MINISTRY OF FINANCE

Public sector innovation barometer 2022
Central government results

Governance Policy

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Language	English	**Pages**	70

Abstract

The public sector innovation barometer was, for the first time, conducted in Finland simultaneously in both central government and municipalities. Public sector innovations are a topic that both the OECD and the Nordic countries have paid more attention to in recent years. The innovation barometer aims to provide a picture of innovation activities and make visible innovations that have been introduced in the public sector. The target group of this survey was the management in central government and universities.

Innovation activities are motivated in particular by the needs of citizens and clients, productivity and new technologies. Drivers of innovation activities are also reflected in individual innovations and their effects. There are not enough working hours or money available. The organisation's strategy and the competence of personnel, in turn, are among the key factors promoting innovations.

Nearly all respondents reported that their organisations innovate. The efforts to improve efficiency by using new technologies and adaptation to the COVID-19 pandemic are visible in the innovations introduced in central government in 2020–2021. Public sector innovations are an opportunity to identify and seize the known challenges and opportunities. Based on the results of the survey, it is possible to raise various issues for public discussion and identify areas that could be improved further.

Julkisen sektorin innovaatiobarometri 2022
Valtion tulokset

Tiivistelmä

Julkisen sektorin innovaatiobarometri on toteutettu Suomessa ensimmäistä kertaa yhtä aikaa sekä valtiolla että kunnissa. Julkisen sektorin innovaatiot ovat aihe, johon sekä OECD että pohjoismaat ovat kiinnittäneet viime vuosina enenevissä määrin huomiota. Innovaatiobarometrin tarkoituksena on ollut luoda kuvaa innovaatiotoiminnasta ja tehdä näkyväksi julkisella sektorilla käyttöönotettuja innovaatioita. Tämän kyselyn kohderyhmänä oli valtionhallinnon ja yliopistojen johto.

Innovaatiotoimintaa motivoivat erityisesti asiakkaiden ja kansalaisten tarpeet, tuottavuus ja uusi teknologia. Innovaatiotoiminnan ajurit näkyvät myös yksittäisissä innovaatioissa ja niiden vaikutuksissa. Rahaa ja työaikaa ei ole riittävästi käytössä. Organisaation strategia ja henkilöstön osaaminen ovat taas merkittävämpiä innovaatioita edistäviä tekijöitä.

Melkein kaikkien vastaajien organisaatioissa innovoidaan. Valtiolla vuosina 2020–2021 käyttöönotetuissa innovaatioissa näkyy pyrkimys tehostaa toimintaa uusia teknologioita hyödyntämällä ja mukautuminen koronapandemiaan. Julkisen sektorin innovaatiot ovat mahdollisuus tunnistaa ja tarttua tiedossa oleviin haasteisiin ja mahdollisuuksiin. Kyselyn tulosten pohjalta voidaan nostaa eri asioita yhteiseen keskusteluun ja tunnistaa kehittämiskohteita.

Innovationsbarometern för den offentliga sektorn
Statens resultat

Referat

Innovationsbarometern för offentliga sektorn har genomförts i Finland för första gången samtidigt vid både staten och kommunerna. Innovationer inom offentliga sektorn är ett ämne som både OECD och de nordiska länderna har fäst alltmer uppmärksamhet vid under de senaste åren. Avsikten med innovationsbarometern är att skapa en bild av innovationsverksamheten och synliggöra de innovationer som införts inom offentliga sektorn. Enkätens målgrupp var ledningen för statsförvaltningen och universiteten.

Innovationsverksamheten motiveras särskilt av kundernas och allmänhetens behov, produktiviteten och ny teknik. Drivkrafterna för innovationsverksamheten syns också i de enskilda innovationerna och i de konsekvenser som innovationerna får. Det finns inte tillräckligt med pengar och arbetstid. Organisationens strategi och personalens kompetens är de viktigaste faktorerna som främjar innovationer.

Nästan alla som svarade på enkäten fanns i organisationer där det förekommer innovationsverksamhet. I de innovationer som staten tog i bruk 2020–2021 syns en strävan att effektivisera verksamheten genom att använda nya teknologier och en anpassning till covid-19-pandemin. Innovationer inom den offentliga sektorn är en möjlighet att identifiera och gripa tag i kända utmaningar och möjligheter. Utifrån enkätresultaten kan olika frågor tas upp till gemensam diskussion och olika utvecklingsobjekt identifieras.

Contents

ABSTRACT

The Public sector innovation barometer has been conducted in Finland for the first time at the same time in both central and local government. Public sector innovations are a topic to which both the OECD and the Nordic countries have paid increasing attention in recent years. Innovations can be a means of not only reforming administrative policy but also creating value for Finnish society and citizens. The purpose of the innovation barometer was to survey innovation activities and to make innovations introduced in the public sector visible. The target group of this survey conducted by the Ministry of Finance was the management of central government and universities[1]. The Association of Finnish Local and Regional Authorities has carried out a survey in the municipal sector, and its results will be published in autumn 2022.

In particular, the government programme and the administrative branch in question provide steering on innovation activities. The activities are motivated especially by the needs of customers and citizens, productivity and new technology. The drivers of innovation activities are also visible in individual innovations and their impacts. There is not enough money and working time available. The organisation's strategy and personnel competence are, on the other hand, factors that promote the most significant innovations. In particular, cooperation is done with other public sector organisations, companies, research institutes and higher education institutions.

Almost all respondents' organisations innovate. While innovations are mostly related to improving processes, innovation activities also create new services and products. Innovations introduced by the central government in 2020–2021 show an effort to make operations more efficient by using new technologies and adapting to the coronavirus pandemic. Alongside efficiency and adaptation, we examine how public sector innovations could be harnessed for anticipatory innovation governance and for solving different societal missions.

Based on the results of the survey, different issues can be raised in public debate and development measures can be identified. The results are not intended to be widely gener-alised due to the limited coverage of the respondents. The central government's strengths include management's openness to new ideas and the internal work of organisations. At

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1   https://vm.fi/valtionhallinto

the same time, we need an innovation-friendly culture that covers the entire public sector and invites citizens and stakeholders to participate. Public sector innovations are an opportunity to identify and tackle known challenges and opportunities. However, a positive change does not happen by itself; instead, we need determination and an open-minded attitude in the face of new things.

1   Introduction

Finland is considered a model for the renewal of public governance[2]. However, public sector innovation activities and their potential have not been fully exploited. Their domestic visibility does not correspond to the attention received by many other areas of work, even though other countries often focus on Finland when talking about, for example, anticipation work or experiments.[3] In the current decade, the special focus will be on linking public sector innovation activities to anticipation, anticipatory innovation governance and support for societal reforms. With the support of Finland, the OECD[4] has prepared a model for anticipatory innovation governance to support systemic change, the core of which is innovations.[5] In parallel, both Finland and the OECD are currently studying ways in which innovations can be used to solve major societal missions.[6]

We need research-based knowledge to support the creation of operating models and everyday development work. The Ministry of Finance and the Association of Finnish Local and Regional Authorities have carried out innovation barometer surveys at the same time in the central government and in municipalities and joint municipal authorities. The surveys have been prepared in cooperation with Finnish and foreign stakeholders, and they enable comparisons with other countries. The surveys create a knowledge base for decision-makers and specialists and create pre-conditions for more effective public sector innovation activities.

Innovations may be overlooked in the public sector even though we innovate in many ways. This report describes how common innovation activities were and how commonly innovations were introduced by the central government in 2020–2021. The report highlights how innovation activities are steered, supported and assessed, with whom innovation cooperation is carried out, how innovation activities are communicated, and which issues promote or hinder innovation. The report includes examples of the innovations introduced by the respondents. The Association of Finnish Local and Regional Authorities will publish the results for the municipal sector in autumn 2022.

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2   https://oecd-opsi.org/wp-content/uploads/2022/06/OECD-Finland-Anticipatory-Report-FINAl.pdf

3   https://oecd-opsi.org/wp-content/uploads/2021/09/Anticipatory-Innovation-Governance-in-Finland.pdf

4   https://www.oecd.org/

5   https://vm.fi/valtion-ennakoiva-ohjaus

6   https://tietokayttoon.fi/-/suomen-missiolahtoisen-innovaatiopolitiikan-kulmakivet-fimo-

The innovation barometer survey was carried out in spring 2022 so that its results would be topical and available in the preparation of the new Government Programme in 2023. Finnish society has faced several challenges in recent years, and the public sector has repeatedly demonstrated its ability to create solutions rapidly, as shown by the coronavirus pandemic and crisis situations. Exceptional times can be seen in the most significant innovations in organisations. In the coming years, the focus areas of public sector innovation activities are likely to change. We need forward-looking debate and strengthening of public sector innovation activities in order to succeed in our tasks in a rapidly changing world.

2 Public sector innovations and their importance

Why?

The public sector must renew itself in order to maintain its functional capacity even in challenging situations. Trust in the government is in a delicate balance, and the inability to produce solutions to problems can erode trust in the government. The public sector will face more and more challenges in the future, and innovation activities can be a key means of solving them. Complex problems require extensive cooperation, exchange of information and activities within organisations and in cooperation with other parties.

Public sector innovations can improve the human-centricity of services and the productivity of the public sector and create new opportunities for companies and civil society. Innovation activities are also used to address and influence global megatrends, such as climate change and digitalisation. The need for innovations increases when we try to respond to known changes and unexpected situations – continuous learning and reform is required from the public sector.

What?

According to the OECD, *public sector innovation* is a novel approach that is implemented and aimed to achieve impact (such as change in public values).[7] Public sector innovation refers to a new or improved service, product or process, or a combination of these, that significantly differs from the organisation's previous services, processes or products and aims to achieve impact on the common good.

In order for a service, product or process to be considered an innovation, it must also be available to potential users, such as customers or employees. The innovation must be new within the organisation, but it may have been used or developed earlier elsewhere.

Innovations can be clearly defined solutions for certain changes in the operating environment or conscious attempts to influence the operating environment. Innovations often combine both perspectives.

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7   https://oecd-opsi.org/wp-content/uploads/2022/06/OECD-Finland-Anticipatory-Report-FINAl.pdf

Innovations can be classified in many different ways. According to the OECD, the development of public sector innovations can be driven by enhancement-orientation, adaptation, mission-orientation[8] and anticipation[9], the latter two getting increasing attention lately. In this report, innovations are divided into service, product and process innovations. These classifications do not directly indicate what kind of a thought process has guided their development, and sometimes the boundaries of classification are blurred both in definitions and in practice.

Product innovation refers to a matter or goods that are either completely new or improved in the organisation. In this report, products include not only physical objects, such as devices, but also digital products and systems.

Service innovation refers to a new or improved service provided by an organisation. The service may be aimed at customers and citizens or for the organisation's own use.

Process innovation refers to an improved operating method related to the organisation's business or internal operations. For example, a process innovation can promote the productivity of an organisation, its smooth processes, communication or information processing.

Innovation activities and their support refer to activities that are done to promote innovation within an organisation. It may be an activity that directly contributes to the development of new or improved services, products or processes for the organisation's customers or to the development of internal work. The activities may also include the management, coordination or cooperation of innovation activities, i.e. support for innovation capacity.

How?
Innovation activities can take place at many levels, as shown in the OECD list (Figure 1):

1) at the individual level
2) within organisations
3) in the public sector
4) in society

Effective innovation activities require an innovation-friendly operating environment. The OECD framework emphasises people, information, working methods, rules and processes.

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8   Also known as mission orientation.

9   https://oecd-opsi.org/blog/innovation-facets-different-tools-for-different-aims/

The development and introduction of innovations are influenced by how people are motivated to explore new ideas and experiment with new ways of working. Ways in which people are selected for specific tasks, rewarded and managed are important for the organisation's innovation capability.
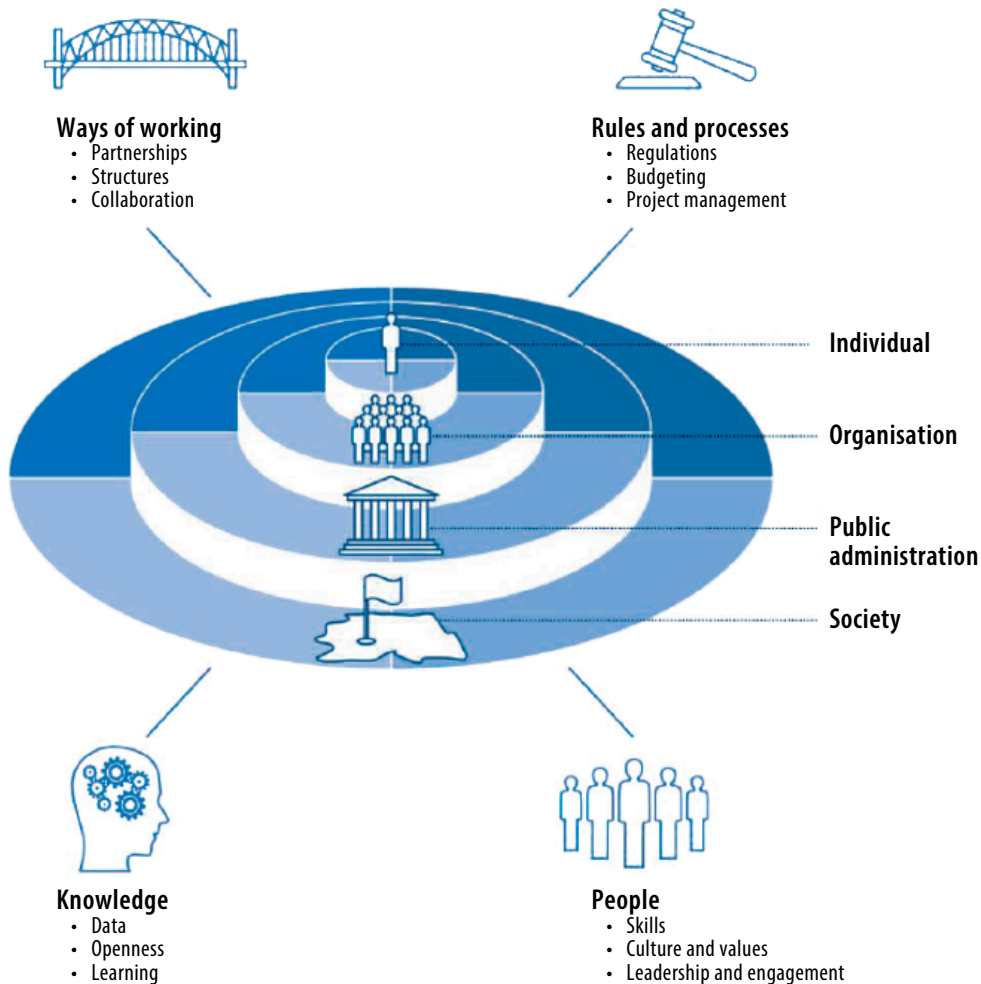
Data, information, understanding and learning are considered essential for the development of innovations. Shortcomings in knowledge management can inhibit innovation. It is also important to openly share information about existing innovations so that others can learn from them.

The working methods of individual organisations and the public sector affect innovation. Workspaces and team structures must be in order. The public sector must nurture partnerships and cooperation with stakeholders and also work seamlessly internally.

Innovation-friendly regulation, budgeting and strategy processes are significant promoters. If poorly implemented, they may hamper the development of innovations.[10] As a result of research into anticipatory innovation activities, the OECD has started focusing increasing attention on the connection between anticipation and public-sector innovations.

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10   https://www.oecd.org/publications/the-innovation-imperative-in-the-public-sector-9789264236561-en.htm

Figure 1. Levels of innovation activities and the operating environment (OECD)

Finland adopted the OECD Declaration on Public Sector Innovation[11] together with the OECD member countries at the meeting of the council of ministers on 22 May 2019 (Figure 2), which in practice means that Finnish general government:

1) embraces and enhances innovation within the public sector
2) encourages and equips all public servants to innovate
3) cultivates new partnerships and involves different voices
4) supports exploration, iteration and testing
5) diffuses lessons and shares practices

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11 Innovation Declaration

Figure 2. Innovation declaration of Finnish general government

We embrace and enhance innovation within the public sector

We encourage and equip all public servants to innovate

We cultivate new partnerships and involve different voices

We support exploration, iteration and testing

We diffuse lessons and share practices

The Ministry of Finance promotes the implementation of the declaration in various ways. The ministry leads the cooperation group on public sector innovation founded in 2021[12] and coordinates an innovation network that enables learning from innovations together. The Ministry of Finance actively disseminates information on public sector innovations to international partners and influences the objectives and activities of the OECD's OPSI working group[13].

Using EU funding, the OECD carried out an assessment of anticipatory innovation governance and innovation activities in Finland in the years 2020–22.[14] According to the OECD, the Ministry of Finance should determine:

1) how the current public sector innovation measures are compatible with the needs of anticipatory innovation governance
2) what kinds of shortcomings exist
3) what kinds of investments are needed in innovation skills and capabilities
4) how innovation activities and innovation could be made a systemic part of the design and implementation of policies

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12 Innovation working group in the project window. The observations made by the innovation working group on the diversity and fragmentation of innovation activities in the public sector serve as a starting point for the implementation of this barometer survey.

13 https://oecd-opsi.org/

14 https://oecd-opsi.org/wp-content/uploads/2022/06/OECD-Finland-Anticipatory-Report-FINAl.pdf

Similarly, the Ministry of Finance should systematically plan and coordinate learning from public sector innovation projects that use new anticipatory tools and methods. This barometer contributes to implementing the OECD's proposals for Finland.

Good to know 1: Anticipatory Innovation Governance

The OECD presented proposals for more effective anticipation, better policy planning and more systematic innovation activities to Finland in the summer of 2022.

Over the past two years of global turmoil, the OECD has developed a new paradigm of anticipatory innovation governance to respond to the rapid changes and uncertain developments of the century. The European Commission and Finland have supported this work.

The proposals for Finland are based on a literature review, an extensive round of interviews, numerous workshops and four practical projects dealing with carbon neutrality, continuous learning, children's well-being and the roles of political and senior management.

https://vm.fi/valtion-ennakoiva-ohjaus

3   Questionnaire, target group and respondents

In spring 2022, the Ministry of Finance sent an innovation barometer survey to a total of 142 organisations, such as ministries, agencies, companies performing separate central government tasks, institutions subordinate to Parliament and universities.[15] The survey was intended for people working in the executive boards of organisations, as their contribution is very important in enabling and steering innovation activities in the public sector. The survey was prepared together with Finnish and Nordic stakeholders.[16] A total of 71 responses were received from 63 organisations. 44% of the organisations to which the survey was sent provided responses. 71% of the respondents were senior management in the organisation (n=50), a quarter were middle management (n=19) and 1% were specialists (n=1). Answering any question was optional, which is why the number of answers varies by question.

The organisations that responded to the survey can be classified into agencies, universities, other public-law corporations[17], companies, ministries and state enterprises. A clear majority of respondents belonged to agencies. (Figure 1) The respondents answered questions from their own perspective, and the answers do not necessarily represent the official position of the organisations.

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15   The survey was available for replies from 28 March to 5 May 2022, and its results were analysed in summer 2022 and published on 23 September 2022.

16   The Ministry of Finance held discussions with public sector innovation actors in Denmark, Norway and Sweden. The survey form is based on the Copenhagen Manual, which was developed under the leadership of Denmark for measuring public-sector innovations. https://innovationbarometer.org/copenhagen-manual/ In Finland, the form was developed with Kela, the Association of Finnish Local and Regional Authorities, Statistics Finland, the Ministry of Economic Affairs and Employment and the State Treasury.

17   Kela, for example.

Figure 1. Classification of respondent organisations
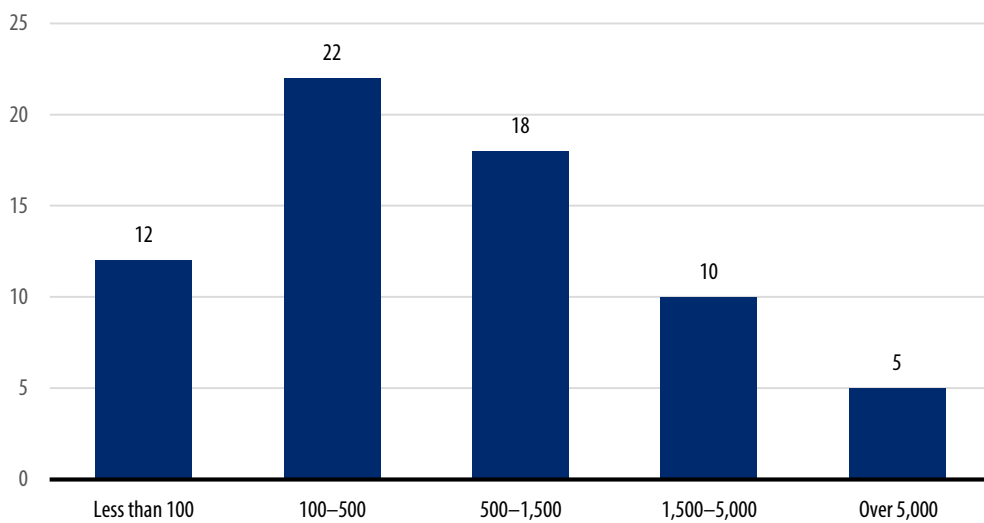
Type of organisation [qty]
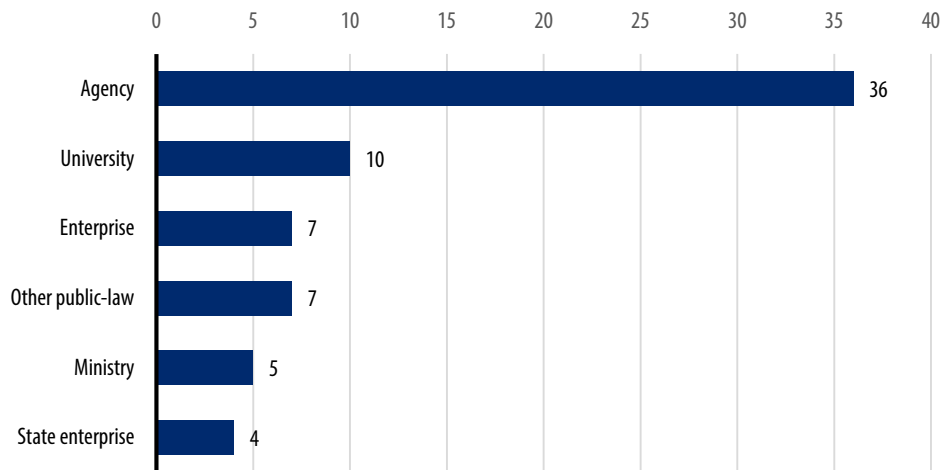
The survey was answered by organisations of different sizes. The largest number of respondents were from organisations with 100–500 employees (n=22). (Figure 2)

Figure 2. Number of employees in respondent organisations

Number of employees in the organisation [qty]

Part A:
# Central government innovation activities

4 Steering of and starting points for innovation

The results of the innovation barometer show that almost all public-sector organisations have innovation activities: 93% of the respondents had innovation activities in 2020–2021. (Figure 3)

Figure 3. Innovation activities in respondent organisations
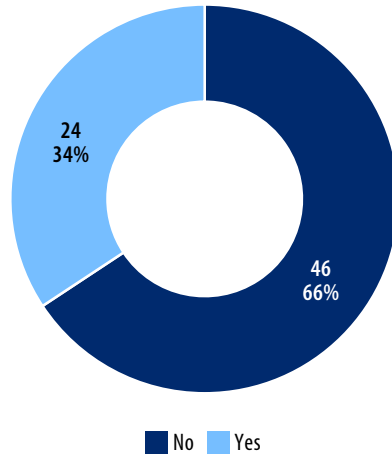
Did your organisation have innovation activities in 2020–2021 [qty and %]
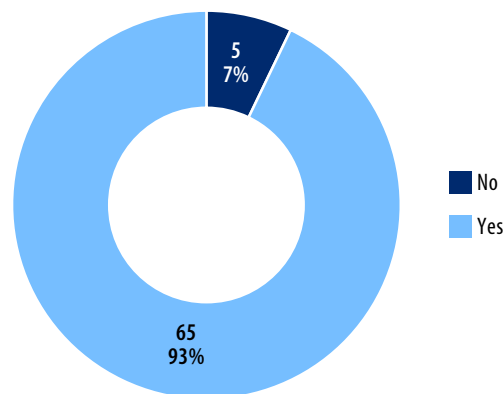
One-third of the respondents had adopted an innovation programme in 2020–2021. (Figure 4) This may be explained by the fact that innovation activities are included in other strategies or development and experimentation activities.

Figure 4. Approved innovation programme

Did your organisation have an approved innovation programme or equivalent on 31 December 2021?

24
34%

46
66%

■ No ■ Yes

More than half of the respondents had a centralised function that coordinated innovation activities. (Figure 5)

Figure 5. Centralised function to coordinate innovation activities

Did your organisation have a centralised function that coordinates innovation activities in 2020–2021?

32
46%

38
54%

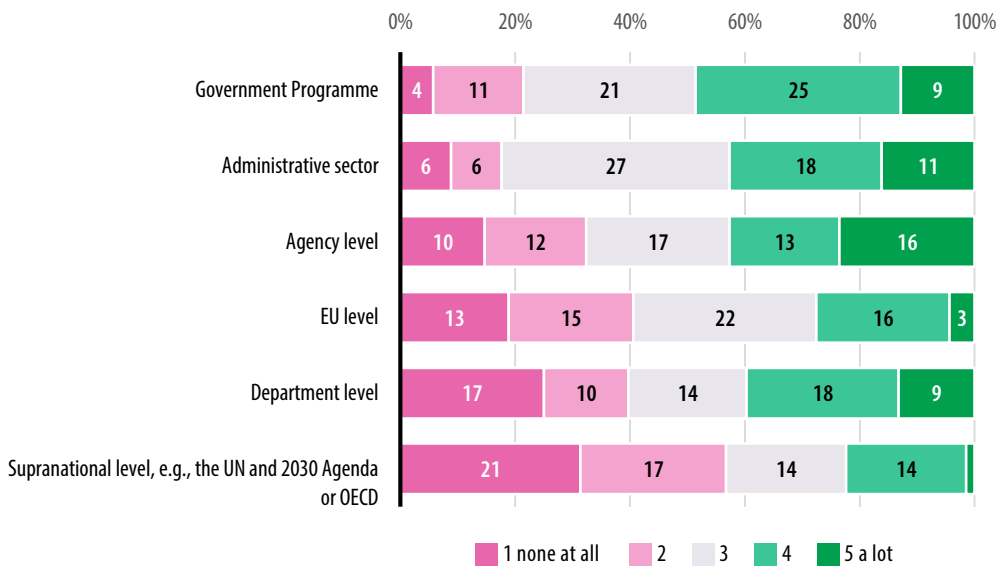■ No ■ Yes
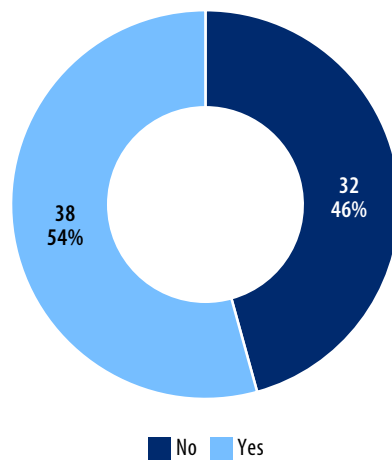
Good to know 2: Kela innovation unit

Centralised innovation activities can be organised in many different ways. A good example is Kela's innovation unit, which combines anticipation and innovation with the organisation's strategy work and other development projects. Anticipation is used to identify phenomena that innovation activities address. The lessons learned from the innovation process will be incorporated into the organisation's strategy work. The activities are in line with the strategy, but this does not mean that the unit is tied solely to the priorities set by the organisation's management. This means that the function is allowed to investigate matters outside the existing strategy. Kela also has development work that has not been organised under the "innovation umbrella". This work is more linked with present matters, while Kela's innovation unit looks further into the future. It is a systematically steered function that can also recognise that something does not work until it is implemented more widely. The innovation function can also act as a risk management mechanism. It can experiment with certain technologies, for example, and use them as a basis for competitive tendering.

The Government Programme provides the most steering and policies for innovation activities for the central government. The administrative branch and the agency level also significantly steer innovation activities. In the organisations of the respondents, the least steering is provided by the supranational level. Based on the results, abundant steering and guidelines are rare at different levels. (Figure 6) One way to steer innovation activities in the public sector can be creating a separate strategy. Norway prepared one in 2021.

Figure 6. Steering of innovation activities

How much steering and policies are provided for innovation by the following parties in your organisation?

	1 none at all	2	3	4	5 a lot
Government Programme	4	11	21	25	9
Administrative sector	6	6	27	18	11
Agency level	10	12	17	13	16
EU level	13	15	22	16	3
Department level	17	10	14	18	9
Supranational level, e.g., the UN and 2030 Agenda or OECD	21	17	14	14	

Good to know 3: Norwegian public sector innovation white paper

In Norway, public sector innovation activities have been promoted by drawing up a white paper to guide innovation. It was created under the leadership of the Ministry of Local Government and Modernisation.

The strategy contains recommendations on user-centricity, competence development and cooperation between the public and private sectors. The key task of managers is to create a culture that fosters innovation.

Read more at https://www.regjeringen.no/en/dokumenter/meld.-st.-30-20192020/id2715113/

Customers' needs and expectations motivate innovation activities the most. Productivity is the second-most motivating factor, and the third is new technology that enables innovation activities. Economic and ecological sustainability emerged as motives in some organisations, but social sustainability was the rarest source of motivation among all response options. (Figure 7)

Figure 7. Motivations for innovation activities

How much did the following factors motivate your organisation's innovation activities in 2020–2021?
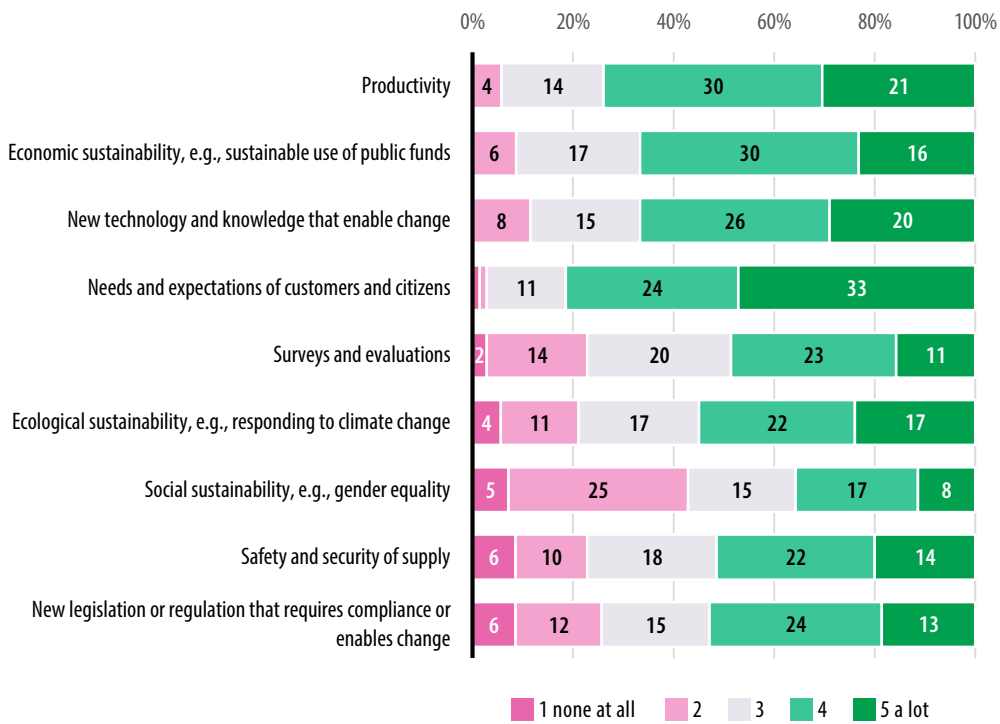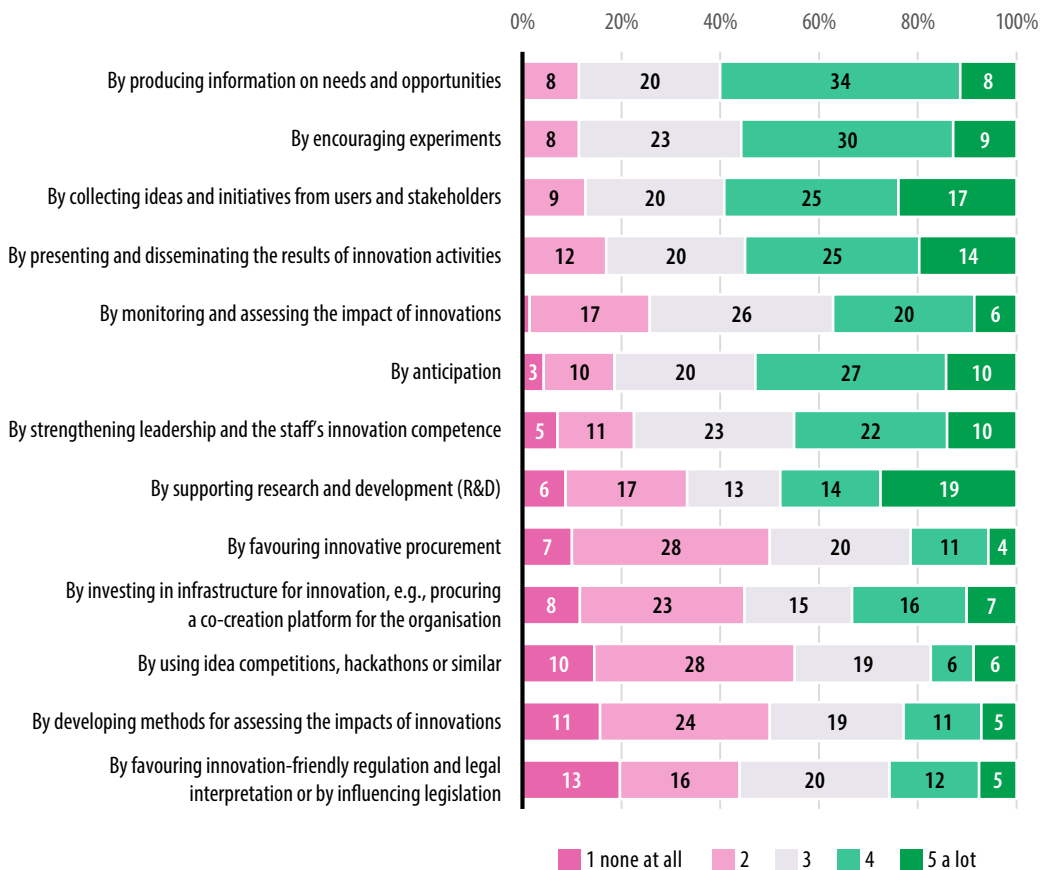
5   Support and pre-conditions for innovation

In the development of innovation activities, different forms of support are important, and the responses to the survey indicate that innovation activities have been supported diversely by various means. The most common means of supporting innovation activities in the respondent organisations have been producing information on needs and opportunities, encouraging experiments, collecting ideas from users and presenting and disseminating the results of innovation activities. (Figure 8)

Figure 8. Means to support innovation activities

How much have you supported innovation activities with the following means in 2020–2021?

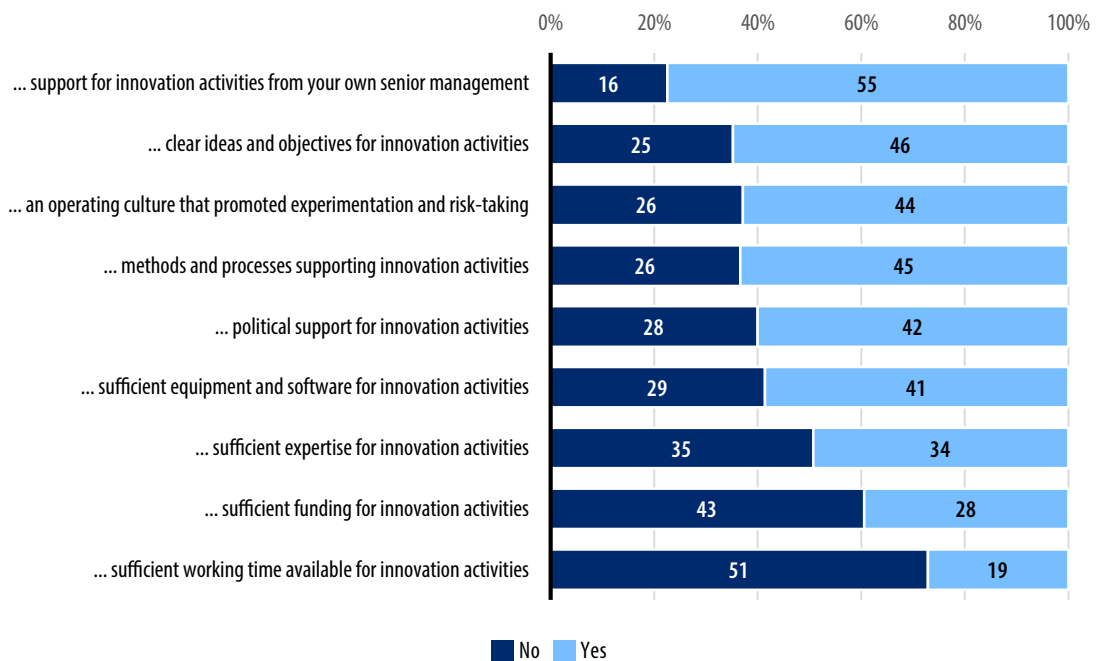|	1 none at all	2	3	4	5 a lot
By producing information on needs and opportunities	8		20	34	8
By encouraging experiments	8		23	30	9
By collecting ideas and initiatives from users and stakeholders	9		20	25	17
By presenting and disseminating the results of innovation activities	12		20	25	14
By monitoring and assessing the impact of innovations	17		26	20	6
By anticipation	3	10	20	27	10
By strengthening leadership and the staff's innovation competence	5	11	23	22	10
By supporting research and development (R&D)	6	17	13	14	19
By favouring innovative procurement	7	28	20	11	4
By investing in infrastructure for innovation, e.g., procuring a co-creation platform for the organisation	8	23	15	16	7
By using idea competitions, hackathons or similar	10	28	19	6	6
By developing methods for assessing the impacts of innovations	11	24	19	11	5
By favouring innovation-friendly regulation and legal interpretation or by influencing legislation	13	16	20	12	5

25

According to the survey, the greatest lack of resources is found in funding and working time: 73% of the respondents feel that there is insufficient working time, and 61% feel that there is insufficient funding for innovation activities. Less than half of the respondents feel that the organisation has sufficient expertise for innovation activities.

Other support, on the other hand, is better available. 78% of the respondents feel that they receive sufficient support from their own organisation's senior management, and 60% feel that they receive sufficient political support. 63% of the respondents have sufficient methods and processes to support innovation activities. 65% of the respondents have enough clear ideas and targets for innovation activities. (Figure 9)

**Figure 9.** Adequacy of support and resources in innovation activities

In 2020–2021, did your organisation have...

	No	Yes
... support for innovation activities from your own senior management	16	55
... clear ideas and objectives for innovation activities	25	46
... an operating culture that promoted experimentation and risk-taking	26	44
... methods and processes supporting innovation activities	26	45
... political support for innovation activities	28	42
... sufficient equipment and software for innovation activities	29	41
... sufficient expertise for innovation activities	35	34
... sufficient funding for innovation activities	43	28
... sufficient working time available for innovation activities	51	19

Based on the results, the most innovation-friendly operating culture is found in the largest and smallest organisations. The larger the organisation, the more there are clear ideas and objectives for innovation activities and the methods and processes that support it. (Figure 10)

Figure 10. Adequacy of resources and support in innovation activities by organisation size class

Adequacy of resources and support in innovation activities by organisation size class in 2020–2021


■ 1. Less than 100	■ 2. 100–500
■ 3. 500–1,500	■ 4. 1,500–5,000
■ 5. Over 5,000	
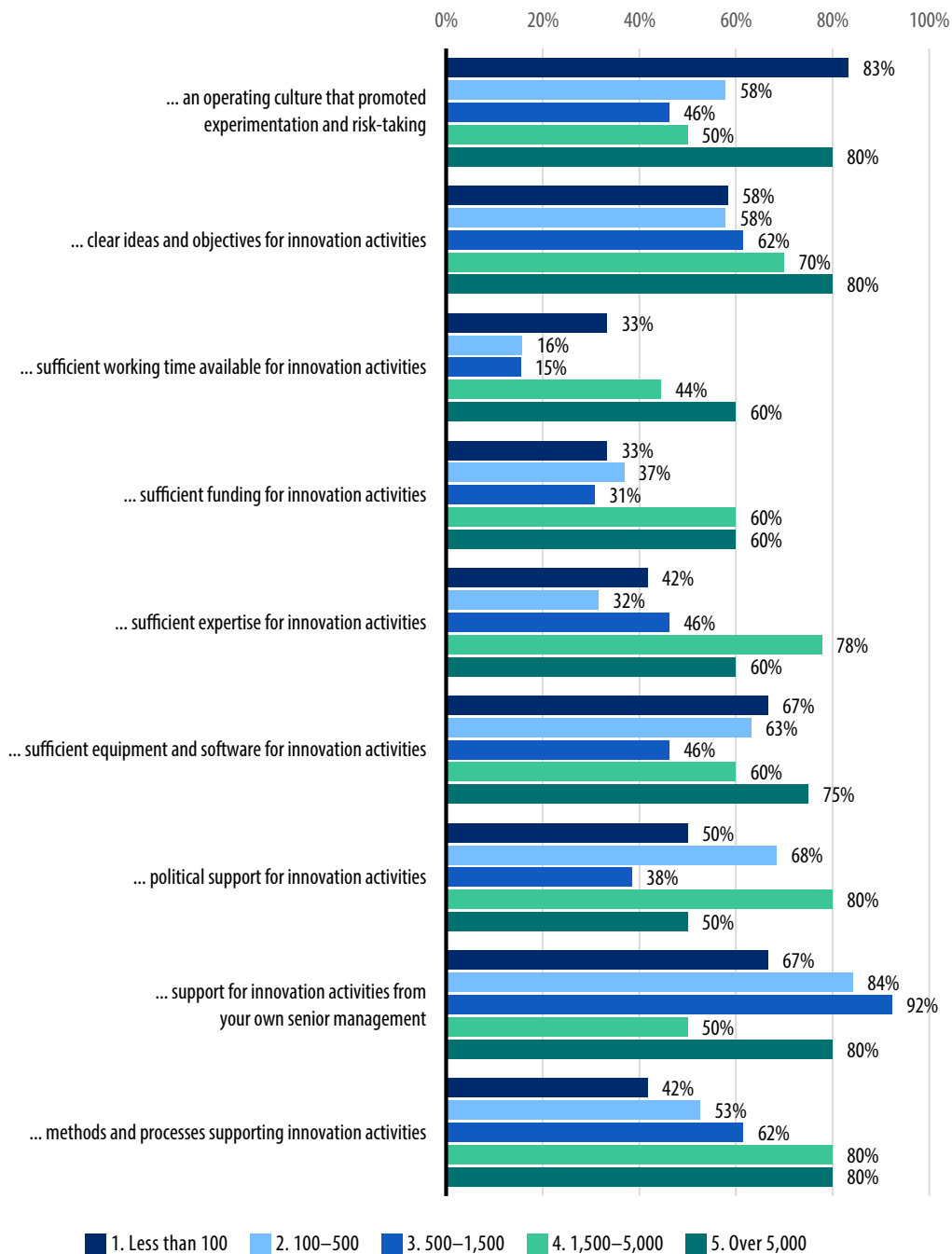
6   The role of partners in innovation

Based on the responses, other Finnish public administration organisations, companies, research institutes and higher education institutions provide the most input for the planning of innovation activities in organisations. According to the respondents, the organisations receive the least input from think tanks and through the third sector. (Figure 11)

Open-ended answers highlight sources of information that were not included in the pre-selected response options. Information sources cited include personnel, interest groups, senior management, cities and municipalities.

Figure 11.   Input to the planning of innovation activities from different sources and partners

How much did the following sources of information and partners give input to your organisation for planning innovation activities in 2020–2021?
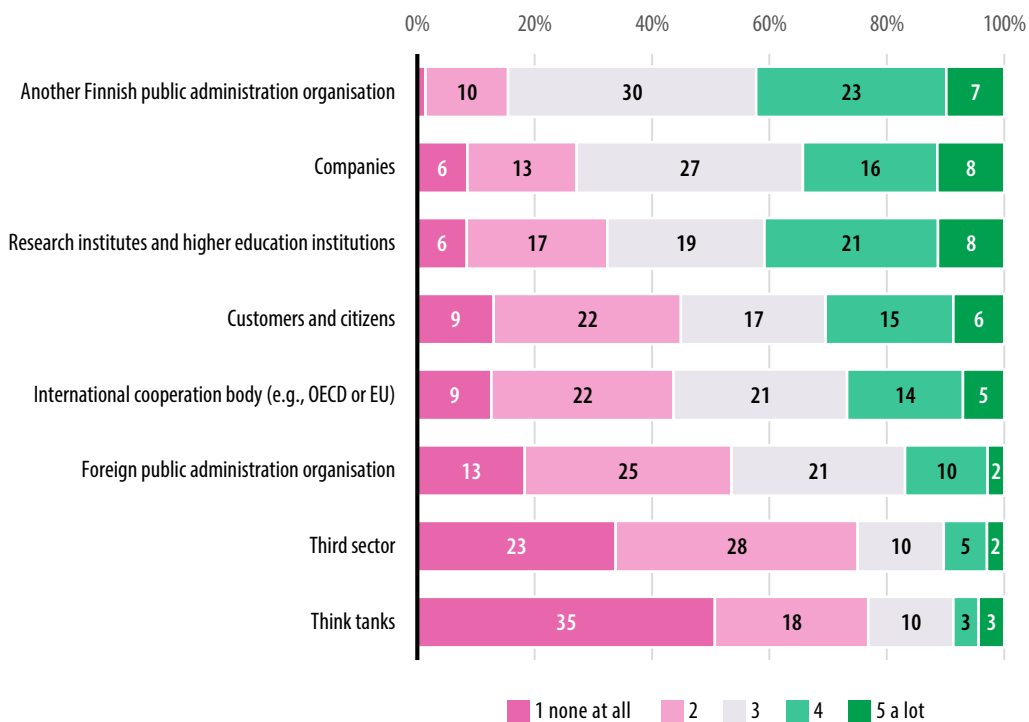
In many cases, innovation activities involve cooperation. The organisations of the survey respondents cooperate most with government agencies and ministries. Other public sector actors and customers and citizens were also common partners. The least cooperation has been done with municipalities, regions and the third sector. (Figure 12)

Figure 12. Innovation cooperation with different actors

How much did your organisation engage in innovation cooperation with the following actors in 2020–2021?

	1 none at all	2	3	4	5 a lot
Government agencies and ministries	2	5	19	31	13
Other public sector actors	3	21	27	14	6
Customers and citizens	5	13	25	19	8
Research institutes and higher education institutions	6	13	19	18	14
Municipalities and regions	11	24	14	12	9
Third sector	19	23	13	8	4
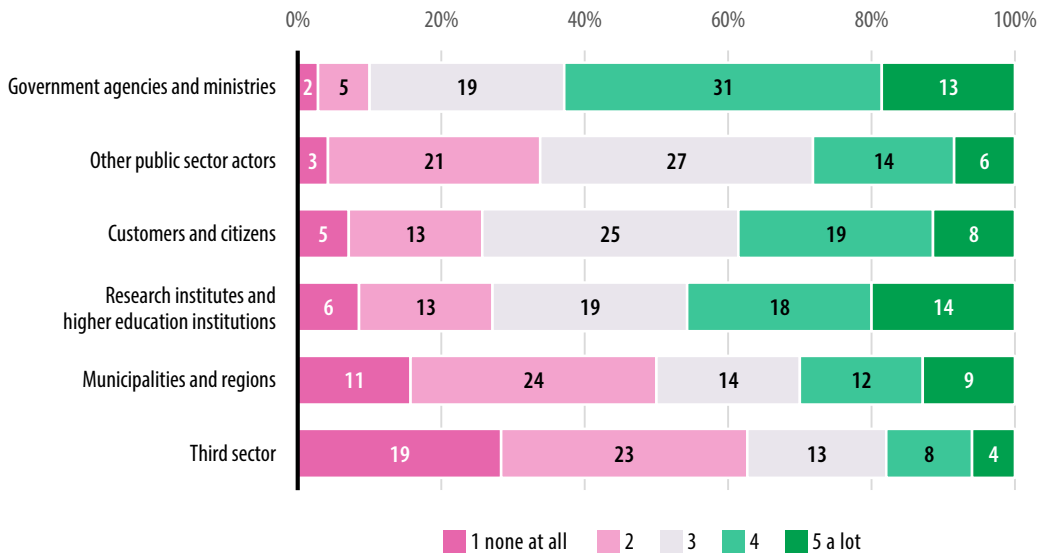
7 Evaluation of innovation activities

The organisations of the respondents have used different methods to measure and assess innovation activities in a versatile manner. The most popular methods are qualitative self-assessments and measuring the achievement of the targets set for individual innovation projects. The third-most popular method is surveys directed at customers, citizens and employees. (Figure 13)

Figure 13. Means for monitoring the impacts of innovation activities

How have you monitored the impacts of innovation activities in 2020–2021? [qty]

Method	Value
With qualitative self-assessments	45
By measuring individual innovation projects' goal realisation	44
With surveys aimed at customers, citizens and employees	32
By assessing the achievement of sustainable development goals in innovation activities (ecological, social, economic)	28
In some other way, how?	8

In addition to the pre-selected response options, open-ended responses also mention other means for measuring, evaluating and monitoring innovation activities. These include patent applications and invention notices submitted, external evaluation, number of new companies and number of scientific publications.

PART B:
Central government's most significant innovations

This section of the report focuses on the most significant innovations in the respondents' organisations.

8 Implementing innovations in organisations

When asked about innovations introduced in 2020–2021, 65 responses were provided. More than three quarters (77%) of the respondents have at least one process innovation, and just under three quarters (74%) have at least one service innovation. More than half (52%) mention at least one service innovation in their organisation. (Figure 14)

Figure 14. Introduction of service, product and process innovations

Did you introduce service, product or process innovations in 2020–2021? [qty]
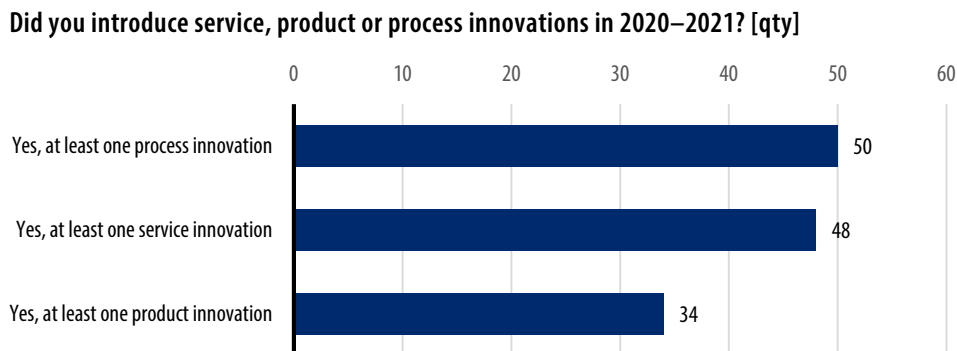
An innovation can be completely new and invented by the organisation in the sector in question. An innovation can be a copy or an adaptation from another sector or from the same sector. An innovation may also have been influenced by several different innovations.

A total of 44 respondents said that the innovation was completely new in the organisation's sector, and 39 respondents reported an innovation that was a copy or adaptation or had been influenced by other sources. (Figure 15)

Figure 15. Introduction of completely new innovations and innovations developed elsewhere

Have you developed entirely new innovations or introduced innovations developed elsewhere in 2020–2021? [qty]

9   Key innovations and motivators

We asked respondents to report on the most significant innovations in organisations, and a total of 50 descriptions of different innovations were obtained. Half of these most significant innovations are process innovations, just over one-fifth are service innovations and less than one-fifth are product innovations. An important and encouraging observation is that the innovations described by the respondents meet the definition of public sector innovation.

The most common motivating factor has been the needs and expectations of customers and citizens. Economic sustainability, productivity and new technologies have also been important motivators. New legislation or a decree that would require compliance or enable change was the rarest source of motivation. (Figure 16)

Figure 16. Motives for the most significant innovations

To what extent did the following factors motivate the most significant innovation introduced in your organisation in 2020–2021?
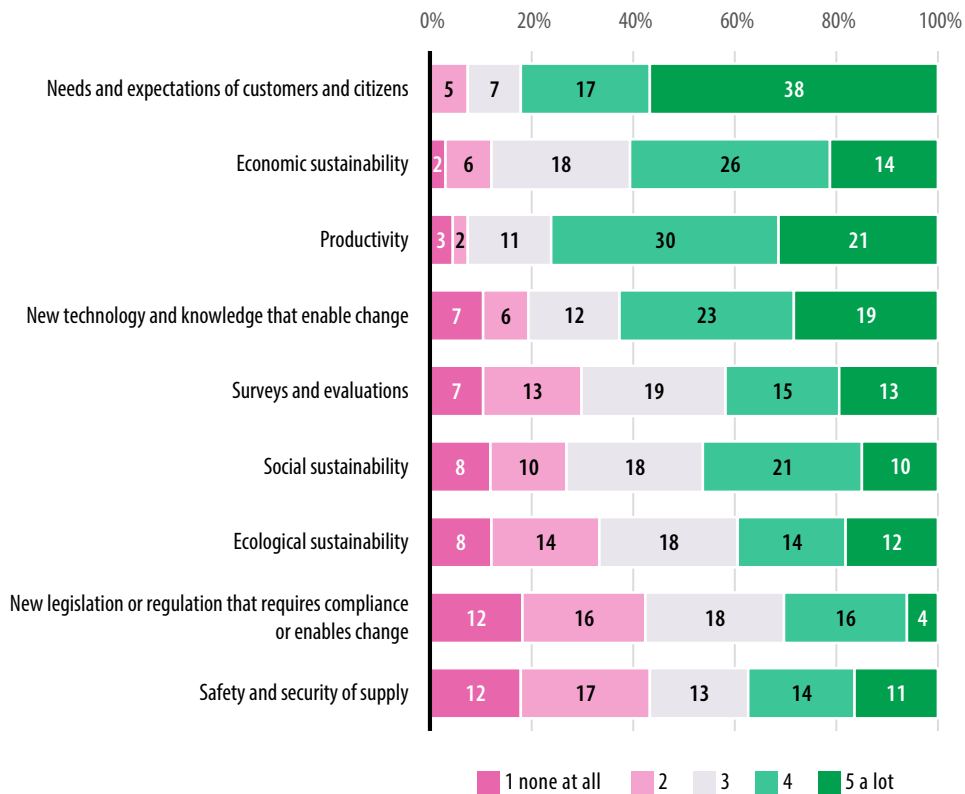
The factors motivating innovation activities have also motivated the most significant innovation, and the table below reflects their correlation. Correlation is not significant in customer needs and expectations. This may be because the responses emphasise process innovations. The same applies to safety, security of supply and legislation.

The latter can be explained, for example, by the fact that more systematic attention may be paid to legislation at the strategic level, i.e., in the planning of innovation activities, than in the development and introduction of individual innovations. On the other hand, for example, the State Treasury's support-for-business-costs innovation has been developed in parallel with legislation. (Table 1)

Table 1. Correlation between the motivation of innovation activities and the motivation of the most significant innovations

Right: Factors motivating innovation activities in 2020−2021/ Down: Factors motivating the most significant innovation in 2020−2021	Needs and expectations of customers and citizens	Productivity	New legislation or regulation that requires compliance or enables change	New technology and knowledge that enable change	Safety and security of supply	Ecological sustainability	Social sustainability	Economic sustainability	Surveys and evaluations
Needs and expectations of customers and citizens	0.42	0.17	-0.21	-0.01	-0.02	0.05	0.22	0.12	0.25
Productivity	0.45	0.65	0.18	0.30	0.21	0.16	0.09	0.25	-0.03
New legislation or regulation that requires compliance or enables change	0.23	0.07	0.38	-0.03	0.36	0.11	0.05	0.19	0.17
New technology and knowledge that enable change	0.25	0.35	0.08	0.65	0.08	0.21	0.20	0.05	0.23
Safety and security of supply	0.19	0.08	0.16	0.31	0.46	0.16	0.18	0.19	0.27
Ecological sustainability	0.28	0.10	0.07	0.19	0.00	0.61	0.38	0.33	0.35
Social sustainability	0.21	0.04	0.04	0.25	0.12	0.43	0.57	0.40	0.43
Economic sustainability	0.39	0.33	0.01	0.17	0.16	0.44	0.34	0.61	0.23
Surveys and evaluations	0.03	-0.05	0.19	0.29	0.23	0.42	0.41	0.22	0.69

Good to know 4: Development of the support for business costs and legislative drafting

The general objective of the support for business costs was to reduce bankruptcies and layoffs caused by the coronavirus pandemic, which, according to studies conducted by the Ministry of Economic Affairs and Employment, was successful.

The purpose of the State Treasury was to achieve a customer-friendly and cost-effective implementation as well as a fully digital application and compensation service process that can be implemented quickly, a service model related to it and stakeholder reporting. State Treasury specialists participated in the drafting of legislation from the outset and at later stages of the legislative amendment together with the Ministry of Economic Affairs and Employment and the Ministry of Finance.

Within the State Treasury, a product team consisting of representatives of different functions was formed, which started operating at the beginning of the legislative drafting process and was responsible for the introduction of the new form of support and service models. The purpose of the legislative drafting was to ensure that the act could be easily implemented, would enable a high degree of automation, and could be easily communicable and unambiguous with its interpretations. By already participating in the preparation phase during the next support round, the State Treasury was able to use customer feedback on previous legislation and improve the clarity of legislation.

A significant advantage was that the State Treasury was mainly able to anticipate future legislation and carry out system reform work, as well as to assess and allocate the personnel required by the service in parallel during the legislative phase, whereby the application service was published very quickly after the act was adopted – at best within a few days of the adoption of the act. The aim was also to use previously used forms of support in different rounds of cost support in order to reduce the costs of new system work.

10 Enablers of the most significant innovation

Internal factors within the organisation, such as the organisation's strategy, financial resources and personnel skills, play an important role in promoting the most significant innovations. Cooperation between the units of the organisation is also perceived as a promoter. In addition to internal action, new technology has been seen as one of the most important drivers of innovation. (Figure 17)

Figure 17. Drivers and inhibitors of major innovations

Which factors promoted or hindered the most significant innovation in 2020–2021?

Legend:
- 1 Prevented innovation very much
- 2 Prevented innovation somewhat
- 3 Neither promoted nor prevented innovation
- 5 Promoted innovation very much
- 4 Promoted innovation somewhat
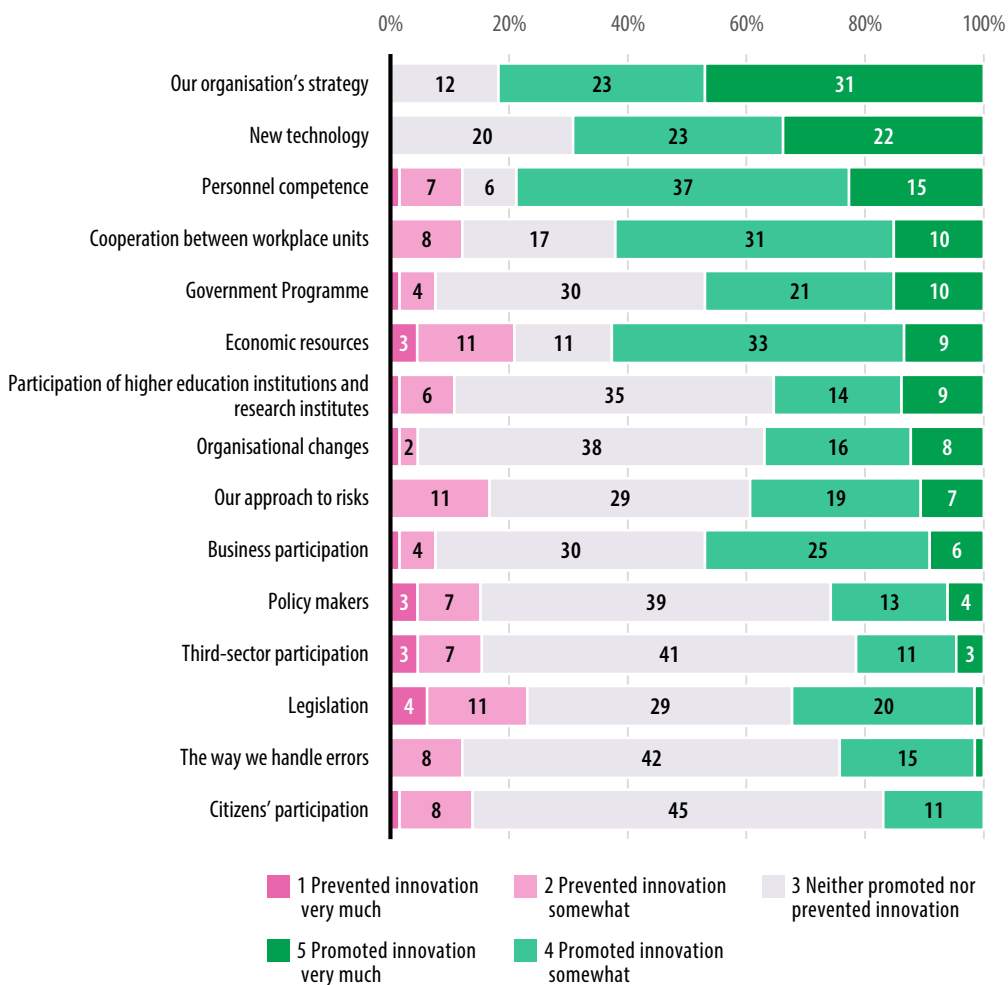
In the most significant innovations, the most cooperation has been done with state agencies and ministries, while the second most has been with research institutes and higher education institutions. The least innovation cooperation had been carried out with the third sector and municipalities and regions. (Figure 18)

Figure 18. Cooperation in the most significant innovations

How much did your organisation cooperate with the following actors in the most significant innovation introduced in 2020–2021?
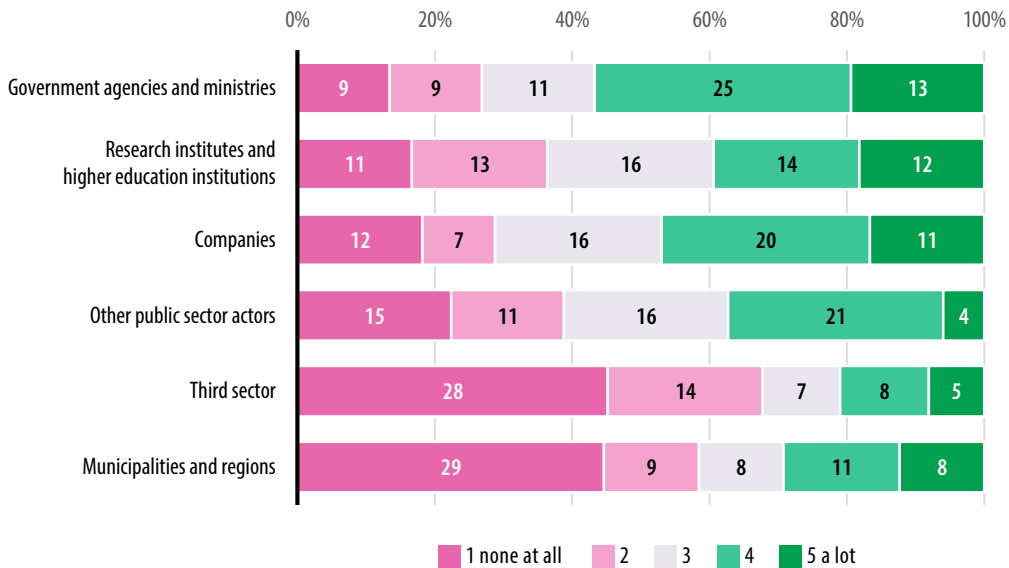
The link between cooperation with the third sector and the impact of cooperation was established in the data analysis. Without cooperation, there is no experience of third sector participation promoting innovation. On the contrary, these respondents have experienced that it hindered innovation. The more cooperation was done, the more third sector participation was considered to promote innovation. In a situation where there is a great deal of cooperation, no one had experience of third sector participation hindering innovation. Based on the results, it can be said that there is a positive correlation between the amount of cooperation with the third sector and the impact of participation on innovation. (Figure 19)

Figure 19. Cooperation with the third sector and its impact on promoting the most significant innovation

Cooperation with the third sector and its impact on promoting the most significant innovation in 2020–2021
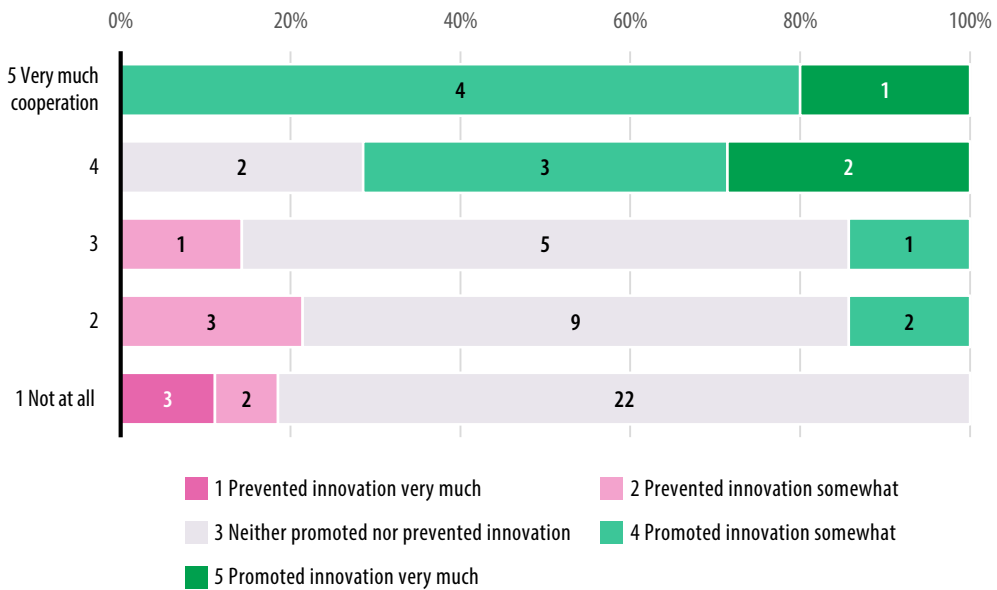
Most of the organisations' most significant innovations have received funding from the organisation's own budget (73%). In addition to the pre-selected response options, external and private funding and various research funding are also mentioned as other funding sources. (Figure 20)

Figure 20. Sources of funding for the most significant innovations

Source of funding for the most significant innovations in 2020–2021 [qty]
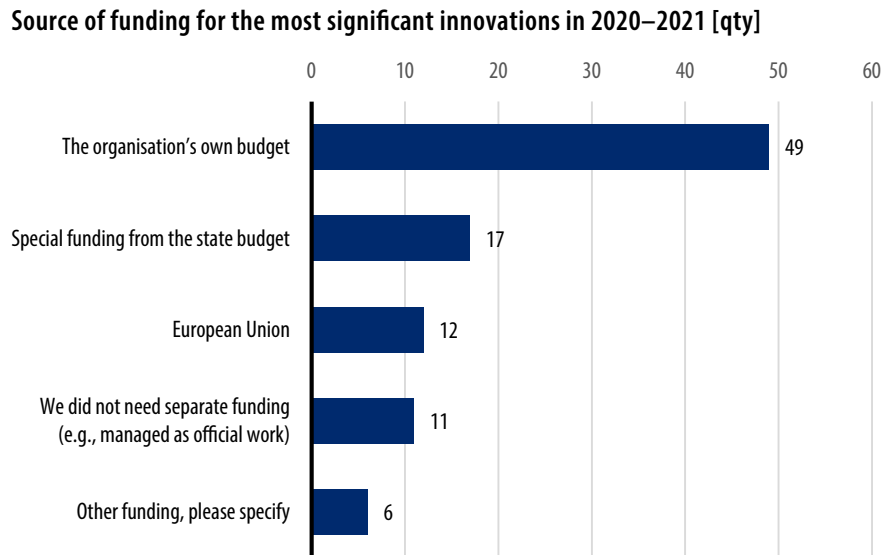
11 Most significant innovation impacts and dissemination

The significant innovations introduced have improved the operations of organisations in several ways. The respondents felt that innovations had the greatest impact on the functionality and productivity of processes. Customer satisfaction has also improved significantly.

Innovations have not weakened the organisation's operations. Compliance with legal requirements and regulations has been weakened most often, but this is also very rare. Innovations are sometimes not seen as influencing the factors examined. (Figure 21)

Figure 21. Impacts of the most significant innovations

How has the most significant innovation introduced in your organisation in 2020–2021 affected the following factors, or how do you think it will affect them?

Factor	3 No effect	4 Improved to some extent	5 Improved a lot
Functionality of processes	11	35	20
Customer and citizen satisfaction	18	30	18
Productivity	12	40	14
Cross-sectoral cooperation	23	30	13
Economic sustainability	2, 17	35	12
Ecological sustainability	31	21	11
Employee satisfaction	3, 16	35	10
Social sustainability	2, 30	25	9
Safety and security of supply	30	26	7
Compliance with legal requirements and regulations	5, 36	19	5

Legend:
- 1 Weakened a lot
- 2 Weakened to some extent
- 3 No effect
- 4 Improved to some extent
- 5 Improved a lot

Almost every respondent has used their own communication channels and networks to disseminate information about the most significant innovation. More than half of the respondents state that the organisation has used the channels and networks of its partners. Less than a quarter have disseminated information on their innovation in international channels. (Figure 22)

Other ways of communicating have included participation in public debate, social media channels and training events.

Figure 22. Dissemination of information on the most significant innovations

Where have you disseminated information on the most significant innovation introduced between 2020 and 2021? [qty]

Category	Value
In our own communication channels	64
In our own networks	61
In partners' channels and networks	38
In international channels and networks, such as the OECD OPSI (Observatory of Public Sector Innovation)	14
Elsewhere, specify?	4
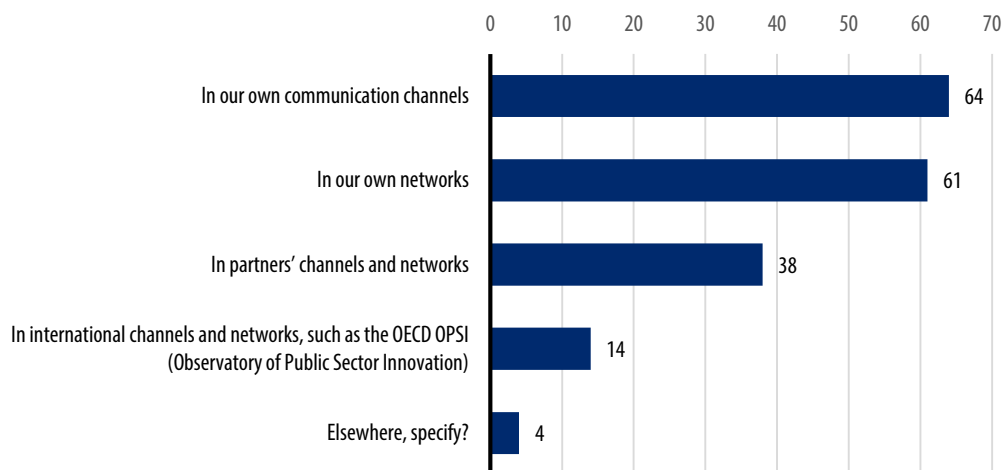
12 Key results and development proposals

The results of the innovation barometer show that innovation activities in the public sector can create many kinds of value for society. The premises for innovation activities emphasise customers and productivity. The most significant innovations have also had a positive impact on these. On the basis of the results, innovation activities can be considered consistent. The impacts reflect the objectives.

Technological solutions and the coronavirus pandemic are emphasised in innovations. Technology is an important driver and enabler of innovation activities. However, it is important to note that not all innovations require major technological investments. Innovations often address the challenges and opportunities at hand, but innovation activities can also be used to anticipate the future and create new opportunities both in the public sector and in society at large.

Available working time and money are bottlenecks in innovation activities. Organisations should pay attention to them, as successful innovations bring cost savings and enable the use of working hours to explore new opportunities and create new ones instead of routine work. When the public sector and society as a whole struggle with different resource pressures and at the same time try to promote ecological, economic and social sustainability, innovation activities are outright necessary.

The development and introduction of the most significant innovations have been promoted by the internal support of organisations in particular. The strategy, personnel competence and cooperation between units are emphasised. On the other hand, cooperation with stakeholders has had less impact on the implementation of innovations. Then again, organisations working together with the third sector have also benefited from cooperation. The innovation activities of the public sector, which is sometimes perceived as old-fashioned, are boosted more by internal factors in the organisation than by, for example, the government programme or political decision-makers.

Based on the results, innovation activities are not particularly strongly steered. The significance of the government programme is most visible in the steering. One possibility for showing a clearer direction and promoting the creation of effective public sector innovations could be taking them more thoroughly into account in the government programme and its implementation.

Taking innovation activities into account at the programme level could also make the public sector an even more attractive working environment.

The impacts of innovation activities are assessed diversely in organisations. At the same time, it is important that the evaluation is further developed. Assessing effectiveness is particularly difficult. The best indicators for measuring the success of innovation can only be found as each process progresses. This innovation barometer has been a systematic initiative by the Ministry of Finance to measure innovation activities in the public sector. A versatile knowledge base makes it possible to identify challenges and opportunities from the organisational level to society as a whole.

Despite the development needs, Finland's public sector is an internationally recognised and monitored trailblazer. This status and effective innovation activities cannot be taken for granted, but require continuous learning and determined development. The Ministry of Finance encourages organisations to reform their operations through innovation. Together with the survey carried out by the Association of Finnish Local and Regional Authorities and the Anticipatory Innovation Governance project, this report creates a good knowledge base for further actions in both organisations and the public sector as a whole.

Proposals for strengthening public sector innovation activities

1) Innovation activities should be more closely linked to the anticipation and strategy work of organisations and other core processes and basic tasks.
2) However, innovation activities should not be connected too strongly to the senior management's priorities alone, but instead grassroots developers should be given freedom and responsibility to actively explore and create better futures through innovations.
3) Attention should be paid to the resourcing and sufficiently robust organisation of innovation activities. However, the same solutions are not suitable for all organisations. One can start with small steps and learn continuously along the way.
4) The innovation capacity of senior management and personnel should be systematically increased, for example by strengthening anticipation skills and experimental skills.
5) Cross-administrative cooperation in the public sector should be supported. Organisations should be encouraged to implement and learn from joint innovation projects.
6) The private and third sectors and citizens are resources that must not be forgotten. The public sector should therefore actively seek new ways and operating models for developing innovations together with the surrounding society and citizens.

7) Good management and an innovation-friendly operating culture must be nurtured. Similarly, open and knowledge-based activities must not be taken for granted.

8) The assessment of innovation activities must be further developed in Finland and with the Nordic countries and the OECD. Alongside backward-looking barometers and forward-looking anticipation and planning, ways are needed to learn from the innovation processes that are already underway.

9) International cooperation and influence must be ensured. Finland is considered a pioneer in the development of public administration and an innovative operating culture, from which a great deal is still expected. At the same time, the work done by the OECD and participation in it are a significant opportunity for Finland to learn.

10) It is worthwhile extending the mandate of the public sector innovation cooperation group and giving it responsibility for planning, coordinating and monitoring the progress of the proposals or to create other types of cooperation structures to support innovation activities.

APPENDICES

Appendix 1. The most significant innovations in organisations

COVID-19 study review

Prime Minister's Office

The purpose of the survey review is to compile the latest research results related to the coronavirus pandemic from the world and Finland for the use of draftspersons and decision-makers in a concise and informative manner. The aim of the review was to strengthen the communication of current research information to decision-makers and to create a cumulative view of the latest research for decision-makers and draftspersons. The main target group of the review was the Government's draftspersons and political decision-makers, but the review was published openly, and anyone could join the distribution list.

Especially at the beginning of the coronavirus pandemic, the situation in which enormous amounts of research data was produced globally, and the demand for information among decision-makers and society as a whole, was a very large and motivating factor in the research review. At the same time, there were no aggregated procedures for screening research data in some way.

The research review provided a comprehensive, multidisciplinary view of the latest research data on the coronavirus pandemic and the multidimensional impacts of the pandemic. It supported the creation of a situation picture and understanding of societal impacts.

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Digital inspections as part of satellite monitoring pursuant to the Forest Act

Finnish Forest Centre

Inspection data under the Forest Act and quality identifiers of the measures carried out in forests are collected digitally using drones instead of manually. The results of the

differential interpretation of the Sentinel2 data are used in the selection of the inspection sites to be flown.

The motivation for innovation has been to improve the accuracy and quality of the information collected in the audits and the Forest Centre's evaluations and to harmonise it. The improvement of the cost and quality ratio of the data collected; the same cost allows for collecting more high-quality and versatile information on the terrain.

The information is collected comprehensively from the entire area of the measure. Manual data collection can only provide data collected from test plots. The collected data is very accurate, for example, all trees in the area of the procedure and their properties are mapped, linked to the site.

Tree-specific information can be used to produce new quality identifiers, such as variations in processing intensity in different parts of the area. In connection with the inspections, it is possible to update and produce the Forest Centre's nature information, such as protection zones, decaying trees and retention trees.

All digitally collected information is distributed to actors from the API, and they can use it, for example, in their own quality work and contractor feedback. Forest owners are offered a 3D image of the audited site for viewing in the metsään.fi service.

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suomen-metsakeskuksen-digitarkastukset-kaynnistyivat-innovaatiokumppanien-toimesta
Presentation video in Finnish: https://www.youtube.com/watch?v=RfeP6cA7iTs

GNSS-Finland service

National Land Survey of Finland

The GNSS-Finland service, based on the national FinnRef base station network (https://www. maanmittauslaitos.fi/tutkimus/tutkimustoiminta/muut-tutkimus-ja-mittausasemat/fin- nref-gnss-asemat), is a GNSS performance quality service that allows the GNSS user to see if the GNSS signal has anomalies (and that the location and time information it provides is thus not reliable) and to be able, for example, to switch to backup systems or interrupt operations for the duration of the disruption. The user interface is map-based, and the quality of the signal at FinnRef stations is presented using traffic lights (see figure). The service has been developed by Traficom at the Finnish Geospatial Research Institute of the National Land Survey of Finland, and its development is based on previous GNSS signal quality research funded by, for example, the European Space Agency ESA and Traficom. (See, for example, https://www.maanmittauslaitos.fi/ tutkimus/pnt-traffic-light-petal).

The societal need to assess the reliability of satellite positioning was a motive for innovation. A nationwide situation picture of GNSS performance was previously not available. The GNSS-Finland service is the first comprehensive situation awareness service, and it has attracted the interest of several different parties (different authorities, telecommunications operators, information traffic, the financial sector, the construction sector, the security sector, aviation and maritime transport). In the future, as autonomous vehicles and vessels and intelligent traffic become more common, this information is of critical importance, especially in cases of interference or the GNSS receiver being misled.

Securing the continuity of critical functions in society (such as the rescue sector, electricity networks, telecommunications, etc.) is the biggest benefit of innovation. The National Land Survey has opened the service for all users, and further research and development will be carried out on it for the needs of actors critical to security of supply. Similar development work is also carried out elsewhere in Europe, and FGI researchers are involved in cooperation.

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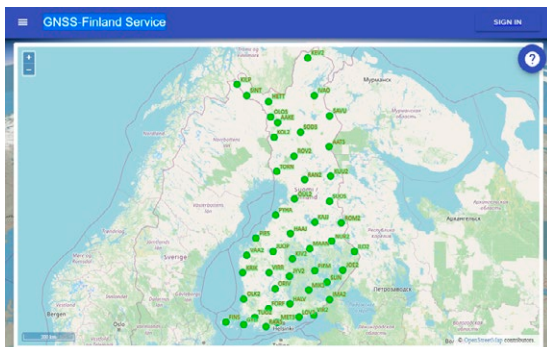
Hippu chatbot

Customs

The main task of the innovation is to provide customer service to individual customers, especially with regard to incoming parcels imported from outside the EU.

The Hippu service has been introduced, as Customs wants to offer 24/7 customer service, launching it without delay as a self-service. The new customer flows brought about by the legislative amendment were also a large driver. In addition, Customs considers it valuable to experiment with new technologies when the need is strong enough. Through experimental activities, the benefits and risks are strengthened before the solutions are taken into everyday use. This also avoids major risks, and technology can be used smoothly in everyday life. This is also how we work with the Hippu chatbot, and this promotion of experiments has been increasingly promoted through strategy work.

The chatbot has provided Customs with even greater benefits than estimated, and the expected resource savings are in the range of 4–6 PWY annually. The aforementioned 24/7 service hours and the possibility of self-service without delay are also benefits. At the same time, we at Customs get used to the fact that new types of operating models and roles, such as bot whisperers, emerge within the organisation.

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Introduction of machine vision in the processing of attachments to benefit applications

Kela

DocCVR is a product developed by Kela with the aim of enabling the reading of structural information from image attachments. DocCVR is integrated with Kela's artificial intelligence runtime environment, which makes it possible to structure large masses of various attachments. The attachment template must be known for the attached files.

The DocCVR product is divided into two main components: Designer and Engine.

Designer is an interface for creating a configuration for different attachment types and modelling their fields from which the data is read, either with optical character recognition (OCR) or by other means (e.g., check box). Engine is a background component that uses a configuration created with Designer to interpret the contents of fields from image data. The engine is also able to straighten documents into the format indicated by the template, making it possible to also use mobile camera images as a source.

An increasing share of attached documents delivered by customers arrive via online services. The number of documents received increased significantly in 2016, when the

processing of basic social assistance was transferred to Kela. The quality of photos taken by customers for attachments varies greatly. They are often also in an incorrect orientation, which means that rotating them takes time. Although the documents photographed by the customer arrive online, the information contained in them is in image format, which means that they can not really be used in Kela's existing automation processes. In 2017, the potential of artificial intelligence for more efficient processing of the attachments was identified.

In 2019, the development of machine vision began with the technology experiments of Kela's innovation unit, in which the aim was, with the help of artificial intelligence, to reduce and correctly rotate the attached documents sent by customers. In spring 2020, the development work had progressed far enough so that the automatic processing of attached documents received online was productised, and the first attachments sent through the online application for basic social assistance could be processed with the help of the developed machine vision technologies. The file size of the attachments was reduced by modifying the image quality and converting colour images into black and white. In addition, artificial intelligence was used to find and identify text in the attachments. Images with an incorrect orientation were rotated the correct way based on the text in the images. These measures facilitated and accelerated the handling of attachments. The processing was expanded gradually, and from the beginning of 2021, the image attachments for all benefits received through electronic services have been processed using machine vision.

In autumn 2020, the processing of invoices for basic social assistance began by reading the bar codes of invoice documents sent online. A virtual barcode is generated in the invoice document using the bar code identified, and the processor can easily copy the virtual code into the benefits system of social assistance (the corresponding technology has been used in paper form for the automatic processing of documents received by Kela since 2016).

In spring 2022, machine vision functionalities were expanded to interpret the information content of attached documents and to transmit interpreted information to benefits systems. First, it has been applied to the processing of pregnancy certificates arriving as attachments to online applications for maternity allowance. Artificial intelligence searches the certificates for the information needed to resolve the matter. The interpreted information is transmitted to benefits systems, after which the robot can process, for example, the maternity grant application. Several health care actors write pregnancy certificates. In the initial stage, only some of the forms printed through different systems could be recognised, and now a larger part of the forms printed from the maternity clinic software can also be processed automatically.

The aim of automating the processing of attachments is to reduce manual work. As of 2022, the annual savings of the measures described above on personal work are estimated to be in the hundreds of thousands of euros per year.

For the time being, reducing the file size of attachments and rotating them to the right orientation has been the most economically beneficial one, which is estimated to be about 50% of the savings potential.

The introduction of machine vision has also had qualitative benefits, as it reduces some rather frustrating work stages in the work of experts in solving problems. A solution specialist can focus directly on content-related issues when the attachments are in the right orientation. In particular, applications for basic social assistance may contain dozens of attachments, so reducing the file size of the attachments has significantly accelerated their loading, especially at a time when work has also taken on new forms through remote work due to COVID-19. The virtual bar code, on the other hand, allows the processor of basic social assistance invoices to copy the number series that require the accuracy of invoices in one go, thus also avoiding routine work that takes time and requires accuracy, and the working time can be used for more important phases.

The estimate is that the personnel costs of development work related to the functionalities introduced so far in machine vision in 2019–2022 will pay for themselves in about two years. New application targets have also been identified and are continuously developed.

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Automatic recognition of handwritten text

National Archives

The National Archives was involved in a joint European project in 2016–2019, in which the automatic recognition of handwritten text was developed by several European partners. The project was funded by the EU's Horizon programme. As a result of the project, handwritten text recognition technology could be introduced at the National Archives and other archives.

The automatic recognition of handwritten text significantly changes the operation of archives and research practices. Traditionally, archive data has been in analogue format and thus difficult and slow to use. The qualitative and quantitative research of extensive data has required time. The digitisation of the material and the recognition of handwritten and typed texts carried out in connection with it enable searches of the content of the

material. At the same time, significant new opportunities are created for conducting research, for example through text mining.

Archives will be digitalised with the rest of society. The development of such technologies and their widespread utilisation will enable modern services and activities to promote the openness of society and information as well as democracy.

Website: You can read about the automatic recognition of handwritten text in the Court records service of the National Archives of Finland, which contains the recognised content of approximately 3.2 million digitised pages of materials from the 19th century.

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Suomenlinna online guide

Governing Body of Suomenlinna

The Suomenlinna online guide is a progressive web application intended primarily for visitors to the world heritage site, which presents the Suomenlinna world heritage site: its attractions, services and transport connections. A PWA runs on a mobile device browser and does not require an application to be downloaded. An important part of the online guide service is the "show route" service available to the user, which guides the user from point A to point B using a positioning-based map. Approximately one million visitors visit Suomenlinna every year (about half of this during the pandemic years 2020 and 2021). More than half of the visitors have been foreigners, but the share of domestic visitors is expected to increase in the near future.

The Governing Body of Suomenlinna had long considered sourcing a mobile application. However, the customer feedback collected for this purpose did not seem encouraging. Visitors are reluctant to download applications that are only perceived as applicable to a one-off visit. The primary motive was to improve the accessibility of Suomenlinna's services. In Suomenlinna, it is difficult to control visitors with physical signs, because an attempt is made to keep the environment of the world heritage site as free of extra structures as possible.

We received three offers, of which Tietotalo Oy's offer met the requirements and the price was acceptable. Instead of a separately downloaded application, the solution was based on a progressive web application, a website that functions like an application. In this way, we were able to overcome people's unwillingness to download an application. We trusted that an EU-level increase in the predictability of prices of mobile data used abroad would reduce the unwillingness of foreign visitors to use the mobile device's web browser. Finnish visitors, on the other hand, prefer self-service solutions, and the price of mobile data is not an obstacle to their use.

The Suomenlinna online guide improves the accessibility of services, because it serves as an accessible service directory, which also prepares access routes to the selected location based on positioning. Dangerous areas and areas to be taken into account in terms of residents' peace are listed on the website that works on the map template. This dissemination of information reduces the need for building signs in the terrain, frees tourist information employees for higher-added-value meetings with visitors, makes visitors feel safe and increases the number of service providers' customers. The latter is expected to improve the turnover of the service providers and thus their ability to pay rent to the Governing Body of Suomenlinna, which is their landlord. Rental agreements for restaurants are turnover-based, so increasing customer flow can be expected to correlate directly with the increase in the body's own funding.

Suomenlinna's service providers are responsible for publishing the information presented in the online guide themselves, and the Governing Body is responsible for the technical maintenance of the online guide. The online guide and the Suomenlinna website contain opening hours and event information, which are updated centrally, thus easing the publication of information related to the presentation.

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Suuntima service

DigiFinland

Suuntima is a question-based digital service for the segmentation of social welfare and health care customer relationships. With the help of the customer's and the professional's own situation-specific questions, the customer can assess their own resources, and the professional can assess the challenges of the customer's situation. With the help of a segment identified for the customer, the customer and the professional can jointly select the most suitable service path for the customer. From October onwards, when the next version 3.0 of the service is released, Suuntima will be renamed Omasuuntima. New features of the coming version include an improved, accessible user interface, the customer's ability to use the service remotely with a mobile device and the possibility to use the Suuntima service also in Swedish.

The significance of the impact of social welfare and health care is increasing, and services must be increasingly targeted on the basis of individual needs. The targeting must be legitimate and customer-oriented. The national objectives steer the wellbeing services counties to use segmentation as part of better targeting of services, including through

the Future health and social services centre programme and Finland's sustainable growth programme. The innovation benefits customers, professionals and wellbeing services counties.

The customer can use the questions to better understand their life situation and communicate their resources to a professional. The customer can participate in the planning of their services and complete Suuntima at home. Using it is quick and easy.

The professional can communicate the challenge level of a treatment/service needs situation to the customer, get an idea of the customer's own resources and overall situation, and can follow the trend of the overall situation. Professionals can assess the customers' situation and right to service guidance systematically and objectively.

The wellbeing services county supports the systematic assessment of the customers' situation in the wellbeing services county and receives follow-up information on the clients' situation both within a wellbeing services county and between them. The wellbeing services counties can tailor content to the needs of the county and participate in developing the Suuntima service to better meet the needs.

Contact people: Jenny Vuollet, director, projects and development, Annukka Ruokolainen, specialist, suuntima@digifinland.fi
Website: https://www.suuntima.com/ https://digifinland.fi/toimintamme/ suuntima-palvelu/

Online cost support application and reimbursement service using automation and robotics

State Treasury
The general objective of the support for business costs was to reduce bankruptcies and layoffs caused by the coronavirus pandemic, which, according to studies conducted by the Ministry of Economic Affairs and Employment, was successful. The purpose of the State Treasury was to achieve a customer-friendly and cost-effective implementation as well as a fully digital application and compensation service process that can be implemented quickly, a service model related to it and stakeholder reporting. The process used the digital application and compensation systems already in existence at the State Treasury, as well as various register data obtained from other authorities, for example, in order to increase the degree of automation and to ensure the reliability of the source data on which the support is based.

Initially, the aim was to create a one-off service for companies to cover temporary losses caused by the coronavirus pandemic but as the pandemic expanded and new legislation emerged, the end result was 11 application rounds in 2020–2022: cost subsidies 1–6,

closure compensation 1–2, event guarantee and support for uncovered fixed costs 1–2. A total of approximately 90,000 aid applications were received (some 43,000 different companies), and the amount of aid paid through the service was slightly over one billion euros.

The innovation was motivated by new legislation on cost support and a strict timetable requirement for ministries. The new service had to be in use within a few weeks of the completion of the government proposal for new legislation. Within the State Treasury, the significance of the exceptional situation was understood, and the participants in the project had a clear desire to achieve a high-quality service on a very fast schedule. With the support rounds, understanding of customers also increased within the State Treasury, and the aim was to improve the process from the round, for example by using customer feedback and data analytics from previous support rounds.

The benefits of the innovation include customer friendliness, efficiency of implementation, organisation and management of services, extensive cooperation with legislative drafting and stakeholders, and publicity of official activities.

Contact person: Tuuli Karjalainen, tuuli.karjalainen@valtiokonttori.fi

I know my products learning environment
Finnish Safety and Chemicals Agency
A learning platform intended for companies that manufacture, import or distribute consumer goods. With the help of the service, the company can accumulate, test and publicly demonstrate its own safety and responsibility competence. The platform in its entirety has also been translated into English so that companies that order products from third countries, for example, can direct the original manufacturers of the products to familiarise themselves with European requirements. The platform makes it easier for Finnish companies to ensure that the manufacturers of products are also familiar with the requirements and that the products are manufactured accordingly. Educational institutions can also use the material on the platform in their teaching.

I know my products encourages companies to act responsibly and to continuously improve their operations. The learning side of the platform simplifies even complex legislative obligations, shares good practices and official interpretations. The platform also has an exam environment that allows companies to demonstrate that they are familiar with the requirements applicable to their products and with the principles of responsible business operations. For sufficient expertise, the company receives the "I know my products" label and a certificate that it can use, for example, in marketing. The service is public, voluntary and free of charge for companies.

The platform is aimed especially at small and medium-sized enterprises, so that even smaller businesses can achieve a sufficient level of competence to ensure the safety of products. The system provides the company with a tool for developing its operations and the possibility of distinguishing itself from market competition, and thus also with a financial interest. Responsible operations are an image factor for the company. The label also tells the company's customers that the company is familiar with the requirements concerning its products and acts responsibly in its business operations. The aim is that I know my products, for its part, ensures the sale of safe consumer goods in Finland.

Contact person: Project manager Jukka Eklund, jukka.eklund@tukes.fi,
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Website: https://tunnentuotteeni.fi/

Model-based carbon balance estimates for drained peatlands in state-owned multiple-use forests

Metsähallitus
The carbon balance data for drained peatlands is compiled in the Silvia forest information system at the group map layer called "peatland carbon balances", and it is intended to support climate-effective decision-making in operational planning.

Innovation motives: the solution-oriented implementation of Metsähallitus's climate programme, including the development of operating models and information content for the planning of measures in state-owned multiple-use forests for carbon-rich drained peatlands.

Innovation benefits: tackling climate change through policy choices that reduce carbon emissions from drained peatlands and increase the carbon sink of trees that develop with them.

Contact person: planning manager Kalle Eerikäinen, kalle.eerikainen@metsa.fi,
Metsähallitus Metsätalous Oy

Appendix 2. Survey form

An english form was not used when conducting the survey. This is a translation from the Finnish form made when translating the barometer.

Innovation barometer 2022

This survey will be carried out to improve the impact of public sector innovation activities. The target group of the survey is senior management in the public sector. The survey has 23 questions, and it takes about 15–30 minutes to answer, depending on whether you have introduced innovations in 2020–2021. You can choose not to answer questions and sections for which you do not know the answer. We appreciate your input very much.

Background questions

Name: _____

Organisation: _____

Number of employees in the organisation: _____

Your position in the organisation:

◯ A) Senior management

◯ B) Middle management

◯ Other, please specify

Public sector innovation activities and its support

A **public sector innovation** is a new or improved service, product or process, or a combination of these, that significantly differs from the organisation's previous services, processes or products and aims to achieve effectiveness for the common good.

In order for a service, product or process to be considered an innovation, it must also be available to potential users, such as customers or employees.

The innovation must be new within the organisation, but it may have been used or developed earlier elsewhere (this means that you need not have invented or developed it yourselves). In the survey, we ask questions about innovations that were introduced in 2020–2021, but it is also possible that the innovation work has been started earlier. In this context, do not consider minor changes in the operation and results of the workplace.

Examples of public sector innovations
- Service innovation: e.g., the Omaolo service
- Product innovation: a new device developed/introduced in, for example, a hospital or research institute
- Process innovation: for example, a new procedure or organisation method

In this survey, **innovation activities and their support** refer to activities that are done to promote innovation within your organisation. It may be an activity that directly contributes to the development of new or improved services, products or processes for the organisation's customers, or to the development of internal work. The activities may also include the management, coordination or cooperation of innovation activities, i.e. support for innovation capacity. Innovation activities and their support include:

- Collecting ideas and initiatives from users and the operating environment
- Producing information about needs and opportunities
- Strengthening leadership and employees' innovation skills
- Investments in infrastructure for innovation, e.g., procuring a co-creation platform for the organisation
- Systematic experimentation
- Innovation activities as part of an overall strategy or the preparation of a separate innovation strategy or programme
- Preference for innovative public procurement
- Research and development (R&D) and/or its funding
- Presentation and dissemination of the results of innovation activities
- Monitoring and evaluation of innovation performance
- Innovation-friendly regulation and interpretation of legislation, e.g., regulatory sandboxes or a special act for experimentation

SECTION A Innovation activities and their support

The questions in this section relate to innovation activities and their systematic support within your organisation.

A1 Did your organisation have innovation activities in 2020–2021?

◯ Yes

◯ No

A2 Support for innovation activities may be part of an organisation's strategy or may be steered by a separate programme/strategy that can be adopted politically or decided on formally. A separate programme/strategy covers the entire organisation or the majority of its activities. The innovation programme can be part of the organisation's wider strategy.

A2 Did your organisation have an approved innovation programme or equivalent on 31 December 2021?

◯ Yes

◯ No

A3 How much steering and policies are provided for innovation by the following parties in your organisation?

	5 a lot	4	3	2	1 none at all
Supranational level, e.g., the UN and 2030 Agenda or OECD	○	○	○	○	○
EU level	○	○	○	○	○
Government Programme	○	○	○	○	○
Administrative sector	○	○	○	○	○
Agency level	○	○	○	○	○
Department level	○	○	○	○	○

A4 Many organisations have a centralised function (unit/team/lab) that coordinates innovation and development activities. Its purpose is often to monitor and coordinate innovation projects at the strategic level, to manage issues related to innovation work and to provide strategic support to the management team.

Did your organisation have a centralised function that coordinates innovation activities in 2020–2021?

○ Yes

○ No

A5 How much did the following sources of information and partners give input to your organisation for planning innovation activities?

	5 A lot	4	3	2	1 Not at all
Another Finnish public administration organisation	○	○	○	○	○
Foreign public administration organisation	○	○	○	○	○
International cooperation body (e.g., OECD or EU)	○	○	○	○	○
Companies	○	○	○	○	○
Research institutes and higher education institutions	○	○	○	○	○
Think tanks	○	○	○	○	○

	5 a lot	4	3	2	1 none at all
Third sector	○	○	○	○	○
Customers and citizens	○	○	○	○	○
Other, specify	○	○	○	○	○
Other, specify	○	○	○	○	○
Other, specify	○	○	○	○	○

A6 How much did the following factors motivate your organisation's innovation activities in 2020–2021?

	5 A lot	4	3	2	1 Not at all
Needs and expectations of customers and citizens	○	○	○	○	○
Productivity	○	○	○	○	○
New legislation or regulation that requires compliance or enables change	○	○	○	○	○
Safety and security of supply	○	○	○	○	○
New technology and knowledge that enable change	○	○	○	○	○
Ecological sustainability, e.g., responding to climate change	○	○	○	○	○
Social sustainability, e.g., gender equality	○	○	○	○	○
Economic sustainability, e.g., sustainable use of public funds	○	○	○	○	○
Surveys and evaluations	○	○	○	○	○
Something else, specify	○	○	○	○	○
Something else, specify	○	○	○	○	○
Something else, specify	○	○	○	○	○

A7 How much did your organisation engage in innovation cooperation with the following actors in 2020–2021?

	5 a lot	4	3	2	1 none at all
Municipalities and regions	◯	◯	◯	◯	◯
Government agencies and ministries	◯	◯	◯	◯	◯
Other public sector actors	◯	◯	◯	◯	◯
Customers and citizens	◯	◯	◯	◯	◯
Research institutes and higher education institutions	◯	◯	◯	◯	◯
Third sector	◯	◯	◯	◯	◯
Other, specify	◯	◯	◯	◯	◯
Other, specify	◯	◯	◯	◯	◯
Other, specify	◯	◯	◯	◯	◯

A8 How much have you supported innovation activities with the following means in 2020–2021?

	5 A lot	4	3	2	1 Not at all
By collecting ideas and initiatives from users and stakeholders	◯	◯	◯	◯	◯
By producing information on needs and opportunities	◯	◯	◯	◯	◯
By strengthening leadership and staff innovation skills	◯	◯	◯	◯	◯
By investing in infrastructure for innovation, e.g., procuring a co-creation platform for the organisation	◯	◯	◯	◯	◯
By using idea competitions, hackathons or similar	◯	◯	◯	◯	◯
By encouraging experiments	◯	◯	◯	◯	◯
By favouring innovative procurement	◯	◯	◯	◯	◯
By supporting research and development (R&D)	◯	◯	◯	◯	◯

	5 a lot	4	3	2	1 none at all
By presenting and disseminating the results of innovation activities	◯	◯	◯	◯	◯
By monitoring and assessing the impacts of innovations	◯	◯	◯	◯	◯
By favouring innovation-friendl regulation and legislative interpretation or by influencing legislation	◯	◯	◯	◯	◯
With anticipation	◯	◯	◯	◯	◯
By developing methods for assessing the impacts of innovations	◯	◯	◯	◯	◯
In some other way, specify?	◯	◯	◯	◯	◯
In some other way, specify?	◯	◯	◯	◯	◯
In some other way, specify?	◯	◯	◯	◯	◯

A9 In 2020–2021, did your organisation have...

	Yes	No
... sufficient funding for innovation activities	◯	◯
... sufficient equipment and software for innovation activities	◯	◯
... sufficient expertise for innovation activities	◯	◯
... sufficient working time available for innovation activities	◯	◯
... methods and processes supporting innovation activities	◯	◯
... clear ideas and objectives for innovation activities	◯	◯
... political support for innovation activities	◯	◯
... support for innovation activities from your own senior management	◯	◯
... an operating culture that promoted experimentation and risk-taking	◯	◯

A10 How have you monitored, measured and assessed the impacts of innovation activities in 2020–2021?

Also applies to innovations made before 2020

☐ By measuring individual innovation projects' goal realisation

☐ With surveys aimed at customers, citizens and employees

☐ With qualitative self-assessments

☐ By assessing the achievement of sustainable development goals in innovation activities (ecological, social, economic)

☐ In some other way, how?   _____

☐ In some other way, how?   _____

☐ In some other way, how?   _____

A11 Possible comments related to section A (innovation activities and their support in your organisation):

_____
_____
_____
_____
_____
_____

SECTION B Innovation development

In this section, we ask questions about innovations that were introduced in 2020–2021, but it is also possible that the innovation activities have been started earlier. The innovation must be new within the organisation, but it may have been used or developed earlier elsewhere (this means that you need not have invented or developed it yourselves).

Examples of public sector innovations
- Service innovation: e.g., the Omaolo service
- Product innovation: a new device developed/introduced in, for example, a hospital or research institute
- Process innovation: for example, a new procedure or organisation method

B1 Did you introduce service, product or process innovations in 2020–2021?

☐ Yes, at least one service innovation

☐ Yes, at least one product innovation

☐ Yes, at least one process innovation

B2 Have you developed entirely new innovations or introduced innovations developed elsewhere?

☐ At least one of the innovations is completely new in the field of our organisation

☐ At least one innovation is a copy or adaptation or has been influenced by other sources

Next, we will discuss the most significant innovations introduced in your organisation in 2020–2021. Assess for yourself what you think was the most significant innovation in your organisation, and respond based on it. If your organisation has not implemented any innovation in 2020–2021, you do not need to answer these questions.

B3 What do you think is the most significant innovation you adopted in 2020–2021? *Describe the innovation briefly. Why do you consider the innovation the most significant one?*

_____
_____
_____
_____
_____

B4 To what extent did the following factors motivate the most significant innovation introduced in your organisation in 2020–2021?

	5 a lot	4	3	2	1 none at all
Needs and expectations of customers and citizens	○	○	○	○	○
Productivity	○	○	○	○	○
New legislation or regulation that requires compliance or enables change	○	○	○	○	○
New technology and knowledge that enable change	○	○	○	○	○

	5 a lot		4	3	2	1 none at all
Safety and security of supply	○		○	○	○	○
Ecological sustainability	○		○	○	○	○
Social sustainability	○		○	○	○	○
Economic sustainability	○		○	○	○	○
Surveys and evaluations	○		○	○	○	○
Other factors, specify?	○		○	○	○	○
Other factors, specify?	○		○	○	○	○
Other factors, specify?	○		○	○	○	○

B5 Did you receive funding for the most significant innovation from the following sources in 2021?

Source of funding

☐ The organisation's own budget

☐ Special funding from the state budget

☐ European Union

☐ Other funding, please specify _____

☐ We did not need separate funding (e.g., was done as official work)

B6 How much did your organisation cooperate with the following actors in the most significant innovation introduced in 2020–2021?

	5 A lot		4	3	2	1	Not at all
Municipalities and regions	○		○	○	○		○
Government agencies and ministries	○		○	○	○		○
Other public sector actors	○		○	○	○		○
Research institutes and higher education institutions	○		○	○	○		○
Companies	○		○	○	○		○

	5 a lot		4	3	2	1 none at all
Third sector	○		○	○	○	○
Other, specify	○		○	○	○	○
Other, specify	○		○	○	○	○
Other, specify	○		○	○	○	○

B7 Where have you disseminated information on the most significant innovation introduced between 2020 and 2021?

☐ In our own communication channels

☐ In our own networks

☐ In partners' channels and networks

☐ In international channels and networks, such as the OECD observatory of public sector innovation (OPSI)

☐ Elsewhere, specify?

☐ Elsewhere, specify?

☐ Elsewhere, specify?

B8 Which factors promoted or hindered the most significant innovation?

	5 Promoted innovation very much	4 Promoted innovation somewhat	3 Neither promoted nor prevented innovation	2 Prevented innovation somewhat	1 Prevented innovation very much
The way we handle errors	○	○	○	○	○
Our approach to risks	○	○	○	○	○
Organisational changes	○	○	○	○	○
Cooperation between workplace units	○	○	○	○	○
Economic resources	○	○	○	○	○
Government Programme	○	○	○	○	○
Our organisation's strategy	○	○	○	○	○

	5 Promoted innovation very much	4 Promoted innovation somewhat	3 Neither promoted nor prevented innovation	2 Prevented innovation somewhat	1 Prevented innovation very much
Legislation	○	○	○	○	○
New technology	○	○	○	○	○
Policy makers	○	○	○	○	○
Personnel competence	○	○	○	○	○
Engagement of citizens	○	○	○	○	○
Participation of companies	○	○	○	○	○
Third-sector participation	○	○	○	○	○
Participation of higher education institutions and research institutes	○	○	○	○	○
Other factor	○	○	○	○	○
Other factor	○	○	○	○	○
Other factor	○	○	○	○	○

B9 How has the most significant innovation introduced in your organisation in 2020–2021 affected the following factors, or how do you think it will affect them?

	Improved very much	Improved somewhat	No effect	Weakened somewhat	Weakened very much
Functionality of processes	○	○	○	○	○
Productivity	○	○	○	○	○
Customer and citizen satisfaction	○	○	○	○	○
Employee satisfaction	○	○	○	○	○
Compliance with legal requirements and regulations	○	○	○	○	○
Cross-sectoral cooperation	○	○	○	○	○
Safety and security of supply	○	○	○	○	○

	Improved very much	Improved somewhat	No effect	Weakened somewhat	Weakened very much
Ecological sustainability	○	○	○	○	○
Social sustainability	○	○	○	○	○
Economic sustainability	○	○	○	○	○

B10 Possible comments related to section B (Innovation development):

_____
_____
_____
_____
_____

C Feedback

C1 Comments or regards to the survey author

_____
_____
_____
_____
_____

C2 How long did you spend responding to the survey?

The Ministry of Finance actively aims to reduce the time that companies and organisations spend providing information. That is why we are grateful if you answer the voluntary question.

○ Less than 15 min

○ 15–30 min

○ 30–45 min

○ 45–60 min

○ More than 60 min

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November 2022