, whose full implementation (which was initially planned for December 2015) had already been pushed back to an uncertain date this year. While each side in the conflict accuses the other of not fulfilling its commitments, political events in Kiev could offer Russia a new pretext to refuse handing over the control of the border to the central government. The OSCE has recently spoken of "circumstantial evidence" that Russia is rearming the separatists.

For all this, developments in Ukraine point to the need for more, not less, *western and European focus. [2]* Both international financial assistance and diplomatic efforts should be kept on track if Ukraine is to be able to stabilise. With all the other problems facing Europe, that may be a hard sell. But it is the European interest to engage, not turn away. *NATO should also continue supporting the military reforms* in the country and building new military capabilities.

The situation in Syria is much better as the UN- brokered Peace Talks started in Geneva.[9] Fighting in Syria has slowed considerably since a fragile "cessation of hostilities agreement" brokered by the United States and Russia came into force on 27 of February. Russian airstrikes continue to target mainstream elements of the Syrian armed opposition, despite the ongoing cessation of hostilities agreement. However, the overall level of violence in the

---

[5] Very High Readiness Joint Task Force (VJTF) is part of the NATO Response Force (NRF) with the purpose to respond *to emerging security challenges posed by Russia as well as the risks emanating from the Middle East and North Africa*. This force (one brigade-size joint battle group) is now in transition to be fit into the overall NRF structure. http://www.shape.nato.int/nato-response-force--very-high-readiness-joint-task-force (12.02.2016)

[6] Warsaw Summit comes at a defining moment. http://www.msz.gov.pl/en/foreign_policy/nato_2016/warsaw_summit_comes_at_a_defining_moment (12.06.2016)

[7] Ukranian Crisis- Latest news and developments. The Guardian, Tuesday 12 March 2016. http://www.telegraph.co.uk/news/worldnews/europe/ukraine/ (12.03.2016)

[8] IMF warns Ukraine it will halt $40bn bailout unless corruption stops. The Guardian, Wendesday, 10 February 2016. http://www.theguardian.com/world/2016/feb/10/imf-warns-ukraine-halt-40bn-bailout-corruption-christine-lagarde (12.03.2016)

[9] Few signes of compromise as Syria war talks resume. World Affairs, March 15, 2016. http://www.worldaffairsjournal.org/content/few-signs-compromise-syria-war-talks-resume?utm_source=World+Affairs+Newsletter&utm_campaign=18a000a466-March_14_2016_WNN3_14_2016&utm_medium=email&utm_term=0_f83b38c5c7-18a000a466-294688121 (15.03.2016)

country has been reduced by 80-90%. The resumption of Geneva peace talks is coinciding with *the fifth anniversary of a conflict* that began with protests against President Bashar al-Assad. The long multi-sided civil war has drawn in foreign governments and allowed the growth of ISIS militants in Syria and Iraq. After five years of civil war that has killed 250,000 people and driven some 11 million from their homes. Currently Syria's territory is already split between various parties, including the government and its allies, Western-backed Kurds, opposition groups and ISIS militants.

The UN Peace Talks now are discussing *the possibility of a federal division* of the war-torn country that would maintain its unity as a single state while granting broad autonomy to regional authorities. The major powers, including United States and Russia, also support the idea. The peace talks are going to be long and hard but carry the hope for the future. The major power endorsed road-map outlining an 18-month political transition (an agreement within *half a year*, followed by election under a new Constitution within *further 12 months*) for Syria. It is working with and counting on Russia to help convince the Syrian president to step aside. With the US and Russia having engineered the cease-fire and cooperating on making it work, it seems, the sides on the ground have to comply it.

The international community is hoping that if the cease-fire continues to hold, *it will ease the refugee flow toward neighboring countries and Europe.* But the truce would have to be sustained for weeks, if not month, to discourage people from fleeing and for refugees to contemplate returning. It is encouraging that president Putin ordered to Russian force to leave from Syria in the middle of March.[10]

As a result of permanent attacks of anti-ISIS coalition and Russian air strikes ISIS lost a major resource hub in north eastern Syria and was expelled from its positions in Western Iraq, Ramadi. ISIS responded by launching a military campaign against Kurdish and the Syrian regime forces.[11] ISIS also launched a wave of explosive attacks across Iraq and Syria with the aims to increase overall disorder by attacking civilian and military targets linked to Shia's governments in Damascus and Baghdad.

The Iraqi Security Forces and the Iranian-backed Iraqi Shi'a militias are also conducting offensive operations in order to recapture desert terrain in the northwest of Baghdad. They also completed the encirclement of Falludjah by June 2016. Meanwhile, ISIS launched successful and spectacular attacks in Babil and Baghdad with the intention to incite sectarian tentions and force the Iraqi government to redeploy for defensive measures away from forward operations.

NATO programs and standardization

In order being successful in operations, *NATO is planning and operationalising changes in the international security environment.* The main aim of the Allience is to achieve ***the organic jointness***. In the twenty-first century technology, capability and capacity will mean that no force will exclusively own any domain and yet all forces will need to be credibly effective across *all seven domains* of military effect: air, sea, land, cyber, space, information and knowledge.

---

[10] Putin orders to begin withdrawal of Russian Forces from Syria starting March 15. TASS Russian News Agency, March 14, 2016. http://tass.ru/en/world (15.03.2016)

[11] Corry Siemaszko: ISIS Attacks Are On Rise in Syria Despite Russian Airstrikes. NBC News, Feb 23 2016. http://www.nbcnews.com/storyline/isis-terror/isis-attacks-are-rise-syria-despite-russian-airstrikes-n524186 (10.03.2016)

NATO Forces 2020 strategy envisages[12] modern, tightly connected forces equipped, trained, exercised and commanded so that they can operate together and with partners in any environment. Maintaining a strong defence industry in Europe and making the full possible use of the potential of defence industrial cooperation across the Alliance remain an essential condition for delivering the capabilities needed for 2020 and beyond.

Smart Defence *is at the heart of this new approach.*[3] The development and deployment of defence capabilities is first and foremost a national responsibility. But as technology grows more expensive, and defence budgets are under pressure, there are key capabilities which *many Allies can only obtain* if they work together to develop and acquire them. NATO encourages member nations to take forward specific multinational projects, including for better protection of coalition forces, better surveillance and better training. These projects will deliver improved operational effectiveness, economies of scale, and closer connections between our forces. They will also provide experience for more such Smart Defence projects in future.

But *Smart Defence* (SD) is more than this. It represents a changed outlook, better standardization, opportunity for a renewed culture of cooperation in which multinational collaboration is given new options for developing critical capabilities. Developing greater European military capabilities will strengthen the transatlantic link, enhance the security of all Allies and foster an equitable sharing of the burdens, benefits and responsibilities of Alliance membership. In this context, *NATO will work closely with the European Union*, as agreed, to ensure that Smart Defence and the EU's Pooling and Sharing Initiative *are complementary* and *mutually reinforcing.* The two international organizations are focusing on the areas of air-to-air refuelling, medical support, maritime surveillance and training. NATO also encourages the national efforts in these and other areas by European Allies and Partners. NATO operation over Libya showed once again the importance of such connections; as soon as the political decision was taken to initiate the NATO mission, Alliance pilots were flying wing to wing with each other, and with pilots from non-NATO European and Arab partner countries. That was essential to the military and political success of the mission.

Another concept in achieving NATO Forces 2020 is the *Connected Forces Initiative. [4] CFI covers three areas: expanded education and training; increased exercises focussed on the NATO Response Force and better use of technology.* The Alliance expands education and training of personnel, complementing in this way essential national efforts. The Alliance is enhancing exercises in line with RAP. To handle the threats from the east NATO is strengthening the bonds between NATO Command Structure, the NATO Force Structure, and our national headquarters. NATO member countries are enhancing cooperation among Special Operations Forces including through NATO's Special Operations Forces Headquarters in Mons, Belgium. NATO is strengthening the use of the NATO Response Force with developing very high level joint force (VJTF), so that it can play a greater role in enhancing the ability of Alliance forces to operate together and to contribute to NATO deterrence and defence posture in the eastern frontline. In the new security environment NATO also steps up connections with Partners as much as possible. To transfer these requirements NATO adopted different *Defence Packages* in Chicago and Wales that will help member states develop and deliver the capabilities future missions and operations require.

The Ukrainian crisis has accelerated this process; NATO is building new forces, the enhance NATO Reaction Force (eNRF) and the Very High Readiness Joint Task Forces (VJTF) as part of eNRF. Developing new deterrence force explains the interrelations of NATO Forces 2020 strategy with the Smart Defence and the Connected Forces Initiative and

---

[12] NATO 2020: Assured Security; Dynamic Engagement. Analysis and Recommendations of the Group of Experts on a New Strategic Concept for NATO. NATO Public Diplomacy Division, 17 May 2010. http://www.nato.int/strategic-concept/expertsreport.pdf (15.10.2015)

combining with Art 5 requirements. NATO must have the necessary forces from low- end conflicts through peace support operations to high-end warfare in light of the potentional Russian threat. To achieving the main goals NATO should cooperate with member nations and partners using the comprehensive approach principle. In this efforts the European Union (EU) represents a strategic partner. The two concepts (SD, CFI) should be reflected in the whole work of NATO covering planning, force generation, enablers, command and communications (Smart Defence areas) and education, training, exercises, lessons learned and innovation (the Connected Forces Initiative areas) as well. Furthermore, the two concepts also should support the *adaptive measures* taken as a result of Wales decisions.

Interoperability and Standardization

The aim of NATO Standardization is enhancing operational effectiveness through *interoperability* among Alliance forces, and between NATO forces and forces of Partners and other nations. *NATO's interoperability defines the term as the ability for Allies to act together coherently, effectively and efficiently to achieve tactical, operational and strategic objectives.*[13] Specifically, it enables forces, units and/or systems to operate together and allows them to share common doctrine and procedures, each others' infrastructure and bases, and to be able to communicate. Interoperability reduces duplication, enables pooling of resources, and produces synergies among the 28 Allies, and partners. It is very important requirement as for instance in NATO ISAF Operation in Afghanistan 50 countries served together and achieved higher and higher level of interoperability during the years. Interoperability does not necessarily require common military equipment. What is important is that the equipment can share common facilities, and is able *to interact, connect and communicate, exchange data and services with other equipment.* Interoperability has different dimentions: *technical* (including hardware, equipment, armaments and systems), *procedural* (including doctrines and procedures) and *human* (including terminology and training) ones. Consequently, NATO standards are normally classified into one of three main areas as follows, although some standards may apply to more than one area:[14]

    a. **Operational standards** are those standards which affect future and/or current military practice, procedures or formats. They may apply among other things, to such matters as concepts, doctrine, tactics, techniques, logistics, training, organizations, reports, forms, maps and charts.

    b. **Materiel standards** are those standards which affect the characteristics of future and/or current materiel to include telecommunications, data processing and distribution. They may cover *production codes of practice* as well as materiel specifications. Materiel includes complete systems, including command, control and communications systems, weapons systems, sub-systems, assemblies, components, spare parts and materials and consumables (including ammunition, fuel, supplies, stores and consumable spares).

    c. **Administrative standards** primarily concern terminology - which apply to both the "operational" and the "materiel" fields - but this category also includes standards which facilitate Alliance administration in fields without direct military application (e.g. reporting of defence economic statistics).

---

[13] NATO Glossary of Terms and Definitions AAP-06. Edition 2015. P. 2-I-8. http://www.google.hu/ (12.03.2016)
[14] NATO Logistics Handbook. NATO Public Diplomacy Division, Brussels, 2012. p.65. http://www.nato.int/docu/logi-en/logistics_hndbk_2012-en.pdf (14.03.2016)

The Interoperable solutions can only be achieved through the defence planning, [5] **effective employment of standardization**, training, exercises, lessons learned, demonstrations, tests and trials. By strengthening relationships with the defence and security industry and by using open standards to the maximum extent possible, NATO is pursuing interoperability as a force multiplier and a streamliner of national efforts.

The ability to work together in the new security environment is *more important* than ever for the Alliance. States need to share a common set of standards, especially among military forces, *to carry out multinational operations*. By helping to achieve interoperability among NATO's forces, as well as with those of its partners, standardization allows for more efficient use of resources and thus enhances the Alliance's operational effectiveness.

NATO standardization is the development and implementation of concepts, doctrines and procedures to achieve and maintain the required levels of compatibility, interchangeability or commonality needed to achieve interoperability. The differentiation between the three levels of interoperability is important because they represent different level of joint operations. Compatibility is being able to fit in NATO system or work with other types of equipment (in case of the Hungarian Defence Forces with Russian equipment). Interchangeability is being able to be exchanged one for another. In operation nations can exchange with all types of resources. Commonality expresses a state where various groups use common resources or have common aims. [15] As *Figure 1* shows the whole integration process starts with standardization which is resulted in a higher level interoperability which is leading to more integration among NATO forces, and between NATO forces and partner nation forces.

The standards are collected in the *NATO Standardization Document Database* (NSDD) which is avaible in the Standardization Office website.[16] 1 200 NATO Standards are avaible now for download for registered users. In addition, some 8 000 stantardized documents avaible in webside. The NSDD is the main tool for providing the Alliance and its partners with standardization documents. In average month, some 30 000 standards are downloaded from 90 countries. [6]

---

[15] Richard Bowyer (ed): Dictionary of Military Terms. Third edition, Bloomsbury, London, 2004, pp. 53,54,129.
[16] http://www.nato.int/cps/en/natohq/topics_124879.htm (12.03.2016)
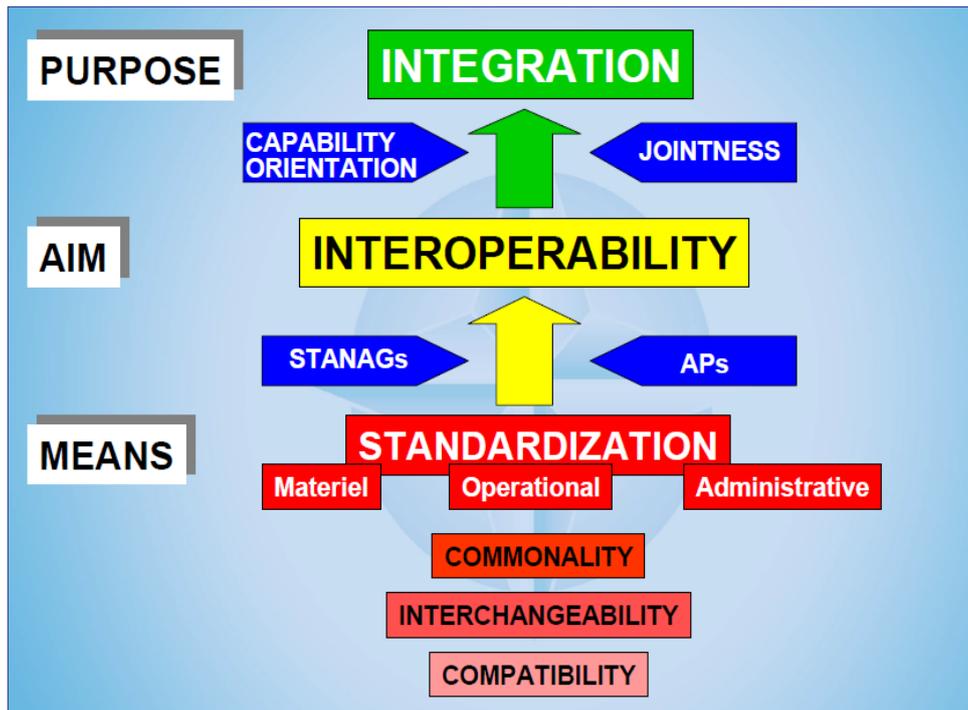
Figure 1: Interrelations between standardization, interoperability and integration.

Standardization affects the operational, procedural, material and administrative fields. This includes a common doctrine for planning a campaign, standard procedures for transferring supplies and interoperable material between troops on the ground, in air and at sea. *Standard is published in a document*, established by consensus and approved by a recognized body (Committee for Standardization)[17] which provides for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context.

Standardization Agreement (STANAG) is a NATO standardization document that specifies the agreement of member nations to implement a standard, in whole or in part, with or without reservation, in order to meet an interoperability requirement.

In standardization process the NATO Standardization Office (NSO) plays key role. NSO is one of the oldest NATO bodies (it was established in 1951)[18] which was not the subject of the last NATO Agency Reform. Although it is also went through the changes it's independency was never questioned during the 2010-2011 years review. The NSO initiates, coordinates, supports and administers NATO standardization activities conducted under the authority of the Committee for Standardization (CS). The CS is the senior NATO body for Alliance standardization composed primarily of representatives from all NATO countries. Operating under the authority of the North Atlantic Council (NAC) it issues policy and guidance for all NATO standardization activities.

The *NATO Standardization Office* is run by *Director* which position is filled by application under the authority of the NATO Military Committee. The director manages the standardization activities of the NSO and is responsible for the efficient functioning and administration of the Office. He is the principal advisor to the Military Committee on development and coordination of standardization activities. He promulgates all ratified

---

[17] http://www.nato.int/cps/en/natohq/topics_69277.htm (12.03.2016)
[18] http://www.nato.int/cps/en/natohq/topics_124879.htm (12.03.2016)

STANAGs and Allied Publications (APs) The director liaises directly with the Chairmen of NATO committees, staffs, the Strategic Commands, and communicates directly with any NATO command, agency or staff on matters of standardization. He is also liaises with civilian standards- developing organizations (agencies) and acts as the NATO standardization management staff *focal point* with these bodies.

In 2012 the NSO supported 86 meeting under the auspices of NATO Military Committee where about 6 000 subject-matter experts attended from 32 NATO and partner nations. The Office also reserves posts for partner nations to prepare them for standardization work at home country. [19]

The Office has four branches: joint, army, naval and air, about 50 people.[20] The branches directly support MC Standardization Boards consisting of members of the appropriate services of the national armed forces and the NATO Strategic Commands. NSO Boards are in permanent session and generally meet once a month. Decisions are normally reached on the basis of unanimity. However, as standardization is a voluntary process, agreements may also be based on majority decisions. The NATO Strategic Commanders have a representative on each Board but do not have a vote. The *Joint Branch* deals with the MC Joint Standardization Board (MCJSB) and the Medical Standardization Board (MCMSB) The Joint Standardization Board deals with joint and overarching standardization policy matters, affecting two or more Services. It manages working groups dealing with Allied Joint Operations Doctrine, information exchange requirement/ message text format harmonization, joint intelligence issues, environmental protection, and NBC defence operations. The Medical Standardization Board manages the standardization efforts of working Groups and expert panels dealing with military medical sructures and operations procedures, military health care, medical standardization, and NBC medical. The *Army Branch* is responsible for the work of the Land Standardization Board (MCLSB). LSB manages working groups dealing with land Operations, artillery, combat engineering, explosive ordnance disposal, helicopter operations, ammunition interchangeability, logistics doctrine, medical support, asset tracking, materials handling/ distribution, movements and transport, range safety, NBC defence operations and NBC medical operations. The *Naval Branch* supports the activity of the Maritime Standardization Board (MCMSB) manages working groups dealing with maritime operations, amphibious operations, helicopter operations from ships other than aircraft carriers, mine warfare, maritime logistics, NATO shipping, replenishment at Sea, submarine escape and rescue, underwater diving and maritime information exchange requirements. Finally, the *Air Branch* supports the work of the Air Standardization Board (MCASB). The ASB manages working groups and panels dealing with air operations and all aspects of operational doctrine, air Transport, air-to-air refueling, search and rescue, flight safety, aeromedical, aircraft/ aircrew integration, aircraft servicing and standard equipment, avionics systems, aircraft gaseous systems, and air electrical and electromagnetic considerations.

Standardization process the senior NATO committee for Alliance standardization, composed primarily of representatives from all NATO countries. Operating under the authority of the North Atlantic Council (NAC), it issues policy and guidance for all NATO standardization activities. Its mission is to exert domain governance for standardization policy and management within the Alliance to contribute to Allies' development of interoperable and cost-effective military forces and capabilities.

The NATO standardization process encompasses the formulation and subsequent national agreement on standardization objectives[21] which are based on standardization requirements

---

[19] Cihangir Aksit (2014): Ibid, p.4.
[20] http://nso.nato.int/nso/boards.html (20.10.2015)
[21] NATO Standardization Agency (NSA) and GS1 Sign Technical Cooperation Agreement. 31 January, 2006. http://www.gs1.org/docs/media_centre/gs1_pr_310106.pdf (15.03.216)

from the strategic commands and nations (top-down structure) and on standardization proposals, which are, in most cases, generated by the specialized NATO groups of experts (bottom-up structure). The process ends with the implementation of approved STANAGs, APs and/or bilateral/multilateral agreements developed from work in NATO fora.

Standardization process has to go through the following steps: [22]

- *Identifying Standardization Requirements/Deficiencies*. Standardization requirements are derived from either the top-down or the bottom-up approaches. They identify the capability to be achieved and the required level of standardization. Those that form part of the NATO Standardization Programme (NSP) are referred to as Alliance Standardization Requirements (ASRs).
- *Formulating and Agreeing Priority Standardization Objectives*. Based on the agreed requirement, priority standardization needs are identified and the standardization objectives (SOs) are formulated.
- *Formulating or Updating of NATO Standards*. The formulating or updating of NATO standards is inherently international in character and hence must be coordinated internationally in the applicable NATO bodies. In view of the wide range of Alliance activities for which standards are desirable, the formulation of proposed NATO standards will normally be decentralized. Formulation of NATO standards can best be accomplished by multinational bodies of national experts.
- *Ratifying NATO Standards by Nations Individually*. Specific proposed standards may not be relevant to all Alliance nations. A proposed standard may be ratified and designated a NATO Standard if several (not necessarily all) Alliance nations agree that it is acceptable as a goal for implementation. Likewise Partner nations can adopt NATO standards as a goal for implementation.
- *Promulgating NATO Standards*. After sufficient nations have ratified the proposed standard it will be promulgated by Director of Standardization Office.
- *Implementing Agreed NATO Standards as a Matter of National Policy*. Implementation of agreed NATO standards is a national responsibility. NATO strongly encourages implementation of ratified STANAGs, by observing, monitoring and reporting results on a nation-by-nation and case-by-case basis.
- *Verifying and Validating the Implementation of Agreed NATO Standards*. Verification of standardization may be carried out in PSOs, exercises and other operations. The verification should be carried out on the basis of a verification plan. Validation of verification information may result in the adaptation and/or deletion of certain STANAGs.

Figure 2 is summarizing the difference between the two standardization approaches. Top-down process is initiated by the two Strategic Commands (Allied Command of Operations, Allied Command of Transformation) identifing the military standardization requirements (MSR).

---

[22] NATO Logistics Handbook, 1997. Chapter 7. http://www.nato.int/docu/logi-en/1997/lo-1709.htm (12.03.2016)
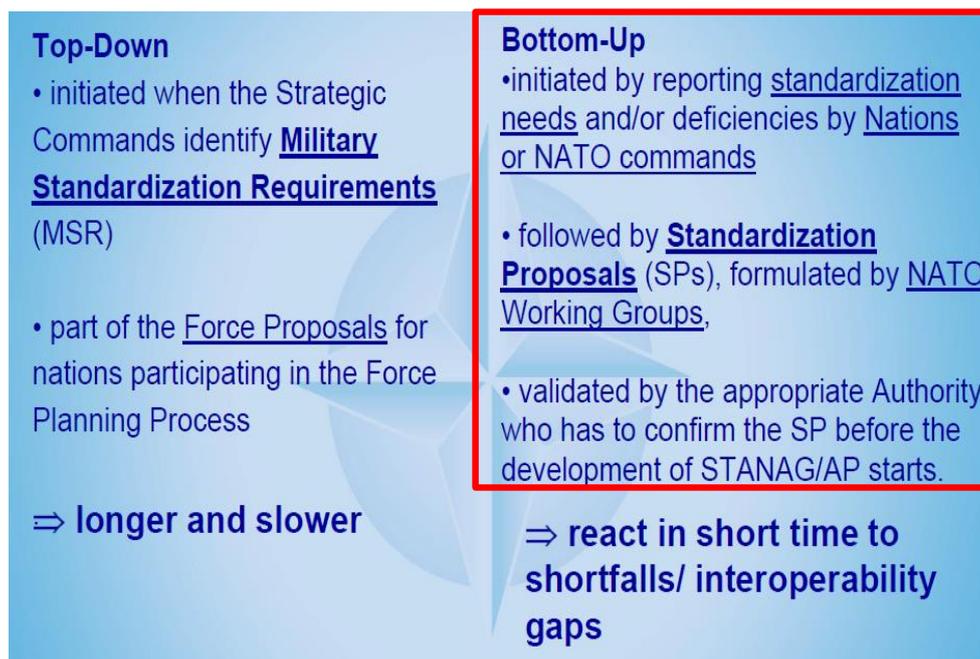
Figure 2: Top-down and bottom-up standardization

The MSR becoming part of the Force Proposals in the defence planning process and plays an important role in building integrated NATO Force. Although the top-down approach is slow and takes longer time, it is used for building of new system-oriented standards. The bottom-up approach is faster and reacting to shortfalls or interoperability gap quickly. In case of bottom-up standardization the initiative comes from the nations or NATO Commands in form of standardization needs. The suggestion is formulated into Standardization Proposals (SP) by NATO working groups and confirmed by the appropriate authority.

NATO Standardization system looks like any other complex system requiring inputs, processes, output and feedback. All components from the contractors [7] to the users are functional and relevant for NATO.

No capability without interoperability

As a result of constant standardization work interoperability between Allience members as well as with partner nations has been developed since the foundation of NATO. Figure 7 principally shows the evolution of NATO interoperability during the Cold War, after 9/11, and today. During the Cold War interoperabilty had primarily developed between services and a little among the nations. As more NATO peace support operations were conducted as increased the level of interoperability. Particularly, USA playes important role in this matters. She has always promoted the Alliance ability to act together coherently and effectively to achieve tactical, operational and strategic objectives.
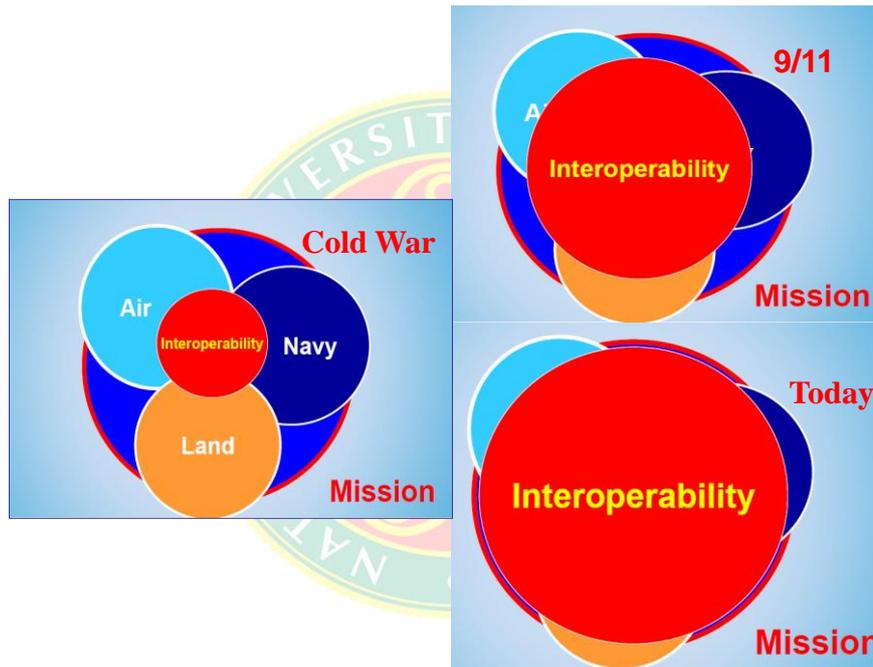
Figure 3: Evolution of interoperabilty in NATO as result of standardization

NATO has gained interoperability –building experience in 27 peace support operations, some of them like ISAF Operation in Afghanistan (2004-2014), air war in the Balkans (1999) and Lybia (2011) were particularly valueable. USA's wars of coalition (Iraq, Afghanistan, global war against terrorism) have also brought experience in the cooperation which was learnt from NATO prospective as well. After the Ukrainian Crisis NATO sets up new level of interoperability which is going to achieve through intensive series of combined and joint exercises.

Participation in NATO Operations has varied greatly from situation to situation, from theatre to theatre, and over time. The implication is that interoperability planning needs to be adaptive enough to accomodate the possibility of countries of different sizes, and composed of different NATO members and partner nations. „Plug and play" is a concept well known at the technological level, but it also is required at national level. There are many examples from the NATO operations, for example, to provide for the possibility of different combinations of troop contributing nations (TCN); and to manage the comings and goings of nations as the mission focus changes and/or missions are added, completed, or abandoned, while minimizing disruptions in the overall NATO effort, as we saw in case of Afghanistan. This requirement suggest a broad range of interoperability solutions, including organizations, doctrine, procedures, and systems that can improve the ability to accomodate the dinamic character of NATO Forces, including transitions.

In light of „hybrid" or „non-linear" warfare conducted by Russia in Ukraine and Syria, NATO must explore new Russian operating concept (use of SOF, electronic warfare) and prepare to counter them. Particularly, NATO forces should increase joint training against conventional and unconventional Russian military scenarios, allowing the Alliance to strengthen its response, practice its interoperability, and signal its defensive resolve. Ultimately, NATO must learn how to assess its own strategy, doctrine and tactics against an adversary whose expertise in hybrid warfare is growing by every day.

CONCLUSIONS

It is necessary to view NATO interoperability in a way that the interoperability issues and problems can arise at each level of military operations or exercises. Therefore, any interoperability initiative must be considered the feasibility and potential impact at each level. Although *the NATO standardization system is able to handle the complex interoperability issues and problems,* including those arising from the Russian hybrid threats, it is clear that the performance and the speed of the system **must be increased**. The experience of NATO operations shows that standardization must focus on *C3ISR* (command, control, communications, intelligence, surveillance, and reconnaissance) *interoperabilty*, offer short and medium solutions *in five areas (readiness, deployment, effective engagement, logistics, new generation weapon systems),* and analyzes several new types of military benefits that might be expected from interoperabilty enhancements.

The standardization is one of the most important ways to achieve interoperability. It is a 65-year normative success in NATO to contribute to achieving high level interoperability in NATO world. No doubt that the standardization community and subject - matter experts inside and outside of NATO will continue developing standardization in a new, more dangerous world. „Be wise - Standardize" [23]

Bibliography

[1]   Szenes Zoltán: *Új bor régi palackban? A walesi NATO csúcs (New Wine in the Old Bottle? The NATO Wales Summit).* Hadtudomány (Military Science Journal), XXVII. Évf. 4-4. Szám, 2014.december, pp.6-8.

[2]   Alexander J. Motyl: *Ukraine as a Vital Security Interest for Europe.* World Affairs, 31 March 2015. http://www.worldaffairsjournal.org/blog/alexander-j-motyl/ukraine-vital-security-interest-europe (15.10.2015)

[3]   Antonin Novotny: *Smart Defence – A new way of Looking at the Capabilities of the Allience.* In: Majer, M., Ondrejcsak, R, Tarasovic, V. (Eds): Panorama of Global Security Environment, 2012. Bratislava: Center for European and Nord Atlantic Affairs (CEENA) Analysis, pp.155-167. http://cenaa.org/analysis/smart-defence-a-new-way-of-looking-at-the-capabilities-of-the-alliance/ (10.03.2016)

[4]   M. Misera, P. Macko: *NATO Forces 2020: Role of Connected Forces Initiative.* Bratislava: CEENA Policy Papers 6/2013 http://cenaa.org/wp-content/uploads/2013/06/PP-6-2013-NATO-Forces-2020-Role-of-connected-forces-initiative.pdf (10.03.2016)

[5]   Florian Ciocan: *Perspective on Interoperability integration within NATO Defence Planning Process.* Journal of Defence Resources Management, Volume 2, Issue 6, 2006. http://journal.dresmara.ro/issues/volume2_issue2/06_ciocan.pdf (16.10.2015)

[6]   Cihangir Aksit: *Smart Standardization: a historical and contemporary success at NATO.* NATO Standardization Agency, 2014. http://www.nato.int/nato_static/assets/pdf/pdf_2014_05/20140528_140528-smart-standardization.pdf (12.03.2016)

---

[23] Slogan of NATO Standardization Office.

[7]   *Standardization Systems in the Defence Industries of the European Union and the United States*. ESL & Network. Litton, TASC, Sept. 1999. p.112
http://aei.pitt.edu/40273/1/A4667.pdf (10.05.2016)