

Development Needs of Finnish Incident Management and Leadership in the Future Operating Environment

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Abstract: This study examines the development needs of Finland's incident management and leadership systems in a changing security environment under normal legislative conditions. The future will require preparedness for increasingly complex and unpredictable incidents. This transformation requires a reassessment of the leadership system and the search for new solutions. The Finnish incident management and leadership management system is based on the principle of comprehensive security, in which public authorities and the private sector jointly safeguard vital functions. Legislation and the rule of law are key considerations in evaluating the management system. International organizations, such as NATO and NORDEFCO, significantly influence Finland's incident management system. From the perspective of comprehensive security, NATO is not merely a military alliance. The complexity of the security environment demands flexibility, cooperation, and resilience from the management system. The theoretical framework of the study is based on complexity leadership theory and systems theory. The empirical data consists of 18 expert interviews, analyzed using inductive content analysis. Based on the analysis, three main themes were found: preparedness of the management system for future challenges, legislative requirements for management system development, and the need for improvements in incident management from the perspective of leadership responsibility. The findings indicate that leadership responsibilities and legislation require clarification, and international cooperation structures should be more effectively integrated into the national system. Additionally, the roles of municipalities and the private sector need further specification. In the future, society must decide which interests should be secured and where the focus of preparedness should lie in the development and management of the management system.

Keywords: Incident management, Comprehensive security, Leadership, Development, Security environment

1. Introduction

Preparing for and managing complex and unlikely events presents a significant challenge for public sector decision-makers (Fukuyama 2007). A change in the security environment, both domestically and internationally, requires a reassessment of the incident management system and the search for new solutions (Balcaen et al. 2022; Prime Minister's Office 2024). The European Union's security strategy highlights the importance of appropriate and effective leadership structures, as well as the implementation of integrated planning for civilian and military operations (European Communities 2009). Incident management and preparedness play a key role in limiting the consequences of disruptions (Wu et al. 2021).

The global security environment has become increasingly complex, making it more challenging to manage and predict (Hirsch et al. 2020). Each state has the responsibility to develop organizational structures and legislation related to incident management (Boin 2019). According to complexity leadership theory, an organization's adaptability and the availability of multiple operational alternatives are essential in an ever-more complex operating environment (Bar-Yam 2018). Furthermore, future incident management and leadership must account for cross-border operations (Wolbers et al. 2021).

Finland implements a comprehensive security model in which authorities, in collaboration with businesses, non-governmental organizations, and citizens, ensure the functioning of the society's vital functions in accordance with preparedness principles. Leadership is one of these vital functions (Finnish Government 2025). A significant part of Finland's security arrangements, particularly in national defense, involves NATO and the Nordic Defense Cooperation (NORDEFCO). From an incident management perspective, NATO's operations are based on an integrated command structure and joint exercises (Ministry for Foreign Affairs of Finland 2025). The agreements between the North Atlantic Alliance and its member states also apply to national authorities (NATO 2025). Similarly, NORDEFCO serves as a cooperative framework that influences national leadership structures through joint operations and collaboration (Nordic Defence Cooperation 2025).

Based on our review, the development needs of incident management and overall leadership have not been previously researched. Research on incidents has primarily focused on individual case studies (Wolbers et al. 2021). More recently, the study of organizational resilience has also gained relevance (Su & Junge 2023). Within the framework of this study, resilience refers to the necessity of preparedness in response to changes in the security environment, as well as the management system's capability to develop (Fjäder 2014; Duchek 2020).

The purpose of this study is to identify the development needs within Finland’s incident management and management system. The research aims to map out areas for improvement, especially in relation to the future security environment. The study is framed within the context of an incident occurring under normal legislative conditions, where coordinated decision-making and cooperation between authorities are required. In the conceptual framework of this study, incident management is understood as a preparedness system grounded in the principle of comprehensive security. It involves the anticipation and coordinated management of incident events through collaboration between public authorities and other key societal actors.

Finnish incident management and leadership are based on statutory authority and the rule of law (Ministry of Justice 731/1999). Within this framework, the rule of law refers to legally binding legislation regarding the allocation of leadership responsibility. The development of legislation must be based on the rule of law, as public authorities are required to operate within the limits set by the legislation (Venice Commission, 2011; Alivizatos et al. 2020).

The theoretical framework is based on systems theory and complexity leadership theory. Systems theory aids in understanding the impacts of disruptions and in resilience and networked cooperation within a changing and complex security environment. According to systems theory, the development of an incident management system is dependent on the surrounding security environment (Morgan 2007). Similarly, within this study’s framework, complexity leadership theory includes the cooperation among actors involved in incident management, the significance of preparedness, and the development of incident management systems and regulatory frameworks. Complexity leadership can be understood as a theory of adaptive leadership. Adaptivity refers to an organization’s ability to adjust to its operational environment (Uhl-Bien 2021). Incident management models emphasize preparedness, as well as learning from and recovering from disruptions (Veil 2011).

Within the framework of this study, learning and recovery are linked to the importance of developing the incident management system. Similarly, from the perspective of preparedness within the complexity leadership theory framework, legislation should enable adaptation to disruptions. Figure 1 illustrates the study’s theoretical framework and the connection between the applied theories and the development of the incident management system.

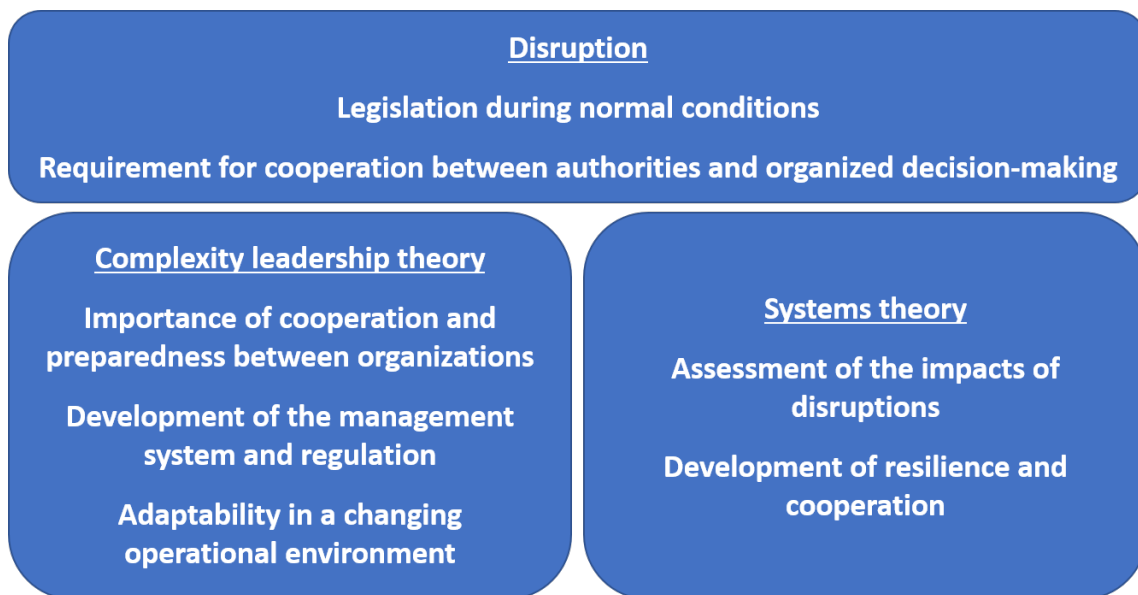


Figure 1. Theoretical framework of the study

2. Methodology and Data

The empirical data for the study was collected during 2023 by interviewing 18 representatives from the central government, municipalities, and organizations. The interviewees represented the top management or expert level of their organization. The interviewees were selected based on their significant roles within their respective organizations, holding strategic, operational, or coordinating responsibilities in the areas of preparedness and incident management. The selection process was guided by the research objective of obtaining contextually meaningful and relevant insights. By interviewing subject-matter experts, the study was able to access in-depth knowledge essential for understanding the phenomena under investigation (Kvale & Brinkmann 2015).

The research conducted followed the ethical principles published by The Finnish Advisory Board on Research Integrity TENK (TENK 2023). The interviews were conducted as theme interviews based on predefined themes. The main themes were: how the management system for incidents should prepare for future threats, how legislation should be developed from the perspective of incident management, and how the incident management system should be developed. The primary research themes were explored by posing the following questions:

- What changes should be anticipated and prepared for in the management system in the future?
- What legislative reforms are necessary within the current management model?

Inductive content analysis was used in the analysis of the research data. Inductive, or data-driven, content analysis emphasizes the data-driven nature of the themes and is therefore suitable for studies where previous research perspectives are supplemented (Hsieh & Shannon 2005). This analytical approach involved open coding of the data, classification, and abstraction of the material (Elo & Kyngäs 2008). The transcribed text data from the interviews was coded using the qualitative data analysis software Atlas.ti 9 (Atlas.ti GmbH, Berlin, Germany).

Creating different coding categories is at the core of the content analysis (Graneheim & Lundman 2004). As a result of the analysis, categories and themes are developed to describe the research theme (Elo & Kyngäs 2008). The analysis of the research data proceeded by following the main stages of content analysis. The unit of analysis chosen was the interviewee's sentence or sentence structure. After familiarizing with the content, the analysis continued by reducing and creating categories, where the interviewees highlighted aspects related to the development of incident management and leadership. This was done by searching for original expressions in the research data that corresponded to the research questions. The analysis resulted in three themes.

3. Results

The research results are presented based on the three themes obtained as a result of the analysis: the management system's preparedness for future disruption challenges, the legislative perspective on determining leadership responsibility, and the development needs of the incident management system in presenting the results, direct quotes from the transcribed text of the interviewees are used to demonstrate the connection between the data and the results (Graneheim & Lundman 2004).

Preparedness of the management system for future challenges

The interviewees believe that in the future, leadership should be prepared for incidents that are difficult to believe could happen and challenging to anticipate. Preparation needs to be wide-ranging, featuring conventional warfare scenarios but also different cyber - and digital warfare scenarios. When preparing for war-like incidents, it is important to note that it affects all of society. Such challenges can be responded to by removing different barriers in legislation and the right of access to information between authorities. In addition, an adequately influential network of actors is needed for managing incidents and enabling a rapid response to various scenarios.

It must be made possible to integrate various different international organisations related to security management (e.g. the EU and NATO) into the national system. Enabling international actors to join our management system requires the development of this system in terms of legislation and cooperative agreements. Despite its international nature, the management system based on the comprehensive security model must be sufficiently developed from a national perspective. There is no directly comparable incident management system that we could emulate. Finland, being a democratic state, means that we also have to take economic issues into account. The management system and preparedness in general cannot be designed to be too complex or to be too costly in terms of maintaining the system. In addition, the management of future incidents can be improved by increasing the size of organisations and units and harmonising structures. The interviewees believe that the newly reformed social welfare and healthcare system is an example of a confusing organisation in terms of managing incidents.

Now that we are joined NATO and the management from the military perspective will be NATO-compatible, it would mean that in practice other crises will also be handled in a NATO-compatible way – not only military crises. Because it is unfeasible that there is the NATO model and also having other different incident management models – integration is wise.

Legislative requirements for the development of the management system

The interviewees stated that current legislation related to management responsibility is partly outdated and inadequate. Existing legislation has not considered the change in the security environment. The management system must be based on legislation applicable to it. Legislation will be used to achieve a common basis for cooperation. Legislation mandating cooperation alone is not sufficient from the point of view of the allocation of responsibility. Actions by authorities cannot be based on agreement on matters related to management responsibility.

Legislation related to management responsibility and the management system must be developed as a whole. The authorities must have clear reasoning and a common vision for drafting legislation in their own sector. Actors involved in managing and leading crisis situations must have a perspective on cooperative leadership and the allocation of leadership responsibilities when developing operations. Legislation should take critical elements into consideration or at least enable their development. During the developmental phase, it is important to avoid incorporating overly detailed technical specifications into legislation. Cooperation agreements between authorities can be used to define more specific details if necessary.

When we have a solid foundation, clear cooperation, and well-defined responsibilities, any new incident that emerges in this field will be effectively managed. Therefore, I support having clearly defined responsibilities, even at the legislative level. This is something we may still need more of.

In the absence of clear legislation, confusion may arise within an otherwise well-functioning comprehensive security concept. Currently, legislative changes are often made in response to past incidents, sometimes resulting in unnecessary new regulations. In some cases, an operational model for managing and leading incidents is developed first, and only afterward is an attempt made to create legislation for it.

Developmental needs of the incident management system from the perspective of leadership responsibility

The development of the management system must consider the obligation to prepare for incidents. The concept of leadership responsibility should be integrated at the preparedness phase. According to the interviewees, society needs a shared understanding of the interests that must be safeguarded. Political actors must define what is essential for society. Based on this shared understanding, leadership responsibilities in crisis situations/incidents can be better allocated. Additionally, a clear structure and system are needed for prioritising tasks related to incidents.

There must also be a common understanding of sites that need to be protected and what society wants to safeguard.

The role of municipalities in incident management needs to be clarified, as every incident occurs within the jurisdiction of a municipality. Municipalities could be given greater responsibility in leading regional incident situations. The role of the private sector as part of comprehensive security should be defined more clearly, particularly in relation to overall security and leadership responsibilities. The expertise of the private sector should be better utilised in decision-making during incidents. In particular, during energy supply disruptions, authorities make significant decisions based on private sector expert knowledge. Development efforts must ensure that sufficient information and situational awareness are shared with all parties involved in incident management.

Companies are increasingly providing critical services, which means that the government must be able to share relevant information with them and engage in discussions. This public-private cooperation should be brought into the conversation, as the role of businesses in critical societal services continues to grow.

Every actor involved in incident management must outline, for the most common situations, how a specific incident affects their organisation's operations, which stakeholders need to be involved in managing the situation, and what level of decision-making capability is required. These incident scenarios must also be practiced. Situations that involve multiple actors and organisations should be managed normally using the standard organisational structures and practices. During an incident, organisational structures should not be changed, additional leadership layers should not be introduced, and temporary management systems should not be implemented. Table 1 summarises the key research findings related to the themes identified in the analysis.

Table 1: Summary of research findings

Theme	Summary of results
Preparing the management system for future challenges	Increasingly complex and unpredictable crises Integration of international organisations and systems into the national framework Harmonisation of national organisational structures
Legislative requirements for the development of the management system	Acknowledging the changes in the security environment Considering cooperation and the allocation of leadership responsibility
Developmental needs of the incident management system from the perspective of leadership responsibility	The importance of crisis preparedness Acknowledging municipalities and the private sector The importance of a permanent organisational structure

4. Conclusions

The research findings highlight key development needs in Finland’s incident management and leadership, including improving the overall incident management system, enhancing broad preparedness for future security challenges, and developing legislation related to incident situations. The roles and responsibilities of various actors within the incident management system must be clarified. The role of private sector actors and municipalities should be defined from the perspective of comprehensive security and a unified governance system. Information must be shared with societally critical actors, and they should be included in crisis planning and training activities.

In an increasingly complex security environment, preparedness must extend beyond traditional threats to include cybersecurity and digital threats. The role of international actors such as the EU and NATO in incident management has significantly grown, making their integration into Finland’s incident management system essential. From a comprehensive security perspective, NATO is not solely a military defence alliance. In addition to military defence and national security, NATO promotes civil preparedness and crisis resilience among its member states. Ensuring military operational capability during crises also requires securing the functions of civil society and critical infrastructure (Ministry of the Interior 2025). Therefore, the development of incident management systems and resilience must take the international dimension into account.

In preparedness planning, it is crucial to define leadership responsibilities and determine what is essential for society and what needs to be protected. Some interviewees cited the COVID-19 vaccination strategy as an example of clear societal prioritisation (European Commission 2020). NATO’s Resilience Committee serves as a good example of how non-military threats are integrated into national security arrangements (NATO 2022).

Regarding legislation, development needs focus on clarifying leadership responsibilities and considering the overall framework. Incident management legislation must enable cooperation between authorities and the private sector while ensuring the predictability of national and international regulatory frameworks.

Previously, challenges related to the allocation of leadership responsibilities in incident management systems have been highlighted. The Finnish Government’s program has partially acknowledged findings from this research. Finland’s position within various security communities and the development of the incident management system is documented in the program. According to the government’s plan, leadership capabilities for both external and internal security threats will be strengthened. Additionally, the governance structure for comprehensive security and cybersecurity will be reformed by establishing a government-level policy decision on incident management and leadership models (Finnish Government 2023). The principle decision on comprehensive security governance, including the national security strategy, was updated without modifying the incident management and leadership framework (Finnish Government 2025). Furthermore, the government program includes a commitment to clarify the division of responsibilities and authorities among public agencies, as well as to implement the necessary legislative changes (Finnish Government 2023).

The reliability of this study is strengthened by the large number of interviewees, the comprehensive inclusion of various administrative sectors, and the high-level positions of the interviewees within their organisations. Many interviewees have been involved in developing functions related to the study’s theme at the national level. The interviews generated extensive transcribed material, which was analysed and reviewed by two researchers. Due to the large volume of data, a potential challenge in analysis and selection of research material is ensuring that

no essential data is excluded (Graneheim & Lundman 2004). Based on the research findings, new perspectives can be identified for the development of incident management and leadership models that consider future operating environments. These perspectives can serve as a foundation for further research, particularly in examining the role of international organisations at the national level. The research findings further highlight that cybersecurity constitutes an integral component of the necessary reforms in incident management. Rather than being treated as a separate domain, cybersecurity must be inherently integrated into the management system, legislative frameworks, preparedness planning, and international collaboration. Regarding the development of the management system, it is essential to establish a unified and coordinated governance model applicable across all administrative levels. Incident situations force the exploration of new solutions and the application of lessons learned from past experiences (Rossi 2021).

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Ethics and AI statement:

No ethical approval was required for the study. The study did not use artificial intelligence tools.

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