

Annex 2: Glossary of horizon scanning and futures terms

7 Questions:	an interview technique for gathering the strategic insights of a range of internal and external stakeholders
Actors:	individuals and organisations - government, businesses, citizens, for example – that are active in the policy or strategy area
Axes of uncertainty:	used to define the critical uncertainties for the policy or strategy area in the future and to frame the scenarios
Backcasting:	determining the steps that need to be taken to deliver a preferred future
Brainstorm:	a process used in workshops or conversations to develop a long list of issues, drivers or ideas. Participants add to the list by building on each other's ideas. The ideas are evaluated after the brainstorm is complete
Critical uncertainty:	a driver or issue that is important for a given policy or strategy area but which has an uncertain outcome
Delphi:	a consultation process used to gather opinion about the future from a wide group of subject experts and to prioritise strategic issues
'Day in the life of':	a 'day in the life of' narrative (sometimes shortened to DILLO) is used to illustrate how the conditions in a given scenario might shape the life of a individual stakeholder or a range of different stakeholders. DILOs can be used alongside scenario narratives to add detail and interest or they can form the central narrative itself. Foresight used DILoS (called 'personas') in the Future Identities report (boxes 3.1 and following)
Driver mapping:	used to identify the political, economic, societal, technological, legislative and environmental (PESTLE) drivers shaping the future policy environment
Driver:	a current or emerging trend that is likely to shape (have an impact on) development of the policy or strategy area
Event:	something of significance in the policy or strategy space that suggests the world is moving in a particular direction
Facilitator(s):	the individual(s) with responsibility for designing, managing and delivering the futures workshop
Futures:	an approach or way of thinking about the possible, probable, and preferable futures and the underlying structures that could give rise to particular future characteristics, events, and behaviour
Foresight:	a process by which one comes to a fuller understanding of the forces shaping the long-term future which should be taken into account in policy formulation, planning and decision making (from Coates, J.F., 1985. Foresight in federal government policy making. <i>Research Futures Quarterly</i> 1, 29–53.)
Groupthink:	the practice of thinking or making decisions as a group, typically resulting in unchallenged and poor-quality decision-making
Horizon scanning:	the process of looking for early warning signs of change in the policy and strategy environment
Internally consistent:	scenario narratives that contain reinforcing messages about the future and do not include events that cannot happen within the scenario logic

Intuition:	the belief that something is going to be strategically important in the future, even when there is insufficient evidence to prove that it will be
Issues Paper:	a paper that presents quotes from the interviews to illustrate the strategic issues and choices around the policy and strategy agenda
Pathway:	a combination of tools designed to meet a particular business need
PESTLE:	a generic term for the drivers shaping the future policy environment. PESTLE is an acronym which stands for P olitical, E conomic, S ocietal, T echnological, L egislative and E nvironmental drivers. There are a number of common variants which describe the same drivers or a subset of them – PEST, STEP, STEEP, STEEPL - and some (PESTO, PESTOLE, for example, where the O stand for Organisational) which introduce additional drivers.
Policy stress-testing:	a method for testing strategic objectives against a set of scenarios to see how well they stand up against a range of external conditions. Sometime called windtunnelling.
Predetermined element:	a driver or issue which has both a high impact on the given policy or strategy area and a certain outcome
Roadmapping:	shows how a range of inputs - research, trends, policy interventions, for example – will combine over time to shape future development of the policy or strategy area of interest
Scan:	(noun) an article, usually part of a horizon scanning process, that describes an external event or emerging trend that points towards change in the policy and strategy environment (verb) to look for articles that describes an external event or emerging trend that points towards change in the policy and strategy environment
Scanner:	an individual who scans, usually as part of a structured process
Scenarios:	stories that describe alternative ways the external environment might develop in the future and how different market conditions might support or constrain the delivery of policy and strategy objectives
Scenario matrix:	a 2x2 matrix that is constructed by juxtaposing two priority axes of uncertainty and that defines the parameters of a set of scenarios
Stakeholder:	any group or individual who has an interest in or an influence on the policy or strategy area
SWOT:	Strengths, Weaknesses, Opportunities and Threats. Strengths and weaknesses are internal factors that need to be taken account of when developing policy or strategy. Opportunities and Threats are external factors that need to be considered
Timeline:	a method for presenting a series of events leading to a scenario or a vision that orders those events relative to each other and to time
Trend:	a visible – or emerging – pattern of events that suggest change. In futures thinking, a 'trend' becomes a 'driver' when it acts on the policy or strategy area of interest
Visioning:	creating a set of common aims and objectives for a project and describing what the future will be like (the vision) if they are delivered

Annex 3: Frequently Asked Questions

Q: Why should I embark on a Foresight activity?

A: Foresight offers a range of benefits. In particular, use it to

- develop and refine new policy or strategy by testing the assumptions underlying the policy or strategy question
- generate new ideas and approaches to a policy or strategy area and explore innovative ways of responding to policy challenges
- show or attain ‘thought leadership’ on a given topic
- shift the focus of senior leader/management dialogue towards the long term
- help improve the culture of strategic thinking in your part of the organisation, so that it is more agile, adaptive, proactive and future-facing

Q: Is there a set way to do futures thinking?

A: No. A particular strength of futures work is that it is highly flexible, so there is plenty of scope for creative approaches and for customizing the tools to your own particular requirement. The Toolkit will help you design the process you need to meet your particular objectives.

Q: What should I do when starting work on developing a strategy or a new piece of policy?

A: A good way to start is by gathering intelligence about the future and then exploring the dynamics of change.

There are four tools for gathering intelligence about the future: Horizon scanning, 7 Questions (and the Issues Paper) and Delphi. Pathway 1 – *Exploring underlying issues or causes in scoping or defining the policy area* – sets out how to use three of them in combination.

Think about inviting some external stakeholders to contribute scans.

To explore the dynamics of change, run a drivers workshop once you have conducted some horizon scanning. You may wish to do some initial drivers research. Invite external stakeholders to the workshop.

Q: Given how uncertain the world is at the moment, are there different approaches which are more relevant? (eg should I pay more attention to game changers as opposed to predictable trends)?

A: Game changers are events that have a profound effect on the policy environment. While their *impact* may be unpredictable, their *emergence* may not be. Game changers can therefore be anticipated, even when it seems unlikely that they will occur.

Timing can be the key. Donald Trump’s presidency (for example) was wholly unexpected before June 2015, considered wholly unlikely in the second half of 2015 and was still seen as highly unlikely by mid 2016. The appropriate futures response to Donald Trump at that time was not “will he or won’t he become President of the USA?” but “what are the broad implications for [for example] the global economy if Donald Trump does become President?”

At times of higher uncertainty, it therefore makes sense to invest more time in exploring the nature of uncertainty and its possible outcomes. To do this, focus more on the techniques for exploring the dynamics of change and describing what the future might be like.

Q: Do I have to use the pathways?

A: No. The pathways are there to provide a guide for common business needs. You may prefer to design your own solution.

Q: What's the difference between a trend and a driver?

A: Relevance to the policy or strategy area.

A trend is a visible – or emerging – pattern of events that suggest something new. In futures thinking, a 'trend' becomes a 'driver' when it acts on the policy or strategy area of interest.

Q: How do I work to identify the broadest range of drivers for change and, in particular, to get beyond those drivers which are within my direct circle of influence or understanding?

A: Our natural tendency is to look for things that we perceive to be important and that reinforce our mental model of the world and how it works. The three ways to counter this in horizon scanning are (i) to be aware of it, (ii) to push past it and be open to drivers of change that are beyond our own areas of interest and (iii) to involve others in horizon scanning who have a different range of interests to our own.

Most policy teams are made up of people who have (broadly) similar educational and cultural experience and who therefore see the world in (broadly) the same way. To get beyond your circle of understanding, involve a mix of people – different age, ethnicity, background, professional discipline and aspiration, for example – in your horizon scanning. If you can't directly involve (for example) 21 year old non-graduates who work in software development, try to understand what their perspectives are on the world and bring those in to the scanning process. Look at the chat forums they spend time on to understand their values, hopes and concerns; look at magazines they read. Interview some if at all possible.

Don't forget, too, to look for articles in places you don't normally look. Visit international news websites such as Economist.com, China Daily, San Francisco Chronicle, Wall Street Journal, Der Spiegel and so on.

When gathering drivers, review what you have according to the PESTLE model to ensure you have a wide and representative spread of issues. Make sure, too, you are looking towards Horizon 3 for everything.

Q: How do I access understanding about the potential future relevance of developments in technology (in an understandable language)?

A: Popular websites such as New Scientist, Science, The BBC's Science Focus and the World Economic Forum are good sources.

Many universities have knowledge exchange programmes and science/technology communicators. Contact relevant institutions and research bodies to gather their opinion.

7 Questions works well for gathering detailed technological knowledge. Identify people working in the particular subject areas of interest to you and invite them to be interviewed.

Delphi is a powerful technique for gathering the opinion of a range of technology experts and using it to refine the technology issues around the project.

Consider engaging a technology journalist, a recent graduate or a technology specialist to produce some horizon scans for the project. Ensure they use the same structure you are using in the rest of your scans and that they don't produce technical reviews.

Q: When facilitating my own futures workshops, where are the problem spots which can potentially derail a conversation?

A: The hardest parts of a workshop often occur when you are moving from one technique to another. Be honest with yourself about which elements of the workshop seem straightforward to you and which you feel less confident about facilitating. Rehearse these latter elements in advance.

In general, keep an eye on participants' energy levels. These can drop quite suddenly after the group has been working for 90 minutes or more.

Think carefully about how you explain tasks and always check that the group understands what you are asking them to do and that they understand the technical futures language you are using. Three common - and particularly important - examples of this occur around Driver mapping, Axes of uncertainty and Scenarios.

In **Driver mapping**, you may find that, when asking a group to map drivers on an importance and certainty matrix (page 44), some participants will interpret 'importance' as 'impact'. The distinction is critical: 'importance' has two dimensions – high and low – whereas 'impact' has four dimensions – high and low, positive and negative. You may choose to use impact in certain cases but you must ensure participants are clear about which one you want in a given exercise.

You may also find that a group is not clear about 'Certainty' in this matrix. Certainty relates to the outcome of a given driver – what the impact will be – not to the probability that a driver is in play.

When agreeing the scenario matrix using **Axes of uncertainty** (page 46) you may find it useful to run that specific conversation before a lunch or coffee break to give yourself time to review the matrix and ensure it is meaningful for the project.

In **Scenarios** it is important that workshop participants use the axes of uncertainty that form their scenario quadrant to build an internally consistent and coherent narrative that reflects how the key drivers of change will shape the future. This can sometimes feel challenging for participants who may not like the scenario space or who may find it clashes with their personal or professional values.

These three areas are particularly important, but all the techniques have points that you need to anticipate when facilitating. Thinking through the procedure will highlight any uncertainties and allow you to prepare for them.

Q: When should I consider bringing in an external facilitator?

A: Bring in an external facilitator when there is no internal facilitator available or when (s)he

- wants to be part of the group discussion
- is perceived to have an interest in a particular outcome
- is not going to be impartial
- does not feel confident that (s)he has the skills required for the particular process
- has to manage a group of internal senior decision makers who may be difficult to challenge

Q: When discussing the future, should people focus on what will be or what should be?

A: This varies by technique. In Visioning, groups create an aspirational vision and define the path towards making it happen. In scenarios, groups explore what might be in order to practice different responses.

Groups don't always make the distinction immediately so it is always worth ensuring people are clear about the task; but, of course, even when you explain it, people do not always hear the point. When facilitating, therefore, listen out for contextual words and phrases that participants use and gently correct as needed. *'What should happen is... What I'd like to see... What needs to happen...'* could all be examples where you might want participants to use definitive words such as *will* instead of *should*, *like* or *need*.

Q: Will people enjoy the process?

A: Almost certainly, the answer is yes. People are not typically asked to think about the future on a day-to-day basis and more often than not, they really enjoy it. You can enhance their experience by helping them to recognise how others (whom they know and work with regularly) might see/frame the world differently to them.

Q: How do I creatively present the findings?

A: There is a whole range of ways to present scenarios, depending on the audience, scale of the exercise and its potential. The following techniques have all been used in Government in the recent past. There is no need to settle on one approach; you can mix and match:

- stories set in the future (endstate narratives)
- timelines that describe how the world moves from the present to the future
- newspaper headlines or images of the future that capture key stories or events
- short films or dramatised versions of the future, perhaps focussed around one or more characters or organisations
- powerpoint presentations that set out the key drivers, axes of uncertainty and main headings of the scenario narratives
- charts and graphs that illustrate strategically important metrics in the scenarios
- day in the life of narratives ('DILOs')
- interactive websites that gather together a range of elements about the future

There is only one rule: make the scenarios (or other futures outputs) engaging, credible and compelling. Otherwise, customize the presentation to your audience.

Q: What is the best way to present scenarios to an audience that hasn't seen them before?

A: It depends on who the audience is and why you are presenting them. If it is a workshop (to conduct policy stress-testing, for example), use a Powerpoint presentation to explain where the scenarios have come from and either present the key elements as bullet points on slides, as handouts or give the group the whole scenario text (if it is short and you have time). If it is a wider group of stakeholders, think about using more engaging storytelling techniques.

Q: I've heard some quotes about Foresight in the past – what are some good ones to use that encapsulate all or some of the process?

A: Common quotes are

- *The future is already here, it's just not very evenly distributed.* William Gibson, author
- *The purpose of looking at the future is to disturb the present.* Gaston Berger, philosopher
- *Scenarios create memories of the future that can help organisations detect the early signs of unlikely change and be better equipped to respond to it.* Arie De Gues, Shell Scenario Planner and author

Q: How do I ensure action afterwards?

A: It is important to consider what you want from the process at the start and to design what happens afterwards accordingly.

For the immediate term, be sure to connect your foresight activity to a form of action planning such as (1) Next steps (2) 100 day plan (3) Roadmap (4) Start, Stop, Continue or (more exhaustively) Strategic Review.

For longer-term action, it is always best for a given foresight activity to fit within existing planning, strategic and decision-making processes and cycles. Look at the section in Chapter 3 on how to link horizon scanning and futures thinking to the policy and strategy cycle.