

EU Border Security – the Drivers and Barriers of Border Guarding Authorities Motivation in Technological Innovation. Case of Latvia

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Abstract. *With the dynamic development of modern society, ensuring the security and control of the state border is the simultaneous goals of both internal and external security of the country. Consequently, it is vitally important to identify and develop tools and ways to address emerging challenges. In the current climate, private and public organizations are required to be up-to date with technological advancements in order to provide competitive, relative and effective solutions and services for inhabitants in all areas. Technological innovation is an important and even compulsory element of the modern organization, which stimulates continuous development and potential growth. There are many innovative ideas within other industries and universities where joint funds could be sort to allow the delivery of innovative solutions that would benefit such law enforcement agencies as border guarding authorities. A significant problem is that there appears to be a lack of interest from the respective law enforcement organizations in participating in consortiums, which is necessary for submission of any proposal. Jon Freemans' Analytical framework for understanding of innovation process used to under pin the main concepts of the research proposed in this thesis. This research involved a series of interviews and questionnaires designed to analyse the perceptions of the drivers and barriers of the State Border Guard of Latvia. From detailed results analysis, a list of general recommendation been established for Border Guarding Authorities in order to improve its motivation for participation in the projects related development of the technological innovation in the field of border security by conducting internal measures and improving network/connection building outside of the organization.*

Keywords: border, innovation, Latvia, motivation, security.

Introduction

Since the beginning of the Schengen Agreement, signed on 14 June 1985 by five of the ten member states of the then European Economic Community, and its following legal development as well as geographical expansion of Schengen Area the security of the state border became part not only of national security, but the core ingredient of the security of all European Union (EU).

In the current climate, private and public organizations are required to be up-to date with technological advancements in order to provide competitive, relative and effective solutions and services for inhabitants in all areas. Technological innovation is an important and even compulsory element of the modern organization, which stimulates continuous



development and potential growth. In a public organization, that is usually relying on expertise and communication of the people working in their professional environment. Externally, an opinion based on the subjective observation of the Author may take place that implementation of latest technological innovation is not required and is far away from being a priority, especially within law enforcement agencies such are border guarding authorities.

Nevertheless, on one hand, the European Union is continuing to push forward the necessity of new technologies in the field of border security by delegating the task

“... to participate in the development and management of research and innovation activities relevant for the control and surveillance of the external borders, including the use of advanced surveillance technology, and develop pilot projects...” (Regulation (EU) 2016/1624)

to the European Border and Coast Guard Agency (Frontex). Also through providing funding opportunities like Horizon 2020 (H2020) (European Union, Horizon 2020), the biggest EU Research and Innovation (R&I) programme, with around €80bn of funding available over seven years (2014–2020)(Cox et al., 2018), which substituted the Seventh Framework Programme and future, starting from 2021, Horizon Europe (European Union, Horizon Europe), allowing the respective companies, educational institutions and public organizations to submit their proposals and to claim financial support.

On the other hand, from the Authors opinion, when acting as the project coordinator within a large consortium of one of the European Union Research and Innovation program`s Horizon 2020 projects, and while communicating with academics, representatives of technical partners and members of other law enforcement agencies, I have observed a lot of comments, and even complaints about the low interest of national law enforcement agencies in participation in research and innovation projects that focus on the development of technological innovations. Existence of such problem and need for improvement of engagement of end users in research projects` activities remain areas for improvement has been already identified by Frontex (Cox et al., 2018). In particular, there are many innovative ideas within other industries and universities where joint funds could be sort to allow the delivery of innovative solutions that would benefit such law enforcement agencies as border guarding authorities. Provided solutions have the potential to enhance the public experience and safety, and border security and put on the table practical tools in order to support the respective agencies in tackling existing border security challenges, then failure to engage in such consortiums means that solutions, which delivered, may not meet the user requirements. A significant

problem is that there appears to be a lack of interest from the respective law enforcement organizations in participating in consortiums, which is necessary for submission of any proposal.

The purpose of the research is to identify motivational aspects (drivers) and barriers that can have an influence towards BGA decisions on participation or not in research and innovation projects. Recommendations developed within the research may help to understand the situation in the field and find solutions for existing perceptions and problems.

The main question of the research is:

Can identification of the drivers and barriers of the border guarding authorities' participation in technological research and innovation projects be used to produce a set of generalized motivational recommendations for border guarding authorities across Europe to increase involvement?

Research period: 2018-2019, within the State Border Guard of Latvia.

Research methods: Literature review, interviews and questionnaire.

The role of the research and innovation in border guarding organizations

It has to be clear that innovation is not limited to only the development of new concepts and can be seen as an added value and has a feasible outcome. At the same time, there are no doubts that even though the invention process remains as a part of the innovation, innovation moves forward and provides the ground for interoperability of the ideas by ensuring that new ideas are relevant to the requirements of end-users (Freeman et al., 2015).

In relation to the innovation within public organizations, some organizations understand it as mainly a purposeful act. Following the idea - innovation without purpose is unlikely to get far in its development stage. Particularly, this is the case in the public sector where existing structures, processes or lack of interest may simply destroy it (Roberts & Tõnurist, 2018).

Nowadays, taking into consideration growing importance of the need for joint efforts to succeed in challenges, raising the public awareness in the process of innovation in the public sector, maybe seen as an open process of collaboration between stakeholders across various organizations (Bekkers & Tummers 2018), which supports practical implementation of ideas into new devices or processes (Schilling, 2013).

According to the Gault F. *'public sector consists of the General government sector and the aggregate of all public corporations'* (Gault, 2018). The Border guarding authority (BGA) (police) is a part of the public administration sector, which is belonging to the division of the public sector

(Arundel & Huber, 2013), hence, further in research when referring to the public sector it considered as equal to the border guarding authority.

Research' in accordance with Oxford dictionary:

'is the systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions. The work directed towards the innovation, introduction, and improvement of products and process defined as research and development'. (Oxford University, 2015)

Referring to the prior mentioned definition of the research, Author considered that research itself practically defined as a part of the innovation process (research & development). Similar principle can be implemented when BGA led by the need to find something new - knowledge, technology, solutions (seeking for innovation) makes a decision to join R&I projects (getting involved in research).

The European Union and some scholars have emphasized that there is a definite difference between what is understood by innovation and its understanding between the public sector and private sector (European Union, 2013).

One of the main criteria for particular opinion is that a private organization in the vast majority of cases focuses on innovation of the products and looking forward for competitive advantages and gaining profit. On the other hand, public organizations give the priority to the innovation of services and enhancing its performance in favour of benefits for the public/society. Additionally, M.Tate, I.Bongiovanni, M.Kowalkiewicz, and P.Townson point out that due to some differences of the system innovations in public organizations requires more communication, interaction and solving of disputes with stakeholders than in private companies (Tate et al., 2018) which may have some affect on the innovation process.

According to Schilling M., product innovation and process innovation both are important for the organization, although product innovation practically is more visible for externals than process innovation (Schilling, 2013). Such situations are inherent to the public organizations, which are performing their tasks in a relatively narrow field of work, such is border-guarding authority. It leads to the point that external actors and in some situations even members within organization are not aware about innovation processes.

Taking into consideration the outcome of the innovation, when describing the process, there are two types of innovation outlined in the literature: radical and incremental innovation, which is relevant for both public and private organizations and requires certain knowledge and has a different impact to the user and the system. Radical innovation provides completely new ways of service or process in organization. Incremental

innovation has relatively low amendments to the existing processes (Schilling, 2013).

The Author's opinion is that due to certain limitations like strict organizational structure, internal bureaucracy, limited financial means and human resources, legislation and lack of other elements which are important for implementing and delivering of innovative ideas, technologies or services, incremental innovation might be a most common way of implementing innovations within border guarding authority.

In this context, delivery of the innovation is in the implementation of a new or significantly changed process. It requires complex major changes within the organization, within inputs towards the process, infrastructure, knowledge and skills (Gault, 2018). According to Schilling M., it may have a relatively sustainable and comprehensive influence not only on a single organization, but also on the industry of the particular innovation and other users of the same technology (Schilling, 2013).

The Author's opinion is that EU border security is very much affected by the implementation of new technologies, especially taking into consideration of the fact that border guarding is quite a narrow field of expertise, and is regulated by the specific regulation (EU) applying to all stakeholders in the field. In simple words, technological development of one player (country) in the EU most probably will have a slight impact to other players, for example strengthening of one particular stage of the external EU borders by innovative technological could imply that the pressure is raised on others, because of permanent flow of irregular migration and criminals seeking for other ways to get in the country. Therefore, it is important to provide equable technological capacity for all countries.

In overall, it expected that innovation should minimize external and internal risks (social challenges) to the organization by enhancing sustainability and competitiveness (Coenen & Díaz López, 2008). According to the European Union research "Security Research and Innovation - Boosting effectiveness of the Security Union (2017)", there is a very low number of Member States financing their own security research programmes, and in most cases countries rely on the priorities set by the European Union (European Union, 2017). Involvement of the BGA in the process of planning and development of the research and innovation may ensure that operational requirements meet financial and intellectual contribution, and further successful implementation in the field. At the same time, research can support BGA in better understanding of threats to border security and supply organizations with up to date technological and process solutions to respond accordingly (Cox et al., 2018). In the author's opinion, the added value of engagement in R&I activities is that the organization receives external independent opinion, so called "ideas

injection” approach for tackling of the routine situations. This is a valuable experience, taking into consideration that the BGA are mostly belonging to the type of organizations, which closed for external proposals.

In the area of responsibility where BGA are operating, R&I is important not only for the purpose of developing new technologies, which may offer cost-effective, innovative, and efficient solutions that minimize disturbance to regular border traffic, enhance operational capacity and contribute to the overall development of the organization. It also helps to find new ways of working that can make border guards in the field more effective. (European Union, 2017) The researches conducted in other fields shows different impacts of innovation, for example research conducted in the field of manufacturing companies proved that by increasing the investment in technological innovation, a company can increase the production efficiency (Liu et al, 2018). Provided example do not guarantee that there will be the same or even similar impact towards BGA, however, it provides evidence that innovation in overall may have a positive impact towards any type of organizations.

From the perspective of the BGA caution towards technological innovation may be explained by the opinion that despite that new technologies may appear and be perceived as a stimulating factor of organizational change, there is nothing automatically about the effects of technology on an organization (Preece et al., 2019). From the Authors practical point of view, as an example in relation to border guarding, it means that having innovative technologies at BCPs does not guarantee that it will help to reduce number of human resources conducting border checks.

There is a diversity of the approaches to research and innovation within the academia: Triple Helix (Etzkowitz & Leydesdorff, 1995), Sectoral Systems of Innovation (Malerba, 2002), The Research and Innovation Pathway (Cox et al., 2018). One of the Author’s research objectives is to develop recommendations to improve activeness of the border guarding authorities to participate in research and innovation projects. Current research will provide input into existing situations, and by identifying, drivers and barriers will help to understand why some BGA are passive in participating in research and innovation projects and not even trying to join pathway presented by Cox et al RAND analyses. In order to reach these objectives, identification of internal and external factors affecting decision of the BGA to join research and innovation projects required. Therefore, in the Authors opinion Analytical Framework for Understanding of the Innovation Process (AFUIP) consisting of 8 factors (Drivers, Culture, Structure, Talent, Capital, Knowledge assets, Infrastructure,

Networks/connections) provided by J.Freeman and RAND will be most relevant to apply in this research (see Figure 1).

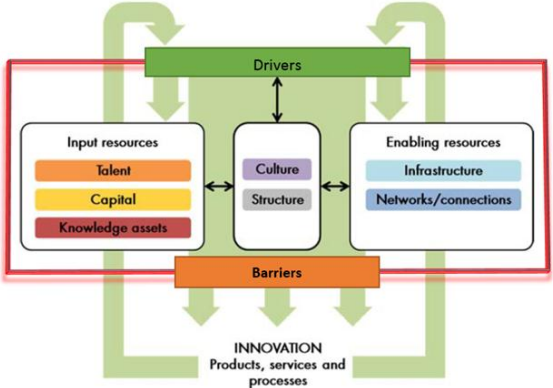


Figure 1. Analytical Framework for Understanding of the Innovation Process (Freeman et. al. RAND, 2015) (Adapted by Author)

Being a representative of the State Border Guard of Latvia, the organization in charge of the security at the external borders of the European Union and fulfilling tasks related to border control procedures and immigration control, I am emphasizing the importance of the implementation of technological innovations in this particular field of work. Therefore, it is important to identify the existing drivers (motivating factors) and barriers, which apply to border guarding authority, who are participating in innovation research and development projects, in order to provide relevant feedback and recommendations, which may support and stimulate those to be more active in contributing to the research and development of the innovations.

Maybe well-developed technologies for the border guarding authorities is the key element towards successful and professional accomplishment of the important role in ensuring relevant border security at external border of the European Union (EU) as well as in providing EU internal security.

Despite the large number of the researches conducted in the field of innovation and research in public sector, there are very few focusing on border security. This shows that the research activity in the field of R&I within border guarding authorities is still low and requires additional academic attention.

Even being a ‘strict rule’ organization, Border guarding authority remains as an organization which is in constant interaction with the environment outside the organization like politicians, international

relations, customers (travellers who cross border), business representatives, criminal activities. Being in such a position, the opportunities for development may appear with the same probability as threats and risks for organization. The external environment may effect daily performance and behaviour of the organization. The border guarding authority must continuously search for a new ways and opportunities for development of the potential of the organization, by learning and increasing its capabilities. In this regard, R&I considered as a crucial driver of economic and social prosperity (European Union, 2018), which has a direct connection with public sector organizations, such as the border guarding authority.

The EU financial contribution for the R&I in the field of security and border control is significant and thus emphasizes the focus and importance of this particular area of interest.

Successful and up-to-date validity of the researches requires expertise and the relevant environment for testing, which may be provided by the border guarding authorities. Therefore, the Author emphasize the importance of the border guarding authorities (BGA) participation in R&I projects and relevance of the particular research and hopes that it may have a positive contribution towards development of the R&I in the field of border security not only in Latvia, but also in other EU countries.

The Author's opinion is that EU border security is very much affected by the implementation of new technologies, especially taking into consideration of the fact that border guarding is quite a narrow field of expertise, and is regulated by the specific regulation (EU) applying to all stakeholders in the field. In simple words, technological development of one player (country) in the EU most probably will have a slight impact to other players, for example strengthening of one particular stage of the external EU borders by innovative technological could imply that the pressure is raised on others, because of permanent flow of irregular migration and criminals seeking for other ways to get in the country. Therefore, it is important to provide equable technological capacity for all countries.

Drivers and barriers of the State Border Guard of Latvia in technological innovation

The State Border Guard of Latvia is relatively young organization that has been developing together with country since regaining independence from the Soviet Union in 1991. It has been a part of Ministry of Defence and currently the organization is under the supervision of Ministry of Interior. Given the historical pattern and taking into consideration, that many of the ex-executives of the organization have grown up and were educated in the

soviet system plays a significant role in the way the internal organizational culture has developed. The organizations culture contains many reflections from the post-soviet influence as a strict hierarchical and one-way decision making system and focusing on internal mechanisms. After the country joined the EU and became a member of Schengen, opening of the borders, external experience, observations and knowledge had a positive impact towards development of the organizational culture in a more open way (public oriented) and provided a wide range of opportunities for further internal development of the organization.

Organizational culture, leadership and motivation identified as few of the main elements of the overall factors, which can have an impact to the activeness of the SBG decision to participate in R&I projects. In spite of the positive changes inside the organization according to the outcomes of the interviews, 5 out of 7 experts identified that existing level of activeness in R&I activities related technological innovations as very low or low and 6 out of 7 experts had the opinion that the organization has to be more active. Organizational culture of the SBG supporting gaining knowledge about new technologies and solutions, which may contribute to fulfilment of the main tasks of the organization and increase situational awareness. However, there is a limited interest and willingness in active participation in activities related exploring of innovations. The activities related to development of technological capacity of the organization are mainly focused on projects that contribute to the discharge of daily duties and concentrating on technical `right now, right here` results not a research purpose. The opinion of the expert is that for the SBG participation in R&I projects considered as an additional task, which can hinder the performance of basic day-to-day functions. In Authors opinion, it does not stimulate motivation necessary for the R&I within SBG. According to the opinion of some experts interviewed within the research, the organizational culture towards technological development is considered as stand by level and requires further development and education of the overall understanding of importance of a wide range of contributions (ideas, knowledge experience) by individuals and the organization itself towards R&I. Experts outlined that leadership plays most important role in development of the R&I supporting organizational culture.

According to the results of the research there is a ground regulation existing within the SBG that can be successfully implemented also in the process of selection priorities for R&I projects. There are individual initiatives of the managers of single units appearing on a case-by-case principle, when they appoint individual border guards under command to monitor technological innovations in the field of the border security that is

available on the market and creating ad-hoc working groups in order to discuss usefulness and applicability of the finding towards existing needs.

The SBG has a limited capacity for the input of resources, but it can be considered as enough in the current situation to contribute to the R&I from the position of the end-user by providing practical experience, professional description of the problem, opinion and knowledge from the field about the processes and real needs of the BGA. The answers of the experts to the interview questions providing an opinion that the SBG has a certain capacity of the talent existing inside of the organization (ideas, individual initiatives and proposals for the technological development, desire to restore and to study) and there is clear understanding of qualities and characteristics necessary for the members of R&I teams representing the SBG. Professionalism, initiative, selflessness, flexibility, ambitious, activeness, thinking out of the box and clear understanding of the needs and specifics of the BGA named as general requirement for the potential members of the R&I innovation teams.

The results of research showed that there is no especially dedicated funding for the purpose of the R&I in the SBG, all costs related participation in R&I project are reimbursed from the budget of the project itself. EU funds are the main source of the finance in relation to the R&I. According to the results of interviews, there is a lack of governmental funds for R&I directly related to the lack of R&I being as a part of the strategy and one of priorities of the organization. In fact, finances distributed within organization in accordance with the list of priorities set by the organization for the particular period.

After summarizing results of the interviewees, there is no or very limited co-operation with educational institutions and/or technical partners outside the SBG in the field of R&I identified. Frontex been mentioned as the only external legal entity having active co-operation with the SBG in relation to the R&I, mostly providing updates on the state of art of technology and by inviting to participate in Frontex organized meetings or workshops with regard to the technological innovations. Rezekne Technology Academy and Riga Technical University been mentioned as key academia co-operation partners. However, there were no practical cases of joint activities (project) in the field of R&I.

Following the analyses of the responses of the experts interviewed, the Culture of the organization is a central factor having impact on the other factors influencing innovation process such are Structure, Capital, Knowledge, Talent, Infrastructure and Networks/Connections in the SBG. According to the opinion of the most of the experts, leadership becomes a crucial and most important element stimulating development of R&I supporting organizational culture. Leadership can have a significant impact

on the shaping of organizational culture by motivating existing personnel and enhancing capacity and capability of input and enabling resources.

The SBG as organization has obvious drivers for participation in R&I/technological innovation projects. New knowledge and access to the information, self-development, access to the newest equipment and services as well as establishment and further development of the networks/connections with future potential academia and technical partners in the field of border security can be mentioned as primary drivers of the organization based on the results of interviews. Surprisingly for the Author, the increase of border protection capabilities, decreasing of irregular migration and combating cross-border organized crime has been mentioned as drivers only by individual experts. However, similar to Freeman it can be explained by the difference of the field of interest and expectations of interviewed experts towards the R&I projects.

Conclusions and suggestions

Conclusion and recommendation based on the information gathered during the literature review and using outcomes of the analysis of results gained via interviews and questionnaires conducted with representatives of the State Border Guard of Latvia. The results of the research identify drivers and barriers of the single border guarding authority, which considered as a general outcome and ground for further research in other similar organizations performing tasks related border security or public security in all around the Europe such as the State Police and Border Police. The motivation, drivers and barriers of the every BGA can differ depending on the internal and external factors described in this research. It expected that the list of general recommendation could be applicable to any BGA. The list of additional recommendations are mainly applicable to the external stakeholders who may influence motivation level of the BGA for participation in R&I projects (for example: EU institutions, Frontex).

Organizational culture existing in the organization and maintained by the leadership can be considered as a key motivating elements of technological development and innovation within the organization. It should support gaining knowledge about new technologies and solutions, which may contribute to fulfilment of the main tasks of the organization and increase situational awareness. Open mind, flexibility, risk taking, creativeness and knowledge considered to be most important individual characteristics of the leader supporting participation in R&I projects/activities. Results of the research leads to the conclusion that the structure of the SBG has a potential platform for the development of R&I activities. Main following drivers of the SBG for participation in R&I projects

outlined: Receiving of new knowledge and information, Self-development, Access to the newest technologies, products and services, Cooperation and network building for the future communication and joint activities., Combating against cross-border organized crime, “Competition” with border offenders and decrease of illegal border crossings, Improvement of border protection capacity.

Three groups of barriers for the SBG to participate in R&I projects can be outlined:

- Lack of personnel with adequate skills, knowledge, experience and qualifications to be involved in R&I projects, insufficient outcome and too long length of R&I projects can be mentioned as most important barriers;
- Bureaucracy (too many agencies responsible for infrastructure), lack of gradual technological development plan and legislation supporting R&I activities, lack of guidelines describing criteria for evaluation of proposals and outcomes of the R&I projects as well as lack of finance dedicated to the research;
- Uncertainty and high risks of failure of the R&I projects, poor previous experience and limited information on the scope of the project including the short time for evaluation of the proposal can negatively influence future decision of the SBG to participate in R&I projects.

The result of the research led to the development of the list of general recommendations for internal development of the border guarding authority such as development of innovation supporting organizational culture and implementation of a strategic management approach to R&I by establishing a technological development strategy as a part of general strategy or concept, which would consist of list of mission oriented short/mid/long term priorities and vision in the field of research and innovation related technological development in order to ensure effective use of resources and targeted development of the organization.

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