Australian Government

Department of the Prime Minister and Cabinet

Policy Fit for the Future

The Australian Government Futures Primer

PP TO Policy Projects & Taskforce Office

Australian Government

Department of the Prime Minister and Cabinet

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FUTURES HUB

This is a guide for using Futures to deliver better policy.

Futures is a systematic exploration of probable, possible and preferable future developments to inform present-day policy, strategy and decision-making. It uses multiple plausible scenarios of the future to anticipate and make sense of disruptive change. It is also known as *strategic foresight*.

Futures in policy is first and foremost about translating insights into action: *what can the government do now* to positively influence long term change and ensure Australians will thrive in a range of possible future worlds.

Through a range of structured participatory tools, Futures can help policy teams to:

- develop more and better policy choices for government decision-makers;
- identify emerging strategic risks and opportunities;
- create more resilient and flexible policies that can succeed in multiple possible futures - not just the one we assume.

Futures does not attempt to predict events. In our volatile, uncertain and complex world this is rarely possible, especially in the long term. Instead, Futures assumes that the fundamental business of government is *building the future we want* – actively shaping change through policy.

This primer provides an overview of Futures methodologies and their practical application to policy development and advice. It is a first step for policy teams and officers interested in Futures: providing you with a range of flexible tools, ideas and advice you can adapt to your own policy challenges and environments.

This primer was developed by the Policy Projects and Taskforce Office in the Department of Prime Minister and Cabinet. We have drawn on expertise from inside and outside of government – including through our project partners, the Futures Hub at the National Security College in the Australian National University.

This primer has been written by policy officers, for policy officers – with a focus on practical and tested approaches that can support you to create policy fit for the future.

The Policy Projects and Taskforce Office (PPTO)

The PPTO is the Department of Prime Minister and Cabinet's in-house strategic policy project unit. Established in 2008, the PPTO was modelled on best practice strategy consulting approaches tailored for the public sector, and has continuously evolved since.

The PPTO brings a toolkit of problem-solving methodologies – including Futures - to tackle difficult strategic policy projects for the Australian Government. We engage early in the policy cycle for maximum impact and collaborate across the APS to build better futures for all Australians.

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Part 1:
Futures
and Policy

Futures: an introduction

What is Futures?

Futures is a systematic, participatory and proactive approach for **exploring multiple plausible futures** to support more forward-thinking policies, strategies and decisions. It is also often called *strategic foresight,* particularly when applied to organisational strategy. Futures uses methodologies such as horizon scanning and scenario planning to anticipate and prepare for possible change and disruption. Futures can help us to understand the forces shaping our local, national and global systems, and how they may evolve over time - supporting policy to tackle the challenges of tomorrow, not just the problems of yesterday.

From:

(implicit and assumed)

```
The Present ───────────────►  'The' Future
```

(explicit and comparative)

To:

```
                    ┌──────────────────────────────┐
              ┌────►│ The futures we expect         │
              │     │ (what we think is probable)   │
              │     └──────────────────────────────┘
              │                  │
              │     ┌──────────────────────────────┐
              ├────►│ The futures we don't expect   │
The Present ──┤     │ (what we imagine is possible) │
              │     └──────────────────────────────┘
              │                  │
              │     ┌──────────────────────────────┐
              ├────►│ The futures we want           │
              │     │ (what we agree is preferred)  │
              │     └──────────────────────────────┘
              │                  │
              │     ┌──────────────────────────────┐
              └────►│ The futures we fear           │
                    │ (what we want to avoid)       │
                    └──────────────────────────────┘
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Inform decisions and policy

PP TO Policy Projects & Taskforce Office

The modern era: Crises, disruptions and exponential trends

Every decade in modern history has involved seismic changes in technology, geopolitics and society – although not all were identified as significant at the time.

Year	Event
1900	Australian Federation
	First airplane, automobile, typewriter and radio broadcasts
1910	World War 1
	Russian Revolution
1920	League of Nations formed
	Silent films give way to sound
1930	The Great Depression
	Jet engine and radar invented
1940	World War 2
	Transistors, commercial television, and the atomic bomb
1950	Cold War begins (Warsaw Pact)
	Korean War
1960	First human in space
	Vietnam War
1970	China's Cultural Revolution
	First commercial microprocessor
	Oil and energy crises
1980	Rise of personal computers
	First genetically modified crops
1990	The end of the Cold War
	Internet, email and mobile phones
2000	9/11 and wars in Afghanistan/Iraq
	The iPhone and smartphones
2010	Global financial crisis
	Social media & Netflix
	CRISPR genome editing
2020	Covid-19
	??
2030	??
	??
2040	??

Why should we explore multiple future possibilities?

The key assumption of Futures is that accurately forecasting the future is not possible over longer time horizons. There are no 'facts' about the future – only our expectations, and more or less plausible possibilities. While we must rely on predictive models, data and assumptions if we want to have evidence-based policy, we also need to appreciate the limitations of forecasting, economic models and traditional risk analysis.
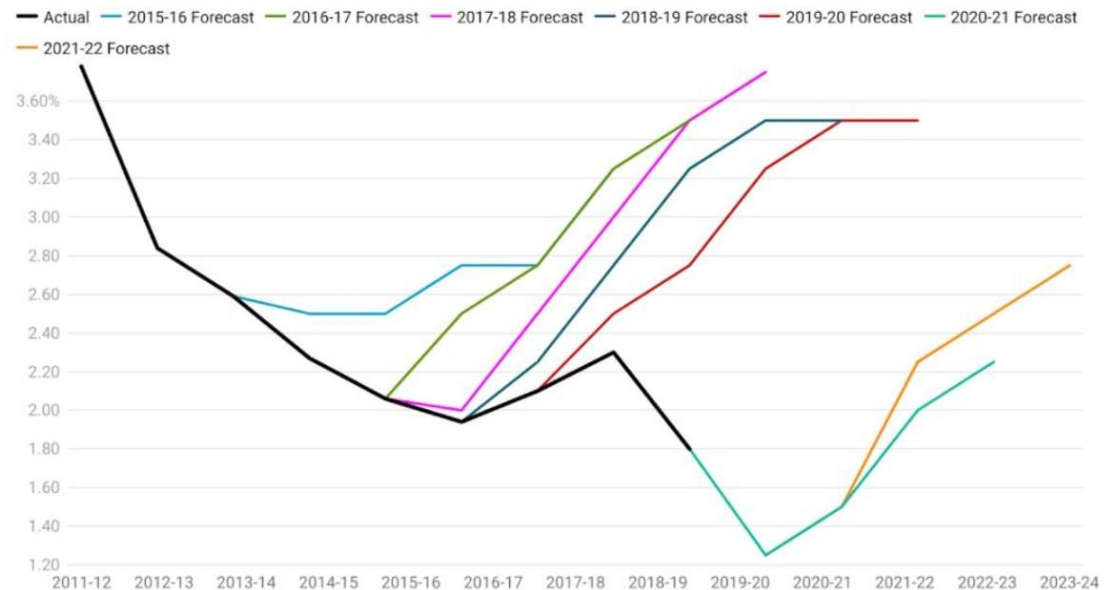
This is particularly important in a globalised, interconnected world that can be described as **turbulent**, **unpredictably uncertain**, **novel** and **ambiguous** (TUNA).[1] In any given decade, we are challenged by disruptive events, changes and innovations with cascading consequences.

Predictive models – even the ones in our heads - are fundamentally based on historical information and assumptions. They are not always (or often!) reliable, particularly in the aftermath of large disruptions (such as Covid-19) or when encountering novel issues (such as artificial intelligence). The uncertainty of our future policy environment is a significant challenge for governments, which need to secure positive outcomes through policy over years or even decades.

Futures methodologies engage with this uncertainty by generating alternative pictures of the future which current and potential policies, plans and strategies can be tested against. While none of these pictures may be correct in many (or even most) details, policy that is robust across a range of plausible future scenarios is more likely to be effective than policy developed with only one hypothetical future state in mind.

> *There are no 'facts' about the future – only our expectations, and more or less plausible possibilities*

Treasury Wage Growth Forecasts vs Actual Wage Growth

— Actual — 2015-16 Forecast — 2016-17 Forecast — 2017-18 Forecast — 2018-19 Forecast — 2019-20 Forecast — 2020-21 Forecast — 2021-22 Forecast

Is Futures just speculation and conjecture?

No. While we cannot *predict* the future, we can *influence* it. Governments remain the most powerful agents for shaping the future – through inaction as well as action. As policy officers, we have a responsibility to provide informed, strategic and forward-looking advice that supports governments to achieve long-term objectives while adapting to disruptive change. Futures activities should always focus on producing actionable insights, achievable policy options and momentum for proactive decision making.

Futures uses both **explorative ('what could happen?')** tools and **normative ('what do we want to happen?')** tools. We can use these in combination to identify preferred future scenarios, and pathways to achieving them. An important premise of Futures is that by developing a better understanding of the drivers of future change, and how strategies may play out under different future scenarios, we are better equipped to make good decisions and policy. This includes the identification of a wider range of choices compatible with the unfolding future, including novel policy ideas and alternative solution spaces that can provide the Government more options for securing its longer-term strategic goals.

Futures methods also involve surfacing and questioning assumptions about the future. These may be tightly held, overly optimistic or pessimistic, or based on poor evidence. We are all vulnerable to cognitive bias and analytic pitfalls, so it's important to test our own thinking to look for unconscious errors or gaps. By taking a structured approach to thinking about change, Futures can challenge these "official futures" – explicit or implicit institutional views on the future which may be comfortable, simplified, biased or unrealistic. Through contrasting this 'baseline future' (or 'ghost future') with alternative plausible future scenarios, Futures can help mitigate against wishful thinking, complacency and bias.

See the sidebar for a quick "Baseline Futures" exercise you can do right now!

Futures Exercise: Baseline Futures

This is a simple and quick exercise you can do by yourself or in a small group.

1) **Select a focal policy space related to your work**– this can be specific to a system (Australia's health system, or immigration system, or the China/Australia relationship) or an environment (the Australian economy, or the global security environment).

2) **Make 6-10 quick predictions** about what your focal policy space will look like in ten years' time:
    o   Your list must include at least three key things that will *be different to now,* and three key things that will *be the same as today.*

    o   For example, if your focal space is arts policy, these things could include: in 203X, AI has put most of our freelance creative workforce out of work. (Change) The major arts institutions still attract most government funding in the sector. (No change).

    o   This list of predictions is your baseline scenario – "Scenario A". Write at the top of your list: *In the year 2035, the key features of [your policy space] are:* (You can add some narrative about the journey between now and 2035. If you're doing this with a group, compare your lists!)

3) **Then test yourself:** Assume you got a random half of your predictions wrong. Change them – this is **"Scenario B"**. (If you disagreed with your colleagues, this is a great time to switch lists). Then change the other half - this is **Scenario C.** (This might require some imagination to consider how you could have got it wrong – it's OK to drop the prediction and make a different new one instead.)

4) **Test the existing policies in your space** under each scenario – as if you knew for a fact it was going to happen. If you knew that scenario was the future, what would you change about current policy? Are there any actions that make sense under all three scenarios?

1. Ramirez, Rafael, and Angela Wilkinson. 2016. Strategic Reframing: The Oxford Scenario Planning Approach. Oxford University Press.

A four-stage model for applying Futures in policy

These are flexible, scalable steps to illustrate the core logic, mindset and methodology of Futures – not a mandatory list of activities you must integrate into every policy project.

This model illustrates the range of roles Futures can play in a policy process, and provides a logical 'flow' for combining different activities and building on prior work. The techniques described in this primer typically straddle two or more of these stages, and it's always appropriate to compress these stages into the time and resources you have available.

While an *ideal* Futures process may go through all these stages over weeks or months, a *practical* Futures process (such as the tools in this primer) will typically focus on the most important and relevant elements for your context and problem.

1. Mapping (possible futures)

Mapping involves gathering intelligence, evidence, diverse perspectives and expert insights to canvas the possible future of a focal policy space, including the trajectory of known trends, emerging issues and possible disruptions – "signals of change." Mapping activities expand our knowledge of what is possible and reveal new risks and opportunities for policy.

2. Sense-making (plausible futures)

Sense-making is the process of surfacing meaning and significance from uncertainty, novelty, complexity and change. It involves synthesising and exploring disparate signals of change to analyse the possible implications for policy environments and systems, typically through the development of scenarios. Scenarios are useful for constructing plausible and coherent views of the future to partition uncertainty and make sense of accelerating change.

3. Challenging (provocative futures)

Once you have developed insights about the future, they can be used to test assumptions, expectations, strategic goals and existing policy settings to build resilience against shocks, surprises and disruptions. Through participatory processes, Futures can challenge existing mindsets, behaviours and perspectives to avoid being trapped in 'business as usual' and flush out alternative policy options and pathways.

4. Catalysing (preferable futures)

After identifying what can or should be done differently, it is important to translate insights about the future into actionable policy. This includes building consensus on preferred future scenarios, strategic agendas and policies and creating agendas for change. Futures can also be useful in communicating forward-looking recommendations to decision makers and stakeholders with influence and impact.

Futures in policy: when and how

All policy development is about shaping the future. Futures tools support the development and delivery of great policy.

Policy development is a process of exploring what we can do now to create a future that delivers better outcomes for Australians. Whether we are ideating, analysing, strategising, engaging, implementing or evaluating, we should always be looking forward.
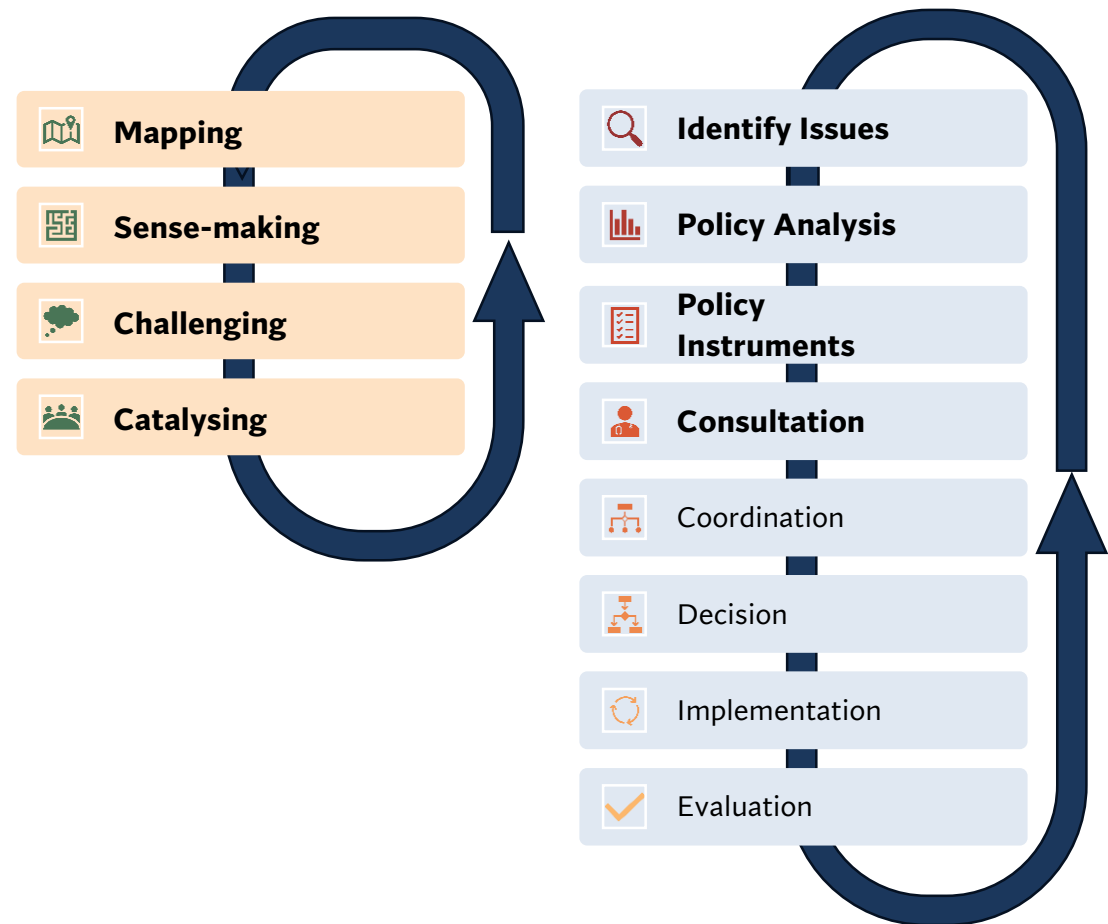
In practice, policy development can be a messy business – often more of an iterative contest of ideas and interests than a linear process. However, policy models can still be useful for illustrating how Futures can support policy work.

Futures can enhance any stage of the policy cycle. However, it is typically most effective in the early stages of policy work when there is the greatest potential to inform policy direction.

Futures is especially relevant to the first four stages of the traditional Australian policy cycle, which focuses on defining and analysing the issues at play and developing options for decision-makers.

While the ideal is to move through each stage as logical steps in a process, Futures methods can still be usefully used independently and partially to support different elements of the policy process. For example, Futures could be used to support a consultation process by using scenarios with stakeholders to stress test potential policies, or to scan for emerging risks that could threaten policy implementation.

The Futures Cycle ⟵┈┈┈⟶ The Australian Policy Cycle

The Futures Cycle	The Australian Policy Cycle
Mapping	Identify Issues
Sense-making	Policy Analysis
Challenging	Policy Instruments
Catalysing	Consultation
	Coordination
	Decision
	Implementation
	Evaluation

There is a close alignment between the *Delivering Great Policy* (DGP) framework for providing policy advice and Futures. The four elements of great policy advice proposed in the DGP model are equally applicable to Futures activities – good Futures work should also be clear on intent, well informed, practical to implement and influential. Futures activities can also be designed to focus on specific elements of the DGP framework to enhance policy advice, as the table below suggests.

Delivering Great Policy model	Futures model
Clear on intent We are clear on the policy intent and what our role is.	**Sense-making, Challenging** Futures refines the problem space and supports agenda setting and strategic direction to land a preferred policy direction that will work with the grain of change.
Well informed We are forward looking and learn from the past. We actively seek multiple and diverse perspectives including from those impacted by the policy.	**Mapping, Sense Making** Gathering "signals of change" expands our knowledge of what's possible and reveals diverse perspectives, surfacing relevant future-focused insights.
Practical to implement We work with those involved in implementation and try out multiple options.	**Challenging, Catalysing** Future-focused insights developed through participatory processes can stress test implementation pathways and develop new ideas and options for achieving objectives.
Influential The right people have been engaged along the way.	**Challenging, Catalysing** Participatory Futures processes can build consensus with stakeholders and establish a shared vision for success.

The adaptive mindsets that underpin delivering great policy advice are also core to delivering great Futures in policy:

- **Humble** - We have expertise, but we don't have all the answers. We can't solve everything on our own.
- **Proactive** - We develop policy options ahead of being asked for them – being proactive and ready to respond.
- **Curious** - We are interested in the evolving issues, and new approaches as they emerge.
- **Timely** - We see timeframes as a boundary rather than a constraint.
- **Collaborative** - We involve those affected by the policy, not just to tell them what we're doing, but to also get their input into the best way to go about it.
- **Consider the wider context** - We understand how policy issues are linked, and work together across government to solve problems.
- **Adaptive** - We avoid the approach that one size fits all, ensuring our approach, advice and solutions are appropriate to the context.
- **Practical** - We test and iterate possible solutions to make sure our policies will work in the real world.

Common challenges, barriers and pitfalls

Futures isn't easy – especially in time and resource constrained environments. Here are some common mistakes and challenges we've encountered applying Futures to policy.

Over-promising what Futures can do

- **Futures is not a silver bullet or universal solution for long term policy and strategy**. It is not a substitute for 'proper' policy advice and development processes, or in-depth research and analysis. It is a complementary approach that - when delivered effectively, with practice and experience – can enhance existing policy and strategy through broadening horizons, opening up space for deliberative discourse, and bringing new ideas into the policy process.

- **Futures activities cannot replace the hard work required for turning great policy ideas into reality**, especially in inertia-heavy institutions and bureaucracies.

- **It's important to set appropriate expectations:** time, effort and iteration are necessary for good results, especially when starting out. In attempting to build an authorising environment, it can be tempting to overstate the potential benefits of Futures activities.

- **It's also critical to ensure Futures approaches are applied to the right problems:** if the time horizon of interest is under three years, a more conventional strategy or risks process might be more appropriate.

"It's interesting, but what's the point?"

Futures activities often struggle to move beyond superficial explorations of well-known trends and contemporary issues, generating conversation but not action. This can rapidly erode credibility, interest and support. There are a few reasons why this can happen:

- **Failure to establish and agree a clear purpose for a Futures activity or process** (e.g. establishing priorities for long term reform, setting direction, assessing risk, developing policy options, testing strategy, building consensus with stakeholders).

- **Failure to connect Futures to live projects, policy teams and policy processes.** To be effective, Futures activities need users able to take forward insights, actions and strategies and apply them to policy development.

- **Failing to follow up and translate strategic insights into concrete actions.** Structured workshops can draw on the collective intelligence of groups quickly, but insights will need to be translated into influential, critical and rigorous policy products to become actionable. This can take significant time and iteration, including bringing people back to the table to refine and lift the quality of ideas.

- **Failure to bring anything new to the table:** It's important to utilise thought leaders, leading literature and diverse perspectives to reach outside the organisation and inject novel, expert and critical ideas into activities.

Institutional barriers

In the APS, we've found dedicated Futures functions often faces similar challenges to research and analysis functions, strategy functions and policy innovation functions. They are hard to build and easy to cut, particularly when there is urgent policy implementation work, short political cycles, and tight resources. This is a challenge across the OECD.

Building and sustaining an authorising environment for Futures is tough. Hierarchy, silos, groupthink and institutional inertia can create resistance to investing in work which could challenge strongly-held assumptions and experts seeking to protect a prediction monopoly. Many of the critical long term policy challenges we face today involve thorny trade-offs, significant economic and social costs, and difficult decisions - which we are not always comfortable bringing to a Minister without sanding off the edges.

The short-term nature of much of our work both creates a challenging environment for Futures (and long-term policy in general) but also leaves gaps which Futures can address.

Seven principles for effective Futures work in government

1. Clear objectives, sharp policy focus and structured processes will maximise results.

Ensure participants, stakeholders, authorisers and decision makers understand the purpose and scope of the activity, and what outcomes it is designed to deliver– including what success and failure looks like, and how the activity will contribute to policy, planning and decision making. Structure and careful process design is important to ensure activities progress beyond the identification and discussion of insights into prioritisation and developing options for action.

2. Use participatory processes to engage as widely and deeply as possible.

In uncertain, complex and ambiguous policy spaces, important and relevant knowledge is distributed widely between different stakeholders, government bodies, experts and sectors of the community. Futures benefits from leveraging alternative and critical perspectives, people on the frontier of change, and non-traditional policy actors to generate novel insights and challenge legacy thinking.

3. Focus on "pluralising" the future.

Be careful that Futures does not become focussed on probability, feasibility and forecasting (extrapolating historical data into the future) – particularly by focussing on one possible future scenario to the exclusion of all others. There is not one, but many possible futures, and we need to ensure Futures focuses on *plausibility* rather than *probability* to broaden awareness of what is possible.

4. Design for users, not audiences.

A common trap for Futures work is producing great written work that sits on a shelf (or more commonly, disappears into the depths of a document management system) because it was designed to be read, rather than used. Having a plan for how the insights developed in a futures activity will be used – in policy, strategy or decision-making – is fundamental for delivering *useful* futures activities and processes.

5. Involve stakeholders and senior decision makers early in the process to build ownership and understanding of the process.

Futures is more likely to prompt decisions and action when the users of insights are deeply engaged in the process. Ideally, anyone who is going to use the outputs should be involved in their development (such as involving senior decision makers in scenario development to draw on their insights, rather than giving them scenarios at the end of a process). Carefully enlisting stakeholders as champions can build ownership of outcomes and generate momentum for action.

6. Bias activities towards discussing the novel, interesting, ambitious and "just barely plausible" – and systems over symptoms.

Participants will often trend towards the expected, known and predictable. However, many important historical developments were regarded as implausible until after they occurred. Futures needs to consider a wide range of potential scenarios and possible disruptions to effectively stress test policy and generate genuinely novel insights and policy ideas. It is also helpful to focus on *change* and the forces shaping it, rather than specific *events* and things that could happen. Policy spaces will inevitably transform and evolve over time in response to the pressures of change – understanding those pressures can be fruitful in exploring what the consequences can be for long-term policies.

7. Choose the most appropriate time horizon for the policy space, but default to ten years.

It is important to push thinking beyond the current electoral cycle, as people can envisage a wider range of possibilities over a longer timeframe. Short time frames (under five years) tend to focus on events and known risks and neglect system transformations, and longer time horizons can involve an overwhelming amount of possible change. Ten years tends to be the sweet spot – but it may make sense to go longer depending on the policy space.

Getting started: preliminary steps

Futures is a purposeful and structured methodology that benefits from conscious design and clear objectives. There is no single, right or best method: every policy space, context and issue is different.

While the diverse techniques in Part 2 of this primer are flexible and can be adapted to a range of policy problems and projects at a variety of scales, the preliminary steps to choosing a tool are usually the same:

1. Define the focal policy space.

A tighter focal policy space will make it easier to explore the key forces shaping the space and generate actionable insights. For example, it is easier to explore "*the future of the Australian retail sector*" than "*the future of the Australian economy*" – or even easier, *"the future effects of AI on Australian retail over the next 10 years"*. There is a balance to strike: if the focus is too tight it can lead to a focus on risks and events over systemic transformation.

2. Define the scope and purpose of the futures activity.

It can be useful to capture the aim of the activity as a question, for example:

- What will the potential pressures be on the higher education system between now and 2035, and what policy decisions can we take today to ensure it will be sustainable, equitable and contributing to national innovation and prosperity in ten years' time?

- How could Australian cities be transformed by climate adaptation and decarbonisation over the next decade, and what can we do now to minimise the future costs of transition?

- How could working practices and norms change for most Australians over the next decade, and what could be the implications for workplace relations, employment policy and regulations?

Note that this may not be an easy exercise and can turn into a mini-project. Sometimes simply defining the right question will be the key challenge for a policy team and becomes the most difficult part of the process.

3. Agree format, deadlines, outcomes and deliverables.

It is important to determine early what outcomes and deliverables the activity will produce – it can be a good idea to mock up pilot products (such as example scenarios or driver maps) in advance of the process design to ensure they will be useful and appropriate for decision makers and feed into live policy development or strategy.

An important format consideration is whether participatory processes such as workshops should be online, in person or both. Depending on the number of participants, running separate virtual and in person sessions is often superior to hybrid approaches.

Additional tips for Futures activities

- **The best Futures projects will leverage both 'deep work' and 'collective intelligence'** – using a mix of reflective, creative, critical, strategic, iterative, analytical, and consultative techniques to produce and synthesise insights. Workshops and other participatory processes are central to Futures, but in-depth research, analysis and thinking is also important to make sense of complex and uncertain issues.

- **Make space to come back to the drawing board.** Great policies and strategies need to be informed by great insights. Sometimes a consultation process or workshop fails to elicit quality insights. Or it succeeds - and the policy issue is reframed to the extent that you need to start over. Quality comes from iteration, so factor it in to ensure you don't cut corners and race to a final solution without a clear understanding of the problem space.

- **Warm up and icebreaker exercises** can be useful to help people get into the right mindset. Futures is a creative and social learning endeavour that rewards curiosity, humility, empathy and openness – these qualities lead to a deeper understanding of policy issues and the identification of better solutions. However, they are not always rewarded in a professional context, and you may need to help people "gear shift" for a Futures exercise.

Part 2:
The Core
Techniques

The core techniques: an overview

All Futures practitioners use a set of similar techniques, both for undertaking their own work and in collaboration with others.

This section introduces the core techniques that are most useful for policy advice and analysis.

This primer provides a menu of options for you to choose from. All are useful in different contexts, so pick techniques that you think will deliver the most useful outcomes for what you are trying to achieve.

Practice makes perfect

This section provides instructions, templates and an example of each technique to get you started. It is normal for these techniques to feel opaque or mysterious when you first read through them. However, all are designed to be intuitive and make sense once you work through them.

Take the time to have a go at different techniques and try them out. The more you use them, the better you will understand their strengths and limitations, and the more helpful you will find them. It can be difficult to assess the level of effort you should invest into a futures activity; there is no perfect answer as it depends on your policy problem and context. This is a matter of judgement and experience.

If possible, it always helps to talk to people who are more experienced, so do reach out to the Policy Projects and Taskforce Office, the Futures Hub or join the APS Strategic Futures Network – or anyone else you know who is doing work like this.

Workshop – or desk work?

One of the superpowers of Futures is harnessing varied and competing perspectives to build a richer understanding of the futures we are facing. All these techniques have a participatory focus and are powerful approaches for structured workshops.

However, these tools can be just as useful in other contexts – within small teams, by individuals, or virtually through online platforms. You can also use other engagement techniques such as surveys or interviews to enrich Futures activities, broadening the perspectives and sources of information flowing into these exercises.

There is also an important role for deep thinking, research and analysis in Futures. Participatory processes will yield richer results when you can inform the design with a robust understanding of the problem space. Additionally, insights generated through workshops will typically need to be packaged for users and participants through useful policy artefacts such as briefings, slide decks or reports – don't underestimate the time required to iterate, test and consult on these. Remember, think in terms of users: not audiences. Who will use this and for what?

The primer focusses on the key steps in each technique so you can adapt them to your circumstances. Even if you're planning a workshop, it's often useful to give these a shot by yourself at your desk first – or even better, with a partner!

How to use this Primer

This primer includes 9 core Futures techniques, selected for their utility in policy.

Each technique includes a step-by-step guide, and most include a template and example.

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Summary of the core techniques

	The Core Techniques	Use it for	Page
Mapping	Horizon Scanning	Gathering novel and alternative intelligence and information to challenge existing assumptions and expectations about the future of your policy space.	19
	STEEP	Systematically exploring **s**ocial, **t**echnological, **e**conomic, **e**nvironmental and **p**olitical change drivers (trends, disruptions and uncertainties) that could influence the future of your policy space.	23
Sense-making	Megatrend Analysis	Exploring the implications of the most important known global forces of change for policy, strategy and decision making.	27
	Driver Mapping	Identifying and prioritising the key dynamics of change shaping your policy space, and assessing which need to be factored into policy now and which should be explored further through scenarios.	32
	Futures Wheel	Exploring the direct and indirect consequences of change drivers and their interactions. A flexible visual tool for workshops.	37
Challenging	Scenarios	Imagining alternative futures to understand the possible implications of change, identify opportunities and risks, and create a shared language of the future for teams and stakeholders.	42
	Stress Testing	Testing how resilient your policies and strategies are to alternative futures, and make your policies and strategies more robust to possible change.	51
Catalysing	Blue Sky / Black Sky	Identifying the futures you and your stakeholders want to achieve – and the futures you want to avoid. Develop policies and strategies to realise your preferred future.	56
	Backcasting	Understanding the key events that need to happen for a preferred future or desired scenario to emerge. Work backwards to understand the sequence of change and identify key inflection points for policy and strategy to influence.	61

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Putting the techniques together

Like any team of superheroes, Futures techniques are individually effective, but most powerful when combined.

The diagram to the right demonstrates three common pathways for using the outputs of one technique as the inputs for another. A horizon scanning process is optional in all three pathways, but can be useful to provide background and initial inputs for participants and users.

- **Pathway 1** is a scenario focused pathway which moves through all four stages of the Futures cycle. The core of this pathway is using Driver Mapping to identify and prioritise change drivers for scenario development and use.

- **Pathway 2** is a faster, lightweight pathway focused on megatrends and exploring their combined implications for policy.

- **Pathway 3** is a visioning and strategy process which aims to build consensus around a preferred future and identifying the most important steps for achieving it.

Driver Mapping (supported by STEEP), Megatrend Analysis and Blue Sky / Black Sky exercises are all good starting points: independent activities that can usefully contribute to policy and strategy, and can also generate momentum and outputs for subsequent Futures activities.

These are suggestions, not instructions: these techniques can be sequenced in a variety of ways. For example, Futures Wheel can provide useful inputs for scenario development, and Blue Sky / Black Sky can produce scenarios which can be used in Stress Testing.

Remember the "Getting Started" tips in Part 1: a sharp focal policy space; clearly defined scope and purpose; agreed format, deadlines, outcomes and deliverables. Once you are clear about the key parameters and objectives for your Futures exercise, aim for the simplest process and sequence of techniques that will get you what you need.

Three common pathways

Pathway 1 | Pathway 2 | Pathway 3

Horizon Scanning

Mapping — STEEP → Driver Mapping

Sense-making — Megatrend Analysis → Futures Wheel

Challenging — Scenarios

Catalysing — Stress Testing | Blue Sky / Black Sky → Back Casting

Policy, planning, strategy and decision making
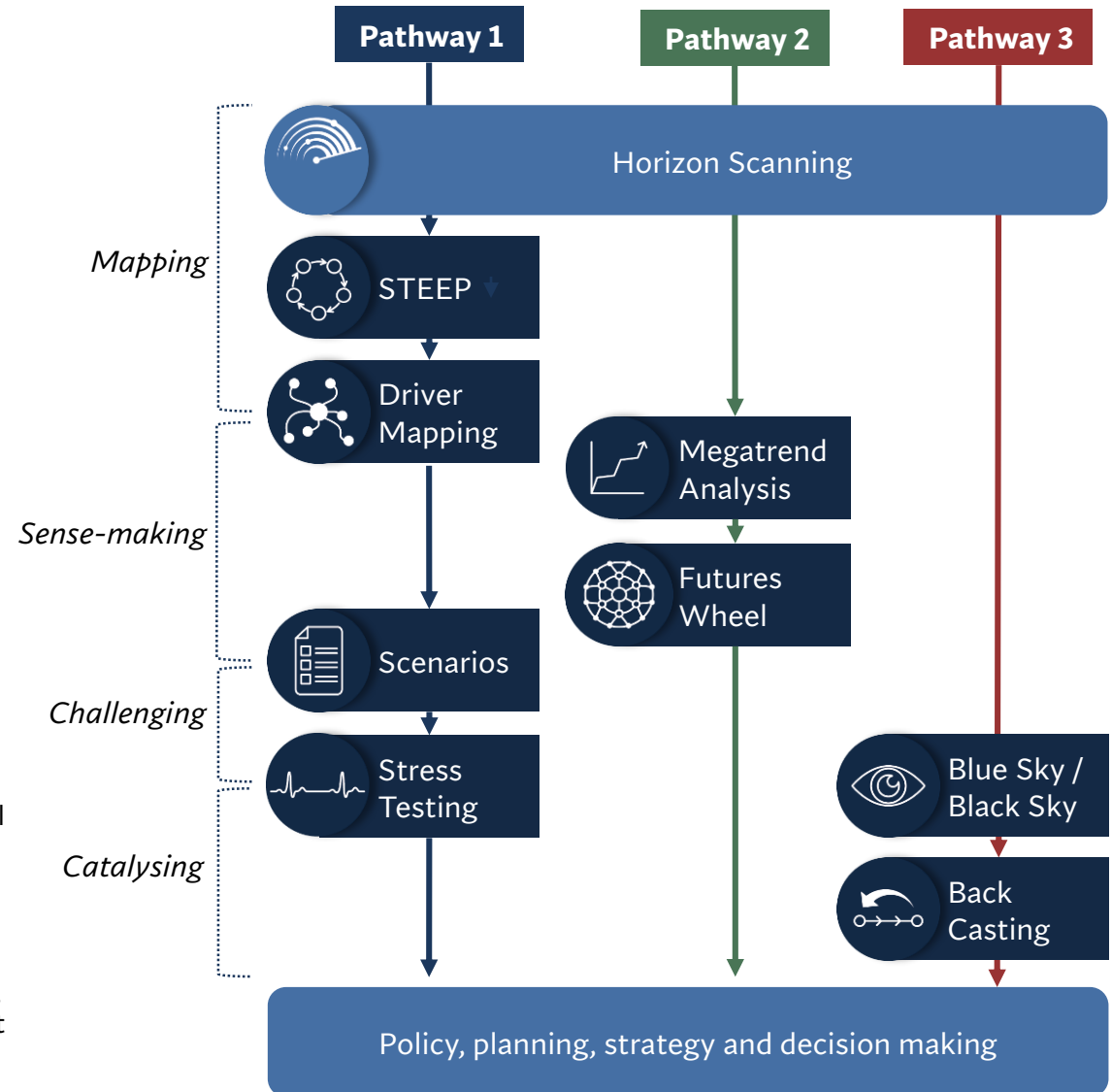
Horizon Scanning – overview

Purpose

Horizon Scanning is a structured method for identifying signals of change in your external strategic environment. It focuses on gathering intelligence and information about the future that challenges institutional assumptions, theories and expectations.

Both the process and its outputs can be useful in improving your understanding of the trends, change drivers and disruptions that might influence the future of your policy space – and it can provide an early warning system for decision makers of emerging risks and opportunities.

Outcomes

- A set of evidence – early indicators of potential change – that can challenge organisational thinking and be used for scenario generation, planning, policy and strategy development.

Key Concepts

This is a method to gather evidence that challenges thinking and assumptions about the future, through focused and structured research.

Horizon Scanning is most efficient when conducted for a policy project, where the boundaries of the policy landscape are well defined and there is a clear strategic objective and project scope. The narrower the policy focus, the easier it is to tighten the horizon scan, leverage expertise and assess relevance.

Horizon Scanning can also be an ongoing process for a team to build capability and maintain awareness of a policy space. In this case it is important to define clear areas of focus (themes or specific policy questions) to ensure the outputs are relevant and useful. Where possible, align scanning work with work plans and key timelines and priorities – and use the outputs for other futures exercises, such as Driver Mapping and Scenarios.

> **Horizon Scanning outputs are particularly useful as inputs for:**
> - Megatrend analysis
> - Driver Mapping
> - Futures Wheel
> - Scenarios

Essential steps

1. **Determine the focal policy space.** Define a focal policy environment and a time horizon (typically ten years) that you will explore. Narrow policy spaces are easier for assessing relevance and impact.

2. **Identify assumptions and expectations about the future.** Establish the baseline future.

3. **Identify the historical and contemporary factors underpinning the status quo.** Establish an understanding of the current system and key events that have led to its present formulation.

4. **Identify sources of potential future change.** Research various sources to collect significant and novel signals of change.

5. **Communicate your findings.** Synthesise and present your research.

Guidance on using this technique

To be most effective, Horizon Scanning should be a contrarian activity – finding evidence that supports the assumed future would be easy, but not useful. Horizon Scanning asks participants to identify - then set aside - their own assumptions and expectations of the future, and systematically consider other possibilities.

- Policy teams are often already aware of strong signals of change from the information they use frequently and the evidence that supports their policy. Horizon Scanning gives you an opportunity to be curious and to consider information and sources that you wouldn't normally look at.

- You will need to create a safe space to explore the uncomfortable and unconventional. Be prepared for some initial scepticism or negative reactions. Be persistent and patient: explain the purpose of the approach, and don't worry if you can't persuade everyone.

- Don't stick to your usual information sources – or even to mainstream information sources. These sources will have already informed your view of the future. Instead, seek out information and sources that you wouldn't normally look at. It may be helpful to start with experts who have a strongly divergent view – what sources are they referencing? What data are they highlighting?

- There isn't a universal set of principles for horizon scanning, as it depends heavily on your policy space and time horizon. One of the most effective and comprehensive ongoing Futures functions in the Australian Government is conducted by the Defence Science and Technology Group, which uses horizon scanning to build knowledge of emerging science and technology trends across a ten to twenty year time horizon. Its approach is fundamentally different to what might be necessary for horizon scanning in the misinformation or education policy spaces.

What are the characteristics of good horizon scan 'hits' (or 'good signals')?

When Horizon Scanning, you will be looking for **signals of change:** insights, emerging issues and new developments.

Good signals or hits will be:

- **Significant:** The signal has the potential to create disruptive change (either positive or negative) to your policy environment.

- **Novel:** The signal has not been considered in policy making or been widely discussed.

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Guidance for identifying signals of change

When searching for signals of change, it is important to use a balanced list of sources and resources. Try to go beyond consulting the 'usual suspects', e.g. subject matter experts and academia. Your sources could include:

- News sources; opinion pieces; popular/commercial publications and blogs;

- Recent publications of national and international research institutes and organisations,

- non-profits, grassroots groups, and think tanks;

- Interviews with stakeholders, subject matter experts and grassroots organisations

- Listening on the ground in communities;

- Academic journals and research;

- Webinars and conferences;

- Social media (such as Twitter or LinkedIn feeds from renowned experts), YouTube (TED Talks), podcasts.

Each signal can be collected and filed using the following template. This is particularly useful to organise your research for a long-term horizon scanning activity:

Category	Guidance
Title	**Write a one sentence title.** To capture the essence of the signal and be more memorable.
Description	**Explain the content of the signal.** How is this constituting a relevant future development? What change is emerging? Who is affected by it? Where is it emerging? What is driving it?
Awareness	**Define if the signal is known.** Is it already on the radar? For example, is it mentioned in official documents such as reports or briefs? This helps establish the novelty of the signal.
Implications	**Speculate on the possible implications of the signal.** Is it primarily perceived as a threat of opportunity? Is it a negative or positive development? Who is primarily affected by it? Is the change limited to the region or area under consideration, or are spillover effects anticipated?
Impact	**Assess the anticipated impact of the signal.** What are the potential social, technological, economic, environmental or political (STEEP) impacts? For prioritisation, you can use a 1-5 scale to assess the impact (no impact to high impact).
Uncertainty	**Estimate the predictability and likelihood of the signal emerging.** For prioritisation purposes, it can be useful to use a 1-5 scale ranging from very certain to very uncertain.
Reference	**Name the source and the publication or interview date.** If applicable, include the online reference (URL).

Source: https://www.unglobalpulse.org/document/horizon-scan-manual-a-step-by-step-guide/

Horizon Scanning – steps in detail

1. Determine the focal policy space to be explored.

This is best expressed as a question. E.g. 'How will leading universities operate in 2035?' or 'How can we ensure Australia's arts sector is thriving and sustainable over the next decade?'

2. Identify personal, team and institutional assumptions and expectations about the future.

Ask:
- 'What do I consider the most likely outcomes for the issue under exploration?
- 'What factors do I consider to be significant?'
- 'What is my team/branch/Department/the Government assuming is the future of this issue?'

This baseline or 'ghost' future may be revealed in discussions with senior leaders, and in key documents like strategic plans.

3. Identify the historical and contemporary factors underpinning the status quo.

Ask: How did we get here? How do things currently work? Talk to experts and undertake your own research. Use STEEP categories to broaden your thinking and minimise blind spots.

4. Identify sources of potential future change.

What factors are changing, or could change? Look for cracks in the current system, and external forces that could disrupt the status quo. Focus on external forces that are not 'built-in' to institutional assumptions about the future. It's often helpful to examine each of the 'current factors' from step 3 and seek out information supporting the idea that this factor is facing disruption.

Use a variety of sources beyond experts – including fringe and contrarian outlets.

5. Communicate your findings.

Less is more when communicating your findings. Select those sources that present the greatest challenge to organizational assumptions or have the greatest impact on the issue.

Make the information digestible – a newspaper article, video, graph, or summary is more likely to be read than a long essay or journal article.

Accompany each source with questions that prompt thinking – 'If this issue were to continue or emerge, what might it mean for our organisation'?

A visual map of signals can be a powerful and influential way to communicate a horizon scan. For an example, see Figure D on page 9 of the WEF's 2024 Global Risks Report at:

https://www.weforum.org/publications/global-risks-report-2024/

Horizon Scanning is not primarily a workshop process, but it can use workshops and other participatory approaches.

Unlike most of the other tools in this primer, Horizon Scanning is primarily a research process – and how you approach it is much more conditional on how much time you have available compared with other Futures activities.

However, research processes will still be enriched by participatory processes, such as workshops, interviews and surveys. You will want to focus on experts and people with strong (but informed) opinions on your policy space. Qualitative research techniques can help get the most from both individuals and groups.

The ideal (but rarely achievable) for horizon scanning involves finding the frontier of change – connecting with the people and places who are already experiencing, to a greater or lesser degree, changes which will ultimately affect us as well.

The author William Gibson wrote "*the future is already here – it's just not very evenly distributed*". Many things we don't know about yet but will take for granted as normal in the future already exist for some people today – technologies, behavioural norms, beliefs. A significant proportion of change involves niche innovations, minor trends or political ideas hitting a tipping point and cascading globally with unpredictable implications.

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STEEP – overview

Purpose

STEEP is a framework and ideation process used to generate a broad range of potential **change drivers** that could influence the future of a focal policy space.

STEEP is often used as an initial step to generate the inputs for other Futures techniques, or to identify gaps in the results of a Horizon Scanning process. It can be also used independently as a policy environment scan to identify relevant external issues that could present risks or opportunities for a policy or strategy.

STEEP is also useful as a consultation mechanism with stakeholders. Including experts and teams from other policy spaces in a STEEP workshop can radically improve the diversity of factors identified as relevant to a policy space.

Outcomes

- STEEP exercises produce a list of change drivers relevant to a focal policy space, which can be used as an 'environment scan' and/or as an input to other Futures exercises.

Key Concepts

Change drivers are the underlying forces or factors that initiate or influence change within major global and national systems – such as societies, economies, and natural and built environments.

The STEEP framework is used to map change drivers against five categories:

Social - the behaviours, demographics, lifestyles, attitudes, cultures and expectations of people and communities.

Technological - the impacts of new and changing technologies.

Economic - changing factors within the economy, including trade, employment systems, supply chains and shifts in capital.

Environmental - the natural and built environments; ecologies and climate change.

Political – governments, politics and power – domestically and internationally.

> **STEEP is a useful early workshop step to generate inputs for:**
> - Megatrend analysis
> - Driver Mapping
> - Futures Wheel
> - Scenarios

Essential steps

1. **Define your focal policy space.** Establish a clear and narrow policy question, problem or environment.

2. **Ideate possible drivers of change.** Generate a list of change drivers (potentially to complement or add to drivers already generated through a horizon scanning or megatrends process).

3. **Map ideas to STEEP framework and fill in the gaps.** Cluster similar ideas together whilst adding new drivers of change to the framework. Conduct further research or ideation to fill the gaps.

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Guidance on using this technique

Change drivers are forces of change that could strongly influence – positively or negatively – the future policy environment. Change drivers typically have uncertain implications and need to be specific to be useful – for example, 'the use of AI in automating white-collar work' is usually better than "automation".

- It's very important to make sure participants understand the concept of change drivers, particularly if you intend to use the ideas gathered in STEEP in other Futures exercises.

- Typically, STEEP is applied as a workshop ideation activity, not a comprehensive mapping activity – the focus should be on generating more and different ideas rather than ensuring change drivers are put in the right box. Don't let groups get stuck debating which category an idea best fits into; push them to identify more and better ideas instead, especially in the categories with less content.

- While major disruptive events can also be drivers of change, it's often preferable to explore the conditions that produce them – rather than a war or pandemic, better change drivers might be the level of geopolitical competition or tension in a region, or the level of vulnerability/fragility to wide-scale pandemics. This depends on your policy issue.

- Sometimes participants in a workshop process will propose drivers they don't feel fits into any category. Here are some common ones (and where you can put them if there isn't a more logical place):

    Health – Usually either Technology or Social.

    Geopolitics and defence – Political.

    Business – Economic.

    Legal / Regulatory - Political.

    Ethical –Social or Political.

What are change drivers?

- **Trends:** Ongoing change that can be observed in the present, with some level of directionality such as 'population ageing' or 'increasing global temperatures.

- **Uncertainties:** Known issues or points of fragility which may develop in unpredictable directions or escalate in significance to an unknown degree, such as geopolitical tensions or known technologies expanding at scale (e.g. AI).

- **Disruptors** – Developments, emerging issues or shocks that are novel and challenge existing norms, systems or trends. Examples typically include game-changing technologies, wildcard events, and unexpected political or social change.

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STEEP – steps in detail

1. Define your focal policy space.

STEEP exercises work best by starting with a relatively narrow policy space (such as "The future of the advanced manufacturing workforce in Australia" rather than "The future of the Australian economy") and then looking outwards – the trends, uncertainties and possible disruptors in the wider world that could influence that space.

2. Ideate possible change drivers.

It's important to canvas a wide range of possibilities – this is an ideation exercise. You can use a Horizon Scanning process to generate an initial list of change drivers, do some basic research and reflection yourself, or use a workshop approach (see an example approach in the sidebar).

Try to turn ideas into full sentences – this may involve splitting them into several ideas. For example, rather than "climate change", consider "The effects of a warming climate on agriculture" and/or "international pressure to act on decarbonisation".

3. Map the ideas to the STEEP framework and fill in the gaps.

Next, map your change drivers to the STEEP framework. Cluster similar ideas together. Which areas are relatively empty and could benefit from more ideation?

Consider reconceptualising ideas at this point – if a change driver seems to originate in two more categories, consider splitting it to further broaden your driver list. For example, "global influence of tech giants on civil society, behavioural norms and politics" could be reframed as "political lobbying by tech giants" (politics) and "influence of social media platforms on social cohesion" (social) – and potentially others.

STEEP framework wheel with categories: Political (Government, politics and power – domestically and internationally.), Social (The behaviours, demographics, lifestyles, attitudes, cultures and expectations of people and communities.), Technology (The impact of new and changing technologies.), Economic (Changing factors within the economy, including trade, employment systems, supply chains and shifts in capital.), Environmental (The natural and built environments; ecologies and climate change.)

Example Workshop Runsheet

Define a focal policy space in advance of the workshop.

1. (5 minutes) Facilitator explains what change drivers are and provides examples. Divide participants into groups of five or six.

2. (5-10 minutes) Working individually, participants generate as many possible (not probable!) change drivers as they can (that could affect their policy space over the next decade).

3. (15 minutes) Participants share their change drivers with their group and work together to generate more ideas.

4. (10 minutes) Facilitator introduces the STEEP framework (potentially using a template, such as on the following page). Groups map their change drivers to the framework.

5. (20 minutes) Groups review their change driver list and undertake one more driver ideation process, focussing on the categories with the fewest identified drivers. The facilitator can also encourage them to split or reconceptualise drivers if appropriate.

Depending on the number of participants in the workshop, step 4-5 can be a convening exercise where all groups contribute to a single STEEP framework.

Note: if you are running this as the first step of a Driver Mapping or Futures Wheel exercise and need a shorter exercise, you can cut step 3 and allow groups to work directly to the template.

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STEEP example: Change drivers for early childhood education (2024–34)

SOCIAL	TECHNOLOGICAL	ECONOMIC	ENVIRONMENTAL	POLITICAL
Demand for a more community and place- based approach to early childhood policy	Better data, analysis and modelling systems to allocate funding where most useful	The relationship between child-care costs and the labour market	Frequency of climate-driven heatwaves and natural disasters disrupting education and outdoors time for children	Extent of popular support for major reform of funding model
High profile scandals affect trust in childhood education providers	Effectiveness of new AI-driven assisted learning for childhood literacy	Mergers between private providers affecting competition	Changes to built environment affects access, security and safety for children	Childcare policy responsibilities between the Commonwealth and the States are reimagined
Ageing population prompts embedding multi-generational approach to early childhood education	New developments in neuroscience to inform learning techniques and better support neurodivergent children	Cost of living (e.g. housing) affects affordability of care	Increasing evidence for the importance of the natural environment, natural light and outside play for child development	A stronger emphasis on embedding First Nations values, knowledge and cultural awareness
How valued early childhood education and its workforce is by society	Macro antibiotic resistance and new disease strains makes grouping young children untenable for long periods of time	Immigration policy and its effects on the early childhood education workforce	Climate adaptation requires new building standards for child care centres, affecting costs	Demand for better integration of early learning with social and health services
		Pay, conditions and career pathways in other sectors of the economy affecting competition for workforce		

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Megatrend Analysis – overview

Purpose

Megatrends analysis explores the implications of the most important known global forces of change for our policy space, strategies and decision making.

Megatrends are an important conceptual framework for making sense of visible but complex and uncertain pattern shifts that will inevitably impact our policy space in both predictable and unpredictable ways.

Megatrend analysis can help us understand the dynamics of these forces and explore the opportunities and risks they present for government. They can also create a strong language of change within an institution (like a government department) to ensure that policies factor in the most important forces of change visible to us in the present.

Outcomes

• A list of megatrends and their potential implications for policy.

Megatrend Analysis can use inputs from:
• STEEP
• Horizon Scanning
• Driver Mapping
Outputs can be used with:
• Futures Wheel
• Scenarios
• Driver Mapping
• Stress Testing

Key Concepts

A megatrend is a global scale, long-term pattern of change with profound and lasting impacts on various aspects of society, the economy, politics, the environment, and technology. Megatrends are broad in scope and cross-sectoral, with transformational impacts across most policy domains, individuals and organisations, and emerge from the convergence of multiple change drivers. Common examples of megatrends include urbanisation, globalisation and climate change.

Megatrends shape the future landscape and create profound changes that affect how societies operate. Key characteristics include:

• **Long term duration:** Megatrends are not temporary or short-lived phenomena but develop and persist over years or decades.

• **Multi-dimensional impact:** They have extensive and far-reaching effects across global systems and structures, affecting economies, societies and environments.

• **Transformational nature:** They bring about fundamental change and transformation in industries, citizen behaviour, and drive innovation and policy change.

• **Observable:** While the future implications, interactions and impacts of megatrends are uncertain, their general direction and influence can be observed and anticipated.

Essential steps

1. **Develop a list of trends, uncertainties and disruptors.** Using STEEP or the framework provided on the template in this section, gather a list of change drivers with a high impact on your policy space and group them into six or fewer clusters.

2. **Conceptualise the megatrends.** Describe the overarching patterns of change for your clusters, or the most important underlying or cross-cutting drivers.

3. **Validate your megatrends.** Test your megatrends against other sets to scan for gaps.

4. **Analyse the implications of your megatrends on your focal policy space.** Explore how the megatrends could affect your policy space individually and in concert.

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Guidance on using this technique

There is no 'right' or 'perfect' set of megatrends that will conceptualise all global change into a rigorous taxonomy. You can find many interesting, useful and insightful megatrend lists online which tackle the same issues through a variety of radically different conceptualisations. What is most important is finding a conceptualisation that is relevant and useful for exploring the implications of visible tectonic global change for *your* policy space.

- Like scenarios, megatrends tell a story about change. Unlike scenarios, megatrends are mostly comprised of what we can see in our recent history and present.

- It's important not to generate too many megatrends – you need a manageable amount. Most megatrend sets describe four to eight. A longer list is more likely to be a list of change drivers (see STEEP and Driver Mapping). The point of a megatrend process is synthesis and prioritisation – what are the *most* important visible forces of global change that will shape your policy space? Megatrend analysis requires good conceptualisation skills and judgement to - essentially - create a theory of global change.

- Megatrend sets can create powerful frameworks for policy evaluation, ideation and strategy. They are also helpful to a range of other Futures tools – they should be foundational to scenarios and Driver Mapping and can be used to support Stress Testing (although scenarios are better). Their level of relevance and impact on a focal policy space or scenario can vary, but they should always be present in some capacity once you have defined them.

- Megatrends can also provide a useful framework for policy governance and forward-looking option analysis. Supported by high quality artefacts (presentations, summaries, placemats or reports) they can provide useful scaffolding for discussions about the resilience of policy for executive committees or stakeholder roundtables or workshops – acting as a checklist for how policy strategies account for the uncertain implications of expected change.

The difficulty of developing the "perfect" megatrend set is particularly apparent with megatrends relating to digital technology: the prominence of big data, artificial intelligence, social media, power of the corporate tech giants, cyber security, the digital economy, automation, virtual working – do these comprise one megatrend or several? Is one a driver for another? Which are the most significant?

How they are conceptualised into one or more trends is fundamentally a matter of opinion and judgement, however well informed – but the process of conceptualising them can be useful in developing a better understanding of the most important known forces of change and exploring their implications.

Example megatrend sets

CSIRO: Our Future World (2023):

https://www.csiro.au/en/research/technology-space/data/Our-Future-World

Copenhagen Institute of Futures Global Megatrends:

https://cifs.dk/global-megatrends/

Megatrend Analysis – steps in detail

1. Develop a list of trends, uncertainties and disruptors.

Compile a list of high impact change drivers (see STEEP or Driver Mapping) under the categories in the template. This can be supported by a horizon scanning process. You can use a STEEP activity or the template on the next page which provides an alternative framework.

Find drivers that have strong relationships – either causal, or common drivers and impacts – and combine them to create a more significant and interesting trajectory of change and impact. Aim to create about six clusters that are most relevant to your policy space.

2. Conceptualise the megatrends.

Describe the overarching patterns of change for your clusters, or the most important underlying or cross-cutting drivers. These are your megatrends. You need to conceptualise them into six or fewer megatrends. Remember the key criteria – megatrends are:

- **Long term** (will shape at least the next decade, and probably longer).

- **Wide ranging** (will impact individuals, regions, organisations, society).

- **Transformational** (has a high impact and will influence systemic change).

- **Observable** (the implications are uncertain, but the core driver has known momentum).

3. Validate your megatrends.

Compare your list to other megatrend sets (either of other groups if you are running a workshop, or public reports).

Is there anything significant missing? If so, you may need to reconceptualise, consolidate or dispose trends to keep your list to under six.

4. Analyse the implications of your megatrends on your focal policy space.

Megatrends can have complex and far-reaching implications for your policy space.

Ask these questions:

1) **How important and relevant** is this trend to our policy space compared with the other megatrends in the set?

2) **What are the national implications** of this global trend? How is it shaping change now, and how do we expect it could shape change in ten and twenty years?

3) **What are some of the key implications for our policy space** – risks, opportunities and possible impacts?

4) **How will it interact with other megatrends** in the set?

5) **What can we do now** to make our policies more resilient and adaptive to change? What else do we need to understand about this megatrend and its potential impacts?

A Futures Wheel activity is recommended for this step in combination with the megatrend analysis template provided in this section.

Example Workshop Run Sheet

1. **(30 minutes)** Create a list of possible change drivers under the categories of the DIY megatrends template (or run a STEEP exercise). Cluster the most relevant and important to your policy space into six or fewer groups.

2. **(20-30 minutes)** Conceptualise your change drivers into six or fewer megatrends.

3. **(Optional)** If you are running this process with multiple groups, compare megatrends and if time permits, agree a list for the wider group. Then, allocate one megatrend per group for the next step.

4. (**20-40 minutes per megatrend per group**) Discuss the key implications of the megatrend for your focal policy space using the megatrends analysis template. Ensure you build in time for actions, including commissioning further research and analysis.

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DIY MEGATRENDS TEMPLATE

What forces are driving long term change? What are the most visible trends influencing future events, behaviours and systems?

DEMOGRAPHIC CHANGE	DEMOGRAPHIC CHANGE	DEMOGRAPHIC CHANGE
TECHNOLOGICAL SHIFT	TECHNOLOGICAL SHIFT	TECHNOLOGICAL SHIFT
ENVIRONMENTAL SHIFT	ENVIRONMENTAL SHIFT	ENVIRONMENTAL SHIFT
CHANGING VALUES	CHANGING VALUES	CHANGING VALUES
CHANGING ECONOMIC POWER	CHANGING ECONOMIC POWER	CHANGING ECONOMIC POWER
POLITICAL TENSION	POLITICAL TENSION	POLITICAL TENSION

Synthesise the most influential trends above into six or fewer megatrends: the most important known forces shaping global change.

Megatrends are long term, multi-dimensional, transformational, and observable.

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MEGATREND ANALYSIS TEMPLATE

MEGATREND

THE IMPORTANCE OF THIS TREND TO US
How significant will this be to the future of our policy space? Mark on the scale:

Unimportant ————————————————— Important

IMPLICATIONS FOR US
What are the potential opportunities and risks to our strategic objectives, policies and plans?

HOW IS THIS MEGATREND SHAPING CHANGE?
What are the probable and possible impacts on Australia – its society, economy and politics?

NOW	NEXT TEN YEARS	NEXT TWENTY YEARS

ACTIONS WE CAN TAKE TO PREPARE
What can we do to make our policies more resilient and adaptive to change? What risks do we need to mitigate, and what opportunities do we need to seize? What else do we need to understand about this megatrend and its potential impacts?

INTERACTIONS WITH OTHER MEGATRENDS
How is this megatrend affected by other megatrends? What compounding effects, accelerations or disruptions exist at the intersections?
Consider using a futures wheel to explore these.

Driver Mapping – overview

Purpose

Driver mapping identifies and prioritises the key change drivers shaping your future policy space. It is a practical and useful tool for translating the results of other mapping processes such as horizon scanning and STEEP into strategy and sense-making exercises, such as scenario development.

It is particularly useful as exercise to collectively decide what issues matter most for a policy space, and need to be factored into forward strategy, planning and policy development. Driver mapping can be delivered in a single workshop, supported by a STEEP ideation. This makes it useful as a first exercise for policy teams interested in using Futures. More comprehensive and robust driver mapping, however, benefits from both participatory processes and desk research or horizon scanning.

Outcomes

- A list of change drivers prioritised by impact and uncertainty.

- A better understanding of the key forces shaping the future of the focal policy environment.

Key Concepts

Driver Mapping identifies which change drivers could have the greatest impact on the focal policy issue and which are most uncertain. Change drivers are:

- **Trends:** Ongoing change that can be observed in the present, with some level of directionality such as 'population ageing' or 'increasing global temperatures.

- **Uncertainties:** Known issues or points of fragility which may develop in unpredictable directions or escalate in significance to an unknown degree, such as geopolitical tensions or known technologies expanding at scale (e.g. AI).

- **Disruptors** – Developments, emerging issues or shocks that are novel and challenge existing norms, systems or trends. Examples typically include game-changing technologies and wildcard events, and unexpected political or social change.

See STEEP for some further information on what defines a useful change driver.

Driver Mapping can use inputs from:
- STEEP
- Horizon Scanning
- Megatrend Analysis

Outputs can be used with:
- Futures Wheel
- Scenarios

Essential steps

1. **Ideate change drivers.** Identify a wide range of possible drivers that could affect your policy space (usually using a techniques like STEEP to look at your issue with different lenses).

2. **Assess impact and uncertainty.** Plot each driver on the driver mapping template (see page 34).

3. **Prioritise by the relative impact.** Redistribute the drivers to focus on the *relatively* most high impact drivers in the top two quadrants – pushing others down into the bottom two quadrants.

4. **Agree actions and next steps.** Decide or agree what you will do with the drivers in each category, with a focus on the prioritised drivers with the highest impact.
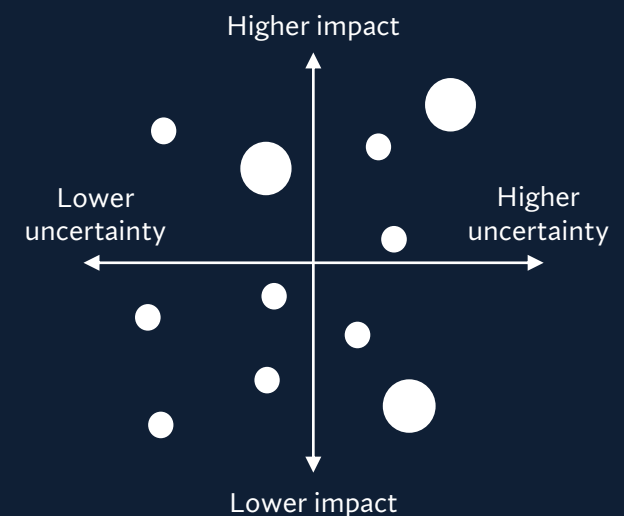
Guidance on using this technique

Driver Mapping is useful because it involves both ideation (mapping) and prioritisation (sense-making). It generates outputs that can be fed immediately into policy and strategy: an agreed list of prioritised highly certain drivers with high impact on the future of your policy space. It additionally provides a robust set of inputs for the development of scenarios.

- If you are using Driver Mapping to provide the inputs for a scenario development process, it can be useful to adjust the wording to remove assumptions about the expected trajectory of the drivers. For example, instead of 'internal migration increasing', use 'level of internal migration' – the language is more neutral and captures future ambiguity. This allows for the creation of scenarios where the trend continues or accelerates, but also scenarios where the trend slows down or even reverses.

- Adding 'Extent to which…', 'Degree to which…', 'Impact of…' or 'Level of….' to the start of the change driver helps retain this level of uncertainty. For trends that you are very confident in (e.g. increased heatwaves due to climate change) it can be useful to make them more specific to your policy space (e.g. the effects of increased heatwaves on health).

- For disruptors, it can be useful to include language implying it may or may not occur ("the possibility of an Alzheimer's cure in the next decade").

- As with most Futures exercises, Driver Mapping activities benefit from a tightly defined policy focal question. This makes assessing relevance and prioritisation of drivers easier.

- Different knowledge and perspectives are valuable for Driver Mapping. Use it to gather a more diverse range of ideas on what could affect your policy space from outside your normal work group, including from stakeholders and experts.

What is uncertainty?

Uncertainty is about how wide the range of potential outcomes of this driver could be for your policy space. Highly uncertain drivers have a wide (or even unknown) range of possible consequences and implications. Highly certain drivers have a narrower range of (likely known and understood) consequences and implications.

Uncertainty is not about *whether* the driver will affect the policy space (workshop groups often get it confused with probability) – it is uncertainty regarding how or to what extent the driver will affect the policy space. How predictable are the outcomes of the driver? How well understood are the implications?

For example: a skills policy team might be looking at the extent to which artificial intelligence could affect the demand for skills by industry in 2040. They know artificial intelligence is being adopted at an accelerating rate by industry and will certainly have impacts on the labour market and what skills are needed for a range of jobs in 2040. The team agrees that AI has a high potential impact on their policy space. However, the team decides the precise extent of that disruption - whether it will displace jobs or supplement them, whether AI skills will be mainstream or specialised – is highly uncertain.

Driver Mapping – steps in detail

1. Ideate change drivers.

Identify as many change drivers as you can that are relevant to your focal policy space over a given time horizon – typically ten years. It's usually a good idea to do this through a STEEP exercise to ensure you consider a range of policy domains.

As with STEEP, try to use full sentences to describe drivers where possible to make it clear what the trend, disruptor or uncertainty is describing. Remember you are identifying possibilities: not probabilities.

2. Assess impact and uncertainty.

Discuss and refine each driver – what do we know about it? What's changing? Why is it significant? Is it the primary change driver, or is it an effect caused by a larger scale trend or disruption? Don't rush this step. This is not something you can get right or wrong – it's a matter of judgement based on how well you understand the issue and its effect on your policy space (and in a participatory process, consensus).

Map each factor on a 2x2 analysis template (see example next page), according to how strong an influence they could have on the future of your focal policy space (impact) and how wide the range of possible outcomes are (uncertainty).

3. Prioritise by relative impact.

If you have identified a wide range of drivers, you may have twenty or more in the top two quadrants. You need to prioritise the most important by assessing the *relative* impact to your policy space between different drivers. Push the relatively lower impact drivers downwards into the bottom two quadrants so that you have a prioritised list in the top two quadrants – generally no more than 3-5 in each for a workshop exercise, or 5-10 for a more comprehensive process (involving consultation and review). This is another opportunity to reframe, merge and split the drivers.

4. Agree actions and next steps.

Decide or agree what you will do with the prioritised drivers in each category, with a focus on the top two quadrants:

- **High impact / low uncertainty drivers:** These should be integrated into strategy, policy and planning, or tested against existing policies – are your policies resilient to the known high impact / highly certain drivers you expect to shape your policy space?

- **High impact / high uncertainty drivers:** These should be explored with scenarios, Futures Wheels or through further research.

- **Low impact / low uncertainty drivers:** Park these for now, but revisit in future.

- **Low impact / high uncertainty drivers:** Monitor these drivers for change or new developments in case you are wrong in your assessment of potential impact.

Example Workshop Run Sheet

1. **(45-60 minutes) STEEP** activity to generate the change driver list.

2. **(5 minutes)** Explain the 2x2 matrix – particularly what is meant by **Impact** and **Uncertainty** (see below).

3. **(20-40 minutes)** Map the change drivers to the Driver Mapping template. Encourage groups to discuss, consolidate, reframe, split or propose new drivers. Ensure there are a healthy amount of ideas in the top quadrants – no policy space is immune to change.

4. **(15-20 minutes)** Groups prioritise the drivers by relative impact, ensuring there are no more than 3-5 in each of the top two quadrants (this can be 5-10 for a longer process).

5. **(Optional but recommended)** Share back to room and discuss subsequent actions, focusing on the top left quadrant.

We have included a conventional 2x2 template (used by this process) and an alternative 3x3 approach which provides some additional structure for Driver Mapping and is particularly useful for identifying drivers for scenario development.

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DRIVER MAPPING TEMPLATE (2x2)

Higher Impact

Integrate into

strategy, policy and planning

Explore with scenarios

Lower Uncertainty   **Higher Uncertainty**
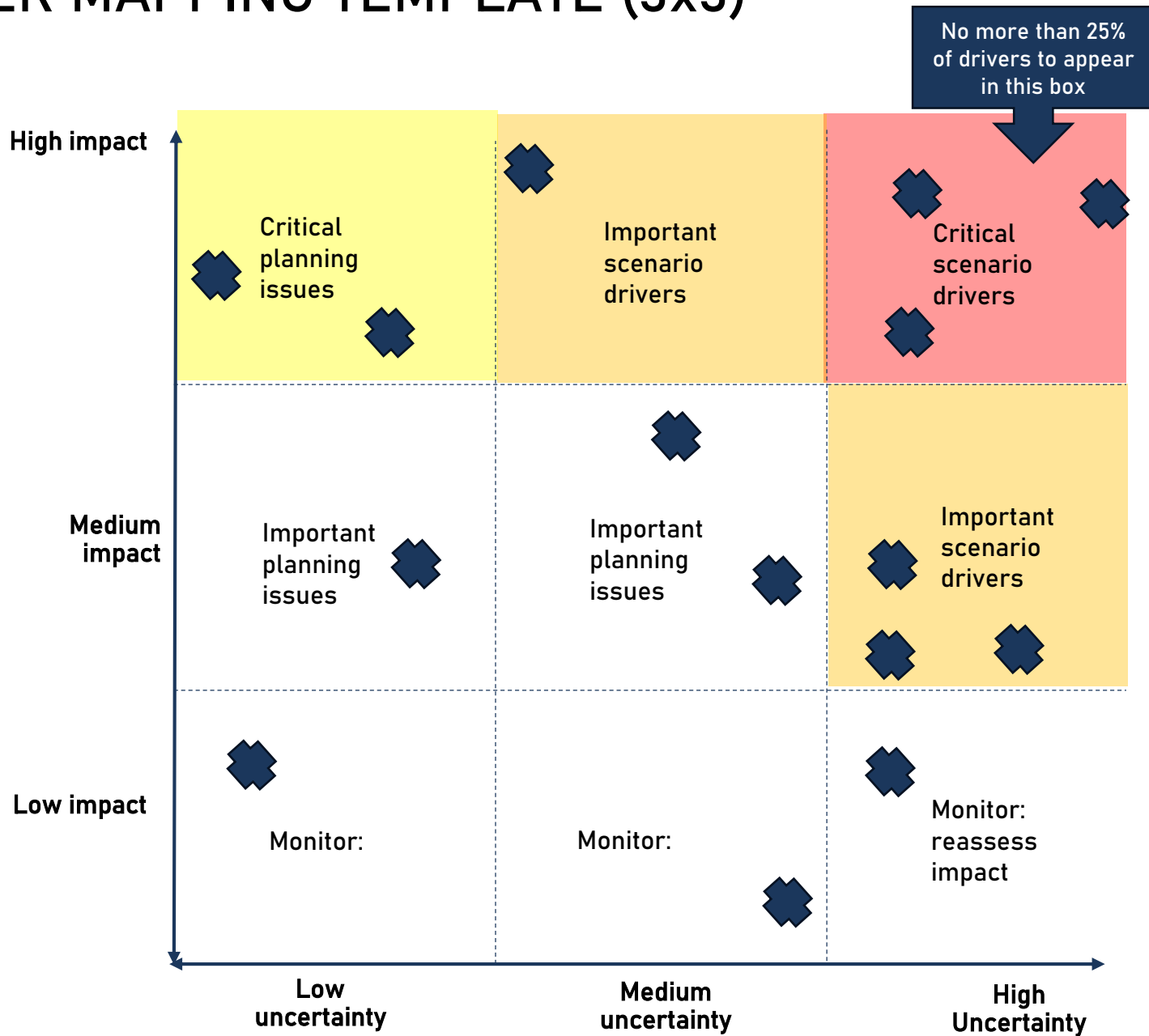
Park for now

Monitor for

change
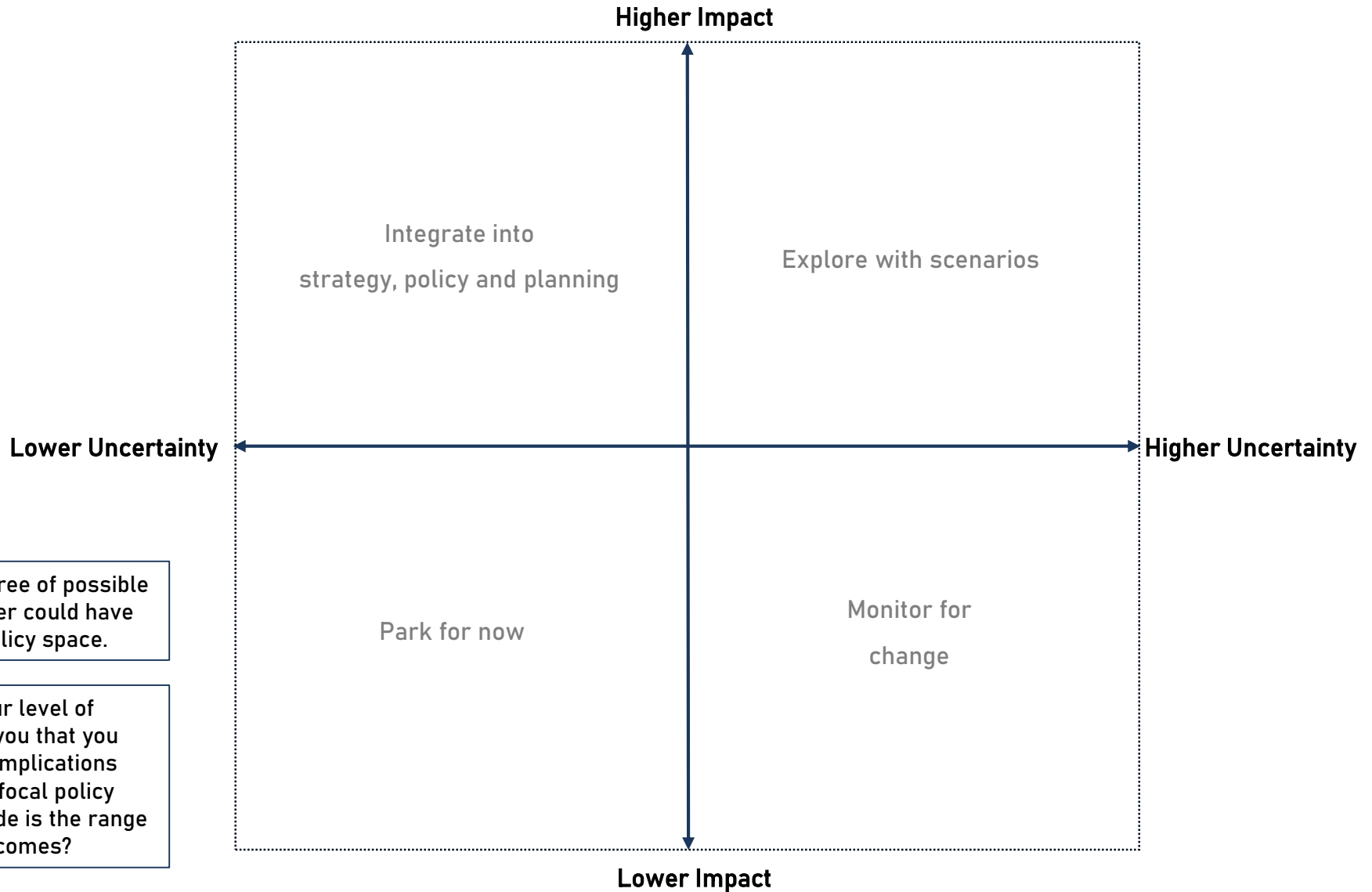
Impact: The degree of possible impact this driver could have on your focal policy space.

Uncertainty: Your level of confidence are you that you know what the implications will be for your focal policy space – how wide is the range of plausible outcomes?

Lower Impact

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DRIVER MAPPING TEMPLATE (3x3)

No more than 25% of drivers to appear in this box

High impact

Critical planning issues	Important scenario drivers	Critical scenario drivers

Impact: The degree of possible impact this driver could have on your focal policy space.

Medium impact

Important planning issues	Important planning issues	Important scenario drivers

Uncertainty: Your level of confidence are you that you know what the implications will be for your focal policy space – how wide is the range of plausible outcomes?

Low impact

Monitor:	Monitor:	Monitor: reassess impact

Low uncertainty   **Medium uncertainty**   **High Uncertainty**

Futures Wheel – overview

Purpose

The Futures Wheel is a simple and versatile tool for exploring the direct and indirect implications of change, intersections and possible responses. It is typically used as a flexible visual approach to structured brainstorming and is particularly useful for workshop exercises.

Futures Wheel can be used to:

- Analyse the first, second or third order consequences of one or more change drivers or megatrends, prompting the identification of new risks and opportunities for policy.

- Sketch out the key features of a scenario based on one or more catalyst events or changes *(What if..... ?)*

Outcomes

- A set of future implications, consequences and possible responses for a policy space that can be factored in further policy development and planning.

The Futures Wheel can use inputs from:
- Horizon Scanning
- STEEP
- Driver Mapping
- Megatrend Analysis

Futures Wheel outputs can be used in:
- Scenarios
- Driver Mapping

Key Concepts

Futures wheel is a visualisation exercise focused on working through levels or steps of implications for change drivers – identifying cascading and intersecting possible consequences.
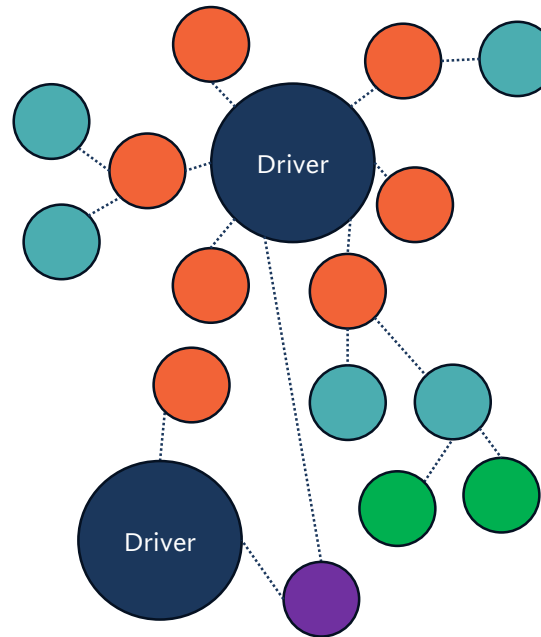
- 🔴 First order (direct) consequence
- 🔵 Second order (indirect) consequence
- 🟢 Third order (indirect) consequence
- 🟣 Implication of interaction

Essential steps

1. **Select key change drivers.** Choose high impact change drivers to explore.

2. **Identify possible direct implications and consequences (1).** Ideate first order impacts.

3. **Identify possible indirect implications and consequences (2).** Ideate second order consequences .

4. **Identify the key actions you can take to respond to the implications.** Review the wheel for critical implications and identify potential courses of action.

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Guidance on using this technique

The Futures Wheel is an effective way to establish a picture of how possible change drivers can shape the future in practice, by focussing on exploring how they interact with policy spaces and systems – and each other.

- A group will typically get more out of a Futures Wheel exercise if they have identified the drivers themselves, ideally through tools such as **STEEP** and **Driver Mapping.** However, you can also use megatrend reports, trend driver cards or other published material to kickstart the activity.

- While it's most common to use Futures Wheel to explore two or three drivers in combination – to assess tensions and intersections – Futures Wheel can also be powerful focusing on a single issue, for example, the cascading and complex effects of climate change over time on a large policy space or system, like the economy of a region.

- As with most Futures exercises, it's important to focus on possibilities, not probabilities. You need to use the Futures Wheel to push beyond what you already know into more speculative territory.

- There are a wide range of ways you can use Futures Wheel in a workshop. In most cases, rather than a template, it may be better to use a more organic approach on a whiteboard (virtual or physical) or on butchers' paper. Facilitators can also draw a Futures Wheel as a way to document a conversation (similar to live scribing). The challenges of these more free-flowing approaches is that it can be harder to capture the key insights afterwards and translate them into actions and decisions unless you have built those steps into your workshop process.

An optional further step is to translate the set of drivers and implications you've identified and develop them into a scenario vignette.

See Other Scenario Creation approaches under the Scenarios tool.
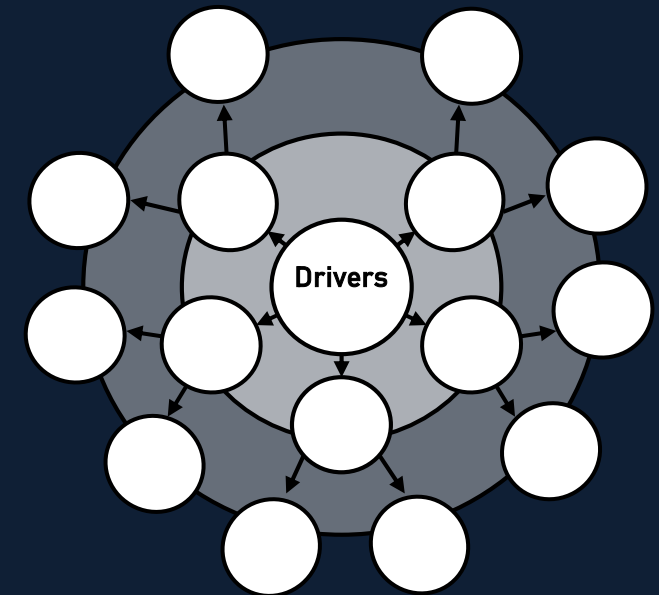
Futures Wheel – steps in detail

Futures Wheel is very flexible and can be used in a variety of ways. This is one approach we've found useful. It's intended to be used for 'freeform' mapping – drawing on a virtual whiteboard or on paper – but you can use the template we have provided too.

1. Select key change drivers.

Start with three change drivers for your policy area or problem. Choose drivers that are likely to have a high impact on your policy space (Driver Mapping can help identify these) and have the potential to create interesting interactions. Put them in the centre of your map (virtual or physical).

2. Identify possible direct implications and consequences.

Begin in the centre with your change drivers. How could they interact with each other and influence your policy space over the next ten years? What would be the most significant possible impacts?

Discuss and agree the most important first order implications of the change drivers in isolation and their possible compounding effects. Identify both positive and negative impacts. Stay focused on the first order impacts to work on the levels one by one – this discourages linear thinking. Ensure that implications or consequences are clear and specific, and follow directly from drivers without intermediate steps.

3. Identify possible indirect implications and consequences.

Move outwards from the centre to explore "the implications of implications" – how direct consequences may combine or interact to generate indirect (second order) impacts. Explore the intersections of the direct implications to generate ideas for further indirect ones.

4. Identify the key actions you can take to respond to the implications.

Review the completed futures wheel. What are the most significant possible implications or consequences for your policy space? Choose up to four critical implications and draw a line to connect each of these to one of the "Action" circles.

Describe potential actions you can take now or possible policy interventions in the action circle to address the critical implications. What could you do now to better prepare against the most potentially high impact consequences and implications identified in the wheel?

Example Workshop Run Sheet

You may want to provide participants with either an example of what the Futures Wheel looks like (see Overview) or the provided template. The template can be used for either exploring the implications of one driver in depth or several. The connecting lines are intended to help step through the process rather than limit thinking to only drivers that are adjacent – participants should just be encouraged to fill out each outer circle with ideas that stem from any combination of drivers or implications.

1. **(5-10 minutes)** Introduce the Futures Wheel tool and the focal policy space.

2. **(20-30 minutes)** Fill out the direct impacts. Starting with the key change drivers, identify the direct impacts. Ensure groups are focused on generating possibilities (including remote possibilities) rather than probabilities.

3. **(20-30 minutes)** Fill out the indirect impacts. Ensure groups are considering interactions between different implications, including across the Wheel.

4. **(20-30 minutes)** Identify the most significant implications for your policy space and propose actions that could address them.

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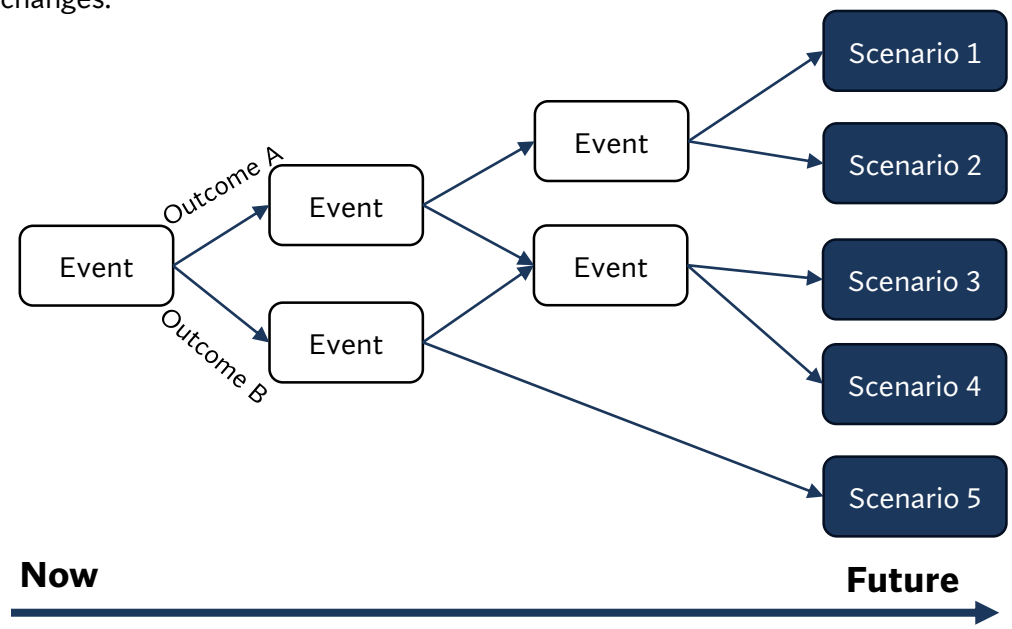
Futures Wheel alternatives

What If?

Futures Wheels can also be used to create a scenario vignette called a "What If?". This starts with a hypothesis: "*What if … was the case?*" For example, *"What if Australia implemented a universal basic income scheme?"* or *"What if Australia could not replace its population with immigration?"* The Futures Wheel is ideal for exploring the implications of the hypothesis and generating a range of possible implications that can be used to develop the key features of a scenario. If you intend to use What Ifs for policy stress testing, generate a set of at least three to ensure your policy is tested against a range of alternatives.
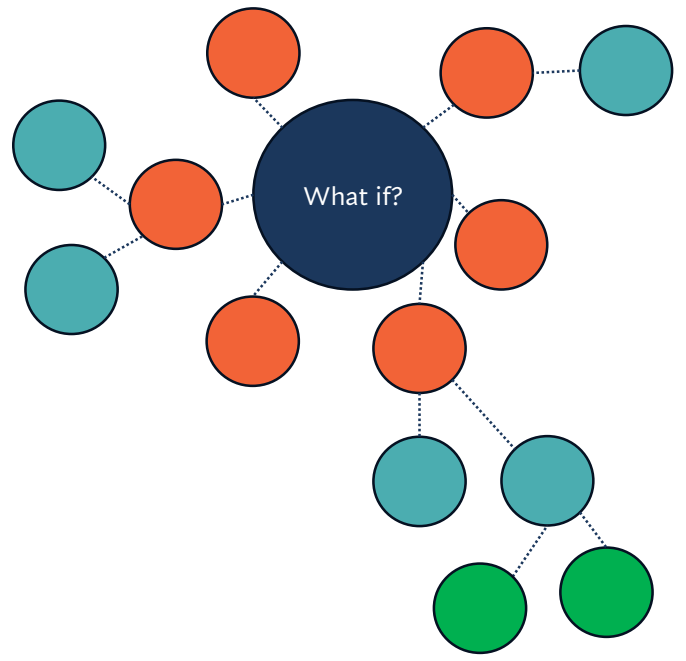
Branch Analysis

This variant is similar to **What If?,** but focuses on generating branching timelines of possible cascading events.

This is typically most useful for supporting policy analysis, where creating many scenarios to explore a wide range of possible outcomes helps to explore causal logics and identify a wide range of possible outcomes. It is less useful for policy development stress testing, where fewer and more complex scenarios are generally more useful. However, you can pick three or four of the scenarios identified in branch analysis to develop further, potentially by undertaking multiple branch analysis activities and synthesising the resulting scenarios to capture the impacts of several sequences of events or changes.

FUTURES WHEEL – TEMPLATE

Policy space or objective:

Indirect implications

Direct implications

One or more Change Drivers

Actions

Actions

Actions

Actions

Actions
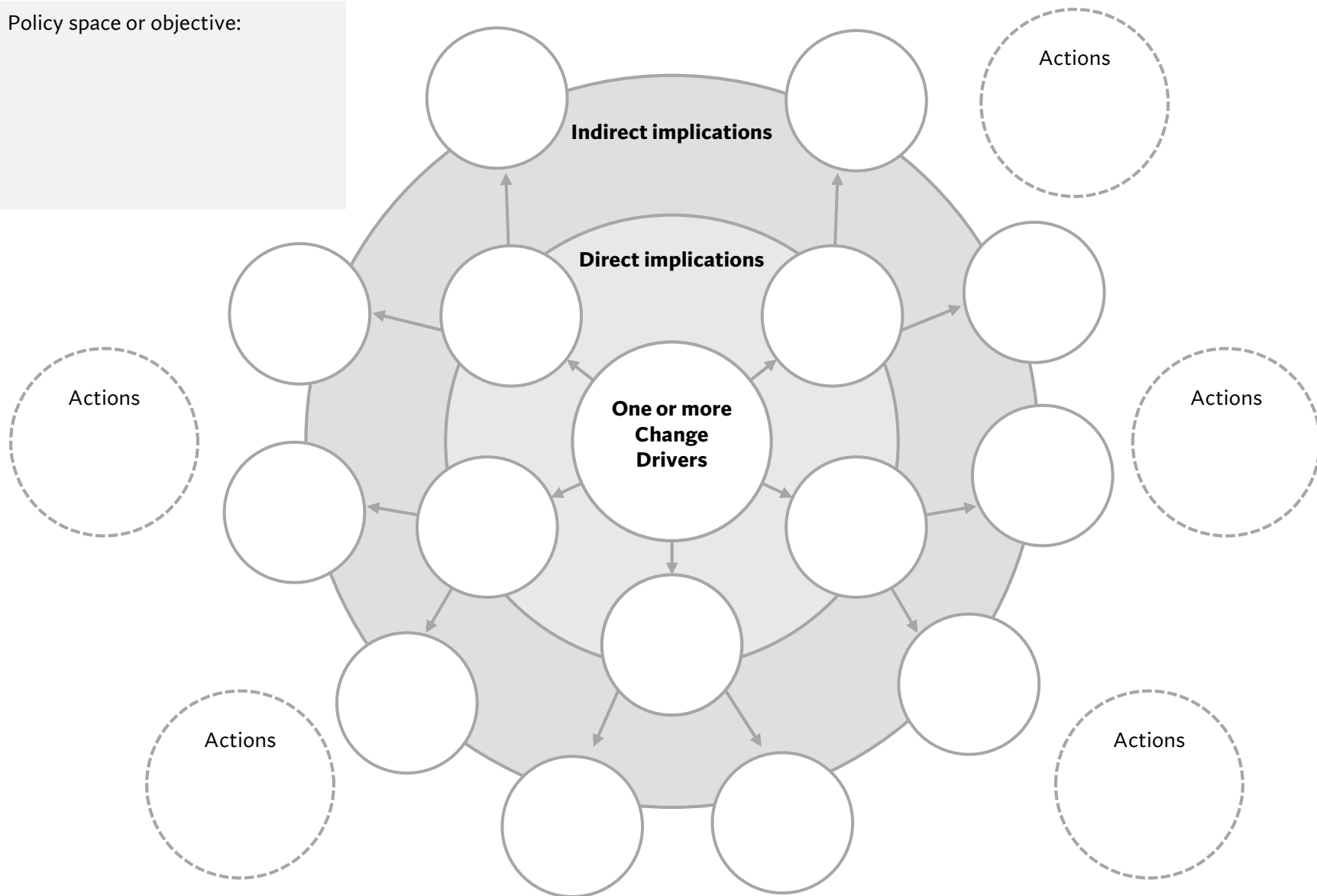
Scenarios – overview

Purpose

Scenarios are plausible narratives of alternative futures. They represent perspectives, hypotheses, expectations and assumptions about the future of a focal policy space or system – incorporating evidence, intelligence, deliberation and ideation.

Scenarios are great tools for informing policies, strategies and risk management, by challenging our biases and assumptions about the future. They are absolutely core to Futures thinking and provide a versatile scaffold for forward-looking strategy, policy and decision making.

Outcomes

- Three or four plausible scenarios that challenge the assumed future and can be used as scaffolding for strategy, sense-making and forward-looking policy design.
- A more sophisticated understanding of how systems may change and evolve, including the unintended consequences of policy and the costs of inaction.

Key Concepts

Scenarios are 'mock-ups' of hypothetical future policy environments. They extrapolate trends, signals and uncertainties from today, exploring their interactions over time through creative and compelling stories of the future.

Scenarios can explore the implications of the new and novel for which there is little data or precedent available. They explore how global trends and disruptions can influence and transform national and local systems. Like all Futures techniques, they should do this with purposeful intent and with users in mind.

This section describes "explorative" scenarios. ("What could be"). We call normative scenarios ("what *should* or *should not* be*) visions: see Blue Sky / Black Sky for a tool to develop these.

> **Scenarios can use inputs from:**
> - All Futures exercises, but particularly Driver Mapping and Futures Wheel
>
> **Outputs can be used with:**
> - All Futures exercises, but particularly Stress Testing. Scenarios are also useful outputs for many strategic tools like SWOT.

Essential steps (for the 2x2 matrix approach to scenario development)

1. **Select two key change drivers.** Pick drivers with high impact and high uncertainty and translate them into interesting and relevant axes of change.

2. **Combine the two axes to create the scenario matrix and describe the key features of each scenario.** Assess the differentiating features of each scenario. They should be challenging, plausible, and be meaningfully different each other and the world today.

3. **Build out the scenarios –** Develop a storyline describing the key events and casual relationships that could lead to the future scenario.

Guidance on using this technique

Scenarios are not predictions or forecasts, or plans or strategies. Developing good scenarios requires creativity, engagement, critical thinking and deliberation.

Scenarios must be communicated with care: they can be highly provocative and challenging for institutions and decision makers, as they can illustrate the costs of inaction or the potential unintended negative consequences of current policies and plans.

- Scenarios can help policy developers anticipate how the future could be different from today and develop policies that are resilient across a range of possible futures. Scenarios are used to explore different ways the future of a policy space may evolve, and to establish a shared understanding and common language about future change and system transformation.

- As you develop the set of scenarios, it's a good idea to define the assumptions common to all scenarios in the set. Scenarios can't capture every dimension of uncertainty relevant to the policy space. You can make this explicit and state up front any major assumptions you are making that cut across all the scenarios – particularly those relating to less relevant megatrends that nonetheless will be a factor in all plausible future scenarios (such as an ageing population or climate change).

- It is **strongly encouraged** to include the users of scenarios (including senior decision makers) in the scenario building process. The direct participation of senior decision makers means they will understand, own and more likely act on the implications of the scenarios. The scenarios are also more likely to be viewed as credible, particularly if the development process also included high quality input from experts. Involving key stakeholders to build buy-in is important for scenarios to be influential.

Avoid individual or binary scenarios

Scenarios are always developed as a set (usually three to four – no more than five) to test how different policies and strategies could succeed (or fail) under alternative future conditions.

Two-scenario sets should be avoided, as they can give the impression there is only a binary yes/no choice about the future contingent on a small set of decisions or events.

For example, will there be a war in the Asia Pacific in the next ten years – yes or no? This is less useful than exploring several ten-year scenarios which could involve a mix of conflicts at various scales and their interactions with other change drivers over the same period. Binary scenarios typically focus on a single dimension of change, but the future is always comprised of the interactions between simultaneous trends, disruptions and unexpected events. It's important to reflect this nuance in scenarios.
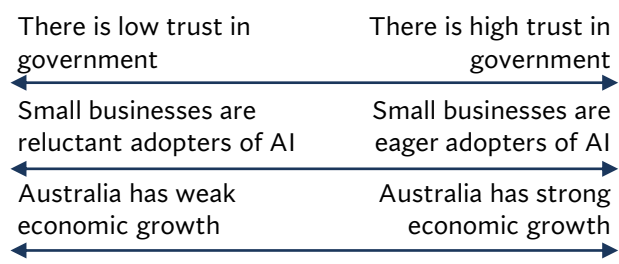
Scenarios – steps in detail (2x2 Matrix approach)

There are many approaches to developing scenarios – it is a craft as much as a methodology. The 2x2 matrix approach is a widely used method to draft scenarios that integrates well with other Futures tools. It works best with a 10 year time horizon.

1. Select two key change drivers.

This is easiest if you have conducted Driver Mapping. The change drivers you pick should have high impact and a wide range of possible outcomes (high uncertainty).

The drivers will need to be turned into axes to provide a binary spectrum of outcomes – 'high' to 'low', or 'more' or 'less'. For example:

There is low trust in government	There is high trust in government

Small businesses are reluctant adopters of AI	Small businesses are eager adopters of AI

Australia has weak economic growth	Australia has strong economic growth

You need to consider which two drivers could combine to generate a set of four interesting scenarios useful to your policy space. Good pairs can sometimes be national / international, or from two separate STEEP categories. Avoid picking two drivers that have a high correlation or dependency relationship (e.g. don't choose both 'rate of immigration' and 'rate of population growth', as the former has a high impact on the latter).

2. Combine the two axes to create the scenario matrix and describe the key features of each scenario.

Place one driver on the horizontal axis of your template and the other on the vertical axis with the appropriate end points (high or low, or similar alternatives).

Keeping your focal policy space in mind, describe how the intersection of the two drivers (high / high, high / low, low / high, low / low) shapes the scenario in each quadrant. What are the key differentiating features of each scenario? Test your ideas by asking:

- Do the scenarios illuminate the focal policy space in an interesting or challenging way?
- Are they meaningfully different from each other and from the world today?
- Are they plausible? (ideally: just barely)
- Can you imagine a simple timeline of causal events between now and the scenario?
- Can you think of provocative scenario titles?

3. Build out the scenarios.

Identify the major characteristics of each scenario and build a 'storyline' describing the key events and changes between now and the future scenario. Incorporate other drivers if you ran a driver mapping exercise to enrich and diversify the scenarios.

Use the guidance and checklist on the following pages to refine the scenarios further.

Example Workshop Run Sheet

Assume that your group has completed a Driver Mapping activity. Note that while it is possible to complete both driver mapping and high-level scenario generation in one exercise, it is at a minimum a half day activity. This won't leave much space for iteration or discussion of the scenarios.

Also, while workshops can generate interesting scenario concepts, creating and refining creative, influential and rich scenarios usually requires dedicated time by an individual or team afterwards - ideally with further consultation.

1. **(10 minutes)** Review your drivers of change.

2. **(30-45 minutes)** Select drivers of change and experiment with turning them into axes, aiming to identify a preferred combination of two drivers.

3. **(90 minutes)** Build out your scenarios. Try to allocate 15 minutes per quadrant to do an initial pass identifying 3-5 key features of each scenario. Then use the remainder of the time to refine the scenarios and test whether they are:

- Plausible (but not necessarily likely)
- Mutually exclusive
- Have challenging implications for the policy space

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The Good Scenario Checklist

Good scenarios are:

❑ **Plausible – not probable.** Scenarios must fall within the limits of what could conceivably occur – but probability should not be a factor in assessing scenario relevance or quality. In fact, "just barely" plausible scenarios are more useful for stress testing policies and strategies – the future is typically far more unpredictable and surprising than we assume.

❑ **Useful and relevant for decision making.** Scenarios should be designed to generate usable insights on the focal policy space. It is vital that they are not just conjectural but illustrate the most important dynamics at play in the future of the policy space, with clear implications for strategy, decision making and government policy.

❑ **Differentiated and mutually exclusive.** Scenarios must be meaningfully different from the expected ('baseline', 'ghost' or 'official') future, and mutually exclusive to other scenarios in the same set. (That is, in a set of scenarios, two of them cannot both plausibly occur at the same time).

❑ **Consistent, convincing, coherent and logical.** Scenarios need a coherent internal causal logic and a consistent narrative to be credible. Scenarios cannot be at odds with facts and evidence (e.g. a scenario of a world where climate change was a hoax). Good scenarios tell a coherent and logical story about "how they came to be".

❑ **Neither wholly positive nor negative.** Humans are inclined to tell "good" or "bad" stories about the future – utopias where we've fixed everything, or dystopias where everything has gone wrong. There is little to learn from either. The future is always a mix - changes which affect lives in many positive and negative ways, sometimes both at once. (Think about the diverse impacts of smartphones, social media and the internet). It's important to capture this diversity of implications in scenarios.

❑ **Imaginative stories with compelling titles.** This is one of the hardest parts of scenario development, and typically needs significant work to achieve – and both creativity and craft. Good stories convey complexity, frictions and a rich world with as few words as possible. They incorporate numbers, data and evidence. They have a beginning, middle and end, and capture attention – including and especially with their titles.

❑ **Challenging and provocative.** If scenarios depict a 'boring' future that does not involve meaningful change, novel risks/opportunities or significant disruptions to the policy space, it won't have much to offer to policy teams and decision makers.

❑ **Informed by diverse perspectives.** The more you can integrate alternative points of view and sources of ideas into your scenario development, the more creative they will be.

Better scenarios are:

• **Person-centric.** They articulate or clearly imply what life is like in your alternative future for diverse people, communities, and regions. Avoid "victims" and "winners" – the best scenarios tell a more complex story with multi-faceted impacts on the everyday lives of real people.

• **Communicated through innovative artefacts.** A long narrative may be creative, compelling and rich with detail, but many people won't have the time to read it. A picture is worth a thousand words – use graphs and creative visualisations to create compelling presentations or executive summaries. Or videos - the concept of "scenarios" in Futures came originally from Hollywood screenplays.

• **Unforgettable but disposable.** Scenarios have a use-by date – borderline implausible developments can become mainstream within a few years (or sometimes, even months). With familiarity, scenarios can lose their provocative edge and become another set of "assumed" or "expected" futures while events move on and new intelligence about the future emerges. Just like strategy and policy, we need to revise and update scenarios as time moves on to take into account new developments.

Building out your scenarios further

Developing a compelling storyline for each scenario is critical. You can use the following prompts in workshops or to inform your own efforts to build out the details of each scenario.

Values, Rules and Knowledge

- What would be the dominant values?

- What rules would society follow?

- What forms of knowledge would people respect? Who would hold legitimacy?

- What could be considered 'normal' in the scenario that is not normal now?

Systems Mapping

- What would be the relationships between the various drivers included in your scenario?

- What other changes could they influence?

- What dominant patterns would emerge?

See Section 4 for guidance on how to create your own system map for each scenario. Futures Wheel can also be useful for exploring this.

Stakeholder Considerations

- Who would be the key stakeholders in this scenario? Would they be different from your stakeholders today?

- What would be their needs and pain points?

- Which stakeholders would have power and who would be left behind?

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SCENARIOS – 2X2 MATRIX SCENARIOS TEMPLATE

Change Driver 2
High

Scenario 1
Low+High

Scenario 2
High+High

Change Driver 1
Low

Change Driver 1
High

Scenario 3
Low+Low

Scenario 4
High+Low

Change Driver 2
Low

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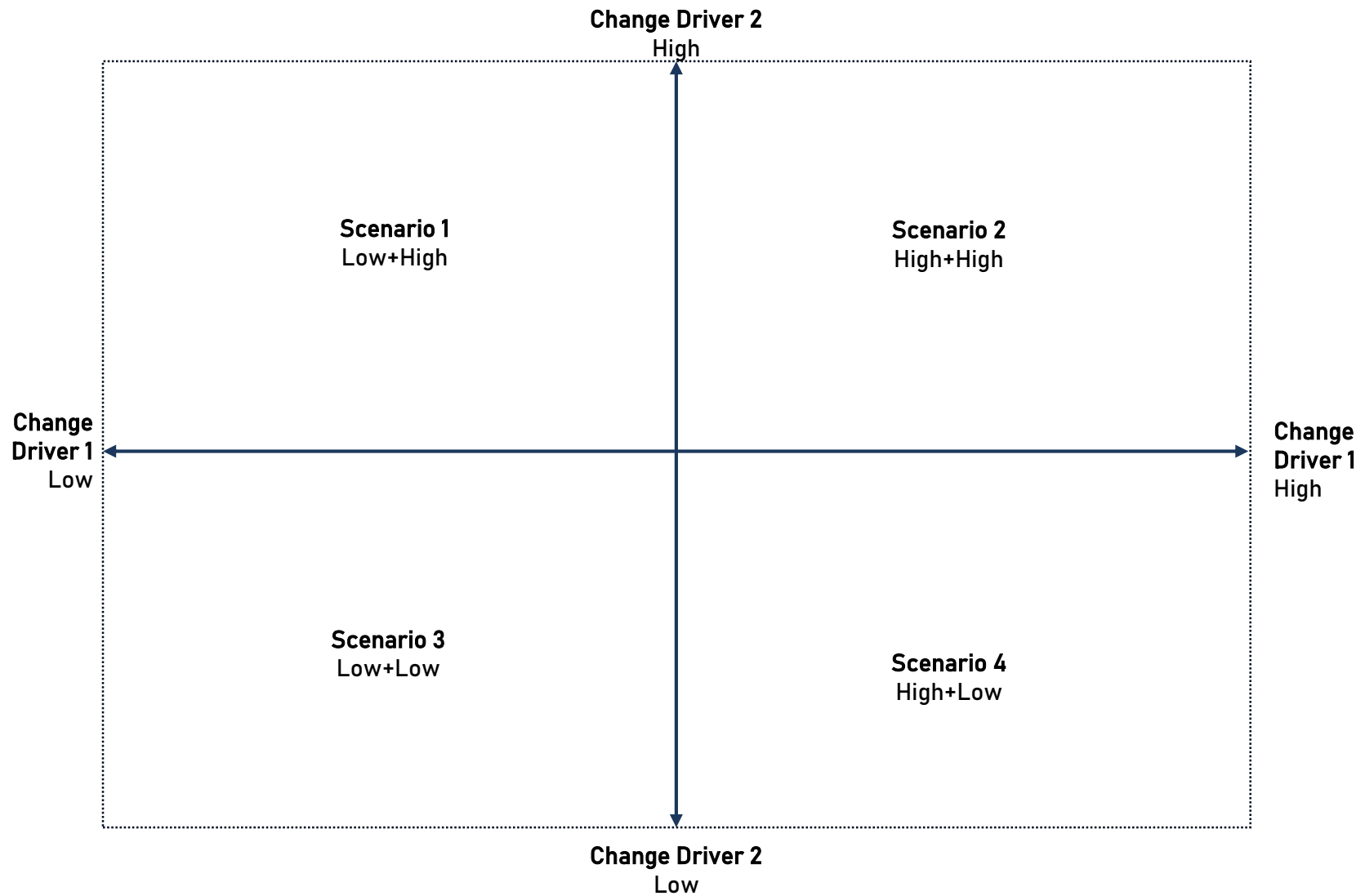
Scenarios – Example: Sydney in 2035

HOUSING GETS MORE EXPENSIVE

URBAN POLICY STASIS

RADICAL URBAN TRANSFORMATION

1
POSTCODE PRIVILEGE
Which Sydney do *you* live in? The one with the 50 degree heatwaves, four generations per household and a two-hour commute to jobs, education, shops and services? Or the one with good jobs in finance and a sea-wall to protect private beachfronts?

2
PLAYGROUND FOR THE GLOBAL ELITE
Smart, green, walkable and climate resilient: the new Sydney is the global city of choice for the ultra-rich. The rest of us commute in from Singapore-style high density housing on the fringe to serve their coffee, teach their kids and clean their solar panels.

3
BERLIN AFTER THE WAR
After the disaster and crash, nothing was the same. Who wants to live in Sydney any more? Turns out young people could finally afford to move back to Sydney, and a renaissance of art, innovation and cultural renewal followed. But everyone is worried about when "it" could happen again...

4
A NEW AUSTRALIAN DREAM
We reimagined the city – we were in economic and climate crisis and needed inclusive and equitable solutions that were fair for everyone, no matter who your parents were or where you came from. But a lot of people are unhappy with the changes especially those who paid most for it...

HOUSING GETS MORE AFFORDABLE

Other Scenario Creation Approaches

Scenarios Vignettes

In this workshop method, participants nominate and combine 3-5 change drivers of interest (e.g., 'accelerated energy transition', 'regional conflict', 'societal backlash against AI', etc.) directly from a **STEEP** exercise.

Participants explore the interactions between each driver using a **Futures Wheel,** generating a list of direct and indirect consequences which form the key features of a scenario – then repeat the process at least two more times with different drivers to generate a set.
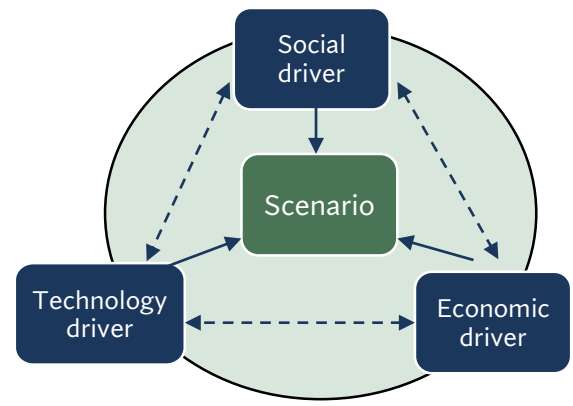
This is a more flexible method than the 2x2 approach, and it allows you to consider a wider range of drivers in each scenario. But it is less systematic and can be harder to develop genuinely mutually exclusive scenarios. You can also incorporate random STEEP drivers into the process to provoke thinking on unexpected combinations of drivers.

Dator Scenario Archetypes

Jim Dator at the University of Hawaii identified that scenarios often fall into one of four archetypes – growth, constraint, collapse or transformation. We can use these archetypes as prompts to create four provocative versions of the future – typically of a system, such as an industry sector, the economy of a geographical region, or a large scale government program.
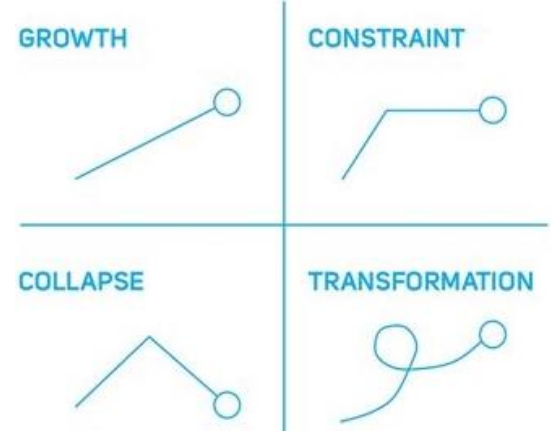
Each archetype has its own logic: **Growth** imagines an upward trajectory – production, consumption, expansion, acceleration. **Constraint** describes a future where discipline and order is agreed or imposed to limit change and maintain a steady-state. **Collapse** involves decline or dissolution, leading to a drastically different state. **Transformation** explores a profound transition to something new.

Dator's archetypes are especially useful for provoking challenging conversations about trends and systems which we assume will evolve in straightforward directions.

Matrix scenarios

In this workshop approach, participants choose 5-7 change drivers with high uncertainty and describe 2-4 possible outcomes for each driver, attempting to cover the widest range of possible outcomes. The outcomes can be described differently depending on the nature of the driver.

Driver 1	Driver 2	Driver 3
High	Increases	>10%
Medium	Steady	5-10%%
Low-None	Decreases	<5%

To generate scenarios, select one outcome for each factor. It can be helpful to start with identifying the assumed future of your team, stakeholders or institution (the 'baseline' or 'ghost' scenario), then create challenging alternatives.

Factor 1	Factor 2	Factor 3
High	Increases	>10%
Medium	Steady	5-10%%
Low-None	Decreases	<5%

Alternative scenario

Baseline scenario

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Using Scenarios

Scenario development can take a lot of time, effort and engagement, but fail to influence policy or strategy. This is one reason it is important to engage users and decision makers from the outset into the scenario development process – to get buy-in for applying the scenarios to policy and strategy.

However, even with a strong authorising environment and bought-in users, applying scenarios to new policy development or reform can still be difficult, especially if a scenario set is highly challenging to current assumptions about the future and entrenched policy settings, or highlights significant potential risks which will require new mitigation and contingency strategies to address.

To apply scenarios usefully to strategy and policy, it can help for users to run through hypothetical questions per scenario, such as:

1) Assuming you knew this scenario is the future that will occur. What three policy recommendations you would make to the Minister to achieve our strategic goals given the changes we expect?

2) What are the key risks we will need to manage in this scenario, and what could we do now to mitigate them?

Particularly useful actions make sense in all scenarios, or at least have minimal negative consequences. The right questions will vary depending on the challenges in your focal policy space.

Structured options for using scenarios:

Futures tools useful for next steps include:

*   **Stress Testing** is the usual next step for testing current policy and strategy under each of the scenarios you have developed.

*   **Futures Wheel** can also be used to explore the key features of a scenario and explore their intersecting implications with a policy space or megatrends.

*   **Blue Sky / Black Sky** can establish 'normative' visions of the future – essentially scenarios we seek to create or avoid – which can be useful to compare against an 'exploratory' scenario set, both to refine the Blue and Black Sky scenarios, but to also test for contradictions and compatibilities. Is the Blue Sky more achievable under some scenarios than others? Is the Black Sky vision more likely under one or more of the scenarios?

Another useful strategy tool is described in Part 4: SWOT analysis. This can be used to assess the strategic context for a team, agency or government under each scenario.

What are our **strengths** in this scenario?	What are our **weaknesses** in this scenario?
What **opportunities** exist for us in this scenario?	What **threats** exist for us in this scenario?

Examples of scenarios to inform your own scenario development

CSIRO's Ag2050 Scenarios:

https://www.csiro.au/en/work-with-us/services/consultancy-strategic-advice-services/CSIRO-futures/Agriculture-and-Food/Ag2050-Scenarios-Reimagining-Australian-Farming-Systems

Centre for Strategic and International Studies: Four Scenarios for Geopolitical Order in 2025-2030

https://www.csis.org/analysis/four-scenarios-geopolitical-order-2025-2030-what-will-great-power-competition-look

National Security College Futures Hub: Four scenarios for the Indo-Pacific regional economic order

https://futureshub.anu.edu.au/the-regional-economic-order-four-scenarios/

Independent Review of the APS: Scenarios for 2030

https://www.apsreview.gov.au/resources/scenarios-2030

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Stress Testing – overview

Purpose

Stress Testing is also known as "Wind Tunnelling". Stress Testing is used to assess the resilience of policies, strategies and plans against a range of scenarios, megatrends or change drivers. You can use it to test existing policies or use it as part of the policy ideation and development process – in either case, it helps you identify what can be done to make policies more resilient to future change.

Outcomes

- A matrix comparing the resilience of policy or strategy options against alternative future scenarios.

- A list of cross-scenario barriers to success that can be used to generate new policy ideas resilient against a range of futures.

Key Concepts
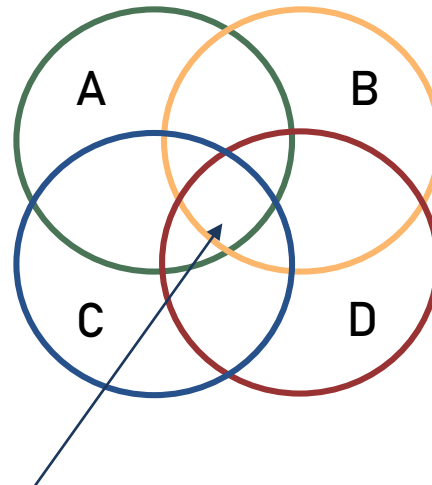
Stress Testing identifies the policy option most robust against possible futures.

Stress Testing works best with scenarios (your own or someone else's) but is also effective for testing different strategic pathways against Blue Sky / Black Sky visions, particularly if you have developed several Blue Sky / Black Sky visions with different stakeholder groups.

Stress Testing can use inputs from:
- Scenarios
- Blue Sky / Black Sky
- Driver Mapping
- Futures Wheel
- Backcasting

Essential steps

1. **Add policy options and scenario set to a matrix.** Strategies, plans or choices can be tested through Stress Testing.

2. **Test your policy options against each scenario.** Rate each policy option on whether it is resilient, can be adjusted to maximise effectiveness or whether it will probably not work.

3. **Evaluate the aggregate effectiveness of your policy options against the scenario set.** Rate the policy options in aggregate across all scenarios, whether they were robust, contingent or ineffective.

4. **Prioritise your policy options.** Establish which should be recommended, amended or discarded – and consider new ideas that could work better than existing choices under the scenario set.

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Guidance on using this technique

When using scenarios for Stress Testing, it's important that users don't get stuck debating the probability or plausibility of the scenarios. You need to encourage users to accept the logic of the scenario and the world it describes to keep them firmly in the strategy and policy mindset. As they work through each scenario, they need to assume it is an accurate picture of the future.

- You don't need to use your own scenarios for Stress Testing – you can use a set relevant to your policy space published by someone else. However, using Stress Testing in conjunction with your own scenarios or sets of Blue Sky / Black Sky visions (or both) is generally more effective in ensuring you are testing policies against the most important and relevant factors shaping your policy space.

- If you are using Stress Testing with Blue Sky / Black Sky, it works best if you have developed multiple visions with different stakeholder groups. You can test which policy options lead to a range of Blue Sky visions, or fail to mitigate a range of Black Sky visions.

- You can also use Stress Testing to assess policy impact, rather than resilience – you can use a similar matrix, but assign T-shirt sizes (XL, L, M, S, XS) to each policy option to describe how much impact it will against your strategic objectives under each scenario.

- Another option is to use Backcasting to generate pathways to evaluate against scenarios or vision sets with Stress Testing.

- Stress Testing can also be used with the outputs of a Futures Wheel activity that has identified key implications that need to be factored into policy consideration, or a Driver Mapping exercise that has identified high impact change drivers that should be factored into policy. In these cases, Stress Testing can test how robust the policy is to the implications and drivers with the highest potential impact.

You can use Stress Testing to evaluate which policy options are most **resilient** and **adaptive** under a set of scenarios – and identify risk **mitigation** and **contingency** strategies for specific scenarios.

Stress Testing also helps to explore and uncover the strengths and weaknesses of policy options that may not have been apparent beforehand. It's important to drill down into the details: ask what is it about this option that works well or poorly in this scenario? The rating is not a substitute for analysis or discussion – it's just to help you compare between options.

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Stress Testing – steps in detail

1. Add your policy options and scenario set to a matrix.

Stress Testing requires a set of distinct scenarios and policy options to work through in combination. The template on the following page provides an example matrix template you can use. (An alternative template is provided for a Blue Sky / Black Sky stress test).

2. Test your policy options against each scenario.

Look at each box in the matrix, and discuss whether the policy option or strategy would work well in that scenario. Why or why not? Does it achieve the policy objective and contribute to the intended strategic outcome? Could it be adapted to be more effective?

Under each scenario, rate each policy option as one of the following:

- **Resilient** (it is likely to succeed at achieving its intended outcomes);
- **Works with adjustments** (there are risks that can be managed)
- **Does not work** (probably), or is likely to produce unintended consequences that cannot easily be mitigated.

Note: the analysis (or discussion, in a workshop context) is more important than the rating. You need to explore and identify the key barriers standing in the way of policy success in each scenario.

3. Evaluate the aggregate effectiveness of your policy options against the scenario set.

Consider how your policy options you tested fared in aggregate across all scenarios. Assign each an overall rating:

- **Robust** (performed well in all/most scenarios)
- **Contingent** (performed well in some scenarios, but poorly in others)
- **Ineffective** (performed poorly in most scenarios).

Also identify common barriers to policy success found in more than one scenario.

4. Prioritise your policy options.

Robust policy options should be prioritised for action or further development as viable recommendations for decision makers.

Ineffective options should be discarded.

Contingent options can possibly be adapted to be resilient across a wider range of scenarios, but can also be useful as contingency options to be held in reserve if that scenario becomes likely. You can then ask: what early warning signals would suggest the emergence of this scenario?

If you have few or no robust options, create new options likely to be robust based on the common barriers to success you identified. Consider developing new policy options then running another stress test on them to assess their relative resilience against each scenario.

Example Workshop Run Sheet

This assumes that participants are familiar with the scenarios (or visions) and policy options. Handouts summarising the scenarios / policy options are recommended, as well as a template pre-populated with the names of the scenarios and options.

Participants can be split into groups which each assess a single policy option against the four scenarios, a subset of options, or all policy options depending on the number of policy options, the size of the group and the amount of time you have.

1. **(20-40 minutes per scenario)** Groups discuss how each of the policy options they have been assigned performs under each scenario. Take the scenarios one at a time and explore each policy option. Set a time limit per scenario to ensure groups get through all of them. Identify key barriers to success in each scenario.

2. **(10-20 minutes)** Each group discusses and agrees an overall performance rating for each policy option, and identifies any cross-scenario policy barriers to success.

3. **(30 minutes)** As one group, all participants contribute their policy ratings to the overall matrix (reconciling any differences if the same options have been discussed in multiple groups.) and cross-scenario barriers. Decide the next steps: which options should be prioritised for action, which should be discarded, which can be amended – and whether you need to commission additional policy options that are more robust against the cross-scenario policy barriers.

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STRESS TESTING TEMPLATE – SCENARIOS

✓ Resilient
? Works with adjustments
X Does not work

Scenario				Overall policy option rating
A	**B**	**C**	**D**	
Policy option 1				
✓	X	?	X	Ineffective
Policy option 2				
?	✓	✓	✓	Robust
Policy option 3				
✓	?	✓	X	Contingent
Policy Option 4				
✓	?	X	✓	Contingent

Common barriers

Key barriers to policy success	…	…	…	…	…

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STRESS TESTING TEMPLATE – BLUE SKY / BLACK SKY

Blue Sky

✓ Directly leads to achieving Blue Sky vision

? Partially contributes to achieving Blue Sky vision

– Has no effect on achieving Blue Sky Vision

X Works at cross-purposes to Blue Sky Vision

Black Sky

✓ Directly mitigates against Black Sky vision

? Partially mitigates against Black Sky vision

– Has no effect on addressing Black Sky vision

X Contributes to achieving Black Sky vision

Blue Sky Vision					Likely level of stakeholder support
	1	2	3	4	
Policy option 1	–	X	?	X	Opposed
Policy option 2	?	✓	✓	✓	Preferred
Policy option 3	✓	–	✓	–	Conditional
Policy Option 4	✓	?	X	✓	Conditional

Black Sky Vision					Overall policy option rating
	1	2	3	4	
Policy option 1	✓	X	?	X	Opposed
Policy option 2	?	✓	✓	✓	Preferred
Policy option 3	✓	–	✓	X	Conditional
Policy Option 4	–	?	X	✓	Conditional

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Blue Sky / Black Sky – Overview

Purpose

Blue Sky / Black Sky is a method for creating one or more compelling visions of a preferred future – and identifying futures we want to avoid.

Blue and black sky visions set the stage for action and open up new solution spaces. They can tease out different ideas of what success and failure in a policy space means to different stakeholders as a first step towards establishing shared goals and momentum for policy action. Blue Sky / Black Sky is about creating co-owned visions with stakeholders to create a permissive environment for ambitious policy and establishing steps for achieving it.

Outcomes

- A Blue Sky (best case) vision of your preferred future state for the policy space, and an outline of goals and actions that can be taken today for realising it.

- A Black Sky (worst case) vision of the future for the policy space - and actions that can be taken today to avoid it.

Key Concepts

Blue Sky / Black Sky is also known as 'visioning'. Visioning is a kind of scenario creation that focuses on 'normative' futures (what *should* or *should* not be) rather than 'explorative' futures (what *could* be). Visioning in Futures is different from a traditional organisational vision statement – it involves the development of a specific and vivid image of a policy environment's future that stakeholders wish to achieve or work towards.

Visioning can use inputs from:
- Horizon Scanning
- Driver Mapping
- Stakeholder Mapping

Outputs can be used with:
- Backcasting
- Stress Testing

Essential steps

1. **Identify the Blue Sky vision.** What are the key features of the preferred future you want to achieve?

2. **Identify the Black Sky vision.** What are the key features of the future you want to avoid through policy?

3. **Identify the Blue Sky boosters.** What factors in the environment will help you achieve the Blue Sky vision?

4. **Identify the Blue Sky barriers.** What factors will work against you when trying to achieve the Blue Sky vision?

5. **Identify what can be done to reduce barriers and harness boosters.** What actions can you take to make your policies and strategies more effective and work with the grain of change?

6. **Develop your Blue and Black Skies in more detail.** Optional.

Guidance on using this technique

Blue Sky / Black Sky is aspirational, seeking to describe preferred and unfavourable futures beyond the normal timeframes of many policy stakeholders focussed on the here and now. The technique is values based, and participants may have vastly different ideas of the preferred outcome.

Identifying these divergent preferences so that they can be understood and negotiated is a core function of the tool.

- It is important that the positive (and negative) visions describe outcomes, or 'what the world looks like', rather than describing what agencies, stakeholders or the government is doing. Success isn't that the government is running an efficient program with lots of stakeholder involvement – it's that real world outcomes are being realised.

- These questions may be useful in developing Blue Sky visions (from Sitra's vision building checklist):

  1. Which megatrends are the most important to your focal policy space and need to be accounted for in your vision?

  2. What are the values underlying your vision?

  3. What does your vision look like from the points of view of a brake, bridge-builder and visionary?

  4. What kind of presumptions are there underlying your vision?

  5. Which existing solutions support the realisation of your vision?

  6. What is the target group for your vision? Who needs to hear about it?

  7. How would you explain your vision in a single sentence?

Using Blue Sky / Black Sky for consensus-building

Blue Sky / Black Sky works best when you develop multiple visions of each with key stakeholders, then compare them to identify points of common ground and conflict. You can then run a second Blue Sky / Black Sky process specifically with stakeholders with divergent views to align and build consensus on what policy should achieve. Stress Testing can also be a useful tool to establish how existing policy solutions can contribute to achieving or avoiding Blue or Black Sky scenarios – see the template under Stress Testing.

Incasting

Going in-depth on the development of one vision is sometimes called 'incasting'. This is a participatory process for enriching a vision to engage and excite a team or community of stakeholders to push forward into new territory through agreeing on a model for major change or reform.

Incasting can create the conditions for building strong consensus and buy-in amongst stakeholders and mobilise them around a strategy for policy action.

Blue Sky / Black Sky – steps in detail

1. Identify the Blue Sky vision.

What does a just-barely achievable best case scenario for your focal policy challenge or environment look like in ten years' time?

Describe the most preferential future state. What are the key features (most important and desired) of this state? Try and outline at least 3-5 key elements of this vision. They should not be institutional goals (e.g. "policy is a success at supporting…") but instead specific descriptive features of the policy space in ten years' time that are meaningfully and significantly different from today. ("The worst public schools are better than the best private schools for supporting student wellbeing and promoting lifelong learning and career success").

For each key feature, develop a short strategic narrative about how we could achieve it over ten years – 3 or 4 key steps to make it happen.

2. Identify the Black Sky vision.

Now describe the plausible "realistic worst-case outcome" for your policy space in ten years' time. What are its key features – the most undesirable outcomes or unmanaged risks that policy has failed to address.

For each negative feature, identify a short narrative about how it could come to pass (3 or 4 steps). What practical steps could be taken now to help avoid that pathway?

3. Identify the Blue Sky boosters.

What change drivers are pushing us towards the Blue Sky vision, or away from the Black Sky vision? Use a STEEP framework to consider a wide range of factors.

4. Identify the Blue Sky barriers.

What change drivers or other factors could make it difficult to achieve the Blue Sky vision (directly or indirectly), or are pushing us towards the Black Sky vision?

5. What could we do to reduce barriers, and harness boosters?

Ask 'What could we do to address or mitigate this barrier?' and 'What could we do to harness these boosters?' Revisit your Blue Sky strategic narrative and incorporate actions you could take to mitigate the effects of barriers and take advantage of positive boosters.

6. Further develop your Blue and Black Sky visions (optional).

See the following slide for tips on building out your Blue and Black Sky visions.

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Example Workshop Runsheet

This assume a mixed group approach but can also be used with different groups of stakeholders to build divergent Blue and Black sky visions which can be compared and tested against each other to determine features that are common and at odds. In this case, it can be useful to follow it up with another session aimed at building a Blue Sky vision around the common factors and reconciling the divergent ones.

1. **(5-10 minutes)** Describes the purpose of visioning and the key features of a Blue Sky vision – it is ten years in the future; it is ambitious but achievable and describes a world that is meaningfully different from today.

2. **(30-60 minutes)** Identify the Blue Sky vision and 3 key features that define it. Against the 3 key features, define 3 steps that could be taken to achieve them.

3. **(30-60 minutes)** Identify the Black Sky vision – the "realistic worst-case outcome". Describe 3 key features that define it, and 1-3 possible causal factors for each feature.

4.   **(20-30 minutes)** Identify Blue Sky boosters and barriers – at least 3 of each.

5. **(20-30 minutes)** Identify what actions can be taken to reduce barriers and harness boosters. Add them to the list of steps groups developed in step 2.

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Developing your Blue and Black Skies

Blue Sky Vision Building

It's often worth investing the time to properly build out your Blue Sky to inspire action and develop actionable plans. This is usually an open and iterative process that could involve a mix of participatory group work and stakeholder consultation.

Once you have the key high level features of your Blue Sky Vision agreed through the process on the previous page, consider developing it further by asking the following questions:

- What is it like to live in this future?
- What is like to work in this future?
- What do people want and expect in this future from governments?
- Who is benefitting most in this future?
- Who is left out of this future?

You can explore these questions through 'personas' – hypothetical people from diverse backgrounds, communities and regions across Australia. What is it like to be young or old in this future? Or from a disadvantaged cohort of the community?

Black Sky Vision Building

It's usually not as useful to fully develop Black Sky visions – it risks falling into a risk management or problem-solving mindset, where our perspective gets stuck in 'what could go wrong' rather than 'what can we fundamentally change for the better'. This is often a space governments and public official feel more comfortable in given our responsibilities to manage risk.

The most useful way to develop Black Sky visions is to use them to detail the costs of inaction to motivate proactivity – how can we take steps today to avoid foreseeable problems and unpredictable risks? You can use similar questions as for Blue Sky, but link them to a case for what we can do now.

It's often most productive to focus on the pathways that could lead us to a Black Sky vision. Identifying alternative ways that things could go wrong can help flush out a wider range of early warning signs and risks that we can take action on now.
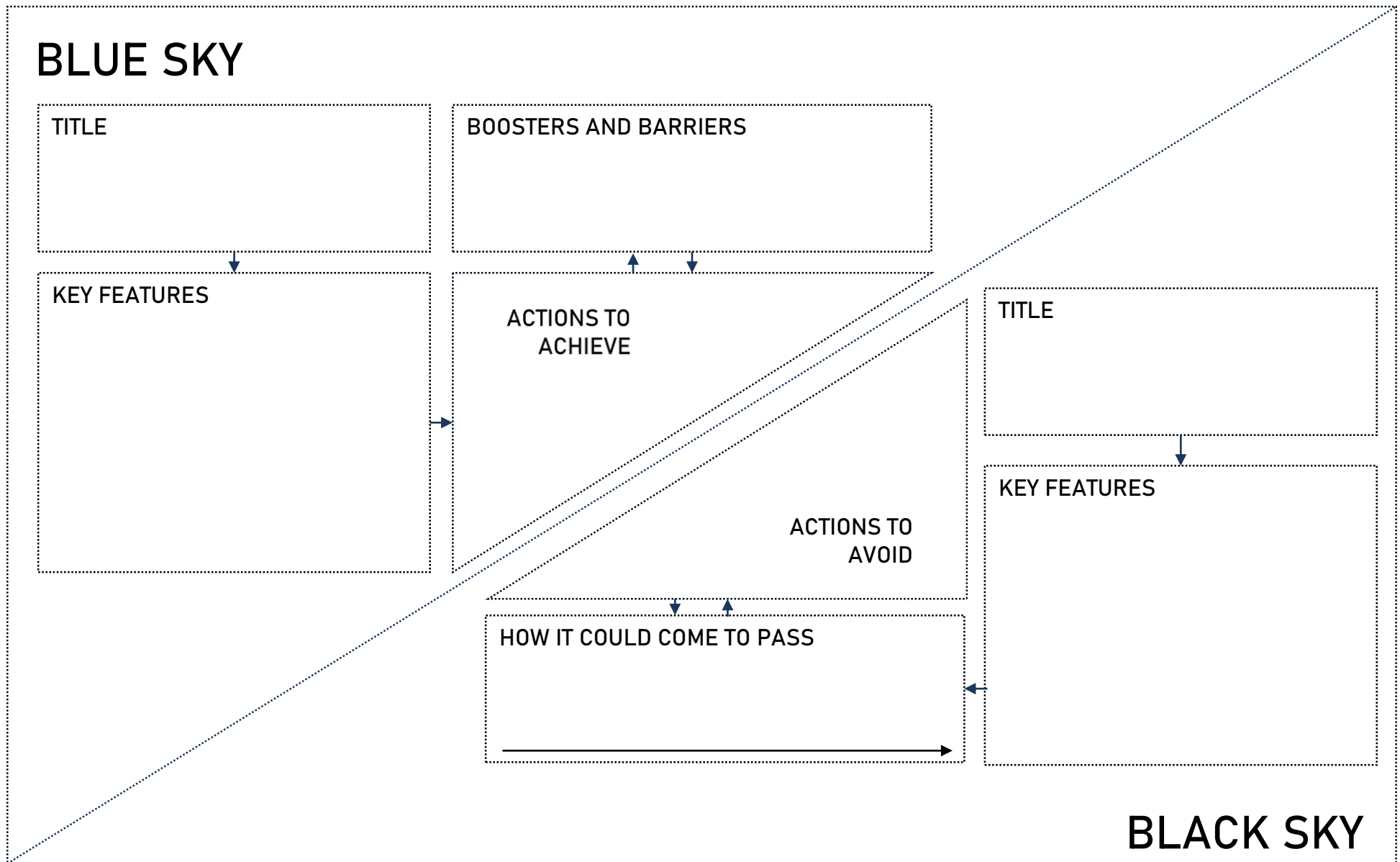
Strong vision criteria

Strong visions share many of the same principles as good scenarios. Strong visions demonstrate:

- **Consistency.** The key features of the vision are not contradictory or at cross-purposes.

- **Plausibility and credibility.** Strong visions are ambitious, but achievable. They also differentiate between things we can't change and things we can.

- **High public value.** The vision must demonstrate why life will be better for others – the public, stakeholders, and the government.

- **Real world outcomes.** Visions shouldn't describe what we will do – they must describe meaningful changes in the world compared with today.

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BLUE SKY / BLACK SKY – TEMPLATE

BLUE SKY

TITLE

BOOSTERS AND BARRIERS

KEY FEATURES

ACTIONS TO ACHIEVE

TITLE

ACTIONS TO AVOID

KEY FEATURES

HOW IT COULD COME TO PASS

BLACK SKY

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Backcasting – overview

Purpose

Backcasting connects a future to the present by identifying what would need to happen for that future to be realised. It takes a future scenario as a given (typically a Blue Sky preferred vision of the future) and guides users backwards to identify possible factors and events that could lead to the realisation of the scenario.

Backcasting can develop alternative future pathways to the desired future and identify new options for policies that could achieve it. It supports the development of alternative theories of change, and explores how external events and stakeholders can support or prevent a preferred future from emerging.

Outcomes

- A shared understanding of the necessary steps and conditions for a preferred future to emerge, and the policy options that could achieve it.

- A set of indicators for monitoring progress towards a preferred future.

- Options for policy levers that take advantage of future opportunities or mitigate strategic risks.

Key Concepts

Backcasting contrasts with the approach taken by more conventional forecasting, planning, and policy approaches which extrapolate present trends and drivers into the future.

Instead, Backcasting identifies potential trajectories for how a preferred future situation might develop by working backwards: identifying the major events and data points (signposts) which could generate that future. Rather than leading to a single plan of action, it prompts consideration of a wider range of actions, policies and systems that are necessary – including those that cannot be controlled by the government but can be influenced – to achieve the desired future.

NOW   FUTURE   Blue Sky
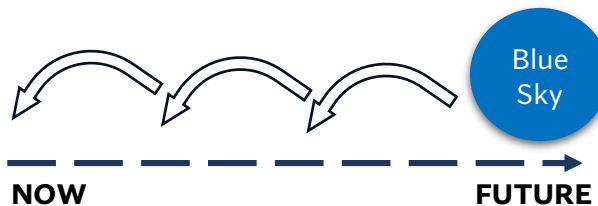
Backcasting can use inputs from:
- Blue Sky / Black Sky
- Scenarios

Backcasting outputs can be used in:
- Stress Testing

Essential steps

1. Identify 3-5 key signposts of change that occurred immediately before the Blue Sky vision was achieved. Use STEEP to consider a variety of factors that could be necessary to achieve the Blue Sky vision.

2. Work backwards to develop the timeline. Identify a logical sequence of events that creates the Blue Sky vision, moving backwards through time one step at a time.

3. Repeat to create one or more additional backcasts (optional). This is highly recommended to identify multiple pathways that policy can take to get to a desired end state.

4. Review critical signposts and identify key enablers and policy options (optional). Once you have completed your backcasting timeline(s), identify the most important signposts which could indicate we are on the pathway to your preferred future. Flag the key enablers and barriers that affect the likelihood of this signpost, and determine policy options that could address these.

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Guidance on using this technique

Backcasting assumes there are many potential pathways to the same future. Creating multiple backcasts helps determine which policies, events and stakeholders are most critical for achieving a preferred vision of the future, and can identify novel pathways for change.

- It's important to have a robust scenario or vision to use with Backcasting, normally a Blue Sky vision. Running a Blue Sky activity is often a precursor to backcasting.

- Backcasting can also be used with Black Sky visions and exploratory scenarios. Backcasting can develop the causal logic of scenarios or identify in more detail the factors and pathways that can lead to a Black Sky vision. This is particularly useful for a strategic risks process and to detect emerging signals that could lead to a scenario or Black Sky vision being realised.

- Note that compared with most of the other tools in this primer, Backcasting can be very time-intensive to apply in practice, particularly if the policy space is broad or highly complex. A mix of workshops and iterative work within a team is often required to deliver the best results.

- There are a variety of approaches you can take to backcasting – we have provided several templates to illustrate different methods you can use:
  - Template A and B are the defaults for the process described in this primer.
  - Template C is a pathway variant focused on working through how different events could contribute to the same key features of a Blue Sky scenario, building out multiple pathways to the same goal.
  - Template D is a wheel approach which is less linear. For this process, groups identify the key criteria (signposts) required for a Blue Sky vision to occur and focus on identifying the possible barriers and opportunities policy must address for the signposts to occur, rather than focusing on the causal logic of events that led to them.

Backcasting takes a future scenario as a given and works backwards to collectively make sense of the policies, conditions, events and stakeholder choices that might lead to it. This creates a shared sense of how the future might emerge.

Backcasting can also consider what lies within the control of the policy and strategy makers – and can therefore be delivered – and what lies outside their control and therefore needs to be managed or influenced.

Backcasting identifies **signposts** – these are events, changes or outcomes that can indicate when you are on the pathway to the desired future. These signposts point the way to the next event, change or outcome that needs to occur for the future to be realised.

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Backcasting – steps in detail

1. Identify 3-5 key signposts of change that occurred immediately before the Blue Sky vision was achieved.

Review the Blue Sky vision and the fundamental differences between it and the current policy environment. (You can use a STEEP template to consider a wide range of potential differences).

Take one step backwards in time. What events and changes happened immediately before this vision was actualised? Generate as many ideas as you can, then try to prioritise the most important 3-5 key changes (signposts) that would be necessary for this future to occur. Put aside any that you feel would be helpful, but not necessary.

These signposts should not be exclusively actions of government (legislation passed, or programs implemented). They should be focused on changes in the world – cultural or behavioural changes, technological changes, consensus between key stakeholders.

2. Work backwards to develop the timeline.

Take another step backwards. What events, outcomes and changes would have occurred to enable the critical signposts you identified in step 1? Add them to the timeline, including when they might have occurred – a year before the signposts, or three years, or five?

Create a logical sequences of events and try to identify potential causal relationships. When required changes in your sequence don't have a clear cause, identify a possible cause. You should also periodically play your backcast forward step by step – does it make sense? Do you need to adjust the timeframes or add intermediate events?

3. Repeat to create one or more additional backcasts (optional).

You can develop backcasts with multiple groups or create them in sequence. (Or both). Exploring and evaluating multiple possible pathways to a preferred future can challenge assumptions and reveal new policy solution spaces. It can also identify strategic intervention points common across several backcasts.

The ideal is to use Stress Testing to evaluate multiple backcasts against a scenario set to explore their suitability in multiple futures.

4. Review critical signposts and identify key enablers and policy options (optional).

First, identify the most critical signposts on the timeline that need to occur for the Blue Sky vision to be realised. Then identify:

1. Which actors are the key enablers for these signposts? (state or Commonwealth governments, the media, citizen groups, industry bodies, the APS, international organisations). Consider barriers as well.

2. What policy options or actions can be implemented today to influence these enablers or barriers?
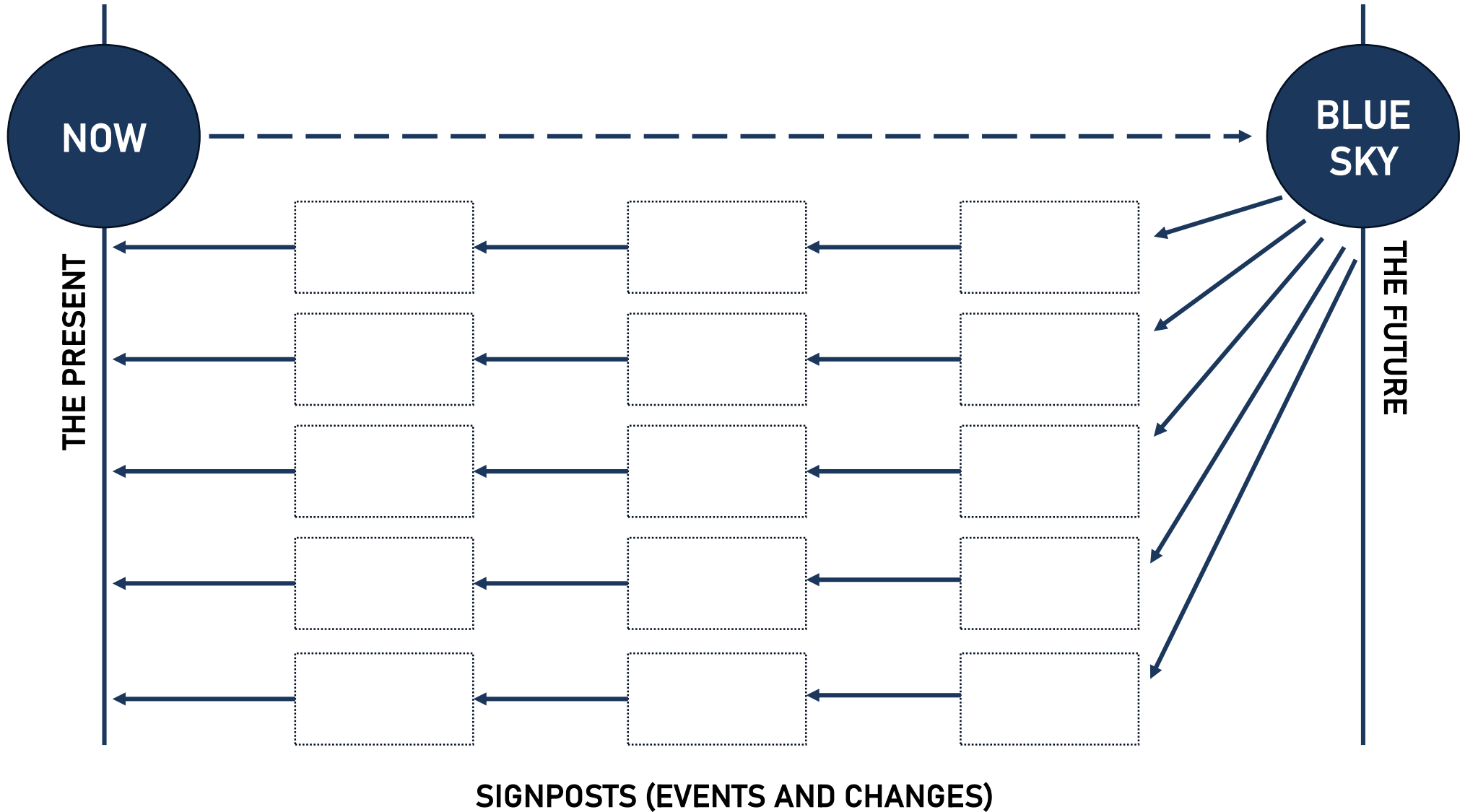
Example Workshop Runsheet

How long you need for Backcasting workshops can vary significantly depending on the complexity of the policy area, the specificity of the Blue Sky vision and the familiarity of participants with both. We've found in practice Backcasting can take a long time for some groups and you may need to break up the below runsheet into further steps to keep people on track (such as allocating time per signpost).

1. **(20-40 minutes)** Agree the key defining features of the Blue Sky vision. (Ideally, these have been provided to participants ahead of the session). Ideate possible signposts – what are the possible events that could have happened immediately before these defining features came to be achieved?

2. **(20-30 minutes)** Prioritise 3-5 key signposts of change that occurred immediately before the Blue Sky vision was achieved. Participants can reformulate items if necessary.

3. **(45-90 minutes)** Use **Template A** to map the 3-5 signposts in the far right boxes. Groups then build out the timeline, working from right to left (the future to the present) on the key events preceding each signpost. Make sure you keep groups on track to fill out the logic for all signposts.

4. **(30-60 minutes).** Identify the 5 most critical signposts on the timeline using **Template B.** What are the most important enablers government must influence to achieve this future, and how?

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BACKCASTING – TEMPLATE A (SIGNPOSTS)

NOW

BLUE SKY

THE PRESENT

THE FUTURE

SIGNPOSTS (EVENTS AND CHANGES)

BACKCASTING – TEMPLATE B (ACTIONS)

Blue Sky Vision			Timeframe

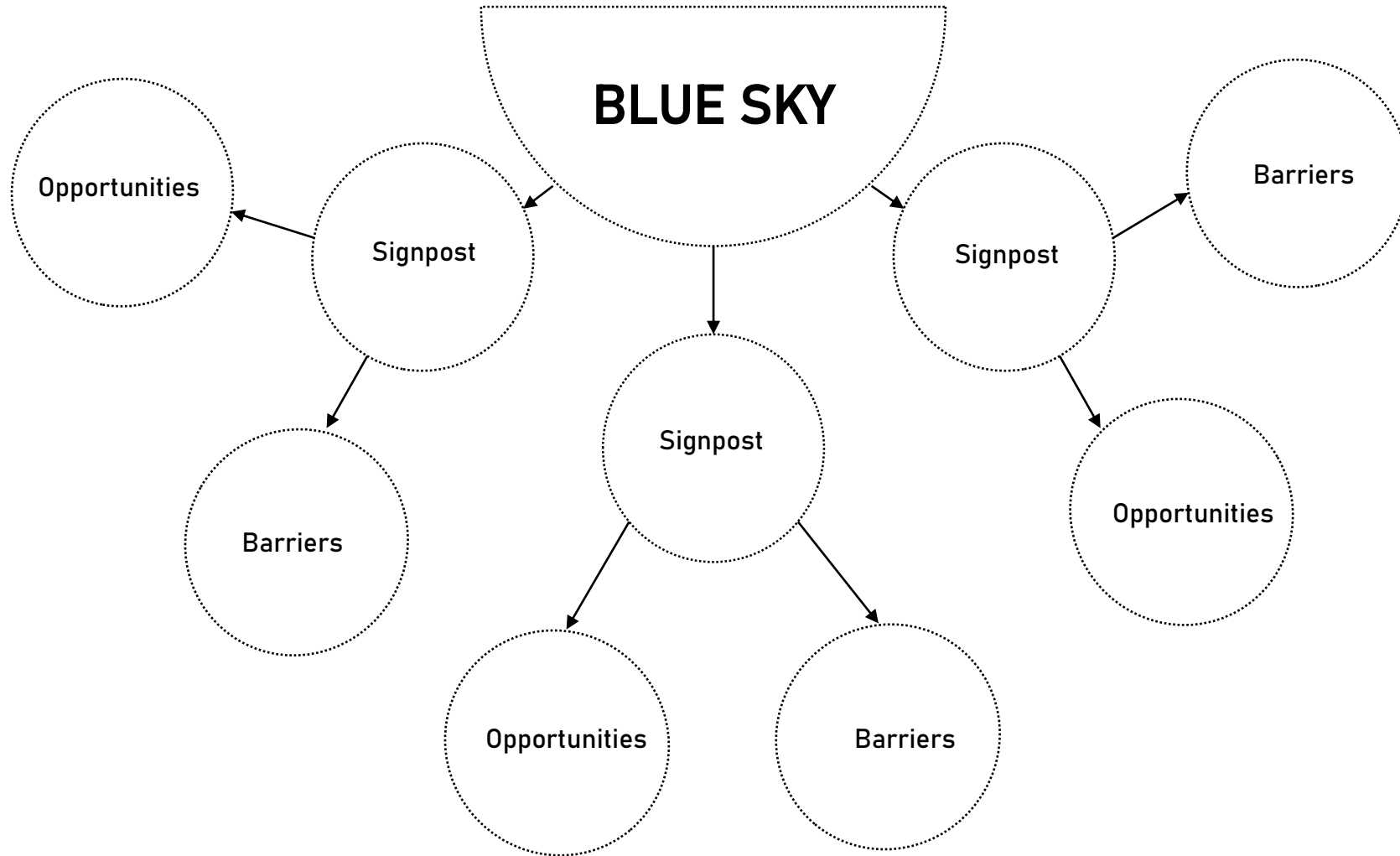| Year	Critical Signposts	Key enablers for signpost (governments, stakeholders, citizens)	Policy options and actions to take today to influence future enablers
Future			
Present			

BACKCASTING – TEMPLATE C (PATHWAYS)

NOW

BLUE SKY

THE PRESENT

THE FUTURE

BLUE SKY FEATURE 1

BLUE SKY FEATURE 2

BLUE SKY FEATURE 3

SIGNPOSTS (EVENTS AND CHANGES)

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66
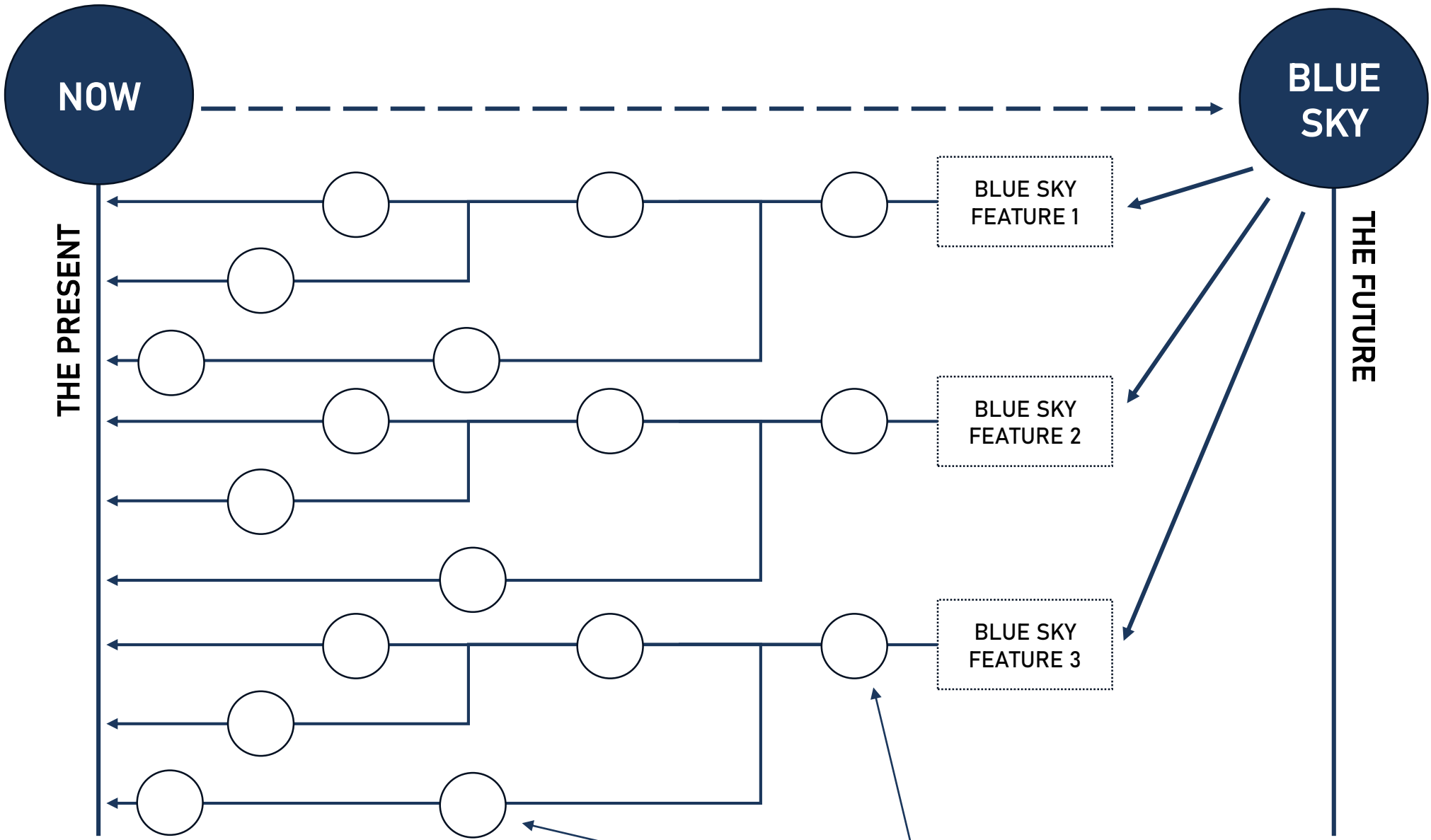
BACKCASTING – TEMPLATE D (WHEEL)

Part 3: Impact and Influence

Futures with impact and influence – overview

Tips to enhance your work

This section includes a range of suggestions for using Futures with impact and influence in government. We have drawn on both the PPTO's practical experiences and a range of insights gathered from expert futures practitioners across government (state and Commonwealth) and the international foresight community, including representatives from the OECD, EU, World Bank and IMF.

Futures needs time, effort and iteration to succeed

Time and space to do futures work is essential for it to be successful. Single-shot workshops without any investment in follow up work to translate insights into good policy and strategy are unlikely to deliver much impact. Alternatively, overinvesting in complex products (such as scenarios) that have no user in mind, low stakeholder buy-in or lack a policy process to hook into can be a waste of effort.

The key to managing both underinvestment and overinvestment is usually iteration – delivering outcomes early and often to engage stakeholders, refine approach, pilot ideas and target knowledge gaps. Futures techniques are designed to build on each other with each other to provide this kind of iteration. The most effective Futures processes provide value at each step *and* build steady momentum, influence and impact through the application of successive techniques.

In this section

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Engaging decision makers

Engage by doing

The best way Futures can demonstrate value is supporting the delivery of high quality outcomes that matter to departmental leadership and the Government. It's important to use Futures tools to move you forward and kick goals: deliver more informed policy and insights that catalyses change. Where possible, bring other teams along with you and use Futures to engage stakeholders. This builds buy-in and demonstrates you are connected to other work and sources of expertise.

Work with the rhythms of government and scan for opportunities

Decision makers are time poor and often most concerned with urgent problems and crises, short term risks and immediate implementation challenges. It's important to time interventions for maximum impact. Think about ways to link the important with the urgent. Consider:

- The public discourse – what is attracting the attention of your decision maker and audience?

- Budget cycles – what decisions are being made and when?

- Parliamentary cycles – sitting times, election cycles and the business of parliament shape all of our work.

- Policy cycles within your department – when is the best time to put forward ideas?

The goal is good policy

Futures is one set of tools amongst many. They provide structure to support long-term thinking and policy, but don't replace the hard work required to get good policy delivered.

Adding value with Futures requires adaptability and pragmatism – you must always be ready to demonstrate to decision makers how your insights translate into better decisions, strategy and policy.

Insights must be based on evidence and intelligence and delivered with craft

Futures is an invitation to consider different, and sometimes uncomfortable, possibilities. Doing this well means gathering a diverse range of evidence, not just speculation and conjecture, and synthesising it for decision makers so that it is credible and useful.

To encourage decision makers to look beyond evidence of the past to guide future decisions, you need to package the issues and evidence through a compelling narrative that helps them understand the future risks and challenges, and persuades them to act in the 'maximum moment' of opportunity. There is usually a higher bar you need to hit in terms of the quality of your writing and communication compared with more conventional reports and briefs – communicating challenging insights to decision makers requires confident, concise and influential products that will engage their attention and interest.

Tips on engaging decision makers from our expert advisory group

Trish, OECD: We do not stop at reports and toolkits: we write and develop a paper with the team we are supporting. They hold the pen on the paper, and we work with them collaboratively to collate great insights. It can be a lot of work to translate this into actionable policy outcomes. We get people involved so there are no surprises in the final report.

Sharon, DCCEEW: Humans respond really well to story-telling; not data. We need to create strong, truthful national narratives, not leave information vacuums that misinformation can exploit. 2-3-page policy papers, maximum. Focus on executive summaries. Execs don't want anything too new, exciting, different – those things often equal extra hard work. Focus on individual issues rather than broadly across too many. Case studies will be the number one weapon in your arsenal – the more credible, relatable, comprehensive, high-status and authority-endorsed, the better. Execs are practical: proof is in the pudding.

Ryan and Owen, NSC: Establish tempo. It's important to ensure futures thinking is repeated, updated and analysed regularly. Tempo will depend on the area, but options include every 6, 12 or 24 months. There should be different streams of work with different tempos. It's always good to remind senior people you are there and doing good things every month or two; with more major pieces of work at a slower tempo. The longer the gap since someone has heard from you, the more work and progress they will expect to hear.

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Communicating the analysis

Short, sharp and to the point

Long form documents are sometimes necessary to undertake in-depth analysis of complex issues and provide the necessary evidence base for ambitious policy decisions. The logic and reasoning behind major policy interventions needs to be captured and subjected to critical analysis. However, most of your audience will not have the opportunity to read and consider a long document. Every long form document needs a great executive summary focusing on conclusions, recommendations and essential insights. Whether it is a brief or a slide deck depends on the preferences of your reader.

Outputs need a user, not just an audience

The most useful products from Futures are those that connect to other strategic work. The observation from Futures teams working in the APS has been that standalone futures products often have not resonated – they had stakeholders and audiences, but not users.

Meet your audience where they are to challenge and influence their thinking

Effective communication meets the information needs of its audience and uses the format that is most accessible to that audience. Written papers and briefs, visual placemats and oral presentations all have their place and choosing which to use and when is important.

Use examples of real people and places to demonstrate the relevance of your work

It is important for both the Government and the APS that policy generates tangible positive outcomes for citizens and their communities. Futures activities can lead to relatively abstract and technical insights about complex global systems and change; it's important to describe the implications for real people and places.

Temporal context is important

A problem or issue does not suddenly appear from nothing or exist in isolation. Retaining sensitivity to the history of the policy space helps us to ground our analysis and communicate how issues have emerged and evolved over time, including how prior policy interventions have shaped the problem space.

A brief in three questions

What? – clearly describing what the issue that you are focusing on is.

So what? – setting out why this issue is important now, is there a problem now or will there be and why should it get attention.

Now what? – Actions and responses, what can or should be done and what are the next steps and who is going to do them.

Tips on communication from our expert advisory group

James, CSIRO: "The long form report is important because of the depth of analysis. However, it is also important to be able to summarise it into a 5-10 minute presentation for decision makers if you want to have influence and impact."

Ryan, Futures Hub: "There is a line to walk between being bold and crazy, or overly dogmatic. People will tend to prefer playing it safe with things they have evidence for or well-known megatrends – but this can lead to a risk that your futures outputs will be only things the senior leaders already know. The aim is to be bold with insights and to get people thinking, but not so bold that you turn them away."

Dayle, Director, Futures Hub: "The best products are short and sharp: briefs with insights accompanied by clear visual trends on a placemat. There needs to be consideration for the look and feel of the material that is being produced."

Scott, NSW Government: "The material produced must be somewhat provocative but simultaneously, something others can connect with. It's important to get people to expand their disbelief and design exercises to get them to think."

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Connecting to the human perspective

Delivering better outcomes for people must always be the ultimate focus of both policy and Futures.

Futures and major policy development that focuses on macro, large scale challenges and trends can be sometimes difficult to translate to the local and community level. Conversely, it can be difficult to engage with sweeping long term global forces of change at the local level.

Perspectives can be conceptualised as macro, meso and micro (see table). The impact of megatrends and change at a macro level often dominates futures activities, but change at the local and national levels is also important to consider for effective policy development – a 'bottoms up' approach to thinking about change is often as or more effective as a 'top down' perspective. What can change at a micro or meso level tell us about change at a macro level?

Seek out voices that are disempowered to broaden your insights – particularly those on the coalface of change.

Futures is ideally about finding the frontier: who are experiencing the first effects of change. We often start with experts and people who are *leading* change – entrepreneurs, scientists and leaders. However, often the most concerning impacts and implications of emerging change can be found in disadvantaged communities experiencing the first wave of disruption. It can be challenging to find them, but it is always worthwhile.

Using different methods to support people to participate

The way we engage different groups of stakeholders and seek out different perspectives must continue to evolve. Virtual and remote working technologies has been a game changer: many Commonwealth policy officers are now working outside of Canberra and embedded in the communities they seek to impact with policy. The APS is at an inflection point, where we have begun widescale remote and virtual work, but have not yet taken full advantage of the opportunities to both engage more comprehensively locally with state and local governments, communities and experts, and use technology platforms to more routinely run large scale consultations across the country. At the moment, we often still use video conferencing tools as if we were running an in-person workshop or meeting; it's important to explore more innovative and asynchronous participatory approaches that could take full advantage of new technologies.

However, there is still considerable value in connecting in person. We need to remember that the explosion of virtual working offers this as well: public servants distributed across the country who can have more and better conversations with real people about how they can influence the Future through policy.

Level	Perspectives	Example
Macro – large systems – Global and national implications	**Megatrends** – influencing over years and decades with the potential for substantial transformative impact	Climate change
	Trends – macro to meso – the changes that are observable in the present	Increasing number and intensity of fire events
Meso – medium systems – Sector and region implications	**Context** – the environment, setting or system where the trend or change is happening	City fringes have much higher fire risk
	Community – people affected by the trend or change who are linked by shared factors	People who live on the edge of the city have higher insurance costs
Micro – small systems - individual interactions	**Individual** – a person experiencing the trend or change first hand	Insurance is unaffordable

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Communicating with Three Horizons

Why three horizons

The challenge of futures is to move decision makers gaze to further horizons: anticipating, preparing, and shaping incoming change. Communicating using Three Horizons can be a useful way of partitioning uncertainty and separating the emerging and important from the immediate and urgent.

**Horizon one – The wind on your face (*current events/trends*)**

In government, we often focus on the problems and opportunities of the moment (Horizon One) when they are having the most visible impacts on the economy, society or environment.

Horizon two – The oncoming storm (*strong signals*)

Futures often focuses on incoming challenges and changes we can see at Horizon Two – where change is visible, but its potential implications are not yet fully determined or understood.

Horizon three – Behind the clouds (*weak signals*)

Signals of change on the furthest horizons are the hardest to perceive and usually only visible to subject matter experts and people at the frontier of their disciplines. Horizon Three requires us to stretch our thinking and push our horizon scanning to seek quieter and smaller signals of change.

Horizon Three - Distant Future

Horizon Two - Near Future

Horizon One - Present
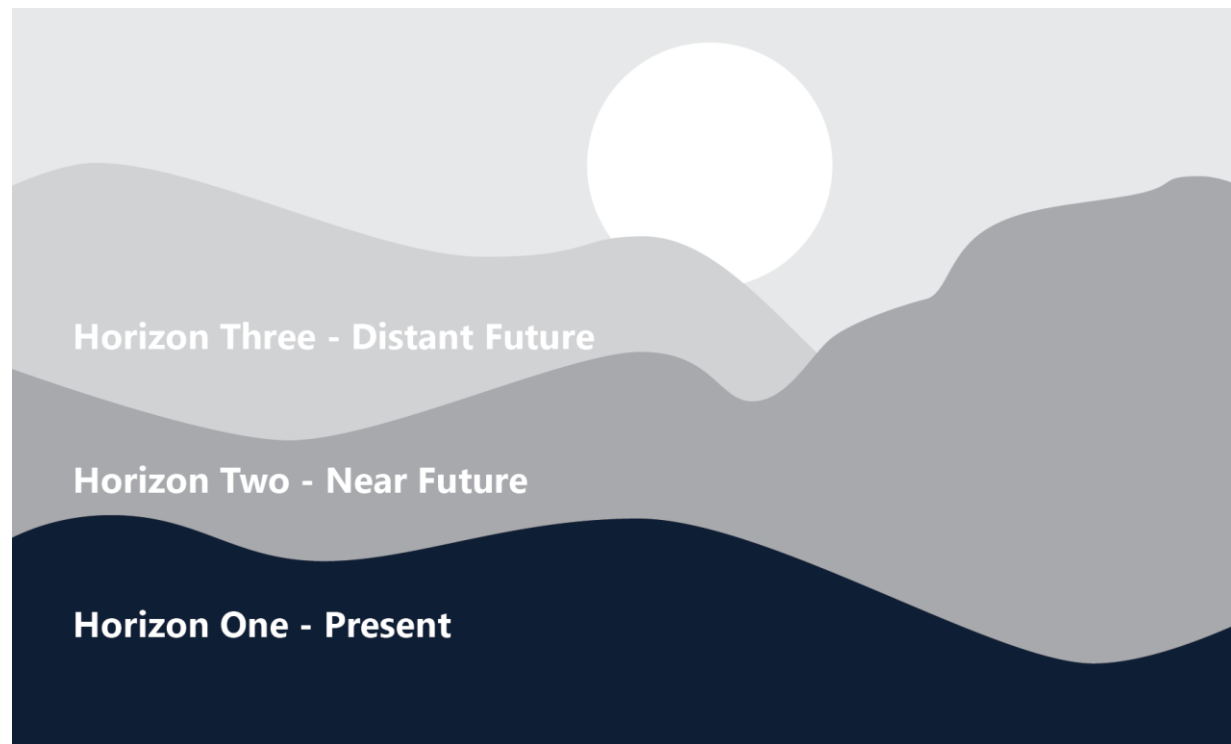
Consider the audience

The main challenge for Futures in government is trying to shift the mindset of policy teams, leaders and government from Horizon One to Horizon Two on most issues, and to Horizon Three on the most important issues which require a long-term view (particularly major reforms - such as adapting to climate change or planning major infrastructure).

The importance of stewardship

Stewardship has recently become an APS value. The Australian Public Service has an obligation to look beyond electoral cycles - typically driving Horizon One thinking - to help anticipate and prepare for change on behalf of both current and future generations. Being an effective steward means considering the long term for our policy, institutions and country.

Good workshop practices

Workshops are a great way to introduce, interrogate and agree to new and divergent ideas to bring your stakeholders along the futures journey. Many of the techniques shared in this Primer are delivered in a workshop format or include a workshop component. The following tips have been prepared to help you make your workshops engaging and productive for both you and your participants.

Design your workshop

- Spend the time to design the workshop to do what you need it to do, consider pace, sequence and progression.

- Keep to a manageable amount of content and ideas.

Sponsor buy-in is critical

- Work with your sponsors to agree expectations, success factors and outcomes.

- Determine evaluation criteria for the workshop.

Diverse voices

- Ensure diverse perspectives through your participants invite list.

- Role play to 'see through the eyes' of someone else.

- Set the tone to encourage debate and participation – you want questions and disagreements

Present information clearly

- Keep it to the point and clear.

- Templates help participants' structure answers and determine the level of detail required based on space provided.

Keep participants engaged

- Understand your workshop attendees.

- Be sensitive to your workshop goals and audience.

Nobody does the pre-reading

- Keep pre-reading reading to a minimum.

- Engage on the day with table prompt cards or placemats instead**.**

Prioritise breaks

- Breaks are vital and informal time for idea exchange and networking can be valuable.

KISS wins every time!

- Keep it simple sunshine! Make it easy to understand – not over-simplified or misleading.

- Identify a clear purpose to engage participants.

- Answer the "so what" question.

Addressing bias

Using structure to reduce bias

We use structured exercises and workshops in Futures to address bias - partially because it's easier to surface assumptions and biases in a group context. Most of the approaches in this primer are specifically designed to make bias explicit and challenge it – especially if you use several tools together. But managing bias and bad assumptions also requires significant self-awareness on behalf of the analyst, policy developer, designer or facilitator – this is why it is important to challenge yourself as well as stakeholders, users and decision makers.

Acknowledging bias helps

Implicit (hidden) bias or assumptions can limit thinking and lead to bad outcomes. Explicit (revealed) bias can be debated and managed. Once you know that the bias is there you can take steps to explore whether you need to mitigate its impact.

Reducing bias early by looking widely

Exposing yourself to new ideas and perspectives and explicitly seeking to build a broader and better understanding of an issue or environment can help to expose implicit bias.

The benefits of deliberately looking wider include:

- Supporting a clearer understanding of the context of an issue or problem; and

- Revealing more options and opportunities to solve a problem or respond to an issue.

Some examples of cognitive biases

- **Action bias** – favouring doing something over nothing even if it could be counterproductive.

- **Confirmation bias** – searching for evidence that confirms your way of thinking.

- **Conformity** – the desire to fit in and align with a prevailing opinion.

- **Authority** – favouring ideas from authority figures.

- **Loss aversion** – preference to avoid a loss over an equivalent gain, often leading to maintaining status-quo situations.

- **The framing effect** – responding to information differently depending on how it is presented.

- **The ambiguity effect** – favouring ideas where the outcome is more knowable over ideas where the outcome is harder to anticipate.

- **Anchoring bias** – relying too heavily on one piece of information when making decisions, often the first or most recent acquired.

- **Present bias** – the tendency to give stronger weight to payoffs closer to the present time when considering trade-offs between two future moments.

- **End of history bias -** The present is stable, and the future is a linear continuation.

Guidance on working with bias

Ryan Young, NSC: As it is not possible to be comprehensive and find all the relevant evidence, it is more productive *to consider a diversity of evidence*. A broad range of disparate but relevant evidence will drive better futures analysis than a narrow but deep collection.

Will Hartigan, PM&C: To some extent, successfully challenging assumptions and expectations – both explicit and implicit ones - is the primary game of futures. There are a range of things we know about the future that we don't act on because of common biases, and it's vital we tackle those through critical and creative thinking.

Look at climate change. Much of humanity is facing a genuine and literal existential challenge, given the scope and level of potential climate impacts. Billions of future lives at are risk. It has massive implications for economies, societies, communities and individual lives. We *also* have the technologies, wealth and knowledge to support global decarbonisation and adapt to most major climate impacts – if we act now.

But linking insight with action remains a massive challenge, and cognitive biases are a major driver for this: we are not good at understanding and acting on long term changes and trends. We have evolved to pay attention to immediate threats. We believe someone else will deal with a crisis. We stay the course even in the face of negative outcomes. We place a much higher importance on the present than the future. These are biases we all share, and we need to challenge and overcome them to build a better future for Australians.

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Generative AI and Futures

What role can generative AI play in futures work?

Generative Artificial Intelligence is an emerging general-purpose technology that has the potential to be useful throughout the policy development process – if used responsibly and ethically. In the coming years, we will all benefit from a deeper understanding of generative AI and its strengths and weaknesses for use in government, as it is already becoming normalised for many forms of work. In considering using AI for Futures work in government, note that AI can write for you, but it cannot think for you - and it certainly can't articulate your deepest values or define the future world you might wish to create.

There is a lot of active experimentation in the wider Futures community on how generative AI could be applied to Futures, particularly scenario creation and horizon scanning. If you want to experiment yourself, there are some significant limitations you should be aware of:

- **Lack of contextual understanding.** AI models can lack real-world context and domain specific knowledge for a policy area. It may provide responses based on general knowledge and a "consensus view" that is superficial. It can generate ideas for drivers of change and scenarios that are potentially well-written but lacking in the meaningful insights that prompt action. You should complement any findings created with AI with participatory processes involving people with strong contextual knowledge to address these risks. It may also be more useful to use AI to test against your own findings for gaps, rather than use it as the basis for your horizon scanning or driver mapping.

- **Bias and lack of diversity in data.** AI models are trained on large historical datasets that can reinforce past biases. Futures work seeks to challenge these inherent assumptions by creating space to imagine alternative futures. It is important to engage with diverse stakeholders, particularly those with unconventional views and values to generate robust scenarios, and be sceptical of the potentially narrow view AI may provide.

- **Reliability issues.** AI models are prone to hallucinations – the perceptions of patterns or objects that are non-existent, creating outputs that are inaccurate. It's important to test the results of AI-generated content against reliable sources. (And often: it might be better to start with the reliable sources rather than the AI!)

AI can write for you, but it cannot think for you – and it certainly can't articulate your deepest values or define the future world you might wish to create.

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Case study 1 – Climate change workshop

Initiated to enhance thinking about the impacts of climate change

In 2023, the PPTO delivered a project to enhance the thinking about social, economic and geopolitical impacts of climate change in PM&C policy teams to improve policy resilience, discuss forward strategy and catalyse the creation of new policy ideas.

The PPTO designed a series of Futures workshops to inform and engage policy officers across PM&C about the forward impacts of climate change, and to help teams to identify constructive intersections between their policy space and climate resilience policy. Insights from the workshops would also contribute to a report on climate resilience and adaptation policy for the PM&C senior executive.

Using the Futures Wheel

The workshops were thematic: framed around economic, social or international policy. Participants selected three change driver cards from a subset of a deck developed by the PPTO. Each subset was tailored to the theme and policy teams participating in each workshop. This helped people get started more quickly and engage with more challenging and disruptive drivers. Participants:

1. Discussed how each change driver might affect their policy theme over the next five to ten years.

2. Explored intersections between issues and change drivers to identify direct and indirect implications for their policy area.

3. Created a simple *scenario vignette*, combining the trends, disruptions, interactions and implications into a story on how these factors could shape their future policy environment.

A whole-of-portfolio Futures exercise

The workshops helped teams explore the implications of climate change for their policy spaces. The PPTO used the sessions to identify climate-related risks, opportunities and policy actions across the portfolio.

The final report for PM&C's executive was deliberately challenging, eliciting debate about possible futures, policy directions and gaps in current thinking. The delivery of the report and the discussion it provoked led to the commissioning of further policy work.

Key learnings

- Artefacts such as **change driver cards** (examples available on request from PPTO) can be useful to jump-start workshop activities. The cards included key facts about trends and uncertainties to provoke thinking and conversation, and focussed the session on prioritisation, implications and the identification of combined risks and opportunities, rather than canvassing known trends and issues.

- The project demonstrated the value of good communications and workshop design: getting the right people in the room and facilitating an interesting, provocative and worthwhile conversation creates the goodwill and groundwork for engagement on further policy work.

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Case study 2 – "What If" scenarios

2023 SES Strategic Policy Workshops

The PPTO ran a series of strategic futures workshops to identify the most important issues future governments will need to address over the next three electoral cycles. The workshops were designed to draw together insights from across government and to build futures awareness and capability in senior SES decision makers.

Designing the workshops

The workshops were designed around three activities:

1. A horizon scanning exercise to identify undercurrents of emerging trends and signals of change – leveraging the collective intelligence in the room.

2. A 'What If' exercise to challenge our policy settings under three different scenarios.

3. Proposing ideas for 'seize the day' actions that agencies can take now to prepare for a range of plausible future scenarios.

Building the "What Ifs"

Prior to the workshop, the project team developed provocative 'what if' questions to build scenarios around. The team undertook desktop research for the selected three questions to paint a picture of the trends, uncertainties, and possible implications for government. For each question, two purposely different scenarios for 2033 were created based on identified trends.

Using the "What Ifs"

During the workshop, the SES participants were provided with a summary of the three 'what if' question scenarios and highlighted some key implications to encourage discussion. This was designed to provoke conversation, not lead it. Participants took an undercurrent identified in the first activity, and debated aspects of that undercurrent, highlighted implications from the case studies they disagreed or agreed with, and discussed options for action that might impact change across scenarios.

The insights and priorities identified in the workshop led to the commissioning of new policy projects and fed into other strategic policy processes across government.

You can contact the PPTO at futures@pmc.gov.au for a copy of the Strategic Policy Outlook report, which includes copies of the "What If" scenarios used in the workshops and a summary of the insights.

Key learnings

- Significant value came from the discussions prompted by the three different 'what if' scenarios. Participants actively discussed different ideas, considering trade offs, implications and opportunities.

- These insights flowed into and enriched the ideas identified in the third activity, and generated interest in the home portfolios of participating SES – the PPTO subsequently ran several major Futures workshops for agencies interesting in running their own variant of this exercise. This demonstrates the utility of good artefacts that can be distributed and spur further discussion.

- There was a high appetite from senior SES across government to undertake further strategic futures workshops. Participants provided feedback that there was high value in using these kinds of exercises to establish priorities for the commissioning of new policy work.

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Part 4: Complementary Tools

Complementary Tools – overview

This section describes several additional techniques that we have found particularly useful to be used in conjunction with the core Futures techniques outlined in section 2 – particularly integrating them with policy and strategy.

Rapid futureproof cycle: an alternative question-based framework for testing policy solutions to improve their future resilience. This approach can be useful for policy teams who don't have time or capability for a more involved Futures process.

Systems mapping: a collaborative learning tool that visualises the parts of a system and their connections to create a 'map' of how it works.

Issues tree: a fast way to break down your problem into smaller questions and make a complex policy challenge more manageable. Very useful for scoping a policy focal space to explore through Futures.

SWOT analysis: a strategic tool typically used to compare the internal capabilities of a team or organisation against its external environment, which can also be used to test policy options through scenarios.

Stakeholder mapping: a visual matrix tool used to identify and categorise stakeholders relevant to a policy or strategy.

Three policy perspectives (3P): a way to explore possible stakeholder perspectives on a policy space using three simple perspectives based on attitudes to change.

Causal layered analysis (CLA): used to explore the different layers of causality and perspective in complex issues. CLA's focus on exploring root causes instead of symptoms can be very useful as an input to driver mapping and scenario development.

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Rapid futureproof cycle

A five-stage approach for refining policy

Policy development is iterative - gaps and bias can sometimes hide in plain sight. This rapid cycle based on approaches recommended by the Office of National Intelligence will help you to review and futureproof your policy proposal.

Refine your solution → Clarify the problem → Interrogate your solution → Futureproof your solution → Stress test your solution → (cycle)

Stage 1: Clarify the problem

- What problem are you trying to solve?
- What is your current proposed solution?
- What is the timeframe for actions?

Stage 2: Interrogate your solution

- What are the most significant tensions or trade-offs you have to balance?

- Who or what will your solution most rely upon? Consider, for example:
  - Specific individuals or groups and places
  - Australian or foreign firms
  - Different levels of government
  - Capabilities, systems or processes and infrastructure

- What is the one thing you wish you knew right now that would increase the odds of your solution working and how you would you get this information?

Stage 3: Futureproof your solution

- How will changes in Australia and its broader environment affect your solution? Consider domestic and international impacts, short and long term timeframes and challenges and opportunities. For example:
  - Economic and fiscal (including public spending).
  - Social or demographic shifts.
  - Technology (consumer and government).
  - International developments.

  - Environmental regulations or climate actions.
  - Major natural disasters.
  - Another pandemic.
  - A significant change in our national security, such as increase foreign coercion or violent extremism or a military crisis in our region.

Stage 4: Stress test your solution

- What would proof of your solution succeeding look like?
- If you went forward five years and discovered your solution had failed, what would be the major reasons it had done so?
- Which stakeholders or entities could most easily derail your solution or stop it from being implemented successfully?
- How would someone game your solution to avoid it impacting them or to profit inappropriately from it?

Stage 5: Refine your solution

- What tweaks or changes would you now make to your solution?
- Consider repeating this process to test your amended solution.

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Systems mapping

Systems mapping informs systems thinking

Systems Mapping is a collaborative learning tool that visualises the parts of a system and their connections to create a 'map' of how it works. The map can help to explore the behaviour, structures, dynamics, relationships and mindsets that underpin complex systems in policy, governance, institutions or the policy environment.

It helps to build a 'systems lens' mindset and tackle systems change – an intentional process of bringing about enduring change by altering the underlying structures and supporting mechanisms which make systems (such as health systems, economic systems or welfare systems) operate in a certain way. These can include policies, norms, relationships, resources, power structures and values.

To change a system, you need to first define and understand it – and systems mapping is a good first step in doing that.

The purpose of a system is what it does

It's important when undertaking systems to put aside what it is nominally designed or promoted to do. There is little value in exploring things systems are supposed to do but don't; a system's side effects, emergent properties or unintended consequences can have significant impacts which need to be understood as normal outputs of the system as it operates in the real world.

Systems are an abstract and imperfect conceptualisation of reality that can be defined in different ways by different people

Systems are defined by the boundaries which separate them from other systems and the rest of the world. These boundaries are arbitrary, and represent choices made by the observer of the system (implicitly or explicitly); different people may make different "boundary judgements" regarding which factors sit within a system or within its broader environment.

It is important to include diverse perspectives in your systems mapping to critically engage with these boundary judgements. There is no one 'system' – it may be appropriate to create several maps based on different conceptualisations of the system and its boundaries.

Simple process

1. Define the system to map.

2. Identify different parts of the system and how they are connected, including key supporting structures, actors, inputs and outputs.

3. Identify the causal relationships between different parts of the system, including both unidirectional and bidirectional flows of information, behaviours and actions

4. Analyse the system to understand how the system behaves. What happens when key underpinning structures are changed?
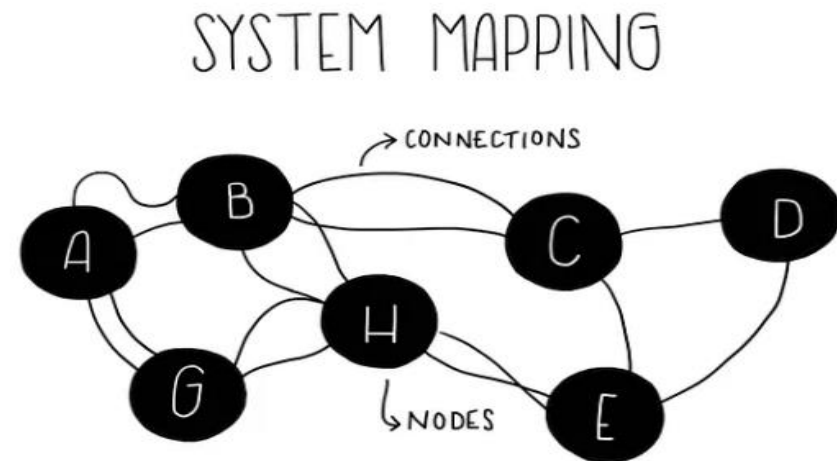
The benefits of systems mapping. — insight & foresight (insightandforesight.com.au)

Issues tree

Unpacking a problem early

An Issues Tree is a fast way to break down your problem into smaller questions and make a complex policy challenge more manageable.

Often used at the beginning of a project, the goal is to develop a clear, complete and mutually exclusive set of questions that need to be answered for the issue.

Process

1. Define the problem: What is the clearest description of the question you are asking.?
2. Break the problem into sub-questions: What do you need to answer to be able to answer your primary question?
3. Refine the sub-questions and ensure the sub-questions are Mutually Exclusive, Collectively Exhaustive (MECE). There should be no gaps or overlaps.
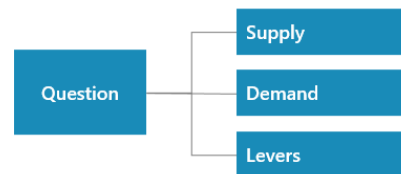
There are different ways to structure issues trees

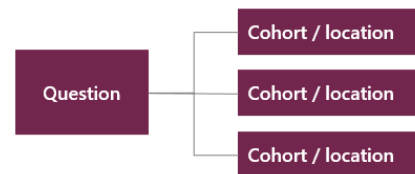Your issues tree can also guide your key deliverables
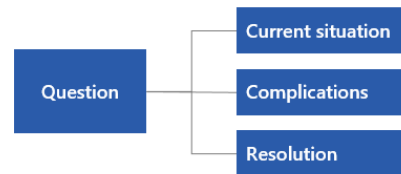
A narrative structure is useful for logically breaking down the problem and guiding future products.
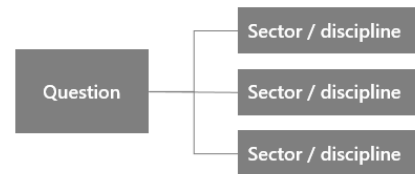
This approach can be useful for breaking down a problem that affects sectors in different ways.
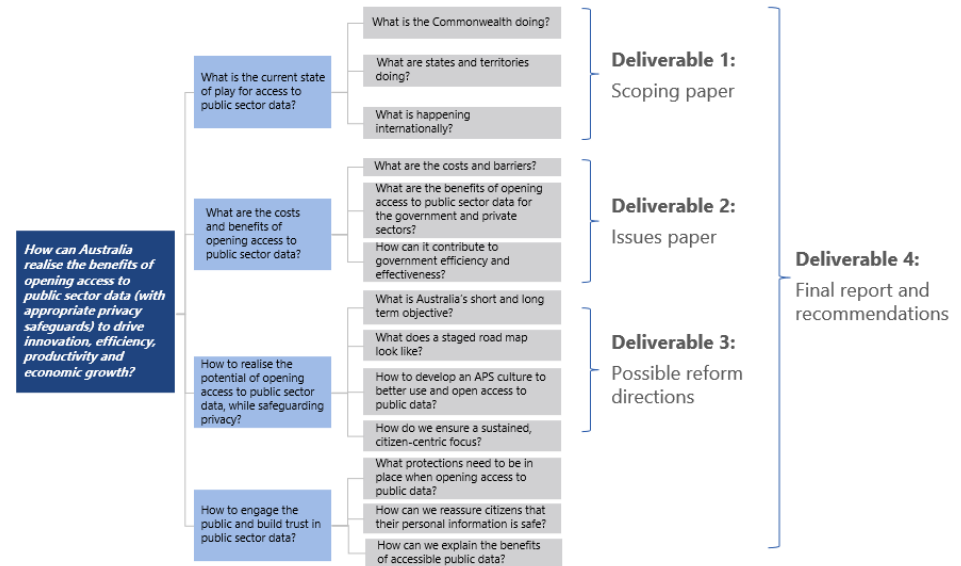
Taking an economic lens can help by breaking problems into supply, demand and levers.

Structuring based on cohorts or location can reveal the full scale of a problem's impacts.

See the Taskforce Toolkit Issues Tree guide: https://www.apsacademy.gov.au/issues-tree-guide

SWOT analysis

SWOT analysis is a strategic tool typically used to compare the internal capabilities of a team or organisation against its external environment. It can be used as a framework for understanding the internal and external factors that can affect the success and impact of a policy or policy strategy, and to explore how those factors might change under different scenarios.

Using SWOT analysis in a scenario set

Under each scenario, test your policy option or strategy:

- **Strengths:** Internal attributes of the policy that contribute to its effectiveness and potential for success.

- **Weaknesses**: Internal factors that could hinder the policy's implementation or effectiveness.

- **Opportunities**: External factors or trends that the policy can leverage to achieve its goals.

- **Threats:** External challenges or risks that could negatively impact the policy.

Prioritise the most important factors in each group – which will have the most impact on success or failure of the policy?

Develop an action plan

Determine actions to improve the likelihood and impact of policy success based on your SWOT analysis. Ask for each scenario:

- How can we use our strengths to seize opportunities and counteract threats?
- How can we overcome our weaknesses or lessen their impact?
- What contingency plans do we need for threats?

STRENGTHS	WEAKNESSES
Strong stakeholder support Evidence based design	Poorly defined objectives Limited funding

OPPORTUNITIES	THREATS
New technologies International collaboration	Economic downturn Political opposition

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Stakeholder mapping

Stakeholders are critical for every kind of policy and every stage of policy development. Cooperation and collaboration can mean the difference between achieving a policy objective and not achieving it.

Stakeholder mapping is a visual analytic tool used to identify and categorise stakeholders relevant to a policy or strategy. It helps in understanding the interests, influences and relationships of different stakeholders, which can inform strategies for engagement and communication. Use a stakeholder map to divide stakeholders into:

- **Stakeholders with the greatest interest and influence on your policy space.** These are your key players. They need to be engaged and bought into the outcomes you are trying to achieve. They often become part of the decision-making process (whether you like it or not).

- **Influential but less interested stakeholders.** These are often not highly invested in your policy success but may be affected by your failure. Engage with them throughout the process and consider how you can build their interest.

- **Less influential but highly interested stakeholders**. These should be kept informed and consulted when appropriate.

- **Less influential and less interested stakeholders.** These should be kept on the radar and informed of key changes or decisions, but otherwise are not a priority for engagement.

Stakeholder mapping template

	Influence	
High	**Meet their needs** Engage and consult on areas of interest Try to increase these people's interest through these consultations	**Key player - manage closely** Focus efforts on this group Involve in governance Engage/consult/co-design
Low	**Monitor** Keep informed via general communications	**Keep informed** Keep informed and consult on areas of interest
	Low — Interest — High	

Three Policy Perspectives (3P)

Exploring possible stakeholder positions on policy reform

Stakeholder responses to a policy vision or plan are rarely uniform. Examining the policy from three different perspectives provides an opportunity to explore sensitivities and develop ideas for positively influencing stakeholders and building consensus.

Three Perspectives

- **The Traditionalist.** Representing the current state, this character is highly conservative about change and is committed to the status quo. They focus on the potential risks of new initiatives, and if pressed on the need for action, prefer minor adjustments to existing policy settings over substantial reforms.

- **The Incrementalist**. Representing transition, this character is a bridge-builder interested in immediate action that produces positive outcomes in the immediate or near future. They are practical and opportunistic. They understand the longer term vision but are primarily interested in what can be done to move forward in the short term, preferring smaller incremental benefits sooner to more aspirational goals.

- **The Visionary**. Representing the long term vision, this character wants radical change in the policy space. They are interested in the big picture, genuine reform, and enduring change. They don't want to get bogged down in details and want to focus on the pathway to fully addressing the key issues at the heart of the policy space, rather than expending effort on half-measures.

Process

1. Set the focal vision and brief the group. Ensure everyone has a mutual clear understanding of the policy vision, plan, or direction that will be considered and the goals of the session. Divide participants into groups of three and allocate each participant a character.

2. Individual thinking time. Give participants some time to consider what their character thinks about the focal vision. Ask each participant for at least three positive and three negative insights.

3. First discussion – criticisms, risks and challenges. Each group of three discusses their negative insights. Participants should be encouraged to argue their character's viewpoint, contest others' perspectives and identify areas where they disagree.

4. Second discussion – opportunities for influence, co-benefits and co-operation. Each group now discusses their positive insights. Participants should be encouraged to discuss opportunities for compromise, co-operation and co-benefits.

5. Summarise and synthesise. Discuss the key areas of conflict and co-operation identified throughout the session. Agree the most divisive points of the focal vision and any discussed trade-offs or opportunities for influence, co-benefit or co-operation.

Examining what works and what doesn't

Three perspectives gives you an opportunity to consider:

- Which elements can they mutually agree on?

- What red-lines would a character not cross?

- What are the common negative or positive insights across the characters?

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Causal Layered Analysis (CLA)

Causal Layered Analysis is a method used in Futures to explore different layers of understanding about a particular issue or topic.

CLA helps to uncover the deeper systemic, social, and cultural factors that shape the future of your focal policy space or problem through four levels of analysis:

Surface Narrative Level

Examine the surface-level, commonly accepted views and narratives about the future of your policy space. This layer includes quantitative trends, data, headlines, and everyday perspectives.

- **Ask**: What are the commonly stated facts and figures? What are the headlines saying?

Systemic/Social Causes Level

Analyse the systemic causes and social structures in your focal space. This layer includes economic, political, historical, and institutional factors, and typically include the major change drivers we identify through megatrend analysis, STEEP or driver mapping.

- **Ask**: What are the systemic structures influencing this issue? What are the policies, economic factors, and historical trends?

Worldview/Discourse Level

Explore the deeper social, cultural, and ideological narratives that shape the systemic level. This layer includes belief systems, ideologies, and social discourses.

- **Ask**: What are the dominant worldviews or ideologies at play? How do different social groups perceive this issue, and how might they perceive it in future?
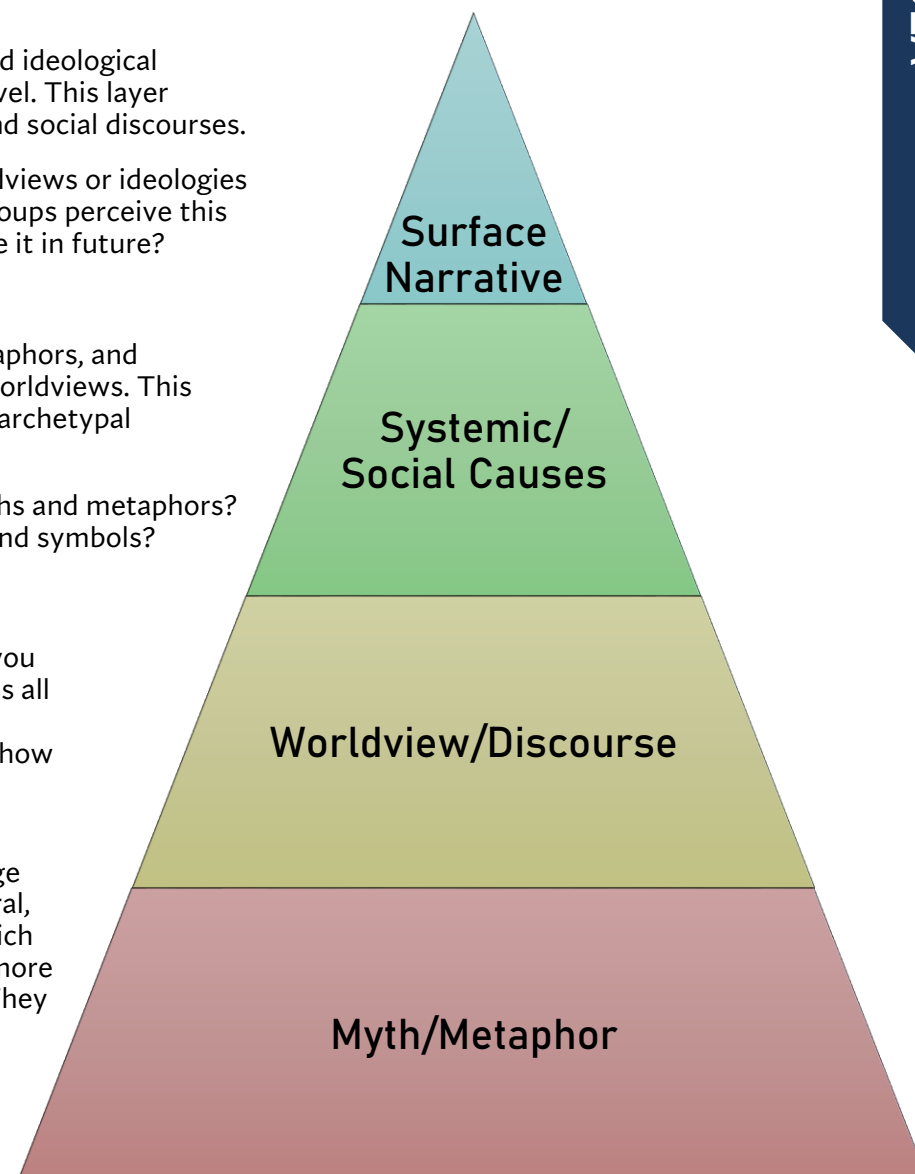
Myth/Metaphor Level

Identify the deep-rooted myths, metaphors, and collective stories that underpin the worldviews. This layer uncovers the subconscious and archetypal dimensions.

- **Ask**: What are the underlying myths and metaphors? What are the deeply held stories and symbols?

Putting the CLA to work

Following your level-based analysis, you should synthesise insights from across all four layers to develop a holistic understanding of the issue, including how the layers interact and influence each other.

This process can create a list of change drivers which include more behavioural, social and ideological dimensions, which can provide a useful complement to more conventional trends and disruptors. They can be used in tools such as Futures Wheel and scenario development to explore their intersections and implications.

Surface Narrative

Systemic/ Social Causes

Worldview/Discourse

Myth/Metaphor

Appendix:
Further reading
and resources

Further Reading

Resources	Appraisal
NESTA Don't Stop Thinking About Tomorrow: A modest defence of futurology	An overview on how futures thinking provides a structured methodology to better design public policy by considering the future. *Source: https://www.nesta.org.uk/report/dont-stop-thinking-about-tomorrow-a-modest-defence-of-futurology/*
The UK Government Futures Toolkit	A comprehensive resource produced by the UK Government and valuable core guide to a wide range of futures techniques. The toolkit provides a step-by-step guide and clear explanation of the techniques. *Source: https://www.gov.uk/government/publications/futures-toolkit-for-policy-makers-and-analysts*
Save the Children Fund's The Future Is Ours: Strategic Foresight toolkit – making better decisions	A clear and concise overview of strategic foresight techniques with tips on how to conduct futures exercises from a non-government organisation perspective. *Source: https://resourcecentre.savethechildren.net/document/future-ours-strategic-foresight-toolkit-making-better-decisions/*
OECD Foresight and Anticipatory Governance in Practice	Provides examples and lessons describing how strategic foresight is being applied by Governments across the world as a value-add for public policy and good governance. Contains explanation and examples of anticipatory governance, definitions, applications and rationales for strategic foresight. *Source: https://www.oecd.org/strategic-foresight/ourwork/Foresight_and_Anticipatory_Governance.pdf*
NESTA Our Futures: By the People, For the People	Overview of participatory futures: how to include people and communities in the design and implementation of futures activities. Presents a case for inclusive design and provides evidence that a participatory approach produces better outcomes. *Source: https://www.nesta.org.uk/report/our-futures-people-people/*
Canadian Government - There may be zombies: a field guide to strategic foresight	A fun and interesting interpretation of strategic foresight that offers the basics of strategic foresight, horizon scanning and associated methods. *Source: https://open.alberta.ca/publications/there-may-be-zombies-a-field-guide-to-strategic-foresight*

Further Reading

Resources	Appraisal
The Dubai Foresight Principles	Proposes a series of guiding principles for engaging with strategic foresight and applications to developing proposals, projects or evaluations. *Source: https://www.dubaifuture.ae/reports/transforming-futuresdubai-foresight-principles/*
The EPSC Strategic Foresight Primer	Produced by the European Political Strategy Centre, this concise primer provides an excellent overview on how governments can apply futures principles and methods to policy. *Source: https://espas.secure.europarl.europa.eu/orbis/document/strategic-foresight-primer*
Our Future World – CSIRO's megatrends report	CSIRO's conceptualisation of seven global megatrends and their potential impacts for Australia. *Source: https://www.csiro.au/en/research/technology-space/data/our-future-world*
International Monetary Fund: How to Implement Strategic Foresight and Why	This guidance note discusses the experiences of the IMF in implementing scenario planning and a policy futures gaming method based on wargaming. *Source: https://www.imf.org/en/Publications/analytical-notes/Issues/2021/12/22/Strategic-Foresight-at-the-International-Monetary-Fund-463660*

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Government Resources

International Government

- **UK Government Futures, Foresight and Emerging Technologies:** https://www.gov.uk/government/groups/futures-and-foresight

- **Horizons Canada:** https://horizons.service.canada.ca/en/home/index.shtml

- **Singapore's Centre for Strategic Futures:** https://www.csf.gov.sg/

- **Government of New Zealand:** https://www.dpmc.govt.nz/our-programmes/policy-project/policy-methods-toolbox/futures-thinking

- **Government of Finland:** https://valtioneuvosto.fi/en/foresight-activities-and-work-on-the-future

Intergovernmental organisations

- **OECD Strategic Foresight Unit:** https://www.oecd.org/strategic-foresight/

- **OECD Observatory of Public Sector Innovation:** https://oecd-opsi.org/work-areas/anticipatory-innovation-2/

- **UN Futures Lab:** https://un-futureslab.org/

- **UN Summit of the Future 2024:** https://www.un.org/en/summit-of-the-future

- **The World Bank:** https://www.worldbank.org/en/programs/futureofgovernment

- **European Union Commission:** https://commission.europa.eu/strategy-and-policy/strategic-planning/strategic-foresight_en

- **Asian Development Bank:** https://www.adb.org/publications/futures-thinking-asia-pacific-policy-makers

- **North Atlantic Treaty Alliance:** https://www.act.nato.int/activities/allied-command-transformation-strategic-foresight-work/

APS

- **The Futures Hub:** a joint initiative of the Commonwealth Government and The Australian National University. https://futureshub.anu.edu.au/

- **Australia's 2023 Intergenerational Report:** https://treasury.gov.au/publication/2023-intergenerational-report

- **Department of Agriculture, Water and the Environment (2021). Abares Insights, Issue 1, 2021:** https://www.agriculture.gov.au/abares/products/insights/megatrends-2021

- **Department of Employment (and partners) – Tomorrow's digitally enabled workforce (2016):** https://www.acs.org.au/insightsandpublications/reports-publications/digitally-enabled-workforce.html

- **Australian Sports Commission and the CSIRO – The future of Australian sport (2013):** https://www.csiro.au/en/news/all/articles/2022/december/the-future-of-australian-sport-report

The Australian Government Futures Primer was developed with advice and support from these partners:

Australian Government agencies

- The Australian Federal Police
- The Australian Public Service Commission and the APS Academy
- The Bureau of Meteorology
- CSIRO
- The Department of Agriculture, Fisheries and Forestry
- The Department of Climate Change, Energy, the Environment and Water
- The Department of Defence
- The Department of Health and Aged Care

- The Department of Industry, Science and Resources
- The Department of Infrastructure, Transport, Regional Development, Communication and the Arts
- The Department of Home Affairs
- The Department of Foreign Affairs and Trade
- The Department of Education
- The Department of Veterans' Affairs
- The Office of National Intelligence

State Governments

- The Department of the Premier and Cabinet, South Australian Government
- Shaping Futures and Data Insights Branch, The NSW Cabinet Office

Institutions

- The Secretary-General's Office of the OECD
- The Futures Hub, National Security College, Australian National University