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INCLUSIVE NETWORK APPROACH TO CONDUCT MILITARY FORESIGHT ANALYSIS: THE CASE STUDY OF THE NUP 2X35 CAMPAIGN

ABSTRACT: The aim of the paper is to explore the case of the NUP 2X35 strategic analysis campaign conducted by the Polish Armed Forces (PAF) and to identify lessons and best practices from employing the inclusive network approach to the conduct of strategic foresight analysis. The research process is centred around the following research questions: (1) What are the assumptions of the NUP 2X35 campaign of strategic analysis? (2) How was the strategic foresight analysis conducted? (3) What are the lessons and best practices from the campaign? (4) How can the case illustrate the employment of the concepts of a learning organization, open innovation and absorptive capacity in military organizations? The single case study methodology is employed as a framework for analysis. Data for analysis is collected from personal, participatory observations conducted by the authors, analysis of official documents related to NUP 2X35 released to the public, and opinions about the project expressed by key leaders of the Polish Armed Forces. The NUP 2X35 strategic foresight analysis is an interesting example of employing an inclusive, network approach to bring valuable external (civilian) knowledge into military analysis. The case shows how the armed forces recognize external knowledge, establish inclusive communities of interest

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grouping together military officers and civilian researchers to absorb this knowledge, how knowledge is assimilated and transformed, and finally exploited for the benefit of the Polish Armed Forces, the national defence sector and NATO. Moreover, the military pays back by increasing the awareness and understanding of defence and national security issues among the society.

KEYWORDS: strategic foresight analysis, NUP 2X35, learning organization, open innovation, absorptive capacity, communities of interest/practice, case study.

INTRODUCTION

The increasing complexity and multidimensionality of the security environment requires from military analysts not only a thorough understanding of the military operational context but also incorporating expertise from various areas, which are 'operated' by civilians, related to: politics, economy, society, technology, and natural environment (Mokrzycki, Reczkowski and Cieśla, 2020). Thus, a traditional, project-based approach to conduct military strategic analysis may be considered as insufficient to meet these requirements. In response to identifying such a gap, military organizations establish platforms to enable networking of military analysts with civilian scholars and subject matter experts. Such an approach enables military organizations to absorb external, civilian knowledge and expertise, and benefit from ideas generated by external experts, materializing the theoretical concepts of absorptive capacity (Cohen and Levinthal, 1990; Zahra and George, 2002; Jansen, Van Den Bosch and Volberda, 2005; Lane, Koka and Pathak, 2006; Todorova and Durisin, 2007) and open innovations (Chesbrough, 2003; Chesbrough and Appleyard, 2007; Huizingh, 2011). The projects of strategic foresight analysis conducted under the umbrella of NATO SFA (Strategic Foresight Analysis, 2017) and Polish NUP 2X35 (Mokrzycki, Reczkowski and Cieśla, 2020) may be indicated as interesting cases illustrating this trend. So far, this new way of the conduct of military strategic analysis, characterized by its network and inclusive character, has not been explored, which opens a gap for a new study.

The aim of the paper is to explore the case of the NUP 2X35 strategic analysis campaign conducted by the Polish Armed Forces (PAF) and to identify lessons and best practices from employing the inclusive network approach to the conduct of strategic foresight analysis. The remainder of the paper consists of four sections. Firstly, the method of study and the data collection process are explained. Secondly, the assumptions of the NUP 2X35 campaign are

analysed to present the context of the study. Thirdly, lessons and best practices from employing the inclusive network approach to conduct strategic foresight analysis are identified. The focus is given to strategic leaders' advocacy and sponsorship, working environment, and participants' motivations and engagement. Finally, the study findings are discussed in the context of the concepts of a learning organization, open innovation and absorptive capacity.

METHOD OF STUDY

The single case study methodology is employed as a framework for analysis. A descriptive approach and case study methodology in particular are claimed to be effective for highly contextualized studies (Lis, 2018) and to explore new concepts through analysing 'early adopters' (Huizingh, 2011). Although the concepts of open innovation and absorptive capacity are not the 'new kids' in management theory, they have not been studied in the context of military organizations. Thus, it seems to be valuable to fill this gap through analysing the case of the NUP 2X35 strategic foresight analysis campaign. The case study analysis is chosen as a research methodology because NUP 2X35 may be an example of a unique approach to conduct strategic analysis in military organizations (cf. Strumińska-Kutra and Kołodkiewicz, 2012, pp. 14–15) and it gives an extremely rare opportunity to discuss the concepts of open innovation and absorptive capacity in organisations which are considered to show preference for intra-organizational generation of strategic knowledge and understanding.

The research process followed the five step model (Yin, 2010; Strumińska-Kutra and Kołodkiewicz, 2012) including: (1) defining study questions, (2) choosing the case and the sources of data, (3) collecting data, (4) analysing data, and (5) writing a study report. The research process was centred around the following research questions: (1) What are the assumptions of the NUP 2X35 campaign of strategic analysis? (2) How was the strategic foresight analysis conducted? (3) What are the lessons and best practices from the campaign? (4) How can the case illustrate the employment of the concepts of a learning organization, open innovation and absorptive capacity in military organizations?

Data for analysis was collected from personal, participatory observations conducted by the authors, analysis of official documents related to NUP 2X35 released to the public, and opinions about the project expressed by key leaders of the Polish Armed Forces. Both authors have been the key planners responsible for designing the concept of the campaign and leading the project. They bring a valuable set of observations, insights and lessons from employing NUP 2X35 in

order to support transformation of the Polish Armed Forces into a knowledge organization (Mokrzycki and Lis, 2020). Being aware of potential subjectivity related to using personal, participatory observation as a data collection method, the authors triangulated their observations with project documentation, including the first edition of the NUP 2X35 report (Mokrzycki, Reczkowski and Cieśla, 2020), and the comments made by the Chief of General Staff of the Polish Armed Forces (Andrzejczak, 2020, 2021) and the Operational Commander of the Polish Armed Forces (Piotrowski, 2020). The following techniques were used to ensure validity and reliability of the study (Yin, 2010): (1) construct validity – employing triangulated sources of data and reviewing the study report by other personnel involved in the NUP 2X35 project, (2) internal validity – pattern matching between the findings from the case study and theory and building explanation of cause-effect relationships, (3) external validity – referring to theoretical assumptions, (4) reliability – documenting sources with the study protocol and a database.

CONTEXT OF STUDY: NUP 2X35 CAMPAIGN

NUP 2X35 is a campaign of strategic analysis being conducted by the Polish Armed Forces, initiated by General Rajmund T. Andrzejczak, the Chief of General Staff of the Polish Armed Forces in 2019. Its name (Nowe Urządzenie Polskie, New Polish Battle Order) refers to the Old Polish Battle Order, which was a battle model employed by the Polish troops between 15th and 17th centuries (Mokrzycki, Reczkowski and Cieśla, 2020, p. 5). The idea of the campaign is explained by the Chief of General Staff of the Polish Armed Forces, who states: “In order to better understand the operational environment, I have established a small think tank in the armed forces dedicated to this area. We have labelled it Nowe Urządzenie Polskie (NUP) [...]. It was my intent to have the name of the project manifesting both the military tradition and modernity. NUP is a group open for both the military and civilians. It assembles numerous military units, as well as several dozen universities, higher education institutions, professors and experts in many subjects. All of them engage in passionate discussions and respond to our requests for information. I called them intellectual outsourcing” (Andrzejczak, 2021, p. 126).

The campaign is aimed at analysing security and operational environments, and developing the national multidomain concept of operations (cf. Figure 1). NUP 2X35 may be considered as a Polish national equivalent of the NATO Long Term Military Transformation (LTMT) programme contributing with its outcomes to the NATO Defence Planning Process (NDPP).

LTMT consists of two components: Strategic Foresight Analysis (SFA) aimed at identifying future trends in the security environment, and Framework for Future Alliance Operations (FFAO), translating these findings into implications for the armed forces (Kubisiak, 2019).

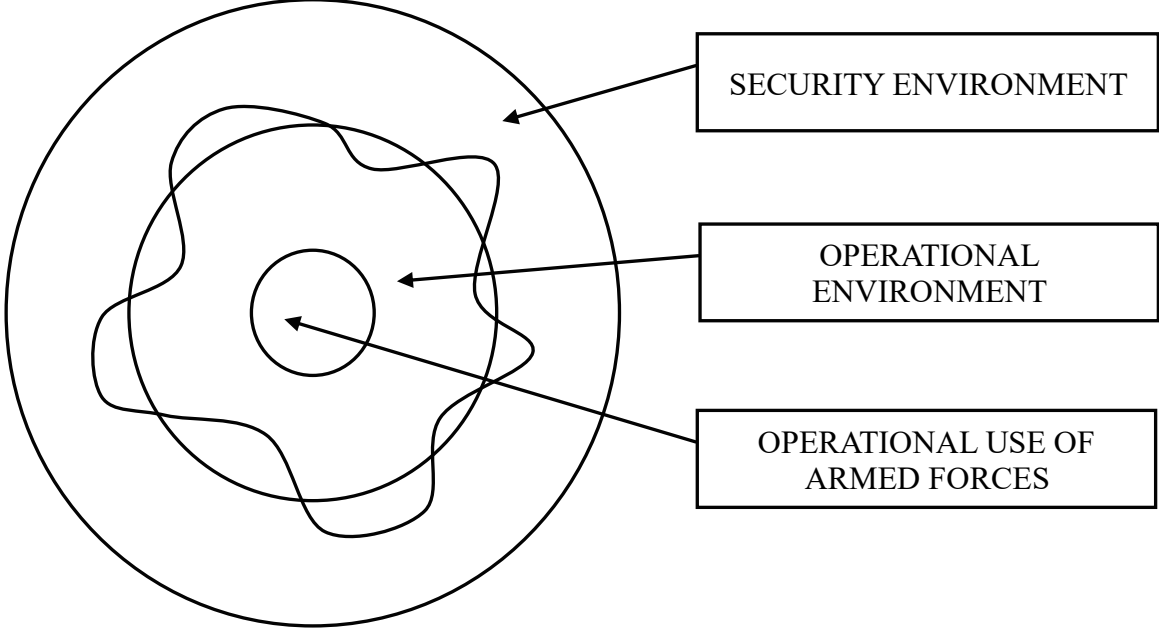


Figure 1. Scope of analysis in the NUP 2X35 campaign
Source: own study.

Strategic foresight analysis of the security environment in 2035 is a first layer of the NUP 2X35 project. It is planned to be conducted as a continuous campaign, engaging civilian scholars and experts to discuss and foresight the forces, trends and key processes identified in the geopolitical, economic, socio-cultural, technological, natural environment and urbanizations themes. Among the areas of particular interest within the NUP 2X35 campaign are: demographics, urbanization, connectography, emerging and disruptive technologies and climate changes (Andrzejczak, 2020, pp. 37–38, 2021, pp. 126–127). Going beyond ‘the military bubble’ and including the civilian perspective in the military strategic foresight analysis was one of the fundamental assumptions of the NUP 2X35 campaign. As highlighted by the Chief of General Staff of the Polish Armed Forces: “After some discussion with soldiers and civilians, I realized that we have different perceptions of the security environment. We are focused on kinetic operations and military aspects. Often, we concentrate on the map of Poland, while we should look at a broader picture. We cope with military issues taken out of the context; thus,

in order to increase effectiveness we must revise doctrines, concepts and programmes” (Andrzejczak, 2020, p. 35).

The continuous character of the NUP 2X35 campaign should be highlighted. While asked when the project will be finished, General Andrzejczak answered: “I hope never. It may be strange, but our concept does not assume that we will finish discussing the future of the Polish Armed Forces in 2035. The key point of the project is to repeat the analysis every three, five years and include systemic changes which emerge. We are interested in the journey, not the final station” (Andrzejczak, 2020, p. 38). The communities of interests grouped around six themes within the project are working on a continuous basis, sharing and exchanging knowledge, opinions and insights. They work online and meet during research seminars/webinars and conferences. Their efforts are channelled in strategic foresights reports produced periodically. The report issued in January 2020 summarized the first cycle of the campaign. In 2020-2021, due to the COVID-19 pandemic, the communities of interest discussed the impact of this breaking event on the geopolitical, economic, social and technological aspects of the security environment. The Russian aggression against Ukraine, which completely changed the security environment in Europe, is now the main reference point for any further analyses and forecasts. The series of updated reports dedicated to the status, developments and forecasts in six themes of the security environment analysed under the umbrella of the NUP 2X35 campaign, i.e. geopolitics, economy, society, technology, natural environment and urbanization, is expected to be issued in 2023 and 2024.

LESSONS AND BEST PRACTICES

Strategic leaders’ advocacy and sponsorship

Leaders’ advocacy is indispensable for implementing any new idea or a programme of changes. This principle applies to a variety of management concepts, but it seems to be of particular importance for the concepts embedded within the knowledge management theory. The lessons from the NUP 2X35 project indicate that strategic leaders’ advocacy and sponsorship should be as well considered among the key factors standing behind its success. Firstly, the Chief of General Staff of the Polish Armed Forces clearly explained his intent and expectations from the project, and actively participated in the designing process (in the spring of 2019) providing the project management team with his feedback. Secondly, he and other

key leaders of the Polish Armed Forces have been personally engaging in the organizational learning processes conducted under the umbrella of the NUP 2X35. The Chief of General Staff actively participated as a speaker in the inauguration research seminar of the NUP 2X35 campaign (in July 2019), in the first seminar of the NUP 2X35 Emerging & Disruptive Technologies (EDTs) community of interest (COI) and four editions of the GlobState conference (2019-2022), organized by the NUP 2X35 community. Some other high-ranking representatives of the Polish Armed Forces and the governmental administration supported, with their expertise, discussions of the thematic communities of interests, e.g. technology COI (Vice-Minister of Digital Affairs, Chief of J6 of the General Staff of the Polish Armed Forces, Director of the National Cyber Security Centre) or geopolitics COI (Department Director, Office of the Prime Minister of the Republic of Poland). Moreover, Deputy of the Head of the National Security Bureau, Deputies of the Chief of General Staff of the Polish Armed Forces, the Deputy of General Commander of the Polish Armed Forces, the Deputy of the Commander of Territorial Defence Forces as well as division and brigade commanders take part in GlobState conferences as speakers and panellists. Thirdly, the Chief of General Staff of the Polish Armed Forces supports the NUP 2X35 community as the honorary chairman of the Scientific Committee of the GlobState international research conference engaging personally in the promotion of the NUP 2X35 and the conference at the level of Chiefs of Defence, e.g. General Daniel Petrescu, the Chief of Defence of Romania attended GlobState 2022 conference by the invitation of General Andrzejczak. Finally, the Chief of General Staff of the Polish Armed Forces requests to have analysis findings from the NUP 2X35 project included in the concepts developed in the Polish Armed Forces.

Conduct of the campaign and the working environment

As already stated, the analysis under the NUP 2X35 is conducted at three levels: security environment, operational environment and operational use of the armed forces. The strategic foresight analysis involving civilian scholars and experts focuses on the first of these layers. It is assumed that the analysis is conducted by communities of interest on a continuous basis, while the outcomes of these studies are published periodically in strategic foresight reports. For instance, the first cycle of the campaign lasted from May 2019 till January 2020 (cf. Figure 1). The first step (May – July 2019) was focused on mapping experts and inviting them to join thematic communities of interest (COIs) dedicated to: geopolitics, economy, society,

technology, natural environment and urbanization. In the second step (from July to November 2019), COIs were working on identifying leading forces and trends in the future security environment and their implications for defence and security. The analysis was enhanced by discussions during research seminars conducted by each of COIs in September and October 2019 and the GlobState conference in November 2019. The last step (November 2019 – January 2020) was collective writing of the final report. The writing team consisted of 16 military officers and 24 civilians. In total, the first cycle of the NUP 2X35 strategic foresight analysis gathered 126 scholars and experts from 50 organizations (Mokrzycki and Lis, 2020).

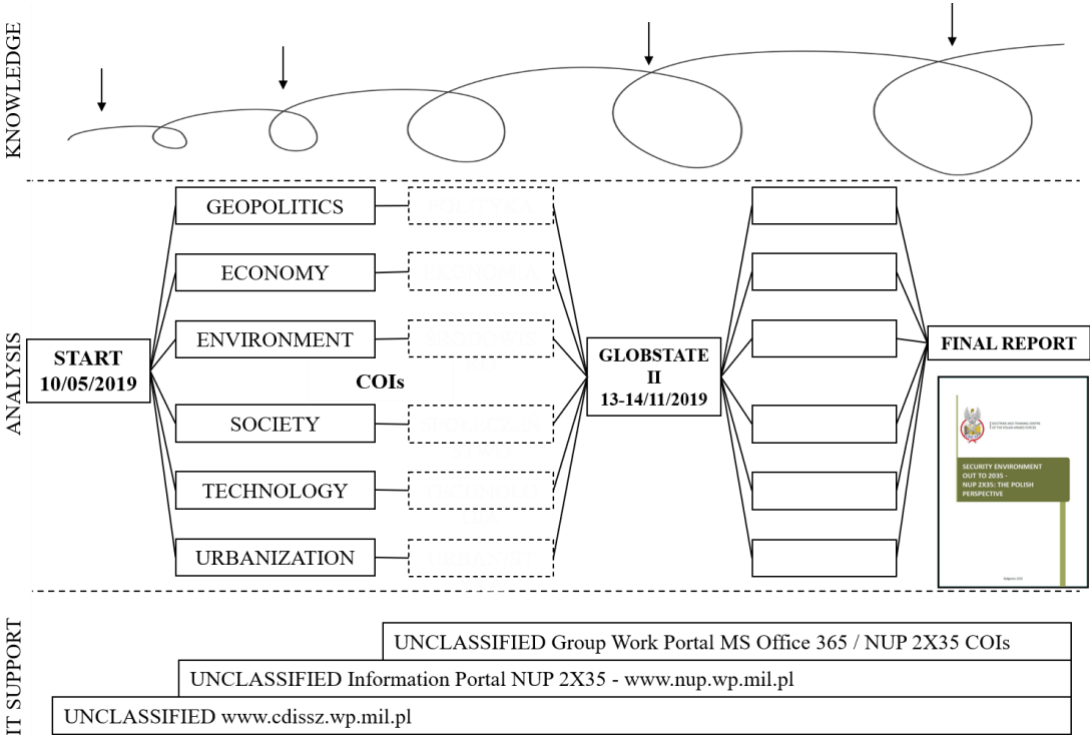


Figure 2. The first cycle of the NUP 2X35 campaign

Source: own study.

The members of the NUP 2X35 communities of interest use the dedicated group work portal based on MS Office 365 software to communicate among each other and work within the thematic teams. The progress of work and key findings are disseminated through the NUP 2X35 information portal and the website of the Doctrine and Training Centre of the Polish Armed Forces. This IT support proved its value in 2020-2021, when all the activity shifted to the Internet due to the pandemic (Mokrzycki and Lis, 2020).

Participants' motivations and engagement

The NUP 2X35 is a voluntary, pro publico bono project. Scholars and experts participating in the project are not remunerated for their contributions. In spite of that, the NUP 2X35 communities of interest succeeded in attracting a numerous group of scholars and subject matter experts, who are highly recognized in their disciplines and willingly work together with military project officers. As highlighted in the report from the first cycle of the NUP 2X35 strategic foresight analysis: "A key success factor for the security environment analysis carried out under the NUP 2X35 campaign has been the involvement of numerous academics, researchers and experts [...]. Without expertise of the representatives of military and civilian universities and academia as well as public administration entities it would not be possible to achieve the intended objective of the first phase of the campaign, aimed at the identification and description of the key security environment trends out to 2035" (Mokrzycki, Reczkowski and Cieśla, 2020, p. 51).

Thus, an important question arises about their motivations to engage in the project. Firstly, patriotism is a very strong motivating factor. As highlighted by some members of the NUP 2X35 community, they highly appreciate to be invited by the Polish Armed Forces to contribute with their knowledge and expertise to increasing defence capabilities of the nation. Secondly, they find the idea of the project and the way of its conduct interesting. While designing the campaign, the management team decided to employ the forms of cooperation, which scholars are familiar with, i.e. research conferences, seminars/webinars and collective writing. Such an approach established a bridge between the military and academia. Thirdly, participation in the NUP 2X35 campaign is a great opportunity for researchers to put the findings of their studies into practice and contribute to the development of the Polish Armed Forces and defence potential of the Republic of Poland. As noticed in the final report from the first cycle of the analysis: "the involvement of academia members in the NUP 2X35 campaign works may constitute an excellent example of an influence of scientific research on the functioning of society in the state security and defence spheres" (Mokrzycki, Reczkowski and Cieśla, 2020, p. 51). Thus, contributions made to strategic foresight analysis under the umbrella of the NUP 2X35 campaign may be used by scholars to illustrate the impact of their research on the society, which is an important aspect of parametric evaluation of research institutions.

DISCUSSION

As acknowledged by the NUP 2X35 project team (Mokrzycki, Reczkowski and Cieřła, 2020, p. 6), the idea of an inclusive approach inviting civilian scholars and subject matters experts to contribute to strategic foresight analysis conducted in the military was inspired by the concepts embedded in the theory of knowledge management, such as a learning organization, absorptive capacity or communities of interest. Moreover, some manifestations of the open innovation concept may as well be observed in the analysed case.

The concept of a learning organization emerged in the early 1990s (Senge, 1990; Garvin, 1993), and has been adopted to the context of military organizations firstly in the United States (Wheatley, 1994; DiBella, 2010; Freeman and Calton, 2020) and then in other NATO states (Girard, 2004; Letens et al., 2012; Lis, 2014; Dyson, 2019). As defined by Garvin, Edmondson and Gino (2008, p. 110), a learning organization is “a place where employees excel at creating, acquiring and transferring knowledge”. The choice between an internal and external source of knowledge is one of learning orientations, which may be followed by organizations, including military organizations. If an organization decides to learn from external knowledge sources, such a process may be implemented incrementally resulting in adaptation, or in a transformative way leading to knowledge acquisition (DiBella, 2010, pp. 120–121). Thus, involving civilian scholars and subject matter experts into strategic foresight analysis conducted by the Polish Armed Forces may be considered as learning from external sources, which is one of the manifestations of the learning organization concept, or a knowledge organization as pointed out by Mokrzycki and Lis (2020).

The concept of open innovation is traditionally associated with business organizations. The review of literature indicated hardly any papers translating this concept into the context of military organizations. Nevertheless, as one of the open innovation principles reads “not all of the smart people work for us so we must find and tap into the knowledge and expertise of bright individuals outside the company” (Chesbrough, 2003, p. 38), the idea of the inclusive network approach to the conduct of strategic foresight analysis implemented in NUP 2X35 seems to match with the assumptions of this concept. “In the new model of open innovation, a company commercializes both its ideas as well as innovation from other firms and seeks ways to bring its in-house ideas to the market by deploying pathways outside its current business” (Chesbrough, 2003, p. 37). Open innovation has two forms, i.e. inbound open innovation (inflow of knowledge and innovative ideas from the outside of an organization) and outbound

open innovation (outflow of knowledge and innovative ideas from an organization to its environment). It seems to be very bold but a thesis may be coined that the inclusive network approach to conduct strategic foresight analysis under the umbrella of the NUP 2X35 project shows some features of the open innovation concept related to the two-sided flow of knowledge. It applies mainly to inbound open innovation, but some features of outbound open innovation may be noticed as well. This is highlighted in the statement made by the Operational Commander of the Polish Armed Forces: “An additional benefit from launching the NUP 2X35 materializes in developing the capabilities of the armed forces to identify and use knowledge absorbed from civilian experts in practice, which is necessary to understand the security environment and to design adequate responses. Moreover, on the one hand, inviting to discussion the representatives of civilian academia enables us to go beyond the expertise in military studies, on the other hand it contributes to increasing awareness and understanding of defence and national security issues among the society” (Piotrowski, 2020, p. 8).

The employment of inbound open innovation leads to the need to develop the organizations’ absorptive capacity, which is defined as “the ability of a firm to recognize the value of new, external information, assimilate it, and apply it commercial ends” (Cohen and Levinthal, 1990, p. 128) or “a set of organizational routines and processes by which firms acquire, assimilate, transform and exploit knowledge to produce a dynamic capability” (Zahra and George, 2002, p. 186). Such an ability seems to be one of prerequisites of efficient and effective contribution of civilian scholars and experts to the process of military strategic foresight analysis. Mapping civilian research institutions and experts by the Doctrine and Training Centre of the Polish Armed Forces represents the process of recognizing valuable knowledge. Then, this knowledge is acquired in daily interactions within communities of interest and during research conferences and seminars. Collective writing teams consisting of both military officers and civilian researchers facilitate knowledge assimilation by the armed forces and its transformation into intra-organizational ideas, concepts and plans. Certainly, the concept of communities of practice (Wenger, 1996, 2000) was employed to establish and run the NUP 2X35 communities of interest as exemplified in the Lessons and Best Practices section. Finally, the exploitation of knowledge in the Polish Armed Forces (e.g. for the purposes of the Multidomain Concept of the Operational Use of Forces), in the national defence sector (e.g. in the process of producing the National Defence Strategy 2020) and in NATO (e.g. through contributions to NATO SFA) closes the loop.

CONCLUSIONS

The study has analysed the case of the NUP 2X35 strategic analysis project run by the Polish Armed Forces, focusing on the employment of the inclusive network approach to the conduct of strategic foresight analysis. Firstly, the assumptions of the NUP 2X35 campaign have been analysed to present the context of the study. NUP 2X35 assumes going beyond the 'military bubble' and engaging voluntary civilian scholars and subject matter experts in communities of interest working together with military officers on strategic foresight analysis of the future security environment. Continuous character is another distinctive feature of the project. Secondly, lessons and best practices from employing the inclusive network approach to conduct strategic foresight analysis have been identified. The focus has been given to strategic leaders' advocacy and sponsorship, conduct of the campaign and working environment, and participants' motivations and engagement. Thirdly, the study findings have been discussed in the context of the concepts of a learning organization, open innovation and absorptive capacity.

Discussing the findings of the study, its limitations should be taken into account. Firstly, the single case study methodology limits the possibility to generalize the findings and use generalizations to contribute to development of theory. Secondly, although triangulated with other sources of data, personal observations by the authors should be considered as a subjective data collection method. Thirdly, the study analyses the lessons and best practices from managing the NUP 2X35 inclusive network approach to strategic foresight analysis and discusses them in the context of a variety of knowledge management related concepts, but the focus is given to processes while a more thorough analysis of organizational routines and learning mechanisms has been omitted.

Summing up, the NUP 2X35 strategic foresight analysis is an interesting example of employing an inclusive network approach to bring valuable external (civilian) knowledge into military analysis. The case shows how the armed forces recognize external knowledge, establish inclusive communities of interest grouping together military officers and civilian researchers to absorb this knowledge, how knowledge is assimilated and transformed, and finally exploited for the benefit of the Polish Armed Forces, the national defence sector and NATO. Moreover, the military pays back by increasing the awareness and understanding of defence and national security issues among the society.

The study opens interesting research avenues for the future. Firstly, replication of the study in the context of other military organizations employing open, inclusive networks of cooperating civilians in their analytical projects could be recommended to compare and contrast identified assumptions, processes, lessons and best practices. Secondly, the quantitative study of motivations of scholars and experts involved in such projects could shed light on this very important aspect of open, inclusive analytical projects. Thirdly, organizational routines and learning mechanisms observed in regard to collaborative work within NUP 2X35 communities of interest or absorptive capacity of the armed forces could become valuable topics of further exploration with the use of qualitative methods e.g. case study analysis. Finally, a network approach to conducting strategic foresight analysis may be studied from the perspective of networks of cooperating national teams contributing to the global and regional analytical projects led by NATO Allied Command Transformation.

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