

A SURVEY ON INFORMATION AND KNOWLEDGE MANAGEMENT IN NATO EXERCISES

Orkun SÜMER*

Abstract

Information management has a vital role in every part of life. Even a nonprofit governmental organization or any company whose existence depend on profit has to use information management for efficiency and to reduce costs in economy. Sometimes for strategic purposes a company has to keep its formula secret (Coca Cola). In this survey we will try to understand how NATO is keeping its information management in an extremely huge information transferred environment and how it can make economy of it.

NATO ÖRNEĞİNDE BİLGİ VE BİLGİ YÖNETİMİ ARAŞTIRMASI

Özet

Bilgi yönetiminin yaşamın her safhasında hayati bir önemi vardır. Kar amaçlı olmayan bir hükümet organizasyonu yada mevcudiyeti kar etmeye bağlı şirket bilgi yönetimini etkinliğini arttırmak yada ekonomik giderlerini azaltmak için kullanılmalıdır. Bazen şirketler stratejik amaçları için bir şirket sahip olduğu formül (Coca Cola) gizli tutmalıdır. Bu araştırmada NATO'nun devasa büyüklükte bilgi transfer edilen bir ortamda bilgi yönetimini nasıl sağladığı ve bundan nasıl ekonomik bir değer çıkarttığını anlamaya çalışacağız.

Introduction

NATO, *North Atlantic Treaty Organization* (in French *OTAN, Organisation du Traité de l'Atlantique Nord*), is the largest political and military organization in the world. There are 29 Nations in NATO including Turkey. There is a huge flow of information among NATO bodies all around the globe.

NATO has seen an evolution from a Cold War military alliance to a global intervention power nowadays. NATO was established in 1949 as an international military organization for collective defense against the Soviet Union. The collective defense role is specified in art 5 of the NATO Treaty and states that an armed attack on one of its members is considered as an attack on all its members. Europe was divided in two blocks with each massive conventional army alongside the Iron Curtain and nuclear weapons pointed at each other. The US, Canada and 10 European countries were the first members, while in the fifties Greece, Turkey and Germany joined. When Germany joined in 1955 the Soviet Union and the Eastern European countries formed in reaction the Warsaw Pact.

With the end of the Cold War in 1989 and the dissolution of the Soviet Union in 1991 the common enemy disappeared. The collective defense role became less important. From this moment on NATO is legitimating itself with a series of vague and potential treats. In the Strategic Concept of 1991 and the actual version of 1999 the spill-over effects of instability outside NATO territory, proliferation of weapons of mass destruction, disruption of the flow of vital resources and actions of terrorism and sabotage are named as potential treats. The following years sees the enlargement of NATO towards the east. First with the reunification of Germany, followed by a first round in 1999 with Poland, the Czech Republic and Hungary, and a second larger round in 2004[7].

This enlargement was prepared in the Partnerships of Peace, a NATO program for military cooperation in order to create trust and to enable the military to work together in multinational operations. In this enlargement you still see the forward defense strategy but this time the frontline moves.

* Major, İstanbul Sabahattin Zaim Üniversitesi/Institute of Social Sciences/Business Administration, İstanbul/TURKEY- orksumer@yahoo.com

Defense Expenditure (Million USD)	2010	2011	2012	2013	2014	2015	2016	2017
NATO Europe	274,592	281,683	263,654	269,441	270,202	235,121	237,883	242,234
Albania	186	197	183	180	178	132	131	152
Belgium	5,245	5,500	5,169	5,264	5,192	4,202	4,315	4,303
Bulgaria	832	758	722	811	747	633	671	821
Croatia	920	996	865	850	805	669	623	651
Czech Republic	2,660	2,437	2,185	2,148	1,975	1,921	1,866	2,119
Denmark	4,504	4,518	4,423	4,216	4,056	3,364	3,593	3,667
Estonia	332	389	437	480	513	463	497	519
France	51,971	53,441	50,245	52,316	51,940	43,474	44,191	44,333
Germany	46,255	48,140	46,470	45,932	46,102	39,813	41,590	42,875
Greece	7,902	6,858	5,633	5,310	5,226	4,517	4,635	4,572
Hungary	1,351	1,472	1,322	1,280	1,210	1,132	1,289	1,355
Italy	28,656	30,223	26,468	26,658	24,448	19,566	22,373	22,558
Latvia	251	286	248	281	293	281	398	487
Lithuania	326	344	324	355	427	471	636	785
Luxembourg	248	232	214	234	253	249	236	278
Montenegro	74	80	68	65	69	57	62	72
Netherlands	11,220	11,339	10,365	10,226	10,332	8,668	9,108	9,426
Norway	6,499	7,232	7,143	7,407	7,336	5,816	6,064	6,309
Poland	8,493	9,106	8,710	9,007	10,104	10,596	9,405	9,997
Portugal	3,540	3,652	3,040	3,262	3,003	2,644	2,615	2,726
Romania	2,086	2,380	2,100	2,452	2,692	2,581	2,633	3,844
Slovak Republic	1,138	1,065	1,020	968	997	986	1,003	1,090
Slovenia	772	666	543	507	486	401	449	462
Spain	14,743	13,984	13,912	12,607	12,614	11,090	9,971	11,655
Turkey	14,134	13,616	13,895	14,427	13,583	11,957	12,629	12,315
United Kingdom	60,329	62,852	58,016	62,263	65,690	59,492	56,964	54,863
North America	739,113	762,784	732,941	699,077	672,092	659,953	682,230	703,729
Canada	18,690	22,040	19,994	18,221	18,150	18,700	18,172	20,315
United States	720,423	740,744	712,947	680,856	653,942	641,253	664,058	683,414
NATO Total	1,013,705	1,044,467	996,595	968,518	942,294	895,074	920,114	945,963

Table 1: 2011 Country Budgets within the Alliance in NATO

*The cut-off date for information used in this report was 26 June 2017. Figures for 2017 are estimates [8].

The enlargement continued and NATO reached total 29 member countries. Just to create a visual understanding about how massive NATO's financial expenditures are please try to measure the limits of it by checking the chart below. When you compare the financial potential of NATO you will clearly see it is wider than most of the country's economy [8].

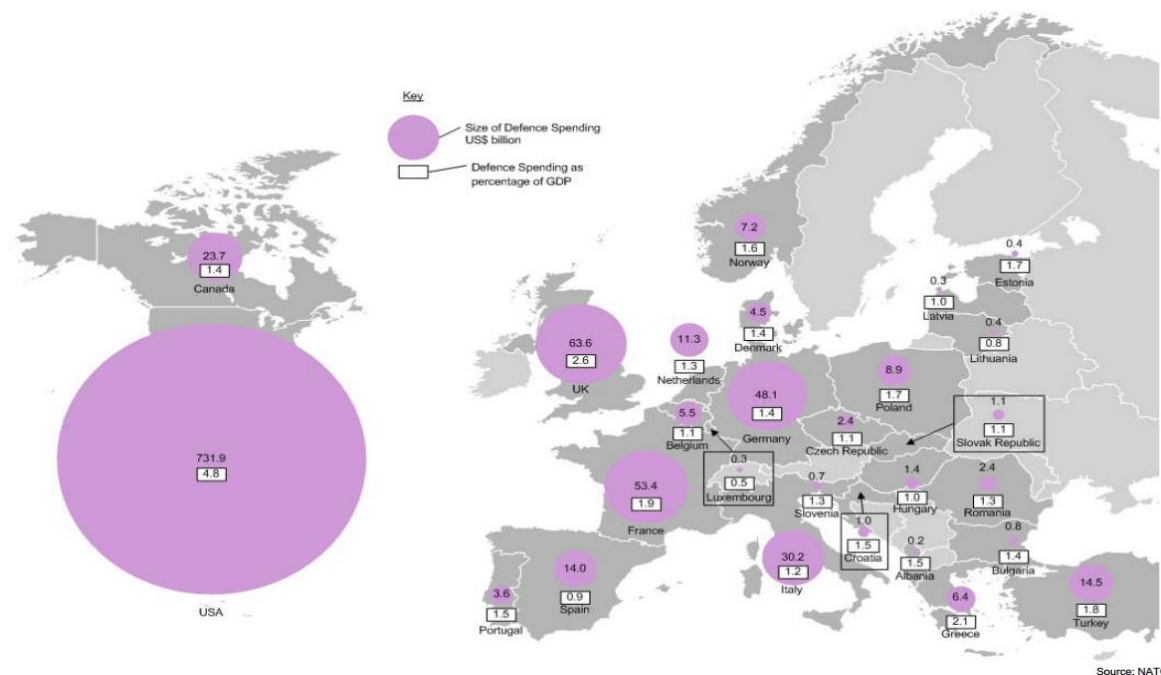


Figure 1: 2011 Country Budgets within the Alliance in NATO.

Figure 1 shows that 2011 Country Budgets within the Alliance in NATO.

Now you have an understanding about NATO's financial power. So to work in this organization or to be able to work with it is a very big market for many industries. Many companies are eager to contract with NATO.

If you need to work at NATO or even want to be in the procurement system to give offers and make contracts you have to have some certain level of security permissions. NATO calls it clearance.

There are certain levels of clearances those are allowing or restricting all entities in need to know basis to indicate and determine who can reach which level of information.

On 15th June, 1999, Council approved the revised NATO Information Management Policy **NIMP** (PO (99)47). The NIMP acts as an umbrella document for information policies within the Alliance including information management, public disclosure and security.

A security clearance is a special status given to those who have met stringent requirements, allowing accessed to classified information. Given the sensitive nature of the information security clearances afford, they can be difficult to obtain.

1. Information Management Strategies

Each time information is exchanged, accessed, or manipulated, project time is expended and project resources are consumed. As much as the project management process is both information intensive and information dependent, the effective implementation of information management strategies will undoubtedly contribute toward goals to reduce overall project cost and schedule which is a must for NATO. An information management strategy may impact personnel requirements, project processes, policies, technologies, or any combination. This survey summarizes benefits commonly attributable to information management applications to exercises and its economic contribution.

NATO Information management is not a process with an easily defined beginning and end. It is a continuous process intrinsic to the agencies normal workflow.

As we have mentioned above a person who wants to perform any kind of role in NATO system needs to have his clearance.

The most usual level of Clearance is **NS (NATO Secret)** this is the information that would cause serious damage to NATO. This is a must for a person to be able to enter any kind of NATO facility and able to use computer and see information or documents [1].

There is also a higher level of clearance called **CTS (Cosmic Top Secret)** – This is the essentially the same as U.S. Top Secret but for NATO nations [1].

The highest level of clearance is **ATOMAL**– Allows access to vital information that has been officially released to NATO, and can be classified above the all other levels [1]

There are also NATO Classified (NC) , and NATO Restricted (NR) used by contractors who wants to make financial contracts with NATO to be able to take part in procurement chain [1].

Finally the level of our survey is **NU (NATO Unclassified)** because all the information here can be found in open source.

As we have learned some basics about NATO information security levels I would like to raise the attention to our topic **INFORMATION AND KNOWLEDGE MANAGEMENT IN NATO EXERCISES**.

Strategy is a must for NATO in every level of its existence. Every penny counts and therefore many different HQ's at many different locations all around the globe consume the economy of the organization every and each second.

It is a very huge subject and some of it is only mentioned in **AJP's** Allied Joint Publications as **Classified** information so we will focus on the strategy of NATO about how it turns its information into economy.

2. Transformation of Information to an Information Management Project

Every year NATO HQ's (Headquarters) conduct internal and joint exercises to keep their readiness levels fresh. Rather than collecting 35.000 pax (personnel) and really perform exercises in range which will cost a huge amount of allowance, maintenance costs they prefer computer assisted exercises (**CAX**). So they have to replicate even the tiniest detail that might happen in real environment.

The rationale for planning and executing military exercises is to prepare commands and forces for operations in times of peace, crisis and conflict. Their aims and objectives must therefore mirror current operational requirements and priorities.

The exercises are executed in three forms: a live exercise (**LIVEX**) in which forces actually participate; a command-post exercise (**CPX**), which is a headquarters exercise involving commanders and their staffs, and communications within and between participating headquarters; and an exercise study, which may take the form of a map exercise, a war game, a series of lectures, a discussion group or an operational analysis. Exercises serve a number of specific purposes:

2.1. Training and experience

Exercises allow forces to build on previous training in a practical way, thereby heightening forces' level of proficiency in a given area. Exercises have varying levels of complexity but most assume that basic training is complete and that a sufficient number of trained personnel are available [4].

- **2.2. Testing and validating structures**

Exercises are designed to practice the efficiency of structures as well as personnel. This is particularly true when periodically the NATO military command structure is reformed and new headquarters need to test their ability to fulfil new responsibilities. A structure consists of many components – concepts, doctrine, procedures, systems and tactics – that must function together. Supply structures, for instance, require specialized training, equipment and operating procedures, which must be combined to effectively support a mission's objectives. Putting these structures into practice allows them to be tested and, if need be, refined [4].

- **2.3. Interoperability**

NATO-led forces must be able to work together effectively despite differences in doctrine, language, structures, tactics and training. Interoperability is built, in part, through routine inter-forces training between NATO member states and through practical cooperation between personnel from Allied and partner countries. Exercises are as open as possible to all formal partners, either as observers or as participants, and in some cases even as hosts of an exercise. Endorsement by the Military Committee and approval by the North Atlantic Council are, however, required before a partner can observe or participate in an exercise [4].

- **2.4. Defense reform**

Participation in NATO exercises is one of the options available to help with defense reform. They provide the possibility for NATO member countries to test reforms implemented nationally and give partner countries the opportunity to be involved in and observe the structures and mechanisms that Alliance members have in place [4].

By using this method to perform exercise NATO transforms its information power and experience into a budget reducing information economy.

This is an extremely huge and wide topic I will address on a smaller part of it which is unofficially and named by me called **{XIM}** Exercise Info Management. In this survey I will try to reflect you how they manage to control flow of information during the NATO exercises.

Since there has not been a scientific research or a specific method used to measure info management in NATO exercises there is an **{IKM}** information and knowledge management branch to implement policies and procedures for this. This branch is the custodian for the information in NATO.

There is also a branch called **{LL}** lessons learned to observe and mitigate every aspect of an exercise including the information management part. So with the help of this two branch and a structure in information and knowledge management branch called **Central Registry** all this huge information flow is monitored. Even though NATO is a very professional international organization it also has the most of the symptoms that an organization is suffering during flow of information from the start of an exercise day till close of business.

All NATO documents prepared for exercises are on **NS** computers. But on exercises NATO pax use **MS** (mission secret) computers those only carry information related with that specific exercise and essential for that mission. So there are some are deadlines before exercises to transfer info from NS to MS.

Here comes the role for IKM branch. There are **TASO** (Terminal Area Security Officers) and **ISO** (information security officers) those approve and sign your data digitally before you sent them to IKM. And finally the information is filtered or monitored by Central Registry and allowed to be transferred to MS computer database.

There is also a program called **JEMM** (Joint exercise management module). All the participants of an exercise use this module to play their role in the exercise. There is a control

mechanism called **EXCON** (exercise control). People works in EXCON are the trusted agents who know all the information and create the body of the exercise for participants who will be evaluated.



When the exercise begins the info management starts. There is a battle rhythm which we can see as the agenda of the exercise. It indicates which meeting will be held at which period and who will participate at which level.

To be able to conduct the daily routine meetings in the battle rhythm there must be subject, an event that occurred and reacted and a story to play.

At this period **EXCON** member event managers start sending injections for participants to react. For example an enemy unit is attacking to one of ours, casualties suffered or a government official of the **host nation** (the country that we presume we are conducting operation) is requesting an explanation of what just happened.

The training audience **TA** (the participants of the exercise who are being evaluated) must give a reaction and that reaction must include the expected outcomes in the quickest way possible after that injection is released. With this process training audience will feel the pressure of a real event and will have to give decisions those will affect the flow of operation.

Every information is monitored by **EXCON** and reactions of TA is daily evaluated by lessons learned branch in the evening VTC (Video Tele Conference). At the end of the exercise there is also a detailed evaluation report that indicates mistakes and lessons learned during the exercise information flow.



The exercise continues and information and experience transforms to new comers , meeting and the role player animated actions demonstrate the real environment. By this NATO gains not only economic saving but also prepares its pax for the real action.

Conclusion

NATO is a huge information processing machine like the Roman army of Caesar. Analysts of the organization never stop transforming every piece of data into information. This is not easy to reflect only with this survey. Even a book may not be sufficient to define every and each aspect of the exercise. There are many **AJP's** Allied Joint Publications separately telling these issues.

If we presume that information management is: The use of all agency personnel, processes, policies, and technologies that define and comprise the information infrastructure in order to coordinate the use of information from the time it is created until it is no longer useful and eliminated than we can say that NATO is in a good level and also using the Information Management not to make profit but to make economy.

I believe every big organization not even the quarter size of NATO is implementing policies like these and making economy in an educational way compared to our subject of exercises. Of course there are many ways to make money out of information but our sample is a non profit international organization so that we will presume an exercise itself is an economic profit.

References

- [1] Url-1: <https://news.clearancejobs.com/2015/02/06/security-clearance-levels-access/>
- [2] Url-2: <https://www.nato.int/>
- [3] Url-3: <http://msb.gov.tr/Content/Upload/Docs/genel/NATOTesisGuvencikBelgesi.htm>
- [4] Url-4: https://www.nato.int/cps/en/natolive/topics_49285.htm
- [5] Url-5: [https://www.ncia.nato.int/Documents/Legal%20Office/C-M\(2002\)60.pdf](https://www.ncia.nato.int/Documents/Legal%20Office/C-M(2002)60.pdf)
- [6] Url-6: <https://nso.nato.int/natoterm/content/nato/pages/home.html?lg=en>
- [7] Url-7: <https://www.no-to-nato.org/wp-content/uploads/presentation-on-nato-by-bombspotting.pdf>
- [8] NATO Public Diplomacy Division, 29 June 2017, *Defence Expenditure of NATO Countries (2010-2017)*.
- [9] Url-8: <https://www.pmi.org/learning/library/information-management-strategies-pm-5290>
- [10] Most of the detailed explanations of exercises are reflecting the hands on job experiences of the author