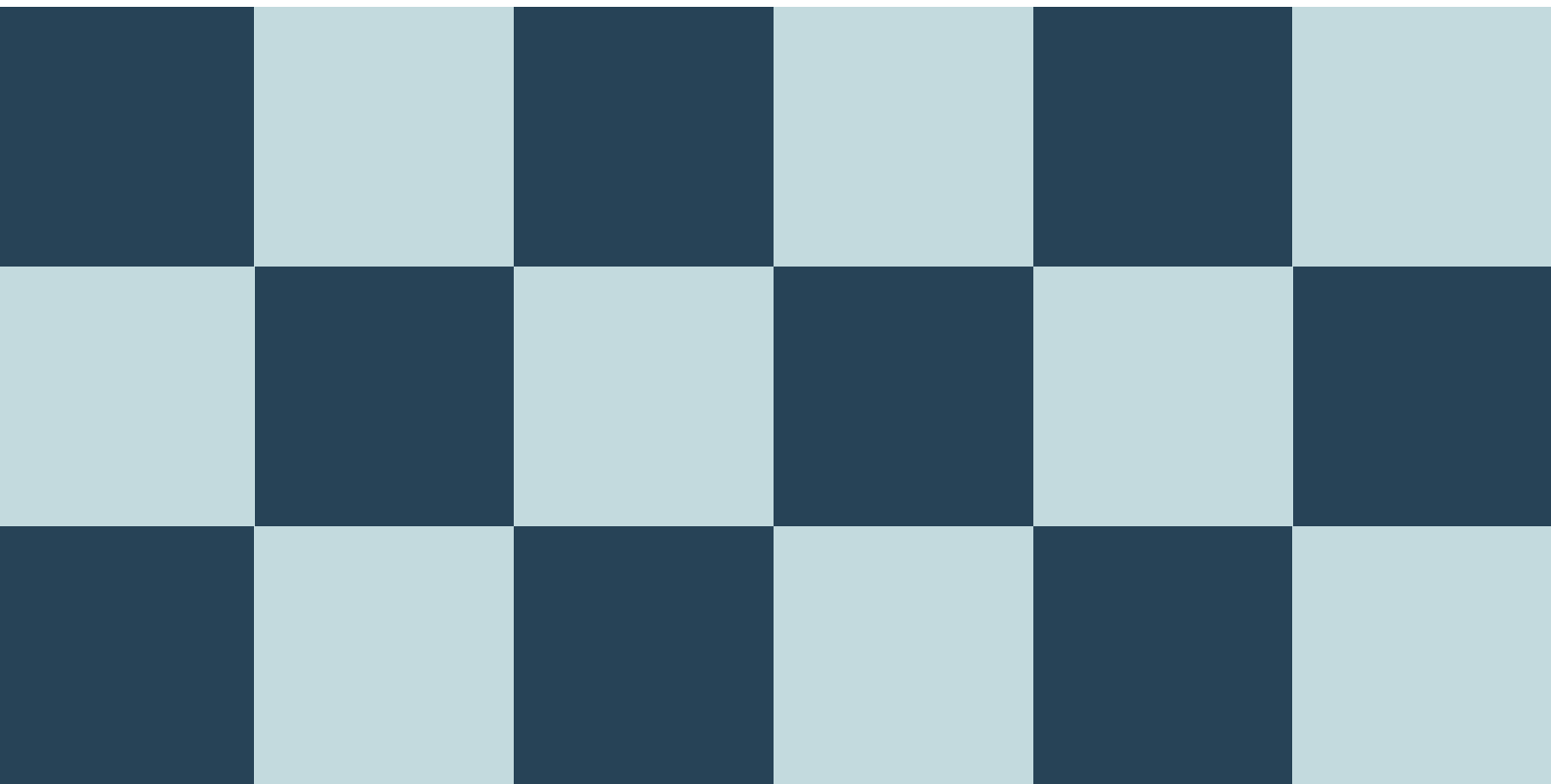




Myndigheten för
totalförsvarsanalys

Swedish Fortifications Agency investments in defence properties – cost-effectiveness and priorities



Swedish Agency for Defence Analysis

Swedish Fortifications Agency investments in defence
properties

– cost-effectiveness and priorities

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Summary

The Swedish Agency for Defence Analysis (MTFA) has been tasked with analysing the Swedish Fortifications Agency's investments in defence properties. This assignment involved analysing major new construction and refurbishment projects and assessing the cost-effectiveness of the investments on the basis of investment appraisals undertaken. It also included analysing the extent to which the current investment plan provides the best circumstances for contributing to increased defence capability.

The Swedish Fortifications Agency has an important role to play in providing appropriate infrastructure to enable the increase in Sweden's defence capability as decided by the Riksdag and the government. The agency's activities, including its investment activities, have grown since the mid-2010s, and are continuing to grow. Therefore, the demands on the Swedish Fortifications Agency – and on the Swedish Armed Forces, its largest client – are not the same as they were a decade ago.

Cost-effectiveness of the Swedish Fortifications Agency's investments

When carrying out the assignment, MTFA has used the Swedish Fortifications Agency's investment plan for 2024–2026 as its starting point. We have analysed how the cost estimates that form the basis for the investments are produced, and using the Swedish Fortifications Agency's project database we have subsequently been able to track the development of cost estimates and time needed on tasks. This data collection initiative has been supplemented with document studies and interviews with representatives of the Swedish Fortifications Agency, the Swedish Armed Forces and other agencies with insight into investments of this kind. Our assessment is that the Swedish Fortifications Agency prepares its calculations in a thorough and detailed manner and follows a methodology that is in accordance with industry practice.

MTFA notes that there is often cost escalation during the planning and project design phases; that is to say, the estimated cost increases as the planning becomes more and more precise. There are various explanations for this. One is the fact that the increase in the construction cost index has been high for a number of years, which can have a major impact on projects that take several years to plan and implement. Other explanations include what is known as requirement creep; that is, changes in requirements, as well

as unforeseen costs. Our assessment is that the extent of cost escalation in the investment plan studied is reasonable and that the Swedish Fortifications Agency has good cost control. We note that development work is in progress at the Swedish Fortifications Agency in order to increase the precision of cost estimates. MTFA considers that this work should be continued.

In this context, it should be emphasised that the development of productivity in the Swedish construction sector has been weak for a couple of decades. A number of inquiries have found that competition in the construction sector is weak and that at times Sweden has seen some of the fastest increases in construction costs in the EU. The inefficiencies that characterise the construction industry in general should also apply to the activities of the Swedish Fortifications Agency.

When a project has been formally commissioned, the Swedish Fortifications Agency initiates a procurement procedure for contractors and the implementation of construction. MTFA considers the Swedish Fortifications Agency to have a high level of expertise in formulating orders and acting as a client. One indication of this is the fact that the calculation used as a basis for procurement corresponds closely to the actual construction cost. MTFA argues that this shows that the agency has the technical expertise and good knowledge of pricing levels and local construction markets. In some cases, procurement procedures are conducted on the basis of only one or two tenders, which raises questions as to whether an effective price formation mechanism is in place. In this respect, MTFA argues that the Swedish Fortifications Agency's knowledge of the industry means that the agency is able to take action in these cases and cancel the procurement procedures if the prices offered by the tenders are too high. Examples of when this has happened are available, too. Overall, MTFA assesses that the Swedish Fortifications Agency's investments are implemented with reasonable cost efficiency and good cost control.

However, MTFA has identified a number of areas where development is needed. One involves introducing procedures to evaluate completed investment projects together with the commissioning body with a view to learning lessons going forward. Another is to continue working on developing dialogue with clients, particularly in respect of cost assessments at an early stage, so as to provide them with as realistic a picture as possible in terms of costs. Finally, MTFA argues that the Swedish Fortifications Agency should develop a methodology that will allow them to monitor the

development of cost-effectiveness and goal attainment in project implementation.

The investment plan's contribution to increased capability

The Swedish Fortifications Agency prepares investment plans annually. MTFA has analysed the extent to which this plan has the potential to make the best possible contribution to increased defence capability. We consider it difficult to provide an unambiguous answer to this question in respect of individual projects. That said, MTFA believes that the process for producing the investment plan needs to be developed if the plan is to be given the best possible circumstances for contributing to the development of military defence. One important aspect in this regard involves developing a planning and prioritisation process that involves the Swedish Fortifications Agency, the Swedish Armed Forces and the Swedish Defence Materiel Administration. Development work that involves these agencies is currently in progress with a view to improving approaches and processes between the agencies. MTFA considers that this work should be continued and followed up.

MTFA notes that the infrastructure supply process differs from the materiel supply process. We assess that infrastructure supply needs to be linked even more closely to the Swedish Armed Forces' planning for capability growth. MTFA perceives three areas for development with regard to the process for preparing the Swedish Fortifications Agency's investment plan:

1. The investment plan should be developed so that it constitutes a longer-term plan covering both ongoing and planned projects.
2. Coordination (synchronisation) between infrastructure, materiel and even personnel needs to be developed. This could, for instance, be achieved by dividing the investment plan into phases and groups of investment items so that there is a clearer link to the Swedish Armed Forces' investment plan for materiel, and by ensuring that the investment plan for infrastructure is more clearly based on the Swedish Armed Forces' long-term planning, to the extent possible.
3. Lead times from needs specification to investment agreement sometimes span a number of years. MTFA believes that efficiency gains should be achieved if the Swedish Armed Forces places orders with the Swedish Fortifications Agency as a whole for a geographical area, such as a garrison, to the extent possible.

Development of governance and funding

MTFA argues that the financing of the Swedish Fortifications Agency may need to be developed. The current funding model was introduced at a time when defence properties were being managed and decommissioned. The situation is different now, with rapid development of military defence and associated needs for infrastructure investments.

A rapidly growing loan portfolio and higher loan-to-value ratios on the property portfolio are leading to greater financial uncertainty. One contributory factor in this respect is the agency's required rate of return, which is defined in the appropriation directions every year. The required rate of return is linked to the size of the Swedish Fortifications Agency's loan portfolio, which is planned to grow to almost SEK 100 billion over the next few years. There is a sharp increase in the size of the required rate of return as a result, also leading to significant planning uncertainties on account of the way in which the required rate of return is designed.

An alternative course of action, therefore, would be to review the funding model with a view to making it more appropriate, given the changing circumstances under which the agency is operating. Inter alia, we consider it essential to develop the funding model so that it enables the Swedish Fortifications Agency to operate proactively and recruit and train personnel in a manner that allows its activities to expand with greater coordination with other defence agencies, in particular the Swedish Armed Forces. One possible way of developing the funding model – which should be analysed as part of the review we propose – could involve streamlining funding so that financial costs associated with the development and operation of the property portfolio are separated from costs linked to other tasks of more strategic importance for both the growth of military defence and total defence as a whole. In this context, consideration should also be given to whether the growth of military defence would benefit from being funded by appropriations for certain elements of the Swedish Fortifications Agency's activities.

MTFA considers it positive if the Swedish Fortifications Agency were to be given better conditions for more active work on the strategic planning of infrastructure. A number of the courses of action we have presented concern this. The government may also consider whether the Swedish Fortifications Agency's tasks should be clarified in some way in order to achieve this. We believe that the government could consider clarifying the

role of the Swedish Fortifications Agency as a defence agency in the agency's instructions.

1. Introduction

The Swedish Fortifications Agency is a representative of the state's principal owner and a manager of defence properties¹. The agency has to work on behalf of the government to carry out new construction and refurbishment of real property and acquire real property on behalf of the state.²

In the appropriation directions for 2024, MTFA was tasked with³

‘analysing the Swedish Fortifications Agency’s major new construction and refurbishment work. The agency shall work on the basis of completed investment appraisals to analyse and report on the cost-effectiveness of the investments. The agency shall also analyse the order in which the investments are made and the extent to which the current investment plan provides the best circumstances for contributing to increased defence capability.’

1.1 Our interpretation of the assignment

The Swedish Armed Forces are the Swedish Fortifications Agency’s largest client. MTFA has therefore restricted its work to analysing the responsibilities of the Swedish Fortifications Agency and the Swedish Armed Forces in the procurement of infrastructure, in order to assess whether the processes are appropriate and effective in times of growth in military defence.

The Swedish Fortifications Agency submits a proposed investment plan every year. This is a list of projects that have been commissioned – or are planned to be commissioned – by the Swedish Fortifications Agency’s clients. MTFA has restricted the assignment to the Swedish Fortifications Agency’s investment plan for 2024–2026, which was the applicable investment plan while the assignment was being implemented.

As the assignment concerns major new construction and refurbishment projects, we have restricted the analysis to projects that were commissioned by the Swedish Armed Forces and relate to refurbishment or new construction with an estimated budget of at least SEK 75 million. This was the monetary limit requiring a government decision at the time when the

¹ Defence properties includes air wings, ports, underground facilities, command posts, barracks, training facilities, offices, storage facilities, land and training areas.

² Ordinance containing instructions for the Swedish Fortifications Agency (2007:758)

³ Appropriation directions for the Swedish Agency for Defence Analysis, 2024.

assignment was allocated. This limit was raised to SEK 200 million in the spring of 2024.

The Swedish Fortifications Agency is responsible for both an open and a closed portfolio. The closed portfolio refers to the fortifications and facilities of the wartime organisation, while the open portfolio usually refers to the infrastructure within the basic organisation. MTFA has chosen to analyse investments in the open portfolio. The main reason for this is that considerations in respect of confidentiality and security protection make it difficult to analyse the closed portfolio. In practice, this is also a prerequisite for this report to be made publicly available.

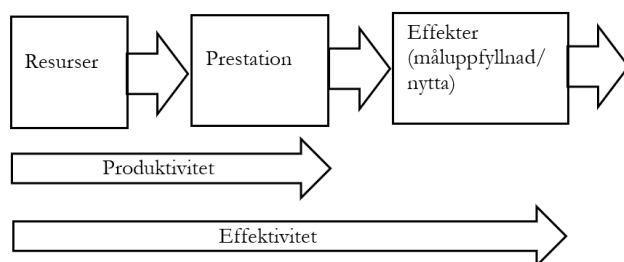
Both the open and the closed portfolio are included in the overall concept of defence properties, but are normally referred to as infrastructure. We use both of these terms in the report.

1.2 About efficiency

The assignment includes the terms ‘cost-effectiveness’ and ‘investment appraisals’. At a general level, these concepts are related to efficiency. How we have used these and related terms in the report is set out in the following section.

At the heart of the concept of **efficiency** is goal attainment; to be efficient, it is necessary to achieve specific goals. Goals may relate to outputs achieved within an organisation, or effects achieved outside the organisation. This is referred to as **internal** and **external** efficiency, respectively (see Figure 1) and is often described as ‘doing things right’, or ‘doing the right things’. Internal efficiency corresponds to productivity.

Figure 1: Simplified illustration of internal and external efficiency.



Source: Based on The Efficient State, Swedish Agency for Public Management 2012.

In the report, MTFA distinguishes between the Swedish Fortifications Agency’s internal and external efficiency. Internal efficiency concerns

outputs over which the agency itself has control, in this case how efficiently the agency plans and implements infrastructure projects. External efficiency concerns the extent to which this infrastructure benefits the Swedish Armed Forces; that is, the extent to which it leads to increased defence capability. External efficiency is influenced by factors such as timing and the effectiveness of coordination with the Swedish Armed Forces and other actors.

Cost-effectiveness

Cost-effectiveness concerns attainment of a given goal at the lowest possible cost.⁴ MTFA has chosen to analyse the cost-effectiveness of the Swedish Fortifications Agency's investments, focusing on the agency's internal efficiency.

Investment appraisals

An investment appraisal is intended to provide an overview of the total costs for an investment so that they can be viewed in relation to the gains provided by the investment.⁵ For public investments, the gain, or benefit, can rarely be valued directly in terms of revenue; instead, some form of societal benefit is involved. In such contexts, the term 'investment appraisal' usually means that only the cost of an investment is calculated; in other words, an investment appraisal is equated with a cost estimate. This is how we use the term in this report, and this is also how the Swedish Fortifications Agency's investment appraisals are created. The role of the Swedish Fortifications Agency in this context is to provide a realistic perception of what an investment costs, so that the Swedish Armed Forces can use this information for planning, prioritisation and decision-making.

1.3 Previous inquiries regarding the Swedish Fortifications Agency

The role and tasks of the Swedish Fortifications Agency have been addressed in a number of different inquiries and reports since the agency was established in 1993. These can be divided into two main themes: inquiries into defence properties, and inquiries into the state as a property owner, lessor and tenant. An initial inquiry as part of the first theme was

⁴ Melese et al. (2017)

⁵ See, for example, National Agency for Public Procurement (2024) SOU 1996:97

published in 1996 as an evaluation of the actual organisation for the management of defence properties.⁶ This was followed in 1997 by an inquiry on forms of cost-effective and operations-oriented management of defence properties.⁷ In 2005, an inquiry considered the issue of what information the Riksdag needs, and when, as well as issues relating to efficient provision of premises.⁸

An inquiry was also published in 1996 on the theme of ‘the state as property owner’. This adopted a holistic approach to what are known as special-purpose properties and the applicable principles⁹ for management and rent setting. This issue was revisited in 2004.¹⁰ Prior to this, in 2000, an analysis was published of conditions and competition between public and private property owners.¹¹ In 2010, an inquiry was then published that proposed measures for more efficient management of the state’s properties.¹²

Both of these themes were subjects of further inquiries; one in 2011 on the state as property owner and tenant,¹³ and the other in 2013 on the future management of defence properties.¹⁴ The first of these proposed a transfer of the Swedish Fortifications Agency’s open portfolio to Specialfastigheter, and a transfer of the closed portfolio to the Swedish Armed Forces. This idea subsequently went on to form a key theme of the later inquiry, which looks at the economic consequences of closure of the Swedish Fortifications Agency, and the handling of these consequences. It should be noted that this inquiry was conducted at a time when it was assessed that many of the Swedish Fortifications Agency’s properties were no longer needed for defence purposes and could be sold on the private market. The inquiry also introduced a new financial model, including the approach used to calculate the required rate of return.

Since the 2015 defence decision, analyses of the Swedish Fortifications Agency’s investment activities have been carried out by the Swedish National Audit Office¹⁵, the Swedish National Financial Management

⁶ SOU 1996:97

⁷ SOU 1997:144

⁸ SOU 2005:7

⁹ SOU 1996:187

¹⁰ SOU 2004:28

¹¹ SOU 2000:117

¹² SOU 2010:92

¹³ SOU 2011:31

¹⁴ SOU 2013:61

¹⁵ Swedish National Audit Office (2018)

Authority¹⁶ and the Swedish Defence Research Agency¹⁷. These have addressed the management of cost overruns, consistency in financial reporting and performance reporting between the Swedish Fortifications Agency, the Swedish Defence Materiel Administration and the Swedish Armed Forces,¹⁸ and an analysis of the criteria for rapid infrastructural growth between 2021 and 2030.

1.4 Research questions

MTFA has broken down the assignment into three research questions:

1. To what extent are the Swedish Fortifications Agency's investments in major new construction and refurbishment cost-effective?
2. To what extent does the Swedish Fortifications Agency's investment plan help to strengthen the operational capability of the Swedish Armed Forces and to enable the Swedish Armed Forces to grow at the pace set out in the government decision *Inriktning för Försvarsmakten 2021–2025*?
3. What criteria does the Swedish Fortifications Agency apply when prioritising investments?

The second question can be answered in two different ways; either by assessing how the individual items in the investment plan help to increase defence capability¹⁹, or by assessing whether the process for developing and implementing the investment plan is efficient and appropriate. Both questions are addressed in the report, but we focus primarily on the latter. The reason for this is that the contribution of an individual investment item to increased defence capability is dependent on other factors, such as the procurement of materiel and personnel growth. This means that coordination and timing are crucial, which in turn requires effective processes for planning and prioritisation.

1.5 Method and implementation

MTFA has analysed the various phases for planning and implementation of major new construction and refurbishment projects. We have based our work on the investment items in the Swedish Fortifications Agency's

¹⁶ Swedish National Financial Management Authority (2022)

¹⁷ Swedish Defence Research Agency (2021)

¹⁸ Swedish National Financial Management Authority (2022b)

¹⁹ The term 'increased defence capability' is discussed in section 2.2.

investment plan for 2024–2026 and the associated documentation in the agency’s project database and register.

The analysis focuses on the cost estimates made prior to investment decisions, and also on the process for project planning and implementation. As part of this work, MTFA has analysed the division of responsibilities between the Swedish Fortifications Agency and the Swedish Armed Forces in terms of infrastructure supply and the agencies’ internal steering documents.

The report is also based on an analysis of documents such as instructions, appropriation directions, budget documentation, the investment plan for defence materiel and facilities, annual reports and the agencies’ documentation prior to the defence decision.²⁰

MTFA has conducted a number of interviews and discussions as part of the assignment. These have essentially covered two categories:

- Individuals at various management levels at the Swedish Fortifications Agency and the Swedish Armed Forces, with a view to gaining a broad overview of how infrastructure projects are planned, prioritised and implemented.
- Representatives of the Swedish Defence Research Agency, the National Defence Radio Establishment, the Swedish National Financial Management Authority, the Swedish National Audit Office and Specialfastigheter. The purpose of these interviews was to provide perspective on the assignment’s research questions and place them in a wider context.

The work was carried out by a project team at MTFA. Representatives of the Swedish Fortifications Agency and the Swedish Armed Forces were offered the opportunity to fact-check a draft of the report. Our Scientific Advisory Board provided comments throughout the project. MTFA has had access to information covered by the Swedish Public Access to Information and Secrecy Act (2009:400) during the work. The report contains only publicly available information.

²⁰ Överbefälhavarens militära råd [the Supreme Commander’s military recommendation] (2022) and the Swedish Armed Forces’ revised material for forthcoming defence decisions (2023), as well as the Swedish Armed Forces’ new budget documentation for 2025.

1.6 Structure

The report is structured as follows.

Chapter 2 addresses the role of infrastructure in the growth of military defence, as well as the tasks of the Swedish Fortifications Agency and the Swedish Armed Forces.

Chapter 3 describes the process for investments in major new construction and refurbishment projects, including how the Swedish Fortifications Agency assesses costs for such projects.

Chapter 4 includes an analysis of the assignment's three research questions, including the cost-effectiveness of the Swedish Fortifications Agency's investments.

Chapter 5 brings the report together with conclusions and proposals for alternative courses of action, and also answers the three questions in the government assignment.

2. The role of infrastructure in the growth of military defence

This chapter describes the changing role and growth of military defence before then going on to explain what is meant in this report by increased defence capabilities. The chapter then goes on to describe the Swedish Armed Forces' process for increasing defence capability. Finally, we describe the Swedish Fortifications Agency's responsibilities and how the agency contributes to and is affected by the growth of defence.

2.1 Military defence is undergoing strong growth

The growth of Sweden's military defence began with the 2015 defence decision. The military defence was once again tasked with defending Swedish territory, having been an expeditionary defence primarily intended for operations abroad since the early 2000s.

It was established through the 2020 defence decision that the primary task of the military defence – defending Sweden against armed attack – would constitute the dimensioning point of departure for all agencies with military defence responsibilities. The decision also included an overall goal for total defence and another for military defence,²¹ to which all defence agencies²² are required to contribute.

In October 2024, the government proposed goals and direction for the military defence in Government Bill 2024/25:34 *Totalförsvaret 2025–2030*. The need to rapidly strengthen the defence is emphasised in this Bill. The government also highlights the need for the defence agencies to continue developing collaboration, a holistic approach and coordination of operational plans in the field of infrastructure in order to achieve growth and increased operational capability, and notes that the Swedish Fortifications Agency's activities are of major importance for growth in the defence area in general.

²¹ Prop. 2020/21:30, Bet. 2020/21FöU4, Rskr. 2021/21:133–136.

²² In this report, the term 'defence agencies' refers to the Swedish Armed Forces, the Swedish Fortifications Agency, the Swedish Defence University, the Swedish Defence Materiel Administration, the National Defence Radio Establishment, the Swedish Defence Research Agency and the Swedish Defence Conscription and Assessment Agency.

As a NATO member, Sweden must be able to make its territory available, including by serving as a staging and basing area for allied land, naval and air forces and by providing supply and transit areas for allied forces.²³ Sweden must have the capability to support allied military operations on Swedish territory, which also includes infrastructure-related measures. The Swedish Armed Forces' military bases are important for the practical support of allied forces on Swedish territory. NATO membership may therefore entail a need for infrastructure-related measures on the basis of the demands that NATO may place on Sweden.

2.2 What is increased defence capability?

The Swedish Armed Forces have a basic organisation and a wartime organisation. The basic organisation is responsible for basic readiness and the production of wartime units.²⁴ In the event of heightened preparedness, the Swedish Armed Forces transition to a wartime organisation.

In December 2020, the government adopted the decisions *Inriktning för Försvarsmakten 2021–2025* [Direction for the Swedish Armed Forces 2021–2025] and *Försvarsmaktens operativa förmåga och Försvarsplanering 2021–2025* [The Swedish Armed Forces' operational capability and defence planning 2021–2025].²⁵ These decisions set out the goals for the Swedish Armed Forces' operational capability, as well as specifying how the Swedish Armed Forces' wartime organisation and basic organisation are to be developed during the period. The wartime organisation is to be gradually organised, staffed and equipped, and to undergo collective training up to 2030. The basic organisation is to be developed through the re-establishment of six new organisational units.²⁶ Some of these are to reach full capacity by 2025, others by 2030.

Defence capability is built up by the Swedish Armed Forces in collaboration with other defence agencies. Infrastructure, together with personnel and

²³ Prop. 2024/25: 34.

²⁴ The basic organisation consists of standing wartime units as well as organisational units for training and development, in order to maintain territorial integrity and conduct operations, as well as maintaining readiness and preparing for mobilisation of the wartime organisation.

²⁵ *Inriktning för Försvarsmakten 2021–2025*, regeringsbeslut 30, 17 December 2020. More detailed goals are set out in *Försvarsmaktens operativa förmåga och försvarsplanering 2021–2025*, regeringsbeslut 4, 17 December 2020.

²⁶ Norrlands dragonregemente (K 4) in Arvidsjaur, Älvsborgs amfibieregemente (Amf 4) in Gothenburg, Upplands flygflottilj (F 16) in Uppsala, Bergslagens artilleriregemente (A 9) in Kristinehamn, Dalregementet (I 13) in Falun and Västernorrlands regemente (I 21) in Sollefteå, plus the training detachment in Östersund.

materiel, is a fundamental prerequisite for creation of military capability.²⁷ Growth and the increasing demand for operational capability mean that the development of organisation, personnel, materiel and infrastructure needs to take place in a coordinated manner.

In this report, increased defence capability refers to the effects of the Swedish Armed Forces' implementation of what is set out in the government decisions, with the support of the defence agencies.

2.3 The Swedish Armed Forces are responsible for defence capability

The following section provides a general description of how the Swedish Armed Forces work to increase defence capability, with emphasis on the supply of infrastructure.

2.3.1 The Swedish Armed Forces' process for developing capability

The Swedish Armed Forces implement the government's direction decisions, which results in *Försvarsmaktens strategiska plan* [the Swedish Armed Forces strategic plan]. This sets out how the agency is to work in order to meet the government's defence capability and growth requirements during the defence decision period. The strategic plan includes the direction for the development of the wartime organisation and the basic organisation. The plan also includes tasks for the heads of the service branches on which wartime units and basic organisational units they should develop and maintain. The service branches are responsible for the provision of personnel and materiel for these. The Swedish Armed Forces also intend to assign the service branches responsibility for the provision of infrastructure.²⁸

In addition to the strategic plan for how the agency is to implement the defence decision, *Försvarsmaktens genomförandeplan* [the Swedish Armed Forces' implementation plan] is compiled each year. It contains assignments and resources for the heads of the service branches. This plan deals with the financial management of the agency. It also includes forecasts for the agency's costs for infrastructure and other aspects. The work also includes preparing the Swedish Armed Forces' investment plan for defence materiel.

²⁷ Prop. 2024/25: 34 p. 103.

²⁸ Redovisning av regleringsbrevsuppdrag avseende effektiva och ändamålsenliga arbetssätt och processer, 4 November 2024, FM2024-4113:34, FortV4916/2024, 24FMV5745-1.

The Swedish Armed Forces report annually on the progress made in increasing defence capability.²⁹

2.3.2 Many units have different responsibilities for infrastructure provision

The Swedish Armed Forces have several management levels. The central management level comprises Headquarters and the service branches.³⁰ The service branches comprise the Army, the Navy and the Air Force. The four Military Regional Headquarters constitute the regional management level. The local management level comprises garrisons and organisational units within the basic organisation. The Swedish Armed Forces Defence Staff at Headquarters, service branches, garrisons and organisational units all have different responsibilities in respect of infrastructure provision.

2.3.3 The work of the Swedish Armed Forces in respect of infrastructure requirements

The Swedish Armed Forces' infrastructure needs are based on the strategic plan, implementation plans and discussions with service branches, organisational units and garrisons. The responsibility of the actors for infrastructure is set out in the Swedish Armed Forces' rules of procedure.³¹

For infrastructure provision, a more detailed description of responsibilities and tasks is also regulated in *Beslut om direktiv påverkansområde infrastruktur* [*Decision on terms of reference for the infrastructure impact area*].³² This document provides a starting point for the Swedish Armed Forces' internal work. However, the document was adopted in 2022 and so does not fully reflect the organisation and allocation of responsibilities that came into force on 1 January 2023.

The Swedish Armed Forces Defence Staff Support Unit is responsible for the development, procurement, maintenance and decommissioning of infrastructure. This work is carried out at the Infrastructure Division, which in turn leads the four Local Planning Units (LPLEs) which are located within the military regions.³³ The LPLEs are the function that coordinates organisational units, service branches and garrisons in matters relating to

²⁹ Appropriation directions for the 2024 financial year for the Swedish Armed Forces.

³⁰ Alongside the service branches, there are also the command, logistics and cyber functions (also referred to as combat forces).

³¹ Försvarsmaktens arbetsordning, FIB 2024:4.

³² Beslut om direktiv påverkansområde infrastruktur (2022).

³³ Local Planning Unit North (Boden), Local Planning Unit West (Göteborg), Local Planning Unit South (Karlskrona) and Local Planning Unit Central (Solna).

infrastructure. In particular, the LPLEs examine whether infrastructure needs can be met within existing premises before the matter of procurement is pursued further.

In turn, the heads of the service branches produce an implementation plan for their own organisational units. Within their respective service branches, they are responsible for developing and maintaining capability, availability and preparedness for wartime units, as well as basic organisational units. This responsibility also includes coordinating the supply of personnel, materiel, land, facilities and premises.

Garrisons are responsible for coordinating organisational units and certain activities within a geographical area, such as the allocation of premises within the garrison's geographical area.

The Swedish Defence Materiel Administration provides technical installations on behalf of the Swedish Armed Forces. For the Swedish Fortifications Agency, this means that there also needs to be coordination with the Swedish Defence Materiel Administration during the implementation process.

2.4 Swedish Fortifications Agency tasks

The following section describes the tasks and responsibilities of the Swedish Fortifications Agency, and how the agency is expected to contribute to the build-up of military defence.

2.4.1 The Swedish Fortifications Agency is responsible for defence properties

The Swedish Fortifications Agency is an agency responsible for managing properties intended for defence purposes, known as defence properties. The Swedish Armed Forces do not own any properties of their own, but lease them from the Swedish Fortifications Agency. The Swedish Fortifications Agency has to manage these defence properties in such a way that sound resource management and a high level of cost efficiency are achieved within the portfolio. Moreover, the Swedish Fortifications Agency has to work on behalf of the government to carry out new construction and refurbishment of real property and acquire real property on behalf of the state. The assignment also includes carrying out fortification development work in

order to develop and safeguard skills that meet society's needs in respect of protective and construction engineering.³⁴

The Swedish Fortifications Agency's appropriation directions state that the agency is to contribute to the attainment of the overall goal for total defence and the goal for military defence. This involves assisting the Swedish Armed Forces in matters relating to the provision of premises. This means that the agency's management of properties intended for defence purposes, and the development of this portfolio, must be appropriate for total defence needs. The property portfolio is to strengthen the operational capability of the Swedish Armed Forces.

2.4.2 The Swedish Fortifications Agency is affected by the growth of defence

The urgent and extensive growth in military defence taking place at the present time has altered the conditions under which the Swedish Fortifications Agency operates. Its activities previously involved managing the existing property portfolio for the most part, but they now include rapid growth and major investment as well.

The importance of infrastructure for the growth of defence is addressed in the 2020 defence decision and should, according to the government, be reflected in the steering of the defence agencies, including the Swedish Fortifications Agency. Furthermore, in its report *Stärkt försvarsförmåga* [Reinforced defence capability] (Ds 2024:6), the Committee on Defence emphasises the fact that infrastructure is important for the expansion of the Swedish Armed Forces' basic organisation resulting from the defence decision. According to the Committee on Defence, time should be one of the most important assessment criteria when establishing new basic organisational units. Key factors for rapid expansion of infrastructure, according to the Committee on Defence, include:

- the importance of the Swedish Armed Forces maintaining close cooperation with the Swedish Fortifications Agency, as well as the counties and municipalities concerned
- when selecting the establishment and design of new infrastructure, the Swedish Armed Forces and the Swedish Fortifications Agency should endeavour to avoid losing time as a result of processes relating to planning and building permits and environmental assessments

³⁴ Ordinance containing instructions for the Swedish Fortifications Agency (2007:758).

- ensuring that the Swedish Armed Forces involve the Swedish Fortifications Agency in the planning work, and that orders are placed as early as possible
- the importance of the Swedish Armed Forces coordinating the planning of material procurement operations and personnel changes with infrastructure needs
- use of standardised building types and similar solutions.³⁵

The Committee on Defence also stresses the importance of the government's ongoing efforts to amend regulatory frameworks so that lead times can be shortened.

2.5 The Swedish Fortifications Agency is funded by fees

Swedish Fortifications Agency operations are funded by fees. This means that costs for the operation and maintenance of properties, new construction and refurbishment, as well as the Swedish Fortifications Agency's own activities, are funded primarily by charging rent to the agency's tenants. The Swedish Fortifications Agency determines the rent levels on the basis of calculated full costs. Depreciation, instalments and interest charges on loans are included in the capital component of the rent. Rental income makes up the bulk of the agency's funding.

The Swedish Fortifications Agency mainly funds investments in the open portfolio with loans from the Swedish National Debt Office. The government sets a borrowing limit on the basis of the proposed investment plan submitted by the Swedish Fortifications Agency for the new construction and refurbishment of defence properties.

2.5.1 Required rate of return on Swedish Fortifications Agency investments

The Swedish Fortifications Agency, like other state property managers, is subject to a required rate of return.³⁶ This was introduced in 1991 when the government's guidelines for state property management were established. These guidelines specify that state investments in property should generate returns in the same way as other capital investments. Failure to do so effectively erodes the value of the investment.³⁷ Since 2016, the required rate

³⁵ Ds. 2024:6, pp. 163–165.

³⁶ For property companies, a goal and an assignment to generate returns are set out in the state's ownership policy.

³⁷ Prop. 1991/92:44.

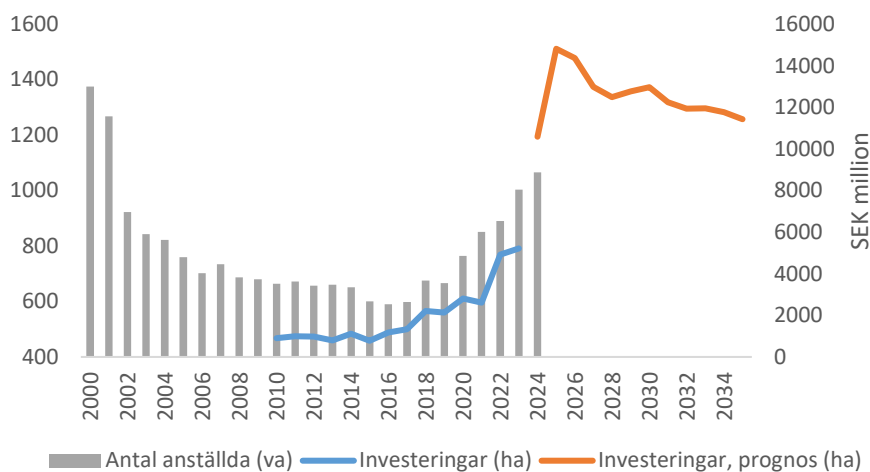
of return for the Swedish Fortifications Agency has been based on a percentage determined annually and indicated in the appropriation directions. For 2024, this figure was 3.62 per cent on 30 per cent of the agency's average loan portfolio for public sector investments at the Swedish National Debt Office.³⁸

2.6 Swedish Fortifications Agency undergoing growth

The fact that the need for investments in defence properties is increasing due to the growth of military defence will continue to have a major impact on the Swedish Fortifications Agency over the next five to ten years. This is illustrated in Figure 2, which shows the Swedish Fortifications Agency's annual investments in defence properties between 2010 and 2023, as well as projected investments for 2024 to 2035. The number of staff employed by the agency between 2000 and 2024 is also shown.

The figure shows that after a prolonged period of declining activity, reflected in a shrinking workforce, the pace of investment picked up again from 2016. The number of employees also increased as a result. Investments tripled in real terms between 2016 and 2023. The Swedish Fortifications Agency forecasts that annual investments will more than double between 2023 and 2026, and then decrease again.

Figure 2: Number of employees at the Swedish Fortifications Agency and realised and forecast investments.



Source: Processing of data from the Swedish Fortifications Agency and the Swedish Agency for Government Employers.

³⁸ Appropriation directions for the Swedish Fortifications Agency, 2024.

3. The process for investment in infrastructure

This chapter describes the responsibilities of the Swedish Fortifications Agency and the Swedish Armed Forces in the process for investments in major new construction and refurbishment projects. It then presents estimated costs and time needed during the project processes.

3.1 Allocation of responsibilities between agencies

The process for infrastructure investments is normally divided into phases that describe who is responsible for what. For the purposes of this report, the following three phases are used throughout:

- planning
- project design
- implementation.

The allocation of responsibilities between the Swedish Armed Forces and the Swedish Fortifications Agency is set out in a main agreement from 2007 and in a number of supplementary agreements.³⁹ Regarding the procurement of defence properties, the agencies signed a supplementary agreement on the allocation of responsibilities in 2008. This states that the procurement needs were to be based on the Swedish Armed Forces' development plan, the materiel plan and discussions with units and schools. It also states that the Swedish Armed Forces must provide the Swedish Fortifications Agency with the established property plan and facilities plan each year, and that the Swedish Fortifications Agency's investment plan has to be developed on the basis of the Swedish Armed Forces' development plan.

The supplementary agreement states that the agencies must always endeavour to minimise costs, and to test and present alternative and flexible solutions. Procurement is carried out when needs arise that cannot be met within existing infrastructure.

Procurement of infrastructure normally begins when the Swedish Armed Forces prepare a statement of requirements. This is usually done at an organisational unit, but it may also arise as a result of decisions on defence growth. Besides the assessment compiled by the garrison and the LPLE of

³⁹ See Appendix 1: Schematic view of the procurement process.

whether the need can be met within existing premises, initial planning takes place first, followed by a more in-depth study that results in a needs assessment. This includes a needs analysis, and – later – a needs specification as well. The Swedish Fortifications Agency contributes to these by producing cost estimates based on the information available. The Swedish Armed Forces' order to the Swedish Fortifications Agency is placed by an LPLE.

Responsibility is then transferred to the Swedish Fortifications Agency, which is responsible for project design, procurement, construction and installation. The procurement process begins when an LPLE orders a preliminary investment agreement from the Swedish Fortifications Agency. The LPLE represents the Swedish Armed Forces and checks that project design work is carried out in accordance with the requirements in the needs specification. Any amendments to time, cost or function are dealt with by the LPLE, or escalated by means of a special procedure so that a decision can be made. The LPLE is also responsible for coordination between the Swedish Fortifications Agency and the contractor, and for coordination with the Swedish Defence Materiel Administration, which carries out technical installations.

When the implementation phase is complete, the Swedish Fortifications Agency is responsible for submitting a final report to the Swedish Armed Forces on the financial outcome and explanations for any deviations. A compensation calculation and a lease agreement are then drawn up, in accordance with what is set out in the agencies' rental model. It is at this stage that rent starts to be charged.

Additionally, the Swedish Fortifications Agency needs to submit a request for a government decision in the case of investments exceeding SEK 200 million, which in itself may involve a process lasting several months.

3.2 The investment plan for defence properties

The Swedish Fortifications Agency is the state's owner representative for defence properties, and as such is tasked with producing a proposal for an investment plan for defence properties. This plan usually covers the next three years and has to be broken down into investment items or groups of investment items, and covers both new investments and refurbishments.

The Swedish Fortifications Agency submits an annual investment plan to the government as part of its budget documentation. This plan includes projects ordered or expected to be ordered by the agency's clients. The appropriation

directions for 2023 also introduced a requirement to present an expanded investment plan. This is to be linked to the Swedish Armed Forces' twelve-year investment plan for defence materiel. The agency has to present an update of the plans, known as a deviation report, in June each year.

We have analysed major projects in the 2024–2026 investment plan. There are around 45 investment items in total. In the investment plan, however, the Swedish Fortifications Agency has grouped these into 20 projects.⁴⁰ Half of the projects were completed shortly before or during the preparation of the report, while the remainder are ongoing. The investment plan includes investment items and calculated financial data based on the Swedish Fortifications Agency's cost estimates.

3.3 The Swedish Fortifications Agency's cost estimates

The Swedish Fortifications Agency estimates costs in several stages during the planning and project design phases of new projects. At an early stage, the agency makes assessments at a more general level, based on a description of needs provided by the Swedish Armed Forces. After that, the level of detail in the Swedish Armed Forces' order increases. The Swedish Fortifications Agency translates this into a more detailed plan specifying the type of premises, number of square metres, technical requirements, and so forth. A cost estimate is then produced.

MTFA has reviewed examples of cost estimates that form the basis for the investment agreement signed by the Swedish Fortifications Agency with the client before procurement commences. The estimates are based on a detailed breakdown of costs in terms of materials and labour. The calculation is based on previous experience if this is possible; otherwise, it is compiled from scratch. In this respect, we understand that the Swedish Fortifications Agency works according to the same methodology as other construction industry actors. The Swedish Fortifications Agency has also emphasised that many newly appointed project managers and people who prepare cost estimates come from the construction industry, which has resulted in an enhancement in expertise.

Besides a detailed breakdown of costs in terms of materials and labour, a cost estimate includes mark-ups for uncertainties and project design costs.

⁴⁰ Note that the investment items that form part of larger projects in some cases do not individually need to reach amounts of SEK 75 million or more.

- An estimate of the costs of alterations, additions and withdrawn work (known as ÄTA in Swedish – ändringar, tillägg och avgående arbeten) ordered during construction. The mark-up applied by the Swedish Fortifications Agency is typically 15 per cent.
- Uncertainties concerning market conditions and price developments during construction. This mark-up can be viewed as an experience-based value applied by the Swedish Fortifications Agency. The mark-up is typically 15 per cent.
- The Swedish Fortifications Agency then adds a mark-up for project design costs corresponding to about 13 per cent of the total estimated construction cost.

Dealing with changes and other uncertainties is standard in the industry, although the mark-ups for these may vary.

This type of cost estimate is prepared for two main purposes. One is to provide the commissioning body with a realistic idea of what an investment is expected to cost. This enables the Swedish Armed Forces to plan and allocate resources effectively. The other is to ensure that the Swedish Fortifications Agency has a good idea of what constitutes a reasonable cost for the project before a procurement procedure is initiated.

The mark-ups calculated provide a buffer that the project manager can draw upon if necessary.

3.4 Cost estimates and time needed during the phases

MTFA has used the Swedish Fortifications Agency's project database to review and compile data for the 45 or so investment items in the sample. Working on the basis of the documentation available in the project database, MTFA has compiled the estimated costs and time needed for the projects. These are set out in Table 1 below.

Table 1. Change in forecast cost and time needed in the various phases.⁴¹

⁴¹ The development of cost estimates is presented in fixed amounts for the planning and project design phase, adjusted for changes in the construction cost index. An average across investment items has been calculated in this phase. Development is recognised in running costs for the implementation phase. An average across projects has been calculated in this case, with some projects comprising several investment items. The reason for this is that the government decisions made before the implementation phase are made at the project level.

	Planning and project design phase			Implementation phase
	Needs analysis□ -> Needs assessment	Needs specification□ -> Preliminary□ inv. agreement	Preliminary inv. agreement□ -> Final inv. agreement	Final civil service contract□ -> Access
Number of investment items per□ project	8	13	27	7
Cost estimate	+9%	+2%	+16%	-1.5%
Time needed	18 months	10 months	21 months	27 months

Source: MTFA's processing of the Swedish Fortifications Agency's project data and Statistics Sweden's construction cost index.

It should be emphasised that the statistical basis for Table 1 is limited, which means that the results should be viewed as indicative.

There is an average cost increase of nine per cent from the needs analysis to the needs assessment. From the needs specification to the preliminary investment agreement, more detailed calculations are made on the basis of detailed needs presented by the Swedish Armed Forces. On average, the cost of the projects reviewed by MTFA increases by two per cent in this phase, and the work takes ten months on average.

Projects transition from a preliminary to a final investment agreement in the final stage of the planning and project design phase. The biggest changes in cost estimates occur at this stage, which MTFA believes to be explained by the fact that this is the point at which projects are finalised. There is considerable flexibility to adapt the project as needed before the final investment agreement is signed. With the agreement, the project now needs to be fixed; which means that trade-offs have to be made between the external and the internal environment. The average time from preliminary to final investment agreement is just under two years, and the cost increases by 16 per cent on average.

Based on existing overviews, MTFA notes that the process from needs specification to final investment agreement takes approximately 2.5 years. During this phase, the cost estimate in fixed amounts increases by an average of 15 to 20 per cent. Furthermore, we observe that the implementation phase takes just over two years on average. The final cost at this stage is slightly lower than estimated on average.

3.4.1 External factors affecting construction costs

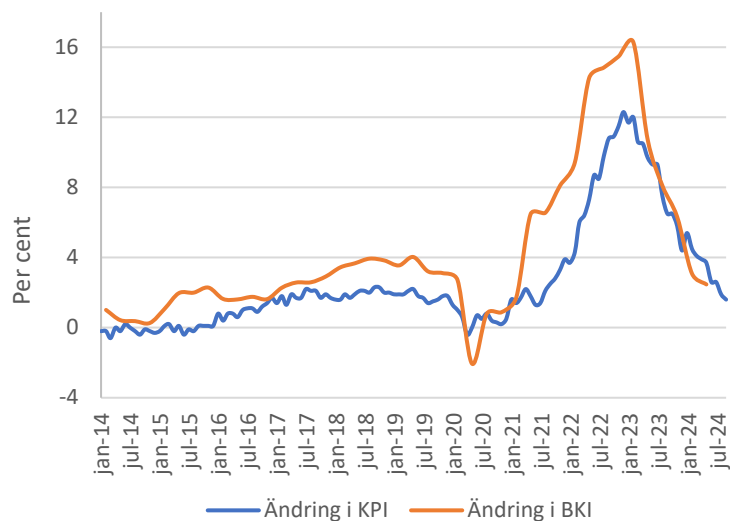
As the Swedish Fortifications Agency is growing and investments are increasing, inflation in construction costs and interest rates has increased. Price developments have increased significantly since 2020, particularly in the construction industry. The construction cost index reflects price developments for construction costs such as building materials, wages and machinery. The construction cost index increased by 13 per cent in 2022, and by 10 per cent in 2023. The evolution of the construction cost index and the consumer price index is shown in Figure 3.

The interest rate is another factor that has affected the Swedish Fortifications Agency's costs. The Swedish Fortifications Agency takes out loans from the Swedish National Debt Office for new construction and refurbishment. The interest rate at the Swedish National Debt Office was zero for a period. From mid-2022 onwards, the interest rate rose gradually and stood at just over four per cent in December 2023.⁴²

Figure 3: Year-on-year change in the construction cost index and the consumer price index. ⁴³

⁴² The Swedish Fortifications Agency's annual report for 2023.

⁴³ Change in the construction cost index is calculated on a quarterly basis as the percentage difference compared with the same period in the previous year. The change in the consumer price index is calculated in the same way, on a monthly basis.



Source: Data from Statistics Sweden, processed by MTFA.

Both the construction cost index and the interest rate have increased the Swedish Fortifications Agency's costs. The agency's costs are to be charged to the client under the cost price principle in the rental model. The Swedish Armed Forces' infrastructure costs have increased as a result.

4. The efficiency of the Swedish Fortifications Agency's investments

In this chapter, MTFA analyses the cost-effectiveness of the Swedish Fortifications Agency's investments. We then analyse the collaboration between the Swedish Armed Forces and the Swedish Fortifications Agency and the investment plan's contribution to increased defence capability. Finally, we discuss the criteria applied by the Swedish Fortifications Agency when prioritising investments.

4.1 Cost-effectiveness of the Swedish Fortifications Agency's investments

This section analyses the cost-effectiveness of the Swedish Fortifications Agency's investments. The analysis is based on the evolution of costs and time needed in the planning, design and implementation phases.

4.1.1 Cost developments during the procurement process

Cost estimates increase during the planning and project design phase. There are several possible reasons for this. One is what is known as requirement creep, where requirements change during the planning process. Another reason may be that the requirements specification becomes more specific when new or unforeseen circumstances have arisen in the planning and have been taken into account in the cost estimate. Costs may increase as a result, but this is a natural part of the cost estimate compilation process. Finally, price developments have been strong in recent years, as shown in Figure 3.⁴⁴

Several of the people we interviewed stress the importance of commissioning bodies and providers understanding one another's supporting material and needs. If the provider does not have a clear understanding of what the commissioning body is requesting, or – conversely – if the commissioning body is unable to interpret the provider's cost estimates, this may result in delays or cost overruns. We have been in contact with a representative of Specialfastigheter, who believes that the scope of projects, and hence the estimated cost, often grows rapidly in instances where planning is rushed. Therefore, it is important for sufficient

⁴⁴ See section 3.4.1.

time to be allowed for the planning phase so that commissioning bodies and providers understand one another.

The average cost increase from the preliminary investment agreement to the final investment agreement, as shown in Table 1⁴⁵, is 16 per cent. The average value is affected by the fact that some projects have experienced substantial cost increases of 70–100 per cent. MTFA assesses that in one case, this was due to shortcomings in meeting the requirements, which meant that the process had to be repeated. Another case involved a technically complex new construction project for which there was no prior experience to draw on.

The cost increase is limited during the implementation phase, which indicates that the cost assessment made by the Swedish Fortifications Agency in connection with the final investment agreement is accurate in relation to the actual outcome.

4.1.2 Time needed in the various phases

As regards the time needed for the various phases, the following observations can be made on the basis of the current analysis. In the step from the preliminary investment agreement to the final investment agreement, a project design phase is implemented for which the Swedish Fortifications Agency is responsible, but which takes place in dialogue with the Swedish Armed Forces. The average time span for this phase is 21 months. In several of the interviews, this has been described as being a relatively long time, although the reasons for this are unclear. MTFA has formed the view that the Swedish Armed Forces are currently delaying the placement of orders. The Swedish Armed Forces point out that this may have something to do with the fact that projects sometimes have to be deprioritised depending on other needs in the agency's planning. The decision to proceed to procurement and construction is made by the Swedish Armed Forces. It has also emerged that there have been bottlenecks in the Swedish Fortifications Agency's management in respect of access to work sites with adequate security protection.

The implementation phase – procurement and construction, that is – takes 27 months on average. MTFA has found no official statistics with which to compare this. A survey by Dagens Nyheter concerning multi-dwelling buildings indicates that it takes 21 months from the time the building permit

⁴⁵ See section 3.4.

becomes legally binding until the building is completed.⁴⁶ This cannot be directly translated to the investments in defence properties that are analysed here. However, MTFA argues that the time needed for construction identified by MTFA in this analysis does not appear to be atypical.

4.1.3 Procurement often requires new permits, which takes time

Agencies' procurement processes are affected by various permit processes. This applies both to locations where new infrastructure is to be established and to the expansion of operations at existing sites. For instance, there are long lead times for the process of obtaining decisions on new or extended environmental permits for new construction and refurbishment.

Procurement is often reliant on permits resulting from the municipal planning and building permit process. There have been examples of ambiguities regarding when a final document should be fixed, and by whom, in relation to what is incorporated into the municipal detailed development plan. There are also ambiguities regarding who has a mandate to represent the project in planning and building permit matters, when these concern details over which the Swedish Fortifications Agency does not have full control. MTFA notes that work is ongoing to review regulatory frameworks with a view to shortening lead times for the permit processes for the Environmental Code⁴⁷ and the provisions of the Planning and Building Act.

⁴⁸

4.1.4 Swedish Defence Research Agency study shows similar results

Our observations regarding major new construction and refurbishment projects point in the same direction as an analysis conducted by the Swedish Defence Research Agency (FOI) for a large number of projects between 2011 and 2021.⁴⁹

The Swedish Defence Research Agency report shows that cost estimates increase significantly during the planning and project design phase, but also that they gradually become more accurate in relation to the final cost.

⁴⁶ Dagens Nyheter (2016)

⁴⁷ Memorandum, Ministry of Climate and Enterprise, Snabbare processer enligt miljöbalken för att stärka det militära försvaret, Dnr KN2024/01391, June 2024. The consultation period for the memorandum ended on 4 October 2024.

⁴⁸ Uppdrag om totalförsvarets intressen vid prövning enligt plan-och bygglagen, Regeringsbeslut V6, 25 May 2022, Fi2022/01727. The National Board of Housing, Building and Planning reported on the assignment in May 2023, Report 2023:19.

⁴⁹ Swedish Defence Research Agency (2024).

During the implementation phase, the estimated cost is relatively close to the actual outcome.

4.1.5 The Swedish Fortifications Agency as a client

MTFA has examined how the Swedish Fortifications Agency works with planning and project design and in its role as a client. The Swedish Fortifications Agency works on the basis of calculation methods and standards that are generally applied in the construction industry.

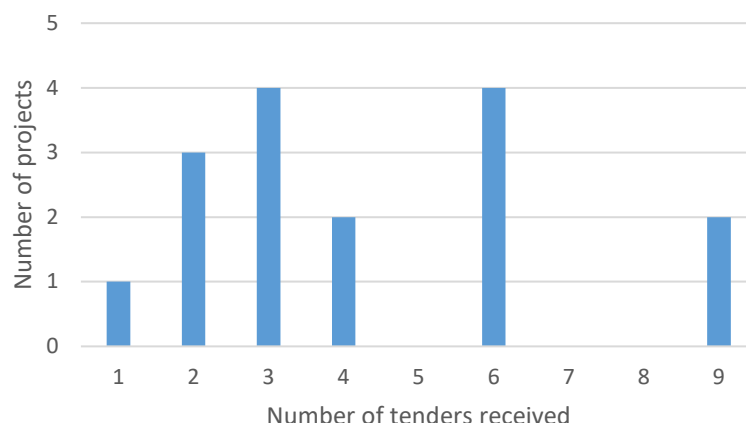
The relationship between client and contractor is largely governed by industry agreements and standards, often at an extremely detailed level. In instances where the Swedish Fortifications Agency adopts the role of client, known as a construction contract, the agency produces construction documents and compiles detailed cost estimates in connection with this. This requires expertise in construction engineering.

MTFA notes that the construction contract was previously the most common form of contract at the Swedish Fortifications Agency. The advantages of choosing a construction contract model are that the Swedish Fortifications Agency has better control over the quality of the work, and also that competition may increase as smaller providers can also submit tenders for various elements. The Swedish Fortifications Agency has increasingly switched to design and construct contracts in recent years, because the number of orders has increased and time is often a critical factor now. Design and construct contracts are usually the quickest solution.

4.1.6 Indications of lack of competition in procurement procedures

Procurement is a key mechanism for achieving cost efficiency. The receipt of sufficient tenders is one indicator of an effective procurement process. The number of tenders in the projects analysed by MTFA varies from one to nine, with an average of 4.3. See Figure 4 below.

Figure 4: Number of tenders per procurement procedure for major projects in the investment plan for 2024–2026.



Source: MTFA’s processing of the Swedish Fortifications Agency’s project data. The data includes the material that was available in June 2024.

According to MTFA, Figure 4 shows that there is a lack of competition in the Swedish Fortifications Agency’s procurement procedures in some cases; although the statistical basis in this instance is limited, and what constitutes a sufficient number of tenders is not clear.

Statistics from the National Agency for Public Procurement for 2022 show that the average number of tenders per public procurement procedure was 4.8, with a median value of 3.⁵⁰ If only one tender was received, this was described as ‘no competition’; or if two were received, it was described as ‘some competition’. According to a 2016 report by the Swedish Association of Local Authorities and Regions, procurement officers in municipalities consider 7–10 tenders to indicate sufficient competition, while fewer than five indicate a lack of competition.⁵¹

Private actors have certain options for delaying construction until the economic situation is more favourable. The Swedish Fortifications Agency has limited opportunities for this, although in some cases it may choose to cancel a procurement procedure if no satisfactory tenders have been received. However, the agency can choose between fixed price and current price contracts in a procurement procedure, and has occasionally procured contracts on a current price basis as a way of keeping costs down by assuming some of the risk.

⁵⁰ National Agency for Public Procurement (2022)

⁵¹ SKL (2016).

4.1.7 The required rate of return creates financial uncertainty

We note that the required rate of return also includes the loans taken out by the Swedish Fortifications Agency for properties that have not been completed or handed over; that is, properties to which the Swedish Armed Forces have not yet gained access. In times of extensive investment, the scope of the required rate of return can be financially onerous. The Swedish National Financial Management Authority's report to the defence property inquiry raised the possibility of excluding loans for unfinished properties from the required rate of return, but this aspect was not included in the inquiry's final proposal.⁵² The Swedish Armed Forces and the Swedish Fortifications Agency have proposed that properties under construction be excluded from the basis for calculating the required rate of return and that the basis for calculation be based on a lower proportion of loans taken out during the period when extensive expansion is to be carried out.⁵³

4.2 The investment plan's contribution to increased defence capability

The fact that the Swedish Fortifications Agency is able to work efficiently with cost estimates, project design and in its role as a client is fundamental to the agency's ability to contribute to the build-up of defence in the best way possible. However, it is also essential for the Swedish Fortifications Agency to have effective collaboration with its commissioning bodies. This is particularly important when producing an investment plan.

4.2.1 The Swedish Fortifications Agency as provider

Our view is that the cooperation between the Swedish Armed Forces and the Swedish Fortifications Agency generally works well within the individual projects. However, there are a number of examples of instances where planning has gone wrong, thereby contributing to increased costs. In some cases, this has involved a lack of coordination between orders for materiel and orders for infrastructure. In other cases, it involved the Swedish Defence Materiel Administration being engaged too late in the process in respect of technical installations.

There are further examples of occasional shortcomings in coordination between the Swedish Fortifications Agency and the Swedish Armed Forces. This may result in cost overruns and the work having to be restarted. The

⁵² Swedish National Financial Management Authority (2013).

⁵³ The Swedish Armed Forces' revised material for forthcoming defence decisions (2023), as well as the Swedish Armed Forces' new budget documentation for 2025.

fact that commissioning bodies and providers understand one another relates to competence in a broad sense, which needs to be present on both sides, and sufficient time has to be provided for the process of developing a requirements specification.

In this context, it should be noted that it often takes time to establish a effective and efficient cooperation on infrastructure investments. This aspects was highlighted by several of the people interviewed by MTFA. The National Defence Radio Establishment has invested heavily in new construction and refurbishment over a number of years. A representative of the agency describes how the cooperation with the Swedish Fortifications Agency was problematic in some respects at the outset, but that it essentially works well now. A representative of Specialfastigheter also emphasises the importance of the commissioning body and the provider understanding one another before proceeding with the procurement procedure.

4.2.2 What does the investment plan comprise?

The Swedish Fortifications Agency is tasked with producing an investment plan. Since the appropriation directions for 2023, the agency has also been required to produce an expanded investment plan.

The Swedish Fortifications Agency's investment plan for 2024–2026 includes agreed investments for major new construction and refurbishment work. This plan therefore represents the sum of orders placed and is not a forecast of future investments.

The expanded investment plan covers tenants' planned investment needs and is to be linked to the Swedish Armed Forces' twelve-year investment plan for defence materiel.

The six re-establishments of regiments and air wings included in the 2020 defence decision are not included in the investment plan for 2024–2026, but are included in the expanded investment plan.

4.2.3 A comparison with materiel procurement

A new governance and funding model for the supply of materiel was introduced in 2019. Among other things, the reform means that the Swedish Armed Forces are responsible for producing a 12-year investment plan for defence materiel, and the Swedish Defence Materiel Administration will then be responsible for conducting procurement procedures on the basis of this. No corresponding review or reform has been undertaken for infrastructure procurement.

Representatives of the Swedish Armed Forces state that the infrastructure procurement process has not been fully incorporated into the agency's capability development process. Instead, some elements are carried out according to working methods that were developed during a period of decommissioning, or when the Swedish Armed Forces' needs largely involved utilisation of existing infrastructure. Several representatives of the Swedish Armed Forces state that there is a need to modernise the process for infrastructure. The agencies themselves put forward proposals in this direction.⁵⁴

4.3 The order in which the investments are implemented

The assignment included analysing the order in which the Swedish Fortifications Agency implements its investments. The Swedish Fortifications Agency does not need to prioritise between different projects, but can generally deal with them in the order in which they are received by the agency. Nor do the Swedish Armed Forces indicate which orders take highest priority.

⁵⁴ Redovisning av regleringsbrevsuppdrag avseende effektiva och ändamålsenliga arbetssätt och processer, 4 November 2024, FM2024-4113:34, FortV4916/2024, 24FMV5745-1.

5. Conclusions and courses of action

This chapter presents our conclusions on the basis of the research questions in the government assignment. We then propose alternative courses of action for the government, the Swedish Fortifications Agency and the Swedish Armed Forces.

5.1 Are the Swedish Fortifications Agency's investments cost-effective?

MTFA assesses that the Swedish Fortifications Agency's investments are implemented with reasonable cost efficiency and good cost control. We base this conclusion on the following assessments and analyses:

- The Swedish Fortifications Agency prepares its cost estimates in a thorough and detailed manner that requires sound industry knowledge.
- The cost estimates prepared by the Swedish Fortifications Agency prior to procurement and contracting are in accordance with industry practice.
- The cost assessment prepared by the Swedish Fortifications Agency based on the final requirements specification and the point at which the final investment agreement is signed generally turns out to be close to the actual cost outturn.
- The Swedish Fortifications Agency is actively working to improve its production of cost estimates.
- The mark-ups applied by the agency do not deviate from what is typical for the industry.

In our opinion, the above observations indicate that the Swedish Fortifications Agency has the ability to assess costs for activities that are characterised by a relatively high level of uncertainty. This uncertainty may involve ground conditions at the construction site, for example, as well as market conditions.

MTFA assesses that in some instances, there is a lack of competition in the procurement procedures conducted by the Swedish Fortifications Agency prior to construction, as fewer tenders are received than would be desirable. This, combined with the fact that the Swedish construction market is characterised by weak productivity growth and, to an extent, weak

competition, may present a challenge for the Swedish Fortifications Agency in terms of achieving cost efficiency. MTFA nevertheless assesses that the Swedish Fortifications Agency, through its expertise and knowledge of the industry, has the ability to take action to minimise costs through procurement. This will be achieved by the Swedish Fortifications Agency selecting the form of contract and the pricing model (fixed or index-linked prices) appropriate in individual cases, and by being prepared to cancel procurement procedures if the tenders received are too high compared with the agency's own estimates.

We argue that the Swedish Fortifications Agency needs to continue developing its internal work. We have noted, for instance, that the Swedish Fortifications Agency does not routinely evaluate completed investment projects. We have also noted that the agency tends to underestimate the cost by 15–20 per cent in the earlier stages of the planning process. MTFA notes that these deviations do not necessarily mean that there are deficiencies in the Swedish Fortifications Agency's estimates; instead, they may also be due to the fact that the dialogue between the Swedish Fortifications Agency and the Swedish Armed Forces fails to function optimally prior to an investment decision.

MTFA notes that the Swedish Fortifications Agency is increasingly making use of design and construct contracts, where all project design and implementation is outsourced to one contractor, instead of construction contracts, where the Swedish Fortifications Agency retains control of the project design process. MTFA assesses that this involves a risk of cost overruns, partly because fewer contractors have the opportunity to submit tenders. It also risks leading to a lower degree of compliance, as the Swedish Fortifications Agency can be assumed to have a better understanding of defence-specific requirements than a private client.

MTFA therefore proposes that the Swedish Fortifications Agency consider the following courses of action:

- Evaluate completed investment projects in order to learn for the future. Do this together with the commissioning body.
- Continue working on developing dialogue with clients, particularly in respect of cost assessments at an early stage, so as to provide them with as realistic a picture as possible in terms of costs.
- Develop a methodology that will allow them to monitor the development of cost-effectiveness and goal attainment in project implementation.

5.2 Does the investment plan provide the best circumstances for contributing to increased defence capability?

The assignment includes analysing the extent to which the current investment plan provides the best circumstances for contributing to increased defence capability. MTFA considers it difficult to provide an unambiguous answer to this question in respect of individual projects. We note that investments are generally preceded by a needs assessment, and that alternatives have been considered. That said, MTFA assesses that the process for producing the investment plan needs to be developed if the plan is to be given the right circumstances for contributing to the development of military defence.

The Swedish Armed Forces, the Swedish Fortifications Agency and the Swedish Defence Materiel Administration are working on behalf of the government to improve working methods and processes between the agencies. MTFA considers that the measures presented by the agencies in order to improve coordinate and increase capability growth are of relevance. However, we believe that further action is needed to achieve coordinated planning of procurement procedures for materiel and infrastructure.

Our analysis also shows that there are circumstances that need to be reviewed in order for the Swedish Fortifications Agency to be given better circumstances for contributing to increased defence capability. We note that the process for infrastructure provision differs from the process for material supply, and consider that infrastructure provision needs to be linked even more closely to the Swedish Armed Forces' planning for capability growth. MTFA assesses that the investment plan for infrastructure needs to undergo further development, given the large investment volumes anticipated. MTFA identifies the following three areas for development in the current investment plan.

1. The investment plan should be developed so that it constitutes a longer-term plan covering both ongoing and planned projects. At present, the Swedish Fortifications Agency is responsible for presenting in its budget documentation an investment plan for infrastructure for the next three budget years, as well as an expanded investment plan that includes an object-based report linked to the Swedish Armed Forces' twelve-year investment plan for defence materiel.

2. Coordination (synchronisation) between infrastructure, materiel and even personnel needs to be developed. This could, for instance, be achieved by dividing the investment plan into phases and groups of investment items so that there is a clearer link to the Swedish Armed Forces' investment plan for materiel, and by ensuring that the investment plan for infrastructure is more clearly based on the Swedish Armed Forces' long-term capability planning, to the extent possible.
3. Lead times from needs specification to investment agreement may sometimes span a number of years. Efficiency gains should be achieved if the Swedish Armed Forces places orders with the Swedish Fortifications Agency as a whole for a geographical area, such as a garrison, to the extent possible.

On the basis of these assessments, we propose that the following courses of action be considered:

- That the government instructs the Swedish Armed Forces, the Swedish Fortifications Agency and the Swedish Defence Materiel Administration to continue to develop coordination (synchronisation) between the supply of materiel, infrastructure and personnel; or alternatively, to consider an annual reporting requirement for these agencies on how they are working to achieve such coordination.
- That the government continues to develop governance so that the investment plan for infrastructure becomes more long-term.
- That the Swedish Armed Forces and the Swedish Fortifications Agency review their collaboration agreements and adapt them to the period of rapid defence build-up that we are currently seeing.
- That the Swedish Armed Forces, to a greater extent, submit consolidated orders, per geographical area or garrison, to the Swedish Fortifications Agency in advance of the presentation of the investment plan.
- That the Swedish Fortifications Agency, in collaboration with the Swedish Armed Forces, continues to develop standard solutions such as typical and reference buildings for more types of premises.
- That the relevant agencies review the allocation of responsibilities for technical installations.

5.3 In what order are investments made?

MTFA notes that the Swedish Fortifications Agency is currently able to implement ordered investments in essentially the order in which they are received. This means that there is currently no need for the Swedish Fortifications Agency to prioritise between projects. We also note that there is no order of priority built into the Swedish Armed Forces' orders, which would imply that all investments can be regarded as having been given the same priority.

However, MTFA argues that the Swedish Fortifications Agency should be prepared to address the issue of prioritisation, as the agency is facing a period of extensive planned investments. We therefore propose that the Swedish Fortifications Agency, together with the Swedish Armed Forces, should consider developing criteria for prioritising between investments, as well as a process for how such prioritisation should take place.

5.4 Review the funding and role of the Swedish Fortifications Agency

In its work on the government assignment, MTFA has also made observations on the Swedish Fortifications Agency's form of funding and tasks that impact the agency's ability to make investments.

5.4.1 The funding model is not adapted to strong growth

The funding model for the Swedish Fortifications Agency was introduced at a time when defence properties were being managed and decommissioned. The situation is different now, with rapid development of military defence and associated needs for infrastructure investments.

Our view is that the funding model works well for the management of an existing portfolio, but that the model has negative consequences for operations during a phase of substantial growth. A rapidly growing loan portfolio and higher loan-to-value ratios on the property portfolio are leading to greater financial uncertainty. The required rate of return has a particular role to play in this respect. It is based on the total loan portfolio, which means that ongoing investments are increasing rents for the existing property portfolio through this mechanism. Moreover, the magnitude of the required rate of return is difficult for the Swedish Fortifications Agency to predict with sufficient precision due to the way in which it is constructed.

Given the new conditions, MTFA argues that there is reason to review the forms of funding for the Swedish Fortifications Agency with a view to ensuring growth at a sufficient pace.

One aspect that should be highlighted in such a review is how the funding model could ensure that the Swedish Fortifications Agency is able to act proactively during planning phases and recruit and train personnel in a manner that allows its activities to increase in a more coordinated fashion with other agencies. Examining whether the growth of military defence would benefit from the Swedish Fortifications Agency being funded by appropriations for certain elements of its activities may also be possible.

5.4.2 The role of the Swedish Fortifications Agency may need to be clarified

If it is desirable for the Swedish Fortifications Agency to have the opportunity to work more actively in the field of strategic infrastructure planning, MTFA assesses that the agency needs to be given better conditions to do so. A number of the courses of action we have presented concern this. The government may also consider whether the Swedish Fortifications Agency's tasks should be clarified in an appropriate manner in order to achieve this.

MTFA argues that as things stand at present, the Swedish Fortifications Agency can primarily be perceived as having a property management assignment. This impression is also conveyed by the agency's instructions. We believe that the government could consider clarifying the role of the Swedish Fortifications Agency as a defence agency, with responsibility for the growth of military defence, in the agency's instructions.

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Appendix 1. Schematic view of the procurement process

