Anticipatory innovation governance : towards a new way of governing in Finland

A SUMMARY REPORT

OECD   **OPSI**

FOREWORD

Good public governance has always played a significant part in building Finnish welfare and national competitiveness. We know by experience that the search for effective governance is no easy task. We must always look for new ways to improve. Now all our countries face the situation where challenges in societies cannot be addressed through reactive and conventional measures. Societies are faced with challenges and changes that cause us to be more intertwined and interdependent. This is intensified by rapid and continuous growth in information flows.

Moving from reactive to more proactive public governance is important. Three is a need to adapt to transformative change in a systemic manner. To be able to prepare for the future public administrations must be ready to be innovative. Therefore, our aim is to develop anticipatory innovation governance as a tool to support systemic change in the society. With this report, we now have an analysis from the OECD of the current situation and what needs to change. We have an external analysis of the core elements of systemic change and through the analysis process, we hope, a raised awareness and understanding of the potential.

But these are difficult challenges and the joint thinking and working together for success is a key ingredient in achieving wanted change. Therefore, we are very grateful for the European Commission for making this project possible.

Our sincere thank you goes to the OECD for this significant work that provides a lot of material for development in many areas and functions. This final report with its suggestions is of course one milestone in this work, but the process with its workshops, interviews, cases and other co-operation has been a very crucial element in developing our thinking.

We are grateful to the OPSI team led by Piret Tõnurist for their dedication to this work. We also want to thank the international colleagues who have contributed to this work and for all our Finnish colleagues who played an important role in the cases.

In a world where events that lie ahead of us in international politics sometimes look gloomy and dark, this kind of collaborative work always bears fruit. We hope that this work on Finland on anticipatory innovation governance will also be of inspiration to the larger EU and international community.

MR JUHA MAJANEN,
Permanent Secretary, Ministry of Finance

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

GLOSSARY OF TERMS

Agency denotes the tools, methods and information resources that enable public servants and organisations to anticipate and innovate in practice.

Alternatives exploration is the ability to consider different policies, service models or modes of intervention that may be in conflict with current strategic intent.

Anticipation is the act of creating actionable knowledge about the future drawing on the existing contextual factors, values and worldviews, assumptions, and range of emerging developments.

Anticipatory innovation is acting on the knowledge about the future by creating something novel that has impact to public values.

Anticipatory innovation governance relates to the structures and mechanisms in place that allow and promote anticipatory innovation to occur alongside other types of innovation.

Authorising environment is the system within the public sector that validates anticipatory innovations – provides feedback that there is demand, value, and use for the work.

Complexity in policy making outlines the dependence of systems of people, institutions and dynamic environmental factors that all tend to influence each other making it difficult to ascertain the nature of policy problems and therefore also how to manage them.

Experimentation means creating new knowledge by putting the approach in place with the necessary structures to find out if it works. There are a wide range of experimental methods suited to different purposes from randomised control trials (RCTs) to A/B tests.

Futures literacy is capacity to explore the potential of the present to give rise to the future.

Future-seeking moments are points in the development of policy or strategy during which possible futures and alternatives are considered.

Impact gap is the lack of use of high-quality futures knowledge in policy making, innovation and strategy due to individual, collective, and institutional limitations.

Policy cycle includes 1) identifying policy priorities 2) drafting the actual policy document, 3) policy implementation; and 4) monitoring implementation and evaluation of the policy's impacts.

Public sector innovation is a novel approach that is implemented and aimed to achieve impact (such as change in public values).

Phenomenon-based policy making means addressing phenomena (e.g. climate change, social disintegration, urbanisation, and immigration) for which no single part of the system holds full responsibility for and which require the collaborative interaction of different parts of a system.

'Right to Challenge' is a function by which public organizations, local governments and public officials can apply for an exemption from an existing rule, regulation or strategic direction. To be granted this right, applicants have to show how they would be better able to innovate or explore an alternative to deliver improved public outcomes with this 'Right to Challenge'.

Sense making is the act of uncovering underlying assumptions about the future and making sense of signals and trends.

Strategic foresight is the ability of an organisation to constantly perceive, make sense of, and act upon the future as it emerges in the present.

Systems thinking denotes a broad range of methods that help to demonstrate how systems are structured and how they operate. Systems approaches help to reflect on how best to use this knowledge to take action (i.e. design and design thinking) by devising proposals to be tested and implemented as system interventions.

Uncertainty denotes a situation where risks connected to policy problems cannot be calculated (whereas with risk the probability distribution is known or predictable).

EXECUTIVE SUMMARY

Today governments must respond to constantly emerging challenges as disruptions due to widespread events and processes connected to climate change, migration, pandemics, geopolitical security, and others quickly develop and demand public policy actions. While Finland may face some of these more acutely than others, it is not alone in this new reality. In this environment, in which complex, interconnected systems and the problems they contain confront governments with a perpetual barrage of novel types of problems, a reactive approach to setting policy is proving increasingly inadequate.

Recent OECD work laid out a principled framework on how governments can start addressing these challenges by integrating anticipatory capacities into public governance and policy steering. This framework is known as anticipatory innovation governance (AIG). Adequate action starts with the willingness to embrace radical uncertainty and complexity, and to put forward the right tools and governance to make sense of new developments as they emerge, adopting a prospective and proactive stance towards them.

Finland is internationally recognised for its achievements in public sector reform and for its focus on the constant enhancement of its public governance. The country is known for high respect for the rule of law, human development, democratic integrity, and high levels of administrative ethics. While Finnish society and public governance are leaders per numerous international comparisons, one of the areas where the Finnish Government has identified a need to improve concerns anticipation and systems approaches to complex problems.

In 2020–2021, the OECD carried out an assessment of the governance system in Finland, specifically focused on assets, preconditions and gaps within the wider public sector policy making and steering system in Finland that may stand in the way or help implement an anticipatory innovation approach in the Finnish context. This initial research identifies six main challenge areas for the Finnish Government.

1 Overcoming the strategic foresight impact gap by integrating futures and foresight with core strategic processes, innovation and experimentation.

2 Opening-up the development of policy alternatives connected to future challenges by systematically involving citizens and other stakeholders in future-oriented policy creation.

3 Strengthening the capacity of public servants to reflect and act on future policy challenges by increasing access to and experience with anticipatory innovation approaches and tools.

4 Ensuring that traditional government policy steering mechanisms – strategic, budgetary and legal – allow for (and do not inhibit) the exploration of policy alternatives and tackling complex problems.

5 Leveraging anticipatory governance mechanisms to allow for complex and long-term policy issues to be collectively understood and sustained across the policy cycle.

6 Countering governmental silos and creating new ways of collaboration to look at emerging problems in a cross-government manner.

Four policy domains were identified as case studies to gain greater understanding and pilot initiatives to build Finland's anticipatory capacity: continuous learning, carbon neutrality, child well-being and collaboration between politicians and public officials. The cases provide substantive and contextualised learnings about the effective governance of anticipatory innovation, informing on how Finland's governance structures can deal with shifting values, new public expectations, uncertain future shocks and a variety of preferable futures that the country wants. In addition, they provide tailored and practical proposals for the enhance-

ment of Finland's anticipatory innovation governance capacity to address concrete policy challenges.

CONTINUOUS LEARNING: The world of work is continuously transformed by the complex interaction of trends such as automation, climate change and an aging population. The changes they precipitate affect the demand for skills: jobs and tasks in one sector may disappear while others emerge which require new combinations of competencies. Against this backdrop, Finland has recognised the need for a reform of continuous learning to create a system that is able to anticipate and respond to changes in the demand for skills and learning across the labour market and broader society. The Continuous Learning Reform project was initiated on 25th September 2019 and is due for completion on 31st March 2023. This pilot case explored how anticipatory innovation governance could facilitate the development and implementation of the Continuous Learning Reform. The pilot case results in the identification of a 'bipedal' governance setup in which one 'leg' engages key government and non-government stakeholders in co-ordination for decision-making, while another 'leg' ensures that relevant anticipatory information is identified and interpreted through collaborative processes.

CARBON NEUTRALITY: Finland aims to be carbon neutral by 2035 and eventually become the world's first fossil-fuel free welfare society. However, no governance model—even with the most successful of reforms—can deliver support to transition to carbon neutrality unless it has the ability to constantly perceive, understand, and act upon the changes of the future as they emerge. For this reason, the government of Finland sought to work with the OECD to explore in this pilot case study how anticipatory innovation governance could be applied to support the country's transition to carbon neutrality. For Finland to develop and act on anticipatory strategies for carbon neutrality, the case highlights the need to prioritise creating responsibility and urgency to act, collaboration and coherence, capacity development, integration of green fiscal practices into the mainstream, and holistic medium-term strategic planning.

CHILD WELL-BEING: Finland published its first National Child Strategy in February 2021. The task is to formulate a vision for a child and family-friendly Finland that spans

government terms and crosses administrative boundaries. The implementation of the Strategy is to be undertaken alongside changes occurring as part of Finland's social and welfare (SOTE) reform, which completely re-envisages how child well-being services are governed and organised. Anticipatory innovation governance has particular relevance in this context, due to the changing nature of childhood and the sense of uncertainty and complexity inherent in policies affecting people early in their lives. This pilot case study highlights how Finland might address existing challenges while preparing to better meet the needs to future generations through implementing some of the anticipatory innovation governance mechanisms. More specifically, the analysis indicates the need to focus on the mechanisms of public interest and participation, sense-making, networks and partnerships, and tools and methods as relevant mechanisms that can help to integrate a more inclusive and long-term perspective. These enable the identification of the following options for action: child well-being missions, ecosystem building and signal exchanges.

COLLABORATION BETWEEN POLITICIANS AND PUBLIC OFFICIALS: To date, future-oriented policy making in Finland is conducted mainly by a 'coalition of the willing' and co-exists alongside traditional policy-making processes and mechanisms. An important question is how different actors within the Finnish Government can work together on anticipatory policy making and what forms of collaboration between public officials and politicians could be instrumental. The purpose of this case study was to contribute to further building Finland's anticipatory capacity, and to the development of the anticipatory innovation governance model by assessing how politico-administrative collaboration could be integrated into the model. This work informed the following suggestions: appointing an objective facilitator for dialogues that enjoys trust from both sides, establishing a dedicated process for politicians and public officials to get to know each other at the beginning of a new term, and embedding anticipation into existing future-seeking moments, such as the development of the Government Programme.

Stemming from these case studies and the overall analysis, including a revision of the anticipatory innovation governance model itself, there are actions that the Finnish Gov-

ernment can perform to make anticipatory innovation capacity more systematic across government. These include:

- **Systematise the government transition process to improve the continuity of long-term reforms and institutional memory.** A knowledge repository around long-term reforms and anticipatory issues, combined with a more structured transition process including opportunities for trust-building and collective future-seeking, could enable governments to build on the successes and learn from the challenges of their predecessors.

- **Develop new methods and governance approaches to plan responses to emerging issues.** A cross-government committee for senior leadership to discuss emerging issues would create demand and legitimacy for the use of anticipatory approaches and improve collaboration across silos. To function effectively, it would require an agreed methodology to diagnose and make sense of emerging policy problems and assign ownership, responsibility and resources to issues in a flexible, but transparent manner.

- **Establish structures for regular collective sense-making, visioning and exploration of alternatives. As part of an anticipatory steering process**, collective sense-making between different communities across government, including politicians and public officials, needs to be institutionalised to understand drivers of change and to facilitate efficient policy co-creation. This needs coordination from the centre and equally involvement of ministries owning the policy issues discussed. As well as enabling the identification of common purposes across government, collaborative processes enhance the exploration of alternatives, leading to more robust policy decisions that account for possible future changes. It is essential to build robust levels of trust between the various communities of government for this to work effectively.

- **Test new approaches to allocate budgetary resources to emerging phenomena.** Effective anticipatory innovation governance requires that fiscal planning and investment prioritisation approaches more systematically explore and address uncertainty. Resource allocation should encourage experimentation and cross-government working to address complex, wide ranging and unstable phenomena.

- **Further enable regulatory approaches to support experimentation.** To prevent legislation from being a barrier to beneficial change, it is important to allow for continuous reflection on drafted legislation and its effectiveness in enabling innovation. The Ministry of Justice should explore the possibility to institute a 'right to challenge' function for strategies, policies and services with resourcing to explore alternatives.

- **Design training, teams and roles to increase the understanding and application of anticipatory approaches.** Targeted programs for public sector leadership, civil servants, foresight and innovation experts should support the development of anticipatory innovation capacity. Redesigning the roles of leaders with a particular focus on middle managers to make space for anticipatory approaches can accelerate their application. An important element of this is establishment of a climate of psychological safety.

- **Institutionalise dialogue and deliberation to build trust between citizens, public officials and politicians in order to enable greater engagement with uncertainty.** Guidelines should be developed to institutionalise citizen and other stakeholder participation methods to consider policy alternatives early on and help provided to public organisations to facilitate these discussions and collective sense-making efforts. Deliberation and dialogues in which both politicians and public officials can contribute to knowledge around future developments and collectively make sense of the insights available should become a regular part of the governance process.

- **Connect the futures and foresight system to policy making.** Training in futures and foresight (not just in the production, but also the use of futures analysis) for experts, policy makers and senior leaders can help bridge the impact gap by improving confidence in the use of anticipatory approaches. Ministries and public organisations should be encouraged by the centre to bring strategic foresight out of "narrow circles" and involve more outside and international experts in the work which can help bring a diversity of perspectives and keep the focus on long term visions (instead of on reactive response to the crisis of the day).

- **Track and assess the use of anticipatory approaches.** The State Audit Office of Finland could take up a more

proactive role in following up on the value chain from futures and foresight, strategic steering to innovation and experimentation and implementation.
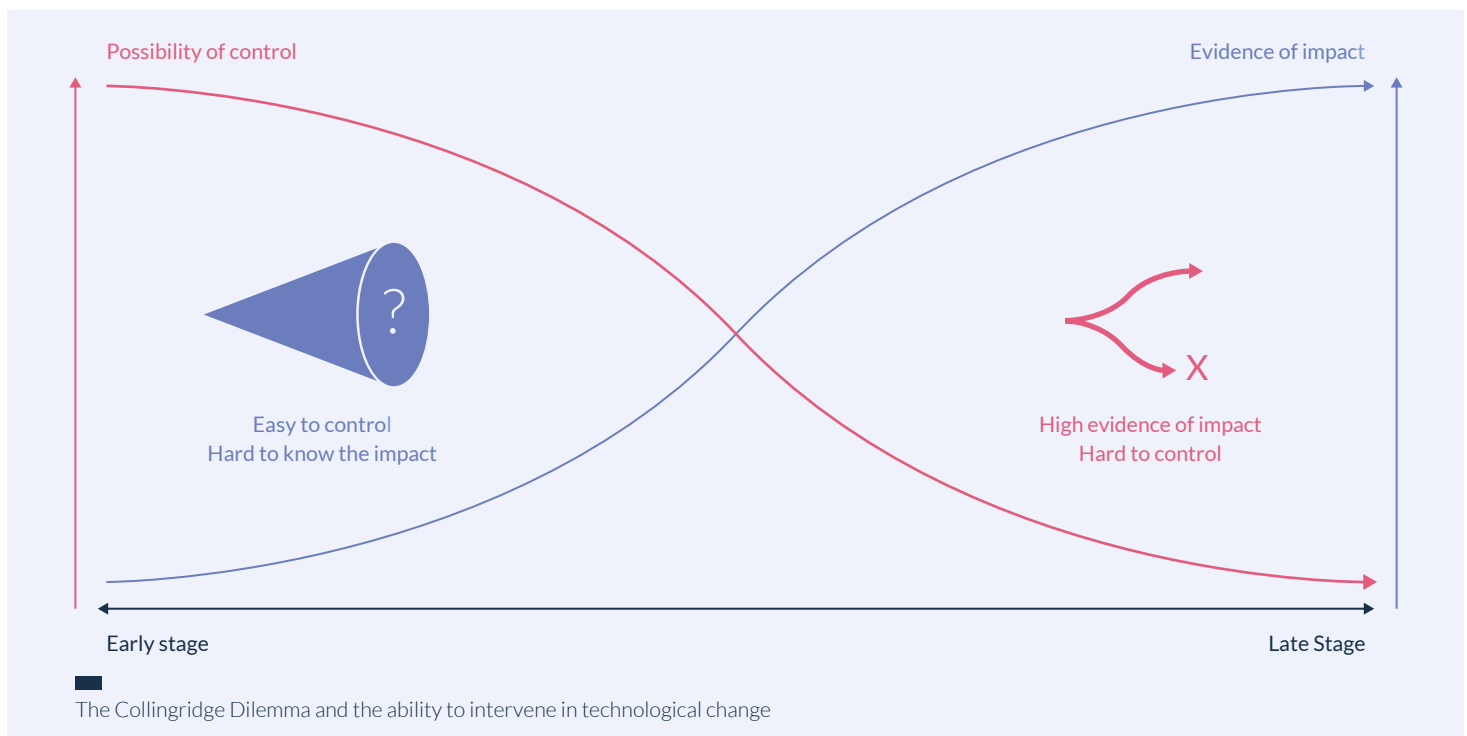
These actions points lay out the need for significant investment in the anticipatory innovation governance system in Finland. Given that many of these recommendations are not new and the increasing pressures of an increasingly fast-paced and volatile policy environment, it is essential for Finland to start taking concrete action. This holds true for any country striving to ensure the effectiveness of their governance system, whether at the beginning or ahead in its anticipation journey. The OECD encourages governments to learn from the Finnish experience and get inspired by Finland's willingness to understand anticipatory innovation governance as an ongoing practice in need of continuous efforts.

FINLAND'S COMMITMENT TO ANTICIPATION IN AN UNCERTAIN WORLD

Governments today must respond to constantly emerging challenges as disruptions due to widespread events connected to climate change, migration, pandemics, geopolitical security, and others quickly develop and demand rapid public policy actions. This environment, defined by complex, interconnected systems and the accelerated dynamics they contain confront governments with a perpetual barrage of novel types of challenges, a reactive, 'wait-and-see' approach to setting policy is proving increasingly inadequate. Governments must not only develop and strengthen their abilities to respond to unforeseen challenges quickly but also anticipate different futures and *act in preparation* for the ones that are preferable, before all the evidence for change is tangible and apparent. Anticipation is not about introducing more strategic foresight or innovation into government, but rather about building a governance system that helps policy makers and other relevant actors learn from both approaches in order to take action today.

Finland recognises the challenges in inherent in this new reality for policy, characterised by:

- **Complexity.** In the policy context, complexity can derive both from underlying characteristics of wicked problems and also due to competing interests in a policy area (Peters, 2005). Wicked problems are characteristically open-ended, inter-connected and without clear, pre-determined pathways to solutions (Rittel and Webber, 1973).

- **Multi-causality.** Policymakers often rely on simulations and predictions based on linear causality, drawing on the dominant pattern within the policy field. This makes futures "closed" as they are extrapolated from past events and continuation of specific values and norms. This is often undesirable, especially when transformation is genuinely necessary or unavoidable. When policy makers consider that their starting points involve many future possibilities and they are layered, they may shift to considering "open futures," with a plural and open-ended understanding of possibilities (Bussey, 2014).

- **Uncertainty.** Uncertainty stems from the fact that policy problems and their solutions are often unquantifiable and their risks cannot be calculated. This contrasts with risk, in which the probability distribution is known or predictable (OECD, 2017). When faced with uncertainty, inaction is often easier in the short term than intervention as it frees authorities from having to justify precarious or uncertain interventionist policies until the future catches up with policy makers and negative outcomes arrive (Guler and Demir, 2020).

- **Diverging pace of change**. Governments are often slow to respond to changed circumstances in their environments and face a 'pacing problem' (Marchant, 2011): given the speed of external innovation, challenges can evolve and change at unexpected points during the policy cycle. Traditional policy making often involves making decisions and judging priorities based on past information and existing evidence. Not all developments can be predicted or reduced to manageable practices within a single policy field; they must be continuously explored in real-time and in an iterative manner. Remaining in a reactive mode will keep governments' perpetually delayed in relation to the pace of change.

Possibility of control   **Evidence of impact**

?

Easy to control
Hard to know the impact

X

High evidence of impact
Hard to control

Early stage   **Late Stage**

The Collingridge Dilemma and the ability to intervene in technological change

- **Technological change.** The far-reaching impacts of technological change tend to be unpredictable. Independent of their direct use technologies can be an accelerator to behavioural or social change unintended by their creators. The Collingridge Dilemma describes the challenging trade-off between clearly understanding the impact a given technology will have on society, and the ease with which interested parties are able to influence the social, political, and innovation trajectories of this technology. When change is easy (at early development stage of a technology), its need and impact cannot be foreseen but it is easy to influence; when the need for change is apparent, following diffusion of a technology, change will be expensive, difficult and time consuming (Morozov, 2012).

- **Crises and short-termism.** Policymakers are often driven by events rather than visionary or forward-looking practices (Burrows and Gnad, 2018). Crises can sometimes act as ‚focusing events' – as is the case with covid-19 or geopolitical developments – which can allow for major policy resets. Yet, this way of making policy depends on chance rather than an intentional process; it is an ad hoc and not a systematic practice. The continuous pressure to seek out quick wins towards political imperatives can defer decisive action on long-term trends such as climate change, demographic changes,

urbanisation, and unsustainable consumption patterns.

- **Risk avoidance.** Governments are generally known to be risk-averse, rule-driven, based on stable structures and predictable decision-making (Brown and Osborne, 2013). Avoiding risks is often justified for political and reputational reasons. However, this position prevents governments from taking quick action when confronted with new challenges or recognising and leveraging new opportunities. Governments' response to transformative change has generally been reactive at best and tend to only act when pushed when hazards (moral, ethical or even physical) materialise.

Recent OECD work laid out a principled framework on how governments can start addressing these challenges by integrating anticipatory capacities and processes into public governance and policy steering (Tõnurist and Hanson, 2020). Adequate action starts with the willingness and commitment to embrace radical uncertainty and complexity, and to put forward the right tools and governance to make sense of new developments as they emerge.

OECD research indicates that such action will increasingly depend on governments' ability to harness futures thinking, anticipation and innovation. While strategic foresight can help governments understand the possibility spaces

within which to take action, the best way to determine the most effective responses to a problem is to test them out in practice by innovating intentionally, even if at the controlled scale of experimentation, and learning from the feedback gathered from this active process to set policy. This commitment to experimentation is at the core of the anticipatory innovation governance model. It is a commitment shared by the Finnish government.

Anticipatory innovation governance as part of a comprehensive public sector innovation portfolio

The Observatory of Public Sector Innovation defines "public sector innovation" as the process of implementing novel approaches to achieve impact (OECD, 2017). In the broadest terms, public sector innovation has to fulfil three different criteria: novelty, implementation and impact.

Part of the OECD's public sector innovation model, the anticipatory innovation governance framework presents a way to strengthen government capacity[1] to anticipate emerging changes, envision desired futures, and develop innovative solutions to achieve those futures. The OECD Declaration on Public Sector Innovation, a legal instrument adhered to by Finland,[2] is based on the notion that different facets of innovation activity in the public sector should be undertaken according to the types of problems at hand.

These facets of innovation are characterised based on the key reasons that governments innovate:

- To reach their goals and solve societal-level problems (mission-oriented innovation)
- Adapt to their citizens' needs and changing environments (adaptive innovation)
- Run their current systems more efficiently (enhancement-oriented innovation)
- Address future challenges, risks and opportunities (anticipatory innovation).

DIRECTED
Sharping / Top-down

Mission-oriented
Innovation

Sustaining change

Transformative change

CERTAINITY
Exploiting / Incremental

Enhancement-oriented
Innovation

Optimizing change

Disputive change

Anticipatory
Innovation

UNCERTAINITY
Exploring / Radical

Adaptive
Innovation

UNDIRECTED
Responding / Bottom-up
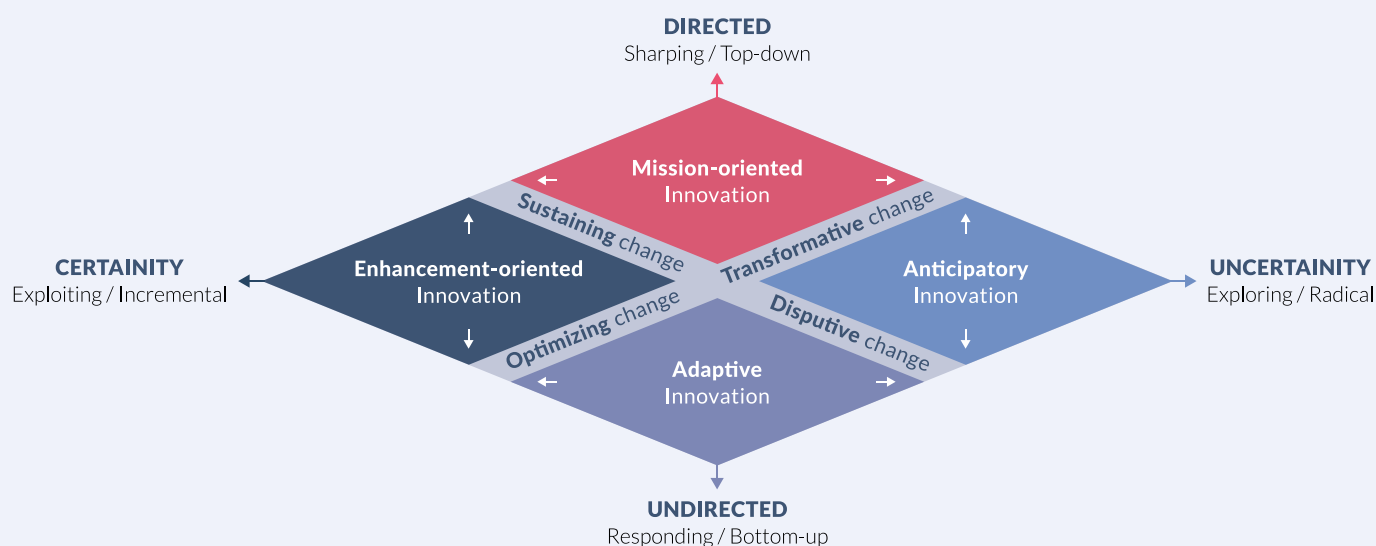
Public sector innovation facets model

1 A comprehensive treatment of public sector innovation systemic capacity can be found in Kaur, M. et al., Innovative capacity of governments: A systemic framework (2022)

2 The OECD Declaration on Public Sector Innovation can be accessed at https://legalinstruments.oecd.org/en/instruments/oecd-legal-0450

Anticipatory innovation and public values

While in the private sector the aim of innovation is usually to gain a competitive advantage in the market, in the public sector, where the same purpose does not apply, the goals usually mean a shift in public value (OECD, 2019), its impact being an improvement at the multidimensional notions of value retained in democratic societies. In general, public value represents a normative consensus of prerogatives, principles, benefits and rights attributed to both governments and citizens (Jorgensen and Bozeman, 2007).

Public sector innovation is connected to the following "substantive values," which hold true even if day-to-day missions and goals in the public sector shift (OECD, forthcoming):

- How can government achieve its ambitious societal goals that it is called to tackle (political-social value)?
- How can government continuously improve and do things better with the public funds it has been trusted with (moral/ethical value)?
- How can government take on board and respond to evolving citizen needs and environmental changes (citizen-centric values)?
- How can government explore future risks and uncertainties, so, it and its citizens are future-ready (transformational values)?

Since the immediate impact of anticipatory innovation is often invisible, mediated and/or protracted, there may be little demand on governments for anticipatory innovation, but it is nevertheless essential in fulfilling the public purpose of governments.

Why anticipatory innovation is critical yet demanding

While anticipatory innovation is increasingly needed in the public sector, it is consistently difficult to create space for anticipatory innovation in government contexts. Several factors underpin the reasons why:

- First, governments tend to focus innovation efforts on current issues using existing tools and mechanisms rather than engaging with future issues that require a change of paradigms, operating environments, and tools.
- Second, even when policy makers do address future issues, they tend to compartmentalise them into categories which exist in the present and rely on present-day solutions to address them.
- Third, anticipatory innovation is often conflated with adaptive innovation; novel action tends to be directed in response to the changes in the operating environment that manifest today rather than those that can potentially impact the future.

For these reasons, Governments can rely on anticipatory innovation to expand their scope on public challenges, going beyond the urgent issues (and its tunnel-effect); to equate and test emerging, alternative or prototyped concepts and approaches to challenge the prevailing notions of feasibility; and to bring long-term awareness and questions of sustainability to the present, adopting a commitment towards the responsible design of public policy.

ANTICIPATION

The creation of knowledge about the future, drawn from existing contextual factors, underlying values and worldviews, assumptions, and range of emerging developments

ANTICIPATORY INNOVATION

Acting upon knowledge about the future by creating something new that has the potential to impact public values

ANTICIPATORY INNOVATION GOVERNANCE

The structures and mechanisms in place that allows and promotes anticipatory innovation to occur alongside other types of innovation

Anticipation, anticipatory innovation, anticipatory innovation governance, Source: Tõnurist and Hanson, 2020.

Agency, authorising environment, and mechanisms of anticipatory innovation

Anticipatory innovation governance operates within established government core architectures and acts on a variety of inputs to manage emerging challenges. It is enabled by a set of mechanisms related to the following:

- **Agency** defines the tools, methods and information resources that enable public servants and organisations to anticipate and innovate in practice.
- **Authorising environment** is the system within the public sector that provides feedback and creates sustainable demand and supply for anticipatory innovations.

To operationalise anticipatory innovation governance, it is key to explore how changes in authorising environments and officials' agency can create opportunities and habits for experimentation, learning and innovation. Governments seeking to authorise anticipatory innovations can create learning loops, evidence and evaluation, legitimacy, networks and partnerships – all that will address vested interests and cognitive biases, public interest and participation.

Public servants need to have agency working with anticipatory innovation in practice: the tools and methods, institutional structures, and organisational capacity to support these initiatives. This requires examining the traditional functions of government, including human resources, budgeting, regulation, decision-making processes, strategic planning and working methods. The anticipatory innovation mechanisms are summarised in the table below and intersect and interact with traditional government functions. These mechanisms, while not mutually exclusive or exhaustive, served as lenses of analysis through which to analyse opportunities and gaps in anticipatory innovation in practice in Finland.

MECHANISMS OF AGENCY	MECHANISMS OF AUTHORISING ENVIRONMENT
Alternatives exploration and experimentation Ability to consider different alternatives that may be in conflict with current strategic intent	**Vested interest and cognitive biases** Ways to address incumbents' interests and biases in thinking about the future
Data and measurement Reading and interpreting signals in time	**Public interest and participation** Involving a variety of stakeholders and new perspectives, and facilitating discussions around values
Sensemaking Uncovering underlying assumptions and making sense of trends	**Networks and partnerships** Working together with leading organisations and individuals with transformative ideas
Organisational capacity Organisational structures that give autonomy and resources to explore transformative ideas	**Legitimacy** Creating trust in government, experimentation and explored futures
Tools and methods Approaches to create new knowledge about possibilities, creativity of thought, and operationalisation of innovations	**Evidence and evaluation** Evaluating future options based on value and accounting for opportunity costs
Institutional structures Institutions that make room for experimentation and testing	**Learning loops** Creating feedback loops from experimentation to dynamically inform policy choices w

Finland as an ideal test bed for anticipatory innovation governance

Finland is internationally recognised for its achievements in public sector reform and for its focus on constant enhancement of its public governance (e.g. European Commission, 2020; Economist Intelligence Unit, 2020). The country is known for high respect for the rule of law, high levels of administrative ethics (Salminen and Ikola-Norrbacka, 2010; Transparency International, 2020) and high trust in government (OECD, 2021).

While Finnish society and public governance are exemplary references in numerous international comparisons, successive governments in Finland have focused on the challenges they face in steering strategy setting and effective policy implementation in the 21st century. One of the areas where the Finnish Government has identified a need to improve concerns anticipation and systems approaches to complex problems (Anttila et al., 2018).

FINLAND RECOGNISES A NEED TO REGAIN LOST AGILITY

In previous public governance reviews, the OECD (2010; 2015) noted that the government had lost some of its strategic agility and that governance was too fragmented between silos, lacking adequate co-operation models between ministries (Määttä, 2011). The 2010 OECD review also highlighted the need to pay more attention to strategic foresight and its role in policy making as the function was not integrated in the traditional policy-making system. Since then, and especially in recent years, the government made strides in renewing its strategic foresight system.

The 2015 joint public governance review with Estonia shed

The case for anticipation and systemic change in the Government Programme

The current Government Programme has recognised the need for systemic change within Finnish society which can only be achieved through a rethinking of how government functions. It explicitly pledges:

- "For **continuous learning** in government amid constant changes, we do not imagine we know in advance what will work and what will not. Instead, we will seek out information and conduct experiments so that we can act in ways that will benefit our citizens."
- "For **long-term policy-making**. We commit to taking account of long-term objectives and to engaging in systematic parliamentary cooperation between the Government and Parliament. We can reach our long-term objectives by introducing new practices for cooperation between Parliament and the Government."

- "For **knowledge-based policy-making**. Legislative preparation of a high quality is a key condition for the credibility and legitimacy of policy-making. We commit to knowledge-based policy-making and systematic impact assessment in all legislative preparation. We will engage in deeper cooperation with the scientific community."

light on the need to institutionalise whole-of-government approaches and increase resource flexibility (OECD, 2015). Based on these insights, successive governments kept focusing on improving the public governance system to increase government agility and capacity to steer the system towards the effective implementation of the government strategy. Consequently, the government has launched several systematic projects and programmes to examine the role of different functions in government over the last decade. This has also led the Finnish Government to look at ways to anticipate better, learn continuously and integrate evidence-informed approaches into its government.

Such commitment to long-term, dynamic, and future-oriented policy positions Finland's steering system ideally to build up and support anticipatory innovation governance and lead the way in demonstrating how it can be implemented in practice.

GOVERNANCE STEERING IN FINLAND

In Finland's central governance steering system, the Prime Minister's Office and the Ministry of Finance act as the main cross-government steering bodies. Known for coalition governments, the Prime Minister's Office tends to take the overall lead for whole-of-government activities and cross-cutting topics while the Ministry of Finance tends to lead through fiscal planning, public governance development, and digitalisation. Looking ahead for the next decade, the Finnish Government plans to renew these areas to reach ambitious goals while maintaining the values of stability and continuity in policy making (see figure below). The recent Steering2020 work revealed that the major elements for an anticipatory approach in the Finnish governance system already exist, but they are rarely put into practice in concrete day-to-day work and implementation (Lähteenmäki-Smith, 2020; Lähteenmäki-Smith et al., 2021).

Considering Finland's ambitious intentions to upgrade public administration to address 21st century challenges and lead the way in governance in the world, the government turned to the European Commission and the OECD to support the building of a model that would incorporate anticipation into the broader public governance system. Finland has proven an ideal test bed for building and testing a working model for anticipatory innovation governance and this work demonstrates Finland's leadership in governance innovation internationally.

RENEWING
ability to renew government internally

AGILE ADMINISTRATION

Successful internal government reforms make it possible to reach goals. However conflicting views at different levels of government lead to concentrating on short-term goals, which increases the possible implications of uncontrolled external impacts.

GLOBAL TRAILBLAZER

The Governments is aware that being a pioneer in key global issues (e.g. just transition) is worthwile and will take action to renew administrative structures and practises on that basis. Unprecedented changes pose due risks and make it more difficult to keep apace.

KEEPING
ability to influence social change

CHANGING
ability to influence social change

CHERISHING TRADITIONS

Public governance focuses on ensuring stability and continuity. Renewal is carried out in modernation on the terms of stability, security and continuity.

GOVERNMENT OF CONTINUITY

Government succeeds in creating common agreement concerning the direction of social change. Conflicts over means and guiding principles prevent the renewal of administrative structures and practises; as a consequence, government largely relies on the old toolbox.

NON-RENEWING
ability to renew government internally

Source: Public Governance Strategy of Finland (2020)

Phenomenon-based approaches

The growing interest in 'phenomenon-based' approaches demonstrates an initial attempt to introduce elements of an anticipatory government function (Sitra, 2018). Phenomenon-based policy making means addressing phenomena (e.g. climate change, social disintegration, urbanisation, and immigration) for which no single part of a system holds full responsibility and which require the collaborative interaction of different parts of a system. This often requires establishing cross-ministerial policy networks and the ability of government to aggregate financial and human resources from across individual entities for cross-administrative objectives to achieve higher impact.

The challenge 'phenomenon-based' approaches aim to solve the challenge that societal problems tend to get lost in government silos and 'projectification' of government action (Hodgson et al., 2019). This means that resources (money) is divided into small projects that do not sufficiently follow cross-administrative objectives and whose combined impact remains unclear. Actors across the government have drawn attention to this issue, in particular the Committee of the Future in the Parliament and the National Audit Office (e.g. Eduskunta, 2018; Varis, 2020a). This has led to pilot research in phenomenon-based approaches, yet it is still unclear if new models around phenomenon-based policy making and budgeting will only describe government action towards phenomena or steer policy and administrative actions (Varis, 2020b).

Initial assessment of anticipatory innovation capacity

In 2020-2021, the OECD carried out an assessment of the governance system in Finland. This focused on identifying assets, preconditions, and gaps within the wider public sector policy making and steering system in Finland that may hinder or help implement an anticipatory innovation approach in the Finnish context.

The findings of the assessment report drew on the triangulation of data emerging from semi-structured interviews, workshops, and desk research to understand how the public sector responds to complex challenges and uncertainty. The work was supplemented by comparative analysis from the OECD's relevant body of research and country work.

TOPICAL WORKSHOPS

Ten validation workshops with a cross-section of public sector innovation leaders, experts and practitioners to corroborate and substantiate the preliminary findings were held between January and April 2021 and covered the following topics: citizens, trust and participation; futures and foresight; budget and resources; experimentation; individual and organisational capacity; policy cycles and continuity of reforms and co-ordination across government.

Two additional workshops were held in December 2020 and February 2021. The first distinguished between issues that could be adjusted with minor changes within the Finnish Government, issues needing more systematic transformation, and issues that cannot be tackled within the current government model. The second workshop uncovered overlapping issues and possibilities for change between the areas of anticipatory innovation, open government and trust.

The initial assessment informed an action research phase in which four pilot case studies were selected. Action research is especially well suited to work in public sector anticipatory contexts, where complex challenges, institutional dynamism and rapidly shifting priorities compel researchers to ground their general theories in practitioners' daily reality in order to produce knowledge that is both relevant and readily useful.

1 **PUBLIC INTEREST AND PARTICIPATION**
How to make anticipatory innovation more democratic?

2 **FUTURES AND FORESIGHT**
How to pass the impact gap of strategic foresight and align futures with strategic planning and needs of decision-makers and vice versa?

3 **BUDGET AND RESOURCE ALLOCATION**
How to align budgetary steering processes with anticipatory innovation and complex challenges?

4 **ALTERNATIVES EXPLORATION**
How to create more room for sense-making, experimentation, innovation and iterative development in policy-making processes?

5 **INDIVIDUAL AND ORGANISATIONAL CAPACITIES, SKILLS AND FACTORS**
Which capacities and skills are needed for anticipation in different government roles? Which biases need to be countered?

6 **POLICY CYCLES AND CONTINUITY OF REFORMS**
How to address complex policy issues beyond 4-year government terms?

7 **COORDINATION ACROSS GOVERNMENT CHALLENGES**
How different policy steering system need to adapt to make working on complex challenges more effective?

GAPS IDENTIFIED IN INITIAL DESK RESEARCH

The findings of the desk research indicated that many co-ordination and steering challenges exist that affect the ability of the public service to anticipate, propose and discuss transformative change needs in an open and participatory way. The system seems to encourage compliance with existing rules with limited possibilities to challenge them. User-centricity in addressing present and future policy issues remains a secondary rather than a systematic driver. Strong sectoral specialisation of ministries and poorly-aligned steering mechanisms make it difficult to deal with cross-cutting and complex challenges.

More dominant steering systems in government – strategic, budgetary and judicial policy steering – do not always align in timelines or intent. The strategy process primarily led by the Government Programme tries to bring up challenges and phenomena that the government needs to tackle, while the budgetary process functions in an organisation-based logic with clear structural boundaries. This "structural incongruity" makes it difficult to plan for cross-sectoral interventions, integrate a variety of inputs into planning processes (e.g. knowledge resulting from agile processes and futures thinking), and establish organisation accountability for shared outcomes.

Cross-cutting governance challenges are predominantly tackled through a network approach by transversal working groups. However, these structures are mostly consultative and rarely enjoy formal decision-making powers and when conflict arises the responsibility to take decisions falls back onto more traditional structures. Consequently, policy makers are continually challenged by governmental silos and incentive systems. Furthermore, in coalition governments such as the case in Finland, the ability of centre-of-government steering bodies to directly negotiate across the public administration and direct change tend to be weakened (for example, the Prime Minister may have to broker a political agreement with heads of coalition parties).

Overall, the initial assessment highlighted various clusters of challenges connected to governance and its ability to deal with complexity and change directly impacting the anticipatory innovation capacity of the Government of Fin-

land. The most frequently mentioned clusters of challenges were associated with:

- Procedural issues: nature of the budget and legislative processes, how evaluation and strategic planning was conducted and openness, flexibility and user-centricity of these processes;
- Organisational challenges: culture, effect of silos, difference between ministries, human resource planning;
- Policy implementation: lack of continuity and available policy mechanisms, influence of foresight on decision making, alternatives exploration and experimentation and connections between strategies and action;
- Policy co-ordination: fragmentation, lack of co-ordinated action and discussion of trade-offs among others;
- Resourcing: lack of time and dedicated funding for anticipatory innovation and dominance of outsourcing development work and R&D;
- Individual factors: linear decision making, expert bias, fear of making mistakes and risk aversion, lack of open-mindedness etc.
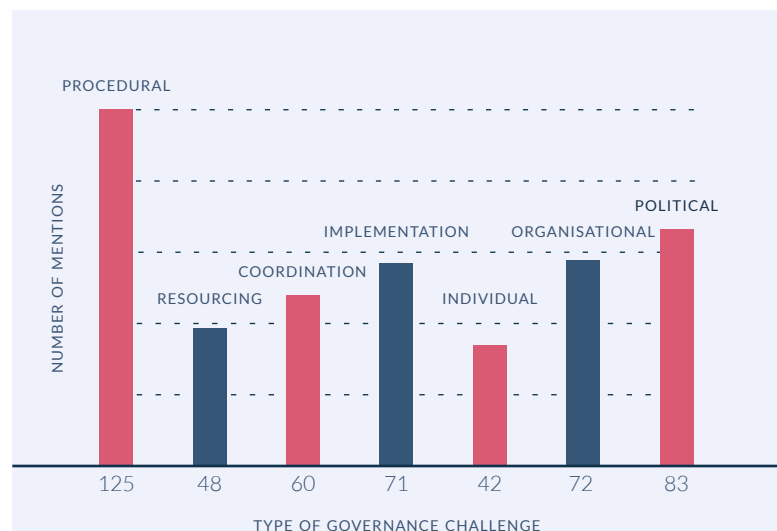
Identified governance challenge clusters, Source: OECD.

Note: The numbers are based on frequency of mentions across 53 coded interviews. Multiple mentions of a challenge within any given interview account for the frequencies shown exceeding 53.

MAIN CHALLENGES REVEALED THROUGH ASSESSMENT

This initial research identified six main challenge areas for the Finnish Government to consider and informed the selection of pilots conducted in the subsequent phase of the project. These areas which anticipatory innovation governance can help with are:

1 **Overcoming the strategic foresight impact gap by integrating futures and foresight with core strategic processes, innovation and experimentation.** The use of strategic foresight in government appears to suffer from a set of individual, collective, and institutional limitations that prevent the use of high-quality futures knowledge in policy making (i.e. the foresight impact gap). Overcoming these requires building up the government's futures literacy and setting up appropriate structures to integrate strategic foresight within core strategic processes, innovation and experimentation. Furthermore, efforts could be directed to clarifying the roles and responsibilities of the different strategic foresight actors within the system (e.g. the role of ministries and their internal foresight activities compared to government-wide processes) in challenging existing policies or solutions.

2 **Opening up the development of policy alternatives connected to future challenges by systematically involving citizens and other stakeholders in future-oriented policy creation.** This will require public servants to acquire facilitation skills to work with citizen input and design open and inclusive policy processes to counter expert bias and groupthink. Also, there are currently not enough initiatives involving external experts in

policy programmes that would allow to keep a focus on long-term vision rather than day-to-day challenges. Overall, room for considering alternative solutions and experiment needs to be created in strategic policy-making processes.

3 **Strengthening the capacity of public servants to reflect and act on future policy challenges by increasing access to and experience with anticipatory innovation approaches and tools**. This requires going beyond the reliance on individuals for experimentation and innovation efforts in government and expanding the toolbox connected to anticipatory innovation in the Government of Finland. The effort needs to be coupled with developing leadership skills and capacities that create demand for anticipation and setting up additional support structures and practices in organisations to develop signal reading and anticipatory policy-making skills. That also means tackling issues connected to data access and interoperability that currently limit anticipatory, user-centric and preventive use of data and service development.

4 **Ensuring that traditional government policy steering mechanisms – strategic, budgetary and legal – allow for (and do not inhibit) the exploration of policy alternatives and tackling of complex problems.** Anticipatory capacity involves the ability to challenge current policies, stress-test them on an ongoing basis and actively explore a variety of future opportunities. The research indicates that often strategic, budgetary and legal steering mechanisms act as chal-

lenges to future-oriented exploration and policy development in Finland. For example, the current budget emerges as one of the major drivers enforcing organisational silos and inhibits addressing policy phenomena as complex problems. Regulatory processes are perceived as limiting agile and iterative ways of experimenting with emerging issues while strategic processes are seen as not offering enough actionable future-seeking moments or as over-prescribing solutions up front.

5 **Leveraging anticipatory governance mechanisms to allow for complex and long-term policy issues to be collectively understood and sustained across the policy cycle.** Most complex policy issues cannot be tackled in a four-year government term and in some areas such as climate change, natural resource management, socio-economic reforms changes need to be considered decades in advance. The research indicates a need to account for the chronological distance between developing visions for alternative futures and their implementation which often spans across several policy cycles. Anticipatory mechanisms could help bridge this gap by reducing the time-to-implementation of policies (e.g. through constant iteration and testing). To ensure continuity in development, mechanisms are needed that allow the continuation of policy exploration and development across policy cycles supported by new evaluation and measurement procedures.

6 **Countering governmental silos and creating new ways of collaboration to look at emerging problems in a cross-government manner.** The research shows that organisational barriers are still a major obstacle for anticipatory innovation. Tackling this will require increasing mobility across silos and new collaborative architectures (e.g. phenomenon-based taskforces). In addition, a more unified approach to analyse new emerging problems and how to tackle and assign responsibility for them in government is needed. This would additionally help to incorporate anticipatory innovation approaches from the start in order to examine these issues in a more institutionalised manner.

The findings from the initial assessment of Finland's government steering system informed the selection of pilot studies in four policy areas to further explore the practical challenges of integrating anticipation into governance steering in Finland.[3]

---

3 See Anticipatory innovation governance : towards a new way of governing in Finland (OECD, forthcoming) for a more extensive description of the findings from the initial assessment, along with a detailed description of the methodologies used in the course of this analysis

Citizen and participation	Case 1: Continous learning
Futures and foresight	Case 2: Carbon neutrality
Budget and resource allocation	Case 3: Child, youth and family policy
Experimentation	Case 4: Interface between politicians and civil servants
Individual capacities, skills and factors	
Policy cycle and continuity of reforms	
Coordination across government challenges	

Note: The findings from the initial assessment informed the selection of pilot case studies, Source: OECD

LEARNING IN PRACTICE: FOUR PILOT CASE STUDIES

Four policy domains were identified as suitable pilot case Four policy domains were identified as suitable pilot case studies for action research to gain greater understanding of approaches to develop Finland's anticipatory capacity: continuous learning, carbon neutrality, child well-being, and collaboration between politicians and public officials. These pilot case studies were undertaken from October 2021 to April 2022, each supported by a taskforce comprised of policy domain specialists in Finland and supported by the OECD secretariat.

The pilot case studies served several purposes, which justified the adoption of this approach:

- They informed learning about the effective governance of anticipatory innovation overall, demonstrating how Finland's governance structures can deal with shifting values, new public expectations, uncertain future shocks and a variety of preferable futures that the country wants.
- They provided tailored proposals and stress-testing of Finland's anticipatory innovation governance capacity to address each concrete policy challenge and informed how the existing governance structures supporting these policy areas could be strengthened and oriented toward anticipation.
- They illuminated lessons on the application of anticipatory innovation governance mechanisms in practice and revealed areas for further development of the model.
- Given their experimental and collaborative nature, these pilot case studies acted as safe spaces for enabling novel approaches to research and co-creation, provided an accessible gateway to stakeholders, and mobilised constant reflexive dispositive of monitoring and assessment throughout their life-cycle.

Pilot Case 1: Mechanisms for the anticipatory governance of continuous learning in Finland
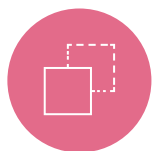
BACKGROUND

The world of work is continuously transformed by the complex interaction of trends such as automation, climate change and an aging population. The changes they precipitate affect the demand for skills: jobs and tasks in one sector may disappear while others emerge which require new combinations of competencies.

According to OECD estimates, 46% of jobs may experience significant change or be automated in the coming 10 to 20 years (Nedelkoska, L. and Quintini, G. 2018). In addition, these trends alter demands for the provision of learning: new forms of self-employment such as 'gig-work' may create opportunities for individuals to learn at times that suit them, but they also challenge expectations about employers' role in skill development.

Against this backdrop, Finland has recognised the need for a reform of continuous learning to create a system that is able to anticipate and respond to changes in the demand for skills and learning across the labour market and broader society. The Continuous Learning Reform project was initiated on 25 September 2019, and is due for completion on 31 March 2023. It aims to develop a resilient system for skill development which enables the Finnish population to continuously develop the competences they need for "employment and a meaningful life" (Publications of the Finnish Government, 2022).

This pilot case study engaged representatives from the Ministry of Education and Culture, Ministry of Economic Affairs and Employment, Ministry of Finance, Ministry of Social Welfare and Health and the Service Centre for Continuous Learning and Employment to explore together how anticipatory innovation governance could facilitate the development and implementation of the Continuous Learning Reform. This group was known as the Continuous Learning AIG Taskforce.

CHALLENGES IDENTIFIED FOR THE FINNISH CONTEXT

In order to identify challenges that inhibit the implementation of the continuous learning reform, the OECD conducted online group interviews with 21 representatives from labour

market organisations, educational institutions, central government and regional government in Finland.

This research was complemented by a review of government papers and reports, academic texts and grey literature relating to continuous learning in Finland and around the world. Working with the taskforce, the OECD identified the following challenges for the development of an anticipatory continuous learning system in Finland:

Co-ordination challenges

- The reform of the system for continuous learning is complex given the many stakeholders involved and the high degree of their autonomy
- The effective implementation of the reform requires horizontal and vertical coordination and a shift of mindset and practices among these stakeholders

Anticipatory information challenges

- Anticipatory information (e.g. skills foresight, futures scenarios) is regularly produced but fragmented and not used in a systematic fashion to inform continuous learning policy or curriculum planning.
- Information related to continuous learning such as skills foresight is complex and uncertain as it is drawn from a wide range of sources. There is a need for a collective approach for stakeholders across the system to interpret anticipatory information and the impact of trends and challenges on the labour market and continuous learning system.
- Anticipatory information is often not tailored to the needs of stakeholders who could make use of it.

Issues concerning funding of continuous learning

- There is a lack of clarity around funding responsibilities for continuous learning.
- Current funding model for adult learning (free or low-cost) provides few levers to promote training for anticipated in-demand skills.
- The benefits of continuous learning are realised in the long-term and distributed among a wide range of actors – this means 'urgent' concerns often take precedence.

CONSIDERATIONS FOR FINLAND

The OECD and the taskforce focused on the first two challenge areas (coordination challenges and anticipatory infor-

mation challenges). Proposals to address these challenges were developed through the consideration of the anticipatory innovation governance model (Tõnurist and Hanson, 2020) and analysis of good practice in international cases. The work resulted in the proposal of a 'bipedal' governance setup to enable the effective use of anticipation in the continuous learning system. In this model, one 'leg' engages key government and non-government stakeholders in co-ordination for decision-making, while another 'leg' ensures that relevant anticipatory information is identified and interpreted through collaborative processes.

Four key principles were proposed as foundational for anticipatory governance of the continuous learning system through the model:

- The continuous learning system will function most effectively if the autonomy and knowledge of stakeholders is respected and leveraged through systematic engagement.
- Meaningful and fair co-operation between relevant ministerial and non-government stakeholders needs to be established throughout the policy process so that decisions are perceived as legitimate, and implementation challenges are identified and resolved early on.
- A shared understanding of information about jobs and skills among stakeholders engaged in the system is a core pillar of co-ordination for continuous learning.
- The application of anticipatory approaches should aim to do more than facilitate timely matching of skills to jobs, such as facilitating regular stress-testing of continuous learning strategies.

HOW THE PILOT CASE INFORMED THE ANTICIPATORY INNOVATION GOVERNANCE MODEL

The pilot case illustrates how using the anticipatory innovation governance model as an assessment tool can indicate how to enhance a system which depends on effective use of anticipatory information. The application of the model in this manner also highlights practical considerations that may be incorporated into its further development:

- **Collective sense making** of anticipatory information is vital to enable co-ordinated action among stakeholders trying to address complex phenomena.
- Leveraging the knowledge of **networks and partnerships** can help to build a better understanding of the diverse future challenges associated with complex phenomena such as the changing demand for skills. Such participation also builds the legitimacy of a shared information resource, which can be relied upon by different stakeholders as a foundation for shared decision-making.
- **Anticipatory information** must be packaged in ways that help stakeholders to address their jobs to be done.

Level of integration of anticipatory data sources (data and analytics) and the collaborative networks it depends on is crucial for action in complex policy domains.

- **Regular use of anticipatory approaches** should allow stakeholders to align on objectives, and stress-test and readjust strategies.
- Regular **collaboration and engagement of high-level stakeholders** in complex issues is essential for their prioritisation, however, holding the attention of senior decision makers is difficult with competing day-to-day issues. There must be functions in government that call for senior decision makers to continuously engage with complex issues and anticipatory information.

Mechanisms explored in Pilot Case 1

① Network & Partnerships

Public Interest & Participation

Vested Interests & Cognitive Biases

Authorising Environment

② Legitimacy

③ Evidence & Evaluation

Learning Loops

Institutional Structures ④

Alternatives Exploration & Experimentation

Organisational Capacity ⑤

Agency

Data & Measurment ⑥

Tool & Methods

Sense-Making ⑦

---

① Complex, decentralised system reliant on auto-nomous providers

- Entrenched models of training and vested interest
- Less powerful groups within the system need to get a voice
- Clear responsibility to sustain network capacity

② Source of legitimacy for the system is unclear

- The attention from the parliamentary committee, but lack of sustainable funding
- Where does data legitimacy come from? Input, Output, or Throughput?

③ Evidence is not enough to ensure the prioritization of a complex issue

- Evidence of the evolvement of complex issue helps to align notions about where current issues lie, but does not create consensus around future developments or actions needed to be taken
- Evidence and measurement should involve anticipatory information

④ Need for a robust model for horizontal and vertical governance of the system

Bipedal governance model with clear roles (visioning versus action plan)

- Skills Policy Council
- Inter-departmental coordination group
- Working groups for cross-cutting, long-term issues
- Future Skills & Labour Market Info Committee

⑤ Collaboration and coherence

- Central coordination role and working across ministerial silos

⑥ Fragmented data sources and their use

- Knowledge is based on one-time studies rather than continuous and systematic anticipatory evaluation
- Anticipatory processes for projecting skills demands exist (e.g., in regional committees), but are not used to the full extent in policy or curriculum planning
- Integrated information resources
- Information products designed for the needs different stakeholders in the system

⑦ Collective sense-making of anticipatory information

- Need for a collective approach in delineating future skill needs and the use of aligned data
- Collective intelligence

Pilot Case 2: Carbon neutrality and evidence about the future in fiscal and economic policy

BACKGROUND

Finland aims to be carbon neutral by 2035 and eventually become the world's first fossil-fuel free welfare society. Carbon neutrality means that emissions and the sinks that sequester carbon are in balance or that greenhouse gas (GHG) removals are as high as the emissions produced by humans. Finland is also party to the Paris Agreement, which sets per country GHG emission mitigation targets, or nationally determined contributions.

Achieving this balance is not easy. Carbon neutrality is characterised as having numerous interconnected factors, incomplete and contradictory information, and no clear idea of what an ideal solution would be if it existed. The field is subject to evolutions and transformations in the future involving society, technology, environment, and the economy. It is therefore increasingly necessary for a network of domains to address this wicked problem in concert. Finland has demonstrated a commitment to a networked approach through the creation and renewal of its Climate Change Act, and the creation of the Climate Policy Roundtable, an advisory body set up in 2020 and chaired by Prime Minis-

ter Sanna Marin. These initiatives engage a wide range of stakeholders to develop plans and strategies to attain carbon neutrality.

However, no governance model — even with the most successful of reforms — can deliver support to transition to carbon neutrality unless it has the ability to constantly perceive, understand, and act upon the changes of the future as they emerge. For this reason, the government of Finland sought to work with the OECD to explore how anticipatory innovation governance approaches could be applied to support the country's transition to carbon neutrality. The OECD worked with the Ministry of Environment, the Ministry of Economic Affairs and Employment, the Prime Ministers Office and the Ministry of Finance, which co-chairs an international Coalition of Finance Ministers for Climate Action.

CHALLENGES IDENTIFIED FOR THE FINNISH CONTEXT

Climate change policy plans in Finland have been produced for the medium-term and long-term by the Ministry of the En-

vironment and the Ministry of Economic Affairs and Employment, respectively. The National Climate Change Adaptation Plan 2022 was published by the Ministry of Agriculture and Forestry in 2014-15 and was reviewed in 2020.

Although the plans are comprehensive and detailed, the OECD found that they lack a systemic engagement with uncertainty, for instance relating to energy imports, regulations, and the effectiveness and timing of proposed emissions reduction measures.

The pilot case identified additional challenges that inhibit consistent anticipatory action to achieve carbon neutrality:

- Traditional approaches to forecasting, planning, and evidence do not engage with uncertainty in policy making and budgeting.
- Responsibilities for achieving carbon neutrality are divided between a wide set of actors both on the national and subnational levels, making co-ordinated action challenging.
- Ambitious carbon measures are cross-cutting and require sense making across different government levels that is currently not undertaken.

CONSIDERATIONS FOR FINLAND
In order to for Finland to develop and act on anticipatory strategies for carbon neutrality, the OECD considers that the country should prioritise the following actions:

- **Creating responsibility and urgency to act**: Setting clear accountability, roles, functional mandates, and resources.
- **Collaboration and coherence**: Overcoming silos between ministries, facilitating expert and political consensus around policy measures and information gaps, and creating whole-of-government sense making and decision forums.

- **Capacity development**: Building expertise, capabilities and tools at an individual and institutional level.
- **Integration of green fiscal practices into the mainstream**: Alternatives exploration, dynamic monitoring and evaluation, alignment of decision-making cycles (i.e. budget, strategy, planning).
- **Holistic medium-term strategic planning**: Systems approaches, engagement with uncertainty, bridging short-term cycles and long-term ambitions.

HOW THE PILOT CASE INFORMED THE ANTICIPATORY INNOVATION GOVERNANCE MODEL

- **Cognitive biases and vested interests** in implementing new tools and methods need to be taken into account as much as the capacity to use the latter.
- **Organisational cultures and structures** are not supportive in hiring or building up anticipatory capacities a"nd alternatives exploration that are not directly aligned with their immediate priorities or expert biases.
- It is difficult to create demand for new approaches that are uncertain in nature and do not fall into anyone's specific field of responsibility. **Creating demand for anticipation** should be a core feature of the AIG system.
- Creating responsibility to act on complex, systemic challenges through functional mandates does not happen a priori. There must be a follow up function that evaluates if the work is actually undertaken and urgency is created by establishing **dynamic evaluation and accountability for inaction**.
- **Co-ordinating across government challenges** requires an actor who has the legitimacy to convene and incentivise both politicians and civil servants to work transversally across existing silos.
- There is a broader **lack of capacity to support signal detection** on the policy ecosystem level and the analysis of that information on a continuous basis.

Mechanisms explored in Pilot Case 2

Network & Partnerships

Public Interest & Participation

Vested Interests & Cognitive Biases

Institutional Structures

Alternatives Exploration & Experimentation

Organisational Capacity

Authorising Environment

Agency

① ② ③ Legitimacy

Evidence & Evaluation

Learning Loops

Sense-Making

Data & Measurment

Tool & Methods

---

① Addressing cognitive biases of fiscal policy makers

- Dominance of quantitative modelling and lack of experience in using qualitative foresight methods

② Who legitimizes uncertain data in fiscal policy decisions?

- Role of the climate panel in contracting and reviewing future-oriented evidence in light of 'traditional' projections

③ Lacking evaluation on phenomenon based financing

- Green budgeting not implemented in practice

④ Clear responsibility and urgency to act

- Accountability for inaction
- Formal governance for climate coordination
- Carbon dialogue forums

⑤ Collaboration and coherence

- Central coordination role within the government
- Shared knowledge base and better links with the research community
- Collaboration with industry
- Expansion of collective road-mapping with additional actors

⑥ Capacity at individual and institutional level

- Capacity in the Ministry of Finance
- Capacity for green budgeting practices that support anticipation
- Organisational capacity for knowledge exchange with research institutions
- Advanced modelling and qualitative foresight methods addressing uncertainty

⑦ Integration of anticipatory fiscal tools and methods into mainstream practices

- Space for alternatives exploration
- Systemic medium-term programme and budget development
- Emergent issue analysis and signal detection
- Dynamic monitoring and evaluation

Pilot Case 3: Child well-being in Finland's welfare service counties
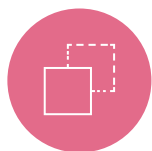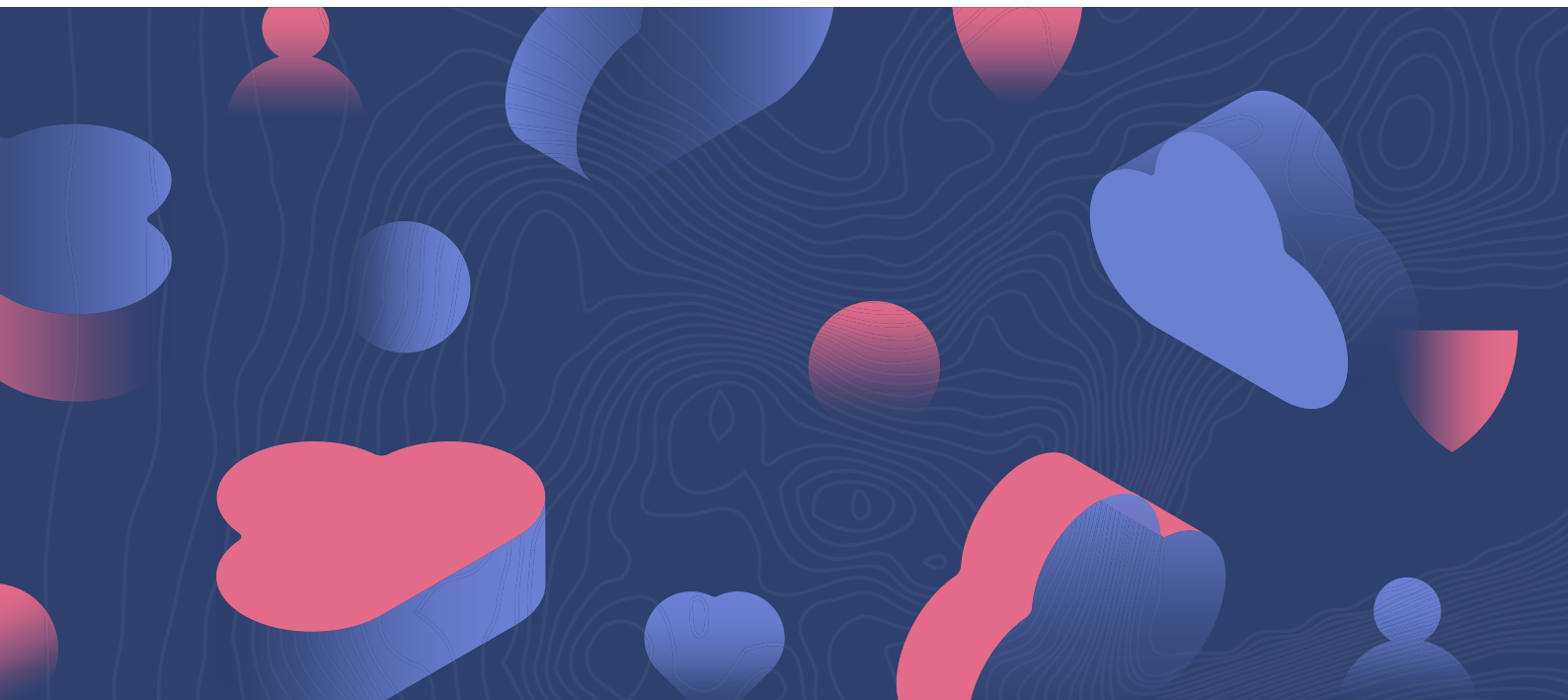
BACKGROUND

Finland published its first National Child Strategy in February 2021. The aim of the Strategy is to create a consistent foundation and better co-operation for all policies and practices concerning children in Finland, embed consideration for children's rights in the mainstream, and better secure the status of vulnerable children. The task is to formulate a vision for a child and family-friendly Finland that spans government terms and crosses administrative boundaries.

The implementation of the Strategy is to be undertaken alongside changes occurring as part of Finland's social and welfare (SOTE) reform, which completely re-envisages how child well-being services are governed and organised. Co-ordination for child well-being is to shift from national-local to a three-level approach, namely national-county-local.

Anticipatory innovation governance (AIG) has particular relevance to the challenges associated with developing and implementing policy in this context. AIG approaches enable governments to prepare for, and create alignment around:

- The changing nature of childhood, whereby the world in which children grow up tomorrow is different from the world in which previous generations grew up.
- Changing policy and measurement considerations for childhood, with new concepts emerging and an eternally incomplete evidence base.
- The sense of uncertainty and complexity inherent in policies affecting people early in their lives, whereby the impacts could be unpredictable, profound, and long-lasting for the future of society, economy, and the environment.

The pilot case study on child well-being was conducted by OECD experts in close collaboration with a taskforce from Finland composed of officials from several ministries, in regular contact with interested parties from newly formed welfare service counties.

CHALLENGES IDENTIFIED FOR THE FINNISH CONTEXT

Through analysis of international cases as well as desk research and consultation with stakeholders on the current characteristics

of the Finnish system, a number of areas were identified as gaps in the ability to develop and carry out anticipatory innovation in the governance of child well-being.

Lack of systematic ways of working
- Different actors within the system (welfare counties, municipalities, service providers, etc.) pursue objectives without adequate co-ordination and coherence.
- There is no universally agreed upon concept of the child or definition of child well-being.

Implementation challenges
- The implementation process is overly legalistic and focused on rights to the exclusion of well-being.
- Well-being counties have difficulty transposing the provisions of the National Child Strategy into the planning and day-to-day running of services at the local level.

Silos, fragmented knowledge and "institutional amnesia"
- Siloed nature of Finnish child well-being governance and service provision inhibits co-ordinated action.
- Incoming administrations tend to develop policies and programmes with little reference to the initiatives or achievements of prior administrations.

Insufficient connection with actors on the ground and inability to detect where problems are coming from now and in the future
- It is not clear how children will be able to participate in dialogue to shape the proposed models for welfare and education systems.
- It is not clear how sources of futures knowledge are used in child-oriented policy making and service delivery

CONSIDERATIONS FOR FINLAND
By implementing some of the mechanisms of AIG, it is possible for Finland to address existing challenges while preparing to better meet the needs to future generations. The OECD proposes focusing on the mechanisms of public interest and participation, sense making, networks and partnerships and tools and methods. In order to implement these mechanisms effectively and address the challenges outlined above, the following options are recommended for action:

- **Child well-being missions**: These would consist of unifying, ambitious, and measurable objective that engage actors at multiple levels, most notably the welfare counties, to define a common cause and commit to mutually reinforcing activities to further child well-being in Finland.
- **Ecosystem building**: An inventory of all stakeholders and their contribution to child well-being could be used to review and develop the interactions between different elements of the system and identify points for strengthening collaboration or initiating it where it does not yet exist. It would also help actors to navigate the complex space of child well-being in Finland in order to facilitate ad hoc collaborations, exchange information, and prototype and test new initiatives.
- **Signal exchanges**: Regular exchange sessions between actors that do not usually share information can promote the integration, validation and improvement of futures knowledge.

HOW THIS PILOT CASE INFORMED THE ANTICIPATORY INNOVATION GOVERNANCE MODEL
- Anticipatory processes should be underscored by **collective sense making and identification of specific tasks** and areas of action that are more manageable (e.g. introducing annual cross-sectoral priorities - missions - to be tackled to ensure responsiveness to emerging themes).
- It is necessary to commit to transparency in and dynamic upgrading of **indicator development and monitoring practices**.
- Co-ordination activities need to be separately resourced as ecosystem management is badly organised, which, means that **continuous and collective intelligence is missing on emerging issues**.
- Signal detection requires a **more immediate connection to implementation** to achieve impact.

Mechanisms explored in Pilot Case 3

1 ··· Network &
Partnerships

Public Interest &
Participation

Vested Interests &
Cognitive Biases

**Authorising
Environment**

2 ······· Legitimacy

Evidence &
Evaluation

3 ··················· Learning
Loops

Institutional
Structures ·· 4

Alternatives Exploration &
Experimentation

Organisational
Capacity

Agency

Data & ··········· 6
Measurment

Tool & ·································· 7
Methods

Sense-Making ································· 7

---

1 **Alignment of actors:
leveraging knowledge of
networks and partner-
ships**

- Connection with actors and
users.
- Addressing vertical and
horizontal governance issues

2 **Prioritisation of the issue
falls between different
levels**

- The prioritisation of the issue
of child wellbeing has
coincided the roll-out of the
SOTE reform building up the
regional level of government
in Finland

3 **Connection between
experimentation and
policy design in imple-
mentation**

- Alignment of child strategy
and experimentation in
regions and municipalities

4 **Silos and Institutional
blindspots**

- Implementation difficulties,
in particular of the National
Child Strategy due to
a legalistic focus and lack
of well-being analysis
- Lack explicit processes such
as scanning, trends analysis,
or scenario-building that
would be characteristic of a
more deliberately anticipator

5 **On the ground connec-
tion to experimentation**

- Strategy level prioritisation
and visioning is not enough
when it is not connected
to implementation and
experimentation on the
ground

6 **Lack of systemic ways
of working**

- Poor use of anticipatory tools
and methods
- Path-dependency in tools and
methods used
- Few concrete SF exercises
have been conducted (incl.
Visioning, horizon scanning for
issues etc.) in a very fu-
ture-centric field
- Lack of concerted ways
of working, or unified core
concept of the child

7 **Identifying missions
around child wellbeing**

- Lack of child-centric view
across levels of impact of
policies and needs
- Lack of connection between
child policy goals and funding
measures across government
levels

Pilot Case 4: Collaboration between politicians and public officials in the field of anticipatory innovation

BACKGROUND

Finland aims to better incorporate the anticipatory innovation function within its governance structure including all actors across the administrative and legislative branch. The Government Programme adopted in 2019 pledges "to make systematic foresight and future thinking a key part of management and also of policy preparation and decision-making processes" (Government of Finland, 2020c). To date, potential future developments are not systematically considered in the policymaking process and future-oriented policy discussions are mainly carried out by a 'coalition of the willing' and co-exists alongside traditional policy-making processes and mechanisms (P. Tõnurist, 2021c). This also holds true for the collaboration between politicians and public officials that mainly takes place in 'traditional' contexts such as committee meetings leaving limited room for the discussion of complex, emerging issues. This lack of opportunities for the two communities to collectively engage in future-seeking limits Finland's ability to develop and implement forward-looking policies as these depend on brought support across the system.

An important question that emerged from discussions during the assessment was therefore what forms of collaboration between public officials and politicians could be instrumental to enhance anticipatory innovation in a systematic way.

This pilot case study was steered by a taskforce of members of the overall project secretariat in Finland from the Ministry of Finance and the Prime Minister's Office. The purpose of the pilot case was to:

• Contribute to further build Finland's anticipatory capacity by identifying insights about collaboration between politicians and public officials in the field of anticipation through literature, international case studies and peer-learning sessions.
• Contribute to the development of the anticipatory innovation governance model by assessing how politico-administrative collaboration could be integrated into the model."

CHALLENGES IDENTIFIED FOR THE FINNISH CONTEXT

As part of the project, several public-sector leadership dialogues ("AIG dialogues") were held using the Timeout method to discuss the development of anticipatory innovation governance and policy making between members of parliament, key party actors and senior officials of the Ministries. They addressed various governance issues including how the political and administrative branch can best work together when it comes to futures work and anticipation.

Participants in the dialogues identified a range of challenges relating to collaboration between politicians and civil servants around issues characterised by uncertainty. These include:

- **Trust**: Diminishing trust between civil servants and politicians
- **Media exposure**: Fuelled by real-time media reporting, politicians face public scrutiny characterised by a lack of acceptance of uncertainty and errors. This can lead to short-termism on the political side. Civil servants tend to me more shielded from public opinion and can take a longer-term view on issues.
- **Meeting opportunities**: Lack of 'future seeking moments' characterised as opportunities for civil servants and politicians to exchange ideas, discuss complex issues, explore alternatives and develop mutual understanding.
- **Roles**: Lack of clear roles and understanding of the management system between politicians and senior civil servants when dealing with long-term policy challenges.
- **Secluded interactions**: Differences in communication between parties in municipalities and agencies, while interaction is more closed on the ministerial level.
- **Absence of mediation and trust-building structures during the transition process**: Lack of dedicated efforts to build trust between politicians and public officials with an incoming government, lack of opportunities for handover and in-depth analysis.

CONSIDERATIONS FOR FINLAND

A literature review was undertaken to identify cases which incorporated mechanisms of anticipatory innovation governance to provide illustrations of how collaboration between politicians and public officials in future-related fields can look like in practice. To complement the research from literature, three peer cases from Scotland, the province of Gipuzkoa (Spain) and Ireland were selected for peer-exchange sessions with relevant representatives. This work informed the following suggestions:

Trust between politicians and civil servants is an essential resource and needs to be a constant concern
- Opportunities to foster dialogue, such as the Timeout method, can help to build trust through a common understanding of the issues at hand.
- An objective facilitator for dialogues that enjoys trust from both sides can support the development of trust.

Transition processes for government terms should be leveraged to build effective relationships between civil servants and politicians
- There should be an institutionalised anticipatory dialogue proceeding the government elections between the public administration and politicians.
- Finland should establish a dedicated process for politicians and public officials to get to know each other, their respective expertise and priorities at the beginning of a new term.

Establish new 'future-seeking moments'
- Facilitate dialogues to create future seeking moments on complex issues that benefit from human centricity and a shared commitment by all stakeholders.
- Embedding anticipation into existing future seeking moments, such as the development of the Government Programme.

HOW THIS PILOT CASE INFORMED THE ANTICIPATORY INNOVATION GOVERNANCE MODEL

- **Crises can create windows of opportunity** for different stakeholders to come together on some policy issues, but in general limit opportunities for informal exchange and relationship-building that is crucial to establish trust.

- The **increasing speed of policy decisions and external changes** direct attention away from the development of anticipatory capacity.
- **Media reporting on a real-time basi**s can create tension between politicians and civil servants.
- Public officials need to take a role in producing and presenting futures knowledge and insights in a format that is ready for decision-making while politicians need an **understanding of the context and limitations of the analysis**.

- Politicians and public officials need **dedicated fora to collectively engage in sense making** of futures knowledge, develop a common understanding of the overarching objectives and work towards concrete actions.
- The design of anticipatory processes should include **accountability to participants**. There is a need to make sure that all inputs (such as the advice of civil servants) are seriously considered.

Mechanisms explored in Pilot Case 4

Network & Partnerships

Public Interest & Participation

(1) ·· Vested Interests & Cognitive Biases

Legitimacy

Evidence & Evaluation

Learning Loops

(2)

Authorising Environment

Institutional Structures   (3)

Alternatives Exploration & Experimentation   (4)

Organisational Capacity

Data & Measurment

Tool & Methods

Sense-Making

Agency

---
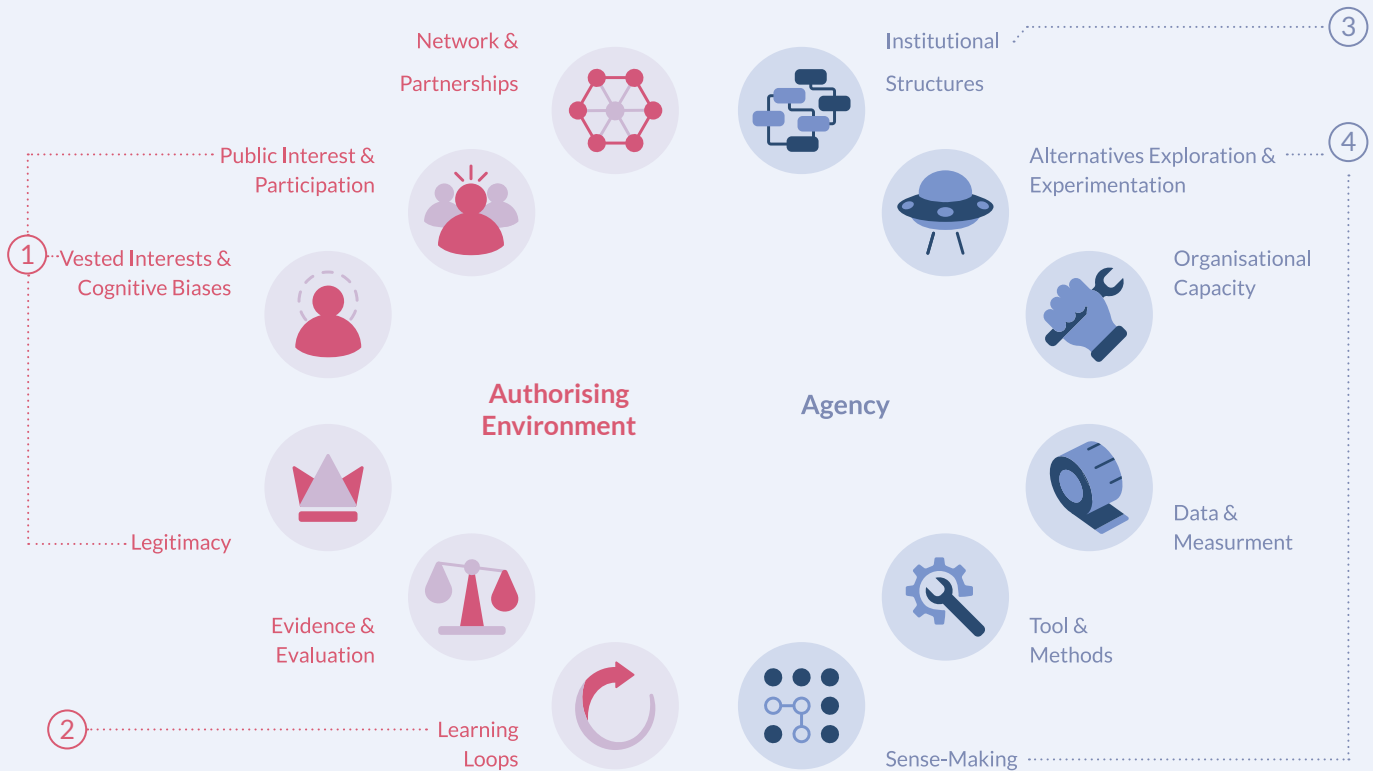
(1) **Trust between civil servants and politicians**
- Ability to outline value-based decisions in a public space
- Information asymmetries and need for objective facilitator for continuous dialogues

(2) **Lack of systemic evaluation of reforms across government terms**
- Learnings from one government term are not carried forward to another: lacking transition management

(3) **Roles in government transitions**
- Lack of clear roles and understanding of the management system between politicians and senior civil servants during exchange of government and dealing with long-term policy challenges
- Lack of channels to influence major issues

(4) **Few future seeking moments**
- Few future seeking moments (government formation) and immense time pressure
- Lack of opportunities for civil servants and politicians to exchange ideas and develop mutual understanding

Table 2. Main needs identified for anticipatory innovation capacity across pilot case studies

CASE	AGENCY	AUTHORISING ENVIRONMENT
Case 1. Model for anticipatory governance of continuous learning	**Institutional structures:** Need to create organisations that allow to operationally work and co-ordinate action that is aligned with the complex issue and the ecosystem **Organisational capacity:** Need to create coherence across silos is essential, but it also involves high co-ordination costs that often are not covered by sustainable resourcing; there is a need to create tailored operational models to tackle specific complex issues **Data and measurement:** Need to join up anticipatory data sources becomes key in continuous sense-making and framing of issues ('platformisation' of anticipatory information) **Sense-making:** Need for a collective approach in delineating futures, data and collective intelligence across variety of actors with different interests	**Networks:** Need for an ecosystem level approach that develops the ecosystem and assigns clear roles and responsibility for actors **Public interest and participation:** Need to create consensus across actors: in a complex system dependent on variety of autonomous actors, participation can create legitimacy around the policy challenge and shared vision about the diverse futures to be pursued **Legitimacy:** Need to create clarity on how inputs (e.g. financial resources), outputs (evidence) and throughputs (ecosystem participation in anticipatory information creation) lead to legitimacy of anticipatory action **Evidence and evaluation:** Legitimacy only through evidence and reporting is not sustainable, if there is no push to do something with the data
Case 2. Carbon neutrality and evidence about the future in fiscal and economic policy	**Tools and methods:** Support the ability to integrate new tools and methodologies into established processes through structured piloting or other processes **Alternatives exploration and experimentation:** Need for emergent issue analysis and signal detection as part of everyday policy processes with clear follow-ups **Data and measurement:** Need to integrate alternative data sources addressing uncertainty into policy steering functions with the accompanying capacity **Organisational capacity:** Need to ensure that capacity is present to use anticipatory knowledge often hinging on the ability to work together with the ecosystem and create common roadmaps and symbiotic action	**Vested interests and cognitive biases:** Need to address strong cognitive biases in which limitations of the current fiscal models are not understood or internalised; there needs to be operational ways to address expert bias and other biases in uncertain policy contexts **Legitimacy:** Need to legitimise anticipatory and uncertain knowledge through processes that help decision makers grapple with uncertainty; using stakeholders within the ecosystem to create urgency around issues **Evidence and evaluation:** Need to create accountability for the counterfactual and opportunity costs; accountability for inaction

| **Case 3. Child wellbeing in Finland's welfare service counties** | **Institutional structures:** Need to assign responsibility and ownership of the phenomenon; making anticipatory processes between structures explicit; addressing institutional blind spots through expansion of collective road-mapping with additional actors

Tools and methods: Support the systemic use of anticipatory tools and methods and addressing capacity barriers in doing so; the ability to bring forth concrete challenges, target groups regardless of existing structure or strategic landscape

Sense-making: Support the ability to bring forth normative futures and clear targets around them that need to be avoided or achieved based on public values

Alternatives exploration: Need to create clear value chain from strategic visioning to experimentation; the ability to question and challenge the strategy/vision when it does not match with emerging empirical evidence and new signals | **Networks and partnerships:** Need to connect policy making and strategic steering directly to implementation and on the ground, target groups to understand and engage with evolving phenomenon

Legitimacy: Need to create mechanisms to prioritise urgent issues and keep them on senior decision-makers agenda

Learning loops: Need to create a clearer process between policy design and experimentation and learning from the former (closely linked to the alternatives exploration and the "right to challenge" strategy) |
| **Case 4. Collaboration between politicians and public officials in the field of anticipatory innovation** | **Institutional structures:** Need for transition management across government cycles and moments of dialogue; delineation of roles in anticipatory innovation involving both public officials and politicians

Alternatives exploration: Need to create new future-seeking moments and the ability to question and test alternatives under or next to dominant strategic directions

Sense-making: Need to create structures for politicians and civil servants to exchange ideas and develop mutual understanding | **Public interest and participation:** Support ability to engage publicly in value-based discussion and consideration of alternatives

Legitimacy: When there is mistrust between actors who are held accountable in different ways, objective facilitation is needed

Vested interests and cognitive biases: Information asymmetries between actors need to be addressed in productive ways

Learning loops: Need to create mechanisms that allow to "carry forward" learnings from reforms to new government terms |

Source: OECD

REVISION OF THE AIG MODEL BASED ON EMPIRICAL ANALYSIS IN FINLAND

The empirical work in Finland has shown that the anticipatory innovation governance mechanisms is a useful and relevant tool to analyse governments' anticipatory capacity. The model can be used as a diagnostic in different policy fields to tackle concrete emerging challenges.

The empirical work also revealed some areas for further development of the model. It has shown how anticipatory innovation capacity in governments interacts with both the core steering processes of government – strategy, budgeting, regulations – and also the organisational and individual capacities and capabilities. To better outline how anticipatory innovation governance can be developed in this context, layers need to be added to the model covering in detail:

- **Mechanisms** of anticipatory innovation governance
- **Functions** that those mechanisms need to fulfil and alternative ways that these functions could be achieved
- **Instrument to assign roles and responsibilities** for those functions.

These are outlined below with specific functions identified with regards to strategic planning, legislation, government planning, oversight, transformation and innovation, human resource planning, digitalisation, open government, futures and foresight, communication, procurement, leadership etc.

In different governments these functions and the assigned roles and responsibilities may take different forms. In the revised model presented, all functions take on an anticipatory character. Possible actions for Finland are given in respect of each mechanism of agency and authorising environment. The diagram on page 45 summarises the relationship between the mechanisms and government functions.

Mechanisms of agency

Alternatives exploration and experimentation functions include anticipatory legislative, leadership, risk-management, strategic steering, budgeting, and transformation and innovation. Finland could consider the following actions:

- Create agility in regulation for exploration and experimentation. Institute a 'right to challenge' function for strategies, policies and services with resourcing to explore alternatives.
- Create demand for anticipation and alternatives in the strategic planning and policy-making process by institutionalising regular anticipatory studies, pilots etc. commissioned by senior leadership.
- Include anticipatory innovation processes in risk and resilience planning including uncertain scenarios where risks are not calculable. Create a prioritisation function to signal areas of risk and opportunity where action is needed and required.
- Create clear and structured future-seeking moments in existing policy cycles where new alternatives and policy goals can be brought forward both by politicians and public officials.
- Develop more iterative and agile forms of resource allocation and government transforms to facilitate continuous experimentation.
- Test continuously ideas coming forward from government futures and foresight activities and ensure that those learnings are shared back to the strategic steering process.

Data and measurement functions concern 'digital by design', strategic steering, and budgeting. Finland could consider the following actions:

- Use technology to create synthesis and collective awareness (e.g. through platforms) for anticipatory knowledge and signal detection including anticipatory, user-centric and preventive use of data in policy and service development.
- Use technology to make data across government interoperable and user/phenomenon centric.
- Integrate anticipatory information into strategic policy making by creating clear and transparent ways in which collected data is used.
- Use alternative tools for data generation that account for uncertainty connected to policy issues in fiscal planning.

Sense-making functions deal with open government, futures and foresight, and strategic steering. Finland could consider the following actions:

- Provide leadership in collective sense-making and opening processes to stakeholders from diverse backgrounds.
- Include anticipatory tools and methods (scenario planning, horizon scanning etc.) in collective sense-making practices in a continuous and systemic manner.
- Institutionalise collective sense-making as the starting point for strategic processes with the appropriate tools and methods to involve diverse stakeholders.
- Use anticipatory sense-making to develop future-oriented targets and missions to explore through innovation.

In terms of **organisational capacity**, functions include government planning, futures and foresight, transformation and innovation, and human resources. Finland could consider the following actions:

- Create procedures to diagnose emerging issues and design flexible, reflexive and impactful anticipatory organisational solutions with clear ownership over issues (new function of change management).
- Build organisational capacity and futures literacy with clearly assigned roles and processes to both produce and supply anticipatory knowledge within organisations. Include anticipatory innovation skills into existing com-

petency models or create new ones if needed. Developed tailored training programs for experts, policy makers, senior leaders in anticipatory innovation capacity.
- Develop and resource innovation and experimentation activities in organisations which integrate strategic foresight.
- Create the ability for public officials to 'move' across organisations with emerging issues and problems rather than getting stuck in government silos.
- Review the responsibilities of key government officials (e.g. in middle management) to cut down on responsibilities and create room for anticipatory innovation responsibilities.

Regarding **tools and method**s, functions include HR, leadership, transformation and innovation, and futures and foresight. Finland could consider the following actions:

- Develop futures literacy and connected skills and capacities to work across emerging anticipatory ecosystems and design open and inclusive policy processes that counter expert bias.
- Develop capabilities and demand for the use of anticipatory tools and methods; lead by example.
- Use innovation projects to test and demonstrate the use of new tools and methods across the ecosystem.
- Integrate futures and foresight tools, methods and practices across the policy-making lifecycle from horizon scanning, strategic intelligence, visioning, fore/backcasting, stress-testing etc.

On **institutional structures**, functions include strategic steering, government planning, budgeting, and legislation. Finland could consider the following actions:

- Create a mechanism to assign ownership for new, emerging or cross-cutting policy phenomena with the function that ensures that principles of collective strategic policy design and implementation are followed.
- Institutionalise a flexible and context aware instrument that allow to operationally work and co-ordinate action that is aligned with the complex issue and the ecosystem are needed.
- Integrate anticipatory tools and methods into fiscal planning and investment prioritisation.

- Create closer ties to regulatory impact analysis with both ex-ante and ex post anticipatory components and institutionalise other means to make regulations more

'future proof' (including sandboxing etc.).

Mechanisms of authorising environment

Regarding **vested interests and cognitive biases**, the main ways to address incumbent interests and biases in thinking about the future include open government, human resources, and transformation and innovation. Finland could consider the following actions:

- Leverage senior support to take a more inclusive approach to strategic foresight involving subject-matter experts from within and outside the government in addition to the innovation and futures community.
- Educate and re-skill people to create awareness about existing cognitive and expert biases connected to anticipation and encourage the uptake of new tools and methods.
- Socialise and de-bias the use of new anticipatory knowledge and methods through demonstration cases, pilots and testbeds.
- Create continuous deliberation on long-term policy issues and public values among politicians and public officials to counter immediacy bias.

In the mechanism of **public interest and participation**, relevant functions are government transfer, open govern-

ment, and communication. Finland could consider the following actions:

- Put in place deliberation and dialogues in which both politicians and public officials can contribute to knowledge around future developments. Institutionalise these processes in policy making processes and policy cycles to make them dependable and dynamic.
- Institutionalise citizen and other stakeholder participation methods to consider policy alternatives early on
- Include citizens into structured dialogues about public values connected to key reforms in future seeking moments in policy development (preceding elections or during government formation).
- Develop, put in place and enforce guidelines to communicate openly which different future scenarios are considered and the uncertainties governments face.

Concerning **networks and partnerships**, anticipatory functions include procurement, planning, and human resources. Finland could consider the following actions:

- Establish new ways to partner with broader policy ecosystem stakeholders (including research institutes, private companies, civil society etc.) to create anticipatory knowledge on a continuous basis.
- Initiate, empower and co-ordinate the whole ecosystem level and assign responsibility over topics may be the way forward. Without clear direction and accountability co-ordination across government or across the ecosystem can become another administrative burden that takes resources from action.
- Assign dedicated resources for anticipatory ecosystem co-ordination and capacity and skill development to collaborate with external partners in an effective manner.

Creating **legitimacy** is a matter of leadership, budgeting, regulations, and open government among others. Finland could consider the following actions:

- Create structures that ensure that anticipatory policy topics remain in top leadership attention and that they are prioritised in assigning resources.
- Ensure that budgets serve to prioritise emerging issues

and cross-government goals rather than government silos.

- Create alternative ways to explore policy options in a legitimate way before 'formalising' options into legislation.
- Use structured dialogue and collective deliberation across policy ecosystems to legitimise emerging policy issues and raise new topics for government.

On **evidence and evaluation**, the main government functions are oversight, steering, and 'digital by design'. Finland could consider the following actions:

- Follow up on the value chain from futures and foresight, strategic steering to innovation and experimentation and implementation. Make it transparent and clear how this value chain worked: e.g. which signals/information/scenarios were considered, how they were made actionable and what the results were. Consider which risks and opportunities were taken up or ignored and why and the costs associated with the former.
- Keep focus on long-term and complex policy issues and development of reforms across governments in a continuous and systemic manner. Include anticipatory knowledge in these evaluations (which scenarios were considered, which innovative actions taken).
- Stress-test exiting and in development policies and strategic planning documents continuously for alternative futures.
- Develop digital tools that could allow collective intelligence, signal collection and systematisation of data in interoperable ways in accordance to emerging challenges (and their identification) for both better monitoring and evaluation purposes.

Finally, **learning loops** are a matter for strategic steering, government planning, and government oversight. Finland could consider the following actions:

- Reduce the time to implementation and adopt agile practices. Ensure that strategies are not led by solutions and there is a dynamic learning model in place from experimentation on the ground.
- Institutionalise institutional learning structures during switching of governments, so insights from long-term

and complex reforms are not lost.

- Bring forward evaluation to real time implementation crossing the 'evaluation gap'. Make sure that this information is systematically used in new sense-making activities.

TOWARDS AN EFFECTIVE MODEL OF ANTICIPATORY GOVERNANCE IN FINLAND

The analysis showed that even the advanced foresight-experienced government of Finland still has significant action to take. It is true that many elements of anticipatory practices were already in place: from the use of strategic foresight, collecting signals and data on future projections, visioning and ambitious future targets, collecting relevant experts and ecosystem partners to deliberate etc. However, by and large these practices were based on one-time efforts and not systematically applied. There was no concretely defined demand or supply for anticipatory information, ways to systematise it or incorporate it into organisational and operational solutions to tackle emerging challenges. This is what a functioning anticipatory innovation governance system should do.

Beyond the suggested actions outlined above, the Finnish government could consider taking the following overarching functional actions to make anticipatory innovation capacity more systemic across government, which include:

GOVERNMENT TRANSITION FUNCTION

- **There is a need to professionalise/systematise the government transition process to ensure the continuity of long-term reforms and avoid the loss of know-how and insights in the process.** To address this, the Prime Minister's Office and Ministry of Finance should establish a knowledge repository around long-term reforms and anticipatory issues encouraging learnings from one government to another, but also between public officials and politicians and the wider ecosystems connected to policy problems. They should also use technology to make data across government interoperable

and be user and phenomenon centric.

GOVERNMENT PLANNING FUNCTION

- **Devising a new function in government to plan responses to emerging issues requires a clear procedure to diagnose emerging issues and design flexible, reflexive and impactful anticipatory organisational solutions** with clear ownership over policy problems (new function of change management). This should become an impulse for change from the top – creating urgency and legitimacy around policy problems. As both the Prime Minister's Office (strategic steering) and Ministry of Finance (resource planning) have a role to play, the development of the mechanism should be a joint responsibility.

- **Establish a standing committee or group across government for senior leadership** to discuss emerging, anticipatory issues with the ability and connected resources to create demand for anticipation and alternatives in the strategic planning and policy-making process by commissioning regular anticipatory studies, pilots etc.

STRATEGIC STEERING FUNCTION

- From the side of strategic policy steering, it **is essential that collective sense-making – as the starting point for strategic processes with the appropriate tools and methods to involve diverse stakeholders – is institutionalised**. This should be supported by the Prime Minister's Office, but also tools and methods developed and rolled out for ecosystem facilitation and dialogue from the Ministry of Finance.

- There is a **need to create clear and structured future-seeking moments in existing policy cycles where new alternatives and policy goals can be brought forward both by politicians and public officials**. This needs co-ordination from the centre, but also the involvement of ministries owning the issues with support from the Ministry of Finance in facilitation skills.

BUDGETARY FUNCTION

- The Ministry of Finance should **use more iterative and agile forms of resource allocation and government transforms to facilitate continuous experimentation** in addition to assign dedicated resources for an-

ticipatory ecosystem co-ordination and capacity and skill development to collaborate with external partners in an effective manner.

- There is a wider need in Finland to **integrate anticipatory tools and methods into fiscal planning and investment prioritisation**. The Ministry of Finance should prioritise the testing and use alternative tools for data generation that take into account uncertainty connected to policy issues in fiscal planning.

- The Ministry of Finance together with relevant public organisations should **use upcoming phenomenon-based budgeting pilots to test and ensure that budgets serve to prioritise emerging issues and cross-government goals** rather than government silos, so, that anticipatory funding principles are integrated into fiscal planning processes.

LEGISLATIVE FUNCTION

- Agility of core government steering processes was outlined in the assessment of the Finnish government system and the core part of the anticipatory innovation governance model. The ministry should also **explore the possibility to institute a 'right to challenge' function for strategies, policies and services with resourcing to explore alternatives**.

- Create closer ties to regulatory impact analysis with both ex-ante and ex post anticipatory components and institutionalise other means to make regulations more 'future proof' (including sandboxing, etc.).

HR FUNCTION AND SKILLS AND CAPACITY DEVELOPMENT

- As the model extensively references the role of HR function in government, the Ministry of Finance should **develop anticipatory innovation capacity across the civil service including targeted programs for public sector leadership, civil servants and futures and foresight and innovation experts**.

- The Ministry of Finance should also take the lead in **review of leadership and middle management roles and tasks to create space and room for anticipatory governance roles** (alternatives exploration, collective sense-making, experimentation, innovation etc.). As identified in both the assessment and the pilot case studies, there is a need to help leaders and middle man-

agement identify what can be 'let go' to make space for anticipatory innovation.

OPEN GOVERNMENT FUNCTION

- There is a need to build trust between citizens and public officials and engagement in democratic processes. There is a need to develop people's willingness to understand the subject of the future and acceptance of long-term investments. **Guidelines should be developed to institutionalise citizen and other stakeholder participation methods to consider policy alternatives early on** and help provided to public organisations to facilitate these discussions and collective sense-making efforts.

- There is a need to identify and create more future-seeking moments as part of government change and as part of policy reforms. The Ministry of Finance should help **put in place deliberation and dialogues in which both politicians and public officials can contribute to knowledge around future developments**.

- The Ministry of Finance should **put forward how current public sector innovation activities align with anticipatory innovation need**s, which additional gaps exist and which investments are needed to create skills and capacities for innovation across the system, but also make the practice systemic in policy design and implementation processes.

- The Ministry of Finance should also **systematically devise and co-ordinate learning from innovation projects across the public sector** that test and demonstrate the use of new anticipatory tools and methods across the ecosystem.

FUTURE AND FORESIGHT FUNCTION

- While the futures and foresight system in Finland is very developed it should be better aligned with ongoing policy-making procedures. It is important to include anticipatory tools and methods (scenario planning, horizon scanning etc.) in collective sense-making practices in a continuous and systemic manner. As outlined above, the Ministry of Finance could have a direct responsibility in developing **tailored training programs for experts,**

policy makers, senior leaders in anticipatory innovation capacity. Ministries and public organisations should be encouraged by the centre to take a more systematic approach to mainstreaming foresight.

OVERSIGHT FUNCTION

- The State Audit Office of Finland could **take up a more proactive role in following up on the value chain** from futures and foresight, strategic steering to innovation and experimentation and implementation. It should be continuously made transparent and clear how this value chain worked: e.g. which signals/information/scenarios were considered, how they were made actionable and what the results were.

Many of the suggestions outlined are not new and have been identified by Finland or external partners in the past. Given the increasing pressures of the ever faster and more volatile policy environment, it is essential that concrete steps be taken to upgrade the Finnish anticipatory innovation governance system. This includes both the establishment of new structures such as the committee for senior leadership on emerging issues, as well as ongoing efforts to enhance the system's futures capacity, leverage existing insights by making sense of them and building effective collaborative relationships between stakeholders.

Other countries striving to improve their ability to anticipate and act upon emerging change can learn from the Finnish experience. Most of the action points identified are relevant to any organisation wanting to establish or improve its approach to anticipatory innovation governance, whether at the beginning or ahead in its journey towards effective anticipation. The outlined points demonstrate the need to understand anticipatory innovation as an ongoing practice requiring continuous investment and reflection rather than isolated efforts. Despite the challenges identified, the Finnish Government shows an outstanding commitment to constantly adjust its way of doing things and to strive towards better policy making. The end of the project marks an exceptional opportunity to leverage its findings in order to push the boundaries of what effective policy making in the 21st century entails.

ROLES

AUTHORISING ENVIRONMENT

AGENCY

ROLES

NETWORK AND PARTNERSHIPS

Government functions
- Anticipatory procurement function
- Anticipatory government planning function
- Anticipatory HR function

INSTITUTIONAL STRUCTURES

Government functions
- Anticipatory strategic steering function
- Anticipatory government planning function
- Anticipatory budgeting function
- Anticipatory legislative function

PUBLIC INTEREST AND PARTICIPATION

Government functions
- Anticipatory government transfer function
- Anticipatory open government function
- Anticipatory communication function

ALTERNATIVES EXPLORATION AND EXPERIMENTATION

Government functions
- Anticipatory legislative function
- Anticipatory leadership function
- Anticipatory risk management function
- Anticipatory strategic steering function
- Anticipatory budgeting function
- Anticipatory transformation and innovation function

VESTED INTERESTS AND COGNITIVE BIASES

Government functions
- Anticipatory open government function
- Anticipatory HR function
- Anticipatory transformation and innovation function
- Anticipatory open government function

ORGANISATIONAL CAPACITY

Government functions
- Anticipatory legislative function
- Anticipatory leadership function
- Anticipatory risk management function
- Anticipatory strategic steering function
- Anticipatory budgeting function
- Anticipatory transformation and innovation function

LEGITIMACY

Government functions
- Anticipatory leadership function
- Anticipatory budgeting function
- Anticipatory regulatory function
- Anticipatory open government function

DATA AND MEASUREMENT

Government functions
- Anticipatory 'Digital by Design' function
- Anticipatory strategic steering function
- Anticipatory budgeting function
- Anticipatory transformation and innovation function

EVIDENCE AND EVALUATION

Government functions
- Anticipatory government oversight function
- Anticipatory government oversight function
- Anticipatory strategic steering function
- Anticipatory 'Digital by Design' function

TOOLS AND METHODS

Government functions
- Anticipatory skills and capacity function
- Anticipatory leadership function
- Anticipatory transformation and innovationfunction

LEARNING LOOPS

Government functions
- Anticipatory strategic steering function
- Anticipatory government planning function
- Anticipatory government oversight function

SENSE MAKING

Government functions
- Anticipatory open government function
- Anticipatory futures and foresight function
- Anticipatory strategic steering function
- Anticipatory strategic steering function

Centre of government; Oversight bodies including State Audit Institutions; internal audit; implementation agencies and organisations

Centre of government

Ministry of Finance, Ministry of Justice

Heads of organisations, senior leader committees/ working parties across government

Centre of government, Prime Minister's Office, strategic planning units

REFERENCES

Anttila, J. et al. (2018) *Pitkän aikavälin politiikalla läpi murroksen – tahtoti-loja työn tulevaisuudesta.* Prime Minister's Office Finland (Valtioneuvoston selvitys- ja tutkimustoiminnan julkaisusarja, 34/2018).

Brown, L. and Osborne, S.P. (2013) 'Risk and Innovation: Towards a framework for risk governance in public services', *Public Management Review*, 15(2), pp. 186–208. doi:10.1080/14719037.2012.707681.

Burrows, M.J. and Gnad, O. (2018) 'Between "muddling through" and "grand design": Regaining political initiative – The role of strategic foresight', *Futures*, 97, pp. 6–17. doi:10.1016/j.futures.2017.06.002.

Bussey, M. (2014) 'Concepts and effects: ordering and practice in foresight', *Foresight*, 16(1), pp. 1–16. doi:10.1108/FS-04-2013-0017.

Economist Intelligence Unit (2020) *Democracy Index*. Available at: https://www.eiu.com/n/campaigns/democracy-index-2020/ (Accessed: 13 June 2022).

Eduskunta (2018) 'tulevaisuuspolitiikka – mitä se on, ja mikä on tulevaisuusvaliokunnan rooli? Tulevaisuusvaliokunnan 25-vuotis-juhlakokous 16.11.2018 Eduskunnan tulevaisuusvaliokunnan julkaisu 9/2018.' Available at: https://www.eduskunta.fi/FI/valiokunnat/tulevaisuusvaliokunta/julkaisut/Sivut/tulevaisuuspolitiikka.aspx.

European Commission (2020) *Digital Economy and Society Index* (DESI) 2020. Available at: https://digital-strategy.ec.europa.eu/en/library/digital-economy-and-society-index-desi-2020 (Accessed: 13 June 2022).

Government of Finland (2020) *Strategy for Public Governance Renewal*. Available at: https://julkaisut.valtioneuvosto.fi/bitstream/han-dle/10024/162573/Public_governance_strategy_2020.pdf?se-quence=1&isAllowed=y.

Government of Finland (2022) 'Competence secures the future', Publications of the Finnish Government, Helsinki.

Guler, A. and Demir, F. (2020) 'Identifying Security Challenges in the IoT for the Public Sector: A Systematic Review', in Gil-Garcia, J.R., Pardo, T.A., and Gasco-Hernandez, M. (eds) *Beyond Smart and Connected Governments*. Cham: Springer International Publishing (Public Administration and Information Technology), pp. 69–84. doi:10.1007/978-3-030-37464-8_4.

Hodgson, D. et al. (eds) (2019) *The projectification of the public sector*. London New York: Routledge, Taylor & Francis Group (Routledge critical studies in public management).

Jørgensen, T.B. and Bozeman, B. (2007) 'Public Values: An Inventory', *Administration & Society*, 39(3), pp. 354–381. doi:10.1177/0095399707300703.

Lähteenmäki-Smith, K. (2020) 'Encouraging the state steering sys-tem to adopt greater systems-based thinking. Perspectives into topical issues in society and ways to support political decision making. Policy brief 20/2020.'

Lähteenmäki-Smith, K. et al. (2021) *Government steering beyond 2020 From Regulatory and Resource Management to Systems navigation*.

Määttä, S. (2011) 'Mission Possible. Agility and Effectiveness in State Governance. Sitra Studies 57.' Available at: https://www.sitra.fi/app/uploads/2011/08/Selvityksia57.pdf (Accessed: 13 June 2022).

Marchant, G.E. (2011) 'Addressing the Pacing Problem', in Marchant, G.E., Allenby, B.R., and Herkert, J.R. (eds) *The Growing Gap Between Emerging Technologies and Legal-Ethical Oversight*. Dordrecht: Springer Netherlands (The International Library of Ethics, Law and Technology), pp. 199–205. doi:10.1007/978-94-007-1356-7_13.

Morozov, E. (2012) 'What is your favorite deep, elegant, or beautiful explanation?' Available at: https://www.edge.org/response-de-tail/10898 (Accessed: 13 June 2022).

Nedelkoska, L. and Quintini, G. (2018) *Automation, skills use and training*. OECD Social, Employment and Migration Working Papers 202. doi:10.1787/2e2f4eea-en.

OECD (2010) OECD *Public Governance Reviews: Finland 2010*. OECD Publishing (OECD Public Governance Reviews). doi:10.1787/9789264086081-en.

OECD (2015) OECD *Public Governance Reviews: Estonia and Finland: Fostering Strategic Capacity across Governments and Digital Services across Borders*. OECD (OECD Public Governance Reviews). doi:10.1787/9789264229334-en.

OECD (2017a) *Fostering Innovation in the Public Sector*. OECD. doi:10.1787/9789264270879-en.

OECD (2017b) *Systems Approaches to Public Sector Challenges: Working with Change*. OECD. doi:10.1787/9789264279865-en.

OECD (2019) 'Strategic Foresight for Better Policies. Building Effective Governance in the Face of Uncertain Futures'. Available at: https://www.oecd.org/strategic-foresight/ourwork/Strategic%20Fore-sight%20for%20Better%20Policies.pdf (Accessed: 5 March 2022).

OECD (2021) *Drivers of trust in public institutions in Finland*. OECD. doi:10.1787/52600c9e-en.

Peters, G.B. (2005) 'The Problem of Policy Problems', J*ournal of Comparative Policy Analysis: Research and Practice*, 7(4), pp. 349–370. doi:10.1080/13876980500319204.

Rittel, H.W.J. and Webber, M.M. (1973) 'Dilemmas in a general theory of planning', *Policy Sciences*, 4(2), pp. 155–169. doi:10.1007/BF01405730.

Salminen, A. and Ikola–Norrbacka, R. (2010) 'Trust, good governance and unethical actions in Finnish public administration', *International Journal of Public Sector Management*. Edited by A. Lawton, 23(7), pp. 647–668. doi:10.1108/09513551011078905.

Sitra (2018) 'Phenomenon-based public administration Discussion paper on reforming the government's operating practices.' Available at: https://www.sitra.fi/en/publications/phenomenonbased-public-ad-ministration/.

Tõnurist, P. (2021) *Towards an anticipatory innovation governance model in Finland*. Paris: OECD Publishing.

Tõnurist, P. and Hanson, A. (2020) *Anticipatory innovation governance: Shaping the future through proactive policy making*. OECD Working Papers on Public Governance 44. OECD. doi:10.1787/cce14d80-en.

Transparency International (2020) *Corruption Perception Index 2020*. Available at: https://www.transparency.org/en/cpi/2020 (Accessed: 13 June 2022).

Varis, Tuula (2020) *Can phenomenon-based budgeting support smart management of central government finances*? Available at: https://www.vtv.fi/en/blog/can-phenomenon-based-budgeting-support-smart-management-of-central-government-finances/.

Varis, Tuula (2020) *Development of phenomenon-based budgeting requires a shared understanding and commitment from the public administration.* Available at: https://www.vtv.fi/en/publications/ development-of-phenomenon-based-budgeting-re quires-a-shared-understanding-and-commitment-from-the-pub lic-administration/.

IMAGE CREDITS

Image 1: Pasi Markkanen, Source : Suomi Finland

Image 2: Pasi Markkanen, Source : Suomi Finland

Image 3: Pasi Markkanen, Source : Suomi Finland

Image 4: Riku Isohella, Source: Suomi Finland

Image 5: Jarno Mela, Source: Suomi Finland

Image 6: Pasi Markkanen, Source: Suomi Finland