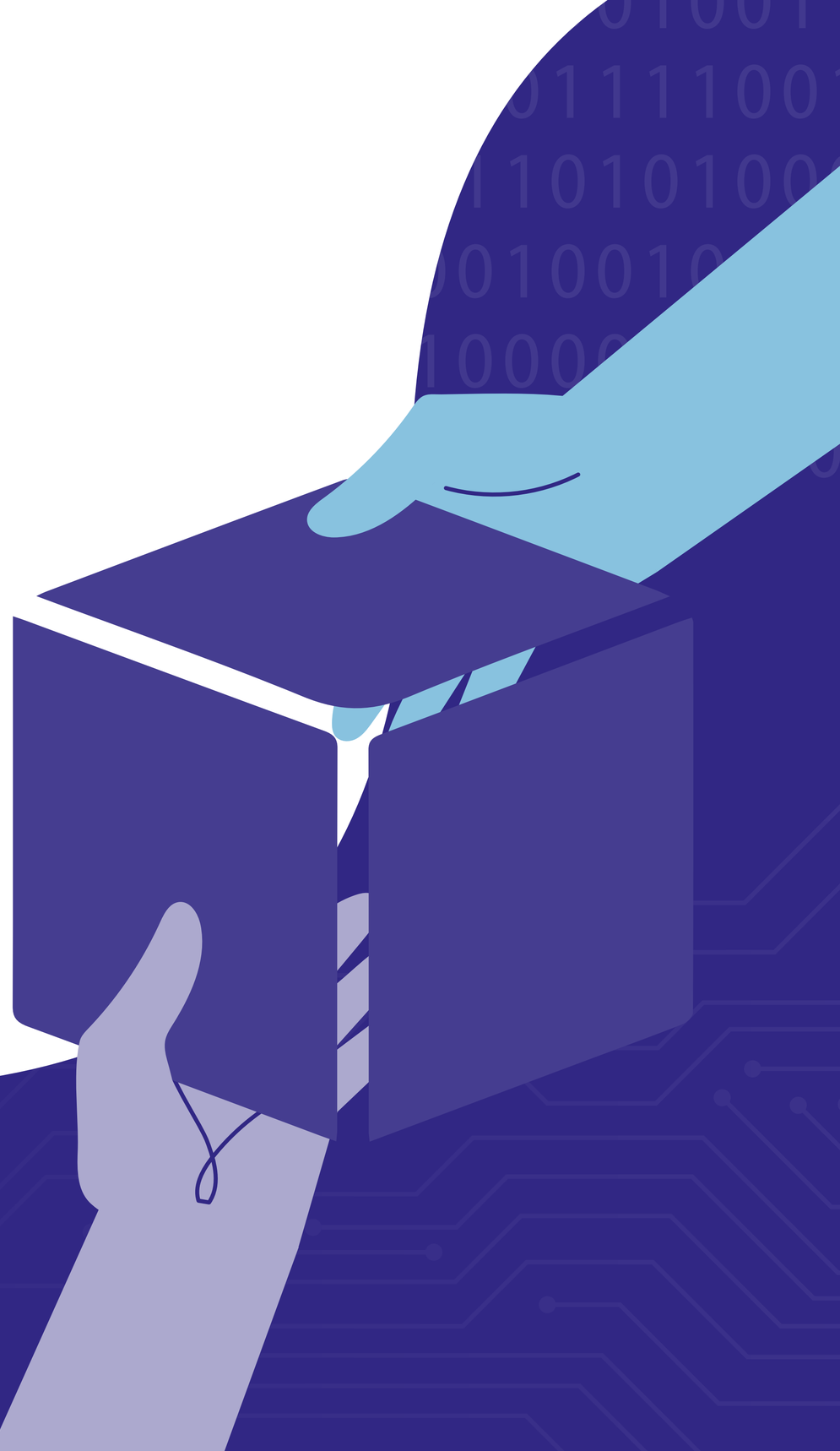
Path to Effective ICT Procurement

Playbook for contracting entities and tenderers



MINISTRY OF FINANCE

KUNTALIITTO | Association of Finnish Municipalities

Introduction

Billions of euros worth of public ICT procurement takes place in Finland every year, and the future will not see any reduction in this amount as the pace of digitalisation is accelerating. At the same time, the ICT sector also accounts for an increasing share of Finland's gross domestic product and exports. It is therefore not irrelevant how ICT procurement – whether by a private actor or public contracting entity – is carried out.

Recent years have seen frequent media coverage of ICT procurement timelines, budgets and objectives rarely being met. With challenges often being faced even in private-sector ICT procurement, it is evident that the process is even more challenging for the public sector because of the Act on Public Procurement and Concession Contracts (Public Procurement Act (1397/2016)).

Relevant questions abound: Are contracting entities capable of procuring the best solutions in terms of their objectives and are suppliers capable of providing them? Do the procurement specifications and requirements enable genuinely equal opportunities for tenderers to take part in competitive tendering? Is the attainment of the objectives of the Public Procurement Act concerning optimal economy, quality, orderliness, sustainability and taking advantage of existing competitive conditions ensured? Is the evolution of the ICT sector and services and the creation of new innovative solutions enabled through public ICT procurement?

Implemented jointly by the Ministry of Finance and the Association of Finnish Local and Regional Authorities, the Procurement Finland programme for effective public procurement resulted in the publication of Finland's first national Public Procurement Strategy in September 2020. Key aspects in the implementation of the strategy include carrying out the procurement of well-functioning and high-quality products and services in a manner that is inclusive of all parties and promotes market vitality. This requires, among other things, that contracting entities have sufficient capacities and competencies for making use of the market. Public procurement procedures must be attractive from the perspectives of different tenderers and solution models, and solutions must be procured in a manner that is needs-based and inclusive and where end users are consulted.

In October 2022, a collaboration project to promote well-functioning and high-quality ICT procurement was launched under the Procurement Finland programme. Open to everyone working in the sector, the project aimed to bring the various actors together and create a new culture of interaction in the sector. Around 200 contracting entity and supplier experts, consultants, researchers and representatives of organisations involved in the theme participated in the work.

These guidelines are intended for ICT service and software procurement but are equally applicable to almost any type of ICT procurement.

The aim was to identify, by means of a participatory approach, challenges relating to ICT procurement and to highlight the sector's good practices. A variety knowledge-gathering and collaboration methods, such as surveys, workshops and themed online sessions, were employed in the process. A public survey conducted in conjunction with the launch of the preparation of this playbook showed that the biggest challenges in ICT procurement are:

1. conflicting requirements provided in the call for tenders;
2. an unsuitable procurement process;
3. overly extensive procurement modules;
4. weak market knowledge of contracting entities;
5. insufficient dialogue with suppliers throughout the procurement process.

ICT procurement is too often an inappropriately extensive, vague and overflowing mammoth procedure that is difficult to manage and features requirements and contractual terms and conditions that conflict with market supply and the contracting entity's actual needs. Such procurement procedures are not interesting to suppliers and will therefore fail to create any actual competitive market environment or market development. Procurement modules that are overly extensive are regarded as being in many ways costly for contracting entities for reasons including higher tender prices and resulting supplier dependence.

The collaborative process was characterised by a strong collective will to draw attention to practices that can help to promote procurement that is high in quality, meets the contracting entity's measurable objectives and needs, and is fair and generates value for all parties to the procurement. This playbook is the outcome of this collaboration. It contains a set of guidelines based on collaboratively identified good practices that those carrying out and taking part in ICT procurement can use to support their work. The perspectives of contracting entities as well as suppliers have been taken into account in the guidelines.

Path to effective procurement

This playbook presents an ICT procurement model based on the agile development mindset. Although agile development is typically thought of being related to the implementation of a client-specific solution procured, its principles can also be applied to the execution of the procurement process.

Path to effective procurement

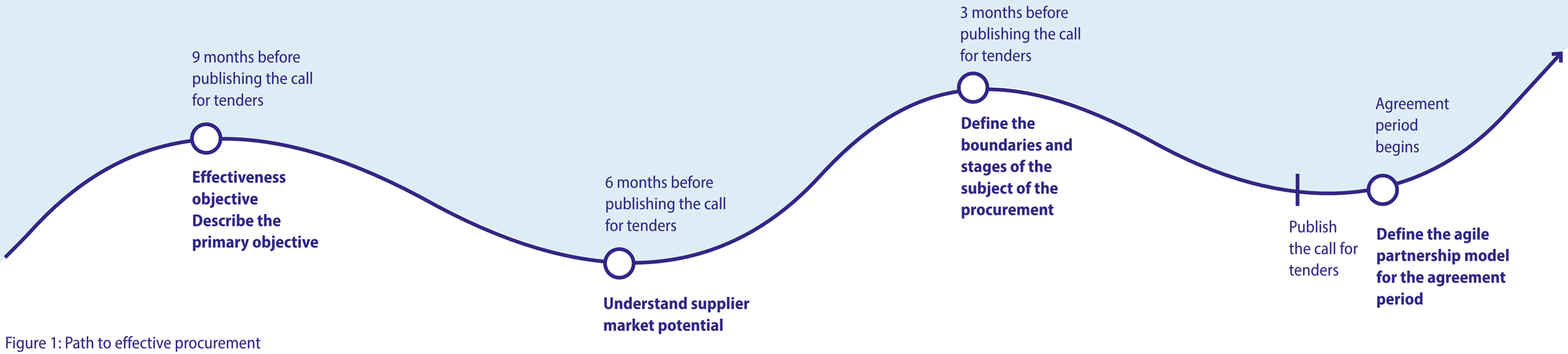


Figure 1: Path to effective procurement

An agile ICT procurement model means that, during the procurement process, efforts are made to minimise the risks involved in carrying out the procurement by dividing the process into stages referred to as iterations. Each iteration starts with specifying the objectives, that is, what is to be achieved during each stage. Each iteration ends with assessing what was achieved in the stage, prioritising the next tasks and deciding on the contents of the next iteration. In a procurement process, agility means specifically that process changes must be possible if so required by the client's needs, effectiveness or the market.

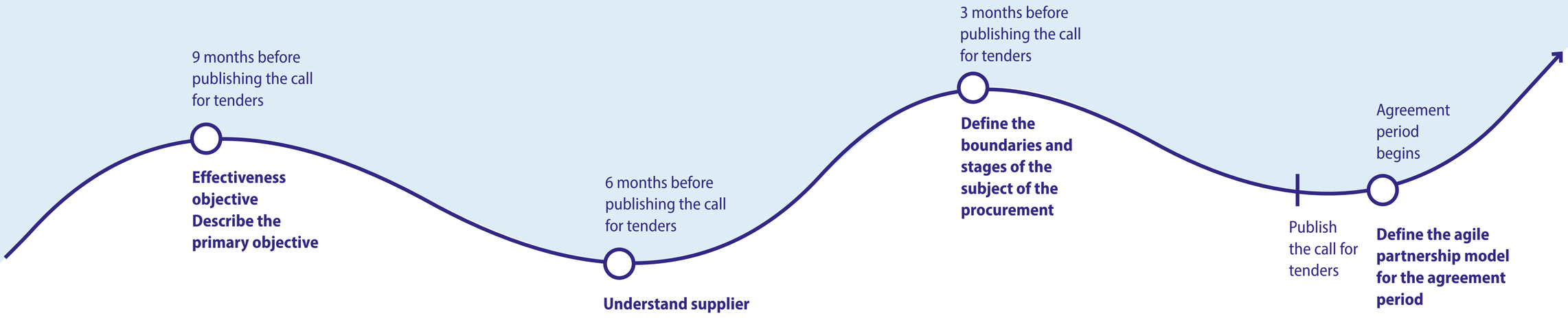
The procurement path of Figure 1 illustrates the agile ICT procurement model. Four turning points have been identified in the procurement process: three before the call for tenders is published and one after it. It is recommended that the contracting entity pauses, analyses the situation and, where necessary, changes direction at each turning point.

The first turning point on the procurement path is to define the effectiveness objective, typically around nine months before the planned publication date of the call for tenders.

The effectiveness objective must specify in concrete terms what the ICT procurement is intended to achieve.

This means prioritising is the ICT procurement leader's most important capability. The project launch is a stage where the project's key effectiveness objectives must be identified and prioritised. This stage is discussed in more detail under ***Chapter 1: Clarify your objectives.***

Path to effective procurement



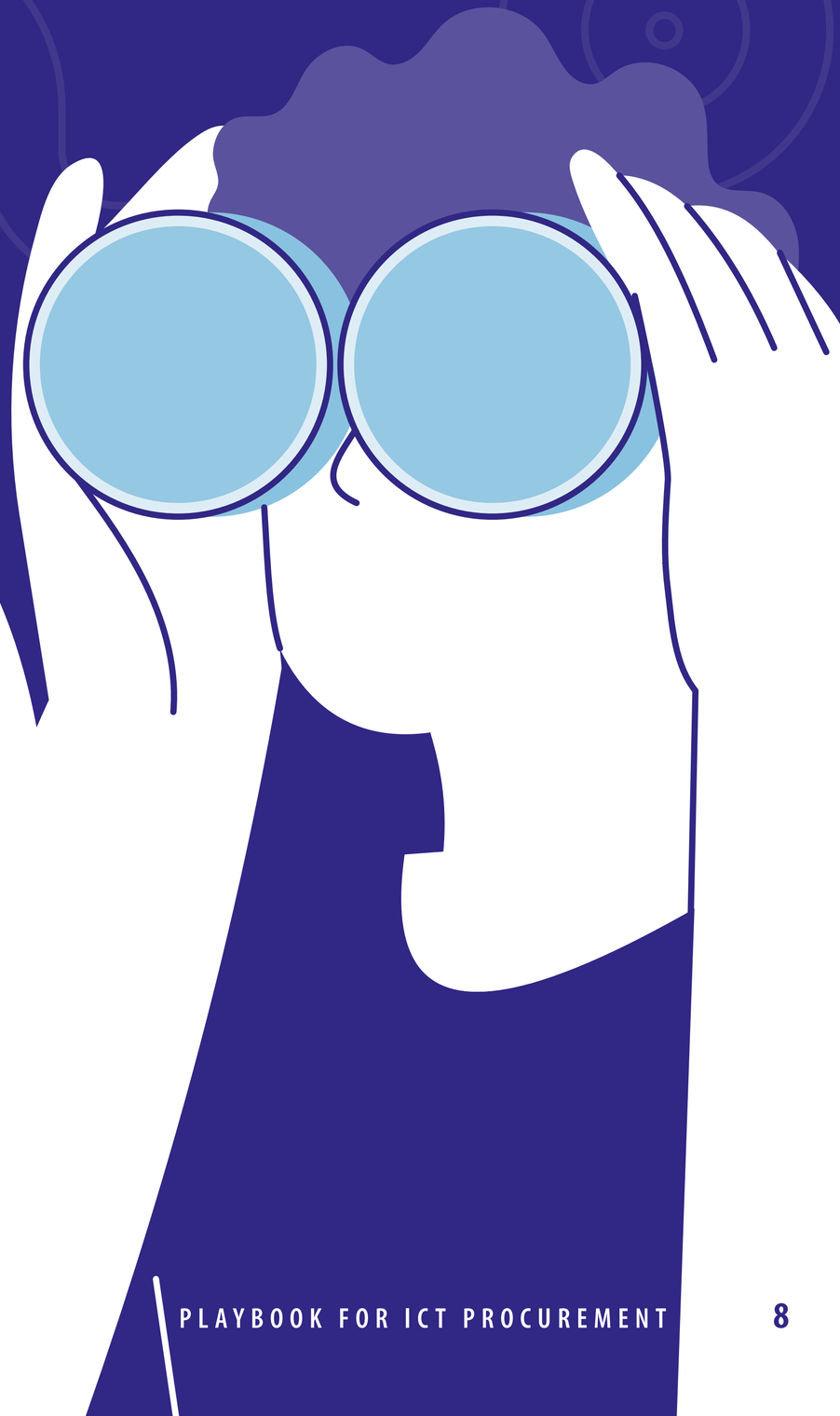
The second turning point on the procurement path is to understand supplier market potential around six months before publishing the call for tenders. At this stage, the procurement objectives have been clarified and decided and the key requirements have been identified. Plenty of time must be allowed for a market dialogue and for generating market knowledge. The contracting entity must find out to what extent the market has capabilities to respond to the identified objectives and needs.
In practice this means analysing the current state of technologies and competencies and their anticipated development. This stage is discussed in more detail under ***Chapter 2: Tap into opportunities for market dialogue.***

The third turning point, defining the boundaries and stages of the subject of the procurement, is around three months before the publication of the call for tenders. This stage involves the careful consideration and definition of what will be procured so that the subject of the procurement meets the effectiveness objective optimally while also being realistic in relation to the capabilities available in the market.

As regards the management of costs and risks, it is important to ensure that the description of the subject of the procurement enables genuine competition and the tendering of best possible capabilities. Ensuring competition is easiest when maintaining a focus on the objectives and not spending too much time on preparing detailed and possibly conflicting lists of requirements. This stage is discussed in more detail under ***Chapter 3: Describe the target environment*** and ***Chapter 4: Enable the provision of best solutions.***

The fourth and final turning point on the procurement path is after the supplier has been selected. This is when the contracting entity, supplier and other stakeholders must pause and define the agile partnership model for the agreement period. This stage is discussed in more detail under ***Chapter 5: Lead the entire process***.

The chapters below delve deeper into aspects identified as key issues and place them on the path to effective ICT procurement.



1. Clarify your objectives

The procurement of an ICT solution rarely means just procuring a technology or application. Instead, it is usually part of a broader process of operational development and making use of supporting digitalisation opportunities. Effectiveness cannot be generated if the contracting entity does not have a clear picture of what it wants to achieve by making use of ICT opportunities and why.

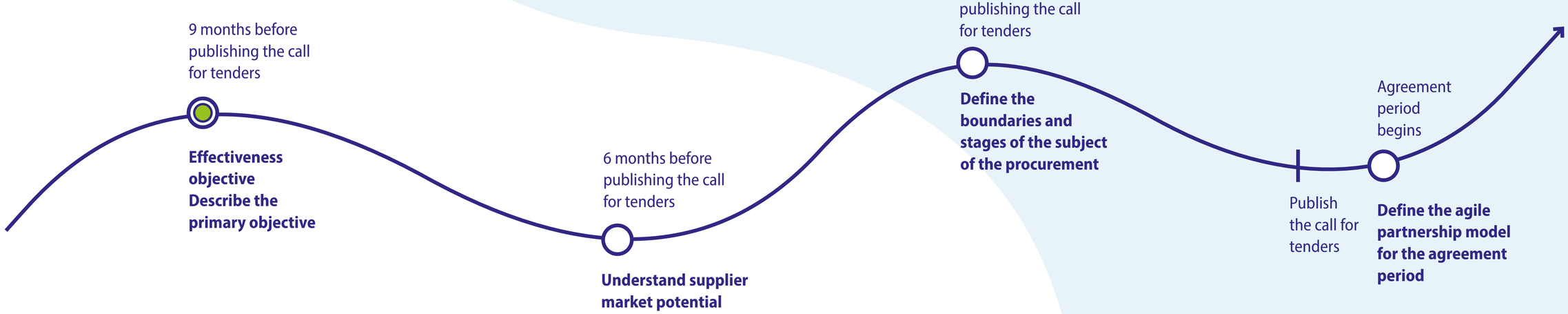


Figure 2: Path to effective procurement, first turning point: effectiveness objective

With clear objectives towards successful cooperation

The success of a procurement is based on the objectives set for the procurement that answer this question: Why is this procurement being carried out? For example, the objective may be to reduce manual work through automation, increase the inclusion of citizens in services relating to themselves, or replace multiple applications that are at the end of their life cycle with a more appropriate solution and, consequently, to increase cost-effectiveness.

For the objectives to be reached, the objectives and their concrete effects – their effectiveness – must first be identified and verbalised from the perspectives of the various stakeholders. Objectives must be such that all stakeholders are able to commit to them. Objectives that are described clearly and understandably help the contracting entity, potential supplier candidates as well as the selected partner. This way the contracting entity is able to specify and the supplier to provide and develop the best possible solution or solution model.

The objectives must be refined though multiple iterations. They must be examined from different perspectives and priorities until the most important effectiveness objectives can be adopted.

Questions supporting objective-setting include:

- What are your business objectives and who is responsible for them?
- What are the desired outcomes and effects?
- Which challenges do you want to solve and which positive aspects do you want to preserve?
- Which and whose activity will be supported and how?
- How will the achievement of the objectives be measured and monitored?
- What are the contracting entity's technology and application architecture-level (enterprise architecture) objectives and scope?
- What are the strategic objectives of the procurement activity (such as generating employment through procurement, environmental criteria, economic efficiency or risk management)?
- Which societal objectives do you want to promote (such as improving national access to rehabilitation services through digitalisation)?

Defining the effectiveness objectives is required so that the procurement process can focus on those solution models that best meet the contracting entity's needs and on those suppliers that are capable of producing the desired effects. Figure 2 illustrates the first turning point in the procurement process where procurement preparation must pause to analyse the procurement objectives. You should allow plenty of time for the analysis, as understandable and measurable effectiveness objectives cannot be created overnight. The key point here is the capacity to prioritise.

Take a look at these:

- Public Administration Recommendation 171 ICT service development: Identifying development priorities in ICT service development (in Finnish only).
- Public Administration Recommendation 172 ICT service development: Preliminary studies. The stages in the implementation process of the public administration's preliminary study method and guidance for each stage (in Finnish only).
- Procurement Pilot: Tool for strategic procurement planning (in Finnish only).

Contracting entity – remember these!

Take account of both external and internal factors when defining effectiveness: What is it that you want to and can achieve?

When defining objectives, take account of the expectations and needs of the contracting entity's internal actors. Make use of tools such as service design methods to verbalise your common understanding and objectives.

Be active in networks outside your organisation. Find out which objectives other contracting entities have achieved when procuring a solution similar to your organisation's needs.

Tenderer – remember these!

Ask the contracting entity for access to a dialogue. Provide concrete examples of what kind of effectiveness has been produced for other clients with your organisation's solution model and what kinds of methods for measuring and reporting on effectiveness are enabled by the solution model.

Help the contracting entity to specify its needs and objectives on the basis of questions and examples.

2. Tap into opportunities for market dialogue

A successful ICT procurement calls for an active, diverse dialogue with enterprises operating in the market led by the contracting entity. A market dialogue is a free-format way to express the contracting entity's needs, gather information about solutions and solution models available in the market and make the content of the call for tenders as understandable and relevant as possible in interaction with suppliers.

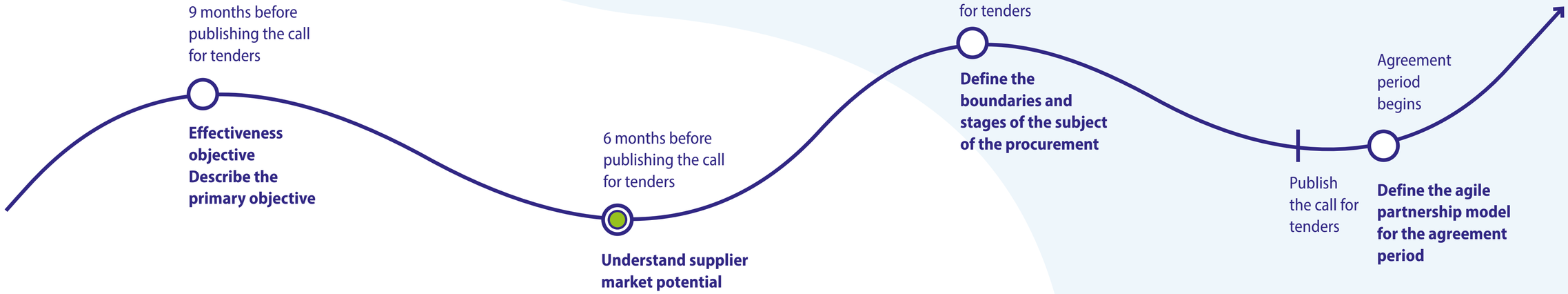


Figure 3: Path to effective procurement, second turning point: understand supplier market potential

Use dialogue to utilise the best capabilities

The dialogue can take many different forms, such as info events that are open to all or restricted to specific groups, written requests for comments, requests for information or one-to-one discussions. Suppliers can be invited to participate in the dialogue by, for example, publishing prior information notices.

A market dialogue provides the contracting entity with diverse information from market actors about issues such as the different solutions and their characteristics as well as alternative solution models. In addition, information can be collected on suppliers and their supply capability, the costs and pricing models of the different alternatives, and the agreement terms and conditions and delivery practices relating to the subject of the procurement.

"If the call for tenders material is found to be too unclear or if the agreement terms and conditions depart too much from general terms and conditions, tenderers will have to factor a lot of risks into their pricing or decide to not participate in the procurement at all, in which case the contracting entity will not receive enough comparable tenders. It is therefore important to study the solutions offered by suppliers and related terms of delivery and to reflect the contracting entity's thoughts on them."

Comments made by contracting entities and tenderers

Up-to-date information helps the contracting entity to examine how realistic the technical and functional requirements are from the perspective of both their own needs and objectives and from the supplier perspective. The dialogue also helps to define the most appropriate procurement module and consider the most suitable procurement procedure. The market dialogue provides the contracting entity with valuable information for calculating the anticipated value of the procurement as correctly as possible.

Suppliers in turn receive valuable information on and understanding about the contracting entity's objectives, needs, operating environment and policies as well as its rationale. In addition, suppliers have the opportunity to comment on the requirements and conditions set by the contracting entity and to tell the entity about technological advancements, the type of solution, delivery and solution model that would best meet the contracting entity's needs, and about any issues that might reduce supplier interest in taking part in the procurement procedure.

ICT solutions and their delivery and agreement practices are undergoing rapid development. Although the market dialogue is often associated with the preparatory stage of a procurement, a dialogue with suppliers should be maintained also when there are no acute procurement needs. The various experts of contracting entities should maintain networks both within the organisation as well as with other public-sector organisations. This enables, for example, the maintenance of up-to-date knowledge and competencies relating to well-functioning procurement practices and operational and solution models. At best, cooperation between contracting entities can harmonise procurement-related requirements and document structures, which in turn may reduce the tenderer workload involved in submitting a tender and therefore make it more attractive to participate in procurement procedures.

Figure 3 illustrates the second turning point in the procurement process. This is where the contracting entity at the latest must pause to find out whether the market actors have capabilities to respond to the specified objectives and needs. Plenty of time should be allowed for the dialogue, with up to several months required in major procurement procedures. The contracting entity should be curious and consider the potential of different technologies, solution models and suppliers to respond to their procurement needs.

The number of topics and questions covered during the market dialogue is often extensive. This is why the successful implementation of the dialogue calls not only for the sufficient contribution of time and effort by both the contracting entity and the supplier but also competencies in procurement procedures, legal aspects, processes, ICT, and service management procedures during the agreement period. It may make sense to divide the dialogue into multiple briefer themed discussions participated in by the parties' best experts in the issues at hand in each session. An agenda for the discussions should be created in advance so that which information will be discussed and why is clear to the parties who will take part in the discussion. The dialogue must be led by the contracting entity to ensure the sensible use of the parties' resources and time.

Take a look at these:

- Public Procurement Advisory Unit: Market consultation. Guide to market dialogue planning and implementation (in Finnish only).
- Motiva: Communication guide for procurement staff. Tips for communication in the procurement planning stage (in Finnish only).
- Edilex, Mäkelä Eeva-Riitta (2011): Technical dialogue – a solution to many problems in public administration? (in Finnish only).

Contracting entity – remember these!

- Define the objectives so that the procurement process is able to focus on those solution models that best meet the contracting entity's needs and on those suppliers that are capable of producing the desired effects.
- Engage in active dialogue with the suppliers at the various preparation stages and by making use of a variety of methods.
- Include operational, ICT, procurement and legal experts in the market dialogues.
- Divide dialogues into themed sessions and iterate where necessary.
- Communicate openly about future procurement procedures, their preliminary timelines as well as the interdependences of procurements and other development.
- Pay particular attention to suppliers' solution and business models and any global standard contractual terms and conditions that do not allow any client-specific flexibility for the supplier.
- Remember the guidance and conditions provided by the Public Procurement Act for market consultations.
- Respond to feedback received from suppliers in the market dialogue context.

Supplier – remember these!

- At best, the market dialogue involves multiple phases.
- Allocate enough time and competencies to participation in the dialogue.
- Offer solution proposals from the perspective of the objectives presented by the contracting entity.
- Help the contracting entity to, for example, clarify the objectives, needs, specifications and criteria on the basis of questions and examples.
- Provide honest answers to the contracting entity's questions.
- Give concrete examples of corresponding solution models provided.
- Remember that the dialogue conducted by the contracting entity is governed by the guidelines and conditions provided by the Public Procurement Act.
- Provide the contracting entity with feedback on the dialogue and materials. This is where you can have your say!

CASE: Joint events of National Police Board of Finland

The National Police Board and the Information Technology Centre of the Police organise joint events for their framework agreement suppliers and other key technology partners to discuss pending and future projects, needs and expectations concerning partners. The events also provide participants with the opportunity to have free-format discussions on the themes with police ICT and substance experts. The joint events safeguard the realisation of openness and non-discrimination in the partner network and also provide opportunities for networking between partners.

3. Describe the target environment

The target solution in ICT procurement is always part of a broader operating environment. It is essential for a successful procurement that the contracting entity describes the entire set of elements a part of which the procured solution will form. This set of elements including processes, information and information flows, applications, technologies, development measures, policies and rules is also called enterprise architecture (EA).

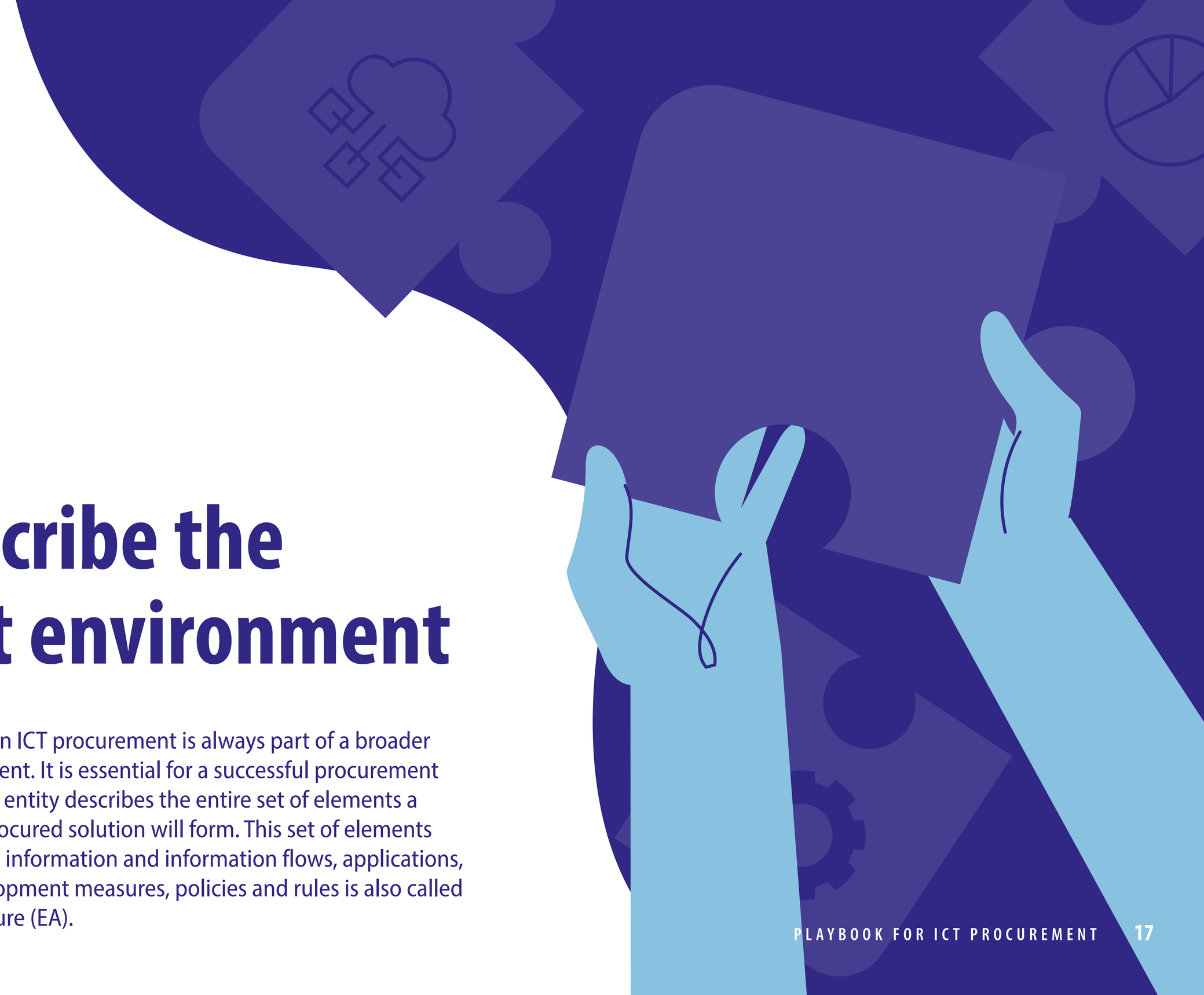


Figure 4: Path to effective procurement, third turning point: define the boundaries and stages of the subject of the procurement.

Describe the target environment to avoid spot solutionsa

Enterprise architecture provides a consistent way of describing the current and desired state of the operating environment, which at the same time also improves interaction between the various parties. It helps the contracting entity to avoid spot solutions, as the description helps the contracting entity, contractual partners, tenderers as well as other stakeholders and partners to get a picture of the choices related to the procurement and the strategies behind them. Things that need to be taken into account include solutions relating to cloud services, ecosystems, modularity of solutions and efficient utilisation of interfaces. Policies relating to ensuring interoperability, openness of data, data protection and information security as well as sustainability criteria included in ICT procurement, such as use of environmental criteria in ICT procurement, must also be taken into account..

"The workload involved in the data migrations included in procurement implementation is usually underestimated. People tend to think as if data migrates by itself from one system to another. It is important for the contracting entity to identify the data migrations relating to the procurement and check the condition of the data to be transferred. If the source data is not in good condition, the system will not work either and this will result in additional costs."

Comments made by contracting entities and tenderers at a workshop

If the description of the target environment is not extensive enough or is missing altogether, this may result in some effects that are essential to the procurement being ignored. This may further result in issues such as increasing labour and procurement costs arising from interface updates or maintenance of parallel solutions, or problems relating to data integrity. By contrast, in an architecture making use of modular solutions and standardised interfaces, the interdependence of the procured solutions or their parts may be more controlled and the risks involved in re-implementing individual parts may be lower than in the procurement of an individual large solution.

The point when the boundary conditions of the procurement should be considered and specified is shown in Figure 4. It is important for the contracting entity to actively include experts representing different fields in the preparatory process and in the consideration of what must be specified and what can be left for the selected supplier to decide.

Take a look at these:

- eOppiva.fi: Introduction to enterprise architecture online training package (in Finnish only).
- Digital and Population Data Services Agency: Support for enterprise architecture. Information and support for enterprise architecture implementation (in Finnish only).
- Public Administration Recommendation 179: Enterprise architecture planning and development. Enterprise architecture planning method and description methods and models for the various stages of enterprise architecture development (in Finnish only).
- Ministry of Finance: Public Sector ICT. Up-to-date information and guides for the development of information management, digital services, interoperability and information security and the creation of preconditions for digitalisation.
- Ministry of Finance (2022): Public Administration API Principles. Common instructions and recommendations for API development and the promotion of digitalisation in public administration.

Contracting entity – remember these!

Effectiveness cannot be built in a vacuum.

All ICT solutions are part of a broader operating environment that cannot be taken into account without an up-to-date description of the operating environment.

Identify and describe at least the processes, information and information flows, utilised interfaces, and functional and technical dependencies relating to the subject of the procurement and well as the architecture principles and policies to be taken into account in the procurement.

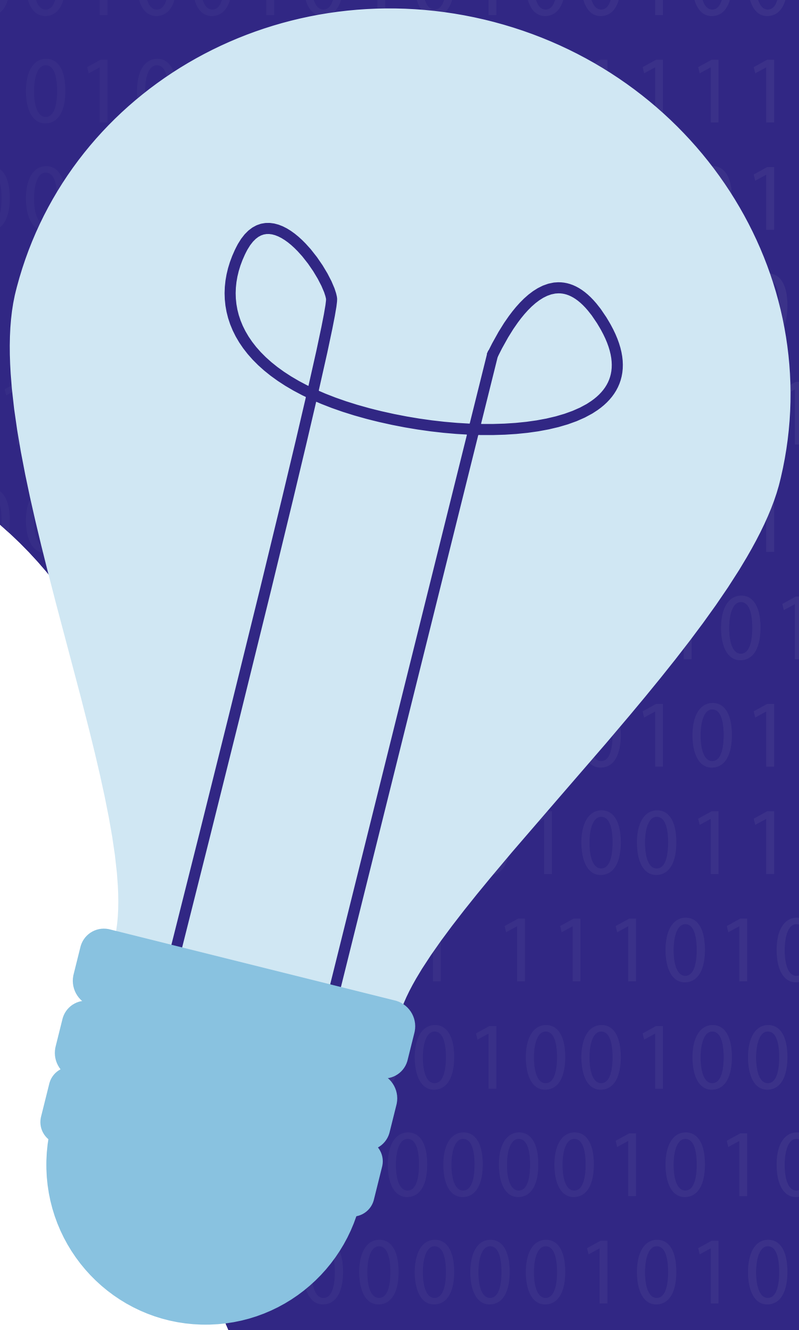
Supplier – remember these!

Ask the contracting entity questions about the operating environment, policies and principles already during the market dialogue.

Explain clearly what information you will need to prepare a high-quality tender. Encourage the use of concrete examples in the description.

4. Enable the provision of best solutions

In a successful ICT procurement, the contracting entity gains access to the solution that best matches its needs and effectiveness objectives. The tenderers in turn have the opportunity to offer solutions in accordance with the contracting entity's needs so that the selected supplier will also gain the value it seeks from the partnership. Such value may include product and service development expansion, new references, business growth or internationalisation.



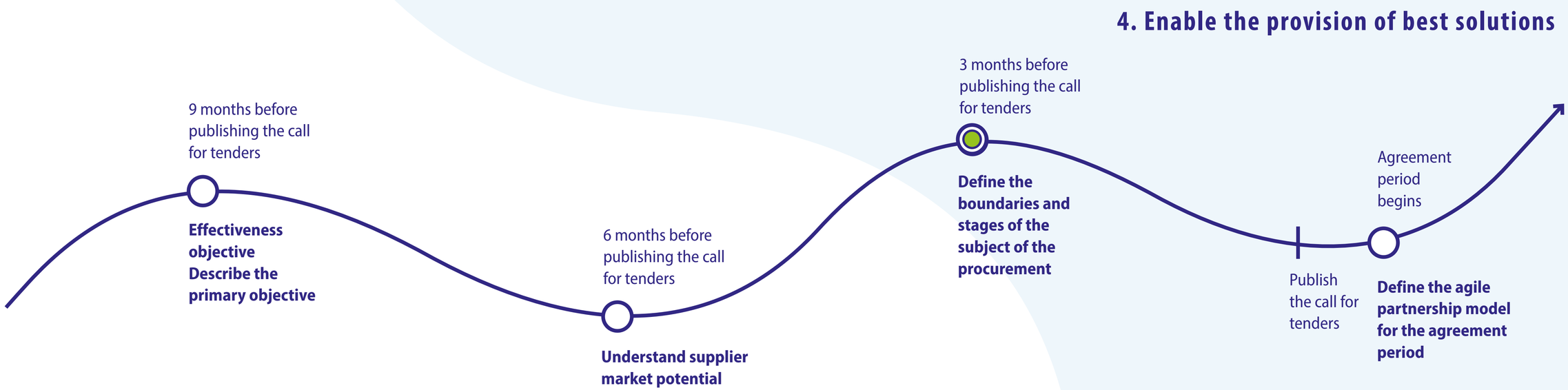


Figure 5: Path to effective procurement, call for tenders

Set reasonable requirements to receive the best possible solution

Procurement-related requirements can be divided into three types: those relating to the tenderer (suitability), to the subject of the procurement (technical and functional) and to the procurement agreement (commercial). Under the principles laid down in the Public Procurement Act, the requirements relating to the tenderer and the subject of the procurement must be linked to the subject of the procurement and proportional to it (proportionality principle). In addition, requirements concerning a procurement must be drawn up so that they treat potential tenderers equally (equality principle). Examples of requirements contrary to the equality principle include requiring such functionalities and features that may only be fulfilled by a certain software product found in the market.

Procurement must be carried out as appropriate modules and efforts must be made to organise them so that different-sized tenderers have the opportunity to participate in the competitive tendering processes on their own or jointly with other tenderers.

The requirements may not unjustifiably restrict the participation of actors in the procurement procedure. For example, requirements concerning the tenderer's turnover, requirements concerning specific types of reference deliveries including itemisations of work input, or technical requirements concerning the subject of the procurement must be made proportional to the value and subject of the procurement.

"A procurement agreement is successful when the parties' rights and risks relating to the procurement have been taken into account and safeguarded in a manner that is satisfactory to both, and the terms and conditions enable the implementation of the contracting entity's changing objectives or requirements concerning the subject of the procurement during the agreement period."

Comments made by contracting entities and tenderers at a workshop

4. Enable the provision of best solutions

When setting requirements, attention must be paid to them being genuinely relevant with regard to the subject of the procurement and the comparison of the tenders. For example, any features desired in a solution that the contracting entity will not actually take into use during the procurement agreement period must not be used as criteria in the comparison of the quality of the tenders.

ICT solutions are increasingly based on cloud service models where contracting entities are provided with a full service including operations services and the required off-the-shelf software. Cloud services enable suppliers to provide their clients with more cost-effective solutions, but the services may be based partially or fully on making use of global platforms. In these, the suppliers' contractual terms and conditions are based on cloud service providers' standard contract templates that, as a rule, cannot be adapted specifically to a country or contracting entity. Correspondingly, contracting entities' own standard contract templates concerning issues such as sanctions may differ very significantly from suppliers' standard terms and conditions. This poses challenges as regards the formulation of both the technical requirements as well as the terms and conditions of agreement so that tendering is possible by means of various solution models. Aspects to be considered include intellectual property rights issues, such as the supplier's opportunities to utilise the results of the implementation work in its other business activity and the contracting entity's opportunities to maintain and further develop the solution with the assistance of third parties.

When the subject of the procurement includes tasks requiring special competencies, the contracting entity faces the challenge of specifying sufficient competency and experience requirements and means of verifying these. When procuring an off-the-shelf solution, aspects that may be considered important include the project management capacity and interaction skills of the person in charge of the delivery project. By contrast, in the delivery of solutions tailored for the client, aspects that may be essential include the application development competencies and teamwork skills of the experts taking part in the implementation.

"Technical or functional requirements for the subject of the procurement specified in too much detail may force the supplier to produce something for which there is no foreseeable broader market demand. It may also be that, due to the specifications, existing well-functioning solutions or their parts cannot be utilised in the implementation. It should also be considered whether it makes sense to try to solve all operational problems at once or whether the procurement could be split into parts. Splitting procurement into smaller modules enables the replacement of solutions in parts that are independent of each other. For example, instead for inviting tenders for a massive HR system, separate competitive tendering could be organised for HR training management and for recruitment systemst."

Comments made by contracting entities and tenderers at a workshop

"Reference requirements ensure that the enterprise has the capacities required for the delivery. Application development is, however, expert work and, above all, calls for competent teams. This is why it is necessary to also set competency and experience requirements both role-specifically and for the entire team. The competencies offered must also be verifiable. Verification may take place, for example, through interviews or written assignments as well as associated teamwork tasks where a points system is used to rate the performance of the team offered in solving the task. Using these requires that the number of tenderers in the procedure is limited and that the contracting entity has competence in assessing capabilities. The schedule and scope of the delivery project must be limited enough for it to be feasible to allocate resources for assigning points to teams, and the agreement terms and conditions must also support the procedure (such as sanctions/ incentives linked with team permanence)."

Comments made by contracting entities and tenderers at a workshop

For the requirements to be set at the correct level, aspects such as the following should be considered:

- Will the most experienced people be required for every stage?
- Would it be possible for the supplier itself to specify the competencies required for each stage instead of a fixed team being designated in the tender?
- Which methods can be employed to identify and verify the required competencies and capabilities in the comparison stage?
- How could you enable the participation of less experienced talents, too, and the development of talents' new capabilities during the procurement?

Whatever the nature of the subject of the ICT procurement, its entire life cycle must be taken into account when setting the requirements, terms and conditions. The contracting entity's objectives or procurement-related requirements may change during the agreement period for reasons including legislative amendments or process development. Correspondingly, development is likely to take place during the agreement period in suppliers' solutions and service models, which may affect the implementation of the agreement. Opportunities for flexibility and changes must be anticipated carefully when preparing the procurement and taken into account in contexts such as agreement texts. It is important to consider in the preparatory stage of the procurement how and under what conditions the solution procured can be withdrawn from and another solution adopted and what the role of the supplier is in assisting this transition.

A good starting point for the assessment of the tenderer's suitability and the setting of requirements concerning the subject of the procurement is, for example, describing not only the objectives and the target environment but also the functional requirements as usage cases. When setting technical requirements, it is a good idea to make use of general criteria for requirements and assessment (such as the **Criteria to Assess the Information Security of Cloud Services (PiTuKri), WCAG 2.1**) as well as sets of questions from standards relating to the subject of the procurement. After that, the requirements, terms and conditions of agreement, any splitting of the procurement and other issues and conclusions concerning the procurement procedure and activities during the agreement period should still be discussed with the suppliers by means of a technical dialogue, for example (see Chapter 3).

The point where the contracting entity must pay particular attention to ensuring the reasonableness of the procurement criteria coincides with stage 4 (Figure 5: Path to effective procurement, call for tenders). It is essential from both the quality and the price perspective that all of the most cost-effective suppliers are able to submit a tender.

Take a look at these:

- Public Administration Recommendation 173 ICT service development: Definition of requirements. Guidance and models for defining requirements for ICT solutions to be procured (in Finnish only).
- Public Procurement Advisory Unit (2022): Guide to taking account of client involvement in public procurement. Guidelines and good practices for client involvement methods, opportunities and aspects to be taken into account (in Finnish only).
- Public Procurement Advisory Unit (2022): Guide to splitting procurement. Guidance and good practices for procurement splitting methods, opportunities and aspects to be taken into account (in Finnish only).
- Association of Finnish Local and Regional Authorities (2022). Open source code procurement guide for municipalities. Guide to the procurement of open source code solutions (in Finnish only).
- Association of Finnish Local and Regional Authorities (2017): Taking account of the General Data Protection Regulation in competitive tendering for public procurement (in Finnish only).
- Association of Finnish Local and Regional Authorities (2022): Preparedness in procurement. Guidance for preparedness and the management of the preparedness process from risk assessments to terms of agreement (in Finnish only).
- TIEKE Finnish Information Society Development Centre (2023): Green ICT: Guide for procurement staff. Guide to more sustainable procurement of ICT hardware and services (in Finnish only).
- Edilex, Oikarinen (2018): Legal regulation of the calculation of anticipated value in procurement (in Finnish only).

Contracting entity – remember these!

When specifying the subject of the procurement, take account of the objectives and functional needs, the requirement to describe the operating environment, the reasonableness of the requirements set and the potential of the solutions offered to meet the defined needs and requirements.

Tap into opportunities for market dialogue before publishing the contract notice.

Supplier – remember these!

Be curious and interested. It may be that you will be able to provide the best solution for the specified need.

Ask the contracting entity for an opportunity for a technical dialogue concerning the call for tenders materials before the contract notice is published. In the dialogue, provide justified amendment proposals to enable the submission of a high-quality tender.

CASE: Lupapiste online permitting and licensing service

"The Lupapiste online service is a success story – including from the public procurement perspective – in the digitalisation of building permitting and licencing that was created in the Ministry of Finance SADe programme in cooperation with municipalities. Ensuring strict compliance with the Public Procurement Act, sourcing the right competencies through a centralised framework arrangement based on competitive tendering and fostering partnership between stakeholders can create a well-functioning outcome. A well-functioning product and well-designed agreement terms and conditions providing the supplier with sufficient rights enabled the productisation of the Lupapiste package and its export to the global market where it today holds a competitive position. The objectives of the Public Procurement Act concerning the efficient use of public funds for high-quality, innovative and sustainable procurement and the maintenance of a well-functioning market were met in an exemplary manner when implementing the service."

5. Lead the entire process

From the procurement technical perspective, an ICT procurement begins with identifying the procurement need and ends when the agreement on the solution or service procured ends or otherwise becomes redundant. This means that it does not merely refer to the competitive tendering stage or its preparation.

Figure 6: Path to effective procurement, Agreement period begins, define the partnership.

Agile partnership for long-term effectiveness

Even though the success of a procurement cannot be verified until during the agreement period, the foundations for success are laid already in the preparatory stage of the procurement. It is not enough that the competitive tendering stage is completed successfully in terms of technical and scheduling aspects if the procurement turns out to be a failure during the agreement period. There are many potential stumbling blocks: the budget or schedule may be blown, cooperation does not work as agreed, the desired effectiveness is not reached, or end users burn out due to the workload caused by a system that is difficult to use. It may also be that the agreement does not enable the implementation of development needs encountered during the life cycle or negotiations need to be conducted during the agreement period on how to interpret ambiguities in the requirements or agreement terms and conditions.

The benefits sought will not be achieved merely by inviting tenders for and deploying ICT solutions. Success calls for not only technical development but also the management of operations, processes and other operating environment and investment in human competencies. The management of ICT procurement entails inter-administrative network management that is often dispersed to multiple roles. It covers operational management as well as ICT, agreement and service management at the strategic, tactical and operational levels throughout the procurement life cycle.

People must not be forgotten, either. Essential conditions for the success of an ICT procurement include interaction skills as well as the management and leadership of teams and work, projects, change, human resources and competencies as well as operations and their development.

The figure (Figure 6: Path to effective procurement, Agreement period begins, define the partnership) illustrates the point where the agreement period based on the procurement partnership begins.

Since the success of a procurement is always the sum total of cooperation between those participating in the implementation, the starting point for management and leadership during the agreement period should be building an open and trusting partnership with the supplier as well as the users. The agile partnership model requires that all parties assume responsibility for a sustainable and high-quality outcome to enable the desired effectiveness. Well-functioning cooperation requires that roles, responsibilities, the budget, timeline as well as communication and monitoring and change management mechanisms have been mutually agreed and are respected. The parties' decision-making powers and processes must be specified clearly. It is essential to ensure that the objectives defined for the procurement are at the core of everything that is done. With regard to needs for change or problems encountered, the parties have the duty to together seek solutions to the situation and, where necessary, change the direction of the procurement in accordance with the agreed change management process.

A successful ICT procurement requires that the users of the procured solution are taken into account both during the planning of the procurement as well as during and after the deployment of the solution. Users must be coached for the change and provided with training and support. User experiences and ideas concerning the use of the solution as well as process development must be consulted and processed actively. Compromising on consultation and inclusion due to reasons such schedule complications may result in users labelling a solution as a failure even though it otherwise meets the objectives and needs well. The benefits of even the best of ICT solutions will not take concrete form if users refuse to use it.

Take a look at these:

- KEINO Competence Centre for Sustainable and Innovative Procurement: Information package for procurement management and development. Information incl. strategic management, analysis and measurement of procurement (in Finnish only).
- KEINO Competence Centre for Sustainable and Innovative Procurement: Sustainable and innovative procurement

Contracting entity – remember these!

A perfect agreement alone will not achieve everything. You should also remember to monitor compliance with the agreement after the competitive tendering and deployment stages.

Build the partnership for the agreement period. You should listen to the suppliers when selecting the partnership operating model.

Engage in operational change management and leadership also during the agreement period to achieve effectiveness.

Monitor progress towards the objectives and respond to any deviations. Be bold to change course in a new direction if necessary.

Supplier – remember these!

Make efforts to reach the contracting entity's objectives and fulfil its needs as the contracting entity's partner during the agreement period, too.

Request feedback from the contracting entity and users and propose improvements.

CASE: Metsähallitus case management system

Metsähallitus, the enterprise governing the use of state-owned land, procured a case management system that is compliant with legislation and requirements and smooth and easy to use as a map to digital datasets. The solution was procured as a cloud service (SaaS). A negotiated procedure was employed as the procurement procedure.

The starting point for the procurement was an information management reform where, going forward, each employee will take part in recording and processing data to be archived. Metsähallitus staff is highly heterogenous, based in more than 60 locations and performing a diversity of duties. The organisation is not always able to provide on-site guidance of employees, which is why particular attention was paid to the usability of the solution. The aim was to provide employees with a genuine and active opportunity to take part in both the competitive tendering stage as well as during the agreement period to ensure smooth everyday use.

The project was launched in December 2019, which is when the project leader and project team were appointed. Responsible persons were appointed for the team from all business units as well as from case management, information management, legal affairs and procurement, with the services of an external case management consultant also used. The Metsähallitus Management Group acted as the steering group. The project leader and project team were provided with genuine responsibility and working hours for the preparation and implementation of the procurement as well as powers to make decisions relating to the project. The time spent for the preparation and the implementation of the competitive tendering process totalled almost ten months. The project complied with the standardised ICT project model of Metsähallitus. The objectives were set and made concrete in cooperation between management and small groups of the business units participating in the specification process.

A comprehensive market dialogue process to prepare the procurement took place in spring 2020. As the aim was for the procurement to be fair and open, suppliers were provided already during the market dialogues with an overall picture of the target environment, needs and objectives, different usage situations as well as terms and conditions applied in the procurement that was as clear as possible. At the same time, information was collected concerning suppliers' views and solution models and their potential impacts on the implementation of the procurement. Information on experiences of other contracting units from similar information system and information management projects was also collected on a broad scale.

The contract notice was published in October 2020 and the final call for tenders in March 2021. Negotiations took place in two pre-programmed negotiation rounds, after each of which the tenderers were provided with a summary of the issues raised in the negotiations, further specifications proposed and further specifications made. The negotiations aimed for a confidential and open dialogue and a genuine will to understand issues that might, for example from the tenderer perspective, prevent the submission of a tender or reduce the quality of the outcome in relation to the objectives. The comparison criteria in the final call for tenders were price at 20%, characteristics rated with points at 40% and usability at 40%. The usability assessment involved a group representing future users assessing the solutions offered in accordance with pre-described key usage cases and assessment criteria. The usability assessment played a major role in the selection of the winning tender.

The key success factors of the procurement identified from the contracting entity and tenderer perspectives were:

1. clear objectives;
2. personnel and management commitment and active participation;
3. realistic timelines;
4. sufficient and expert resources in the preparatory and procurement stages;
5. clear roles and tasks;
6. open, active, honest, cooperative and continuous interaction internally and with tenderers; and
7. and agile and iterative working model with efficient leadership.

CASE: Occupational Safety and Health Administration's surveillance data system

The subject of the procurement of the Department for Work and Gender Equality of the Ministry of Social Affairs and Health was the maintenance and development of the Vera surveillance data system for occupational safety and health (OSH) enforcement introduced in 2011 as well as other ICT development required by the Department as small-scale development or based on projects. The procurement was carried out as an internal competitive tendering process using a Dynamic Purchasing System (DPS).

The project was launched in December 2019. A project leader and a project team consisting of OSH enforcement and operations developers as well as ICT, procurement and legal personnel were appointed for the project. The project team also had representatives from the Ministry of Social Affairs and Health, Regional State Administrative Agencies and the Prime Minister's Office. The working group reported on progress made in the procurement to the management of the Department for Work and Gender Equality and of the Occupational Safety and Health Divisions of the Regional State Administrative Agencies. Based on lessons learned from previous procurements, plenty of time and experts were allocated for the preparation and the implementation of the competitive tendering process.

Tried and tested specifications and call for tenders documents relating to the procurement of the Vera ICT system as well as operational descriptions of OSH enforcement were, following updates to their contents, utilised in the preparation of the procurement. In addition, the preparatory stage involved a procurement method analysis to select the most functional procurement model. Before the publication of the call for tenders, the procurement documents were published for a technical dialogue with the tenderer candidates that had joined the DPS. The call for tenders was published in October 2020. The tender comparison criteria were price at 40%, experience and competencies of the experts at 50% and proposed contents of the delivery at 10%.

Challenges faced in the procurement included formulating relevant selection criteria, and difficulties in monitoring the process during the busiest phase when the work focused on a few preparing officials. The low number of tenders received came as a surprise and resulted in a reflection on whether it makes sense to subject the maintenance and development of old ICT systems to competitive tendering for fixed-term agreements.

One of the most essential success factors of the procurement was that the project team had remained almost exactly the same since the deployment of the Vera system and the majority of the experts had taken part in the previous competitive tendering processes. Four of the project team experts also had previous procurement experience. The procurement had clear objectives and a planned timeline. Enough time was allowed for analysing the procurement method and updating the call for tenders documents.

Read more: Working group on the Occupational Safety and Health Administration's 2021 procurement of the Vera surveillance data system for occupational safety and health (STM071:00/2020) (in Finnish only).

Conclusion

We in the working group of this joint project hope that the solutions presented in this playbook will help you with challenges faced in ICT procurement processes. The project has shown that there is a need for the further development of public ICT procurement processes. Potential themes for further development include sharing best practices, improving the various types of ICT procurement guidelines and creating shared agreement practices.

We would like to thank all of the representatives of contracting entities, market actors and stakeholders participating in the joint project. The joint project reached the objective set to identify key factors affecting the success of public ICT procurement.

The workshops found that there are challenges involved in all stages of ICT procurement. The observations were used as the basis of producing this playbook, and a decision was made to describe the key challenges and solutions at the various procurement stages that had emerged. The success of an ICT procurement boils down to keys to the solution being identifiable at all stages of the procurement agreement and of the life cycle of the solution procured – not just during the stages involved in the preparation of the competitive tendering. This playbook describes the procurement process as a path at the turning points of which the contracting entity should pause, analyse the situation and, if necessary, change direction.

In the initial stage of the procurement it is important to form a clear picture of what you want to achieve with the procurement. It is also important to describe the target environment of the procurement carefully. Dialogue between contracting entities and tenderers and, consequently, ensuring best capabilities support the management of the whole formed by the various factors affecting the procurement.

The dialogue is expected to be proactive and diverse in the rapidly changing operating and market environment. A successful procurement reflects the criteria, namely the objectives, value creation and cost effectiveness. Feedback and assessment of success help to make progress in procurement development. A process with good management and leadership as well as implementation contributes towards a successful procurement. It also creates long-term effectiveness and good partnership and trust between the parties to the agreement.

Procurement Finland will continue to develop public ICT procurement together with stakeholders. Going forward, the aim is to address the issues that emerged in the joint project.

The playbook was prepared by Tarja Sinivuori-Boldt, Eija Riikonen and Olli-Juhani Piri from the Ministry of Finance, Katariina Huikko and Olli Jylhä from the Association of Finnish Local and Regional Authorities and Outi Tarvainen and Jussi Pyykkönen from PTCServices Ltd.

The contracting entity's to-do list

1. Clarify your objectives

- ◯ Take account of both external and internal factors when defining effectiveness: What is it that you want to and can achieve?
- ◯ Be active in networks outside your organisation. Establish which objectives other contracting entities have reached by procuring a solution that corresponds to your own organisation's needs.
- ◯ When defining objectives, consider the expectations and needs of the contracting entity's internal actors. Make use of tools such as service design methods to verbalise your common understanding and objectives.

2. Tap into opportunities for dialogue

- ◯ Define objectives so that the procurement process is able to focus on those solution models that best meet the contracting entity's needs and on those suppliers that are capable of producing the desired effects.
- ◯ Communicate openly about future procurement procedures, their preliminary timelines as well as the interdependences of procurements and other development.
- ◯ Engage in active dialogue with the suppliers at the various preparation stages and by making use of a variety of methods.
- ◯ Pay particular attention of suppliers' solution and business models and any global standard contractual terms and conditions that do not allow any client-specific flexibility for the supplier.
- ◯ Remember the guidance and conditions provided by the Public Procurement Act for market consultations.
- ◯ Include operational, ICT, procurement and legal experts in the market dialogues.
- ◯ Divide dialogues into themed sessions and iterate where necessary.
- ◯ Respond to feedback received from suppliers in the market dialogue context.

3. Describe the target environment

- ◯ Effectiveness cannot be built in a vacuum.
- ◯ All ICT solutions are part of a broader operating environment that cannot be taken into account without an up-to-date description of the operating environment.
- ◯ Identify and describe at least the processes, information and information flows, utilised interfaces, and functional and technical dependencies relating to the subject of the procurement and well as the architecture principles and policies to be taken into account in the procurement.

4. Enable the provision of best solutions

- ◯ When specifying the subject of the procurement, take account of the objectives and functional needs, the requirement to describe the operating environment, the reasonableness of the requirements set and the potential of the solutions offered to meet the specified needs.
- ◯ Tap into opportunities for market dialogue before publishing the contract notice.

5. Lead the entire process

- ◯ A perfect agreement alone will not achieve everything. You should also remember to monitor compliance with the agreement during and after the competitive tendering stage.
- ◯ Build the partnership for the agreement period. You should listen to the suppliers when selecting the partnership operating model.
- ◯ Engage in operational change management and leadership also during the agreement period to achieve effectiveness.
- ◯ Monitor progress towards the objectives and respond to any deviations. Be bold to change course in a new direction if necessary.

Tenderer's to-do list

1. Clarify your objectives

- ◯ Ask the contracting entity for access to dialogue. Give concrete examples of what kind of effectiveness has been produced for other clients with your organisation's solution model and what kinds of methods for measuring and reporting effectiveness are enabled by the solution model.
- ◯ Help the contracting entity to specify its needs and objectives on the basis of questions and examples.

2. Tap into opportunities for dialogue

- ◯ At best, the market dialogue involves multiple phases.
- ◯ Allocate enough time and competencies to participation in the dialogue.
- ◯ Offer solution proposals from the perspective of the objectives presented by the contracting entity.
- ◯ Help the contracting entity to, for example, clarify the objectives, needs, specifications and criteria on the basis of questions and examples.
- ◯ Provide honest answers to the contracting entity's questions.
- ◯ Give concrete examples of corresponding solution models provided.
- ◯ Provide the contracting entity with feedback on the dialogue and materials. This is where you can have your say!
- ◯ Remember that the dialogue conducted by the contracting entity is governed by the guidelines and conditions provided by the Public Procurement Act.

3. Describe the target environment

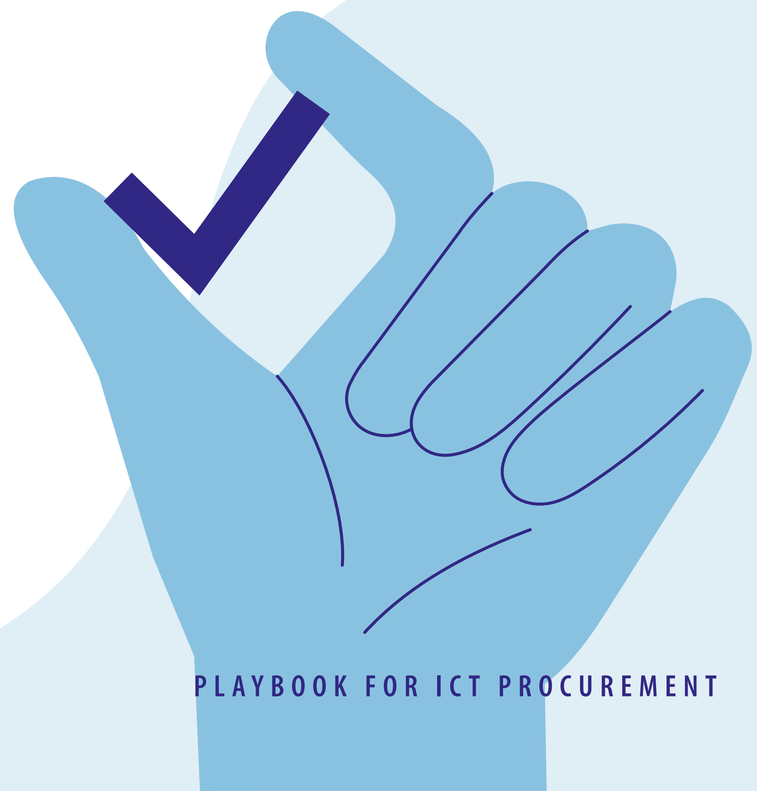
- ◯ Ask the contracting entity questions about the operating environment, policies and principles already during the market dialogue.
- ◯ Explain clearly what information you will need to prepare a high-quality tender. Encourage the use of concrete examples in the description.

4. Enable the provision of best solutions

- ◯ Be curious and interested. It may be that you will be able to provide the best solution for the specified need.
- ◯ Ask the contracting entity for an opportunity for a technical dialogue concerning the call for tenders materials before the contract notice is published. In the dialogue, provide justified amendment proposals to enable the submission of a high-quality tender.

5. Lead the entire process

- ◯ Make efforts to reach the contracting entity's objectives and fulfil its needs as the contracting entity's partner during the agreement period, too.
- ◯ Request feedback from the contracting entity and users and propose improvements.



Glossary

Open data = data in a digital form that can be accessed freely by anyone.

Anticipated value = the maximum total amount to be paid to the supplier during the agreement period that is based on the value at the start of the procurement procedure. The calculation of the value must take account of the procurement's potential alternative implementation methods, any additional procurement or extension terms included in the procurement agreement, and any fees or payments to candidates or tenderers during the procurement procedure.

ICT = Information and Communication Technology solutions and services including all applications, information resources, user and other interfaces, telecommunications solutions, licences and other equipment or services required for the automated data processing delivered by them.

Integration = an information technology solution that enables the transmission of data between applications.

Enterprise architecture (EA) = a way of identifying, analysing, planning and describing the structural elements and their interdependences in a whole formed by activities, processes, services, information, information systems and and services provided by them.

Modular = consisting of independent parts. In a modular ICT solution, each module performs is own specified role in the data processing of the whole system and modules are connected with each other via interfaces.

Service design = development and planning of services and operational processes by making use of methods of design. The key aim of service design is planning in a way that the service or operational process meets both user as well as business objectives.

Interface = a technical specification based on which applications are able to communicate and exchange data. Integrations are implemented through interfaces. Also referred to as Application Programming Interface (API).

Technical dialogue = a type of market dialogue where the contracting entity seeks to obtain information about the technical details, requirements, selection criteria and agreement terms and conditions relating to the subject and implementation of the procurement in order to refine the call for tenders for publication or to select the most suitable procurement procedure. Other used as a synonym for 'request for information'.

Request for information (RFI) = a request to suppliers, usually made in writing, by the contracting entity for suppliers to provide information about available products or services on the basis of the questions made by the contracting entity. Other used as a synonym for 'technical dialogue'.

Data protection = protection of personal data against unauthorised access.

Information security = operating models and technical measures to ensure the availability, reliability and integrity as well as confidential processing of data.

Operational process = a set of interrelated tasks and resources required to implement them (such as people, applications, data) to achieve a specific defined outcome.

Interoperability = principles and technical solutions by means of which data can be utilised and exchanged between different applications without any loss of the original meaning of the data.


MANAGEMENT BY INFORMATION
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SKILLS DEVELOPMENT
SOCIAL EFFECTIVENESS
EMPLOYMENT
THE ENVIRONMENT
INNOVATIVENESS
STRATEGIC APPROACH
Public Procurement Strategy
PROCUREMENT FINLAND
State
Wellbeing services counties
Companies
Parishes
Municipalities
Joint municipal authorities
Expert organisations