

Public-Private Partnerships for Information Sharing in the Security Sector: What's in It for Me?

Emma Van Goethem , Marleen Easton  (✉)

Research group 'Governing and Policing Security,' Department of Public Governance & Management, Faculty of Economics and Business Administration, Ghent University, Ghent, Belgium, <http://gaps-ugent.be>

ABSTRACT:

There is little research on public-private information sharing partnerships within the security sector and the benefits it may bring to both sectors. This contribution uses insights from previous research on the benefits of public-private partnerships from organisational science, information management, innovation economics, and technology studies to examine whether they are also valid within the security sector. In a first phase, this analytical framework is used to screen insights from partners involved in triple-helix collaboration in the field of innovation, technology and security. In a second phase, in-depth interviews are conducted with public and private actors involved in setting up a pilot project where information exchange is central. The research results show that traditional benefits such as increased effectiveness, efficiency, improved relationships, creation of learning opportunities and obtaining a strategic, operational, and/or economic advantage that were found in other contexts are also confirmed in the security sector. In addition, Belgian security actors saw improved decision-making and service delivery, increased personnel safety and a more integrated security chain as potential benefits. Understanding these benefits may facilitate the design of future public-private partnerships in the security sector.

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1. Introduction

Information and intelligence have always been, and will remain, the most essential components of policing and, indeed, all law enforcement work.

– Sir John Evans, 2001

The European Union Agency for Network and Information Security sees economic interests as one of the main reasons as to why establishing public-private partnerships (PPPs) could be appealing. With this kind of collaboration, the opportunity of economies of scale presents itself by exchanging information between partners.¹ According to the European Commission, PPPs provide an opportunity to set up a legal structure and thereby enable the possibility to combine resources which vary from human resources, financial or even infrastructural resources.² The demand to share data, let alone information (which is the processed version of data which has been given meaning), between different jurisdictions has grown tremendously; be it vertically across the levels of government (local, regional or federal level) or horizontally on the same level.³ One might say it is absolutely necessary to share pieces of the puzzle in order to possess relevant information and be able to lay the puzzle.

In times of financial and budgetary distress, more and more attention is paid to PPPs in different policy domains as they are seen as a possibility to operate in a cost-effective manner.⁴ PPPs are defined as a “cooperation between public actors, private actors and possibly associative actors; within which the different actors can achieve their own objectives, while working communally on the basis of potential synergies, by sharing responsibilities, opportunities and risks, on the basis of a formalized contract of cooperation.”⁵ In practice, a lot of cooperation between these actors is being set up without any formal contract. We consider both (formal and informal) types of partnerships as being relevant to get a grip on the benefits for all partners involved.

This general context of decreasing means and trying to do ‘more with less’ is also a recurring reality as far as law enforcement agencies are concerned. Simultaneously, the general public and other stakeholders demand an overall increasing amount of efficiency of public organisations and urge that public resources be handled in a financially responsible manner.^{6,7,8} However, these budget cuts have caused a decrease in efficiency and effectiveness of this exact public service of safeguarding public security. This context has generated different PPPs in the security context aiming to share different kind of resources such as manpower, information, expertise and technology.

In this contribution we are zooming in on information sharing PPPs in the Belgian security setting for two main reasons. First, information is a vital resource in the security context, therefore it is not only appealing to acquire more in general but also to acquire it from more partners. Not only is information a key resource that could be shared in such a PPP; it also has the potential to increase efficiency and effectiveness of daily operations in the security context

whilst keeping costs under control.⁹ Therefore, making an information sharing PPP is an interesting case to investigate. Secondly, earlier research showed that public-private partnerships in the Belgian security sector are scarce.^{10,11} We want to address some evolutions in the field of PPPs during the last decade and answer the question what makes information sharing partnerships between Belgian public and private security actors attractive to the partners involved. What are potential benefits that could be gained from partnering up?

In what follows we first describe the mixed-methods used to collect our qualitative, empirical research data for this contribution. Using the general concepts generated by our literature review, we then describe the similarities and differences in benefits for public-private partnerships for information sharing in the Belgian security sector illustrated by citations of our respondents. We end with a conclusion and some reflections relevant for practitioners in the field.

2. Methods

This contribution is based on mixed-methods including a literature review, an analysis of documents including discussions on benefits of PPPs and in-depth interviews with practitioners in the field of security involved in the set-up of an information sharing PPP.

A detailed review of the literature on the topic of public-private partnerships integrates insights on benefits for the public and private sector from diverse research disciplines such as organisational science, information management, innovation economics and technology studies. Main keywords needed to be combined in order to locate relevant literature within Google Scholar and Web of Science. These keywords included 'public-private partnerships,' 'security,' 'law enforcement,' 'information sharing,' 'data sharing.' Most of the input found for this literature review situated in field of studies such as 'computer science' or 'cyber security.' The types of sources ranged from academic papers to reports, textbooks, and so forth. Once all the information was gathered from multiple areas of expertise, it presented the opportunity to look at the topic from an interdisciplinary point of view.

This analytical framework has been used to screen insights from public and private partners involved in collaboration in the field of innovation, technology and security. Since 2014, Belgium has a non-profit organisation IUNGOS (www.iungos.be) that brings together public and private partners to learn from each other through innovation labs and projects on subjects in the field of innovation, technology and security.^{12,13,14} All members have been discussing the benefits of the public-private partnerships, including the potential for information sharing, at board meetings during the last six years. The reports of the meetings of the board of directors between 2014 and 2019 were analysed as part of the document analysis. Here, we found arguments to engage in public-private partnerships.

Furthermore, in-depth semi-structured interviews are conducted with 15 experts from the public and private sector currently involved in attempts to create an information sharing platform in collaboration with Belgian public and private

security providers. We used a form of convenience sampling in the sense that we carefully and purposefully selected experts who are capable of assessing potential benefits of this kind of information sharing PPP. Each of the experts is well aware of the challenges of information sharing in the Belgian security sector. The expert group consists of a variety of people performing different functions at the local versus national level, on the operational versus policy level and in the public versus private sector.

All qualitative data has been analysed using the data analysis program NVivo. A thematic analysis as defined by Braun and Clarke has been conducted and all citations used in this contribution are anonymised due to the interests at stake for all respondents involved in the issue of information sharing public-private partnerships in the Belgian security sector.¹⁵

3. Similarities and Differences in Benefits for Public-Private Partnerships

Figure 1 below shows how the benefits for public-private partnerships from previous research are largely confirmed by our applied Belgian case study. However, a number of new elements also emerge that may be important in further developing information sharing public-private partnerships in the security sector. Below we explicitly zoom in on similarities and differences between our empirical research and findings from previous research on public-private partnerships applied to the context of information sharing.

General potential benefits for engaging in public-private partnerships from previous research that are reflected in our case-study are: (1) enhanced effectivity, (2) enhanced efficiency, (3) strategic, operational or economic advantages, (4) enhanced relationships and (5) learning opportunity. All respondents involved referred to each of these benefits supporting the findings of earlier research. In what follows, the evidence is systematically built up integrating insights from our literature review and citations from the qualitative, empirical research.

(1) Enhanced effectivity and (2) Efficiency

Being core values of New Public Management as described by Bryson, Crosby & Bloomberg, efficiency and effectivity are at the core of many PPPs in diverse policy domains.¹⁶ When examining the economic driving forces, the argument of implementing a more efficient way of working by reducing the transaction costs cannot be overlooked. From an economic standpoint, being able to use resources more efficiently, is an indispensable argument that attracts both public and private security organisations to join such a partnership.¹⁷

In addition, cost-side spillovers arise. When a partner encounters difficulties with certain techniques, they can signal this and warn the other partners not to invest in it. Therefore, preemptive cost savings take place.¹⁸ In an information sharing partnership, this could for instance be in all sorts of new (information and communication) technology.

All respondents agreed upon and stress different sub-elements of these benefits:

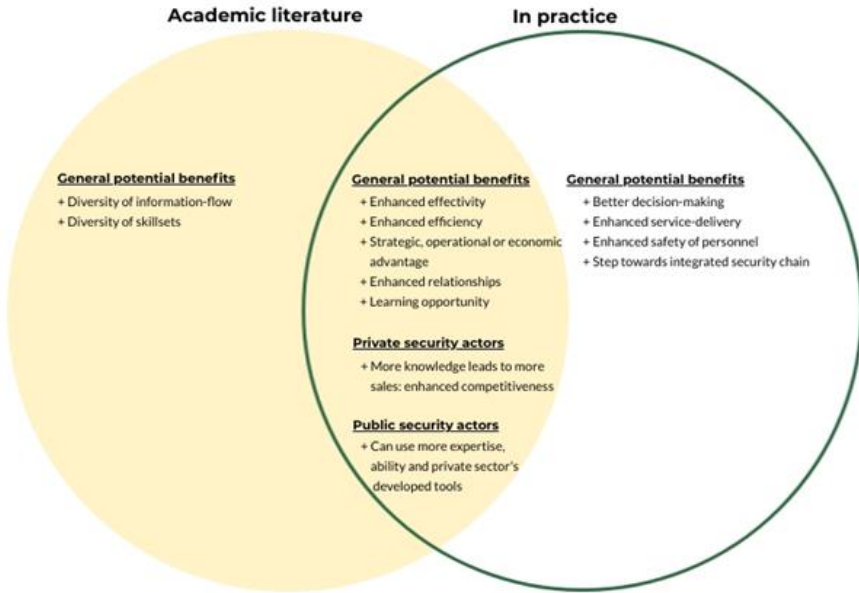


Figure 1: Potential benefits of information sharing public private partnerships according to academics and practitioners.

There is an evolution towards big data; more and more information becomes available. But the key is trying to put together relevant pieces of information. Looking at information relevant for policing will be key to contribute to the effectiveness of crime reduction. (public actor)

I believe that if you want to take certain leaps forward in development and efficiency, this can only happen when we start to share information. I strongly recognise that information and sharing information is extremely important. Efficiency gains without information sharing are an illusion. (public actor)

By sharing information, you can work more efficiently. This means both cheaper and better. But also preventive by being predictive. (private actor)

(3) Strategic, operational or economic advantage

All partners investing in PPPs are assessing the win-win situation in which strategic, operational or economic advantages play a key role.

Innovation and an organisation’s “knowledge creation can be understood as a continuous process through which one overcomes the individual boundaries

and constraints imposed by information and past learning by acquiring a new context, a new view of the world and new knowledge.”¹⁹ Utilizing new knowledge in an organisation is often with the purpose of obtaining a strategic, operational or economic advantage. Whereas the private sector utilizes knowledge mainly for the purpose of enhancing its competitive advantage, the public sector utilises this in order to improve operational, strategic and administrative efficiencies and effectiveness when it comes to adjusting to the ever-changing social, economic and political environment.²⁰ Political electives often see PPPs as an opportunity to enhance manpower for operational capacity and optimise financial resources.²¹

Our case study shows that a clear *strategic* advantage for private companies is to have access to governmental agencies.

Until now, sporadic but not systematic contacts with the government. By being introduced to the IUNGOS network, we have a better understanding of who plays what role within the government, and then we are talking about the broad security domain. (private actor)

This access can even generate impact on legislation.

If you don't sit together, you can't know each other's needs. With... the project, we succeeded in realising technological innovation in the security domain. Moreover, the use of technical means by private security has become a piece of legislation. That is an important realisation... (private actor)

Finally, the related *economic* advantage in PPPs cannot be underestimated and is stressed by our respondents.

(1) The first thing that is looked at are finances. What comes out of this? (2) Also important is the growth of the business in terms of sharing knowledge. As long as you don't have an interface with the people ... then you are nowhere. After all, they can indicate what the needs are and where it really hurts. (private actor)

CEOs of private companies want a short-term return ... Better relationships with government actors for example led to concrete business. We also see the impact on the content of legislation as return on investment for our sector. (private actor)

Besides these advantages, PPPs are all about engaging in relationships with other partners.

(4) Enhanced relationships

Each actor that joins a partnership is aware that they will engage in increased interaction and a close relationship with the other partners involved in the partnership. Thereby, the opportunity is created to benefit from another partner's capabilities, knowledge and outlook. In other words, besides serving the purpose of reaching the partnership's common goal, each partner can take ad-

vantage of the occasion to learn from the other participating organisations. As an effect of these learning opportunities on an organisational level, this has the potential to improve the quality of the services provided by the actors. Even more, previous general analysis has shown that being involved in a partnership improves the organisational culture, along with the productivity and efficiency.²²

By letting others into your organisation; you just get used to the critical questions that are asked. In terms of attitude and culture, that creates a different perspective. People are used to being asked questions, to critical thinking, without it having to be threatening. Moreover, it creates opportunities to have confidence in each other. (public actor)

Trust may not be the right word, it is about knowing or not knowing each other. That takes time. Everyone's language is also different. Being able to communicate with each other and speak the same language is important and that also takes time. (private actor)

Indirect return by generating a different way of thinking in your company culture anyway. (public actor)

It is within these relationships that learning opportunities arise.

(5) Learning opportunity, (6) Enhanced competitiveness, (7) Expertise, ...

The learning opportunity in setting up PPPs has been confirmed especially when knowledge institutions are around the table which are often being considered as building bridges between the public and private sector in terms of knowledge exchange. Wicked problems that both the public and private security sector are being confronted with ask for multidisciplinary approaches and these can be facilitated by PPPs.

What I have found particularly important in that composition is the presence of the knowledge institutions that can in fact form the bridge between what the private sector wants and what the government can do. ... that has been particularly enriching, to establish that through underpinning by knowledge, you can more easily set up new cooperation projects. (public actor)

The need for multidisciplinary in the development of innovations is an important reason for increasing cooperation, both between companies and between companies, government and knowledge institutions. It no longer works alone. (private sector)

An additional benefit for private (security) actors is that information sharing does not only triggers a direct effect, it also serves a strategic purpose.^{23,24,25} As mentioned in our figure, for private security actors more knowledge leads to more sales and this generates (6) ***enhanced competitiveness***.²⁶

If you want to develop certain things you need cooperation, it's about creating things together. Then you need a support base and such a triple-helix or quadruple-helix organisation can bring different parties together, create a support base and realise things. ... Return on investment for us in the short term is more sales in the clusters where we want to be active in the future. That's pretty well measurable. In the medium term, deepening market knowledge to do product development is an important ROI. As a company, through participation in ..., we have become smarter in the field of critical infrastructure and have strengthened our position in the field of port security.... It is not because we are sitting around the table and participating in ... that we are automatically going to sell more. But we do have a more pronounced focus. We know what we are talking about, who to contact and where the budgets are. That's an important added value in terms of know-how. (private sector)

Public security actors on the other hand refer to the gain of an information sharing public-private partnership in terms of (7) using **more expertise, ability and private sector's developed tools**. This was the motive for local police chiefs to engage in IUNGOS as a non-profit organisation as it implied a partnership between the public sector, private companies and knowledge institutions including projects in which information sharing was crucial.

On an economic level, if you can get cheaper and more efficient contracts because of the competition that's going to come into play. Often served faster, served better and served cheaper. (public sector)

Although the benefits are described differently, we decipher an own kind of competitiveness present within the public security sector.

The most important finding on the basis of our case study is that respondents put forward four benefits that are less apparent in earlier research. They stress the importance of (8) **better decision-making**, (9) **enhanced service delivery**, (10) **enhanced safety of personnel** and (11) **the positive contribution to an integral safety and security approach**.

Our figure shows that respondents involved in information sharing public-private partnerships in our case study did not explicitly acknowledge (12) the **diversity in information-flow** and (13) **diversity of skillsets** as benefits which could according to the literature review indirectly lead to better decision-making, enhanced service-delivery and safety of personnel.

(8) Better decision-making

'Data' is the first component in the process of gaining intelligence. One needs to have pure, raw facts that exclude both opinions and analysis. It is sort of speak 'the fuel' to initiate analytic work. Once the 'data' is available, gathered, processed and given meaning, it turns into relevant 'information' that can be used in a particular context. Once put into context, information turns into

knowledge. This again has the ability to turn into 'intelligence' if it is used to gain understanding for decision-making.²⁷

Every organisation has its own information with which they can create specific knowledge, which can be turned into intelligence and can enhance decision-making. With the help of information, organisations can understand the change in the organisation's environment and generate knowledge that can lead to innovation.²⁸ Additional data and information leads to more intelligence, thus better overall decision-making. A former CEO of Securitas publicly claimed in an interview that: "We as the private sector dispose of information and knowledge that could be vital to police forces, for example, when it comes to data-analysis."²⁹ The argument was made that pooling data could diversify and increase the amount of information available, supporting the perception that both sectors are being complementary. Some felt that by linking the information that each member has, a more comprehensive picture of a given situation could be painted, and more thorough insights could be gained.

The complementarity between both sectors might lead to more information. More information with a predictive character, which could prevent crimes. (private actor)

More information is important to increase the common operational picture. [...] Receiving data from others will enrich the experience and enable better estimate of a situation, if not anticipate or predict, including your own information. It's the big data principle: the more information you have, the more diversified it is. (public actor)

We need information. If you can make a good analysis of the available information, we will be able to use our resources and capacity more efficiently if we know on what we should focus. If we don't, we run around like headless chickens. We need to precisely know where we can find information, where certain phenomena occurs and which data is behind it. At what times do these phenomena occur, etc. That way we can deploy our resources in a more focused, more targeted ways during the patrols. (public actor)

The 2016 terror attacks in Brussels revealed that this still happens insufficiently. By keeping information fragmented, entailing that everyone has one piece of the puzzle, one is unable to see the bigger picture, which criminals ultimately benefit from. Today, the public security sector has many different databases that cannot communicate with each other. By maintaining these fragmented databases, it was indicated one cannot achieve an optimal functioning.

Respondents were convinced that by sharing information between complementary multidimensional partners, one is able to capture trends at a higher quality level. This again would have a positive effect on knowing what is happening in a district and enables responding adequately. It serves the interest of what can be called the 'common operational picture.' By including both the pub-

lic and private sector in an information sharing platform, one is able to cover information from the whole security chain.

The respondents agreed that having a more holistic picture fed by a larger amount and more diversified information, would lead to overall better decision-making.

(9) Enhanced service delivery

Service delivery defines the offer of a service between providers and clients. This offer can range from information to a certain task. Important are the 'when,' 'where' and 'how' of the service design and the fulfilment of a clients' needs by using the service.³⁰ By being open to using new resources to develop new service offerings, this translates to service delivery innovation.^{31,32} Applied to this particular context, by using information sharing, security actors are open to new resources and can 'serve' the 'client' better. With more information, better decision-making can occur and security actors can thus offer a better 'service' of offering security and fighting crime. Offering near to real-time information either from the own information or from partners, increases the value even more, seeing that faster crime detection also leads to a faster follow-up.³³ Our respondents revealed that the advanced analyses that can be performed on more (and potentially more holistic) data provide a better sense of which areas need more attention than others in terms of security provision. Consequently, by knowing what areas are susceptible to crime, combined with better analyses and more effective and efficient work, it is highly probable that the public's positive perception of service-delivery will increase, along with their satisfaction of the service.

An example is given of an existing platform of car criminality, in which the public police involved private security organisations. Together both sectors were able to formulate a strategic plan to deal with the problem. As a result, they were able to recuperate more cars intact. Seeing that this increased 'client' satisfaction, in this case the victims of car criminality, they experienced an improved service delivery. The same goes for private security partners; for them it is equally interesting to have data on when and where criminal offenses are committed so that they can also adapt their capacities accordingly and enhance their service delivery.

With the subsequent parliamentary commission after the terror attacks, one of the main take-aways was that information sharing is crucial. It can't be that one department has one piece of information, another department has another piece but no one can oversee the bigger picture. In principle, this is aiding criminals. (public sector)

(10) Enhanced safety of personnel

According to the European training manual, security-related risks can be divided into three categories: risks resulting from the general situation, risks related to security activities, and risks related to the post held. The first category mainly consists of interference risks.³⁴ At the basis of this risk factor is a lack of knowl-

edge. By sharing information, security personnel is better informed of the general situation and thereby reducing this risk factor. The same goes for the second and third category.

Our respondents indicate that an increased amount of information that results in having a more comprehensive picture of a given situation, could assist their workforce in adequately performing threat assessments. For management, this could also inform decisions on how and where to deploy their capacities, based on the analysed information that indicates more dangerous areas, or signals an increased likelihood of a conflict brewing. Performing more detailed and therefore enhanced risk analysis on a strategic and tactical level is said to be beneficial for the safety of personnel on the ground. It could result in adjusted capacities at certain places or times, ranging from manpower, to protective gear, and so forth. Hence, enabling an answer that is tailored to the situation as far as possible. If the employees on the ground have better knowledge of what to expect from certain situations, thereby being better prepared for a situation, this can play a key role in increasing their own safety.

Data is knowledge. You need to know what is going on. I think this can be interesting in both directions. We see things that are useful for police. The police can also give us information on actions that they are doing or trends they see. For example, with burglaries and possible regions that are being hit by travelling gangs. We can then take this into account in our analyses of alarms that go off under our supervision and in the patrols we then send. One, this is important for the safety of our people. When they are warned beforehand of the risky region which they are about to enter. But also, to aid use in identifying patrons within regions will aid police to establish suspicious movements.

(private actor)

(11) The positive contribution to an integral safety and security approach

A comprehensive and integrated approach presupposes the commitment of all actors in the security chain and across the different levels of government. The private security sector and the citizen also have complementary roles, regulated by law, in consultation and under government control. This philosophy is inherent to the Belgian safety and security policy and is reflected in the testimonies of our respondents challenged to set up public-private information sharing partnerships.

Important to note is that although all respondents are supportive of the idea of an information sharing public-private partnership in the Belgian security sector, reservations are made about the way in which it should be organized. Actors do question the need for one structural information sharing platform on a large scale and see a lot of opportunities in information sharing on an ad-hoc basis as it allows more fragmentation and working on a smaller scale. Some even see more opportunities in using open-source data as they imply less legal and privacy barriers although they acknowledge that exchanging classified information is another issue.

4. Conclusion

In this paper, we examined the potential benefits of an information sharing PPP. In order to answer the main research question “Does information sharing between public and private security actors provide a benefit to the partners involved?”, we looked at both theoretical benefits, as well as benefits according to practitioners active on the security field. When comparing the two, we clearly see similarities and differences as displayed by Figure 1 above. Besides the benefits known by previous academic research, our empirical research adds value by discovering potential benefits to being a member of an information sharing PPP in the (Belgian) security context. Our interviewees added better decision-making, service delivery and safety of personnel as additional benefits in this context which remained unidentified in previous literature. This is indirectly linked to a diversified information flow and skillset since these can create a more holistic picture of what occurs on the ground and thereby impact the decision-making process, the service delivery and also the safety of personnel. Important to mention is that by forming an information sharing public-private partnership, practitioners saw this as an important step forward towards a genuine integrated security chain.

Practitioners active in the Belgian security domain recognise that it could increase overall effectivity and enhance efficiency in the context of using means efficiently and handling them in a financially responsible manner. Adding to this, our empirical research shows that by collaborating with private security actors, public security organisations are aided in the issues created by decreasing resources, in terms of operational capacity for example. One could argue that an information sharing public-private partnership between Belgian security actors checks all these boxes.

In addition to use of resources, having a privileged relationship with the members of the partnership and this potentially providing a learning opportunity amongst members were mentioned. Also, a higher demand for services provided by private security organisations within the partnership gives them a competitive advantage over private security firms who are not in the partnership. These benefits were all acknowledged by our respondents.

We can conclude that there are many similarities between potential benefits of PPPs and an information sharing PPP in particular, as perceived by practitioners active in the Belgian security domain and those found in previous academic research. However, there has yet to be an initiative that is enrolled on a large scale. Keeping in mind that benefits such as enhanced decision-making and increased safety of personnel are absolutely vital in a security context, this speaks in favour of such a partnership.

Finally, our empirical research shows that linking the benefits of public-private partnerships in relation to country specific security policies, such as the choice for an integral and integrated safety and security approach, may strengthen and facilitate the design of future partnerships.

References

- ¹ ENISA, “Public Private Partnerships (PPP) – Cooperative Models,” November 2017, <https://doi.org/10.2824/076734>.
- ² European Commission, “Shaping Europe’s Digital Future: Public Private Partnerships,” August 20, 2018, accessed April 12, 2021, <https://ec.europa.eu/digital-single-market/en/public-private-partnerships>.
- ³ John S. Hollywood and Zev Winkelman, “Improving Information Sharing Across Law Enforcement: Why Can’t We Know?” Research Report RR-645-NIJ (Santa Monica, CA: RAND, 2015), https://www.rand.org/pubs/research_reports/RR645.html.
- ⁴ Terrance W. Gainer, “Partnerships between Public Law Enforcement and Private Security Should Become the Norm,” Securitas Security Services USA, Inc., 2014.
- ⁵ David Giauque, “Les difficultés de gestion des partenariats public-privé en Europe,” *Revue Française d’administration Publique* 130, no. 2 (2009): 383–94, quote on p. 385.
- ⁶ Douglas Edward Abrahamson and Jane Goodman-Delahunty, “Impediments to Information and Knowledge Sharing Within Policing,” *SAGE Open* 4, no. 1 (2014), <https://doi.org/10.1177/2158244013519363>.
- ⁷ Willy Bruggeman, Marleen Easton, and Philippe De Baets, “‘It’s the Economy’ of Hoe Financiële Imperatieven Het Politie – En Veiligheidsbeleid Meer Dan Ooit Bepalen,” *Orde van de Dag: Criminaliteit En Samenleving* 71 (September 2015): 15–18.
- ⁸ Mahboubeh Fatemi and Mohammad Reza Behmanesh, “New Public Management Approach and Accountability,” *International Journal of Management, Economics and Social Sciences* 1, no. 2 (2012):42-49.
- ⁹ Chun Wei Choo, *The Knowing Organization: How Organizations Use Information to Construct Meaning, Create Knowledge, and Make Decisions*, 2nd ed. (New York: Oxford University Press, 2006); Gainer, “Partnerships between Public Law Enforcement and Private Security Should Become the Norm”; Noël Klima and Philippe De Baets, “Inleiding. Kosten van Veiligheid – Beperkingen, Risico’s En Kansen Door Innovatie,” *Orde van de Dag: Criminaliteit En Samenleving* 71 (September 2015): 2–4.
- ¹⁰ Jan Terpstra, Bas Van Stokkom, and Ruben Spreeuwers, *Toezichhouders En Handhavers in de (Semi)Publieke Ruimte-Een Internationale Vergelijking* (Nijmegen, The Netherlands: Criminologisch Instituut, Radboud Universiteit Nijmegen, 2013).
- ¹¹ Elke Devroe and Philine Terwel, “De Politiefunctie Geprivatiseerd? Private Beveiliging in België En Nederland,” *Cahier Politiestudies* 3, no. 36 (2015): 11–31.
- ¹² Marleen Easton, Arne Dormaels, and Evelien De Pauw “Innovatie, Veiligheid En Technologie: Partnerschap Als Katalysator?” (Mechelen: Kluwer, 2016).
- ¹³ Marleen Easton, “La Triple Hélice en tant qu’outil de gestion de l’innovation au sein d’une police publique en réseau,” in *Organiser, Innover, Agir: Réformer et Adapter Les Polices En Belgique (18e-21e Siècles)*, edited by Jonas Campion (Louvain: Presses Universitaires de Louvain, 2017), 131–46.

- 14 Marleen Easton, "Reflections on the Triple-Helix as a Vehicle to Stimulate Innovation in Technology and Security: A Belgian Case Study," in *Innovations in Law Enforcement: Implications for Practice, Education and Civil Society*, edited by Detlef Nogala, Thomas Görgen, Justyna Jurczak, Bence Mészáros, Peter Neyroud, Lucia G. País, and Barbora Vegrichtová (Budapest, Hungary: European Union Agency for Law Enforcement Training, CEPOL, 2019), 35–45.
- 15 Virginia Braun and Victoria Clarke, "Using Thematic Analysis in Psychology," *Qualitative Research in Psychology* 3, no. 2 (2006): 77–101.
- 16 John M. Bryson, Barbara C. Crosby, and Laura Bloomberg, "Public Value Governance: Moving Beyond Traditional Public Administration and the New Public Management," *Public Administration Review* 74, no. 4 (2014): 445–56, <https://doi.org/10.1111/puar.12238>.
- 17 Heiko Richter and Peter R. Slowinski, "The Data Sharing Economy: On the Emergence of New Intermediaries," *International Review of Intellectual Property and Competition Law* 50 (2019): 4–29, <https://doi.org/10.1007/s40319-018-00777-7>.
- 18 Anindya Ghose and Esther Gal-Or, "The Economic Consequences for Sharing Security Information," *Information Systems Research* 16, no. 2 (2005): p186208, <https://doi.org/10.2139/ssrn.629282>.
- 19 Ikujiro Nonaka, Georg Von Krogh, and Sven Voelpel, "Organizational Knowledge Creation Theory: Evolutionary Paths and Future Advances," *Organization Studies* 27, no. 8 (2006): 1179–1208, <https://doi.org/10.1177/0170840606066312>.
- 20 Abrahamson and Goodman-Delahunty, "Impediments to Information and Knowledge Sharing within Policing."
- 21 Bruggeman, Easton, and De Baets, "It's the Economy"; Klima and Philippe De Baets, "Inleiding. Kosten van Veiligheid."
- 22 Ramina Samii, Luk N. Van Wassenhove, and Shantanu Bhattacharya, "An Innovative Public-Private Partnership: New Approach to Development," *World Development* 30, no. 6 (2002): 991–1008, [https://doi.org/10.1016/S0305-750X\(02\)00015-3](https://doi.org/10.1016/S0305-750X(02)00015-3).
- 23 Ghose and Gal-or, "The Economic Consequences for Sharing Security Information."
- 24 Naubahar Sharif, "Emergence and Development of the National Innovation Systems Concept," *Research Policy* 35, no. 5 (2006): 745–66, <https://doi.org/10.1016/j.respol.2006.04.001>.
- 25 Ross Anderson and Tyler Moore, "The Economics of Information Security," *Science* 314, no. 5799 (2007): 610–613, <https://doi.org/10.1126/science.1130992>.
- 26 Birgitte Andersen and Will Hutton, "Raising the Potential of the Triple Helix Co-Innovation to Drive the World Forward," *Big Innovation Centre*, July 2013, www.biginnovationcentre.com/wp-content/uploads/2019/07/BIC_RAISING-THE-POTENTIAL-OF-THE-TRIPLE-HELIX_02.07.2013-1.pdf.
- 27 A.J. Nash, "The Differences Between Data, Information, and Intelligence," *United States Cybersecurity Magazine* 5, no. 15 (Spring 2017), www.uscybersecurity.net/csmag/the-differences-between-data-information-and-intelligence/.

- ²⁸ Choo, “The Knowing Organization”; Gainer, “Partnerships between Public Law Enforcement and Private Security Should Become the Norm.”
- ²⁹ Jean Vanempten, “Geef Bewakingsagenten Nog Meer Bevoegdheden,” *De Tijd*, September 1, 2016, <https://www.tijd.be/opinie/algemeen/geef-bewakingsagenten-nog-meer-bevoegdheden/9804166.html>.
- ³⁰ Susan Meyer Goldstein, Robert Johnston, JoAnn Duffy, and Jay Rao, “The Service Concept: The Missing Link in Service Design Research?” *Journal of Operations Management* 20, no. 2 (2002): 121-134, [https://doi.org/10.1016/S0272-6963\(01\)00090-0](https://doi.org/10.1016/S0272-6963(01)00090-0).
- ³¹ Ja-Shen Chen, Hung Tai Tsou, and Astrid Ya-Hui Huang, “Service Delivery Innovation: Antecedents and Impact on Firm Performance,” *Journal of Service Research* 12, no. 1 (2009): 36-55, <https://doi.org/10.1177/1094670509338619>.
- ³² Robert Johnston and Graham Clark, *Service Operations Management* (Harlow, United Kingdom: Prentice-Hall, 2001).
- ³³ Bart Engberts and Frans Copini, “Sensing Door de Politie En Publiek-Private Samenwerking: Operationele Noodzaak,” *Het Tijdschrift Voor de Politie* 78, no. 7 (2016): 18–22.
- ³⁴ “Preventing Occupational Hazards in the Private Security Sector,” European training manual (Brussels: Centre de Sociologie de la Santé, Université Libre de Bruxelles, 2004), <https://www.eesc.europa.eu/sites/default/files/resources/docs/140-private-act.pdf>.

About the Authors

Emma **Van Goethem** is a voluntary researcher affiliated to the research group “Governing & Policing Security” (GaPS, www.gaps-ugent.be) at the Department of Public Governance & Management (Faculty Economics and Business Administration) at Ghent University. The focus of her research is on innovation and technology use in the security domain with a focal point on information sharing. She currently works as a scientific advisor at the Flemish Parliament. <https://orcid.org/0000-0003-3973-5170>

Marleen **Easton** is Professor and chair of the research group “Governing & Policing Security” (GaPS, www.gaps-ugent.be) at the Department of Public Governance & Management at Ghent University. Her research group generates research on public management and governance in the policy field of safety and security. GaPS is currently focusing on four research lines: (1) Governance of Flows, (2) Innovation, Technology and Security, (3) Knowledge Exchange and (4) Safety in local communities. Since 2017 Easton is Associate Professor at the Criminology Institute at Griffith University in Australia. Besides her academic career, Easton is presiding the Innovation Network for Security (www.iungos.be) since 2014. <http://orcid.org/0000-0003-0104-0533>