The Architecture Guild

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Enterprise Architecture Framework for Suomi.fi Service Developers

Guide on Best Practices

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Enterprise Architecture Framework for Suomi.fi Service Developers

1 Objectives of the enterprise architecture framework

The enterprise architecture framework for Suomi.fi service developers is a joint public-administration framework that contains best practices, targeted at developers of public services. The aim is to promote digitalisation between different Finnish actors and to support the goal-setting of organisations, the structuring of operating processes, data, applications and technologies and their interoperability. Despite the naming similarity, the framework is a completely separate entity that is not related to Suomi.fi services but has been prepared to support the enterprise architecture work of public administration. There is no legal obligation to apply the framework, and organisations can apply it according to their own needs.

The enterprise architecture framework is maintained on the Suomi.fi for Service Developers website, where it consists of a description of the enterprise architecture framework (this document) and a guide, with its appendices, that supports enterprise architecture work. The guide includes descriptions and examples of good practices observed by the public administration. The guide also presents international architecture frameworks, standards and recommendations, especially from the perspective of how they can be utilised in national enterprise architecture work. The framework is maintained and developed by the architecture guild coordinated by the Digital and Population Data Services Agency.

The objective of the Enterprise Architecture Framework for Suomi.fi Service Developers is to

- compile and share content related to the enterprise architecture of the public administration in a centralised one-stop shop
- help organisations develop their own enterprise architecture and architectural cooperation with other parties
- promote interoperability and provide support for the implementation of the Information Management Act (906/2019), especially the information management model, where the enterprise architecture method is used as the description method

The Enterprise Architecture Framework for Suomi.fi Service Developers and the related support material in particular are regularly updated in accordance with the following principles:

Objective	Description	Justification
Made for a wide range of users	The framework is widely applicable and usable by public administration and its stakeholders – including architectural work as well as technical planning and implementation.	In addition to architects, service providers, development managers, management, researchers, students and administrators of the information management model have been identified as potential users.
Scalable to the operating environment	The framework can also be utilised in change situations and is scalable for the organisation's activities and guidelines. It must also support the implementation of legislative requirements.	The operating environment changes constantly and sometimes the change is highly unexpected. In addition to the Information Management Act (906/2019), there are many other legal concerns that must be taken into account in architectural work.
Intelligible documentation	Clear, concise and visually understandable material is demonstrative and provides support in practical situations.	It is likely that the user organisations of the framework will prepare their own guidelines for its use in architectural work. The more usable the framework, the easier it is to create your tailored instructions and practices.
Up-to-date and consistent	The framework, which is available to everyone, is kept up-to-date, and existing frameworks and practices are taken into account when it is updated.	The use of an up-to-date framework promotes the development of common practices.
Reusable	The framework provides organisations with under-the-hood support for the efficient use of different development plans and materials.	Reusability is a general principle of architectural work and is related to the iteration of larger development entities. For example, a well-prepared plan may benefit the preparation of the next plan of the same type.

2 What is enterprise architecture?

The Enterprise Architecture Framework for Suomi.fi Service Developers is a general presentation of enterprise architecture work, the concepts of which are based on industry standards, frameworks and a glossary compiled by the Digital and Population Data Services Agency's architecture guild[1].

An **enterprise architecture** is the architecture of an organisation or other entity that describes and determines the structure and operations. Enterprise architecture is used to develop the organisation's operations.

An **enterprise architecture framework** is a conceptual structure used for the planning, development, implementation, management and maintenance of enterprise architecture. In enterprise architecture frameworks, architectures are typically structured into business, information, application and technology architectures. These perspectives are examined together with digital security, which is taken into account as an integral part of the organisation's operations. This framework follows the same principle.

The **enterprise architecture method** is used to manage entities in a structured and systematic format so that the current state, target state and changes can be understood and managed on the basis of up-to-date information. The purpose of the enterprise architecture is to describe the link between the goals of the operation and the operating environment. It can be used to identify factors that affect the development of the operation, such as overlapping operational processes, services that do not generate value for the customer as well as shortcomings in information resources, information exchange and technologies. Enterprise architecture is used to develop applications to better support operations, to reduce overlapping functionalities in applications and to optimise costs.

The **enterprise architecture management model** sets responsibilities and practices for the management, steering and maintenance of the enterprise architecture.

Organisations use an enterprise architecture to form an overview of, for example, the elements of digital security and support its development as part of the organisation's strategic, tactical and operational planning. The method can also be used to ensure that digital security is taken into account across the organisation's overall operational development. This approach helps to ensure that digital security is aligned with the organisation's goals and, on the other hand, with the organisation's operational requirements.

An up-to-date enterprise architecture boosts the agility of an organisation and makes change management more efficient. It ensures that the organisation complies with

[1] Enterprise architecture glossary for public administration v. 1.5 (2026). The enterprise architecture guide provides more information about glossary https://kehittajille.suomi.fi/guides/enterprise-architecture/introduction-to-enterprise-architecture/learn-the-principles .

laws and regulations, especially in strictly regulated industries, through support for the implementation of information security and data protection requirements.

Enterprise architecture promotes innovation and the implementation of new technologies, ensuring compatibility with the organisation’s strategic goals. Optimising processes and services through enterprise architecture improves quality and customer satisfaction. Overall, it provides better visibility and control over the organisation’s operations.

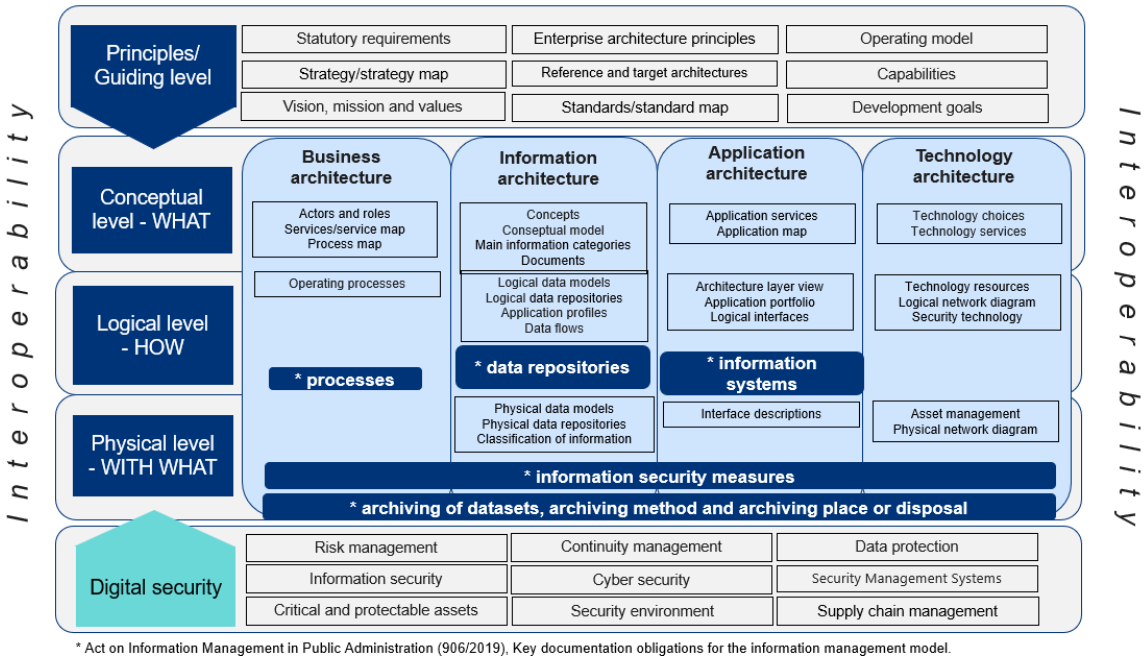
3 Structure of the enterprise architecture

The Enterprise Architecture Framework for Suomi.fi Service Developers is a tool that can be used to identify and select suitable description targets and methods for the design entity (see Figure 1). Different description methods are used to produce the descriptions, such as different frameworks and their templates. These descriptions can either represent the structures of an individual architecture level or combine different perspectives into broader composite descriptions. The description methods presented in this recommendation represent proven good practices, and using and harmonising them promotes interoperability and improves collaboration between organisations. It is essential to select description methods that best suit the organisation that clarify the planning entity and improve understanding between stakeholders.

Digital security, just as comprehensive security, is part of an organisation's enterprise architecture. The security environment and security-related policies in the organisation may impose significant constraints and requirements on both enterprise architecture and the architecture of individual solutions.

In Figure 1, the dark blue indicates the descriptions that require simultaneous review of several perspectives in the planning and consideration of the information management model. The statutory requirements concerning the information management model are laid down in section 5 of the Information Management Act (906/2019). (For more information on the implementation of the information management model by means of an enterprise architecture, see section 7.2) The content of Figure 1 is described in more detail in Appendix 1 of the Enterprise Architecture Framework for Suomi.fi Service Developers.

Figure 1 Framework for enterprise architecture descriptions



* Act on Information Management in Public Administration (906/2019), Key documentation obligations for the information management model.

3.1 Abstraction levels of the enterprise architecture

Enterprise architecture abstraction levels are a method used to present the different levels of enterprise architecture description and modelling, where the degree of generalisation and concreteness varies.

The enterprise architecture framework for Suomi.fi service developers contains four different levels of abstraction. These levels are the principle/guideline, concept, logical and physical level. Digital security is considered in the planning of each level.

- The **principle/guiding level** describes the context of the organisation's environment and enterprise architecture (explains the why).
- The **concept level** focuses on implementation-independent requirements to understand the object and to define the necessary services (explains the what).
- The **logical level** focuses on identifying the technology-independent building blocks, their structures and relationships of the item described conceptually (explains the how).
- The **physical level** deals with the allocation and implementation of the physical components of the described item according to the identified logical components (explains the how and where).

3.2 Perspectives of the enterprise architecture

Enterprise architecture consists of four inter-dependent perspectives: the business architecture, information architecture, application architecture and technology architecture.

Simply put, enterprise architecture aims to describe the following through the four perspectives:

- how the data used by the organisation in its operations and services is related to the organisation's processes, applications and information pools,
- how data is transferred between the organisation's different applications, operating processes and information pools, and
- how the organisation's operation, applications and information pools are connected to the technologies used by the organisation.

Business architecture

The business architecture is the part of an enterprise architecture that includes functional structures and their relationships. Functional structures include business capabilities, actors, roles, services, functions, processes and products. These structures are examined in a business architecture in a technology-independent manner.

The business architecture often also guides the other perspectives, including in terms of information security measures. The business architecture provides the basis for taking information security and data protection into account, as data protection is highly dependent on the situation and uses.

Information architecture

Data architecture is part of the enterprise architecture that comprises data and their interrelationships at different levels of detail and data ownership. The data architecture supports data management at the level of the entire organisation, such as the implementation of data security, classification and protection of data, and documentation of the disclosure and receipt of data.

The information architecture should also take the classification of information into account from the perspective of information security and data protection, which also strongly determines how information should be protected in the other architectural perspectives. For example, the identification of data flows and related risks is important for the implementation of personal data protection.

Securing the confidentiality of information is not only a task of the information architecture, but it must also be taken into account in operations, applications and technology. This could also be reflected through the division of the information management model. For example, the information security measures referred to in section 5(2) of the Information Management Act cover the perspectives of the enterprise architecture. In addition to information architecture, these include controls included in processes and technical infrastructure, for example.

A key building block of the information architecture is an **official document** (section 5(2) of the Act on the Openness of Government Activities). The documents form the knowledge base for the legal protection of a citizen, community or data subject, the transparency of the authorities' activities, and enable statistical and historical research on public administration and wider societal activities. The architectural planning of the accrual, processing, storage and disposal or archiving of official documents is called information management planning, the result of which is an information management plan.

Application architecture

Application architecture is a component of enterprise architecture that includes technology-independent automated data processing. The connections between the application architecture and the other perspectives describe, among other things, to which activities, information pools and technology the applications are related. An **application** refers to a logical entity consisting of one or more application components and the application services they provide, limited to supporting specific functions or services within the organisation.

In addition, the application architecture should consider the information security and data protection requirements set for the applications and the data processed in them as well as continuity plans based on the critical nature of the normal and emergency conditions of the systems.

Technology architecture

The technology architecture is the part of enterprise architecture that includes technologies and their operation. Technology architecture includes descriptions of technological functions and implementation, including technology services, descriptions of the operating environment, network connections and APIs.

Information security and data protection also strongly guide technology choices from the perspective of risks and opportunities. For example, a technology chosen by the organisation may include features that promote information security or set marginal conditions for the processing of certain data.

3.3 Control tools of the enterprise architecture

At the core of the enterprise architecture are elements that guide the organisation's development work and ensure consistency between strategy and implementation. These core elements are:

- the **architectural vision**, which defines the target state,
- the **strategy map**, which combines strategy and architecture,
- the **capabilities**, which enable the operation, and
- the **architectural policies**, which lay the foundation for decision-making and development.

These are used to build a comprehensive and effective architecture.

Architectural vision

The architectural vision is a description of the organisation's target state. It determines what the organisation is expected to develop into. It serves as a strategic guideline for steering the development of the organisation's operations and architecture towards long-term goals. The architecture vision combines the organisation's goals and solutions in the operating environment, providing an overview of how different areas, such as operations, applications, information pools and technologies, will efficiently work together.

Strategy map

The strategy map summarises the key perspectives relevant to the implementation of the organisation's strategy in a single diagram. It helps understand how different strategic objectives, measures and resources are interconnected and how they promote the implementation of the overall strategy. The strategy map often presents different perspectives, such as financial performance, customer satisfaction, internal processes and learning, all of which support the achievement of strategic objectives.

The strategy map helps the organisation combine the operating strategy and enterprise architecture, helping to identify and visualise how different areas, such as operating processes, applications and technologies support strategic goals. Additionally, the strategy map serves as a communication tool for stakeholders to help communicate the connection between the strategy and the enterprise architecture.

Capabilities

Capabilities often refer to an organisation's ability to perform certain functions or achieve certain objectives. A capability may include competence, processes, technology, intellectual capital, decision-making ability and resources needed to perform a task efficiently.

Capabilities are an essential part of enterprise architecture planning and analysis. The enterprise architecture can be used to map out the organisation's capabilities and how they support the goals of the operation, as well as which capabilities need to be developed or are entirely new ones needed to support operations.

Architecture policies

Architecture policies are the principles, rules and guidelines that guide the development and maintenance of the organisation's enterprise architecture. They define how the different components of the organisation's enterprise architecture, such as operations, data, information resources, applications and technologies, should be designed and implemented so that they support the organisation's strategic objectives and enable efficient operations.

Architecture policies help ensure that the architecture is developed in line with the organisation's strategy. These policies also ensure that the organisation develops and uses its resources consistently and efficiently. They help reduce risks, increase interoperability and consistency between different parts of the organisation and its stakeholders, and support the organisation's ability to adapt to change.

Instead of creating an extensive and complex collection of policies, the organisation could focus on defining only the few critical policies that have the greatest impact on the implementation of the strategy and the appropriate management of the enterprise architecture. These policies may be related to, for example, interoperability, the principles of technology selection, support for critical services and operations, or digital security.

They are important, and their usefulness depends on how well they are designed and implemented. By keeping to the most important policies, keeping them clear and flexible, and ensuring regular review and updating, the organisation's policies remain practical and continue to guide its operations.

3.4 Digital security as part of the enterprise architecture

Digital security aims to ensure that the digital operating environment is reliable, secure and accessible. This requires that different actors are able to prepare for threats

to the digital operating environment, withstand disruptions and recover from them as effectively and as quickly as possible. Securing everyday functions also requires extensive cooperation, shared operating models and willingness to develop them. The five key implementation areas of digital security are leadership and risk management, continuity management, cybersecurity, data protection and information security. [2]

In the enterprise architecture, digital security should be seen as a cross-cutting function, which also makes it essential in every perspective of architecture description. For example, the data processed by the organisation, critical protectable assets, supply chains and security management systems have an effect on the importance of digital security in operating, data, application and technology architectures.

Statutory information security requirements and the positive and negative risks identified through risk management have a key impact on the organisation's choices. This must also be taken into account in any development plans that area a result of enterprise architecture work. As far as it is possible, all levels and perspectives of the organisation's enterprise architecture should also be examined through risk management. Identifying the key risks of the organisation's operation and deciding on the means of managing them inevitably also has an impact on the enterprise architecture.

The digital security architecture covers the digital security structures in the organisation, from the level of management — including the operating environment, practices and resources — all the way to technical protection and control solutions and the processes of continuity, incident management and recovery. Appendix 2 of the Enterprise Architecture Framework describes in more concrete terms how, for example, data protection and information security are supported by digital security architecture. The appendix also describes how digital security can be assessed, for example, by means of information security audits, by examining implemented solutions against different criteria and standards.

[2] What is digital security? | Digital and Population Data Services Agency

4 Frameworks and methods of enterprise architecture work

International enterprise architecture frameworks are generally accepted de-facto standards and methods that support the alignment of the organisation's structures, functions, processes, and the data and technology required for them. The frameworks include guidelines and instructions that organisations can use for the comprehensive management and development of their architecture.

In addition to frameworks, architecture work makes use of reference models and reference architectures that are presented in standardised notation:

- A **reference architecture** is an architecture description that describes the target state of an individual industry or some other constrained item.
- **A reference model** is a more concrete and detailed model adapted to a specific context, such as an industry.
- **Notation** is a visual representation method that clearly describes and presents the different elements of the organisation's enterprise architecture.

The Suomi.fi for Service Developers enterprise architecture framework presents commonly used international reference architectures for enterprise architecture, reference architecture frameworks and notations.

- Reference architectures: The Open Group Architecture (TOGAF), European Interoperability Framework (EIF), European Interoperability Reference Architecture (EIRA©), Lean Enterprise Architecture (Lean EA)
- Information architecture and information management: Data Management (DAMA), Control Objectives for Information and Related Technologies (COBIT), international standard SFS-ISO-42010, Business Technology Framework (BT standard), Entity Relations (ER model)
- Processes and applications: ArchiMate notation, Business Process Modeling Notation (BPMN), Unified Modeling Language (UML), EnterpriseDesign and EDGY framework
- Digital security: ISO/IEC 27000 information security standard set, NIST Cybersecurity Framework

5 Processes of enterprise architecture work

Enterprise architecture processes refer to the functions and procedures used to plan, develop, manage and maintain the organisation's enterprise architecture. These processes of the enterprise architecture include

- Planning
- Development
- Management
- Communications
- Change management
- Evaluation and improvement.

The planning process defines the future state of architecture, while the development process focuses on practical implementation. The management process ensures the continuity of the architecture, and the communications process keeps different stakeholders informed of changes and development measures. The change management process guides changes in the enterprise architecture, and the evaluation and improvement process examines the efficiency and development needs of the enterprise architecture.

Development of the enterprise architecture requires support from the management. The management is responsible for the strategic steering of the enterprise architecture and its integration with the organisation's operations, ensuring that the digital operating environment is reliable, secure and accessible:

1. **Goal-setting**: Defines the objectives and expectations of the enterprise architecture that guide the development and implementation of its processes.
2. **Resource allocation**: Ensures that there are sufficient resources to develop and maintain the enterprise architecture, such as budget and personnel.
3. **Provision of support**: Sponsors the enterprise architecture, providing ongoing support and encouragement at all levels of the organisation to understand and promote the importance of the enterprise architecture.
4. **Control and monitoring**: Monitors and evaluates the progress of enterprise architecture processes to ensure their effectiveness and timely resolution of potential problems.

5.1 Stages of the process

Stages of the enterprise architecture process:

- Current State Analysis (As-Is): Identification and description of the organisation's current architecture, processes and technologies.
    - Typical outputs: Present state descriptions (business, information, application and technology), process and service descriptions, key dependencies, identified challenges and overlaps. Assessment of the maturity level of the current state.
- Definition of the target state (To-Be): Definition of the desired state of the architecture to support the strategic goals of the organisation.
    - Typical results: Architecture descriptions of the target state (business, information, application and technology), architecture principles, policies and boundary conditions, service and process models and interoperability solutions.
- Comparison of the current state and the target state (GAP Analysis): Analysis of the differences between the current and target state; identification of development needs.
    - Typical results: The final output of the enterprise architecture work is a view based on the current state–target-state comparison (GAP analysis) of development needs, architectural policies guiding them and phased progress towards the target state to support decision-making and development.
- Creation of a roadmap (Roadmap): Creation of a plan that defines and prioritises measures with a timetable for reaching the target state.
    - Typical results: Set a phased and prioritised pathway from the current state to the target state, including key measures, their interdependencies and timings
- Implementation and monitoring: Launch of the planned measures and monitoring of the progress towards the target state.
    - Typical results: The implementation of development measures is monitored regularly as part of architectural steering, and deviations from the target state are dealt with in steering and decision-making procedures.
- Maintenance and management: The enterprise architecture is continuously updated and managed to meet changing needs and objectives.
    - Typical results: The implementation of development measures is monitored regularly as part of architectural steering, and deviations from

the target state are dealt with in steering and decision-making procedures.

Digital security is a key part of enterprise architecture work and must be present at all stages of the process:

- During the planning phase, the objectives of digital security must be integrated with the work. It is important to take legislation and the principles and strategies guiding the organisation's digital security into account.
- During the development process, it is ensured that the security aspects of all solutions are at an adequate level.
- The change management process must ensure that changes to the architecture do not jeopardise the security and continuity of the organisation.
- In the review and improvement process, it is important to carry out security-related self-assessments and audits that can be used to identify significant areas of improvement in terms of security.

5.2 Organisation of work

Different approaches can be applied to organising the work stages of the enterprise architecture, depending on the size of the organisation, maturity level and available resources. The maturity level of the organisation has a significant impact on how the enterprise architecture is described, processed and approved. The maturity level assessment is carried out in the initial situation to determine the current state and then regularly, typically annually, to monitor developments and to specify operating models. Various assessment tools[3] are available for assessing the maturity of the organisation, and their use is recommended as a starting point for the work.

- Coordination of activities and projects: Enterprise architecture serves as a common framework for continuous operations and project activities. The architectural policies and target state steer the planning and implementation of projects, and the changes produced by the projects update the enterprise architecture accordingly as part of ongoing operations.
- Iterative and agile approach: The stages take place in several recurring cycles, allowing more flexibility and continuous improvement. This model is suitable for dynamic environments and is suitable for organisations that use agile methods.

[3] For example, the TOGAF and Zachmann maturity assessment models.

- Centralised management with decentralised implementation: The strategic architecture team has overall management responsibility, but the implementation is divided between different units/groups/teams. This model is particularly suitable for large organisations where units manage their own entities.

- Continuous development model: All stages are continuously updated as part of daily operations without separate projects. This model is suitable for mature organisations where architectural development is established as part of the normal operating model.

- Hybrid model: Combines several approaches; for example, the definition of the target state and key policies can be implemented as a project, while the implementation, monitoring and maintenance are carried out as part of continuous activities and development. This model supports both long-term development and agile changes.

5.3 Roles and tasks of architecture work

Architecture work in organisations is the responsibility of several professional groups. This section describes the typical responsibilities and tasks of different professional groups.

Management

Management is responsible for assigning architectural responsibilities within the organisation and for monitoring the status of architecture development. Architectural governance is exercised through management decisions. Key tasks include:

- strategic steering of architecture
- approval of architectural principles
- policy on reference architectures used in architecture work
- approval of the architecture management model
- high-level assignments related to enterprise architecture and approval of their outputs

Service and product owners maintain product/service/system descriptions and provide this information as well as a financial perspective for architectural design.

Different architect roles

The titles and tasks of architects vary by organisation. In some cases, an enterprise architect can perform a wide range of architectural roles, while in some cases there are architects specialising in different areas of architecture. For example, the following titles are commonly used:

- The **principal architect** is responsible for the whole (EA function) and for architectural communication, which also requires communications profession-

als. The principal architect should be close to management in the organisational structure. The enterprise architect is responsible for describing the enterprise architecture at EA level and for ensuring that it complies with the strategic objectives. The division of responsibilities between the principal architect and the enterprise architect may vary from organisation to organisation. There may be one principal architect who is also an enterprise architect and represents all perspectives. A typical established model is that the principal architect is an enterprise architect.

- A **business architect** is responsible for raising the needs of their area of responsibility in accordance with enterprise architecture processes and methods, and for supporting other ICT personnel in development work. A **business architect** is responsible for describing and developing the activities, processes and capabilities of the organisation. The role ensures that changes in operations are in line with the strategy and that they are consistently linked to information, application and technology architectures.

- A **solution architect** is responsible for an individual solution or entity to be developed and its architecture at all levels and from all perspectives (operations, information, applications, technology). The role ensures that the solution is compatible with enterprise architecture policies and meets the set operational and technical requirements.

- A **service architect** is responsible for the structure, service chains, interfaces and lifecycle management of the service collections in accordance with the principles of enterprise architecture. The role ensures that the services are user-oriented, clear and interoperable and support the strategic and operational goals of the organisation. A service architect may also work as a service designer, in which case the area of responsibility includes deepening the user understanding of services, designing customer journeys and service experiences, and developing services together with stakeholders. In this case, service design serves as a means of concretising architectural policies and ensuring that service solutions are functional in practice and meet the needs of users.

- An **information architect** is responsible for defining information structures, concepts, data models and data flows, as well as for the interoperability of information. The role ensures that the information supports operations, analytics and reporting and complies with agreed standards and policies.

- An **application architect** is responsible for the structure, integrations and inter-application dependencies of the application portfolio. The application architect ensures that the applications support services and processes and comply with architecture policies and technical principles.

- An **information security architect** is responsible for developing the organisation’s information security together with the information security officer and the data protection officer.

- A **technology or infrastructure architect** is responsible for technology and infrastructure solutions as a whole, and for their policies and lifecycle management. The role often focuses on line work, such as the maintenance, monitoring and development of technologies, and typically involves less project work. The position may be consultant-led, but also the responsibility of the authority.

- The **person responsible for enterprise architecture quality and development** ensures compliance with the methodology.

Information security and data protection personnel

The party responsible for enterprise architecture is also responsible for engaging digital security experts in the different work processes. Roles responsible for digital security, such as information security managers, information security architects and data protection officers, should be included in all stages of the process in accordance with their respective areas of responsibility and competence.

An **information security manager** is responsible for the information security architecture. **Information security specialists** describe and maintain information security architecture. In architecture design, they define information security requirements. Similarly, they use enterprise architecture descriptions when assessing information security.

The **data protection officer and other data protection specialists** serve as specialists in the specification of the architecture and check the implementation of data protection requirements at different stages of development. They also use enterprise architecture descriptions when assessing data protection. They play a key role in defining the data resources and datasets of the information management model, as the basis and interpretations for them come from data protection regulation (GDPR).

Information management personnel

The **specialists responsible for the information management model** are responsible for its information management component and its maintenance. The information management model is part of the enterprise architecture, but its purpose is different.

Information management specialists are responsible for the life cycle management of datasets and produce content especially for data architecture (e.g. information management plan, archive formation plan, task classification and other descriptions of data resources/datasets). They play a key role in defining the data resources and datasets of the information management model, as the basis and interpretations for them come from the act on information management in public administration and archival legislation.

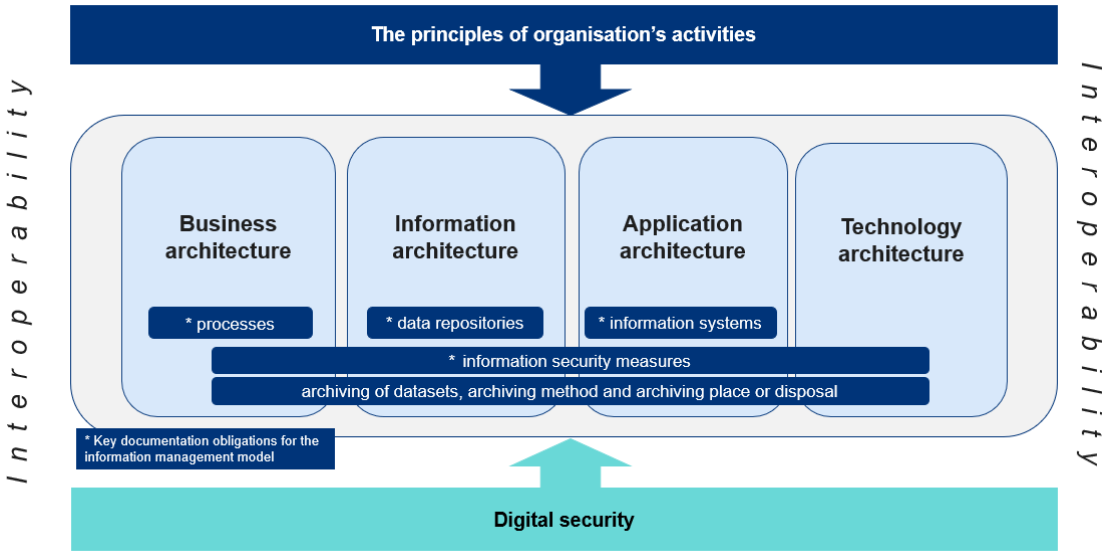
6 Description and documentation of the enterprise architecture

One of the key outputs of enterprise architecture work is a description of its current state and target state. The descriptions can be used, for example, as a communication tool and in reporting. Descriptions can be included in the information management model, which an authority uses to define and guide its information management. They can be used to analyse the architecture, such as the impacts of change, and to produce alternative structures that minimise dependencies between systems or processes.

6.1 Basic descriptions (“minimum level”)

Architectures must be clearly described by distinguishing between enterprise and **solution architecture** levels so that they meet the needs of the organisation. Solution architecture is a part of enterprise architecture that describes the implementation of a defined area. A solution, on the other hand, refers to an implementation that meets the need. The scope and accuracy of the descriptions must be optimised for the strategic intent of the organisation’s management and experts, as well as for the preparation and maintenance of the descriptions in accordance with the available resources. The organisation must determine the sufficient level of accuracy of resources and intent.

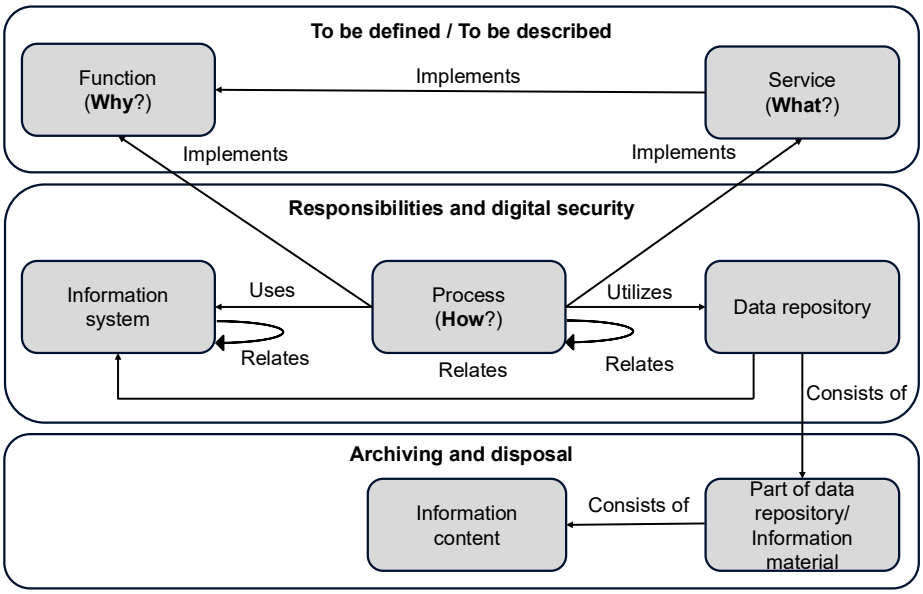
Figure 2 Basic descriptions of the architecture (simplified version of Figure 1, the purpose of which is to illustrate key elements of the basic level)



At the minimum, architecture descriptions must include the requirements necessary for the organisation’s operation and information management as well as the supporting guidelines. Industry-specific, national and EU-level security and data protection regulations must be taken into account in the organisation’s operation and thus in the

descriptions and documentation of the enterprise architecture as well. The figure below presents, as a conceptual model, the key items to be described and the responsibilities for the descriptions of the information management model.

Figure 3 Key issues that must be described in the information management model



6.2 Documentation and processing of descriptions

Architecture descriptions must be presented in easily accessible formats, such as tables, matrices, diagrams or text, using different notations as necessary (e.g. BPMN, UML, ArchiMate). It is important to ensure that the descriptions are up to date, understandable and usable for different stakeholders. In addition, the descriptions must enable a smooth transition from general upper-level descriptions to both same-level descriptions and more detailed ones.

The descriptions must be kept easily available in different formats and with role-specific views. To ensure timeliness, centralised maintenance is recommended, which allows an update to one location to be reflected in all relevant descriptions. Tools that support collaboration, versioning, and logging help the management of updates and reduce resource needs.

6.3 First steps in learning about enterprise architecture work

The instructions in this section are intended for architects who begin to familiarise themselves with practical enterprise architecture work.

Familiarise yourself with your organisation's operating environment, strategy, architecture principles and existing documentation, such as the information management model.

Also familiarise yourself with enterprise architecture frameworks other than those used by the organisation, the frameworks and models of your own field and reference architectures. Understand their relationship with each other and look for best practices.

Learn about the organisation's business, information, application and technology architecture practices.

In the business architecture, it is a good idea to focus on describing processes and services and initially on the core processes, which are often described in the process map. In many cases, it may take a lot of time to go through the core processes and require revisions, as there may be a lot of details and special cases as the process becomes more specific. Identify process names, owners, descriptions, and purpose.

When familiarising yourself with information architecture, it is a good idea to focus on reviewing information resources and datasets, which are described in the information management model, document publicity description, privacy statements and information management plan.

In application architecture, you should focus on the organisation's services and the architecture related to their development. These are often described in the organisation's application map or portfolio.

In the technology architecture, you should examine how technology policies are managed in the organisation and where to find additional information on current policies. The selected technologies determine how supportive information technology can be developed. It is easier to familiarise yourself with technology architecture if there is a description of the technology environment and an explanation of how these policies are reflected in the implementations.

7 Key requirements and implementation methods for interoperability

7.1 Furtherance of interoperability

The purpose of the Information Management Act (906/2019) is to promote interoperability (section 1) and, to achieve this objective, provisions are laid down in the Act on the public authorities' obligations to strive to utilise data from other authorities (section 20), to disclose data through a technical interface (section 22) and to make their data available (sections 19, 24a and 24b). Section 5.1 of the Information Management Act contains provisions on the public authorities' obligation to maintain an information management model. State and municipal authorities were required to prepare the information management model by 1 January 2021 and wellbeing services counties by 1 January 2023. The key objective of the regulation on interoperability in the Information Management Act is to promote the electronic disclosure of information between public authorities while preserving the significance and usability of the information and to ensure that public authorities have access to the information they need from others.

Interoperability can be used to improve security-related processes, among other things. For example, the disclosure of data between organisations, especially with regard to protected data and personal data, is facilitated through commitment by all parties to document information security measures related to data transfers and storage. This ensures that data is transferred securely and efficiently between different systems and actors.

The **European Interoperability Framework**[4] (EIF) is a set of recommendations that guides public administrations to improve the governance of their interoperability, establish relationships between organisations, harmonise processes supporting digital services, and ensure that existing and new legislation does not jeopardise interoperability efforts. The EIF consists of a conceptual interoperability model and twelve interoperability principles, which are divided into 47 recommended measures. The interoperability model makes use of four interoperability perspectives: legal, organisational, semantic and technical.

Legal interoperability ensures that organisations operating under different legal frameworks, policies and strategies can cooperate.

Organisational (business architecture) interoperability refers to the integration or harmonisation of business services and processes that enable the achievement of mutually agreed and mutually beneficial objectives.

Semantic (information architecture) interoperability means that the exact form and meaning of the information exchanged is preserved and understood during exchanges between the parties, i.e. the data is understood as transmitted. The sender and recipient of information must therefore understand the content and structure in

[4] European Interoperability Framework https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2017%3A134%3AFIN

the same way. The principles are described in more detail in the EU's European Interoperability Framework.

Technical (application and technology architecture) interoperability covers application and technology services as well as applications and infrastructures. It applies in particular to descriptions of data flows and APIs between applications, data integration services, information presentation and exchange, and secure communication protocols.

The European Interoperability Framework (EIF) defines the principles and objectives of European interoperability, which the European Interoperability Reference Architecture (EIRA) concretises by providing a reference architecture and meta-model based on these principles for the design and implementation of interoperable digital services. The EIRA defines the most important architectural building blocks (ABBs) needed to describe and build interoperable electronic services. The EIRA includes a common set of terminology that can be used for a variety of architecture and system development tasks.

7.2 Interoperability platform support for enterprise architecture work

The use of data models, glossaries and code sets that are as compatible as possible is at the core of interoperability. For this purpose, an Interoperability platform has been built: a three-tool package, i.e. a metadata portal for describing content. It includes:

- The **Glossaries** tool, which is a maintenance and publication application for glossaries and concepts, for terminology glossaries and other glossaries. A terminology glossary is a glossary that contains information on specialised concepts and their designations.

- The **Data Models** tool, which is a maintenance and publication service for semantic data models. It contains two types of data models: core data models and application profiles. Core data models are general data models intended for the harmonisation and reuse of data. Application profiles, i.e., data models, are drawn up based on these to describe in more detail the data required for a specific purpose and their structures. These include descriptions of the content of interfaces or data resources. It contains common data specifications (core data) for the harmonisation of data. The tool is also used for such purposes as the managing of data content in interfaces or data repositories. Core data is used in descriptions for a specific purpose, i.e., application profiles, such as the presentation of APIs or the content of data resources.

- The **Code Sets** tool is a nationwide shared maintenance and publication application for code sets and classifications. Code sets can be browsed online, but the actual content of the Code Sets tool is intended to be utilised in system development. Code sets can be downloaded as files or retrieved through APIs. In data models, code sets serve as sets of attribute values. You can browse the content

of the Code Sets tool and use the code sets that you need. The contents of the Code Sets tool are used as a set of values needed in semantic data models.

The interoperability platform is based on the principles and operating model of the so-called **interoperability method**. Central to this are the uniformity and re-use of data specifications describing data content: maximum use is made of the existing vocabularies, code sets and data models. In addition, metadata descriptions are both human and machine-readable.

Instead of a situation where each organisation determines, for example, the concept of a 'person' and the information related to it, the description is produced for the interoperability platform only once. After that, other users can refer to the description and apply it. Technically speaking, the descriptions of glossaries, code sets and data models imported into the interoperability platform are linked data, or specific online resources with their own permanent identifier that can be referred to from elsewhere on the web.

7.3 Implementation of information management models by means of enterprise architecture

Section 5.2 of the Information Management Act (906/2019) contains provisions on the minimum content of the information management model. The Act does not specify the procedure or form in which the descriptions contained in the information management model must be created; they are left to the discretion of the information management units. Where applicable, the information management model can be described with the enterprise architecture method, for example, or with another description method. The Information Management Board's recommendation on the information management model[5] states that even though the authorities no longer have a separate statutory obligation to maintain the enterprise architecture, several authorities use enterprise architecture methods to develop their operations and to manage the datasets and applications required for their operations and to manage the related information security measures.

In addition to the minimum statutory requirements, the information management model can and should include descriptions necessary for the operation of the information management unit, such as interoperability descriptions, integration with the management system, information management development plans, and enterprise architecture development plans and target descriptions. More detailed descriptions can also be linked to the information management model to make them discoverable through the model for use in assessing the impacts of changes to the model.

Up-to-date enterprise architecture descriptions help demonstrate the implementation of the information security measures included in the information management model. For example, the management of log data (section 17) or the data transferred

[5] Suositus tiedonhallintamallista (Recommendation for the information management model, available in Finnish and Swedish). Publications of the Ministry of Finance 2024:22. http://urn.fi/URN:ISBN:978-952-367-445-5

through information networks (section 14) can be included in the different perspectives of the enterprise architecture descriptions, making it easy to demonstrate compliance with the requirements of the Information Management Act (906/2019).

Section 5(3) of the Information Management Act contains provisions on the obligation of the information management unit to assess the change caused by planned administrative reforms and the activation of information systems and their impacts on the information management of the information management unit. This assessment shall be carried out when a reform changes the content of the information management model of the information management unit. Ultimately, the assessment of change impacts remains at the discretion of the public authority, but in practice, the assessment best supports the authority's operation when it is part of the assessments and risk management regarding the authority's other operations.

The **public administration information management map**[6], for which the Ministry of Finance is responsible, is a description of how information management is organised in public administration, published through the State Treasury's tutkihallintoa.fi service. The map allows different actors to plan and develop the interoperability of the information pools and applications used in public administration. The purpose of the map is to provide different actors with a general view of the central information pools of public administration, their contents, rules of disclosure between pools and the usage of the contents of these information pools. The information management map enables actors to assess the impacts of extensive administrative or structural changes on actors responsible for information management and the information management of actors.

It is a good idea to plan in advance the disclosure of information about the information management model to third parties and the archiving of the information management model. The information management model is an official document referred to in the Act on the Openness of Government Activities, which is subject to the provisions on the publicity and secrecy of the document laid down in that act. In other words, it may be subject to requests for information. It is the duty of the authorities to archive their information management models for permanent storage. If the information management model is implemented using an enterprise architecture tool, it must be planned how it can be stored in an archivable format and where it is stored.

7.4 Implementation of information management planning by means of enterprise architecture

Information management planning has become a general term to describe the ex-ante planning of document management. The purpose of the plan is to map the types of documents accumulated in an organisation's operations and to specify the retention period and certain other metadata for them. An information management plan examines the organisation's operations through a standardised task classification, and links the documents or documentary data collected in connection with them to each

[6] The public administration information management map.
https://www.exploreadministration.fi/information-management-map-of-public-administration/

task category. In the new Archives Act, the planning of information management takes place through the structures of the Information Management Act (906/2019).

If the organisation has implemented an information management model in terms of operating processes, applications and data resources by means of enterprise architecture (section 7.3), the description method can be expanded to cover information management planning by modelling official documents into building blocks of the information architecture. The document can be linked to an operating process, data repository or application, whereby the connections of these building blocks are expressed through the processing of documentary data. The enterprise architecture guide contains an example of information management by means of enterprise architecture.

Glossary

Enterprise architecture glossary for public administration v 1.5 (2026).
https://sanastot.suomi.fi/en/terminology/jhka

Appendices

Appendix 1 Description of the Suomi.fi for Service Developers enterprise architecture framework

Appendix 2 Digital security

Sources

Regulations

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Digital and Population Data Services Agency: Ensure semantic interoperability – Share and utilise data in an interoperable manner - Suomi.fi for Service Developers.

Online training Johdatus kokonaisarkkitehtuuriin (Introduction to enterprise architecture) in Finnish. https://www.eoppiva.fi/koulutukset/johdanto-kokonaisarkkitehtuuriin/

Online training Kokonaisarkkitehtuurin mallintaminen (Enterprise architecture modelling) in Finnish. https://www.eoppiva.fi/koulutukset/kokonaisarkkitehtuurin-mallintaminen/

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