Stockholm School of Economics
1351 Master's thesis in Business and Management
Academic year 2025-2026

The Defence Strikes Back: How NATO's Membership is Reshaping Sweden's Defence Ecosystem

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A qualitative study on the interplay between national autonomy, alliance demands and industrial interests

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Abstract

Sweden's entry into NATO marks a significant shift in the country's security environment and places new demands on the defence ecosystem. This thesis examines how public authorities, firms and associations adjust to these developments and how the ecosystem can support Sweden's mission in NATO while balancing national defence priorities, alliance obligations and commercial interests. Drawing on qualitative data from across the defence sector, the study shows that NATO integration reinforces long-standing practices of collaboration and shared problem solving, while also introducing new information flows, planning requirements and capability expectations. The findings highlight that effective adaptation depends on dynamic capabilities that are generated through interaction rather than within individual organisations. These insights inform the development of the concept of ecosystem-integrated dynamic capabilities, which captures how adaptation emerges from interdependence and shared institutional structures. The thesis concludes that Sweden's defence ecosystem is evolving into a more internationally embedded and strategically synchronised system, while remaining rooted in Swedish governance traditions.

Keywords: *NATO integration, defence ecosystem, dynamic capabilities, institutional complexity, resilience and preparedness, Swedish defence industry*

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Acknowledgements

We would like to express our sincere gratitude to our supervisor, Associate Professor Daniel Tolstoy, for his invaluable guidance, encouragement, and thoughtful advice throughout this thesis process. His insightful feedback and patient mentorship have shaped our analytical thinking and strengthened the quality of this work.

Our heartfelt thanks go to all company representatives and industry professionals who generously shared their time and perspectives during interviews. Their openness and reflections made this research possible and deeply enriched our understanding of Sweden's evolving defence ecosystem.

Finally, we would like to thank our family and friends for their support, patience, and encouragement throughout this journey. We are very grateful.

Siri & Mila

Abbreviations

Abbreviation	Definition
AI	Artificial Intelligence
ASAP	Act in Support of Ammunition Production
EDIS	European Defence Industrial Strategy
EIDC	Ecosystem-Integrated Dynamic Capabilities
EU	European Union
FMV	Swedish Defence Materiel Administration (Försvarets materielverk)
FOI	Swedish Defence Research Agency (Totalförsvarets forskningsinstitut)
GDPR	General Data Protection Regulation
NATO	North Atlantic Treaty Organization
R&D	Research and Development
SME	Small and Medium-sized Enterprise
SME-D	The Swedish Association of Small and Medium-sized Enterprises in Defence and Security
SOFF	Swedish Security and Defence Industry Association (Säkerhets- och försvarsföretagen)
SOU	Swedish Government Official Reports (Statens offentliga utredningar)
UN	United Nations

Key Definitions

Term	Definition
Capability Requirements	Operational, technological and organisational standards established by NATO and translated by national authorities into procurement and capability development priorities. They guide the acquisition, design and use of defence systems.
Collective Defence	A principle central to NATO whereby an attack on one member is treated as an attack on all. It requires member states to contribute to shared defence tasks, often beyond their own territory.
Ecosystem Strategy	A strategic perspective emphasising how interdependent actors co-create value by fulfilling different but complementary roles within a coordinated system (Adner, 2017; Jacobides et al., 2018).
Hybrid (National–Allied) Defence Ecosystem	A term used in the thesis to describe the configuration of Swedish defence actors operating across national governance structures, EU regulations and NATO frameworks.
Institutional Alignment	The process by which organisations adapt structures, routines and practices to conform to the expectations of dominant institutional actors or governance arrangements.
Institutional Complexity	The coexistence of multiple institutional logics, rules and expectations (e.g., NATO, EU and national governance structures) that shape organisational behaviour and create tensions in decision-making and coordination.
Interoperability	The ability of armed forces, systems and organisations from different countries to operate together effectively, including technical compatibility, common doctrines and shared operational procedures.

Just-in-Time vs. Just-in-Case Logistics	Two contrasting supply philosophies. Just-in-time focuses on efficiency and minimal inventories, whereas just-in-case prioritises redundancy and availability to ensure resilience in crisis situations.
Preparedness (Swedish: beredskap)	A coordinated system of responsibilities, resources and procedures aimed at maintaining societal and military functionality during crises, heightened readiness and armed attack. Involves both public and private actors.
Resilience	The ability of defence, industrial and societal systems to absorb shocks, maintain essential functions and recover rapidly. Includes redundancy, supply chain robustness and organisational adaptability.
Security of Supply	The ability of a state to ensure access to critical goods and services necessary for defence and societal resilience, especially under crisis or conflict conditions.
Sensing, Seizing, Reconfiguring (Dynamic Capabilities Framework)	A tripartite model describing how organisations detect changes, mobilise resources to address them and restructure operations to remain effective in evolving environments.
Value Chain Vulnerability	Exposure to risks arising from dependencies in global or concentrated supply chains, including material shortages, geopolitical risks and technological dependencies such as reliance on non-European electronics or software.

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1. Introduction

1.1 Background

1.1.1 A changing security and industrial landscape

Europe's security environment has changed fundamentally over the past decade. Russia's full-scale invasion of Ukraine, the long-term effects of the COVID-19 pandemic, and growing strategic competition with China have all shown how vulnerable modern societies are when energy, transport, digital infrastructure, and key technologies are disrupted. NATO's *Strategic Concept 2022* describes this as a period of "strategic competition" and underlines that collective defence now depends not only on armed forces, but also on the protection of critical infrastructure, supply chains and the defence-industrial and technological base (NATO, 2022).

In response, resilience has moved from being a supporting idea to becoming a core strategic task. NATO has strengthened its political commitment to resilience and civil preparedness, developing baseline requirements for critical sectors (NATO, 2016, 2021). These efforts build on Article 3 obligations in the North Atlantic Treaty and are further clarified in NATO's updated guidance on resilience (NATO, 1949, 2024). In parallel, the European Union (EU) has begun to build a more explicit defence-industrial policy. The Act in Support of Ammunition Production (ASAP) aims to scale up European ammunition manufacturing and address urgent supply gaps created by support to Ukraine, while also reinforcing long-term industrial capacity (Regulation (EU) 2023/1525). The *European Defence Industrial Strategy* (EDIS), adopted in 2024, goes further by setting out how the EU intends to make its defence industrial and technological base more resilient, coordinated and responsive to demand (European Commission, 2024). These developments blur the line between security policy and industrial policy. Defence is no longer only about national armed forces and defence budgets. It also concerns how states, alliances and companies jointly organise production, innovation and supply under conditions of geopolitical uncertainty.

1.1.2 From armed neutrality to NATO and renewed Total Defence

Sweden's accession to NATO in March 2024 marks a historic break with more than 200 years of military non-alignment. Membership makes Sweden part of NATO's collective defence system and ties Swedish defence planning more tightly to allied strategies, standards and capability goals (Government Offices of Sweden, 2024). NATO accession also places Sweden geographically at the centre of the Alliance's northern defence and reinforcement plans, increasing expectations that Sweden will provide logistics, infrastructure and industrial support in a wider regional context (NATO, 2022). The move also places Sweden at the geographic centre of NATO's northern defence and reinforcement plans, raising expectations for Swedish contributions in logistics, infrastructure and industrial support across the region (NATO, 2022).

This external shift interacts with a longer internal transformation. Sweden has been rebuilding its Totalförsvaret (Total Defence), which integrates military defence with civil defence and societal preparedness. The long-term planning document *Totalförsvaret 2021–2025* (Prop. 2020/21:30) reintroduced the idea that all parts of society should contribute to defence and resilience, including critical infrastructure and vital supply chains (Riksdagen, 2020/21:30). The forthcoming proposition *Totalförsvaret 2025–2030* (Prop. 2024/25:34) further stresses that Total Defence now operates in a NATO environment and that public and private actors will be expected to support allied and national needs (Government Offices of Sweden, 2024).

These developments build on, and are shaped by, the long-term evolution of Sweden's defence industry. Sweden's defence industry emerged during the 20th century as part of a broader strategy to sustain military capability under conditions of armed neutrality. From the late 1930s onward, the Swedish state invested heavily in domestic production of aircraft, artillery and naval systems, giving rise to national champion firms such as SAAB and Bofors. This reflected a small-state logic of securing independent military supply in the absence of guaranteed external support (Stenlås, 2008). Over time, this created a close and long-term relationship between the state and defence-industrial actors. The post-Cold War period, however, transformed this model: budget constraints, liberalisation and globalisation undermined the viability of a fully national industrial base. Foreign firms acquired several major Swedish companies, and production became increasingly integrated into international, particularly European, supply chains (Stenlås, 2008). Sweden's EU accession accelerated this shift by opening the market to cross-border investment and cooperation in procurement and technology development.

As a result, Sweden entered the 21st century with what can best be described as a hybrid defence-industrial system: it retains strong domestic capabilities, long-standing state–industry collaboration and nationally significant firms such as SAAB, but these are embedded within global supply chains, mixed ownership structures and EU-level industrial regulation.

1.1.3 State-industry relations in a hybrid defence ecosystem

In this hybrid setting, defence-related firms operate at the intersection of three overlapping governance arenas. First, NATO defines capability targets, standards and expectations for resilience and civil preparedness that member states are expected to meet (NATO, 2021, 2022). Second, Swedish national governance sets the legal framework for Total Defence, procurement, preparedness and crisis management, and distributes responsibilities between authorities, municipalities and businesses (Riksdagen, 1992; Government Offices of Sweden, 2024). Third, market governance, shaped by global competition and EU regulation, structures how firms can invest, innovate and participate in international supply chains (European Commission, 2024).

For Swedish firms, this means that resilience and security of supply are no longer purely political or ethical aspirations, but increasingly part of how legitimacy and competitiveness are defined. Companies in defence-related sectors are expected to deliver interoperable

products that work in allied operations, to contribute to national and allied security of supply, and to remain profitable in competitive markets. This applies both to large "system integrators" and to small and medium-sized enterprises (SMEs) that supply specialised technologies or services.

The legal and institutional basis for involving firms more directly in preparedness is currently under revision. A separate pre-study, *Sweden's Preparedness System and the Institutional Implications of SOU 2025:68* (Appendix 1), provides a detailed account of the Swedish preparedness system, the decentralised governance model, and the current debate on whether stronger legal obligations for firms are needed. The present thesis draws on this institutional background but does not evaluate preparedness legislation as such. Instead, it focuses on how firms interpret and act within the evolving institutional landscape.

1.1.4 Problem Identification and Research Gap

While earlier research has examined NATO integration from a policy or strategic studies perspective, few studies explore how *firms themselves* interpret, negotiate, and operationalise these changes within their strategic and organisational frameworks. This absence of firm-level insight represents a critical knowledge gap. This study, therefore, examines how Swedish defence-related firms perceive and respond to the emerging institutional order at the intersection of NATO alignment, national preparedness policy, and industrial adaptation.

1.2 Purpose and Research Questions

To address these developments, this study examines how Swedish defence-related firms understand and respond to NATO membership and the evolving preparedness framework within Sweden's hybrid defence ecosystem. By drawing on the perspectives of different organisations, the study seeks to show how actors interpret institutional pressures linked to NATO, national policy, and market conditions and how these interpretations differ across the ecosystem. This approach also makes it possible to identify recurring patterns as well as notable contrasts in how roles, responsibilities, and adaptation pressures are described. The study further investigates the factors that influence firms' strategic and organisational responses to this changing institutional landscape and how they position themselves in relation to resilience, preparedness, and security of supply in a NATO context.

To guide this analysis, the study is structured around the following research questions:

Main research question
How can the Swedish defence ecosystem support Sweden's mission in NATO by balancing requirements related to national priorities, alliances, and commercial interests in the defence sector?

Sub-questions

1. *How do Swedish defence actors interpret NATO's role and obligations, and how do these interpretations reshape roles, relationships, and institutional arrangements within the national defence ecosystem?*
2. *Which dynamic capabilities are required for Swedish defence actors to engage effectively in NATO-related cooperation, and how are these capabilities supported or constrained in current practice?*
3. *How can governmental agencies strengthen the ecosystem's ability to meet both national and NATO requirements, and which governance mechanisms are most effective for achieving this alignment?*

1.3 Expected Contribution

The study's expected contribution is twofold, offering insights that are valuable for both researchers and practitioners working in defence, preparedness and NATO integration.

For researchers, the study aims to improve understanding of how national defence industries interpret and respond to changes linked to NATO membership. It is intended to contribute to discussions on ecosystem strategy, dynamic capabilities and institutional theory by showing how these perspectives may help explain coordination challenges in complex and security-focused environments. More specifically, the study is expected to clarify how different organisations interpret alliance expectations, manage shared responsibilities and handle pressures related to preparedness, legitimacy and interoperability.

For practitioners, the study aims to provide insights that can support decision-making within both industry and government. By examining how firms perceive NATO-related demands and adapt their collaboration and internal processes, the study is intended to help organisations better understand the opportunities and challenges that may accompany deeper NATO integration. The findings are also expected to offer policymakers practical considerations for strengthening governance arrangements that support innovation, resilience and industrial competitiveness while remaining aligned with NATO requirements.

2. Methodology

This chapter outlines the methodological approach used in the study. To provide a clear overview of the process, Table 1 summarises the main stages of the research methodology, from the underlying research philosophy to data collection, analysis, and quality criteria.

Stage	Description	Key Concepts
Research Philosophy	Constructivist and pragmatic worldview guiding interpretation and practical relevance.	Reality as socially constructed; focus on meaning-making; actionable insights.
Research Design	Qualitative, abductive case study using semi-structured interviews and document review.	Iterative movement between theory and data; evolving interview guide.
Data Collection	22 interviews with 21 organisations + policy and strategic documents.	Purposive sampling; senior respondents; anonymisation; GDPR-compliant ethics.
Analytical Approach	Thematic analysis (Braun & Clarke) integrated with abductive reasoning.	Coding, clustering, theme development, iteration with theory.
Quality Criteria	Trustworthiness framework (credibility, transferability, dependability, confirmability)	Researcher triangulation; thick description; reflexivity; transparent documentation.

Table 1 - Overview of the research methodology stages

2.1 Research Philosophy

This study adopts a constructivist and pragmatic research philosophy, recognising that knowledge about organisations is constructed socially through human interaction, dialogue, and interpretation (De Sordi, 2021). Constructivism holds that reality is created through social processes and institutional contexts, where actors continuously define and redefine meaning. Pragmatism, on the other hand, stresses that knowledge should be valued for its capacity to inform and improve practice (Molina-Azorin, 2011).

In the context of this research, constructivism enables an exploration of how meanings of “resilience”,“preparedness”, “mission”, and “alliance” are negotiated among firms, government agencies, and alliances, rather than taken as fixed or universally shared concepts. Pragmatism complements this by emphasising the applied relevance of these interpretations.

Reality is understood as institutionally structured yet enacted through interpretation and action. In Sweden’s defence sector, organisational actors interpret frameworks such as NATO membership, EU industrial strategies and national regulations, and translate these interpretations into concrete strategic responses. The interviews also showed that such interpretations are influenced by the respondents’ professional roles, organisational affiliations and prior experiences such as military training.

The study therefore seeks to explore how organisations construct and act upon their understanding of change, not by identifying universal laws but by revealing contextually grounded patterns of strategic adaptation. This approach acknowledges that multiple, sometimes competing realities coexist within the Swedish defence ecosystem: firms may simultaneously frame NATO integration as opportunity, obligation, or constraint, depending on their institutional position.

This philosophical stance combines constructivism’s focus on meaning with pragmatism’s concern for practical usefulness, providing a balanced foundation for analysing how Swedish defence-related firms make sense of, and strategically respond to, NATO integration.

2.2 Research Design

The study uses a qualitative case study design combined with a constructivist thematic analysis. This approach fits with the aim of understanding how different actors within the Swedish defence ecosystem describe and make sense of NATO membership and national preparedness reforms. The purpose is not systemic comparison between firms, but to build a broad picture of how diverse organisations interpret similar pressures.

The empirical material consists of interviews with representatives from anonymised Swedish defence-related firms, as well as views from government agencies, trade organisations and sector associations, (R1-R21, see Appendix 2). The firms differ in longevity, size, ownership, and international exposure, as well as in technology focus ranging from software, digital systems, specialised equipment, manufacturing, advisory services and integrated technical solutions. Their customer bases also differ, covering the Swedish Armed Forces, civil emergency actors and private companies. Including this variety was important for capturing the breadth of experiences across the ecosystem, even though each firm only represents its own perspective.

The analysis situates firms within a wider institutional landscape comprising public authorities, regulatory and legal requirements, alliance structures, and the broader organisation of total defence, together with the informal networks and practical routines that link these actors together. This makes it possible to examine how organisations handle both

market-driven demands and institutional expectations linked to NATO integration and preparedness reforms. The thematic analysis focuses on recurrent ways interviewees describe their roles, working relationships and areas where they experience pressure to adapt. Differences between organisations are noted, but not treated as formal comparative findings given the study's design and limited number of interviews per firm.

The research adopts an abductive and pragmatic orientation. The analysis developed iteratively, with empirical material and theoretical ideas examined in parallel rather than in a predetermined sequence. Early interviews, together with publicly available annual reports (BAE Systems, FMV, Nammo, Saab, and Volvo), articles and press releases, helped identify observations and tensions that were not anticipated and could not be accounted for by initial assumptions. These insights informed adjustments to the interview guide and redirected the analytical focus as the study progressed. Subsequent data collection was therefore shaped by emerging questions, allowing the inquiry to follow issues that only became visible through continued engagement with the material. This abductive movement between data and theory supported the development of interpretations that were grounded in participants' accounts while informed by relevant strategic and institutional perspectives. The constructivist stance underpinning the study recognises that meaning arises through the interplay between participants' narratives, the researcher's interpretation, and the institutional context in which these narratives are produced.

2.3 Data Collection

Primary data were collected through semi-structured interviews with senior representatives of defence-related firms and organisations involved in decision-making, strategic planning, collaboration or technological development. Interviews were designed to last around 45 minutes (as listed in Appendix 2), though the majority exceeded this due to the breadth of topics covered and followed a flexible guide that covered themes such as adaptation to NATO standards, interactions with public agencies, and strategic positioning within the Swedish defence ecosystem (Appendix 3). All interviews were transcribed verbatim, anonymised and coded as R_X (X being the chronologically given number). In all but three cases transcription was supported by AI tools to ensure accuracy during the dialogue. By 20 November 2025, the study had conducted 22 interviews with representatives from 21 firms, agencies and organisations.

To broaden the empirical basis, the analysis also drew on corporate and policy documents, including annual reports, strategic statements, and official publications from NATO, the EU and the Swedish Government. Swedish legislative and policy materials relating to preparedness governance, together with government propositions, were first reviewed as part of the pre-study to map the institutional debate surrounding private-sector responsibilities in total defence (Appendix 1). These materials provided the initial analytical frame, but early interviews offered limited insight into this specific issue. As a result, the focus of the study was adjusted in line with emerging empirical patterns, and the policy documents were subsequently used primarily to contextualise interview accounts rather than as a direct basis

for thematic development. These documents were selected because they specify expectations placed on private actors and clarify how resilience responsibilities are negotiated in the policy arena.

2.4 Analytical Methods

The analytical process followed a multi-step qualitative approach, integrating thematic, comparative, and abductive reasoning. This layered approach was designed to capture both the shared meanings and diverse interpretations that emerge when firms navigate multi-level institutional pressures within Sweden's evolving defence ecosystem.

2.4.1. Thematic and Abductive Analysis

The data were analysed using Braun and Clarke's (2019) approach to thematic analysis, guided by an abductive logic. Coding began with detailed readings of the interview transcripts, followed by the gradual organisation of codes into broader patterns that captured how actors described NATO integration, preparedness reforms and their organisational roles. As the analysis progressed, these patterns were refined into four overarching themes that structure the empirical chapter. Abductive reasoning played a central role in this process. When interview accounts revealed tensions or developments that were not anticipated, these moments of analytical surprise were examined alongside relevant theoretical perspectives and used to reshape the emerging thematic structure. As Tavory and Timmermans (2022) note, "surprise always emerges against a background of theoretical expectations" and it was precisely these instances that guided the refinement of themes and deepened the interpretation.

After the initial round of open coding, the transcripts were revisited iteratively to compare codes across organisational types and to identify recurring patterns in how respondents framed responsibilities, constraints and opportunities under NATO integration. Codes that consistently clustered together were grouped into provisional subthemes, which captured, for example, shifts in strategic orientation, evolving institutional roles, changing forms of collaboration, and differences in sensing, seizing and reconfiguring capabilities. These subthemes were then reviewed against the full dataset and refined through repeated movement between data and theory. In this iterative process, both convergent accounts and divergent or unexpected statements played an important analytical role, prompting adjustments to the thematic boundaries and clarifying how the empirical patterns related to the study's conceptual framework.

The final thematic structure presented in Chapter 4 emerged from this abductive interplay between empirical material and theoretical reflection. A detailed account of the coding process, the organisation of subthemes and the empirical extracts that supported each theme is provided in Appendix 4.

2.5 Quality of Study

The quality of this study is evaluated through the concept of trustworthiness, a framework developed for evaluating qualitative research (Lincoln & Guba, 1985). Trustworthiness consists of four elements: credibility, transferability, dependability, and confirmability, which together help show how the findings were produced and how they should be interpreted, aligning with the study's constructivist and pragmatic foundations.

2.5.1 Credibility

Credibility refers to how well the findings reflect participants' perspectives and is a central component of trustworthiness in qualitative research (Lincoln & Guba, 1985). Several steps were taken to strengthen this aspect of the study.

First, the participants' backgrounds contributed to the credibility of the study. The interviewees held senior roles, and many have long experience in Sweden's defence sector. Their positions meant that they were well-informed about organisational strategies, collaboration with public authorities, and developments linked to NATO integration. This increased the likelihood that the information they shared was accurate and grounded in practice.

Second, researcher triangulation supported the credibility of the findings. Both authors were present in the interviews and alternated between leading the conversation and observing. This allowed the observer to ask follow-up questions when needed and to provide two perspectives on the interviews. Researcher triangulation is described as a useful way to reduce individual bias and strengthen the connection between data and interpretation (Lincoln & Guba, 1985). After each interview, notes were reviewed independently before being discussed together, which helped ensure that interpretations were developed collaboratively and consistently. Finally, the study's iterative and abductive approach further strengthened credibility. Initial interpretations were revisited as new interviews were conducted, enabling the analysis to advance gradually and remain closely tied to participants' accounts rather than prior assumptions. This ongoing interplay between data and interpretation aligns with established approaches in qualitative analysis (Bell et al., 2019).

2.5.2 Transferability

Transferability concerns how applicable the study's insights are to other settings. In qualitative research, this depends on the level of contextual detail provided rather than on statistical generalisation (Lincoln & Guba, 1985). Lincoln and Guba refer to this as offering "thick description," meaning that the researcher clearly explains the study's setting, scope, and conditions so readers can judge whether the findings may be applicable in similar contexts.

In this study, transferability is supported by describing the broader research context, including the structure of the Swedish defence ecosystem and the types of organisations involved. The empirical chapters also present multiple quotations that illustrate participants' views on developments related to NATO integration and preparedness. Even though the interviews are

anonymised, these quotations provide insight into how the themes were derived and show how the analysis is grounded in participants' accounts (Bell et al., 2019). The aim of the study is not to produce general claims about all organisations in the defence sector. Instead, the combination of contextual explanation and rich empirical material enables readers to assess whether the findings may be meaningful for other settings with similar institutional or organisational conditions.

2.5.3 Dependability

Dependability concerns the consistency and transparency of the research process. In qualitative research, this involves showing how the study was carried out and ensuring that the steps taken are documented clearly enough for others to follow the reasoning behind the findings (Lincoln & Guba, 1985).

To ensure dependability, the study followed a structured, well-documented workflow. A project plan guided the stages of data collection and analysis, and a tracking document was used to organise outreach efforts, interview scheduling, transcription progress, and other practical details. Dependability was also strengthened through the authors' regular communication. The researchers were in contact almost daily, discussing emerging insights, refinements to coding, and analytical decisions. These ongoing conversations helped maintain a coherent approach to interpreting the data and ensured that decisions were reviewed collaboratively rather than made independently.

2.5.4 Confirmability

Confirmability concerns the extent to which the findings are shaped by the participants' accounts rather than by the researchers' own assumptions. In qualitative research, this involves showing that the interpretations are grounded in the data and that steps were taken to limit personal bias (Lincoln & Guba, 1985).

In this study, confirmability was supported through reflexive practice. Throughout the process, the authors discussed how their backgrounds, expectations, and interpretations might influence the analysis. Reflecting on these issues helped maintain awareness of potential bias and encouraged careful consideration of alternative explanations (Bell et al., 2019). Finally, while researcher triangulation played a role in overall trustworthiness, in the context of confirmability, it specifically served to check individual interpretations. By comparing the independent readings of the material, the authors ensured that no single perspective dominated the analysis.

2.6 Ethics

In the constructivist paradigm, the inquirer acts as an *"orchestrator and facilitator of the inquiry process"* rather than as a detached observer (Guba & Lincoln, 1994, p. 112). The researchers' background in business and management provided contextual understanding but also required careful reflexivity to mitigate bias. Reflective notes were maintained throughout data collection and analysis to document interpretive choices and assumptions. This reflexive

practice aligns with Alvesson and Sköldberg's (2017) view that interpretation in qualitative research involves a continuous dialogue between data, researcher subjectivity, and theoretical framing.

Given the study's focus on the defence sector, a field where issues of national security, confidentiality, and political sensitivity are particularly salient, ethical awareness was central to all stages of the research process (Kaiser, 2009). It's recognised that participants' accounts might reflect both organisational narratives and strategic discretion shaped by security considerations. Accordingly, interviews were designed to avoid any request for classified or sensitive information and focused instead on perceptions, strategies, and collaboration practices.

The study followed the ethical guidelines of the Stockholm School of Economics. Participants provided informed consent and were assured anonymity. They were informed of the study's purpose, voluntary participation, and they had the right to withdraw at any stage without consequence. No classified or commercially sensitive information was collected, and all data were managed according to the GDPR.

Ethical integrity was maintained procedurally and relationally (Tracy, 2010). Consistent with the constructivist paradigm, ethical responsibility included representing participants' perspectives respectfully and accurately, while acknowledging the co-constructed nature of knowledge in qualitative inquiry. This approach grounded ethical practice throughout the research design and interpretive stages.

2.7 Scope and Limitations

The main limitation of this study is the size and composition of the empirical sample. Although more than 200 potential participants were contacted, only 21 agreed to be interviewed, reflecting both the confidential nature of the defence sector and the time constraints many organisations face, narrowing the breadth of perspectives captured. In addition, each organisation is represented by a single interviewee. While these individuals occupied senior roles and were closely involved in strategic decision-making, their accounts cannot capture the full range of views that may exist within their organisations. Despite these constraints, the interviews provided sufficiently varied and detailed insights to identify recurring patterns in how organisations interpret and respond to strategic and institutional pressures. Future research could broaden the sample by including multiple respondents from the same organisations, as well as policymakers, civil defence authorities and alliance representatives, to capture additional layers of Sweden's defence governance landscape.

Another limitation concerns restricted access to non-public strategic documents. Since much of the analysis relied on publicly available information and interview data, it was not possible to examine internal strategies or sensitive material that could have provided a deeper understanding of company decision-making.

There is also a risk that corporate rhetoric does not fully reflect operational reality. Company representatives may describe strategies and practices in ideal terms that align with organisational narratives or policy expectations, which can differ from what occurs in practice. The organisations studied operate in varying contexts, which limits the extent to which conclusions can be generalised to the defence sector as a whole. As a result, the findings should be interpreted as contextually grounded rather than statistically generalisable, offering analytical rather than predictive insight (Yin, 2018).

A further limitation concerns the use of methodological triangulation. Combining interview data with corporate disclosures would in principle have strengthened the study, but available documents offered too little relevant detail. Annual reports contain mainly financial information and brief strategic statements, providing limited insight into defence roles, preparedness responsibilities or views on NATO integration. They therefore could not support systematic triangulation, although they informed the initial development of the interview guide and early thematic orientation.

Finally, the timeline of the project (approximately three months) posed a practical constraint. The limited time available reduced the number of interviews that could be conducted and restricted opportunities for follow-up discussions or longitudinal observations. Given that institutional and strategic adaptation processes unfold over extended periods, a longitudinal research design would enable deeper understanding of how NATO alignment and preparedness governance evolve in practice.

Beyond these practical considerations, a conceptual limitation lies in the interpretive scope of the study. The analysis primarily captures firms' perspectives on institutional change rather than the reciprocal processes through which state actors influence and reinterpret private-sector roles.

Despite these limitations, the study contributes to a broader understanding of strategic behaviour and adaptation within the defence sector in Sweden. Its value lies in offering theoretically informed, empirically grounded insight into how Swedish defence-related firms make sense of and respond to the evolving institutional logics of NATO membership and national preparedness.

3. Theory and Literature review

3.1 Overview

This chapter explores theoretical and empirical aspects of how Sweden's NATO membership is reshaping its defence-industrial system. The analytical focus is how firms respond to and manage multilayered institutional governance, and how they interact within a strategic ecosystem that connects national, Nordic, and trans-Atlantic actors. As Granstrand and Holgersson (2020) demonstrate, ecosystems include collaborative and competitive relations, substitute technologies, and artifacts that jointly influence system performance.

Existing research, however, has concentrated on institutional coordination among states and international organisations rather than on industry-level behaviour. Studies of NATO's decision-making, UN–NATO coordination, and EU–Nordic security alignment (Michel, 2014; Kille & Hendrickson, 2011; Harsch & Varwick, 2009; Dickens, 2024) illuminate how political and institutional actors adjust to shifting security conditions, but they provide limited insight into how defence-industrial firms respond to the same pressures. In the Swedish context, analyses of Totalförsvar highlight increased public–private interdependence (FOI, 2024), yet the strategic adaptations of firms within this framework are still underexplored.

3.2 Ecosystem Strategy, Governance, and Dynamic Alignment

Adner and several other theorists approach the concept of an industry as a network of interconnected companies that create and capture value via complementarities rather than through a hierarchical ownership model (Adner, 2017; Jacobides, Cennamo, & Gawer, 2018; Kapoor, 2018). According to Adner (2017), an ecosystem is an alignment structure within which interdependent value-creation and adoption activities are performed by the partners, meaning that the success of any individual actor is contingent upon the cooperative functioning of the entire system. His approach emphasizes that ecosystems substitute vertical control with alignment among self-governing units that must cooperate to manage co-innovation and adoption-chain risks (Adner, 2017). Ecosystems emerge when interdependent actors cannot coordinate effectively through markets or hierarchy alone, and shows how alignment among autonomous organisations enables joint value creation in settings where knowledge is dispersed, technologies depend on each other, risks have system-wide consequences, and essential capabilities are fragmented across the ecosystem.

Elaborating further, Jacobides et al. (2018) distinguish ecosystems from markets and supply chains by focusing on specific non-generic complementarities and multilateral dependence among participants. In their view, participants in an ecosystem combine distinct, non-substitutable resources and capabilities to create joint value, while modularity with shared interface standards enables collaboration without full integration (Jacobides et al., 2018). As interdependence among modular actors grows, effective coordination (rather than ownership) becomes the primary determinant of success within the ecosystem. Consequently,

shared protocols, joint R&D consortia, and collaborative platforms function as governance mechanisms to achieve both flexibility and coherence in distributed innovation executed within an agreed structural framework (Kapoor, 2018; Rietveld & Schilling, 2021).

Ecosystem governance involves more than technical coordination. It encompasses the relational and strategic processes required to align incentives among heterogeneous actors. Kapoor (2018) introduces the concept of architectural control, where focal firms (orchestrators) influence ecosystem evolution by defining participation rules and interface standards around a focal value proposition. Similarly, Autio and Thomas (2022) define ecosystem orchestration as a form of strategic leadership that balances control with partner autonomy through shared vision, trust, and interpretive alignment. In this sense, governance is not top-down; it is based on reputation, credibility, and relational legitimacy among participants, a view elaborated by Autio and Thomas (2022) and supported by Harima et al. (2024).

Contemporary evaluations demonstrate that governance also supports ecosystem competition and adaptation. Krome and Pidun (2023) argue that firms make sequential decisions (joining, creating, competing within, and evolving ecosystems) and must constantly manage the balance of cooperation and competition, or coopetition. Their analysis shows that coordination mechanisms such as feedback loops and joint sense-making sustain collaboration even when formal authority is absent. Harima et al. (2024) complement this perspective by identifying two interrelated leadership capabilities in ecosystem orchestration: network orchestration, which involves trust-building and inter-organizational tie management, and resource orchestration, which mobilizes and reallocates assets across participants to sustain balance and resilience. These adaptive capabilities enable ecosystems to evolve through iterative coordination rather than through hierarchical control (Harima et al., 2024).

Teece (2007) links these coordination mechanisms with firms' dynamic capabilities, their ability to sense opportunities and threats, seize them through timely investment and design choices, and reconfigure internal and external resources to remain competitive. In ecosystems, dynamic capabilities are collective and distributed, functioning through shared routines of learning, experimentation, and realignment across organisations (Teece, 2007; Autio & Thomas, 2022). As Rietveld and Schilling (2021) note, adaptive governance allows ecosystems to adjust both control and openness over time so that evolving role allocations and interdependencies remain aligned with the overall value architecture.

Taken together, these insights conceptualize ecosystem strategy as a structural-and-relational process of alignment. Structural design specifies modular interfaces and boundaries of participation (Jacobides et al., 2018; Kapoor, 2018). Relational governance cultivates legitimacy, trust, and shared understanding (Autio & Thomas, 2022; Harima et al., 2024). Dynamic capabilities enable organisations to adapt and to continually reconfigure and renew their assets as markets, technologies, and ecosystems evolve (Teece, 2007).

While ecosystem literature emphasizes coordination, complementarities, and interdependencies among actors, recent reviews show that existing definitions often understate the role of institutional forces. Granstrand and Holgersson (2020) identify that only a minority of ecosystem definitions explicitly include institutions, despite their importance for shaping actor behaviour and system evolution. To address this limitation, the following section introduces institutional theory as a complementary lens for analysing how organisational behaviour and collaboration develop within complex, multi-level governance structures.

3.3 Institutional Complexity and Organisational Response

Institutional theory complements the ecosystem view by explaining how organisations operate within environments shaped by social norms and legitimacy expectations. Meyer and Rowan (1977) argue that organisations adopt formal structures as myths and ceremonies to secure legitimacy in institutionalised environments, often decoupling symbolic compliance from operational activities. This perspective clarifies how defence-sector firms must appear compliant with alliance norms of transparency and resilience while simultaneously pursuing technological and commercial objectives.

When multiple logics coexist, such as national security, commercial efficiency, and alliance interoperability, organisations face institutional complexity. Their responses include selective coupling, hybridisation, and balancing external legitimacy with internal effectiveness. Swedish firms integrating into NATO frameworks illustrate such hybridity, aligning with alliance standards while preserving domestic industrial autonomy.

3.4 Resilience as Strategic Capability

Classic work on environmental jolts described resilience as the ability of an organisation, grounded in its routines, structures and shared beliefs, to absorb sudden shocks and re-establish workable order (Meyer, 1982). Wildavsky later framed resilience as the capacity to cope with unexpected dangers as they arise and to recover through learning processes that strengthen future responses (Wildavsky, 1988).

Subsequent organisational studies highlighted that resilience develops over time and is shaped by how organisations interpret conditions and adjust their behaviour. Research on adaptability described resilience as a dynamic pattern formed through repeated organisational experience with disruption (Gittell et al., 2006). Resilience was also identified as a combination of cognitive, behavioural and contextual qualities that allow organisations to understand their situation and design responses that match the demands placed on them (Lengnick-Hall & Beck, 2005). Later work extended this understanding by showing that resilience includes the ability to take in disruptive surprises, produce situation-specific responses and use these adjustments to strengthen long-term viability (Lengnick-Hall et al., 2011).

Systems-oriented research gives further insight into how resilience unfolds across interconnected settings. Boin, Comfort and Demchak described resilience as the capacity of a social system to adapt to and recover from disturbances that fall outside normal expectations (Boin et al., 2010). Their approach highlights the significance of relationships, coordination and shared interpretation when actors confront adversity. A related systems perspective defined resilience as the ability of a system to absorb disturbance while reorganising in ways that preserve its essential functions, structure and identity (Walker et al., 2004). This shift to a wider analytical frame emphasises that resilience emerges through interaction between organisations and their institutional environment, rather than through isolated organisational capabilities alone.

These insights are directly relevant in the Swedish defence context, where resilience is shaped by institutional responsibilities and collective expectations. The Totalförsvar framework distributes preparedness and continuity roles across public authorities, municipalities and private firms, which means resilience depends on consistent interpretation of responsibilities and coordinated adjustments among interdependent organisations. Firms may strengthen supply continuity, reorganise production, re-shore, near-shore or diversify sourcing, but these steps must align with actions taken by defence authorities and alliance partners. Public authorities rely on industry knowledge to anticipate vulnerabilities, identify bottlenecks and monitor the capacity of supply networks. In this setting, resilience is an outcome of shared assessments and coordinated responses rather than an internal property of individual organisations.

NATO alignment makes these interdependencies more visible. New standards, planning routines and information requirements require adjustments within both state bodies and firms, and these changes must be compatible with the adaptations occurring elsewhere in the defence ecosystem. This pattern reflects the understanding of resilience as a process shaped by ongoing interaction between organisations and their institutional context, consistent with the system-level views outlined in Boin et al. (2010) and Walker et al. (2004).

Viewing resilience in this way clarifies why it functions as a strategic capability within Sweden’s defence ecosystem. It arises from the ways organisations interpret developments, revise their practices and coordinate with one another to maintain essential functions under uncertainty. This perspective aligns resilience with the institutional and ecosystem features that structure collective action in Sweden’s defence environment, as emphasised in broader reviews of resilience across organisational settings (Williams et al., 2017).

3.5 Conceptual Framework

Sweden’s defence sector is conceptualised here as a hybrid institutional ecosystem, shaped by the interaction of alliance, state and market logics that converge within the same organisations. Drawing on Friedland and Alford’s (1991) understanding of society as an inter-institutional system and the institutional logics perspective (Thornton, Ocasio & Lounsbury, 2012), organisational behaviour is seen as the outcome of actors navigating

multiple, coexisting rule systems rather than a single coherent governance order. NATO's standards for interoperability, national expectations around total defence, and competitive pressures in global defence markets are thus not external factors but institutional forces simultaneously structuring organisational sensemaking and strategic choice.

Hybridity is particularly concentrated in Sweden's central defence authorities. Försvarsmakten and FMV embody regulatory authority, capability development, NATO coordination, and procurement roles. Their institutional position requires them to translate between competing expectations and to mediate tensions that arise when alliance integration intersects with national sovereignty concerns and industrial competitiveness. As Skelcher and Smith (2015) argue, such organisations do not merely balance multiple logics but enact them, shaping how problems are defined and how resources and responsibilities are distributed across the ecosystem.

Firms, too, operate within this plural environment. Instead of adhering to one dominant organising principle, they draw selectively on elements of different logics to maintain legitimacy across audiences. Pache and Santos (2013) describe this as *selective coupling*: the integration of practices linked to conflicting logics without fully resolving their contradictions. In Sweden's emerging defence ecosystem, selective coupling influences how companies interpret NATO expectations, how they operationalise resilience, and how they embed preparedness requirements into commercial strategy.

While hybridity describes how organisations negotiate and combine multiple institutional logics within the defence ecosystem, it does not explain where these plural and sometimes competing expectations originate. The sources of this institutional plurality stem from the wider governance environment in which Swedish defence actors operate. This distinction becomes clearer when examining the multi-level governance structure, where NATO, EU and national institutions generate overlapping rule systems and expectations that feed into the hybrid configuration described above.

Understanding the sector as a hybrid institutional ecosystem highlights that adaptation is not solely a technical or market-driven process but a negotiation of institutional tensions. This perspective provides the conceptual grounding for analysing organisational responses to NATO integration and preparedness reforms in the empirical chapters.

3.6 Governance and Institutional Logics

Sweden's defence transformation unfolds within a multi-level governance structure, in which NATO, the European Union, and national institutions exercise overlapping authority. Such arrangements diffuse decision-making across supranational, national and sectoral arenas, creating what Hooghe and Marks (2003) describe as interdependent yet fragmented governance. Defence actors must therefore interpret and reconcile rules and expectations that arise at multiple levels and do not necessarily align. Whereas Section 3.5 focused on how such institutional plurality manifests internally as organisational hybridity, the multi-level governance perspective clarifies the external institutional architecture that produces these overlapping demands.

Institutional logics theory offers a lens for examining how organisations navigate these layered pressures. Swedish defence actors are simultaneously exposed to an alliance logic that emphasises interoperability and collective readiness; a national logic anchored in sovereignty, total defence and societal resilience; and a market logic privileging competition, innovation and voluntary collaboration. As Greenwood et al. (2011) note, the coexistence of such logics creates institutional complexity, requiring organisations to sustain legitimacy across audiences whose expectations diverge both substantively and temporally.

This complexity manifests in the tensions highlighted across the empirical material: NATO's push for harmonisation coexists with national preferences for control over critical capabilities; preparedness reforms introduce regulatory obligations that challenge commercial flexibility; and market incentives often favour efficiency rather than redundancy or resilience. Thus, organisational behaviour is shaped less by the dominance of any single logic and more by the interpretive work required to navigate their simultaneous influence.

3.7 Conceptual Synthesis: The Hybrid Defence Ecosystem Model

Integrating the theoretical and empirical insights above, Sweden's defence-industrial transformation can be understood as the evolution of a hybrid defence ecosystem shaped by the interplay of alliance, national and market logics. The alliance logic, embedded in NATO frameworks, promotes interoperability and shared capability development. The national logic, rooted in Sweden's total defence tradition, emphasises sovereignty and resilience. The market logic highlights innovation, competitiveness and voluntary collaboration.

Swedish firms operate at the intersection of these logics and develop dynamic capabilities (Teece, 2007) to align with alliance demands, comply with national regulation and remain agile in global markets. The interaction of these influences creates both constraints and opportunities and requires firms to balance legitimacy, coordination and strategic flexibility.

The conceptual model illustrates this hybrid configuration by showing how the external layering of authority that characterises multi-level governance is reflected in the internal coexistence of several institutional logics within organisations. The model does not treat the

logic as separate drivers. Instead it highlights their concurrent presence and the interpretive work organisations undertake to reconcile them.

Political and market forces appear in the model as cross-cutting pressures that shape how the alliance, national and market logics are activated. Political forces influence how alliance and state expectations are understood and prioritised. Market forces affect firms' ability to respond through their impact on supply chains, competitiveness and industrial capacity. These pressures show that organisational adaptation reflects not only institutional demands but also the broader geopolitical and economic environment.

Defence actors develop adaptive capabilities such as cross-sector coordination, internal reconfiguration and institutional translation that allow them to work across organisational boundaries and adjust to changing expectations. In this model, hybridity is a defining feature of Sweden's evolving defence governance system. It helps explain why firms respond differently to NATO integration, why coordination challenges persist even when policy goals are shared and why preparedness reforms lead to varied organisational reactions. It also draws attention to the role of central state actors as institutional intermediaries whose interpretations influence how logics are communicated throughout the ecosystem.

Taken together, these dynamics form the analytical basis for the empirical analysis. The hybrid ecosystem model makes it possible to interpret organisational adaptation as an institutionally embedded process and to understand how NATO alignment, national regulation and market competition develop together within Sweden's defence-industrial landscape.

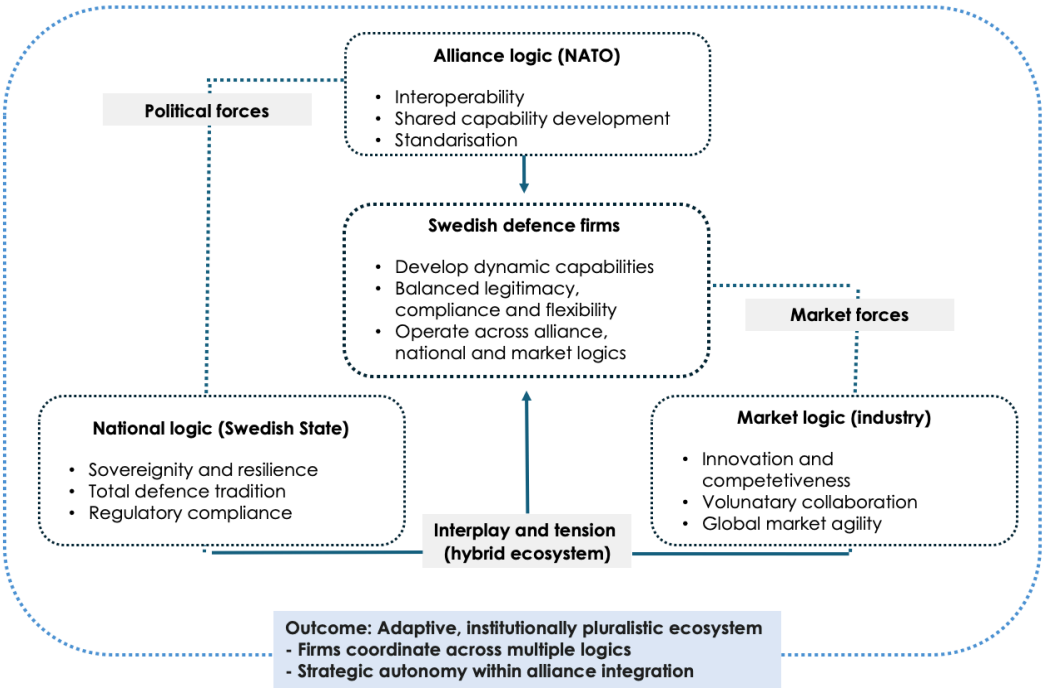


Figure 1 - The Hybrid Defence Ecosystem Model

4. Findings

4.1 Adjusting Roles, Relationships, and Institutional Arrangements

Sweden's NATO membership has initiated a significant repositioning within the national defence ecosystem. Across interviews, participants described changes in strategic orientation, organisational roles, state–industry relations and international partnerships. These developments show how actors reinterpret their responsibilities within a multi-level governance environment that includes NATO structures, national defence authorities, and commercial markets. The following subsections synthesise these perspectives. An overview of these themes and their theoretical grounding is presented in Table 2.

Theme	What the Theme Captures	Theoretical Grounds
1. Adjusting Roles, Relationships, and Institutional Arrangements	How actors reinterpret strategic orientation, organisational roles, collaboration patterns and responsibilities in light of NATO membership; evolving relations between agencies, industry, and allied partners.	Institutional theory (Meyer & Rowan, 1977; Greenwood et al., 2011); Ecosystem roles & complementarities (Adner, 2017; Jacobides et al., 2018); Multi-level governance.
2. Dynamic Capabilities for Effective NATO Engagement	How the defence ecosystem develops sensing, seizing and reconfiguring capabilities to respond to geopolitical, technological and institutional shifts; includes scanning, innovation, scaling, supply-chain redesign, organisational adaptation.	Dynamic capabilities (Teece, 2007); Ecosystem-integrated capabilities (Autio & Thomas, 2022); Distributed innovation.
3. Navigating Institutional Complexity	How actors manage overlapping NATO, EU and Swedish governance layers; translation of alliance expectations, regulatory tensions, slow permits, distributed authority, information challenges, principal–agent issues.	Institutional complexity (Greenwood et al., 2011); Information-processing theory (Galbraith, 1974); Multi-level governance.
4. Balancing National, Allied, and Commercial Interests	How actors reconcile competing logics of national sovereignty, alliance interoperability and commercial strategy; tensions in procurement, capability development, standardisation, SME inclusion and supply-chain resilience.	Strategic balancing (Pache & Santos, 2010); Ecosystem strategy (Adner, 2017); Defence industrial policy; Dynamic capabilities.

Table 2 -Themes, Analytical Focus, and Theoretical Anchoring

The interviews also showed that respondents interpret NATO in several different ways, ranging from a collective defence alliance to a coordinating and standard-setting body, a market opportunity, a regulatory framework, a logistics driver, a continuation of long-term alignment and a political symbol. These interpretations reflect the varied institutional logics that shape actors' roles within the ecosystem. A structured overview of these interpretations, together with illustrative quotations, is provided in Appendix 5.

Please note that the quotations presented in this chapter were anonymised and paraphrased to prevent indirect identification, and the respondent roles and descriptions were generalized to ensure anonymity (Appendix 2).

4.1.1 Changing Strategic Orientation

Across interviews, participants described NATO accession as the moment when Sweden's defence logic shifted from inward protection to outward engagement. One respondent captured this change directly:

> *"Before NATO, much of the planning focused on ensuring that Sweden could receive support from third parties. Now, the logic is reversed. Under NATO, the focus is on defending Sweden abroad, meaning in Finland or the Baltic states." (R6)*

Several interviewees explained that this orientation is grounded in Sweden's geography and its role within NATO's northern defence planning. They emphasised that Sweden is now expected to function as a key logistical actor in the region. A senior manager described how:

> *"Sweden's geographic role within NATO will be that of a logistics base nation, facilitating the movement of allied troops and equipment to Finland or the Baltics" (R7).*

Industry respondents expressed similar views, with one senior executive characterising Sweden:

> *"...a logistics hub and recovery country for NATO in potential conflicts in the High North" (R18).*

Interviewees also discussed changes in procurement priorities. As one respondent put it:

> *"...there's a clear shift toward valuing local procurement more highly than simply getting the lowest price" (R1).*

They linked this development to Sweden's new role in NATO, explaining that reliable access to equipment and industrial capacity is now seen as essential for readiness and resilience, particularly in crisis situations. Interviewees also noted that NATO membership requires changes in everyday planning and coordination, influencing how organisations structure their work and interact with one another. At the same time, many stressed that this shift is not

entirely new. One respondent recalled that NATO standards were already being used internally, even if they were not explicitly referenced in order to maintain neutrality:

> *"There were fewer and fewer Swedish-only systems and more and more NATO-oriented systems already then." (R10)*

Another interviewee provided a detailed account of long-standing practical alignment:

> *"Even though Sweden was not a NATO member before, our planning and operational methodology were already aligned with NATO standards. We had long adopted NATO doctrines, processes, and terminology, translating them into Swedish and practising them during joint exercises. For example, in multinational exercises, we used NATO planning formats and procedures interchangeably with our own." (R6)*

Others pointed out that Sweden had already been following alliance processes:

> "*..for many years,*" with membership making the country "*part of the system, not just a partner on the side" (R11)*.

One participant linked this continuity to a longer trajectory of change by noting that after years of contraction:

> *"It's about rebuilding capacity and finding our place in a new alliance structure" (R11)*.

The interviews together show that Sweden now frames its defence responsibilities in relation to its role in the alliance rather than purely national considerations. This understanding shapes how actors organise their roles, collaborate and coordinate within the defence ecosystem.

4.1.2 Evolving Roles and Responsibilities in a NATO Framework

Interviewees described how NATO membership requires actors to reinterpret their organisational roles. For public authorities, this has meant moving from self-contained national planning toward working within a broader allied structure. As one agency representative put it:

> *"NATO sets requirements for Sweden, the Armed Forces, and FMV, and those in turn affect what we have to deliver" (R4).*

Respondents also stressed that Sweden's administrative model makes coordination essential. One policy expert explained that the distribution of authority across multiple agencies requires collective problem-solving rather than centralised direction. This dynamic was illustrated clearly by a government representative involved in NATO integration:

> *"Once we became members, we started receiving a great deal of information from NATO, and I had to manage it. It became an entirely new channel to manage." (R15)*

For industry, NATO membership has reshaped both strategic identity and market orientation. A senior executive described this shift, noting:

> "*Swedish companies are no longer just national suppliers. They become allied suppliers*" (R7).

Several interviewees also pointed to the commercial implications of this transition. One industry representative reflected on how the decision to join NATO immediately changed perceptions within the sector:

> *"When Sweden decided to join NATO, the reaction in the industry was immediate. Most Swedish companies saw it as a huge opportunity to export more. But I also realized that it meant the reverse: Sweden would become a new import market for suppliers from NATO countries." (R3)*

Industry managers also stressed that NATO rarely purchases equipment directly. Instead, it shapes capability requirements that flow through national procurement channels. As one manager summarised it:

> "*NATO itself doesn't buy much directly. It defines capability requirements for member states, and those requirements cascade down to the Armed Forces and, ultimately, to industry" (R8)*.

Taken together, these accounts show how NATO membership is reshaping expectations across government agencies, firms and individual professionals. Actors are adjusting how they interpret responsibility, authority and legitimacy within a defence ecosystem that is now formally embedded in an allied framework.

4.1.3 Transformation of State–Industry Relationships

Interviewees described how collaboration between public authorities and industry has taken on greater importance following Sweden's NATO accession. Respondents emphasised that while cooperation has always been central to the Swedish defence model, the demands created by the new security environment have intensified interaction across institutional boundaries. Several participants pointed to the administrative pressures this creates:

> *"You simply drown in the bureaucracy." (R3)*

The same respondent also noted that the shift in the security environment has influenced how authorities behave and communicate:

> *"The main difference since Sweden's NATO accession isn't about NATO itself dictating things, but about the security environment and the cultural shift it triggered. Swedish authorities have become much more transparent." (R3)*

Rising expectations for resilience have further changed established practices. As the interviewee explained:

> *"The 'just-in-time' model is gone. Authorities are even willing to pay more for inventory and redundancy to reduce risk." (R3)*

Despite these tensions, respondents stressed that cooperation remains foundational. State and industry actors depend on one another for capability development, procurement and implementation. One participant described the interdependencies clearly:

> *"Collaboration is essential because no single authority in Sweden can make binding decisions across the defence ecosystem. The Armed Forces issue capability needs, FMV procures, companies respond. It is slow but it promotes dialogue" (R7).*

Several interviewees emphasised cultural factors that support this cooperation. One respondent noted:

> *"Sweden's small size and flat organisational culture make this cooperation smooth and informal compared to other countries, where hierarchy slows everything down. (…) the collaboration culture in Sweden is strong. The country does not have the same rigid hierarchies seen in many others. Engineers, project managers, and officers can discuss issues directly without waiting for approval from multiple levels of management. That's one of Sweden's greatest strengths." (R8)*

Respondents also described a broader cultural shift toward more open and problem-driven interaction. Companies reported that authorities increasingly share needs early and invite input on emerging challenges. This openness is supported by new interaction arenas. As one firm representative explained:

> *"We are spending more time in testbeds and exercises than in traditional meetings. They arrange working groups and study trips where we can understand needs, constraints and how to contribute" (R4)*.

Industry associations play a central coordinating role in this landscape. Respondents pointed to SOFF and SME-D as key intermediaries that bring together companies, government and international actors. As one participant put it:

> "*It is the key platform. It brings companies, government and international actors together under formal rules" (R7)*. Another added that "*for us, it is the main contact point for structural and policy issues where we lack insight. They host seminars and forums that help us understand how things work" (R1)*.

However, respondents also stressed that collaboration remains uneven. SMEs described significant barriers to engagement, visibility and influence. One entrepreneur remarked:

"Bridging small innovators to big integrators is still missing. Small firms drown in the compliance and admin load of large primes." (R4)

Another participant pointed to communication barriers:

"*There's a certain 'fear of contact' from authorities, they worry that if they talk too much with a company, that company might be disqualified later during a procurement process. That makes open dialogue difficult. Sometimes communication becomes one-way, companies reach out, but agencies stay silent." (R5)*

Others described difficulties entering the defence market more generally:

"Difficult to enter the defence sector. Smaller companies are struggling. Is there any dialogue with FMV? Not enough. Sometimes the military is too hierarchical." (R9)

Some respondents criticised broader structural tendencies within the system:

"We have a system that supports old family-owned defence companies rather than small ones. It glorifies resellers. It creates rigidity." (R13)

These accounts show that while NATO integration increases the need for collaboration and has stimulated more open and frequent interaction, it has also highlighted long-standing asymmetries. State–industry relations are becoming more integrated, but the ecosystem remains stratified, and smaller firms continue to face obstacles in accessing decision-making processes and procurement pathways.

4.1.4 Integration with Allied and Nordic Partners

Interviewees described how NATO membership has intensified Sweden's international cooperation and given existing regional relationships clearer institutional structure. Several respondents highlighted the demands of operating within multinational frameworks. One industry representative explained that:

"...large projects often require political alignment between countries, as well as interoperability and security vetting. That's why the sales cycles are so long". (R3)

Another noted that:

"*...our customers now have a much sharper focus on strengthening Swedish (and, secondarily, European) capability". (R4)*

Respondents also discussed changes in joint training and operational coordination. As one interviewee put it:

"*...while multinational exercises existed before, they were often symbolic. Now, they are*

operationally integrated and carry strategic signalling value-to demonstrate readiness and deterrence towards Russia". (R6)

Others described cultural factors that support deeper cooperation:

"Sweden has long cooperated with NATO and, culturally, we're more open to adopting shared standards. Much like how Swedes are comfortable speaking English, there's a willingness to adapt." (R14)

Nordic cooperation was a recurring theme in the interviews. Several participants described longstanding regional ties that now gain formal expression within NATO frameworks. One interviewee noted:

"The Nordic trust base helps. Cooperation with Finland and Norway feels natural. It is not only political, it is cultural." (R9)

Industry respondents also highlighted how membership has improved cross-border relations. A company representative observed:

"The Nordics never understood Swedish neutrality. Now they are very happy that Sweden and Finland are in NATO. Cooperation is much stronger and doing business is easier because it is no longer seen as a security risk." (R18a)

Operational integration requires technological and logistical alignment. A senior official emphasised the practical dimensions of this:

"We must be able to move heavy equipment from Norway across Sweden to Finland. This is part of how NATO defines baseline resilience." (R5)

Respondents stressed that firms must now maintain more continuous engagement with international partners, not only through formal agreements but also in day-to-day collaboration, exercises and information sharing. Several interviewees pointed out that NATO membership primarily formalises processes that had been under way for many years. As one respondent put it:

"We have trained with NATO for many years. Membership only makes the integration visible and explicit." (R11)

Sweden is embedded in a multi-level institutional environment involving Nordic, EU and NATO structures. NATO membership strengthens existing regional ties and adds new obligations for coordination, interoperability and collective resilience, reshaping how actors manage relationships and responsibilities across borders.

4.2 Dynamic Capabilities for Effective NATO Engagement

The interviews show that Sweden's defence ecosystem requires a set of dynamic capabilities to operate effectively within NATO while balancing national obligations and commercial interests. These capabilities are distributed across agencies, firms, and associations, and they determine how actors sense changes in the environment, seize emerging opportunities, and reconfigure organisational structures and processes. Respondents repeatedly emphasised that NATO integration has increased the demand for these capabilities, exposed constraints in existing practices, and created new expectations for responsiveness and adaptability.

4.2.1 Sensing Capabilities

Sensing capabilities describe the ability to interpret geopolitical developments, anticipate technological shifts, recognise emerging needs within NATO, and identify vulnerabilities in supply chains and institutional arrangements. Across the interviews, participants consistently described sensing as essential for keeping pace with the rapidly changing defence environment.

Geopolitical threat perception forms a central part of sensing. Respondents pointed to the war in Ukraine and prior patterns of Russian aggression as clear signals informing NATO readiness. As one association representative described:

> *"If you look at Russia's behaviour from Chechnya, Georgia, Crimea and now Ukraine, you see interventions every few years. So the question is what happens next. There is a real risk of a limited attack on a NATO country." (R16)*

This sense of urgency shapes how actors scan for capability needs. A senior industry representative emphasised the operational implications:

> *"Ukraine has shown how decisive technological development is. Drones and other advanced systems shape the balance of power." (R16)*

A supplier working closely with the Armed Forces noted:

> *"Right now the biggest issue is defence against many drones at once of different sizes. It is unsolved everywhere." (R17)*

Beyond the battlefield, sensing includes supply chain awareness. Firms recognised the fragility of globalised production:

> *"Many rely on the same global suppliers like semiconductor manufacturers. A bottleneck affects everyone." (R17)*

Another explained that:

"Shortages of key raw materials can affect us, especially as hybridisation becomes more important." (R18)

Respondents also highlighted concerns about dependency on non-European suppliers. One agency official explained:

"Chinese sourcing is a problem because there can be software that can disrupt or disable functions." (R19)

Companies must also monitor changes in expectations from domestic customers. A senior manager observed:

"There is a strong interest from our customers to build up a Swedish and European capability, but it is always a balance between cost, availability and the standards we have to follow." (R4)

Taken together, the interview data shows that sensing capabilities now involve constant scanning across geopolitical, technological, supply-chain and institutional dimensions. These sensing activities provide the foundation for subsequent action within NATO.

4.2.2 Seizing Capabilities

Seizing capabilities describe how organisations mobilise resources, scale production, engage in rapid innovation, form partnerships, and act upon opportunities arising from NATO integration. The empirical material demonstrates variation in the strength of these capabilities, with larger firms generally better positioned to seize emerging opportunities.

A recurring theme was the ability to scale production quickly. A senior executive at a manufacturing firm highlighted their capacity:

"We produce 100 to 150 vehicles per day in Sweden alone. We can shift civil production toward defence because it is the same factories." (R18)

Another emphasised the benefits of distributed production assets:

"We have our global spare parts warehouse in Belgium, and factories in Belgium, Brazil and the United States. That makes us more resilient in our value chain." (R18)

However, several respondents described workforce availability as a persistent barrier. A participant with long industry experience added:

"People left the industry and it took time to recover. We needed to strengthen Sweden again, but the real awakening only came during the past three years when the threat became tangible." (R11)

Beyond scaling, seizing capabilities rely on effective partnerships. NATO procurement dynamics were described as increasingly reliant on industrial participation from partner countries. One respondent explained:

> *"Most countries require that 50 percent of the value of defence investments must go back into the country." (R18)*

This compels firms to build multinational partnerships to access new markets. Associations provide critical platforms to support this. As one representative described:

> *"SOFF brings companies, government and international actors together under formal rules." (R7)*

Nordic cooperation was also seen as a strength:

> *"The Nordic trust base helps. Cooperation with Finland and Norway feels natural." (R9)*

Another participant reflected that NATO membership made these partnerships more consistent:

> *"Before, we cooperated mostly through specific projects. Now, with NATO, the networks are constant. We share information, test together and think together." (R12)*

Seizing capabilities also include innovation under compressed timelines. Multiple cases highlighted accelerated innovation. A senior strategist described:

> *"We developed a counter-drone system together with the Armed Forces in just 82 days, from concept to field testing." (R14)*

This acceleration is closely tied to how firms and authorities now work together. Companies emphasised that innovation now depends on closeness with authorities. One leader explained:

> *"Authorities describe problems and invite industry to propose solutions. Joint exercises allow companies to test solutions alongside the Armed Forces." (R3)*

However, not all actors benefit equally. SMEs in particular reported challenges in seizing opportunities:

> *"Small firms drown in the compliance and admin load. We need structured ways for small, fast companies to plug in without getting stuck." (R4)*

The findings show that seizing capabilities depend on resource availability, organisational flexibility, institutional access, and the ability to form partnerships across borders. These factors determine whether actors can convert sensing into effective action within the NATO environment.

4.2.3 Reconfiguring Capabilities

Reconfiguring capabilities involves transforming organisational structures, supply chains, routines and strategic priorities to meet both domestic and NATO expectations. Respondents described extensive reconfiguration underway across the ecosystem.

Agencies highlighted the need to redesign information flows and internal processes to accommodate NATO's requirements, noting that membership has introduced new and more complex channels of communication and coordination. Institutional arrangements were not fully prepared for these additional demands.

Reconfiguration is equally evident inside firms. A major manufacturer described retooling its production to integrate defence-specific adaptations:

> *"After a vehicle comes off the main line, we take it into a special adaptation dock for military customisation." (R18)*

This is part of a broader strategic effort to reshape both workforce and production systems:

> *"We are retraining civil engineers into defence engineers to meet new demand." (R18)*

A major theme was the shift toward regionalised supply chains. Actors described a deliberate move away from vulnerable global structures. One firm explained:

> *"We stopped sourcing globally after COVID. Now we want production close by: Sweden, the Nordics, Northern Europe." (R17)*

Another described the rationale for distributed production:

> *"Having factories in several countries makes us more resilient in our value chain." (R18)*

Reconfiguration also affects long-term strategic priorities. One defence strategist highlighted the need to rebalance capability development:

> *"To be relevant in Finland or the Baltics, we need more ground forces. This changes the balance between air, naval and ground." (R14)*

Agencies expressed similar concerns, emphasising areas that must remain domestically controlled:

> *"We must maintain Swedish capability in fighter aircraft, underwater systems and cryptography." (R19)*

Reconfiguration also extends to logistics and supply philosophies:

> *"The old "just-in-time" logistics philosophy has been replaced by "just-in-case." (R3)*

These findings demonstrate that reconfiguring capabilities entail multi-layered adjustments spanning administrative routines, organisational structures, production systems, workforce planning, supply chains, and long-term strategic visions.

4.2.4 Limits and Constraints

While dynamic capabilities are emerging across the ecosystem, respondents identified significant constraints that restrict the ability to sense, seize and reconfigure effectively.

Institutional rigidity was described as a major obstacle. One agency official expressed frustration:

> *"There are so many obstacles that it feels like nothing is moving forward. It takes forever to make decisions." (R15)*

Municipal autonomy slows investment processes:

> *"Our permit processes are time consuming. Combined with strong municipal autonomy, things become slower." (R19)*

SMEs also face structural barriers that limit their dynamic capabilities:

> *"As a small entrepreneur I did not gain any advantage from NATO membership." (R13)*

Talent shortages further constrain reconfiguration and scaling:

> *"The defence industry absorbs almost all engineers today." (R17)*

Technological dependencies present continued risks:

> *"Chinese sourcing is a problem because there can be software that can disable functions." (R19)*

These constraints illustrate that dynamic capabilities operate within structural and institutional boundaries that both enable and limit the ambitions of Sweden's defence ecosystem.

4.3 Navigating Institutional Complexity

A central theme across the interviews was the complexity of navigating overlapping institutional frameworks from NATO, the European Union, and Swedish national governance structures. Respondents described how these layers shape the ability of governmental agencies to support firms in meeting defence requirements, while also creating frictions that constrain adaptation. Agencies thus operate in an environment that is both enabling and restrictive: they provide coordination, legitimacy and information, yet are bound by

procedural rules, distributed authority and administrative traditions. These conditions define how Sweden's defence ecosystem manages integration into NATO.

Participants consistently stressed that NATO rarely creates direct demand for companies; rather, domestic agencies translate alliance requirements. One industry representative explained:

> *"NATO doesn't affect us directly. The alliance sets requirements for Sweden, the Armed Forces, and FMV, and those in turn affect what we have to deliver." (R4)*

This filtering function places agencies at the centre of procurement, capability planning and industrial policy. Several respondents noted that alliance membership dramatically increased the volume and complexity of information that agencies must process. A government official working with secure communications described the sudden expansion of obligations:

> *"Once we became members, we started receiving a great deal of information from NATO, and I had to divide it up. It became an entirely new channel to manage." (R15)*

Redesigning internal routines and coordination structures became necessary. Yet many interviewees emphasised that Sweden's widely distributed decision-making authority makes centralisation difficult. As a policy expert put it:

> *"There is no single actor in Sweden who can make binding decisions. Everyone must work together to reach a common solution." (R7)*

This governance model encourages collaboration but can also slow coordination. A state official illustrated this challenge in the context of secure communications:

> *"There is a kind of paralysis between authorities when it comes to the secure flow of information, especially regarding unclear activities and divisions of responsibility." (R15)*

Beyond information flows, respondents stressed that governmental agencies play a critical role in shaping markets and supply chains under NATO integration. Interviews highlighted Sweden's strategic approach to security of supply, including decisions about which capabilities must remain national and which can rely on allied structures. Such prioritisation guides firms' long-term investments and capability development.

Government agencies also influence the development of resilient supply chains, especially as firms reduce dependence on global suppliers. Respondents noted more active state involvement in managing industrial capacity. This role is particularly important given shortages of materials, global competition for components and new NATO baseline requirements for logistics and infrastructure. As one logistics expert explained:

"NATO places specific requirements on Sweden, making sure that logistics and transport capacity exist to move heavy vehicles like tanks from Norway, across Sweden, to key ports, towards Finland." (R5)

Agencies likewise support innovation and facilitate firm participation in defence procurement. Companies described the importance of early dialogue, shared problem understanding and structured arenas for experimentation, needs that have intensified with NATO's emphasis on interoperability and accelerated procurement cycles. One company leader noted:

"Authorities are becoming more open. They describe problems and invite industry to propose solutions." (R3)

New initiatives reflect this shift. As one official explained

"We run Tech Days a couple of times per year. We present a problem and companies pitch ideas. The most interesting ones get an order already during those days." (R19)

Another measure involves lowering barriers for smaller firms:

"The agency will launch a contact point where companies can get in touch to receive guidance, find out who to talk to, how the system works and so on." (R19)

Despite these efforts, SMEs remain structurally disadvantaged. As one entrepreneur summarised:

"Small firms drown in the compliance and admin load of large primes. We need structured ways for small, fast companies to plug into programs without getting stuck." (R4)

Institutional complexity is further heightened by EU regulatory obligations. Several respondents contrasted NATO's flexibility with the EU's legislative ambition. An agency representative explained:

"NATO is a consensus club and is not especially bureaucratic in that sense. But it is the EU that has the power and the ambition to legislate. In the EU there is a lot of money, and there is an ambition and a will to change the defence market in Europe." (R19)

Another respondent described the resulting tensions:

"In the EU it is not very flexible, but the new reality demands more flexible and rapid solutions. The bureaucracy within the EU and Sweden clashed with that need, which caused a lot of frustration." (R15)

Agencies also face structural constraints in infrastructure and permit processes, which slow industrial investments. A senior official noted:

"Regardless of how the law is written and which country has the strictest rules, our permit processes are time consuming. Combined with a rather far-reaching municipal self-government and the fact that we do not really have a tradition where the state steps in and overrules local decisions, that makes things slower." (R19)

Associations echoed this frustration, describing specific delays in critical industrial investments. For example, one representative recalled a case related to explosives production:

"The permit process was long and complicated, even though the product was considered critical at the European level." (R16)

Some respondents raised concerns about governance risks. One entrepreneurial supplier described structural inefficiencies and accountability gaps:

"The closer you get to the state - construction, electricity, infrastructure, defence - the more corruption there is. The user, buyer and payer are further apart, with a sponsor in between. The principal–agent problem becomes huge." (R13)

Despite such constraints, many interviewees viewed Sweden's collaborative governance culture as an advantage. As one official emphasised:

"Sweden's small size and flat organisational culture make cooperation smooth and informal compared to other countries where hierarchy slows everything down." (R8)

Overall, the findings show that governmental agencies play an essential role in shaping industry's ability to meet national and NATO requirements. They translate allied expectations, coordinate complex information flows, shape national supply chains and facilitate innovation. Yet their efforts are constrained by regulatory obligations, slow permit processes, distributed authority and administrative traditions. Navigating these tensions has become central to Sweden's ability to adapt to NATO membership.

4.4 Balancing National, Allied, and Commercial Interests

A central challenge highlighted across the interviews is the need to balance three competing logics: national defence priorities, NATO and allied requirements, and commercial interests within the defence industry. Respondents described this balancing act as continuous and often difficult, involving trade-offs across strategic, operational, institutional and market dimensions. These tensions manifest in capability development, procurement decisions, supply chains, industrial strategy and everyday practices within both public agencies and private firms. Together, the findings illustrate how Sweden's defence ecosystem seeks to reconcile these demands in order to support Sweden's mission in NATO.

One of the clearest tensions concerns balancing interoperability with the preservation of national strategic autonomy. Several respondents noted that NATO cooperation requires

alignment with alliance-wide standards, while Sweden must also retain independent capacity in strategically sensitive technologies. As a senior agency representative explained:

> *"We must maintain Swedish capability in fighter aircraft, underwater systems and cryptography, but for many other areas we now rely on allied structures. The question is where we must be independent and where we can integrate." (R19)*

This reflects a strategic judgement that some technologies serve as pillars of national sovereignty, while others can be integrated more closely with allied systems. Yet even in areas where integration is desirable, firms described pressures that complicate standardisation. As one senior executive put it:

> *"Every country wants its special product, which complicates standardisation." (R18)*

Thus, Sweden must balance alliance-wide harmonisation against the commercial and political realities of nationally defined defence markets.

A second major tension is between security of supply and market efficiency. Swedish authorities and firms described a growing emphasis on resilience, with NATO baseline requirements and geopolitical shocks increasing pressure to localise or regionalise production. As one company representative explained:

> *"We buy everything we can from within the Baltic region. The idea is to keep production as close to home as possible." (R12)*

However, domestic suppliers cannot always meet volume or cost requirements. A manufacturer described this trade-off:

> *"Swedish suppliers can have capacity problems." (R18)*

Agencies face similar dilemmas. One official noted a shift in procurement priorities toward shaping markets to secure wartime supply:

> *"We should not just passively receive whatever the market can offer, but to some extent also shape the market. It is about creating the conditions for a market that can supply the military defence in crisis and war." (R19)*

This tension underscores how resilience-oriented strategies can conflict with traditional market logics emphasising efficiency and competition.

A third tension concerns balancing speed with accountability. Respondents described growing demands for rapid prototyping, accelerated procurement cycles and quicker decision-making, driven by the deteriorating security environment. Yet Swedish administrative procedures and EU legislation impose constraints that slow adaptation. An SME founder captured the frustration:

"The Swedish method is one year for procurement and fifteen years for production." (R13)

While NATO processes were generally viewed as flexible, domestic and EU frameworks were seen as limiting responsiveness. As one official explained:

"In the EU it is not very flexible, but the new reality demanded more flexible and rapid solutions. The bureaucracy within the EU and Sweden clashed with that need." (R15)

Actors must therefore balance the operational urgency of NATO requirements with the legal obligations inherent in democratic governance.

A further balancing act relates to the inclusion of SMEs versus maintaining system stability. Although innovation often originates in smaller firms, SMEs face significant structural barriers. One entrepreneur explained:

"Small firms drown in the compliance and admin load of large primes." (R4)

Large firms acknowledged these issues and saw themselves playing a bridging role:

"We try to help smaller defence tech companies and smaller defence suppliers improve and scale up. Getting into the defence market as a small tech company is not easy." (R18)

Government agencies are also taking steps to widen participation. As one official described:

"The agency will launch a contact point where companies can get in touch to receive guidance." (R19)

Despite these initiatives, respondents noted that prioritising system reliability and security often results in large primes maintaining dominance, leaving SMEs struggling to scale or enter major programmes.

At the strategic level, balancing national and NATO requirements involves reconciling different understandings of Sweden's defence mission. Several respondents highlighted that Sweden's planning has shifted from a primarily territorial focus to a role embedded in NATO's collective defence. One official summarised this shift:

"Before, much of the planning focused on ensuring Sweden could receive support. Now the focus is on defending Sweden abroad." (R6)

Logistical expectations are now externally defined as well. As one respondent noted:

"NATO places specific requirements on Sweden, making sure that logistics and transport capacity exist to move heavy vehicles across the country." (R5)

This requires industry to design products suitable not only for Swedish use but also for NATO operational environments. A manager explained:

> *"What we deliver must work in an allied context, in joint operations, under NATO concepts and standards." (R14)*

Finally, several interviewees emphasised that balancing national, allied and commercial logics is not a technical exercise but an ongoing negotiation among politics, industry, government agencies and international partners. As one association representative remarked:

> *"NATO is a club in the sense that we stand up for each other. By being allies we have a joint interest in the other countries succeeding. There is mutual trust in cooperation." (R19)*

At the same time, firms must still compete for contracts, operate efficiently and maintain profitability.

In sum, the interview data shows that the Swedish defence ecosystem supports Sweden's mission in NATO by continuously balancing national autonomy, alliance obligations and commercial imperatives. This balancing spans strategic posture, procurement processes, supply chains, innovation efforts and market structures. It requires strong dynamic capabilities, coordinated action across agencies and industry, and a willingness to navigate structural tensions that have no simple resolution. The interviews demonstrate that NATO integration is not solely a matter of alignment but an ongoing management of competing demands in everyday practice.

5. Discussion

Sweden's accession to NATO has intensified a transformation already underway in the national defence ecosystem. The empirical findings show that integration is not limited to technical adjustments in standards or procurement procedures. It involves a shift in how public and private actors interpret institutional expectations, negotiate their roles and coordinate responses within a multi-level governance setting shaped by NATO, the European Union and Sweden's administrative traditions. This chapter interprets these findings through the lenses of dynamic capabilities, ecosystem strategy and institutional theory and introduces the conceptual contribution, Ecosystem-Integrated Dynamic Capabilities (EIDC).

5.1 Dynamic capabilities situated at the ecosystem level

Dynamic capabilities theory conceptualises adaptation as an organisation's ability to sense change, seize opportunities and reconfigure resources. The findings show that, in Sweden's defence context, these processes take place across the interconnected ecosystem rather than within individual organisations. This is central for the second research question, on which dynamic capabilities are required and how they are supported or constrained.

Sensing is distributed. Agencies interpret geopolitical developments and NATO requirements, firms monitor technological developments, emerging capability gaps and vulnerabilities in supply chains, and associations consolidate information from members and public authorities. This distributed sensing creates a broader situational picture than any actor could generate alone, but it also introduces asymmetries. Larger firms and central agencies have privileged access to information and international forums, whereas SMEs depend on intermediaries, particularly associations, to understand evolving expectations. In this way, ecosystem-level sensing improves collective awareness while reproducing existing power imbalances.

Seizing capabilities also emerge through coordinated structures rather than isolated firm decisions. Examples such as the rapid development of counter-drone solutions illustrate that accelerated innovation depends on authorities framing open problems, providing access to exercises and accepting iterative testing with the Armed Forces. Yet public procurement rules, offset requirements and national-industrial interests limit how authorities can collaborate and select partners. Larger firms are better placed to manage complex tenders and compliance burdens, while SMEs risk exclusion or confinement to subordinate roles. Seizing capabilities are therefore unevenly distributed and shaped by formal rules as much as by entrepreneurial initiative.

Reconfiguring involves multi-layered changes across agencies and firms. Authorities redesign internal routines to manage NATO information flows and new logistics and resilience requirements, while firms reorient supply chains toward Nordic and European sourcing, adapt production for military variants and retrain engineers previously focused on civilian sectors. These changes are mutually dependent, yet constrained by workforce shortages, reliance on global components and slow permitting processes for new industrial

investments. The patterns in Chapter 4 show that dynamic capabilities in this context are ecosystem-embedded and structurally conditioned rather than purely internal routines.

5.2 NATO as a multi-dimensional institution within the ecosystem

The first sub-question concerns how Swedish defence actors interpret NATO and how these interpretations reshape roles, relationships and institutional arrangements. The findings show that NATO is understood in multiple, partly overlapping ways: security agencies emphasize collective defence alliance and deterrence;administrative authorities highlights standards, planning procedures and capability targets; firms view NATO as an enlarged market and industrial cooperation platform; and logistical and training actors stress its role in defining host-nation support, mobility and baseline resilience.

Institutional theory helps explain this plurality. Organisations interpret NATO through institutional logics that fit their mandates. Security agencies privilege defence and deterrence, administrative bodies emphasise legality and standardisation, and firms commercial opportunity and risk. These interpretations are not merely parallel but sometimes conflicting. For instance, NATO's emphasis on rapid readiness and interoperability collides with EU competition rules, Swedish environmental regulation and municipal autonomy that slow infrastructure and industrial projects. NATO functions simultaneously as a source of strategic alignment and as a layer within a dense institutional environment.

From an ecosystem perspective, this plurality is not only a problem but also a resource. Differentiated interpretations allow actors to fulfil distinct but interdependent roles. Government bodies coordinate politically and strategically, firms drive industrial growth and innovation, and associations meditate across these spheres. However, the findings also suggest that actors sometimes underestimate the institutional consequences of moving from partnership to membership. Because many NATO practices were already informally adopted before accession, some respondents portray membership as a smooth extension. The data in Chapter 4 point instead to growing tensions around logistics, supply chains, information flows and legal authority that will require more explicit role renegotiation.

5.3 Institutional complexity as a structure for adaptive governance

The third sub-question asks how governmental agencies can strengthen the ecosystem's ability to meet both national and NATO requirements and which governance mechanisms are most effective. Institutional complexity is central. Sweden's defence ecosystem operates within a layered governance structure involving NATO, the EU and national law, including municipal self-government.

On the constraining side, respondents describe slow environmental permitting, lengthy procurement processes and fragmented authority as major obstacles. Municipal autonomy limits the state's ability to prioritise strategically important infrastructure, even when NATO needs are clear. EU regulations on competition, exports and sustainability further restrict

how quickly agencies can respond to alliance demands or support industrial expansions. These constraints illustrate the coercive and procedural pressures highlighted in institutional theory.

On the enabling side, Sweden's administrative culture is characterised by relatively high trust, informal communication and a tradition of consensus seeking. Agencies and firms use established forums, testbeds and joint exercises to clarify roles, discuss capability needs and explore new technical solutions. Initiatives such as innovation days, contact points for SMEs and joint study trips attempt to lower access barriers and improve mutual understanding. Yet as Chapter 4 shows, these mechanisms often favour established actors over new entrants and that informal practices cannot fully compensate for structural delays or unclear mandates.

Institutional complexity therefore shapes dynamic capabilities in ambivalent ways. It broadens sensing, as actors interpret NATO, EU and domestic signals simultaneously. It complicates seizing, which requires alignment across several institutional levels. It conditions reconfiguring, as structural changes in organisations and supply chains must remain legally and administratively compliant . Agencies can strengthen the ecosystem's adaptive capacity by clarifying responsibilities, streamlining procedures and creating predictable interaction arenas, though within boundaries that cannot be removed.

5.4 Resilience as a shared strategic and institutional objective

Resilience emerges across the findings as a shared yet contested organising principle. Public authorities describe resilience in terms of preparedness, continuity of supply, strategic autonomy in critical capabilities and the ability to support allied forces on Swedish territory. Firms emphasise flexible production, regionalised sourcing, dual-use technologies and rapid recovery. These perspectives reflect complementary roles but also different risk horizons and incentives.

In practice, resilience is already reshaping policy and business behaviour. Chapter 4 shows that firms are moving away from global just-in-time logistics toward regional just-in-case strategies, while authorities increasingly pay for redundancy and inventory.Yet, resilience objectives conflict with cost-efficiency norms, environmental restrictions and EU competition rules. Localising production improves security of supply but may increase costs and reduce short-term efficiency.

Viewed through dynamic capabilities, resilience directs sensing toward vulnerabilities, seizing toward exposure-reducing investments and reconfiguring toward more robust structures. However, resilience is not a neutral goal. It is shaped by institutional expectations and political judgements about which technologies must remain national, acceptable supply chain risks and how to balance speed with legal and democratic accountability. The findings show that resilience functions as a shared horizon for adaptation, but its operationalisation is negotiated and uneven.

5.5 Adaptation as an ecosystem-wide process shaped by interdependence

Chapter 4 shows that adaptation in the Swedish defence ecosystem arises from interdependent adjustments rather than isolated organisational reforms. Agencies translate NATO expectations, manage information flows and shape markets through procurement and industrial policy. Firms reorganise supply chains, scale production, develop new technologies and restructure workforces. Industry associations and other intermediaries mediate these processes and provide platforms for information exchange.

This interdependence brings both strength and vulnerability. On the one hand, Sweden's tradition of collaboration, relatively flat hierarchies and long-standing personal networks facilitates joint problem definition and coordinated responses, especially under crisis. Yet reliance on informal contacts reinforces insider networks, limits transparency and hinders SMEs and new actors visibility. Several respondents describe a system where large primes remain the default partners and smaller firms face compliance burdens, opaque processes and limited access to early dialogue.

The main research question concerns how the ecosystem supports Sweden's NATO mission while balancing national, allied and commercial interests. Agencies attempt shaping markets to secure wartime supply, while still respecting competition rules. Firms seek to benefit from NATO-related opportunities without creating new dependencies on few suppliers or countries which undermines resilience. The ecosystem adapts through repeated negotiations over these trade-offs, amid uncertainty about future threats and political trajectories.

5.6 Theoretical contribution: Ecosystem-Integrated Dynamic Capabilities (EIDC)

The Swedish case indicates that traditional, firm-centric dynamic capabilities theory is insufficient for understanding adaptation in a highly regulated defence ecosystem where organisations lack full autonomy. Their ability to sense, seize and reconfigure is shaped by shared information flows, overlapping institutional logics and governance structures beyond their control. The concept of Ecosystem-Integrated Dynamic Capabilities (EIDC) is proposed as a response to this gap.

EIDC refers to the ability of organisations to adapt through processes that are structured by interdependent roles, shared institutional environments and ecosystem-level governance arrangements. It captures three central insights from the empirical material. First, sensing is distributed across actors with different mandates and knowledge bases, and its quality depends on how effectively actors share and interpret information. Second, seizing requires coordinated resource mobilisation that meets alliance expectations, domestic law and commercial constraints. Third, reconfiguring requires aligned changes across agencies, firms and intermediaries, for example in supply chains, logistics and workforce skills.

By integrating dynamic capabilities theory with ecosystem strategy and institutional theory, EIDC provides a framework for analysing adaptation in sectors shaped by security interdependence, regulation and political authority. It clarifies how Swedish defence actors can support NATO integration through both internal strategic choices and participation in, and sometimes contestation of, the institutional and relational structures that make adaptation possible.

5.7 Adjusting the Swedish defence ecosystem

A central implication of the findings is that Sweden's defence ecosystem is adjusting to NATO integration in ways that deepen existing patterns rather than create a new system. The ecosystem becomes more outward-looking and interdependent as allied planning cycles, interoperability requirements and resilience expectations increasingly shape national priorities. Yet these developments build on long-standing features of Swedish governance: strong professional agencies, consensus-oriented coordination and a collaborative political-administrative culture.

The study also highlights persistent limitations that complicate this adjustment. Slow permitting and procurement processes, talent shortages and structural barriers for SMEs restrict the pace at which actors can respond. Tensions between NATO requirements, EU regulations and domestic administrative traditions create additional friction, in logistics, security of supply and industrial scaling.

Future effectiveness of the ecosystem depends on how public authorities, firms and associations develop EIDC in practice. This involves strengthening distributed sensing without reinforcing information asymmetries, enabling faster yet accountable seizing through more adaptive governance mechanisms and supporting reconfiguring that aligns with Swedish institutional norms while meeting alliance expectations. In this sense, the adjustments underway represent an incremental but significant evolution toward a more internationally connected and strategically aligned defence ecosystem. Its long-term performance will hinge on its ability to manage, rather than resolve, the tensions that arise at the intersection of national, allied and commercial interests.

6. Conclusion

This thesis set out to examine how Sweden's defence ecosystem can support the country's mission in NATO while balancing national priorities, alliance expectations and commercial interests. The findings show that membership represents continuity more than rupture. Many NATO standards, procedures and operational practices had already been integrated before accession, and membership formalises rather than transforms these trajectories. At the same time, Sweden's entry into the alliance exposes the defence ecosystem to institutional demands that both reinforce and challenge established governance traditions.

A central contribution of the study is its demonstration that Swedish actors interpret NATO in distinct but complementary ways, directly answering the first research question. Security agencies regard NATO primarily as a framework for collective defence, administrative authorities view it as a system of standards and planning protocols, and firms understand it as a platform for industrial cooperation and market expansion. Logistics and infrastructure actors emphasise NATO's influence on mobility and host-nation support. Public authorities increasingly act as intermediaries that translate alliance requirements into national procedures, determine which capabilities must remain domestic and coordinate planning across agencies. Firms adjust by integrating NATO standards, forming cross-border partnerships and preparing for multinational capability structures, while associations provide forums for expectation setting. This interpretive diversity strengthens the ecosystem's adaptive capacity by broadening awareness and aligning different actors' responses with institutional mandates.

The second research question asked which dynamic capabilities are needed for Sweden to engage effectively in NATO-related cooperation and how these capabilities are supported or constrained. The findings show that the capabilities required for adaptation are fundamentally ecosystem-embedded. Sensing is distributed across agencies, firms and associations, each of which contributes different forms of knowledge that together create a comprehensive understanding of geopolitical and technological developments. Seizing depends on coordinated structures such as joint exercises, innovation arenas and problem-oriented collaboration with the Armed Forces. Reconfiguring requires parallel adjustments across organisations, for example through supply-chain redesign, workforce retraining or the adoption of new planning routines. These capabilities, however, are unevenly distributed and are shaped by structural constraints. SMEs face disproportionate compliance burdens and limited access to early dialogue. Public procurement rules and EU regulations slow innovation and limit flexibility, while municipal autonomy delays infrastructure projects even when they are strategically important. Workforce shortages further restrict firms' capacity to reconfigure at the pace that NATO integration demands. These findings underline the need for a perspective that moves beyond firm-level explanations and recognises dynamic capabilities as ecosystem-level processes shaped by institutional complexity.

The third research question concerned how governmental agencies can strengthen the ecosystem's ability to meet both national and NATO requirements. The study shows that

agencies play a critical and multifaceted role. They provide early information about capability needs, open avenues for cooperation through exercises and innovation programmes and create mechanisms intended to lower barriers for SMEs. Their decisions about sovereignty-sensitive technologies shape long-term resilience and guide industrial investment. However, their ability to support industry is limited by the fragmented governance system in which they operate. EU competition and procurement rules restrict rapid action, environmental permitting processes delay strategic infrastructure and decentralised authority complicates coordination. Effective support therefore depends on formal mandates, clear communication, predictable guidance and cross-agency collaboration that mitigates structural constraints.

These answers also make it possible to address the main research question. The study demonstrates that Sweden's defence ecosystem supports the country's mission in NATO by combining long-standing collaborative practices with emerging ecosystem-level adaptive capacities. The balance between national autonomy, alliance participation and industrial competitiveness is not achieved through centralised control but through ongoing negotiation between actors who operate under different institutional logics. Authorities interpret and translate alliance expectations, firms innovate and adapt in line with both national and allied needs and associations mediate between them. Effectiveness therefore rests on coordination under conditions of interdependence, limited authority and institutional layering.

The concept of ecosystem-integrated dynamic capabilities, developed in this thesis, captures why and how these adaptations occur. It offers a theoretical solution to the limitations of traditional dynamic capabilities theory, which assumes organisational autonomy and internally controlled routines not present in a regulated, security-dependent ecosystem. EIDC explains how sensing, seizing and reconfiguring unfold through shared information flows, interdependent responsibilities and governance arrangements that no single actor controls. It clarifies why Sweden's defence transformation depends on ecosystem coordination rather than isolated organisational action and why institutional alignment is as important as technological or industrial capacity.

Overall, the findings suggest that Sweden's defence transformation is incremental, collaborative and institutionally conditioned. The ecosystem is becoming more outward-looking and integrated into allied planning cycles, yet it remains anchored in the communicative, consensus-oriented practices that characterise Swedish public administration. Its future effectiveness will depend on continued investment in the relationships, processes and capabilities that allow it to sense changes, seize opportunities and reconfigure in line with both national and alliance expectations. Strengthening ecosystem-integrated dynamic capabilities will be crucial for navigating the tensions between national sovereignty, allied interdependence and industrial competitiveness that now defines Sweden's position within NATO

7. Implications

As shown in the preceding analysis, Sweden's integration into NATO brings new institutional expectations, coordination demands and capability requirements that shape how the defence ecosystem must adapt. The following sections translate the empirical findings and theoretical interpretation into implications for policymakers and defence-related firms.

7.1 Implications for Policy

The findings suggest several important implications for Swedish defence policy. First, successful NATO integration requires sustained investment in the institutional interfaces where national and alliance processes meet. Clearer communication channels, synchronised planning cycles and durable forums for dialogue would reduce uncertainty and strengthen coherence across the ecosystem. The institutional complexity described in the findings frequently created signal overload for agencies and firms; better integration mechanisms can mitigate this.

Second, agencies need to maintain a balanced approach to national autonomy and allied interdependence. Identifying which capabilities must remain under Swedish control, while recognising where Nordic or NATO cooperation adds resilience and cost-effectiveness, is central to long-term security of supply.

Third, the persistent challenges faced by SMEs warrant targeted policy support. SMEs contribute technological innovation yet face disproportionate administrative burdens, including complex security vetting and documentation requirements. Simplified procedures, clearer guidance and proportionate compliance obligations would facilitate their participation in capability development.

Finally, defence policy must better align EU regulatory obligations with NATO readiness requirements. This includes procurement, infrastructure permitting and innovation funding. Coordinated political and administrative efforts are required to ensure that European regulations do not unintentionally constrain Sweden's ability to meet alliance expectations.

7.2 Implications for Industry

For the defence industry, NATO integration expands both responsibilities and opportunities. Firms must now position themselves not only as national suppliers but as contributors to a broader allied capability architecture. This shift entails long-term investments in interoperability, secure information handling and readiness to engage in multinational development projects.

Early engagement with agencies and participation in joint exercises will become increasingly important for shaping capability paths and gaining visibility in alliance-related initiatives.

Firms should also strengthen resilience by diversifying suppliers, regionalising production where appropriate and developing flexible, modular systems that support rapid adaptation.

The findings further show that industry actors would benefit from clearer and more timely guidance from agencies on capability needs and the relationship between national and allied requirements. Greater transparency would help firms orient their investments and reduce uncertainty in planning. These practical recommendations, which translate the findings into concrete strategic actions for agencies and firms, are presented in Appendix 6.

8. Contributions

8.1 Theoretical Contribution

The study advances theory by integrating dynamic capabilities, ecosystem strategy and institutional theory to explain how national defence ecosystems adjust under international alignment pressures. Defence transformation is conceptualised as an ecosystem process in which interdependent actors coordinate value creation and innovation under multi-level governance.

By synthesising these perspectives, the thesis conceptualises Sweden's defence system as a hybrid ecosystem situated between national and supranational governance. The proposed concept of Ecosystem-Integrated Dynamic Capabilities (EIDC) addresses the limitations of traditional, firm-centric dynamic capabilities theory by showing how adaptation relies on interdependent sensing, coordinated mobilisation and system-wide reconfiguration.

8.2 Empirical Contribution

Empirically, the thesis provides detailed insight into how Swedish defence organisations adjust to NATO membership. It analyses organisations of different sizes and roles and identifies recurring patterns in how they reorganise, coordinate and collaborate in response to new demands. The findings clarify how actors interpret and operationalise alliance expectations and how institutional complexity shapes day-to-day practices in capability development, supply chains, information management and cross-border cooperation.

8.3 Policy and Practical Contribution

For policymakers and industry leaders, the study clarifies how NATO integration and preparedness reforms can support total defence while maintaining industrial competitiveness. It shows that resilience is most effectively built when responsibility is shared through coordinated planning, transparent communication and incentive-based agreements rather than solely through top-down regulation.

9. Future Research

The study's limitations and the rapidly evolving defence environment suggest several avenues for future inquiry. Since only one representative per organisation was interviewed, future research should include multiple respondents from the same organisation to explore internal variation in how NATO integration is interpreted and operationalised.

Longitudinal research would also be valuable. Sweden had recently joined NATO during data collection, and many processes were still emerging. Tracking how roles, routines and coordination mechanisms evolve as experience accumulates would provide deeper insight into ecosystem adjustment. Comparative studies could help distinguish findings unique to Sweden's governance traditions from those common to other NATO members. Countries with more centralised or differently structured defence systems may experience distinct patterns of adaptation. Further research on SMEs is necessary, as smaller firms contribute innovation but face substantial administrative and security-related burdens. Examining how these barriers affect long-term resilience and competitiveness would provide actionable insights for policy.

Finally, the tension between NATO readiness requirements and EU regulatory frameworks warrants deeper investigation. Understanding how states reconcile overlapping institutional obligations would contribute to broader debates on defence governance in multi-level political systems

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Appendix 1 - Pre-Study

Sweden's Preparedness System and the Institutional Implications of SOU 2025:68

This pre-study offers an institutional background necessary for understanding the environment in which Swedish defence-related firms currently operate. The main thesis examines how firms interpret Sweden's integration into NATO and which dynamic capabilities they deploy to respond to evolving expectations from the state. Because these expectations are shaped not only by NATO membership but also by significant ongoing reforms in Sweden's preparedness governance, an outline of these developments is required. However, the material presented here is extensive and analytically distinct from the core research question. Including it in full within the main thesis would risk widening the analytical scope beyond what the study can meaningfully address. For this reason, the discussion is presented separately as a pre-study to support the interpretation of the empirical findings without disrupting the thesis's conceptual coherence.

Sweden's preparedness system is embedded in long-standing administrative traditions emphasising decentralisation, consensus, and voluntary cooperation between public authorities and private firms (MSB, n.d.). Legislation such as the *Lag (1992:1403) om totalförsvar och höjd beredskap* establishes that all societal actors are part of the Total Defence, yet the obligations it outlines are primarily geared toward public institutions and individuals. In peacetime and during lower levels of crisis, the state lacks legal mechanisms to require private firms to participate in preparedness activities (Riksdagen, 1992). This structural limitation has been repeatedly identified in governmental reviews, which argue that the system depends heavily on informal coordination and normative expectations rather than enforceable duties (SOU 2023:50).

These institutional characteristics have become more problematic as Sweden's economic and material dependencies have deepened. Critical infrastructure, supply chains, and advanced technologies are predominantly privately owned and increasingly globalised. The wide distribution of decision-making authority across agencies and municipalities further complicates coordination, as no single actor has responsibility for directing the system in situations below the threshold of *höjd beredskap* (Statskontoret, 2014).

SOU 2025:68 identifies these structural weaknesses as a central challenge for Sweden's resilience and proposes reforms aimed at modernising the preparedness architecture. The inquiry argues that the most acute vulnerabilities lie in the "grey zone" between peace and war, where disruptions may threaten critical functions without triggering the legal conditions under which extraordinary governmental powers can be activated. According to the report, Sweden's reliance on voluntarism is insufficient in this zone, particularly given the strategic importance of private and foreign-owned firms whose commercial priorities may not align with national preparedness objectives (SOU 2025:68). The inquiry therefore introduces a

two-tier governance model intended to stabilise collaboration and establish a pathway toward more formalised obligations.

The first tier consists of voluntary preparedness agreements (*F-avtal*), conceived as civil-law contracts between the state and selected firms. These agreements may regulate stockpiling, redundancy planning, continuity management, and information-sharing during crises. They are meant for exceptional situations where normal procurement mechanisms cannot ensure reliable supply and must conform to EU law, including rules on competition and state aid. Although voluntary, the agreements attempt to formalise cooperation in a way that reduces ambiguity and improves predictability for both firms and authorities.

The second tier is conceptual but represents a more profound institutional shift. The inquiry recommends that the government develop a new *Försörjningsberedskapslag*, a dedicated Business Preparedness Act that would grant the state the authority to impose binding obligations on firms during crises. Such a law could enable requirements concerning prioritised production, capacity retention, reporting duties, or other preparedness measures, with compensation aligned to market principles. The authors of the inquiry argue that without such a legal instrument, Sweden cannot ensure participation from firms that decline voluntary agreements, especially those whose ownership structures or market exposures may lead them to prioritise commercial interests over national resilience (Henriksson & Malmberg, 2025).

The relevance of this institutional backdrop to the main thesis lies in the pressures it creates for firms to reinterpret their role in national defence and crisis preparedness. NATO integration introduces a new layer of expectations related to interoperability, resilience, and supply security. At the same time, domestic governance reforms signal an evolving understanding of the responsibilities of private actors within Sweden's Total Defence. Firms must therefore navigate a multi-level transformation in which alliance-based requirements intersect with emerging national regulatory frameworks. These developments shape how firms perceive their obligations, how they allocate resources, and which dynamic capabilities they prioritise in order to remain legitimate and competitive in a shifting institutional environment. Because the thesis is centred on firms' strategic responses rather than on evaluating Swedish preparedness legislation, incorporating the full institutional analysis within the main text would blur the study's focus. The reforms proposed in SOU 2025:68 operate at the level of governance architecture, while the thesis analyses organisational behaviour and capability formation. Presenting the institutional material in a pre-study ensures that readers can understand the structural context without requiring the thesis to undertake a full policy analysis. This separation maintains analytical precision and allows the empirical chapters to concentrate on how firms interpret and respond to these evolving conditions.

Appendix 2 - Respondent list

The compilation includes information on the type of organisation, interview date, duration, and the respondent's position in the organisation. Details are intentionally limited to ensure confidentiality and to avoid recognition, given the relatively small and interconnected nature of the Swedish defence sector.

Respondent Code *(1-21 in chronological order)*	**Organisation type**	**Date of the interview** *(YYYY-MM-DD)*	**Meeting form**	**Length of the interview** *(min)*	**Respondent's role within the organisation**
R1	Limited Company	2025-10-06	Digital	47	CEO
R2	Limited Company	2025-10-08	In person	51	Senior Executive
R3	Limited Company	2025-10-09	Digital	49	CEO
R4	Limited Company	2025-10-09	Digital	42	CEO
R5	Limited Company	2025-10-10	Digital	36	CEO
R6	Agency	2025-10-21	In person	70	Senior Manager
R7	Association	2025-10-21	Digital	45	Executive Director
R8	Limited Company	2025-10-21	Digital	46	Senior Manager
R9	Limited Company	2025-10-21	Digital	45	COO
R10	Limited Company	2025-10-23	Digital	63	Senior Executive
R11	Limited Company	2025-10-29	Digital	58	Senior Executive
R12	Limited Company	2025-10-30	Digital	40	CEO
R13	Limited Company	2025-11-03	In person	65	CEO

R14	Limited Company	2025-11-06	In person	55	Senior Manager
R15	Agency	2025-11-06	In person	60	Specialist
R16	Association	2025-11-07	Digital	62	Executive Director
R17	Agency	2025-11-10	Digital	42	Senior representative
R18a	Limited Company	2025-11-10	Digital	25	President
R18b (continuation)		2025-11-20		37	
R19	Agency	2025-11-11	Digital	53	Specialist
R20	Limited Company	2025-11-14	Digital	59	Account Manager /Specialist
R21	Limited Company	2025-11-17	Digital	50	Senior Executive

Appendix 3 - Interview guide and connection to theory

1. **How do you view NATO's focus on resilience, technological autonomy, and security? Has it influenced your strategic or investment priorities in the defence sector?**
   Follow-ups: How have these developments affected your business model or partnerships? Have you changed your approach recently?
   Institutional theory, Dynamic capabilities
2. **Do you see Swedish and European companies as particularly advantaged by NATO membership?**
   Follow-ups: Which types of firms or capabilities seem best positioned to benefit? Are there groups that struggle more to adapt?
   Ecosystem strategy, Institutional logics
3. **Which areas in defence and security do you see as most promising, such as traditional systems, cyber, AI, or space?**
   Follow-ups: Where do you expect the strongest growth? Do you see it mainly in product innovation, service integration, or a mix of both? Are there any particular trends?
   Dynamic capabilities, Innovation ecosystems
4. **Do you see more opportunities or risks in the NATO and EU markets, given larger budgets but stricter regulations?**
   Follow-ups: How do compliance or certification requirements affect you? (Any differences between service and product firms) What challenges does your company face?
   Institutional complexity, Pragmatism
5. **What role does NATO play compared to EU and national defence budgets in driving market growth?**
   Follow-ups: Which level of policy (NATO, EU, or national) has the most influence? How do you handle possible conflicts between them?
   Hybrid ecosystems, Institutional logics
6. **How do NATO's long-term security goals affect how you assess performance, competitiveness, or risk?**
   Follow-ups: Do these goals shape how you evaluate business models? Does alignment with NATO priorities influence your strategy?
   Institutional legitimacy, Ecosystem orchestration
7. **Have NATO's investments in AI, cyber, and space changed the types of companies or capabilities you invest in?**
   Follow-ups: Have you seen a shift from traditional hardware to digital or service-based innovation? Which technologies look most transformative?
   Dynamic capabilities, Institutional entrepreneurship
8. **How do you balance financial return with ethical and sustainability considerations (ESG) in defence investments? Is resilience and security a part of sustainability strategy?**

Follow-ups: How do you define responsible investment in your area? How do you apply ESG principles to both product and service firms? Do you see a difference in how defence companies in other countries in Europe translate ESG-regulations?
Institutional work, Constructivism

9. **How do you manage geopolitical risk, such as conflicts, export controls, or shifting alliances?**
   Follow-ups: Do risks differ significantly between service-based and manufacturing companies? How do you prepare for sudden political or regulatory changes?
   Resilience theory, Dynamic capabilities
10. **How has investor and public perception of the defence and security sector changed in recent years, and how do you expect it to develop over the next decade?**
    Follow-ups: What has driven this change? Do you think defence-related services are becoming more legitimate or accepted?
    Institutional change, Field evolution theory
11. **How do you view collaboration between private and public actors in developing innovation and competitiveness in defence?**
    Follow-ups: What makes collaboration successful? Does it look different for service and product companies?
    Ecosystem orchestration, Institutional work
12. **How does Sweden's tradition of consensus and voluntarism influence how companies adapt to NATO standards?**
    Follow-ups: Are there cultural or institutional factors that support or slow adaptation? How do firms balance national traditions with alliance expectations?
    Institutional logics

Appendix 4 - Analytical Procedure, Coding Structure and Relation to Chapter 4

A4.1 From Initial Codes to Overarching Themes

The abductive thematic analysis described in Section 2.4.1 generated a substantial set of empirical codes capturing how interviewees understood NATO integration, preparedness reforms, market dynamics and institutional constraints. These codes were iteratively compared across interviews and examined in relation to the theoretical framework. Through this process, broader patterns of meaning were identified and gradually consolidated into four overarching themes. These themes provide the organising structure for the empirical presentation in Chapter 4:

1. Adjusting roles, relationships and institutional arrangements (Section 4.1)
2. Developing dynamic capabilities for NATO engagement (Section 4.2)
3. Navigating institutional complexity (Section 4.3)
4. Balancing national, allied and commercial interests (Section 4.4)

Each theme consists of several subthemes that correspond to the subsections in Chapter 4, such as Sections 4.1.1–4.1.4 and 4.2.1–4.2.4. The movement from first-order codes to themes did not follow a linear progression. Instead, the structure emerged through repeated cycles of comparison between empirical material and theoretical expectations. Instances that challenged initial assumptions prompted further refinement of the thematic boundaries. The final structure represents the outcome of an abductive dialogue between the data and the conceptual lenses provided by dynamic capabilities, ecosystem strategy and institutional theory.

Coding was conducted using verbatim transcripts. Quotations in Chapter 4 were anonymised and lightly paraphrased to reduce the risk of indirect identification. The coded extracts in this appendix are closer to the original wording and are included to document how the analysis was grounded in the empirical material.

A4.2 Coding Structure Aligned with Empirical Themes

Table A.1 summarises how first-order codes were organised into subthemes and overarching themes. The subthemes correspond directly to the section headings in Chapter 4, which makes the analytical link between coding and the empirical narrative transparent.

Overarching Theme (Chapter 4)	Subtheme (Section)	Indicative Codes
4.1 Adjusting Roles, Relationships, and Institutional Arrangements	**4.1.1 Changing Strategic Orientation**	Shift from inward to outward defence; Sweden as logistics base / hub; defending Sweden "abroad" (Finland/Baltics); NATO baseline for resilience; rebuilding capacity after contraction; continuity in NATO alignment before formal membership; changing procurement priorities (from lowest price to local/secure supply).
	4.1.2 Evolving Roles and Responsibilities in a NATO Framework	NATO requirements filtered through Swedish authorities; translation of alliance expectations into procurement and capability development; redefinition of agency mandates; industry identity as "allied suppliers"; NATO as indirect market shaper; changing self-understanding of professionals (security mission, European defence).
	4.1.3 Transformation of State–Industry Relationships	Intensified interaction after NATO accession; increased transparency from authorities; move from "just-in-time" to "just-in-case" thinking; administrative overload and "drowning in bureaucracy"; collaborative interdependence (Armed Forces–FMV–industry); flat and informal Swedish collaboration culture; new arenas (testbeds, exercises, working groups, study trips); role of industry associations (SOFF, SME-D) as intermediaries; persistent asymmetries and SME disadvantages.
	4.1.4 Integration with Allied and Nordic Partners	Longstanding NATO and Nordic cooperation gaining formal structure; multinational projects requiring political alignment and security vetting; exercises as operationally integrated and signalling deterrence; cultural openness to shared standards; Nordic trust base; removal of neutrality as a perceived obstacle; cross-border logistics demands (e.g. Norway–Sweden–Finland corridors); continuous engagement with partners beyond formal agreements.
4.2 Dynamic Capabilities for Effective NATO Engagement	**4.2.1 Sensing Capabilities**	Geopolitical threat perception (Russia, Ukraine, risk of limited attack); technological scanning (drones, advanced systems, hybrid threats); identification of unsolved capability gaps (multi-drone defence); awareness of supply-chain vulnerabilities (semiconductors, raw materials); concerns over non-European/Chinese dependencies; monitoring of customer expectations for Swedish and European capability; interpretation of new NATO information flows.
	4.2.2 Seizing Capabilities	Ability to scale production rapidly; flexible use of dual-use factories; geographically distributed production assets and warehouses; multinational industrial participation requirements; networks and partnerships across borders; role of associations as platforms for joint positioning; Nordic cooperation as enabling resource; accelerated innovation cycles (e.g. 82-day counter-drone system); problem-driven collaboration formats (exercises, joint testing); institutional mechanisms for innovation (e.g. challenge-based events, new tools at FMV); uneven ability of SMEs to seize opportunities.

	4.2.3 Reconfiguring Capabilities	Redesign of information flows and internal routines in agencies (new NATO channels); organisational restructuring around NATO committees and working groups; production reconfiguration (adaptation docks, military customisation); retraining of civil engineers into defence roles; regionalisation of supply chains (Nordics, Northern Europe); distributed production for resilience; strategic rebalance of capability portfolios (ground vs air/naval); identification of domains that must remain nationally controlled; shift from "just-in-time" to inventory and redundancy.
	4.2.4 Limits and Constraints	Institutional rigidity and slow decision-making; lengthy permit processes; municipal autonomy as a brake on investments; structural disadvantages for SMEs; limited human capital (shortage of engineers and specialised workers); technological dependencies and cyber vulnerabilities; trade-offs between speed and legal/administrative accountability.
4.3 Navigating Institutional Complexity	– (single integrated theme)	NATO as indirect demander (requirements filtered through Swedish structures); agencies as translators of alliance expectations; proliferation of NATO-related information and need for categorisation; distributed decision-making authority and absence of a single binding actor; inter-agency "paralysis" in secure information flows; differentiation between NATO's consensus character and the EU's regulatory power; tension between EU procedures and national urgency; long and complex permit processes; difficulties in overriding local decisions; concerns over principal–agent problems and distance between users, buyers and payers; collaborative governance culture as partial counterweight to structural complexity.
4.4 Balancing National, Allied, and Commercial Interests	– (single integrated theme)	Tension between interoperability and national strategic autonomy; identification of strategically sovereign capability areas (e.g. aircraft, underwater systems, cryptography); persistence of nationally segmented markets despite integration rhetoric; trade-offs between security of supply and market efficiency; localisation/regionalisation of production vs supplier capacity and cost; shift from passive market-taking to more active market-shaping by agencies; speed vs procedural accountability (transparency, competition, EU rules); inclusion of SMEs vs stability and security of the ecosystem; large primes as bridges for smaller firms; balancing territorial defence traditions with NATO collective defence planning; design of products for allied operational contexts; ongoing negotiation between political, industrial, and allied logics.

Table A.1 - Overview of Themes, Subthemes and Associated Codes

A4.3 Empirical Basis for Themes

The quotations used in Chapter 4 are derived from clusters of coded data associated with the codes listed in Table A.1. Each subtheme was supported by multiple excerpts from different types of actors, including agencies, large firms, SMEs and industry associations. During analysis, these excerpts were systematically compared within and across interviews to test the consistency of patterns and to identify variations that required analytical differentiation.

In line with the ethical considerations set out in Section 2.6, the respondent list was anonymised (Appendix 2) and material presented in Chapter 4 was paraphrased and

generalised to reduce the risk of respondent identification. The underlying coding, however, was based on verbatim transcripts, which served as the primary empirical anchors for the themes developed in Sections 4.1–4.4.

Abductive reasoning guided all stages of theme development. Several examples illustrate how this iterative process informed the analytical structure:

1. Codes relating to outward defence orientation, Sweden's logistics role and the long-term alignment with NATO standards informed the construction of Section 4.1.1 and supported a reinterpretation of Sweden's strategic shift in terms of institutional and ecosystem dynamics.
2. Recurrent references to scanning technologies, supply chain vulnerabilities and shifts in institutional expectations strengthened the interpretation of sensing as an ecosystem-level capability in Section 4.2.1, which informed the conceptualisation of dynamic capabilities as distributed rather than firm-internal.
3. Comments concerning EU regulatory processes, permit delays and administrative fragmentation contributed both to Section 4.3 on institutional complexity and to Section 4.2.4 on constraints, thereby linking institutional theory more closely to the dynamic capabilities perspective.
4. References to competing strategic, commercial and alliance-related logics motivated the framing of Section 4.4 as a theme concerned with balancing institutional demands, rather than treating these pressures as simple consequences of NATO membership.

Through these iterative cycles, the coding structure and thematic organisation were progressively aligned with the thesis's central research questions, namely: how Sweden's defence ecosystem adjusts its roles and arrangements during NATO integration, which dynamic capabilities are required for effective engagement, how governmental agencies shape these processes and how national, allied and commercial priorities are negotiated in practice.

Appendix 5 - Interpretations of NATO's role within the Swedish defence ecosystem

Interpretation of NATO's role	Description	Illustrative quote (R = Respondent)
NATO as a collective defence alliance	NATO is understood as a security community where Sweden contributes to collective defence, including operations beyond its own borders.	"Before NATO, much of the planning focused on ensuring that Sweden could receive support from third parties. Now the focus is on defending Sweden abroad, meaning in Finland or the Baltic states." (R6)
NATO as a coordinating and standard-setting body	NATO is viewed as defining doctrines, capability requirements and planning frameworks rather than acting as a purchaser. These expectations are translated through national agencies.	"NATO itself doesn't buy much directly. It is a coordinating body that defines capability requirements for member states. Those requirements then cascade down to the Armed Forces and, ultimately, to industry." (R8)
NATO as a business development opportunity	For many firms, membership expands access to markets, partnerships and international programmes, reconfiguring commercial orientation.	"Swedish companies are no longer just national suppliers. They are becoming allied suppliers." (R7)
NATO as a regulatory framework	NATO is understood as a source of procedures, compliance demands and planning rules that structure national defence work.	"NATO sets certain requirements for Sweden, which means that the Armed Forces and FMV must adapt their systems and routines. Those requirements then reach us as suppliers." (R4)
NATO as a logistics and infrastructure driver	NATO introduces explicit requirements for transport corridors, host nation support, military mobility and resilience planning.	"NATO places specific requirements on Sweden, making sure that logistics and transport capacity exist to move heavy vehicles like tanks from Norway across Sweden to key ports." (R5)
NATO as a long-term strategic process	Respondents highlight continuity rather than rupture, describing NATO membership as an institutionalisation of practices already adopted.	"We started working with NATO standards years ago. Back then you were almost not allowed to say NATO, but we were already using their systems." (R10)

NATO as a political symbol	Membership is interpreted as a statement of alignment, credibility and belonging within the Western security community.	“Joining NATO is as much about trust and credibility as it is about defence. It shows where Sweden stands.” (R12)
NATO as an ecosystem connector	NATO is seen as linking Sweden to wider research, innovation and cooperation networks, deepening international embeddedness.	“With NATO, the networks are constant. We share information, test together and plan together in ways we did not before.” (R11)

Appendix 6 - Practical recommendations

The implications identified in the previous section point to several concrete steps that can strengthen Sweden's ability to adapt to NATO integration. These recommendations build directly on the interview material and the patterns described in Chapter 4.

NATO integration should be treated as a strategic transition rather than a technical adjustment. Several firms, particularly smaller ones, described certification processes and NATO-related evaluations as unexpectedly complex and costly. Developing internal expertise in alliance standards, secure information handling and compliance procedures would help reduce the uncertainty that many interviewees associated with these tasks. Public agencies can support this by establishing clear points of contact with responsibility for guiding companies through NATO frameworks and related administrative requirements. Such structures would help address concerns raised by SMEs that existing support from FMV is difficult to access or insufficient for navigating the system.

Collaboration needs to be strengthened and made more predictable. The findings showed that Sweden's informal networks work well for actors who are already well-established in them, but newer and smaller firms often struggle to gain entry. Several respondents noted that authorities sometimes avoided discussions with companies because they feared compromising future procurements. To address this, collaboration should be formalised through recurring capability dialogues and shared development forums where companies of varying size can participate on equal terms. Exercises, testbeds and joint evaluations were consistently described as effective and should be expanded and opened to a wider range of participants.

Barriers facing SMEs require specific attention. Many reported difficulties meeting documentation requirements, security vetting rules and other administrative thresholds designed with large firms in mind. Adjusting these requirements to the scale and nature of the activity would allow more specialised suppliers to contribute. Larger companies could also be encouraged to work more actively with smaller firms through structured partnerships that clarify expectations and responsibilities.

The institutional complexity that characterises Sweden's defence governance suggests the need for a more coherent coordination structure. Interviewees described fragmented information flows and uncertainty about who interprets and transmits NATO requirements. A small coordinating function within the Government Offices, with responsibility for synchronising NATO, EU and national initiatives, would help ensure more consistent guidance to both agencies and industry. Companies can respond by assigning roles that monitor institutional developments and translate them into internal priorities. This would reduce the confusion that several respondents associated with rapidly changing expectations.

Resilience should be translated into concrete and measurable objectives. The shift away from global just-in-time logistics, concerns about imported components and the desire for more regional supply chains indicate that both the state and industry see resilience as a practical requirement. Defining indicators such as redundancy in sourcing, continuity of supply or recovery capabilities would support integration of resilience into procurement and planning. Instead of strict obligations, incentives could encourage firms to strengthen supply chain robustness or develop dual-use technologies that contribute to national preparedness.

Adaptive capacity should also be reinforced. The interviews described several examples of rapid problem-solving when public and private actors worked side by side, including efforts to develop counter-drone solutions under tight time constraints. Creating more structured environments for this type of work, including innovation accelerators and joint development programmes, would support continued experimentation. Leadership training that prepares officials and managers to work across organisational boundaries would further strengthen this capacity. Exchange programmes between agencies and companies would also help reduce misunderstandings that several respondents attributed to cultural or organisational differences.

Finally, Sweden's procurement and preparedness frameworks require adjustments to operate effectively under current security conditions. Respondents described slow permitting, long procurement cycles and uncertainty regarding responsibilities in situations where time is limited. Introducing preparedness partnerships that can be activated quickly, clarifying decision-making procedures for periods between peace and crisis and adjusting regulatory requirements to the scale and sensitivity of each procurement would relieve some of these bottlenecks. These revisions would not replace core governance principles but would allow for greater responsiveness when circumstances demand it.

Together, these recommendations reflect the practical challenges identified in Chapter 4, including uneven access to collaboration, fragmented governance, complex administrative demands and vulnerabilities in supply chains. Addressing these issues would help Sweden strengthen its defence ecosystem while maintaining the cooperative and trust-based practices that remain one of its key strengths.

Appendix 7 - Data Collection/ Interview Request

(In Swedish, the original text that was adjusted depending on the platform and the recipient)

Förfrågan om intervju – Handelshögskolan - Natos påverkan på svenska försvarsföretag

Hej,

Vi är Milena Günther-Hanssen och Siri Carlsson, masterstudenter vid Handelshögskolan i Stockholm, och skriver för närvarande vår masteruppsats om Natos påverkan på svenska försvarsföretag.

Vår forskning undersöker hur europeiska företag omformar sina strategier som svar på Natos växande fokus på leverantörskedjors resiliens och återföring av produktion (re-shoring), mot bakgrund av de tilltagande geopolitiska spänningarna. Vi vill särskilt förstå hur företag inom försvarssektorn hanterar balansen mellan resiliens, kostnadseffektivitet och konkurrenskraft.

För att få praktiska insikter genomför vi semistrukturerade intervjuer med yrkesverksamma inom företagsstrategi, inköp och leverantörskedjehantering. Vi skulle vara mycket tacksamma om ni kan hjälpa oss att komma i kontakt med en person inom ert företag som kan delta i en kort intervju (ca 30–45 minuter). Alla intervjuer kommer att anonymiseras och behandlas med strikt konfidentialitet, och ert deltagande kommer att bidra med värdefull kunskap om hur företag hanterar dessa utmaningar.

Uppsatsen handleds av Daniel Tolstoy vid Center for Security and Resilience på Handelshögskolan i Stockholm.

Tack för att ni överväger vår förfrågan. Vi ser verkligen fram emot möjligheten att prata med er och anpassar oss gärna efter er tillgänglighet.

Vänliga hälsningar,
Milena Günther-Hanssen & Siri Carlsson

Masterprogrammet i Business and Management
Handelshögskolan i Stockholm
Tel. 07********
Tel. 07********

Note: *Phone numbers have been redacted to protect privacy.*

Appendix 8 - Use of Artificial Intelligence

Artificial intelligence was used in a limited and practical way during the work with this thesis. Its use was confined to tasks that assisted with managing the empirical material and preparing the written document. All decisions concerning the analytical approach, the interpretation of data and the development of the study's arguments were made by the authors.

Most interviews were recorded in Swedish and transcribed with the help of AI-based transcription software such as Microsoft Teams transcription tool (accessed through SSE student account), and Fireflies program used for in-person meetings. This reduced the time required for manual transcription and ensured that spoken material was captured accurately. Names, phone numbers and other personal information were removed immediately after transcription. Preliminary English translations were also produced with the support of AI tools. These translations served as working material and were carefully reviewed and revised by the authors to preserve nuance and contextual meaning.

AI tools were also used to support reference management and to check the consistency of formatting. In the final editing stages, language-review tools were used to identify unclear or imprecise formulations, which were then edited manually. These tools functioned solely as aids to proofreading and did not generate analytical or substantive content.

On a few occasions, AI was used as a space for exploring alternative ways of phrasing or structuring emerging ideas. It did not influence the analysis itself, nor did it contribute theoretical content. The substantive contribution of the thesis, including the research design, coding procedures, interpretation of empirical material and development of the conceptual framework, is entirely the work of the authors. The technical support provided by AI tools is reported here in accordance with the requirements of the Stockholm School of Economics and for the sake of academic transparency.