

Futureproofing democracy

Principles of foresight-based policy analysis and stress-testing for national parliaments and governments

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Abbreviations

DTI	Danish Technological Institute
EBA	European Banking Authority
FGC	Wales Future Generations Commissioner
GOS	Government Office for Science
HILPs	High impact, low probability events
IPPC	Intergovernmental Panel on Climate Change
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
OECD	Organisation for Economic Co-operation and Development
TAU	Technical Advisory Unit
WFD	Westminster Foundation for Democracy
WFGA	Well-being of Future Generations Act 2015

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Executive summary

In an exceedingly uncertain policy environment, national parliaments and governments face numerous challenges. Technological innovation of economies and new domestic and international political conditions, including societal disruptions related to the degradation of ecosystem services and natural resource depletion and to climate change,¹ could very well result in a different future than the one envisaged in most predictions. If governments fail to adapt to this new reality, democracy and freedoms are more than likely to worsen and impede effective governance.

Many governments lack the necessary tools to deal with multiple possible policy options in an uncertain future and often seem to rely on so-called political “short-termism”. To address this challenge, some utilise strategic foresight; that is, the systematic procedure of looking beyond prevailing predictions, accounting for a range of futures to identify implications of policies implemented today. A number of methodologies are used to identify future developments: for example, horizon scanning involves a systematic monitoring of data points to uncover potential causes of change, and also, therefore, risks and opportunities associated with trends; megatrends analysis focuses on the detection of overarching changes expected to lead to multidimensional impacts, and can typically be identified tendencies resulting from previous developments that might decrease or increase in magnitude over time; and the Delphi method aims to gather and coordinate views from experts on strategic prevalence of certain events. What all these methods have in common is that they reveal and discuss potentially useful insights about the future.

Moreover, unanticipated and disruptive events cause considerable impacts across sectors and geographies. These are explored through stress-testing, which can aid policymakers in addressing increasing uncertainty when evaluating policy performance against numerous scenarios. Stress-testing provides a proactive approach to improving policy performance and can be expected to produce more robust policies and legislation that have an increased chance of remaining functional during external shocks, and more resilient following disruptive events. As shown by the COVID-19 pandemic, government capacity to apply regulatory policy tools in times of crisis is severely limited and impact assessments or stakeholder consultations were overlooked as a consequence of urgency. Integrating stress-testing in policy formulation and implementation may therefore lead to greater readiness for such events. Unlike conventional impact assessments, neither strategic foresight nor stress-testing hold assumptions of continuity, which is central to most impact assessment practices.

To differentiate between numerous potential future trajectories that can be considered in anticipatory policymaking, the most prominent models discussed in the academic literature are the futures cone (see Figure 1) and the futures pyramid (see Figure 2). The futures cone is a common conceptual model, connecting future-anticipating disciplines to different levels of uncertainty about future developments. Conversely, the futures pyramid instead differentiates between four more

¹ For example, food and energy insecurity.

encompassing fields of future anticipation by associating varying potential futures with levels of uncertainty, thereby underlining the intricacies of anticipating potential future trajectories.

This policy brief focuses on how an increased strategic foresight and stress-testing capacity of national parliaments and governments can improve policy resilience, explicitly answering the following three questions:

- (1) *What is the added value of strategic foresight and stress-testing for conducting effective impact assessments of policies and legislation at a national level?*
- (2) *According to the available literature, which methodologies and approaches for futureproofing and stress-testing are complementary to impact assessments?*
- (3) *What are the best practices, or useful examples from the past ten years from how parliaments and governments organise their resources for futureproofing?*

The purpose of this policy brief is to provide recommendations to strengthen the strategic foresight and stress-testing capacity of national parliaments and governments through the use of multiple potential future trajectories in policymaking. While there is a rich literature on intergenerational issues, surprisingly little has been written to bridge the current gap between the agenda-setting phase and practices leading to tangible policy proposals. In this policy brief, three case studies have been chosen – Finland, New Zealand, and the United Kingdom – mainly as a result of the extensive strategic foresight systems that these countries have implemented in the past few years. Specifically, Finland’s strategic foresight practices began in the early 1990s due to an economic downturn, the semi-formal Strategic Futures Group in New Zealand was established in 2016, and the UK Foresight Programme has been around since 1994. However, despite the choice of case studies, the topic is also relevant for countries in the global south or east.

In analysing strategic foresight and stress-testing practices in the chosen case studies, it is noted that, firstly, Finland has a well-integrated approach and that strong institutions for strategic foresight have been established. Long-term thinking has been applied across the government, legislature, and publicly funded non-departmental bodies. As no legislative commitments have been made to ensure that stress tests are conducted, attempts to improve policy resilience have targeted other methods of foresight. Furthermore, stress tests are generally not applied in the New Zealand policy process, for which the absence of systematic procedures and difficulties in engaging policymakers have been prominent explanations. Nonetheless, strategic foresight concerning potential future trajectories is considered part of the recognised standard of practice. The United Kingdom does not have a legal obligation nor a generally accepted approach to stress-testing policies across UK government agencies. When utilised as a policy tool, stress-testing is typically performed during the later stages of the policy process for purposes of evaluation. This is presumably caused by the discrepancy between the time it takes to perform stress tests and the limited period for affecting policy design. In Scotland however, the Future Forum has directly promoted long-term thinking in the policy process and arranged more than a hundred events with the intention of channelling new

thoughts into the Scottish Parliament. Similarly, the success of the Welsh Well-being of Future Generations Act 2015 (WFGA) crucially depends on the willingness of Welsh public governance, and the inclination of the Wales Future Generations Commissioner (FGC) to enforce the Act. Thus, strategic foresight capacity is not merely a matter of establishing particular institutions, but of an additional willingness to explore fast-paced developments with high uncertainty.

Accordingly, the following key characteristics are identified in successful strategic foresight and stress-testing systems:

- **Legislative commitments** impose an obligation on public bodies to implement strategic foresight and stress-testing practices, thereby confronting political short-termism.
- **Political commitments and parliamentary oversight** are crucial to effectively conduct and coordinate efforts, allowing for the standardisation and integration of principles across government departments and in centralised decision-making practices.
- **Institutional capacity** enables governments to make use of intellectual capabilities and skills needed to establish strategic foresight and stress-testing and integrate them into the policy process.
- **Embeddedness** further facilitates the process of integrating strategic foresight and stress-testing into policy design. These cannot be seen as isolated from the policy process but should rather be viewed as an integral part of it.

This policy brief may be valuable to researchers and parliamentary and governmental agencies in: (1) reviewing current parliamentary and governmental strategic foresight and stress-testing practices; (2) identifying new opportunities for policy improvement and supporting parliamentary and governmental activity; and (3) supporting the establishment of efficient and autonomous strategic foresight units. However, it foremost serves to aid Westminster Foundation for Democracy's (WFD) country teams in their work with national parliaments and governments, where the analysis in this policy brief will most likely prove useful.

1. Introduction

Democracy entails more than electoral cycles. Democracy is hard to establish and even more so to sustain. Characterised by fragility democracy needs to be constantly nurtured, and according to Freedom House, the last few years have seen the largest increase in authoritarian rule and freedom erosion worldwide, further fuelled by the COVID-19 pandemic.² Likewise, Bertelsmann Stiftung and the Economist Intelligence Unit also both indicate a downward trend (despite the former finding that widespread authoritarianism has been met with civil resistance).³ In a constant state of crisis, international developments are characterised by high uncertainty more than ever before, and if governments fail to adapt to this new reality, democracy and freedoms are more than likely to worsen. The number of political parties is increasing, becoming more fragile, and subject to weaker coalitions, and while this may introduce new voices into the political systems, it is also likely to impede effective governance.

National parliaments and governments are today faced with numerous pressures – economic downturns, nationwide migration, climate change, and growing international instability such as war, armed conflict, and foreign occupation – and the future shows no signs of being less challenging. The rapid technological innovation of economies and societies, and new domestic and international political conditions could very well make for a radically different future than the one envisaged in the most up-to-date predictions.⁴ So, what does preparedness for such a future entail? Trying to project or forecast uncertain futures might be of limited benefit in volatile conditions but identifying plausible scenarios and examining their impacts on public policies is highly valuable. It is crucial to explore futures beyond traditional projections policymaking and account for how various developments might unexpectedly interact. Changes may transpire faster and far further than today's contemplative decision-making processes are intended to deal with, and if they grow considerably, so too must parliaments' and governments' abilities to respond to such changes.⁵

Abrupt events regularly lead to considerable impacts across multiple sectors and geographies (which are typically referred to as 'high impact, low probability' events, or HILPs).⁶ As shown by the COVID-19 pandemic, government capacity to implement policy tools in times of crisis is severely limited and impact assessments or stakeholder consultations were overlooked as a consequence of urgency.⁷ Integrating stress-testing in policy formulation and implementation may therefore lead to greater readiness for such events.

² Repucci and Slipowitz (2021).

³ Economist Intelligence Unit (2021); Bertelsmann Stiftung (2022).

⁴ OECD (2019b).

⁵ Ibid.

⁶ Mendonça et al. (2004); Heinonen (2013); UNDP Global Centre for Public Service Excellence (2018).

⁷ European Commission (2021).

Accordingly, this policy brief relies on the premise that potential future trajectories are underrepresented in policy processes, in part due to political “short-termism”.⁸⁹ This is evidenced by, for example, the limited impact on decision-making of input from the Intergovernmental Panel on Climate Change (IPPC), which was created to provide policymakers with assessments on climate change, including potential future risks and implications, and adaptation and mitigation options, or of that from the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).¹⁰

National parliaments and governments focus on the most immediate concerns, meaning that they systematically neglect potentially catastrophic risks, including long-term national and particularly global trends (such as demographic change or technological advances, that could leave communities or countries behind).¹¹ While a diverse literature even proposes institutional arrangements to negate the “short-termism” implicit in public policy, with some even arguing in favour of parliamentary representation of future generations,¹² or the establishment of an additional branch of government devoted to long-term concerns,¹³ this policy brief suggests that strategic foresight and stress-testing practices are means to remedy such a discrepancy. All governments must build greater anticipatory capabilities and institutionalise the use of such methods, which requires careful consideration of all steps in the policy process.

Focusing on institutional configurations, this policy brief therefore starts by reviewing the existing literature and presents the most common frameworks and methodologies to systemise the use of strategic foresight and stress-testing in the policy process. Thereafter, three case studies are examined; Finland, New Zealand, and the United Kingdom were chosen as they have all implemented far-reaching measures in enhancing forward-thinking practices; that is, extensive strategic foresight systems which have been in use for a number of years. Namely, Finland’s strategic foresight practices began in the early 1990s due to an economic downturn, the semi-formal Strategic Futures Group in New Zealand was established in 2016, and the UK Foresight Programme has been around since 1994. Moreover, all three countries are recognised as developed democracies,¹⁴ which serves as an adequate foundation on which to extrapolate key recommendations for emerging and established democracies that wish to enter the strategic foresight and the stress-testing policy area.

The policy brief focuses on the potential added value of strategic foresight and stress-testing practices for national parliaments and governments. To that end, the research questions are: (1) What is the added value of strategic foresight and stress-testing for conducting effective impact

⁸ Thompson (2010).

⁹ Although, as evidenced, this does not seem to affect all democracies equally (Vanhuysse, 2014), and democracies that foster inclusiveness are less inclined to demonstrate such ‘short-termism’ (Caluwaerts and Vermassen, 2020).

¹⁰ IPCC (2022).

¹¹ Global Priorities Project et al. (2014).

¹² For example, see Dobson (1998); Ekeli (2005); Kavka & Warren (1983).

¹³ Tremmel (2015).

¹⁴ Unlike, for example, Singapore where multiple advances have been made in the area of strategic foresight and stress-testing (for example, see Choo and Fergnani (2022)).

assessments of policies and legislation at a national level? (2) According to the available literature, which methodologies and approaches for futureproofing and stress-testing are complementary to impact assessments? (3) What are the best practices, or useful examples from the past ten years of how parliaments and governments organise their resources for futureproofing?

This policy brief may be valuable to researchers and parliamentary and governmental agencies in: (1) reviewing current parliamentary and governmental strategic foresight and stress-testing practices; (2) identifying new opportunities for policy improvement and supporting parliamentary and governmental activity; and (3) supporting the establishment of efficient and autonomous strategic foresight units. As with comparable assessment briefs, it also aims to aid the creation of key benchmarks, accounting for specific national contexts. However, foremost it serves to aid Westminster Foundation for Democracy's (WFD) country teams in their work with national parliaments and governments, where the analysis in this policy brief will most likely prove useful.

2. Literature review

2.1. Strategic foresight, futureproofing, and stress-testing

Present challenges in need of attention regularly lead to an inability of governments to adequately engage with future developments.¹⁵ Formulating policies inevitably means accounting for the future, but most governments underperform in their duty to handle unexpected or unprecedented developments.¹⁶ To address this discrepancy, governments oftentimes utilise strategic foresight, which is a systematic procedure that looks beyond existing predictions and accounts for a range of plausible futures to identify implications of policies implemented today. This is done by examining inherent assumptions, and challenging prevailing narratives, engaging with otherwise dismissed potential disruptions. By using a variety of methods (such as horizon scanning, megatrends analysis and analysis of weak signals, developing a multitude of scenarios), it reveals and discusses potentially useful insights about the future.¹⁷

Strategic foresight is primarily characterised by two key elements. First, it scrutinises possible policy options in an uncertain future in order to more adequately foresee potential changes and their respective impacts.¹⁸ Second, it is executed in collaboration with several actors to inform a broader perspective on potential future scenarios.¹⁹ Accordingly, in the strategic foresight literature, futureproofing can be defined as the general concept of evaluating how future trends might evolve, while stress-testing particularly focuses on the disruptiveness of events.²⁰ Stress-testing concerns how policies and legislation can better be adapted to anticipate and face future disruptive developments, and is the assessment of the impact of policies in a range of potential future trajectories.²¹ As a result, futureproofing is an umbrella term. Strategic foresight therefore constitutes one of multiple futureproofing methods, and stress-testing is likewise one of multiple strategic foresight methods. Unlike conventional impact assessments, neither strategic foresight nor stress-testing holds assumptions of continuity, which is central to most impact assessment practices.

Given an increased need for policymakers to use stress-testing to improve policy resilience in facing uncertain futures, it is assumed that it can be implemented to futureproof policies against unanticipated shocks and developments of known trends – all having a significant effect on society.²² After the global financial crisis in 2008, stress tests were made mandatory in the financial sector to evaluate whether institutions had enough capital to deal with future shocks. In Europe,

¹⁵ Fuerth and Faber (2012).

¹⁶ OECD (2019b).

¹⁷ Ibid.

¹⁸ Slaughter (1997); Ringland (2010).

¹⁹ Ibid.

²⁰ Mousmouti (2022).

²¹ Fernandes and Heflich (2021, p. 3).

²² OECD (2019b); Fernandes and Heflich (2021).

this was done through European Banking Authority (EBA) stress tests.²³ Stress tests for fiscal purposes primarily use econometric modelling to predict how financial institutions will cope with hypothetical scenarios.²⁴ As a result, a considerable portion of the current literature focuses on fiscal stress-testing.²⁵ However, the validity of such tests has come into question, showing that representative model forecasts differ significantly from those that are bank-specific, and from the eventual outcomes.²⁶ Considering such evaluations, and assuming that the scope and organisation of public policy and national legislation are more intricate than banking, the direct transfer of quantitative methods seems inadequate alone and warrants the qualitative approach of this article.

Numerous policy areas are increasingly faced with more complexity and uncertainty as a result of the unanticipated consequences of issues revolving around, for instance, automation, artificial intelligence, and climate change.²⁷ Furthermore, abrupt events can lead to considerable impacts across multiple sectors and geographies. These are typically referred to as high impact, low probability events (or HILPs).²⁸ As stress-testing and strategic foresight can aid policymakers in addressing increasing uncertainty when evaluating policy performance against numerous scenarios, they provide a proactive approach to improving policy performance,²⁹ and policies can be expected to be more robust and have an increased chance of remaining functional during external shocks, and more resilient following disruptive events.³⁰ As mentioned, governments regularly fail in adequately preparing for unexpected developments,³¹ and given the risks involved, there is consensus within the stress-testing community that multiple future trajectories should be considered in policymaking.³² Stress-testing can illuminate how policies might fare during a crisis, which can contribute to more robust policy designs as most (if not all) policies are affected by unanticipated developments in the long term.³³ Integrating stress-testing in policy formulation and implementation may accordingly lead to greater readiness for such events.

2.2. Conceptual models

When anticipating future developments is restricted to identifying the most significant future trajectories, policymakers might be blind to developments that are less likely to impact future events. Any meaningful effort to futureproof policies must therefore explore the full spectrum of future trajectories.³⁴ Thus, there is a necessity to introduce models to differentiate between levels of uncertainty. The most prominent models discussed by current literature are presented below.

²³ European Banking Authority (2009).

²⁴ Kupiec (2020).

²⁵ For example, see Magnus et al. (2019); Chatta and Alhabshi (2020); Luu and Vo (2021).

²⁶ Kupiec (2020).

²⁷ Tönurist and Hanson (2020).

²⁸ Mendonça et al. (2004); Heinonen (2013); UNDP Global Centre for Public Service Excellence (2018).

²⁹ OECD (2019b).

³⁰ Capano and Woo (2017).

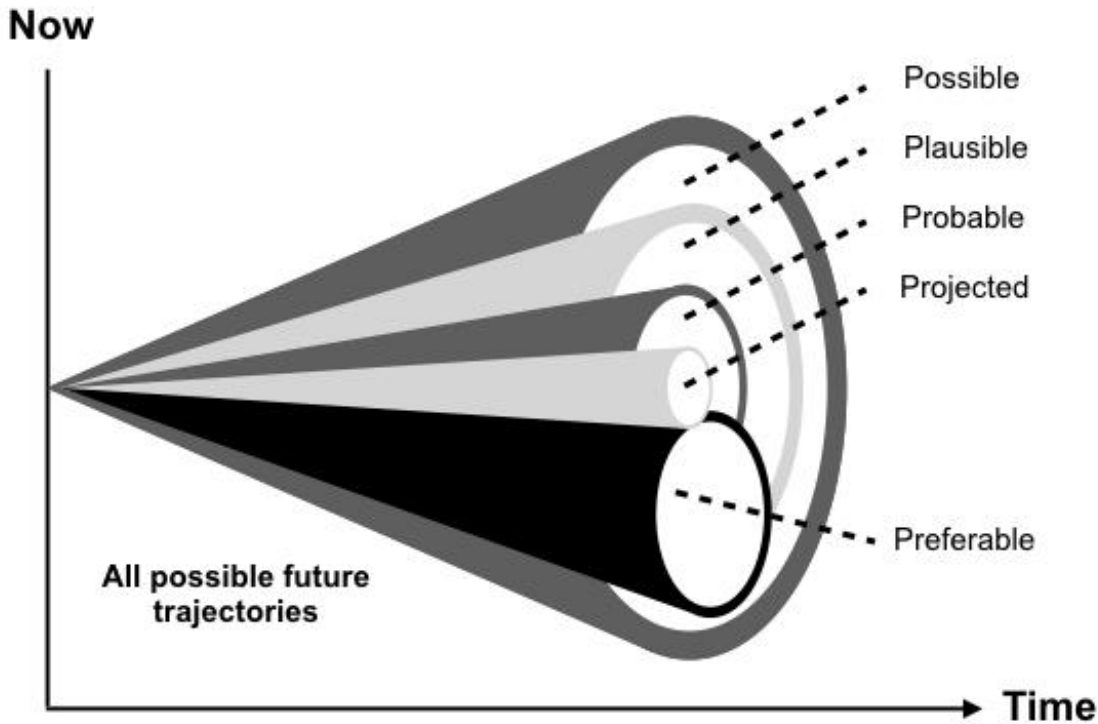
³¹ OECD (2019b).

³² Marchau et al. (2019); Tönurist & Hanson (2020); Government Office for Science (2021b).

³³ Howlett et al. (2018); Fiott (2019).

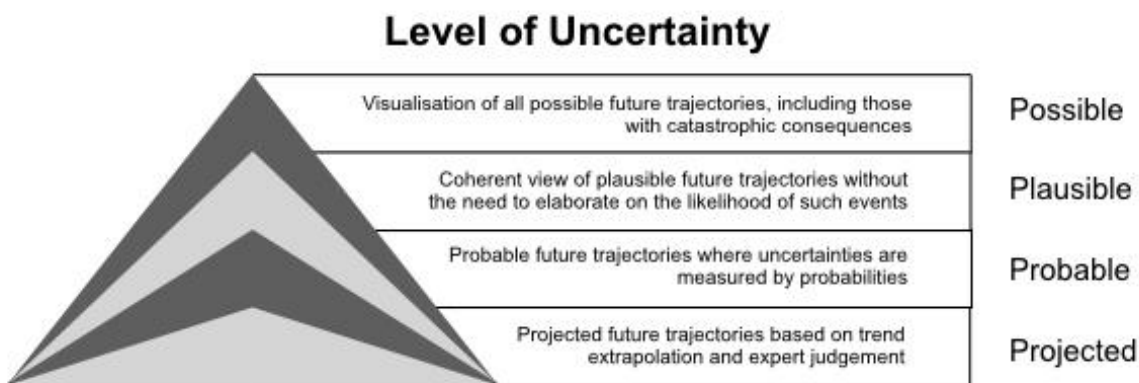
³⁴ UNDP Global Centre for Public Service Excellence (2018).

Figure 1 – the futures cone



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Figure 2 – the futures pyramid



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Van Dorsser et al. utilise the futures cone (see Figure 1) in creating a conceptual model relating various future-anticipating disciplines to different levels of uncertainty about future developments.³⁷ Conversely, the futures pyramid (see Figure 2) differentiates between four fields of future

³⁵ Adapted from Voros (2003); Van Dorsser et al. (2018); Fernandes and Heflich (2022).

³⁶ Adapted from Van Dorsser et al. (2018); Fernandes and Heflich (2022).

³⁷ Van Dorsser et al. (2018).

anticipation by associating alternative futures with levels of uncertainty, thereby underlining intricacies of anticipating potential future trajectories (as insights into the future inevitably diminish in detail over time).³⁸ As both models differentiate between numerous potential future trajectories considered in anticipatory policymaking, they can effectively be used when deciding which scenarios may be relevant for stress-testing or strategic foresight. While the futures cone utilises a time axis to highlight differing potential future trajectories, the futures pyramid relates levels of uncertainty to such trajectories.³⁹ For instance, Van Dorsser et al. argue that the lowest uncertainty is associated with deterministic forecasting, generally using exploration of trends and expert judgement to reach the most reliable forecast.⁴⁰

The link between strategic foresight and exploration of plausible future trajectories in the futures pyramid enables deliberation about the uncertainty that stress tests potentially can and should address. While activities treating plausible future trajectories could be grounded in evidence (extrapolations of impacts derived from experiences of present events), this does not apply when the aim is to futureproof policy and legislation against HILPs, or other events that lie within a possibilities scheme but are unlikely to occur. As a result, the OECD emphasises that trying to project future developments might be less useful in view of high uncertainties. Instead, developing multiple plausible future trajectories and then examining their potential impacts and implications for policy is deemed more valuable.⁴¹ As the above literature suggests, methods of strategic foresight generally aim to anticipate plausible future trajectories,⁴² but alternative sources also highlight the need for policymakers to consider unexpected developments with significant effects (that is, HILPs). However, despite the inevitable fact that HILPs cannot be “predicted”, understanding such risks might be valuable practice for policymakers.⁴³ As Fiott suggests, the function of crisis simulations is to reveal particular advantages and disadvantages in crisis responses that become uncovered by using scenarios emulating critical developments.⁴⁴ While acknowledging it as challenging, the literature nonetheless recommends the approach of “scanning” for weak signals (early signs of developments yet to arise). They are signs of discontinuity or possible events and may be associated with new practices or technologies.⁴⁵

As Fernandes and Heflich find, stress-testing policies against all possible trajectories is clearly unfeasible, while considering events that are expected to occur is much more attainable.⁴⁶ Conversely, the scope of stress-testing against particular events increases when contextual variables that co-determine risk can more easily be quantified, or even modelled, for instance, when policies become more geographically concentrated, at the national or regional level. It can

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Ibid.

⁴¹ OECD (2019b).

⁴² Lempert (2019); Tönurist and Hanson (2020).

⁴³ Mendonça et al. (2004); Heinonen (2013); Government Office for Science (2021a).

⁴⁴ Fiott (2019).

⁴⁵ UNDP Global Centre for Public Service Excellence (2018); Government Office for Science (2021b).

⁴⁶ Fernandes and Heflich (2022).

therefore be inferred that the scope of stress-testing practices can be broadened when dealing with national rather than inter- or intra-national endeavours.

2.3. Foresight-based methodologies

In this section, common methods of systemising strategic foresight practices are described and contextualised in detail. These include horizon scanning, megatrends analysis, and scenario planning.

2.3.1. Horizon scanning

A number of methods have been implemented to anticipate potential future trajectories and the possible impacts. Horizon scanning is the most prominent of these methods and has been deemed as the “... foundation of any strategic foresight process” by the OECD.⁴⁷ It involves a systematic monitoring of data points to uncover potential causes of change, and therefore also risks and opportunities associated with such trends. Details on such causes can be collected through a number of methods, which can include interviews or workshops, and horizon scanning allows for consultation of experts and stakeholders in a particular sector. Moreover, the review of relevant research (such as reports or articles) related to the environment of policymaking that is being explored will prove particularly useful.⁴⁸ For instance, climate change and terrorism inspired by religious views and practices are early signals that have moved from the periphery of mainstream thinking to become issues that are relevant to a range of policy agendas. Likewise, water security and the loss of ecosystem services made possible through biodiversity are likely to become central to future policy agendas.⁴⁹

2.3.2. Megatrends analysis

One form of scanning that focuses on the detection of overarching changes expected to lead to multidimensional impacts is megatrends analysis. It can typically be identified as analysis of tendencies resulting from previous developments that might decrease or increase in magnitude over time.⁵⁰ Examples of megatrends include globalisation, the next industrial revolution wave based on computer science and automation, and the growing ecological exhaustion of resources.⁵¹

Conversely, scanning can also examine high uncertainties by searching for weaker signals (see section 2.1). However, this is a rather intricate process as there is usually no robust evidence to support potential findings. They are merely signs of issues that are yet to arise.⁵² Unlike established developments that are regularly characterised by low uncertainty, weaker signals could

⁴⁷ OECD (2019b, p. 2).

⁴⁸ Government Office for Science (2017); OECD (2019b); Tönurist and Hanson (2020).

⁴⁹ Sutherland and Woodroof (2009, p. 525).

⁵⁰ OECD (2019b); Tönurist and Hanson (2020).

⁵¹ Pećciak (2016, p. 172).

⁵² UNDP Global Centre for Public Service Excellence (2018); Government Office for Science (2021b).

be detected in isolation, which makes them difficult to decipher and easy to overlook. Nevertheless, this is an essential tool for anticipating risks, changes, and opportunities in the long term.⁵³

2.3.3. Scenario planning

Given that stress-testing is the assessment of the impact a policy can have in a range of potential future trajectories, the development of multiple scenarios is essential in the stress-testing process. The literature differentiates between varying scenarios and suggests numerous strategies to uncover them. Börjeson et al. differentiate between types of scenarios, where exploratory scenarios might be the most appropriate for stress-testing practices.⁵⁴ Instead of predictive and normative scenarios, exploratory scenarios are characterised by potential future trajectories (such as “what can happen?”). The use of scenarios to simplify thinking about future developments began after the second world war where the US Department of Defense utilised such a method at RAND Corporation. In the 1960s it was subsequently used for public policy analysis and decision-making processes.⁵⁵

Additionally, the Delphi method is another commonly used scenario development technique aiming to gather and coordinate views from experts on strategic prevalence of certain events. This is typically done via a deliberative process whereby experts consider and discuss each other’s opinions to reach consensus.⁵⁶ Depending on the scope of strategic foresight or stress-testing activities using scenarios (potential future trajectories), the aforementioned methods can treat different time frames. It is therefore conceivable to develop scenarios after a single workshop, or on the views of a range of different stakeholders and combination of generation techniques over a longer time period.⁵⁷

2.4. Strategic foresight and stress-testing in practice

As established, the aim of strategic foresight and stress tests is to make sure that policies and legislation fulfil their potential in a greater number of potential future trajectories.⁵⁸ However, depending on the extent to which these build on researched evidence, the risk of cognitive bias in the form of anchoring⁵⁹ in conclusions inferred from the past is worrying as the question at hand continues to be about uncertainty. It is therefore vital to identify the level of uncertainty relevant to a particular policy development, as highlighted by the futures cone (see Figure 1) and the futures pyramid (see Figure 2).

⁵³ Government Office for Science (2017); Tönurist and Hanson (2020).

⁵⁴ Börjeson et al. (2005).

⁵⁵ Amer et al. (2013).

⁵⁶ Ibid.

⁵⁷ Börjeson et al. (2005); Government Office for Science (2017); UNDP Global Centre for Public Service Excellence (2018).

⁵⁸ Government Office for Science (2017); UNDP Global Centre for Public Service Excellence (2018); OECD (2019b); Tönurist and Hanson (2020).

⁵⁹ Tversky and Kahneman (1973).

However, methods of strategic foresight and stress-testing cannot merely be ‘applied’ to the development of policy and the planning of initiatives. As Jones notes, the Canadian FORLEARN project suggests that adequate applications of stress-testing and strategic foresight must already be present in the design of public administration processes.⁶⁰ These approaches will remain ineffective if performed subsequent to the agenda-setting and concept development phase, and foresight per se should become integral to the policy design process over different timeframes.⁶¹ In order to reach an appropriate level of understanding and ensure that it is applicable to policy design, close collaboration between stakeholders (for example, decision-makers, social actors, NGOs) and experts is needed more than ever.⁶² Such a challenge also requires that the way science is done is transformed and becomes probing in its scope, engaging all stakeholders.⁶³

However, as Borges de Castro contends, strategic foresight and stress-testing must also adapt to democracy, thereby enhancing democratic politics through better governance models. There is a fundamental tension between democracy and anticipatory policymaking, but it is nonetheless possible to combine them. Long-term thinking should be reconciled with electoral politics and the demands of elected representatives, and this should go beyond just encouraging caution about future developments. Rather than condemning representatives for being short-sighted, practitioners should integrate strategic foresight into structural democratic features (such as elections, pluralism, and power alteration).⁶⁴

⁶⁰ Jones (2017, p. 18).

⁶¹ Ibid.

⁶² Boone et al. (2020).

⁶³ Stokols (2006), Newton and Elliott (2016), Boone et al. (2020).

⁶⁴ Borges de Castro (2021).

3. Case studies

The following section presents findings from three widely different countries, detailing the degree to which stress-testing has been implemented and the respective strategic foresight capacities in Finland, New Zealand, and the United Kingdom. These countries were chosen as they have all implemented far-reaching measures in enhancing forward-thinking practices, that is extensive strategic foresight systems which have been in use for a number of years.

3.1. Finland

Finland has implemented a well-integrated approach and strong institutions for strategic foresight, applying long-term thinking across its system including in the legislature and the publicly funded non-departmental public bodies.⁶⁵ After entering into an economic recession in the early 1990s – which has been identified as a catalyst for strategic foresight thinking – there is a strong awareness of the necessity to anticipate crises in order to drive the economy forward.⁶⁶ Domestic efforts are distinguished by well-established collaborations between experts and policymakers from multiple disciplines and fields, the Parliament (via the government, the Prime Minister’s Office, and the Parliamentary Committee for the Future) as well as ministries play a part in strategic foresight responsibilities.⁶⁷

Methods of strategic foresight are currently integrated into all Finnish ministries and the strategies of most are based on the exploration of potential future trajectories.⁶⁸ Once every electoral cycle, the Finnish government is obligated to deliver a report on long-term future perspectives to the Parliament (usually exploring the next 10 to 20 years). The Government Report on the Future explores future challenges and opportunities and outlines a vision of the most desirable future. The two most recent reports have focused on the transformation of work and well-being through sustainable growth.⁶⁹ Similarly, ministries are expected to write a Futures Review for their respective branches of government once every electoral cycle.⁷⁰ Moreover, such activities may be aided by public bodies possessing strategic foresight capabilities, which include the Interministerial Government Working Group for the Coordination of Research and the Government Foresight Group.⁷¹ As a result, the resilience of policies in an uncertain economic and physical environment is sought through what Fernandes and Heflich describe as “... knowledge-based decision-making or simply national foresight work...”.⁷² Accordingly, it is expected that ministries take the outcomes of such initiatives into account when formulating legislation.⁷³

⁶⁵ SOIF (2021, p. 49)

⁶⁶ Ibid.

⁶⁷ Fernandes and Heflich (2022, p. 22).

⁶⁸ OECD (2019a).

⁶⁹ Prime Minister’s Office (2013; 2017).

⁷⁰ Prime Minister’s Office (n.d.).

⁷¹ Fernandes and Heflich (2022).

⁷² Ibid, p. 23.

⁷³ Ibid.

While strategic foresight capacities are well-organised across government institutions, follow-on stress tests of policies and legislation are not systematically applied in the Finnish policy process. As there is no legal requirement to perform such tests, attempts to improve policy resilience instead focus on methods of strategic foresight (such as scenario development and horizon scanning).⁷⁴ The Finnish approach typically focuses on the policy design phase rather than subsequent legislative phases, and favours ‘forward-looking’ policy design over stress-testing of legislation. Accordingly, a lot of emphasis is given to formulating a desirable future⁷⁵, which has also been demonstrated through national strategic foresight initiatives where citizens are included in exploratory dialogues on future developments.⁷⁶ Therefore, Fernandes and Heflich note that there is a lack of connectivity between such “forward-looking” design and drafting of legislation on the one hand, and impact assessments on the other, and no ex-post legislation evaluation is systematically applied.⁷⁷

However, all things considered, strategic foresight plays a crucial role in the early as well as later stages of Finnish policymaking. Ministries are informed by domestic as well as foreign national strategic foresight activities when suggesting legislation and performing impact assessments. Thereafter, in the Prime Minister’s Office, the Finnish Council on Regulatory Impact Analysis is tasked with enhancing the impact assessments of government proposals, although no timeframe of impact or emphasis on multiple potential future trajectories is required.⁷⁸ Moreover, the National Audit Office of Finland performs governance assessments and background mechanisms of strategic foresight information. While it does not perform stress-testing against HILPs, it does contribute to improving policy resilience by legislation analysis against current trends.⁷⁹ Additionally, the Finnish Committee for the Future has identified 100 legislative objectives to facilitate the adoption of future technologies. Additionally, it has identified 200 new professions of the future being created from adaptation to upcoming challenges and opportunities with the appropriate workforce skill composition.⁸⁰

3.2. New Zealand

Stress tests are generally not applied in the New Zealand policy process. The absence of systematic procedures of strategic foresight and difficulties in engaging policymakers to utilise the outcomes of strategic foresight initiatives are prominent explanations for this.⁸¹ Nonetheless, stress-testing against potential future trajectories is considered part of the recognised standard of practice. Government agencies are legally obligated to oversee and demonstrate that regulatory practices are operational due to the requirement of regulatory stewardship. Established through the

⁷⁴ Ibid.

⁷⁵ See Prime Minister’s Office (2013; 2017).

⁷⁶ Lahtinen (2021); Timeout-Foundation (n.d.).

⁷⁷ Fernandes and Heflich (2022).

⁷⁸ Prime Minister’s Office (2019).

⁷⁹ Fernandes and Heflich (2022).

⁸⁰ Linturi and Kuusi (2019).

⁸¹ SOIF (2021).

‘Public Service Act 2020’⁸², such an obligation entails that chief executives of government departments (where the majority of legislation is processed) are expected to actively secure the legislation that is administered. This also entails anticipating long-term change to secure stable and functioning policies in a number of potential future trajectories. However, the Act does not stipulate a timeframe or state a legal obligation for departments to deploy stress tests accordingly. Conversely, it does require executives to publish Long-Term Insights Briefings on opportunities and risks that might have a future effect on society.⁸³

Since no centralised public unit for strategic foresight and stress-testing exists, the responsibility for organising domestic foresight efforts falls on the semi-established Strategic Futures Group, founded in 2016. Consisting of 140 foresight practitioners, it promotes the expansion of strategic foresight capacities in government and assists with peer reviews on the stress tests performed.⁸⁴ Documented efforts include the work done by the Ministry of Transport, where the public as well as experts were consulted in order to generate potential scenarios for what society’s modes of transport could look like in the year 2042. The impact of New Zealand’s land transportation system on potential future trajectories was thereafter calculated using a quantification model.⁸⁵ Similarly, the Ministry of Environment is obligated to produce risk assessments on climate change and use scenarios based on the latest data in order to examine possible weaknesses in different areas of society.⁸⁶

Stress tests tend to be conducted on an ad hoc basis after the mandatory assessments during the later stages of the policy process. Explanations for this are, in some instances, the lack of time or that evaluating the probability of future impacts is simply not prioritised.⁸⁷ Moreover, the outcomes of stress-testing initiatives rarely feed into the intended policies, which can partly be attributed to the lack of commitment mechanisms to ensure that policymakers engage in and implement strategic foresight activities and stress-test outcomes. While added value of anticipatory policymaking is acknowledged, stress tests play a negligible role in New Zealand’s policymaking. Part of the reason for this may be because the ‘Public Service Act 2020’ does not stipulate how the results of strategic foresight activities (such as the Long-term Insight Briefings) should be used by policymakers.⁸⁸

3.3. United Kingdom

The integration of strategic foresight practices in the UK government began in 1994 with the establishment of the UK Foresight Programme⁸⁹, which aims to improve the UK’s advantages in

⁸² Parliamentary Counsel Office (2020).

⁸³ Department of the Prime Minister and Cabinet (2021a; 2021b); Ministry of Justice (n.d.).

⁸⁴ Fernandes and Heflich (2022).

⁸⁵ Lyons, et al. (2014).

⁸⁶ Ministry for the Environment (2020; 2021).

⁸⁷ Fernandes and Heflich (2022).

⁸⁸ Ibid.

⁸⁹ Parliamentary Office of Science and Technology (2009).

technology and science to enhance overall competitiveness and life quality, promoting strategic foresight, and a new fund was one of multiple initiatives.⁹⁰ Currently a part of the Government Office for Science (GOS), the UK Foresight Programme supports members of the cabinet and the prime minister in developing evidenced-based policy and strategic foresight. For instance, in encouraging the use of strategic foresight among practitioners, the UK Futures Toolkit was developed, containing guidance on applying strategic foresight methods (such as horizon scanning) in policymaking. The Toolkit accentuates that stress tests as policy tools are grounded in other strategic foresight methods, including scenario development and horizon scanning.⁹¹ Moreover, the Future Team unit supports government agencies with strategic foresight practices by developing and disseminating the relevant information to policymakers⁹² for possible use in stress-testing.⁹³ Since early 2020, the UK government has also introduced additional tools to assist public bodies in utilising strategic foresight measures, where the Futures Procurement Framework provides guidance on horizon scanning from 27 external suppliers.⁹⁴

Anticipatory policymaking is reflected through strategic foresight initiatives in a range of sectors in the United Kingdom. Scenario development and horizon scanning are prominent methods, and have been used to examine, for instance, the future of urban development, farming, food, and transport.⁹⁵ In order to gain useful external insights on policy issues, strategic foresight initiatives in the United Kingdom involve numerous different stakeholders. Foresight-based projects on, for example, the future of cities in Britain utilised workshops, the Delphi method, and interviews to consult experts in urban development, researchers, local governments, and businesses.⁹⁶

Although stress-testing is not applied as frequently in UK policymaking, one study by the GOS explored obesity in Britain and used four potential future trajectories as well as quantitative modelling to stress-test particular configurations.⁹⁷ As emphasised in the government's 25-year environment plan, the Department for Environment, Food & Rural Affairs is currently using stress tests to explore key environmental targets identified against a range of potential future trajectories. It has so far declared its intentions to work towards better follow-up and evaluation of these aims in addition to the proposition that they be amended at least once during each electoral term following a review of the progress made.⁹⁸

There is however no legally binding or generally accepted approach to stress-testing policies across agencies. Instead, when utilised as policy tools, stress tests are typically performed at the later stages of the policy cycle for purposes of assessment evaluation. Furthermore, UK policymakers' uptake of stress-testing has been shown to be limited, which is attributed by

⁹⁰ UK Parliament (2001).

⁹¹ Fernandes and Heflich (2022).

⁹² Government Office for Science (2021a).

⁹³ Government Office for Science (2017).

⁹⁴ UK Government (2020).

⁹⁵ Government Office for Science (2011; 2016; 2019).

⁹⁶ Government Office for Science (2016).

⁹⁷ Government Office for Science (2007).

⁹⁸ Fernandes and Heflich (2022).

policymakers to a discrepancy between the time it takes to perform stress tests and the limited period for affecting policy design.⁹⁹

In **Scotland**, the Future Forum was founded in 2005 to remedy political short-termism; that is, to “...look beyond immediate horizons, to some of the challenges and opportunities we [Scotland] will face in the future”.¹⁰⁰ The Forum’s efforts are guided by a Board of Directors and its members include Scottish parliamentarians, academics, business representatives, and civil servants. Though the Forum still depends on the Parliament for funding, it is autonomous in terms of determining the areas of its work.¹⁰¹ One of the primary aims of the Forum is to encourage Scottish public debate with regard to futureproofing, and by doing this, it engages with policymakers, the public, and the business sector. Additionally, it also conducts studies that report on how particular Scottish sectors will evolve in the future.¹⁰² Overall, the Future Forum is laudable for directly promoting long-term thinking in public policy. Between 2011 and 2016, it organised in excess of 100 events¹⁰³, but assessing the impact of such initiatives is rather difficult. The Forum has only dealt with a few topics in its research, and such a narrow scope might have been affected by the limited influence of the Scottish Parliament in dealing with healthcare, economic policy, or risk research.¹⁰⁴

In **Wales**, the ‘Well-being of Future Generations Act 2015’ (WFGA) came into force in 2016, being the first piece of legislation to impose an obligation on public bodies to account for future generations.¹⁰⁵ The Welsh government has played an essential role in the success of the ensuing programmes, not merely as it is a public body obligated under the Act itself, but because its demonstration of the principles in the Act will have a considerable impact on the behaviour of other public bodies.¹⁰⁶ However, crucially the Act’s success depends on the political willingness of Welsh public administration, and the inclination of the Future Generations Commissioner (FGC) to hold public bodies to account under the Act.¹⁰⁷

The legal requirement imposed on public bodies can certainly improve the Act’s vision for Wales’ future development. Even though such a requirement cannot be directly enforced, the FGC can nevertheless be effective in holding public bodies to account. Given that this is attained, knock-on effects are to be expected, especially in private institutions that care about public contracts.¹⁰⁸ However, the statutory guidance and literature provided by the FGC and the Welsh government, while typically referring to the long term as a form of practice, is unclear on what “the long term” means.¹⁰⁹ In its well-being objectives, the four-year capital budget and one-year revenue plans are

⁹⁹ Ibid.

¹⁰⁰ Wilson (2016), cited in Jones et al. (2018, p. 157).

¹⁰¹ Jones et al. (2018)

¹⁰² Ibid.

¹⁰³ Ibid.

¹⁰⁴ Ibid.

¹⁰⁵ Davies (2017).

¹⁰⁶ Future Generations Commissioner for Wales (2020).

¹⁰⁷ Davies (2017).

¹⁰⁸ Ibid.

¹⁰⁹ Ibid.

considered a good balance between long and short-term interests. However, this is not thought of as long-term by most future generations experts.¹¹⁰ The risk is therefore that assessing the 'long-term' will be limited by the political cycle, which would undermine the Act's purpose.

¹¹⁰ For example, see Lawrence (2014); Hiskes (2009).

4. Characteristics of a successful strategic foresight system

As discussed in the introductory literature review (see section 2), strategic foresight practices scrutinise potential policy choices facing an uncertain future in order to better anticipate developments and respective impacts. Moreover, stress-testing can aid policymakers in addressing uncertainty when assessing the impact of policies against multiple scenarios and provides a proactive approach to improving policy performance. Governments lack the necessary tools to deal with unexpected events, and given the risks involved, there is consensus in the strategic foresight and stress-testing community that multiple potential future trajectories should be considered in the policymaking process.

As the strategic foresight practices in Finland, New Zealand, and the United Kingdom show, any organisational change will have to rely on legitimacy and receive support to authorise the allocation of the resources necessary and changes to otherwise established practices, thereby sustaining an effort.¹¹¹ As a result, the tendency through which anticipating the future is neglected in favour of more immediate pressures or continuous reporting requirements can possibly be managed. It could also incentivise the exploration of provocative issues that challenge existing assumptions and policy, ensuring that it is not performed as an academic endeavour, but rather as the foundation of priorities and decision-making processes within government.¹¹²

Among institutional arrangements to deliver strategic foresight, one of the potential components is having a central devoted unit to coordinate, conduct and champion measures and initiatives across agencies, such as Finland's Parliamentary Committee for the Future, the UK Foresight Programme, or the Welsh FGC. While centralising efforts is not a primary aim, it does allow for the standardisation and integration of principles across government departments and in centralised decision-making practices. Even though mainstreaming standards of practice is crucial, the experiences in the above-mentioned case studies indicate that some degree of autonomy for units can create opportunities to experiment with stress-testing ideas, challenging widely held assumptions about future developments. Stress-testing must be able to deal with developments running counter to established procedures, and even though it is crucial to institutionalise measures to make sure that they are not separated from other decision-making processes, autonomy is important for them to be able to explore disruptive and challenging ideas and make sure they are insulated from potential bias by the status quo agenda. However, strategic foresight capacity is not merely a matter of establishing particular institutions, but as emphasised by the OECD "... an additional willingness to engage with rapid change and high uncertainty".¹¹³ Still, in order to deliver any results at all, such institutions first have to exist.¹¹⁴

¹¹¹ Moore (1995); Moore and Khagram (2004).

¹¹² OECD (2019b).

¹¹³ OECD (2019b, p. 7).

¹¹⁴ Radavoi and Rayman-Bacchus (2021).

In pursuit of these aims, strategic foresight and stress-testing cannot be seen as isolated from conventional decision-making processes but are best viewed as part of them and can be utilised at any stage in the policy process, from scoping to testing current strategies.

Additionally, as shown by strategic foresight initiatives in Finland and the United Kingdom, stakeholders will have to be involved in the policy process, because only by encountering a change in understanding about unanticipated events and their effects will decision-makers obtain a sounder framework on which to base their decisions. The same goes for public servants not directly involved or affected in strategic foresight processes to understand the use and purpose of such practices, and how it is relevant to their respective assignments. Accordingly, governments should ideally aspire to provide futures literacy, conceived as the "... capacity to explore the potential of the present to give rise to the future"¹¹⁵, to public servants and communities with particular strategic foresight responsibilities. This embeddedness principle also applies in extending the conversation to citizens. Engaging affected communities further aids the process of building legitimacy by inputs provided by constituencies.¹¹⁶ A few countries have therefore engaged with business, labour organisations, academics, civil society, and citizens in shaping strategic foresight systems. As previously mentioned in section 3, Finland has demonstrated this through national strategic foresight initiatives where the public is consulted through dialogues about the future, and in the UK, exploring the future of British cities included workshops, the Delphi method, and interviews consulting experts, researchers, local governments, and businesses.

Establishing and organising strategic foresight systems inevitably needs feedback and review to enhance future responses to new developments. Demonstrating the positive impacts of good strategic foresight and stress-testing practices on better policies is vital, especially in relation to previously unanticipated opportunities that were identified and put into practice or crises that were able to be avoided. However, as emphasised by the OECD, such evaluation is challenging as it entails examining not yet realised or even projected futures and assigning a source of novel concepts in an intricate policy process.¹¹⁷

¹¹⁵ Miller (2007, p. 347).

¹¹⁶ Scharpf (1970).

¹¹⁷ OECD (2019b).

5. Recommendations for parliaments and governments

As this policy brief has demonstrated, strategic foresight and stress-testing practices scrutinise potential policy options to better anticipate future developments, taking a proactive approach to improving policy performance. Given the above discussion, even in a small number of case studies, accounting for the already established practices in Finland, New Zealand, and the United Kingdom, the key recommendations for national parliaments and governments for a successful strategic foresight and stress-testing system are therefore presented below:

- **Legislative commitments**, such as the process whereby, once every electoral cycle, the Finnish government is obligated by law to submit a report on the future to Parliament enabling long-term thinking across the legislature. Likewise, as there is no legal obligation to perform stress tests, attempts to improve policy performance focus on other methods of strategic foresight (such as scenario development or horizon scanning), showcase the need for reform. Moreover, in New Zealand, stress-testing forms part of the recognised standard of practice, and agencies are legally obligated to oversee and demonstrate that regulatory systems are operational as a result of the obligation of regulatory stewardship. However, as the 'Public Service Act 2020' does not stipulate how the results of strategic foresight research should be used by policymakers, little has been done to remedy the lack of effective policy implementation. Similarly, there is no legal obligation or generally accepted approach to stress-testing policies across UK government agencies, leading to policymakers' uptake of stress-testing being quite limited due to the narrow period of opportunity for affecting the design of the proposed policies. To address this issue, the imposition of the Welsh WFGA has led to the obligation of public bodies to implement strategic foresight and stress-testing practices, thereby confronting political short-termism.
- **Political commitments and parliamentary oversight** are crucial to effectively conduct and coordinate efforts, allowing for the standardisation and integration of principles across government departments and in centralised decision-making practices. For instance, the Finnish Prime Minister's Office issues a report on long-term perspectives to Parliament once every electoral term, essentially helping to control the tendency through which anticipating the future is neglected in favour of more immediate pressures, recognising future developments in time to act. Furthermore, such activities might be aided by public bodies with strategic foresight capabilities. Conversely, in New Zealand, no centralised public unit for strategic foresight and stress-testing exists, potentially causing such activities to be conducted on an ad hoc basis – the outcomes of which rarely feed into the intended policies. However, as demonstrated by the Welsh case, such initiatives' success crucially depends on the political willingness to implement strategic foresight and stress-testing in public governance.
- **Institutional capacity** enables governments to make use of intellectual capabilities and skills needed to establish strategic foresight and stress-testing and integrate them into the policy process. In Finland, domestic efforts are distinguished by collaborations between experts and

policymakers from multiple disciplines and fields, and both parliament and ministries are involved in the strategic foresight duties together, effectively enhancing the impact assessments of government proposals. Similarly, the Scottish Future Forum's efforts are guided by a Board of Directors and its members include Scottish parliamentarians, academics, civil servants and business leaders, encouraging the Scottish public debate with regard to futureproofing. Similarly, the UK Futures Toolkit has been developed to encourage the use of strategic foresight among policy professionals, containing guidance on applying strategic foresight methods, aiding the aim of recognising it as an essential component of policy design.

- **Embeddedness** further facilitates the process of integrating strategic foresight and stress-testing into policy design. These cannot be seen as isolated from the policy process but should rather be viewed as an integral part of it. While the Finnish approach has typically been focused on the policy design phase rather than the subsequent phases in the legislative cycle, in New Zealand, stress tests tend to be conducted on an ad hoc basis during the later stages of the mandatory assessments at the end of the policy process. Explanations for this are, in some instances, the lack of time, or in others, evaluating the probability that future impacts might not be prioritised. Likewise, British policymakers' use of stress-testing has been shown to be limited, which has been attributed to the discrepancy between the time it takes to perform stress tests and the limited period for affecting policy design. Drawing on the case studies in this policy brief, the lack of integration of strategic foresight into the policy cycle can be seen as the main reason for failing to adequately translate futureproofing initiatives into desired policy solutions, essentially leading to the intuitive preference for political short-termism rather than trying to anticipate uncertainties and their respective impacts.

While this policy brief has shown that strategic foresight, and occasionally stress-testing, are already being implemented across countries and policy areas, the above recommendations are essential components in bridging the gap between the agenda-setting phase and continued practices leading to tangible policy proposals. However, it is still unclear whether all of these components are required for a fully functioning strategic foresight and stress-testing system, and in what capacity these will have to be implemented in order to better anticipate disruptive developments and their respective impacts. Further research will therefore have to account for these factors.

6. Conclusions

As outlined in the introduction in section 1, the three main research questions in this policy brief are reiterated and, in turn, answered below, drawing on previous sections:

(1) What is the added value of strategic foresight and stress-testing for conducting effective impact assessments of policies and legislation at a national level?

Formulating policies inevitably means accounting for the future. However, as the record shows (see section 1 and 3), many governments lack the necessary tools to deal with unexpected or unprecedented developments in favour of so-called political ‘short-termism’. These include economic downturns, nationwide migration, climate change, and growing international instability such as war, armed conflict, and foreign occupation. To address this discrepancy, a few governments utilise strategic foresight, that is, the systematic procedure of looking beyond prevailing predictions, accounting for a range of futures to identify implications of policies implemented today. By using multiple methodologies (such as horizon scanning, megatrends and analysis of weak signals, developing several scenarios), it reveals and discusses potentially useful insights about the future.

Furthermore, disruptive events cause considerable impacts across sectors and geographies. These are typically referred to as high-impact, low-probability events (HILPs), and are explored through stress-testing, which can aid policymakers in addressing increasing uncertainty when evaluating policy performance against numerous scenarios. It provides a proactive approach to improving policy performance and can be expected to be more robust and have an increased chance of remaining functional during external shocks, and more resilient following disruptive events.

(2) According to the available literature, which methodologies and approaches for futureproofing and stress-testing are complementary to impact assessments?

Numerous methodologies and approaches have been and continue to be used to futureproof and stress-test policies, complementary to impact assessments. Horizon scanning is the most prominent of these methods and entails a systematic monitoring of data points to uncover potential causes of change, and therefore also risks and opportunities associated with such trends. Details on such causes can be collected through a number of methods, which can include interviews or workshops, and allow for consultation of experts and stakeholders in a particular sector.

Alternatively, megatrends analysis is another form of scanning that focuses on the detection of overarching changes expected to lead to multidimensional impacts. These can typically be identified tendencies resulting from previous developments that might decrease or increase in magnitude over time. Conversely, scanning can also examine high uncertainties by searching for weaker signals. This is a rather intricate process as there is usually no robust evidence to support potential findings. They are merely signs of issues that are yet to arise. Given that stress-testing is

the assessment of the impact a policy can have in a range of potential future trajectories, the development of multiple scenarios is therefore essential in the stress-testing process.

The Delphi method is another commonly used scenario development technique aiming to gather and coordinate views from experts on strategic prevalence of certain events. This is typically done by a deliberative process whereby experts consider and discuss each other's opinions to reach consensus. Depending on the scope of strategic foresight activities using scenarios (potential future trajectories), the aforementioned methods can treat different time frames. It is therefore conceivable to develop scenarios after a single workshop, or on the views of a range of different stakeholders and combination of generation techniques over a longer time period.

(3) What are the best practices, or useful examples from the past ten years from how parliaments and governments organise their resources for futureproofing?

While there are multiple examples during the past ten years of how parliaments and governments organise their resources for futureproofing, the most prominent examples in this policy brief include:

- The Welsh 'Well-being of Future Generations Act 2015' (WFGA), being the first piece of legislation to impose an obligation on public bodies to account for future generations the Act's success depends on the political willingness of Welsh public administration, and the inclination of the Future Generations Commissioner (FGC) to hold public bodies responsible under the Act, displaying the importance of **legislative commitments**.
- The Scottish Future Forum's efforts are guided by a Board of Directors and its members who include Scottish parliamentarians, academics, civil servants and business leaders, encouraging the Scottish public debate with regard to futureproofing, highlighting elements of **institutional capacity**. Reciprocally, the UK Futures Toolkit, containing guidance on applying strategic foresight methods (such as horizon scanning) in the policy process further aids the aim of recognising the value of strategic foresight as an essential component of policy design.
- The Finnish Prime Minister's Office's obligation to issue a report on long-term perspectives to Parliament once every electoral term, essentially helps to control the tendency through which anticipating the future is neglected in favour of more immediate pressures, recognising future developments in time to act and demonstrating **political commitment and parliamentary oversight**. Such activities are further aided by public bodies possessing strategic foresight capabilities, which include the Interministerial Government Working Group for the Coordination of Research and the Government Foresight Group.

Four principles of foresight-based policy analysis and stress-testing of legislation for national parliaments and governments have ensued from these initial inquiries, which will aim to aid researchers and parliamentary and governmental agencies to support the establishment of effective and autonomous strategic foresight and stress-testing units, and opportunities for their improvement and review.

However, as is evident, further research will have to be undertaken in order to identify the ideal policy practices in the face of external shocks, and through a more extensive empirical record detail successful aspects of building greater anticipatory capacity and institutionalise the use of such methodologies. The strategic foresight and stress-testing realm would benefit tremendously from examples highlighting the applicability and relevance of the methods utilised. Given that it is a niche issue, such practices will aid understanding significantly and highlight the added value of the entire field, effectively prompting policymakers and practitioners alike to make use of its many advantages.

Furthermore, serving to aid Westminster Foundation for Democracy's (WFD) country teams in their work with national parliaments and governments, crucial questions concern how political will within systems is supposed to be generated (where political will exists, how it came about, and how it is sustained) as strategic foresight capacity is in part due to an additional willingness to explore fast-paced developments with high uncertainty.

Another issue that would need to be addressed is the function of political parties in strategic foresight and stress-testing practices, given that short-termism, the electoral cycle, and citizens (that is, voters) are viewed as a contributing factor to short-sightedness. Accordingly, political parties should probably be part of the solution to how strategic foresight and stress-testing practices can be embedded as an accepted standard.

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Annex 2: About the author

Douglas Thorkell is currently pursuing a Degree of Bachelor of Science in Politics and International Relations at University College London (UCL), where he also serves as a Research Assistant under the supervision of Dr Julie Norman, a Lecturer in Politics and International Relations at University College London (UCL), and the Co-Director of the UCL Centre on US Politics (CUSP).

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Westminster Foundation for Democracy (WFD) is the UK public body dedicated to supporting democracy around the world. Operating internationally, WFD works with parliaments, political parties, and civil society groups as well as on elections to help make countries' political systems fairer, more inclusive and accountable.

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