6. Tools for gathering intelligence about the future

Horizon scanning is the process of looking for early warning signs of change in the policy and strategy environment

7 Questions is an interview technique for gathering the strategic insights of a range of internal and external stakeholders

The issues paper presents quotes from the 7 Questions interviews to illustrate the strategic issues and choices around the policy and strategy agenda

Delphi is a consultation process used to gather opinion from a wide group of subject experts about the future and to prioritise the issues of strategic importance

Horizon scanning

Horizon scanning is the process of looking for early warning signs of change in the policy and strategy environment

Aims:
- To gather information about emerging trends and developments that could have an impact on the policy or strategy area in the future
- To explore how these trends and developments might combine and what impact they might have
- To involve a range of people in futures thinking and increase their knowledge and insight about the changing policy environment

Approach: Combines desk research and – if required – workshop discussion

Participants: Anyone you want to involve in futures work. Participants can come from inside or outside the team or organization

Number: No restriction

Timing: Best run over several weeks. Can be run throughout the project to build intelligence about the changing external environment

Facilitation: Novice

Output: Individual scans gathered into a horizon scanning report. Scans can be presented by theme or set out randomly

Outcome: Horizon scanning helps participants read news articles and journals differently and to develop a long term perspective

Good for:
- Engaging people in the futures process
- Gathering a range of opinion

Risk: **Low.** The main risk is not including important or insightful stakeholders, resulting in missed content and lowered credibility

Get here from…

- Horizon scanning is the first step in gathering intelligence through desk research

Move on from here to…

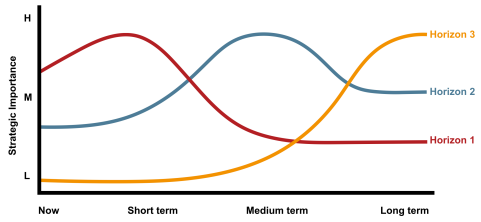
- Drivers analysis

Use the output to inform…

- Delphi
- Drivers analysis
- Scenarios
- Visioning

The Approach

Horizon scanning looks towards the long term (Horizon 2-3) but is not focussed exclusively on it; many H3 developments are the long term outcome of a range of factors, some of which are in play already.



Horizon scanning is an open ended process that can involve as many people as you want. Start with the internal team and then think about inviting externals who have a good knowledge of the policy area. To keep the process manageable, you may wish to start with no more than 10 people. You can expand the network at a later date once you have worked out the logistics of your scanning process.

Start by asking each scanner to produce one short article (or 'scan') per week that describes

- What the scan is about
- How it relates to the policy or strategy area
- Why the reader thinks it is important and what thoughts the scan stimulated

The scan can contain links to the original source material and to any other relevant or interesting articles that the scanner is aware of. Ideally, scanners should keep each scan to a single page.

This is a productive process: 10 authors each producing one scan per week will produce 60 scans (or more) over 6 weeks. You will need a project manager to gather the individual scans and to organize them.

Horizon scanning is relatively straightforward but does rely on intuition and insight - which can feel counterintuitive to those who are more practiced in evidence based strategic thinking. The hardest part for many authors is knowing whether something they have read is interesting or different enough to include in the scan. Scanners should always err on the side of being irrelevant.

*Scans can be organized in the horizon scanning report using the PESTLE framework (see **Driver mapping**) but it is often more interesting to group them by themes that emerge from the scans themselves*

Find sample scans in Annex 1

See the case studies in Annex 5

7 Questions

7 Questions is an interview technique for gathering the strategic insights of a range of internal and external stakeholders.

Aims:
- To identify strategic issues that need to be addressed in the futures work programme
- To stimulate individuals' thinking in advance of a futures workshop
- To involve people who cannot take part in futures workshops
- To identify conflicting views of the future

Approach: Confidential interviews. Ideally carried out by 2 people, one to lead the interview and one to take detailed notes

Participants: Anyone you want to involve in futures work. They can come from inside or outside the team or organization

Number: No restriction

Timing: Interviews last approximately 60 minutes
The interview programme is best run at the start of a futures process but can continue throughout

Facilitation: Novice

Output: Different perspectives of what success in the future will be like and what needs to be done to achieve it

Outcome: Engagement in the futures process

Good for:
- Building enthusiasm for the futures process
- Developing your understanding of the different issues and opinions to be addressed in the project
- Extracting deep information about underlying concerns

Risk: Low. The main risk is not including important or insightful stakeholders

Get here from…

- 7 Questions is the first step in one approach to gathering intelligence from stakeholders

Move on from here to…

- The issues paper

Use the output to inform…

- Visioning
- SWOT
- Policy stress-testing

The Approach

The 7 Questions technique was pioneered by Shell in its scenario planning process. It is a powerful tool for gathering opinion from diverse stakeholders on the strategic issues that need to be addressed in a given policy area and for highlighting areas of agreement or conflict about the way forward.

It's best to conduct these interviews face to face; ideally in the interviewee's office or a place of their choosing. If logistics are tricky, interviews can be done over the phone – but expect them to take less time and yield a little less insight

Interviews are conducted under the Chatham House rule - interviewees can be quoted but the quotes must be anonymous – and focus on 7 broad areas:

- The critical issues for the policy or strategy area being considered
- What a favourable outcome is
- What an unfavourable outcome is
- The key operational, structural and cultural changes that need to be made to deliver the favourable outcome
- Lessons from the past
- Decisions which must be prioritised
- What the interviewee would do if (s)he had absolute authority

The questions are open ended: interviewees speak as much or as little as they want, without any prompting from the interviewer(s). That's not always easy (for either side) but it's important to let the interviewee follow his or her train of thought without interruption. Silence often means interviewees are thinking about issues prompted by the question.

If you have the resource, take two people to the interview. One should lead the questions, both should capture the response. It's a useful safety net in case one of you misses something that's said

Typically, 80% of the strategic issues for the future are uncovered in the first 12-15 internal interviews. Further interviews are done to uncover the remaining issues and to include people in the process. Use external stakeholder interviews to get a different perspective on the issue or potential policy response.

There are two commonly used versions of the questionnaire. The first is close to the original used by Shell; the second is broadly similar but less personal in tone. The latter is a better approach to use where asking for a more personal view might be seen as too subjective or might inhibit some interviewees. Both versions are set out on the next page.

Version 1 (Based on Shell):

1. If you could speak someone from the future who could tell you anything about *[this venture]*, what would you like to ask?
2. What is your vision for success?
3. What are the dangers of not achieving your vision?
4. What needs to change (systems, relationships, decision making processes, culture for example) if your vision is to be realised?
5. Looking back, what are the successes we can build on? The failures we can learn from?
6. What needs to be done now to ensure that your vision becomes a reality?
7. If you had absolute authority and could do anything, is there anything else you would do?

Practice active listening. Try to capture the interviewee's language and turns of phrase in your notes. These add interest –and often insight – to the interview output

Version 2:

1. What would you identify as the critical issue for the future?
2. If things went well, being optimistic but realistic, talk about what you would see as a desirable outcome.
3. If things went wrong, what factors would you worry about?
4. Looking at internal systems, how might these need to be changed to help bring about the desired outcome?
5. Looking back, what would you identify as the significant events which have produced the current situation?
6. Looking forward, what do you see as priority actions which should be carried out soon?
7. If all constraints were removed and you could direct what is done, what more would you wish to include?

Have a few prompts or questions on specific topics ready in case interviewees find the open ended questions difficult

Writing up the interviews

You may want to send a write up of the interview to the interviewee for them to verify – particularly if there are contentious issues or if you are planning on using the interview to produce an issues paper for wider circulation. In this case, having quotes verified can be valuable.

It is rare – but not unknown – for interviewees to amend the write up. Usually this is to clarify a particular perspective that may not have come over as the interviewee wanted; but occasionally (experience suggests 1 interview in 50 or less) it is because the interviewee prefers to – or needs to – be circumspect.

Even if you don't plan to send a copy of the interview to the interviewee, you may still wish to write it up for archive and audit purposes. This is particularly valuable if there are no plans to produce an issues paper from the interview stage.

Find a sample interview in Annex 1

The Issues Paper

The Issues Paper presents quotes from the 7 Questions interviews to illustrate the strategic issues and choices around the policy area

Aims:
- To set out the main ideas and issues surrounding the policy area that were identified in the interview programme
- To identify the emerging themes that need to be tackled
- To highlight conflicting views of the future and expectations of the policy
- To highlight the potential trade offs and choices that policy design will need to address

Approach: Select key quote from the interviews and organize them by theme

Participants: The Issues Paper is developed by the project team

Timing: Varies – can take several weeks

Facilitation: Advanced beginner

Output: An Issues Paper (or slides) that capture different perspectives of what success in the future will be like and what needs to be done to achieve it

Outcome: Qualitative analysis of stakeholder perspectives and of the strategic challenges and choices or policy development

Good for:
- Providing a snapshot of current thinking and different perspectives
- Highlighting areas of agreement and disagreement
- Highlighting sensitive issues

Risk: **Medium.** Some issues raised in the interview programme may be politically sensitive and may need to be handled carefully

Get here from…

- 7 Questions

Move on from here to…

- The Issues Paper is the final output from the 7 Questions interviews

Use the output to inform…

- Visioning
- SWOT
- Policy stress-testing

The Approach

The issues paper can be developed as the interviews progress.

Once each interview is complete, highlight up to ten quotes that seem to be most important in each interview. Spot them by

- using your intuition
- noticing where issues come up repeatedly
- paying attention to comments like – "this one is really key…"

For the first few interviews you process, simply list the quotes as bullet points. Think about lightly editing the quotes to remove any references that might cause the interviewee to identified. As the interviews proceed, keep selecting key quotes and add them to the paper.

After four or five interviews, you'll notice some themes appearing and you can begin to group quotes accordingly.

Let the themes evolve – they will almost certainly change as you draw in more interviews. Group quotes together within each theme according to correlation (or opposition) of viewpoints. There's no need to provide any analysis of the quotes as part of the paper; the quotes and how you group them create their own narrative.

The Issues Paper is a powerful analytical tool for the policy and strategy development team. You may also want to circulate the paper more widely to interviewees, to people participating in workshops or to senior stakeholders. Drawing out key quotes at different stages of a workshop conversation (for example) can be a useful way to focus groups on important areas for discussion.

Think about what you want the issues paper to accomplish before you circulate it widely. There may be contentious or sensitive issues in it and you may wish to explore these further in workshops

The issues paper focuses primarily on issues internal to the policy or strategy area (or to organisations within it) and on highlighting which aspects of the current situation need to change

Find a sample issues paper in Annex 1

Delphi

Delphi is a consultation process used to gather opinion from a wide group of subject experts about the future and to prioritise the issues of strategic importance

Aims:
- To gather opinion from a group of experts
- To refine thinking on the future
- To highlight conflicting views of the future and expectations of the policy
- To highlight the potential trade offs and choices that policy design will need to address

Approach: Consultation with experts

Participants: A panel of identified subject experts

Number: 12 - 16

Timing: Varies but can take several weeks

Facilitation: Experienced

Output: A prioritized list of issues for the project to address

Outcome: Engagement of a group of subject experts who can become advocates for the project

Good for:
- Refining the project scope
- Refining the project priorities

Risk: **Medium.** May require some negotiation between experts in the final stages

Get here from…

- Delphi is the first step in gathering intelligence from a panel of external experts

Move on from here to…

- Driver mapping

Use the output to inform…

- Scenarios
- Policy stress-testing

The Approach

The Delphi process involves working with an expert panel over several rounds of discussion to identify and prioritise strategically important issues. Responses are anonymous; participants can know who else is involved, but not what they have said. Anonymity ensures that opinions are heard independently without bias and that participants avoid groupthink.

Delphi can be conducted by mail or e-mail, in an online conference or by using specialist software. The latter is efficient and effective, particularly across different time zones.

If running an online Delphi process, make sure the software can deliver the process you want.

There are seven steps

- **Step 1:** Define the question
- **Step 2:** Appoint a facilitator and engage the panel
- **Step 3:** Gather and consolidate first round responses
- **Step 4:** Identify the most important ideas
- **Step 5:** Rank the most important ideas
- **Step 6:** Review the ranking and identify priority issues for the project
- **Step 7:** Explore the ranking in a workshop with the panel

Define the question

The question to explore should point at the broad policy or strategy area. Keep it open and not too focused: a question framed as *How will the design of cities in 50 years' time create social and economic wellbeing?* (for example) is likely to lead to a richer conversation than a question framed as *How should we design the city of the future?*

Appoint a facilitator and engage the panel

Appoint a facilitator who is experienced in process design and managing group dynamics.

The panel is made up of subject experts who are selected to represent a wide spectrum of opinion. The optimal size is 12-18 people. You may want to widen participation in later stages, or even to repeat the exercise with different groups.

Aim for a mix of experts that incudes academics, practitioners in the business area, government and NGOs

Gather and consolidate first round responses

The first round is comparable to a brainstorm. Invite panel members to submit their initial responses – say 8-10 ideas each – to the project question. This will generate around 150 ideas. Review all the responses and remove any duplicates.

Identify the most important ideas

Send the full set of ideas back to all panel members and ask each one to identify their top 10. Participants shouldn't rank ideas at this stage, simply identify them.

'Top 10 ideas' means 'Which ideas are most important for the future and for this project to look at?'

Review the responses and identify which ideas appear in the top 10 most often. These are the most important ideas that go forward to the next stage. For example,

Idea	Times selected	% of respondents selecting the idea
1. Everyone has access to ambient global connectivity	18	100
2. Access to superfast global transport links	17	94
3. Cities will create gated creative community zones	12	67
- // -	- // -	- // -
149. Distribution drones will be pervasive	1	6
150. Cities will manage inward migration	1	6

Rank the most important ideas

Send the list of most important ideas back to the panel and now ask them to rank them.

There is no hard and fast rule about how many issues to send back… Begin by reviewing the top 25 issues and go from there

Ranking is done against two factors that you (the facilitator) should identify and that relate to the broad objectives of the project.

So, for illustration, you might ask the panel to rank each idea according to its importance for the UK's future prosperity and how urgently it requires policy intervention. Each panel member therefore assigns a score to each idea that reflects its relative importance (1= least important, 10 = most important) and urgency (1= least urgent, 10 = most urgent).

Ranking can be chosen to reflect the issues. Scales of 1 - 10 and High, Medium, Low are good contenders

One respondent might, for example, return the following scores:

Idea	Importance for future prosperity	Urgency of policy response required
1. Everyone has access to ambient global connectivity	10	4
2. Access to superfast global transport links	8	7
3. Cities will create gated creative community zones	4	2
- // -	- // -	- // -

The respondent has assigned *Everyone has access to ambient global technology* a score of 10 (high) for its importance for future prosperity and 4 (low – medium) for the urgency of the policy response acquired. Another respondent might (for example) agree that access to ambient global technology is important, but may assign a score of 10 for urgency.

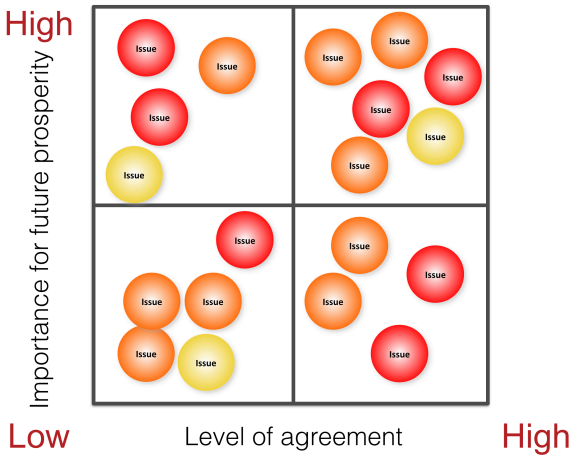
Review the ranking and identify priority issues for the project

The ranking exercise will highlight some significant differences of opinion about what is most important and what is most urgent. One way to visualise this is to map each issue in a matrix that combines level of agreement with both ranking dimensions.

This might look like the matrix on the right.

The horizontal dimension defines the level of agreement on a given issue; the vertical dimension maps one of the ranking factors (importance for the UK's future prosperity in this example).

Each issue is mapped in the 2x2 according to how it scores. Here, there are 6 issues in the top right quadrant which means the expert group agree they are all highly important for the UK's future prosperity. These six are therefore priority issues for the policy area.



The range of scores for the second ranking factor - how urgently the issue requires policy intervention – is shown in this example by colour coding: red represents a high score in the ranking, yellow represents a low score and orange an intermediate score. Overall, therefore, two of the six priority issues need to be addressed urgently, three need to be addressed soon and one is less urgent at the moment.

The distribution of issues in the other quadrants is important. In particular, issues where there is a low level of agreement (wherever they map in the second dimension) may require further research to explore why the differences of opinion exist.

Explore the ranking in a workshop with the panel

Conducting a short workshop with the panel (and/or others) to present back the 2x2 and to explore the factors underlying significant differences of opinion can be valuable for generating insight.

The workshop might have three steps

- **Step 1:** Present the outputs of the Delphi process
- **Step 2:** Identify research priorities issues in the High-High box
- **Step 3:** Review the areas of low agreement to explore strategic issues

Present the outputs of the Delphi process — 30 minutes

Remind the group of the process. Present the outcome of the ranking exercise.

Identify research priorities for issues in the High-High box — 60 minutes

1. Divide participants into groups of 4-6
2. Ask each group to review issues in the High-High box and identify
   - Why each issue is important for the future of the policy area
   - Why it is urgent
   - What research questions the project should address
3. Review in plenary

Modify these questions to reflect the ranking factors used in the exercise

Review issues research priorities for issues in the Low boxes

75 minutes

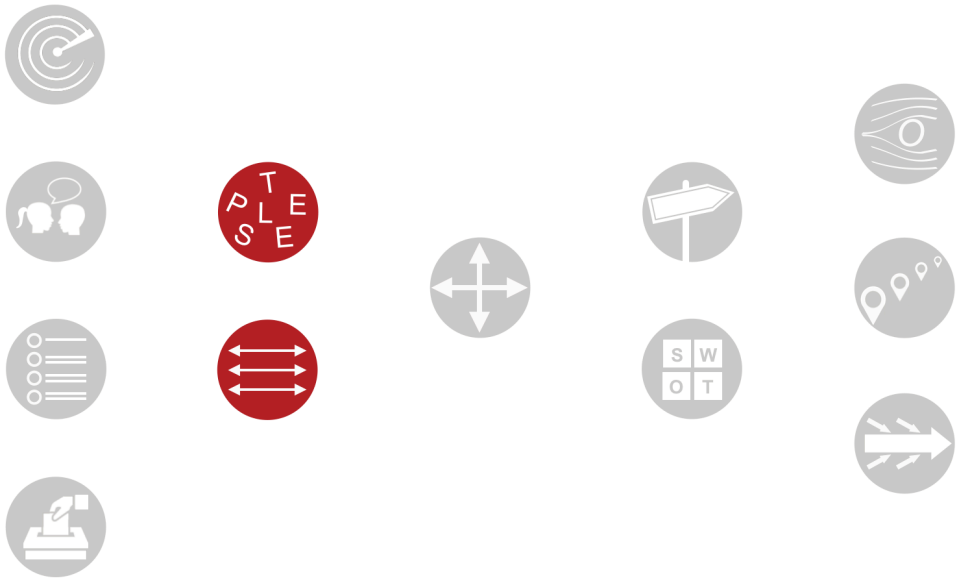
1. Ask two groups to review the Low-Low quadrant and two to review the Low-High quadrants
2. Identify
   - How each issue might be important for the future of the policy area
   - Why there is low agreement about its importance
3. Invite each group to make a case for some issues moving to the High-High box
4. Review in plenary

Remember that some participants will advocate the issues they have an interest in and will not necessarily accept a low ranking for them

At the end of the Delphi process, you will have identified a short list of issues which are important for the future of the policy area. Exactly how you proceed from here will depend on how you ranked the issues, but it is likely that you will wish to go into a driver mapping exercise or scenario exercise to explore how the issues will develop in the future.

Find a sample Drivers map in Annex 1

7. Tools for exploring the dynamics of change



Driver mapping is used to identify the political, economic, societal, technological, legislative and environmental drivers (PESTLE) shaping the future policy environment

Axes of uncertainty are used to define the critical uncertainties for the policy area in the future and to frame the scenarios

Driver mapping

Driver mapping is used to identify the political, economic, societal, technological, legislative and environmental drivers (PESTLE) shaping the future business environment

Aims:
- To identify drivers shaping the future
- To identify which drivers are most important for the future of the policy area or strategic endeavour
- To distinguish between certain and uncertain outcomes resulting from the action of drivers

Approach: Workshop discussion

Participants: People with an interest in the policy area. This may include external stakeholders

Number: Works best with groups of 12 or more – but can be done with fewer

Timing: 1.5 - 2 hours in a workshop setting
45-60 minutes for a small team discussion

Facilitation: Advanced beginner

Output: A list of drivers that need to be acted on, drivers that need to be tracked and drivers that are important for the policy area but that have an uncertain outcome

Outcome: Agreed priorities for action

Good for:
- Understanding the dynamics of change
- Identifying issues that have a high impact on the policy areas
- Distinguishing between drivers with a certain and an uncertain outcome

Risk: **Low-Medium.** The main risk is that participants do not have exposure to a wide range of drivers. Counter this by including subject experts in the exercise or including pre-researched drivers

Get here from…
- Horizon scanning
- 7 Questions
- Delphi

Move on from here to…
- Axes of uncertainty
- Scenarios
- Visioning

Use the output to inform…
- SWOT

The Approach

This section describes brainstorming and mapping drivers in a workshop setting. The process for a small group conversation is broadly the same but requires less time.

There are three steps

- **Step 1:** Introduce the workshop and the PESTLE approach
- **Step 2:** Brainstorm the drivers
- **Step 3:** Map the drivers

The different acronyms used to describe drivers - PESTLE, STEEP, PESTO, STEEPL, for example - are all versions of the same approach. There is no need to be restricted by these typologies. Foresight's Migration and Global Environmental Change project, for example, used Economic, Social, Political, Demographic and Environmental drivers

Introduce the workshop and the PESTLE approach — 15 minutes

Introduce the aims of the project if this is a workshop with external stakeholders or participants who are unfamiliar with it.

Introduce the aims and approach of the workshop. It may be useful to explain the three horizons model (Figure 1, page 2) and invite the group to focus on the mid to long term.

Introduce the driver categories (PESTLE) and perhaps offer brief examples of each type.

Brainstorm the drivers — 45 minutes

If you have researched drivers in advance of the workshop, preprint them on post it notes and miss this step out

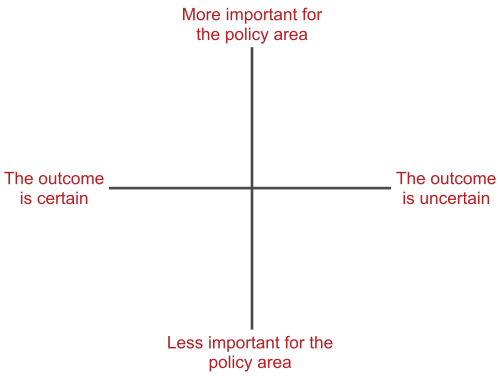
1. Invite participants to work in groups of 6 (or so).
2. Ask groups to identify what's driving change and link it to the project question/policy area. Encourage them to think about drivers in the wider global context (Figure 2, page 3).
3. You can, if you wish, ask each group to focus on one or two driver categories (ask one group to focus on political and economic trends; another to focus on societal and technological trends and so on). This can reduce overlaps and ensure you get coverage across all the categories, but it's not essential.
4. Groups should brainstorm drivers onto post-it notes (one driver per post-it). Ensure that the rules of brainstorming – list drivers, build on each other's ideas, don't critique anything at this point - apply. Quantity at this stage is more important than 'quality'.
5. Suggest that groups use different coloured Post-its to record drivers acting in the short term, in the medium term and in the long term.

Encourage groups to write a short phrase rather than a single word or two. "Sustained economic growth in China" gives a better sense of change then "The Economy"

Map the drivers

30 minutes

1. Ask each group to map their drivers on an **importance and certainty matrix** according to their importance for the policy area and how certain the outcome of each one is.
2. Depending on the number of post-its in each quadrant, groups can cluster them by theme.
3. Ask each group to focus on the top left and top right quadrants and to identify 3-5 priority drivers that are *most* important for the policy area. Mark these with a red dot.



Different groups can go through this exercise at quite different speeds. Don't worry if the fastest group has to wait a while for the slowest group to finish

Next steps

What you do next depends on where Driver mapping sits in your futures process.

If this is a stand alone workshop…

…one of a series of Driver mapping exercises you are running with different groups, for example – this is the last stage of the workshop.

The final task is to spend 20-30 minutes reviewing the different driver maps in plenary and comparing priority drivers from each group.

Explain to the group how this workshop fits in the wider futures process you are conducting, then close.

If this is the first part of a scenario workshop…

…as in Pathway 4, for example, focus on the Post its in the top right quadrant.

Drivers in this quadrant – called critical uncertainties - are strategically important and have a high impact on the policy area but an uncertain outcome.

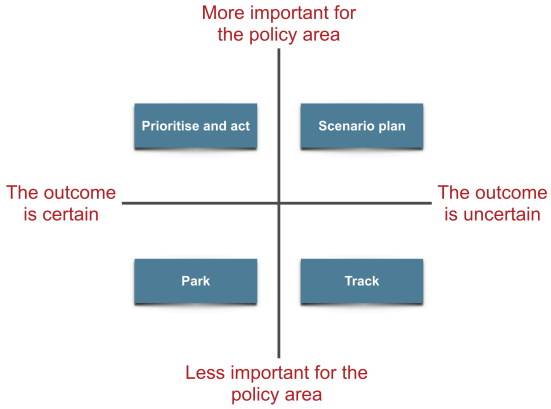
Use the priority drivers in this quadrant to move into the next stage in the process - **axes of uncertainty** (page 46) and to build scenarios that explore alternative ways the policy area might develop.

If this is the first part of a visioning workshop…

…as in Pathway 2, for example, focus on the Post-its in the top left quadrant.

Drivers in this quadrant – known as predetermined elements - have a high impact on the policy area and a certain outcome. These drivers are already changing the policy environment in clear and predictable way and government must **prioritise and act** on them.

Use visioning to describe a positive outcome for addressing these drivers.



Drivers that have a certain outcome but low impact can be **parked** – that is, they are not relevant or important for the future. Drivers in the **track** quadrant, however, seem less important at the moment but could have a high impact in the future if they develop in certain ways. It's worth keeping an eye on these drivers in future rounds of horizon scanning.

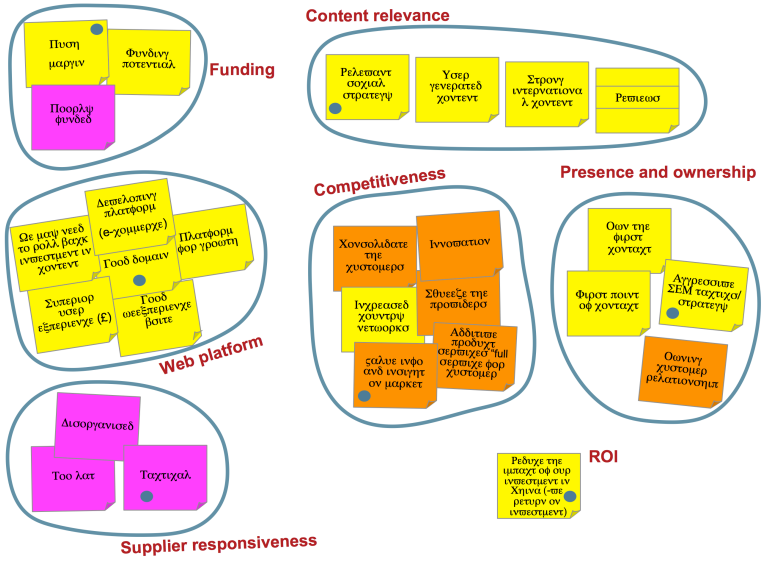
*Use drivers in the **track** quadrant to inform future rounds of horizon scanning*

An alternative method to mapping the drivers

If you want to use a different approach in the **Map the drivers** step, ask the group to cluster their drivers rather than map them on the importance and certainty matrix. To do so, groups should

To take the alternative approach, start here after brainstorming drivers

1. Cluster drivers in related themes
2. Name each cluster
3. Identify the driver in each cluster that is (as required) the most important critical uncertainty or the most important predetermined element.



Try to put no more than 6 post-its in any one cluster

The Forestry Commission, Natural England and others use driver mapping. See the case studies in Annex 5

Axes of uncertainty

Axes of uncertainty are used to define the critical uncertainties for the policy area in the future and to frame the scenarios

Aims:
- To characterize the nature of the critical uncertainties facing the policy area in the future
- To agree which critical uncertainties are most important
- To create a meaningful and focused scenario matrix

Approach: Workshop discussion

Participants: People with an interest in the policy area

Number: Works best with groups of 12 or more. Can be done with smaller groups

Timing: 90 minutes

Facilitation: Experienced

Output: The scenario matrix

Outcome: A shared model of the future policy space

Good for:
- Making the dynamics of change explicit
- Building shared understanding of the dynamics of change

Risk: **Medium-High.** The output from this exercise is a scenario matrix that will frame the discussion of the future scenarios. It is important to ensure the matrix is meaningful for the policy area and that it will define scenarios that tackle the relevant issues and stretch thinking

Get here from…
- Horizon scanning
- Driver mapping

Move on from here to…
- Scenarios

Use the output to inform…
- SWOT
- Visioning

The Approach

Moving from Driver mapping to defining Axes of uncertainty

This tool uses **critical uncertainties** – drivers that are more important for the policy area but which have an uncertain outcome - to define the axes of uncertainty that create the scenario matrix.

There are three steps:

- **Step 1:** Develop a long list of axes of uncertainty
- **Step 2:** Draw up the short list of axes of uncertainty
- **Step 3:** Agree a scenario matrix

Develop a long list of axes of uncertainty — 40 minutes

1. If you are continuing from the Drivers mapping process (page 42), keep participants working in the same groups of 6 and ask them to work with the critical uncertainties [drivers in the top right quadrant] they prioritised with a red dot. You will not be able to look at all 5 critical uncertainties, so ask the group to prioritise 2 or 3.
2. If this is a separate workshop and you are drawing on critical uncertainties developed in previous drivers workshops, form groups of 6 and give each group 3 critical uncertainties to work with.
3. Groups define an axis of uncertainty by describing alternative ways that a critical uncertainty might play out. For example, a group might decide that the uncertainty around a driver written as ***Global security*** is best described as

The world is insecure and unstable ⟷ The world is secure and stable

4. Groups should not, however, settle on their first interpretation of the uncertainty but should spend 10-15 minutes exploring further interpretations and outcomes.

It is worth checking with each group what critical uncertainties they are working with. This means you can manage any overlaps

Try to organize the groups so that you get at least 8-10 axes of uncertainty

Participants generally find this task easier to understand if you demonstrate how to do it with a randomly selected uncertainty.

NB: this means facilitators need to really understand this procedure and to demonstrate it effectively. Practice helps!

5. So, for example, continued discussion of ***Global security*** might lead a group to come up with a three further interpretations of the axis of uncertainty:

The world is insecure and unstable	↔	The world is secure and stable
Terrorism is a continuing global issue	↔	Nation states work together to tackle terrorism
Nations are closed and protectionist	↔	Nations are open
Resource insecurity disrupts UK economic growth	↔	Access to resources sustains UK economic growth

Draw up the short list of axes of uncertainty — 10 minutes

1. Once all the groups have identified several axes of uncertainty for each of their drivers they should select one axis to put forward to the short list. Thus, the group that discussed ***Global security*** might choose Nations are closed and protectionist ↔ Nations are open for the short list.

2. This group will have discussed a second driver and will therefore have a second axis of uncertainty to put forwards.

3. The final short list will have (approximately) 8-10 axes of uncertainty – depending on how many groups are in the workshop.

Write the short list of axes on a flipchart or put them on a powerpoint slide

Agree the scenario matrix

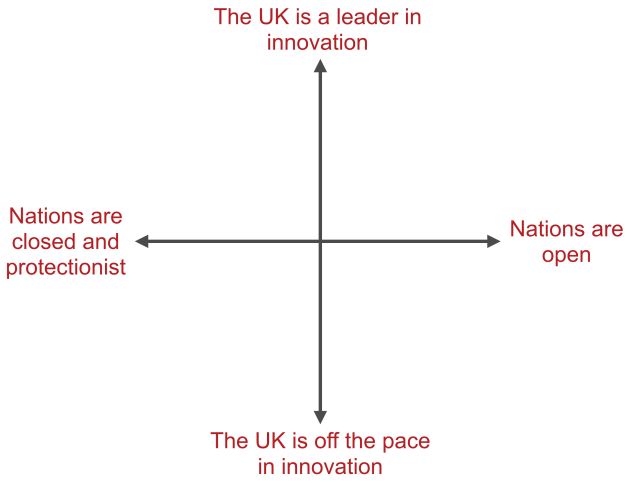
40 minutes

Facilitate a plenary discussion to agree which two axes of uncertainty will create the most interesting or valuable scenario matrix.

The most straightforward way to do this is to invite everyone to vote on which two axes they want to use.

It may help the decision to draw up a couple of alternative matrices and briefly explore what the scenarios will look like.

The final scenario matrix will look something like this:



Make sure the final two axes are not different versions of the same uncertainty

Run this session before a lunch or coffee break to give yourself time to review the matrix and ensure it is meaningful for the project

Don't discard the axes of uncertainty that didn't make it into the scenario matrix. Use them for research or for developing storylines in the scenarios

8. Tools for describing what the future might be like

Scenarios are stories that describe alternative ways the external environment might develop in the future. Each scenario explores how different conditions might support or constrain delivery of policy and strategy objectives

Visioning is used to create a set of common aims and objectives for a project and to describe what the future will be like if they are delivered

SWOT stands for 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

Scenarios

Scenarios are stories that describe alternative ways the external environment might develop in the future. Each scenario explores how different conditions might support or constrain delivery of policy and strategy objectives

Aims:
- To explore alternative ways that a particular policy area might develop in the future
- To consider how key actors - government, businesses, citizens, competitors - might behave under different conditions
- To identify the key requirements of policy under different conditions

Approach: A combination of workshop discussion with additional research to support writing the narratives

Participants: People with an interest in the policy area

Number: Works best with groups of 12 or more

Timing: 2-3 hours

Facilitation: Experienced

Output: Scenario narratives

Outcome: A shared understanding of the dynamics of change and the options and choices facing stakeholders under different market conditions

Good for:
- Building shared understanding of the dynamics of change
- Rehearsing future decisions and trade offs
- Gaining insight into opportunities and threats in different futures

Risk: **Medium.** Scenario building allows participants to explore different perspectives. Scenarios do, however, challenge the *status quo* and may need to be communicated carefully

Get here from…

- Axes of uncertainty

Move on from here to…

- Policy stress-testing
- Backcasting

Use the output to inform…

- Visioning

The Approach

Thinking about uncertainty

The aim of scenario thinking is to identify important strategic uncertainties surrounding the policy area and to explore how they might play out in the future. The scenario stories do this in a way that helps policy makers anticipate how the future might differ from today and how to develop policies that are resilient across a range of possible futures.

Scenarios are not predictions. They are not meant to be 'right' or 'wrong', 'good' or 'bad', but to offer interesting (and in some cases challenging, stretching or controversial) pictures of the future. They provide a safe space – a sand pit - to explore alternative ways the policy area might develop and the choices that various stakeholders might make under different market conditions.

Scenarios should be set a reasonable distance into the future; 10-20 years is good for a workshop but groups can be pushed to think further out if you wish.

If you want groups to think further than 20 years forward, think about staging the conversation – that is, asking groups to describe the world in 20 years and then to describe the opportunities and challenges looking forwards from that point

Scenarios developed in a workshop are necessarily brief but provide insight into the specific challenges and opportunities each future presents for the policy area. The narrative structures can be used to develop and research more detailed stories after the workshop if required.

This tool sets out how to develop scenarios in a workshop[2]. It has 6 steps

- **Step 1:** Describe what the world is like
- **Step 2:** Describe what the UK is like
- **Step 3:** Conduct a SWOT analysis of the policy or strategy issue in the scenario
- **Step 4:** Create a timeline of events
- **Step 5:** Name the scenario
- **Step 6:** Identify the main recommendations and issues for developing policy or strategy

Groups rarely start a scenario workshop at this particular point; they are more likely to have arrived here after Driver mapping and Axes of uncertainty. After detailing the scenario approach, this tool describes how to deliver scenarios as part of a one day workshop.

[2] There is a discussion on how to develop larger scale scenarios at the end of this section of the Toolkit.

The scenario process

Describe what the world is like — 25 minutes

Groups describe the world of their scenario in general terms. This might be structured along the following lines:

1. Describe the global economic environment in your scenario
   - What are the main economic drivers in play?
   - Is the global economy growing or flat?
   - Where is the main economic power in the world?
   - How open is the global economy?
   - What are the main trading blocs and economic relationships?
2. Describe environmental issues in your scenario
   - Is energy widely available?
   - Are food and water widely available?
   - What is the impact of climate change?
   - Do societies care about low carbon living?
   - What are the consequences for lifestyles and consumption?
3. Describe international relationships
   - What are the strong international relationships? The weak ones?
   - Where are the tensions and how does the international community manage them?
   - Is the prevailing international mood one of optimism or pessimism? Why?

Divide workshop participants into four groups and ask each group to develop one scenario. Give each group a worksheet with the questions to record their responses

The questions set out here work well enough but are rather generic. Spend some time with the problem holder in advance of the workshop to identify more specific or topic related questions to ask when describing the scenarios

Describe what the UK is like — 25 minutes

4. Describe the social and economic context in your scenario
   - How's the UK economy doing?
   - Is the UK outward looking or insular? Who are its main partners?
   - Is society comfortable with itself? Are there any fault lines?
   - Who are the main winners and losers?
   - What are the UK's main successes? Its challenges?

It's a good idea to customise these questions in particular.

Conduct a SWOT analysis of the policy or strategy issue in the scenario — 25 minutes

5. Within the logic of their scenarios
   - What are the UK's strengths in the policy or strategy area?
   - What are the UK's weaknesses in the policy or strategy area?
   - What are the opportunities for the UK that the policy or strategy needs to facilitate?
   - What are the threats to the UK that the policy or strategy needs to mitigate?

Remind the group that strengths and weaknesses are internal and opportunities and threats are external

Create a timeline of events — 20 minutes

6. Identify the 10 key events that lead from the present day to the future scenario

Groups can miss this step out if they are short of time – although timelines are particularly useful when writing up scenarios after the workshop

Name the scenario — 5 minutes

7. Come up with a name for the scenario that is memorable and that evokes the essence of the narrative.

The four scenarios for the Intelligent Infrastructure Systems Project were Perpetual Motion, Urban Colonies, Tribal Trading and Good Intentions

Identify recommendations and issues for developing policy or strategy — 20 minutes

8. The final question in the exercise provides a bridge between the future scenario and the present policy/strategy challenge. Each group should answer the following question:
   - Assume this is future that will occur. With that knowledge, and based on this conversation, what three recommendations would you make to The Secretary of State to ensure that (s)he delivers the policy/strategy that the UK needs?

Plenary presentation and discussion — 30 minutes

9. Invite each group to give a short (5 minute) presentation of the key points in their scenario. Makes sure they give you the scenario name and the recommendations to the Secretary of State. At the end of the presentations, ask the group for similarities and differences between the scenarios and for key learning points from the overall exercise.

Draw the scenario matrix on a couple of flip chart sheets and capture the key points of each scenario as groups present

Delivering scenarios as part of a one day workshop

You can deliver an effective one day scenario workshop by combining three tools:

- Driver mapping 90 minutes
- Axes of uncertainty 90 minutes
- Scenarios 150 minutes

Find sample slides for introducing scenarios in Annex 1

An illustrative timetable is

9.30 Introduction

- Introduce the project aims and objectives
- Introduce the workshop program
- Introduce scenario thinking

9.50 Conduct driver mapping

11.15 Coffee

11.30 Develop axes of uncertainty

12.30 Agree the scenario matrix

1.00 Lunch

1.45 Develop scenarios

3.45 Tea

4.00 Feedback

4.30 Next steps

4.45 Close

Write up the scenario narratives after the workshop

The one day scenario workshop described here will generate four scenarios, each with a good level of detail. Use the workshop notes to write up four scenarios that are each 600-800 words long and that capture the essence of the narratives generated in the workshop. You may wish to structure the scenarios so that they describe (for example) what the world is like in the future, what the UK is like and what the particular policy issues and challenges are.

Draw on roadmapping and horizon scanning to identify future developments that can be written into the scenarios

For an exercise of this type, you may prefer to write end state scenarios: stories that are set in the future you are describing. The alternative – timelines that describe how the scenario developed from the present day – are difficult to write without more detailed research.

Find a sample scenario in Annex 1

The scenarios must be plausible and they must challenge the *status quo*. Use the notes and knowledge from each group discussion to identify emerging technologies and research key trends and events that are important to development of the scenarios. Try to write in an engaging style that evokes something of the future you are describing.

The FAQs at Annex 3 suggest a range of creative approaches to scenario writing

Adding metrics to your scenarios

You may wish to use the scenarios to explore how a number of key metrics – quantitative or qualitative indicators such as GDP, population and quality of life, for example – vary between different futures. You can introduce some basic questions to the scenario workshop discussion ('Is population higher or lower than the current baseline?') or you can combine the scenario logics with existing research to illustrate how different environmental conditions might lead to variation of important indicators. Foresight used this approach in the Migration and Global Environmental Change project to build quantitative models.

Go to Annex 4 to find out how to introduce quantitative and qualitative metrics into your scenarios

A note on large scale scenario development

Some futures projects require more extensive scenario work to draw in a range of research and more detailed and extensive scenario exercises. Foresight's Intelligent Infrastructure Futures scenarios, for example, were developed over 8 months and involved 4 drivers workshops, 8 focus groups and detailed systems mapping.

The scenarios were 3000 words long and looked forwards 50 years to 2055. Each was set in 3 timepoints – 2025, 2040 and 2055 – and the narratives drew extensively on research conducted as part of the wider project to explore future developments in infrastructure.

The scale of the Intelligent Infrastructure project meant the scenarios were developed over a series of workshops, each designed to scale up different stages of the scenario process described here. The overall approach described here was at its core.

Health and Safety Executive use scenarios. See the case studies in Annex 5

Visioning

Visioning is used to create a set of common aims and objectives for a project and to describe what the future will be like if they are delivered

Aims:
- To focus groups on what a successful outcome looks like
- To agree what the current reality is and what therefore needs to be done to deliver success
- To set out and prioritise the steps required to achieve the vision

Approach: Workshop/group discussion

Participants: Anyone with a stake in the issue

Number: Ideally needs to be 6 or more. There is no real upward limit, since large groups can divide into breakout groups

Timing: 2-3 hours as a standalone activity

Facilitation: Advanced beginner

Output: A shared vision and the steps required to achieve it

Outcome: A shared aspiration. Agreement on what needs to be done to achieve it; and, if there are areas of disagreement or uncertainty, these are clearly identified.

Good for:
- Clarifying expectations
- Building a shared sense of purpose
- Highlighting what is important in the short term and what can wait until later
- Identifying the scale of change required for success

Risk: **Low**

Get here from…

- Horizon scanning
- Driver mapping

Move on from here to…

- Roadmapping

Use the output to inform…

- Policy stress-testing
- Backcasting

The Approach

Visioning is a relatively straightforward process. It can be run as a standalone activity or can be informed by previous work. A particularly good way to connect visioning to other futures work in a specific workstream is to present the outputs from the earlier activities as a stimulus to the conversation.

One aspect of the technique requires some management of expectations. When participants are describing their vision, encourage them to be aspirational and not held back by the reality of the present. The design intent behind this is to help groups shake off existing practical, policy or market constraints that might be blocking their long term thinking. A potential danger of encouraging this is that groups push the visioning conversation into unrealistic or impractical territory. If this happens, acknowledge it before returning to the current reality and allowing the group to self correct. There is more benefit in building a demanding – even an unrealistic – vision and then adjusting it than in being too cautious and not setting a stretching aspiration for future success.

The tool has three main steps:

- **Step 1:** (Optional) Present the output from previous relevant work such as horizon scanning or 7 Questions
- **Step 2:** Describe the vision of success
- **Step 3:** Agree the current reality and define the steps required to deliver the vision

Present the output from previous relevant work — 20-30 minutes

This option is useful if you want to build on previous work – such as 7 Questions (which explicitly asks interviewees to express their vision) or Driver Mapping (which identifies drivers shaping the future context for policy or strategy) – in order to stimulate thinking.

The two main reasons for presenting previous work are to stimulate group thinking and to highlight issues that they perhaps hadn't thought about. Follow up any presentation with a short discussion about what was interesting and why.

If you want groups to practice thinking about the future before they start the main exercise, do a warm up where individuals envision their own future success. Invite them to think forward 10 years and to accept that they have achieved their personal and professional aspirations. Ask them to describe (if only to themselves)

- *What they do*
- *Where they live*
- *What they are planning to do for their next holiday*
- *What the next week at work holds for them*

Describe the vision of success — 45-60 minutes

Ask groups to imagine they are members of the team that has successfully delivered the policy or strategy being discussed. They should describe what that means to them and what success looks like.

Encourage the group to speak in the present tense and to take ownership of the future they have created

The following trigger questions are generic (but work well) and can be modified as required. Groups should capture their conversation on flip charts or on a crib sheet which they subsequently hand in. This will form the basis for the write up.

Participants should treat this element of the conversation like a brainstorm – all ideas are valuable and worth including. Differences can be ironed out in the next stage

The questions are

1. What have we achieved?
2. Who are our stakeholders? How have they benefited from what we've done?
3. What are we most pleased about?
4. What arrangements (procedures, structures or decision making processes) have we put in place to make sure the project is sustained?
5. How are we measuring progress and success?
6. Is there anything we still need to tackle?
7. What are the challenges we face now?
8. What have we learned from our successes and failures?

Listen in to the conversations. Don't let anyone question whether someone else's aspiration is possible – the point of this discussion is to agree what the aspiration is. Practicalities are dealt with in the next step

Invite groups to feedback — 5 minutes per group plus 5-10 minutes discussion

Ask groups to present a brief summary of their discussion (but not to read all the bullet points on their sheets).

Facilitate a short discussion to compare and contrast the visions. Do not ignore differences of opinion, but do not over emphasise them either. Identify the areas of broad agreement that will form the core of the vision and acknowledge any differences of emphasis or detail that will need to be considered later.

Think about taking a break after the feedback. This will give you space to review the visions and confirm the main elements

Agree the current reality and define the steps to deliver the vision 45-60 minutes

The objective of this session is for groups to come back to the current reality and discuss what needs to happen if the vision is to be delivered. Keep participants in the groups they have been working in and to work with the vision they have developed.

Don't worry at this stage if one group has a radically different vision of success. They may modify it during this second round of discussion

These questions are less generic but will still benefit from being modified.

The questions are

1. How close are we to our vision?
2. What needs to change to achieve the vision?
3. Which changes are in our control? Which aren't?
4. What are the key steps towards achieving the vision? When do we need to achieve them by?
5. What resources do we need? Who will lead the process?
6. Who will be the winners and losers in this change? How do we bring people with us?

Capture these questions on task sheets. Perhaps ask groups to use post it notes to build a timeline of the key steps

Invite groups to feedback 5 minutes per group plus 5-10 minutes discussion

As before. Invite groups to give feedback, perhaps focusing on the timeline.

Facilitate a short discussion to compare and contrast what needs to happen now and how change will be resourced. Once again, acknowledge differences of opinion, but do not overplay them.

Gather all the notes and write a composite vision that captures as many of the points as possible

Find a sample vision in Annex 1

SWOT

SWOT stands for 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

Aims:
- To identify what needs to be done to capture and build on opportunities
- To identify what needs to be done to mitigate threats
- To identify internal priorities and challenges

Approach: Primarily a workshop/group discussion tool, but can support desk research

Participants: Best developed with those involved in developing policy or strategy

Number: 6 or more

Timing: 60 minutes

Facilitation: Novice

Output: Analysis of the issues facing the policy or strategy team going forwards

Outcome: Clear insight into the shifting dynamics in the external environment and what they mean for the policy area

Good for:
- Deciding what to prioritise in the policy or strategy area
- Identifying barriers to success
- Identifying emerging opportunities

Risk: **Low**

Get here from…

- Driver analysis
- Scenarios

Move on from here to…

- Roadmapping

Use the output to inform…

- Scenarios
- Roadmapping

The Approach

SWOT analysis is a very practical technique for mapping out the issues that will have an impact on successful delivery of a policy or strategy.

If you are working with a single group, facilitate the conversation and write the group's responses on a flipchart. If you are working with more than one group, ask them to note their discussion on a single flipchart or give them a sheet with the SWOT box already written on it.

Ask groups to identify what fits in each quadrant of the box. Remind them that

- Strengths are *internal* factors in the organization or partnership leading policy or strategy implementation that will support the effort to drive the policy or strategy forwards;
- Weaknesses are internal factors that might hold implementation back and that will need to be addressed;
- Opportunities are *external* factors that will help to achieve the policy or strategy aims and that policy design can build on;
- Threats are external factors that may prevent or delay implementation and that need to be characterized and mitigated against.

SWOT analysis in futures work is mainly used to underpin forward planning. It is also a useful component of a one day scenario development process.

Strengths	Weaknesses
Opportunities	**Threats**

Health and Safety Executive use SWOT analysis. See the case studies in Annex 5

9. Tools for developing and testing policy and strategy

Policy stress-testing is a method for testing policy, strategy or project objectives against a set of scenarios to see how well the objectives stand up to a range of external conditions

Backcasting is a method for determining the steps that need to be taken to deliver a preferred future

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

Policy stress-testing

Policy stress-testing is a method for testing policy, strategy or project objectives against a set of scenarios to see how well the objectives stand up to a range of external conditions

Aims:

- To explore how different contextual conditions might affect what different stakeholders want from a policy or strategy
- To explore how different contextual conditions might alter the relative importance of elements of a proposed policy or strategy
- To identify which objectives are robust across the full range of scenarios and which will need to be modified if conditions change
- To identify what external events will trigger modifications and what those modifications are likely to be

Approach: Workshop discussion that builds on the scenarios

Participants: People with responsibility for the policy or strategy area. Participants don't need to have developed the scenarios directly

Number: Up to 16

Timing: 1.5 – 2 hours

Facilitation: Experienced

Output: Feedback on how a new or existing policy, strategy or project might be affected in different scenarios and how it might need to be modified to ensure resilience across a range of future conditions

Outcome: A more resilient policy, strategy or project

Good for:

- Focussing participants on policy, strategy or project objectives
- Testing the robustness of those objectives
- Identifying events that will trigger the need for policy adjustment

Risk: **Low.** Policy stress-testing is advisory rather than prescriptive

Get here from…

- Scenarios

Move on from here to…

- Backcasting

Use the output to inform…

- Roadmapping
- Policy or strategy development

The Approach

Policy stress-testing is used to see how well a set of policy objectives stand up to a range of market conditions. These objectives may exist already – in which case this exercise is testing whether they are robust enough to deliver in a range of future market conditions – or policy stress-testing may be part of the process for developing new objectives.

If the purpose of the workshop is to develop new objectives, you need to introduce 'first draft' or 'straw man' objectives for the group to work with

Policy stress-testing is a flexible technique. It can be done straight after a group has developed scenarios or it can be a stand alone session at a later date. In the latter case, groups need to be introduced to the scenario set, so the narratives need to be written up in bullet form at least.

Groups review each strategic objective against the different market conditions that exist in each one of the scenarios and in each case decide whether the objective is still relevant or whether it is need to be adjusted.

There are four steps:

- **Step 1:** Introduce the scenarios (not necessary if they were developed by the group)
- **Step 2:** Introduce the policy or strategy objectives being considered
- **Step 3:** Test the objectives against all scenarios
- **Step 4:** Review the findings and discuss the implications

Introduce the scenarios — 20 minutes

Deliver a short presentation that explains

- What scenarios are and what they are designed to do
- How this particular set of scenarios was developed
- The scenario matrix
- The broad structure of each scenario and some of the strategic questions each one throws up

Produce a one page handout for each scenario that shows the scenario matrix and gives the main characteristics of the scenario in bullet points

Introduce the policy or strategy objectives to be tested — 10 minutes

Deliver a short presentation that reminds the group of (or introduces them to) the specific policy, strategy or project objectives being tested.

It is worth spend a few minutes at this point having a conversation with the group to ensure they understand the objectives clearly.

Even if the group works in the specific policy or strategy area, do not assume they know the objectives you are testing. Print the full set of objectives out or put them onto a slide

Test the objectives against the set of scenarios — 40-60 minutes

Divide the group into four and allocate one scenario to each group. Give each group the relevant scenario handout and – if required – the full set of objectives being tested.

Invite people to read the scenario individually and to discuss the relative strengths and weaknesses of the scenario for achieving their policy or strategy goals. **Allow 20-30 minutes** for this step.

Start here if coming straight from a scenario workshop

Invite each group to test the objectives against their scenario. They should

- Imagine that the world is as described in the scenario
- Decide whether – for this world – each objective is
  - Robust
  - Redundant
  - In need of modification
- Be prepared to explain why they have made their decision

Remind groups to work with the logic of their scenario – not try and change it so that it meets the needs of the objectives

Allow 20-30 minutes for this step.

Review the findings and discuss the implications — 30 minutes

Facilitate this discussion by drawing up a table that lists the range of policy objectives down the side and the scenarios across the top.

Gather feedback from each group and record it all in the table before analyzing the results.

The table may look something like this:

Strategic objective	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Objective 1	☺	😐	☺	☺
Objective 2	😐	😐	☹	☺
Objective 3	😐	☺	☺	😐
Objective 4	😐	😐	☹	😐
Objective 5	😐	☺	☺	☺

*☺ means the objective is **robust** in the specified scenario*

*😐 means the **objective needs modified** in the specified scenario*

*☹ means the objective is **redundant** in the specified scenario*

Once you have built the table, spend some time discussing it with the group and exploring the implications for the policy.

For example, in the table above (which is a real example taken from a policy workshop)

- Objectives 1 and 5 look robust across most futures but may need a slight adjustment depending on the circumstances
- Objectives 2 and 4 need to be revisited – and may not be required at all
- Objective 3 may need to be reassessed

Don't forget to review the table vertically as well as horizontally

Individual groups will have different perspectives as well. The group assessing scenario 1 will take the view that most of the objectives need to be revisited. So will the group reviewing scenario 2. None of the groups will be confident that the objectives as a whole are robust for the future.

Foresight's Obesity project used policy stress-testing to test the robustness of various policies against different scenarios. You can see the results in pages 107-108 of the Foresight Obesity Report.

Health and Safety Executive use policy stress-testing. See the case studies in Annex 5

Backcasting

Backcasting is a method for determining the steps that need to be taken to deliver a preferred future

Aims:
- To agree a preferred future
- Identify what needs to change between the present and the preferred future
- Build a timeline that sets out the key changes
- Determine and address the key internal and external factors that might affect the timing or scale of change

Approach: Workshop discussion that builds on scenarios or on a vision

Participants: People with responsibility for the policy or strategy area. Participants don't need to have developed the scenarios or vision directly

Number: 16-24 is optimal, but the process can be adapted to more or fewer participants

Timing: 4-4.5 hours

Facilitation: Experienced

Output: A shared view of the future and a the steps required to deliver it

Outcome: A plan to achieve future success with prioritised steps.

Good for:
- Building shared purpose
- Identifying what is in a team's control and what is not
- Determining who outside the team needs to be involved in making the future happen
- Creating a realistic picture of the scale of the task ahead

Risk: **Medium.** It's important to be honest about what is in the team's control

Get here from…

- Scenarios

Move on from here to…

- Use Backcasting to support development of a shared plan

Use the output to inform…

- Roadmapping
- Policy or strategy development

The Approach

Backcasting is an effective way of connecting a given future to the present and identifying what needs to be done to deliver it. The process is similar to the second stage of visioning - *Agree the current reality and define the steps to deliver the vision* – but focuses more on the role of external stakeholders in making the future happen.

Participants work backwards from the future and identify the key steps, events and decisions that will make it happen. One particular focus of backcasting is to identify 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.

The tool has 6 steps:

- **Step 1:** Introduce the preferred future (not required if it was developed by the group)
- **Step 2:** Identify the key differences between the present and the preferred future
- **Step 3:** Build a timeline that sets out the key changes needed to move from the present reality to the preferred future
- **Step 4:** Identify which changes are in your control and which aren't
- **Step 5:** Identify what you need to do to deliver the steps that are in your control
- **Step 6:** Identify how you can influence or facilitate the steps that are outside your control

Introduce the preferred future — 30 minutes

Deliver a short presentation that explains

- How the future was develop
- Who was involved
- Its key characteristics and outcomes

The preferred future may be one of a set of scenarios or it may be a single vision developed in a visioning workshop

Identify the differences between the present and the preferred future — 30 minutes

Invite participants to work in groups of 4-6 and to describe the key differences between

- The policy or strategy area now and in the preferred future
- The global contextual environment (see Figure 2, page 3) now and in the preferred future
- The policy delivery environment (see Figure 2, page 3) now and in the preferred future

Give participants a handout that describes the key characteristics of the preferred future

Build a timeline that sets out the key changes needed to move from the present reality to the preferred future — 45 - 60 minutes

Continuing in the same small groups, ask participants to

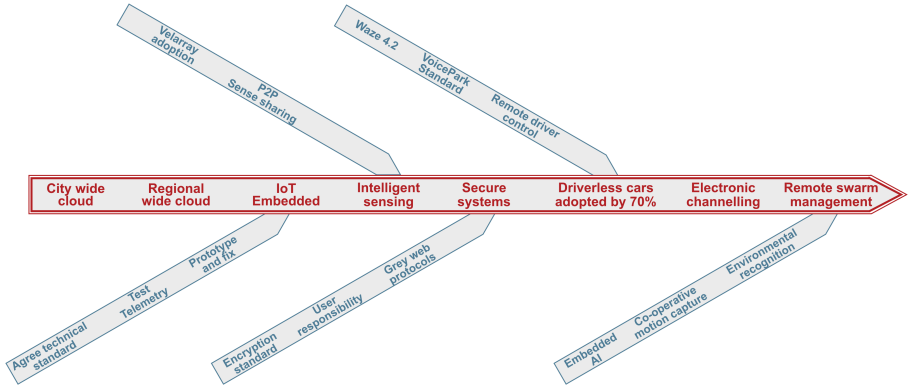
- Describe the key events and steps that need to occur to achieve the preferred future
- Map the key events on a timeline
- Identify the *critical* events that must occur if the preferred future is to happen

Ask the groups to write the events on post it notes and then put those on a timeline. Each group can build their own timeline or you can create a single one that everyone contributes to

If you have sufficient time, ask the group to develop the timeline into a fishbone diagram:

- Focus on the critical events that must occur
- Identify the (say) three or four things that need to happen to ensure they do occur
- Develop the timeline into a fishbone diagram

If you have enough groups, think about about asking each to focus on one category of events: political, economic, societal, technological, legislative or environmental, for example



Identify which changes are in your control and which aren't — 30 minutes

Score each event on the timeline

- **1:** this event is wholly in our control
- **2:** this event is partly in our control
- **3:** this event is wholly out of our control

You can be pragmatic at this point. If there are too many events to score every one, focus on the critical ones

Identify what you need to do to deliver the steps that are in your control — 45 minutes

You may need to vary the timing of this session depending on the number of events and participants

Split each group into two. Ask one group to focus on the critical events on the timeline that are wholly in your control. For each one, identify

- What impact the event will have on delivering the preferred future
- Which stakeholders will benefit from this event happening
- Which stakeholders will – or may feel that they are going to – lose out
- How certain it is that the event will happen
- The enablers that will make it easier for you to make the event happen
- The barriers you may have to overcome to make the event happen
- The four (or more) key steps you need to take now

Ask the other group to focus on the critical events that are partly in your control. For each one, identify

- What impact the event have on delivering the preferred future
- Which stakeholders will benefit from this happening
- Which stakeholders will – or may feel that they are going to – lose out
- How certain it is that the event will happen
- What you need to do/who you need to work with to ensure the event will occur
- The four (or more) key steps you need to take now

Identify how you can influence the steps outside your control — 30 minutes

Focus on the critical events that are out of your control. For each one, identify

- Who or what has control
- The impact of the event not happening
- What you can influence to increase the likelihood that the event will occur

Plenary review and discussion — 45 minutes

Review the conversations and focus on next steps

Roadmapping

Roadmaps show 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

Aims:
- To build a holistic picture of the different elements in a project and how they combine over time
- To deepen understanding of the complex connections and relationships between different elements

Participants: As a desk exercise, the issue holder or full project team. As a workshop discussion, key stakeholders and subject experts

Number: In a workshop, can be done with groups of 4-6

Timing: Flexible. Can be delivered over the life of the project

Facilitation: Advanced beginner

Output: A roadmap of relevant issues set out over time and connected to related strands of evidence and driver developments

Outcome: More holistic thinking about the policy area and clearer insight into the connections, relationships and causal links between policies and exogenous factors

Good for:
- Creating insight
- Developing a holistic approach to policy
- Preparing for the impact of related - and sometimes unrelated – policies on the policy or strategy areas of interest

Risk: **Medium.** The main risk is that the roadmap can become 'the plan'. The roadmap is as good as the intelligence built into it

Get here from…

- Visioning
- Policy stress-testing
- SWOT

Move on from here to…

- If used at the start of the process, move on to most activities

Use the output to inform…

- Policy or strategy development

The Approach

The roadmap is a timeline that visually identifies when and how key exogenous events and decision points – technology adoption, drivers, policy announcements, changes of government and so on - might shape the policy area under consideration.

A particularly useful aspect of roadmapping is that it combines known (certain) developments with speculative (uncertain) developments. The roadmap does not need to be a single line or be restricted only to the core issue; it can be expanded to include developments in related policy areas that may impact on the central project question.

There are 6 steps:

- **Step 1:** Agree the scope
- **Step 2:** Build a 'first draft' roadmap
- **Step 3:** Gather research
- **Step 4:** Refine and develop the timeline(s) in the roadmap
- **Step 5:** Validate the roadmap
- **Step 6:** Create an action plan

Of all the techniques in this Toolkit, roadmapping is the most flexible and – crucially – the most emergent. Use this section to get a sense of how it's done and then try it out and create your own roadmap and your own process

Agree the scope

Agree the core issue under investigation and consider related policy areas that may have an impact on it. Agree the planning horizon (how far into the future to look), where to look (horizon scanning) and who to involve.

Build a 'first draft' roadmap

Do this quickly, to get the key events out. The roadmap is going to evolve so don't worry about missing things out at this point. You can build it with the project team or widen discussion by running a short workshop with subject experts to build a map using post it notes to capture events.

Start building the roadmap on a whiteboard to allow for plenty of rubbing out and redrawing

Review the map at the end of the conversation to identify what you need to clarify, what you want to find out more about and what might need to be added in later iterations of the map.

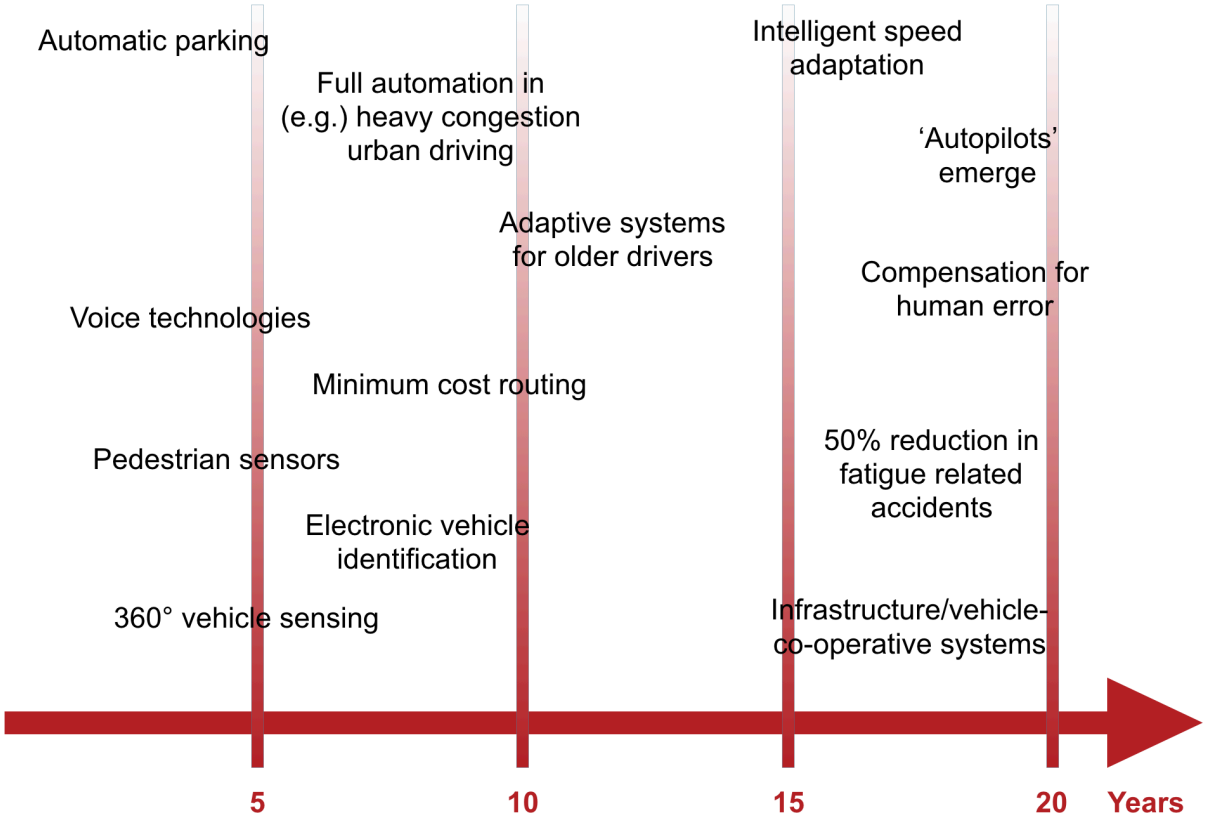
Gather research

Research the specific areas identified in the scoping stage. Use research journals and horizon scanning to identify possible emerging issues. Interview topic experts using 7 Questions and identify key trends and developments (PESTLE) that might have an impact on the roadmap. Uncover key drivers that underpin the topics to build a detailed picture.

Keep developing the roadmap as your research knowledge grows. Change the map constantly

Refine and develop the timeline(s) in the roadmap

As your knowledge grows, modify and develop the roadmap. Look at different strands of research and consider how they connect to – and influence development of – events further along the timeline.



This roadmap is from Foresight's Intelligent Infrastructure Futures project. You can find it in the project's Technology Forward Look paper

Validate the roadmap

At a suitable point, consider presenting and reviewing the timeline with subject experts and other policy makers to present and validate the timelines. Do this 1:1 or in a short workshop.

Refining and developing timelines are an ideal way to engage subject experts in a workshop

Create an action plan

The action plan illustrates key objectives that are necessary for success within this environment. Thereafter, the action plan identifies clear routes for achieving these objectives.

10. Evaluating the impact of using a particular tool

Each of the tools and pathways in the Toolkit describes a purpose, a set of aims[3] and an output. The most straightforward way to evaluate the impact of any given tool or pathway is therefore to determine the extent to which it met that purpose, achieved the aims and delivered the output.

It is worth remembering, however, that purpose, aims and outputs are described at a generic level in the Toolkit and you may want to understand the project team's specific requirements in advance of working with them. Section 3 provides guidance on the general questions to explore with the team to build this understanding.

Futures processes generally deliver qualitative outcomes – shared models, agreed priorities, shared understanding of the choices that need to be made - rather than quantitative ones. These can be harder to measure than quantitative outcomes and generally involve some degree of judgment; but don't underestimate the importance of a group enjoying and being intellectually challenged by a particular conversation.

More subtly, perhaps, a futures process may aim to challenge existing mental models and suggest new ways of doing things. A scenario workshop, for example, might prove quite challenging for some stakeholders who find that the scenarios conflict with their own view of the future and, consequently, their own purpose and strategic priorities. Where this happens, it usually means the scenario process is doing exactly what is required of it - examining how robust a set of strategic objectives are – but some participants may find some lines of conversation threatening and suggest that the process itself is not valuable.

This can lead to the process owner and participants having a different view of the success of a particular conversation. In general, it is the process owner's evaluation that is important.

Time has an effect on evaluating the success of a particular tool as well. By the end of a workshop, participants – and the process owner - may be tired and unsure of the full range of benefits that have come out of the process. They will have a much clearer perspective next day, so it is worth checking in with them at that time.

[3] Defined as the business need in each pathway