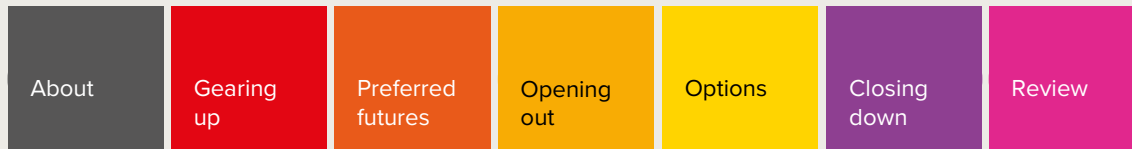


FUTURES

A Mott MacDonald and UWE Bristol collaboration

Future **U**ncertainty **T**oolkit for **U**nderstanding and **R**esponding to an **E**volving **S**ociety

An interactive guide

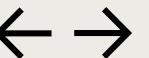


“ The world is changing. Significantly.

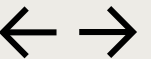
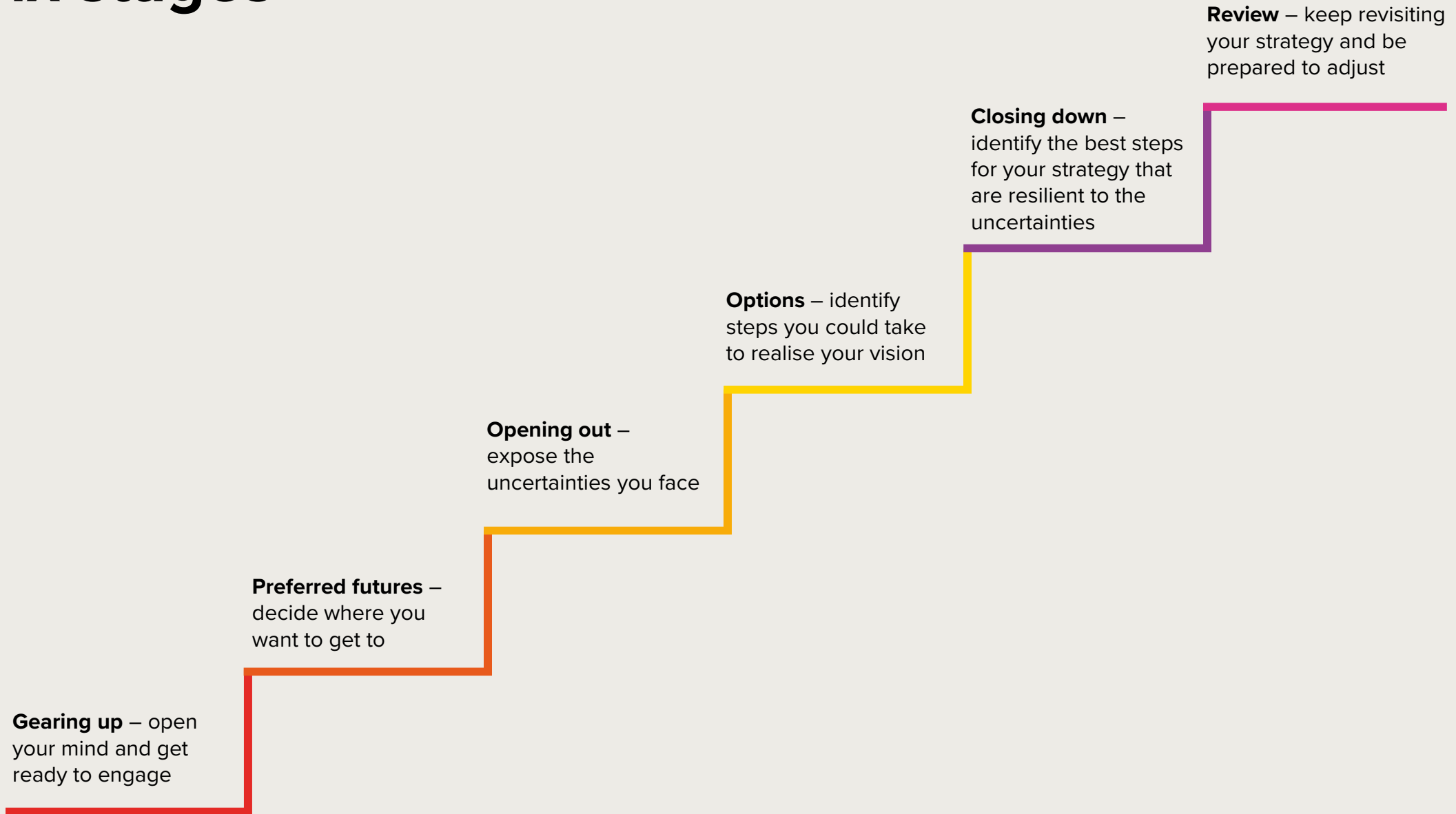
Planning for the future by looking in the rear-view mirror is no longer adequate in the face of the opportunities, threats and uncertainties ahead.

This calls for strong planning that is vision-led and which negotiates uncertainty to achieve more resilient decision making.

This calls for **FUTURES.** ”



Six stages



FUTURES is a new approach to transport planning which enables you to decide on a direction of travel and provide measures to set the course; conventional methods attempt to predict the future and provide measures to match it.

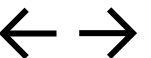
It is designed to support decision making in the face of uncertainty – particularly at the strategic planning stage. Uncertainty is uncomfortable but to conceal it would be short-sighted.

FUTURES allows you to plan for the future you want and embrace and respond to uncertainty to help ensure your policymaking and investment realise your vision.

The approach has a number of stages available allowing us to work with you in a way that is tailored to your needs.

This this interactive guide allows you to explore and understand the approach. We provide all the underpinning capability to work with you and your stakeholders to put FUTURES into practice.

FUTURES is an approach that combines people, techniques and tools to plan for the future.

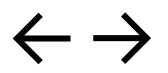


Provenance

FUTURES is founded upon leading international experience and academic rigour.

It offers you a regime testing approach to transport planning and policymaking that allows you to decide and provide.

Instead of adhering to trends and the nature of the world we have known, you will be enabled to bring that world into question. You will allow vision to guide your policy decisions, shaping and supporting society.



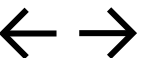
Fit for purpose

FUTURES is aligned with a wider and developing body of expertise and experience and with techniques that are being applied across sectors.

The UK Government Office for Science offers its own 'Futures Toolkit' that outlines, with examples, key approaches that can be taken in futures thinking.

In 2019-20 we are responsible, with partners, for providing the UK Department for Transport and its stakeholders with 'Futures Support' based on the Futures Toolkit and our own FUTURES approach. The purpose is to add resilience to decision making across the DfT's areas of policy.

The FUTURES approach has therefore been tailored to support your needs associated with the transport sector.



FUTURES has six stages

Gearing up

The first stage is designed to introduce the approach and its context. It is about allowing you and your stakeholders to tune in and to understand and gauge your appetite, readiness and needs.

Preferred futures

The second stage is about co-creating with your stakeholders an expression of what characterises the future that is preferred – reconciling different values and preferences to converge on a shared vision.

Opening out

The third stage embraces and opens out uncertainty, surfacing drivers of change and homing in on critical uncertainties to develop plausible future scenarios with which your vision must contend.

Options

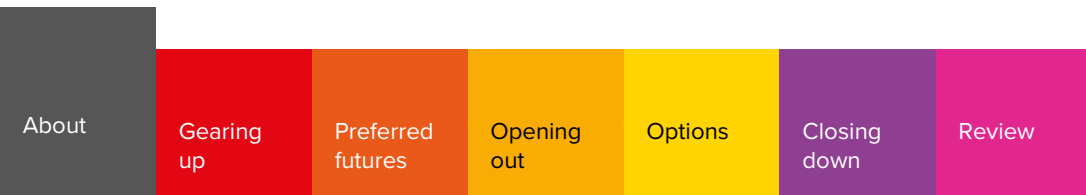
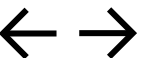
The fourth stage involves option generation – identifying ways to deliver your vision with some cognisance of the uncertainty that has been opened out and drawing on examples from elsewhere.

Closing down

The fifth stage concerns a need to stress test options for their ability to negotiate uncertainty and remain aligned with your vision, helping you to choose the right option and make the correct decisions.

Review

The sixth stage is about helping you to set in place a plan for monitoring, review and adaptation as well as steps to ensure the approach and underlying philosophy become embedded.



Gearing up

Features

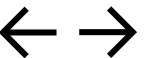
Workshop-based participation to consider how prepared you and your stakeholders are for an uncertain future.

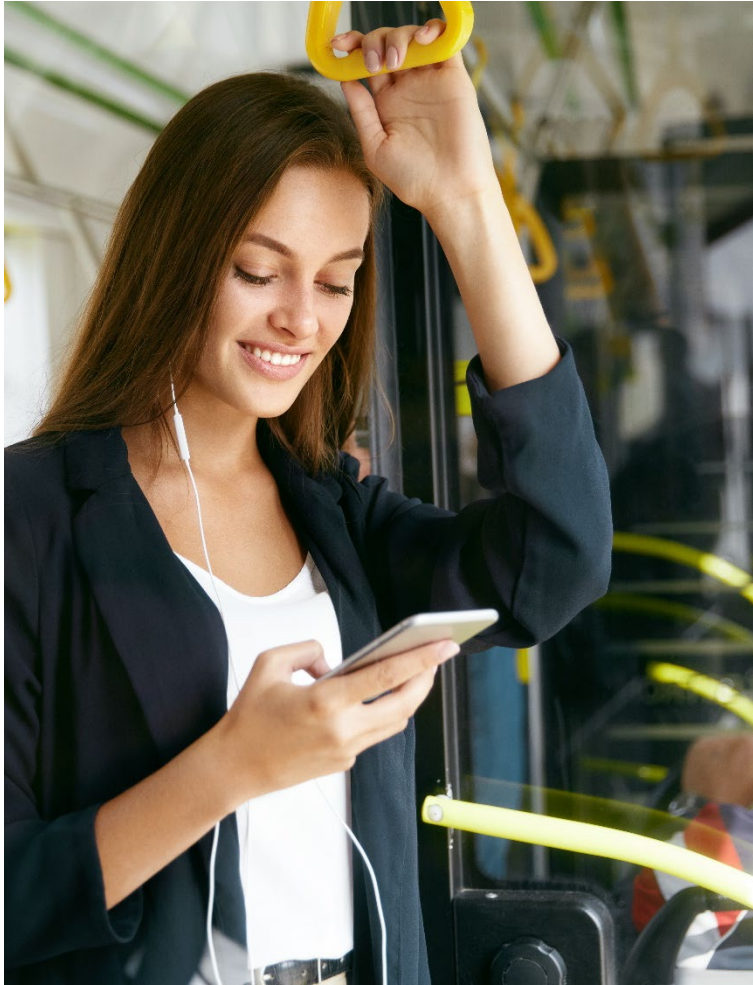
Benefits

A clear appreciation of how you can add resilience to your decision making and an ability to judge whether to proceed with other stages.

Outcomes

Familiarity with futures thinking, an ability to reappraise your transport planning requirements, and a statement of shared commitment you can refer back to.





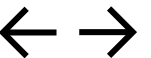
The **gearing up** stage is an important preparatory step. It helps you and your stakeholders to tune into the approach and its underlying philosophy.

The stage centres on a workshop format (extensible to suit your needs, budget and time) which can be run multiple times depending on the breadth of stakeholder engagement you are seeking.

We help you and your stakeholders step away from the immediate demands of the day job, allowing you to open your minds and reach a point of buying-in to the approach.

As part of gearing up, supplementary elements are available offering deeper dives into key components of future mobility (including autonomous vehicles, electric vehicles, mobility-as-a-service, micromobilities and communications technologies).

This stage can be helpful to repeat over time – refreshing awareness of the approach and when inducting new staff and stakeholders into the approach.





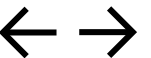
Future uncertainty

You will be introduced to how change has occurred historically and continues to do so.

The stability of the ‘motor age’ is passing with the arrival of the ‘digital age’.

We are arguably in a period of regime transition towards a new form of mobility system that supports future society.

As a consequence we are facing deep uncertainty around how we plan for transport in the future.



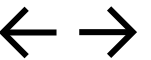


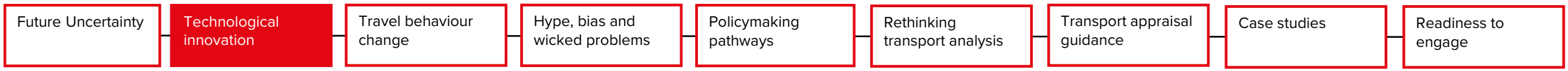
Technological innovation

You will be introduced to the array of technological innovations and disruptors that are expected to transform the transport system.

Such innovations also include non-transport technologies affecting social and business practices from which travel demand derives.

Depending on your needs, you may find it helpful to engage in examining different innovations.





Technological innovation

There are multiple (inter-related) areas of innovation, each with opportunities, threats, hype and uncertainty.

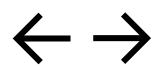
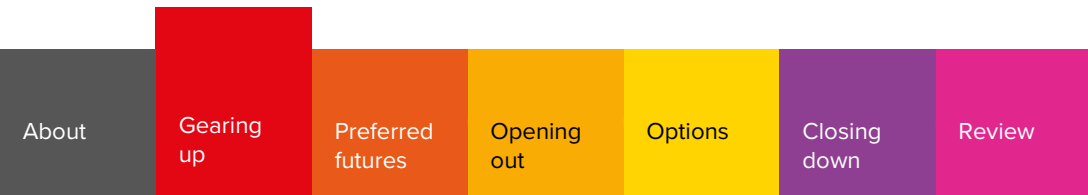
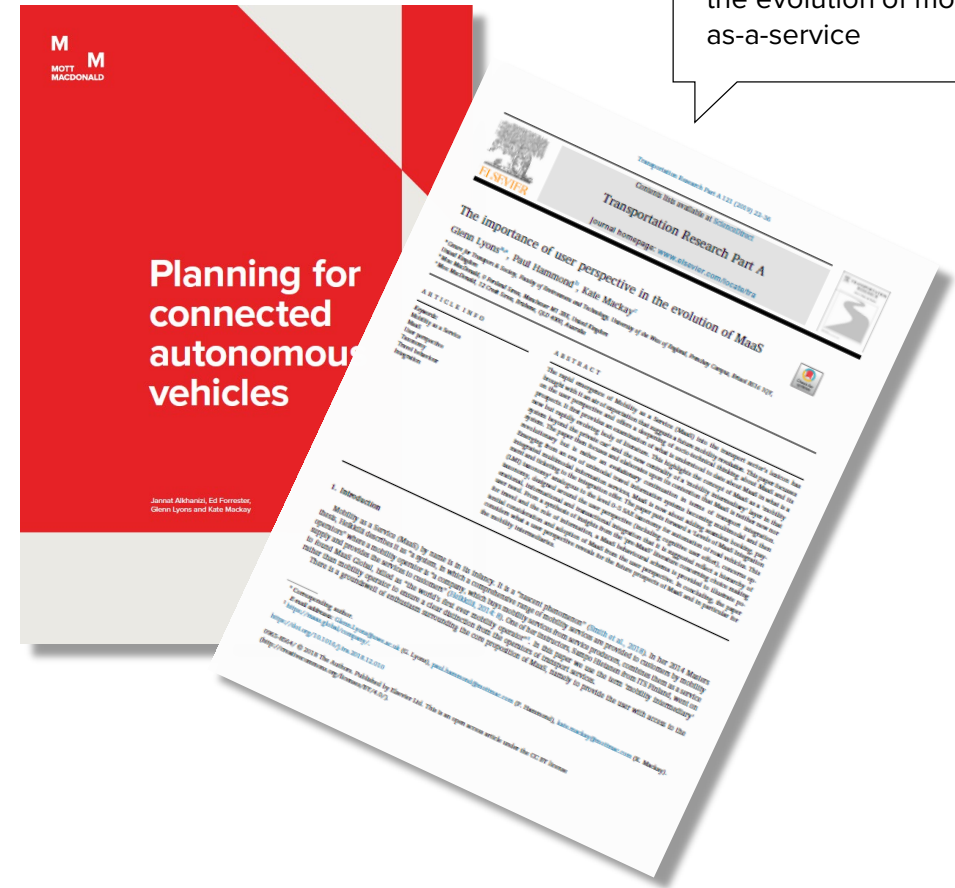
It can be important for you and your stakeholders to become more familiarised with some of these territories as part of your overall decide and provide forward planning.

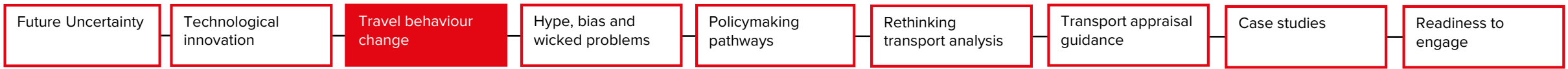
Each area can also be treated in its own right with the FUTURES approach.

In either case we draw upon our own connected thinking and relationships with academia to ensure you are in well-informed hands.

Areas you may wish to address include autonomous vehicles, electric vehicles, mobility-as-a-service, micromobilities and communications technologies.

The importance of user perspective in the evolution of mobility-as-a-service





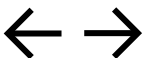
Travel behaviour change

Changes in people's lifestyles, circumstances and values are giving rise to new dynamics in behaviour change.

It is important that the significance of this is appreciated.

We will share national/international insights with you.

It can be especially beneficial to prepare and share insights specific to your geographic area.



Hype, bias and wicked problems

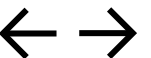
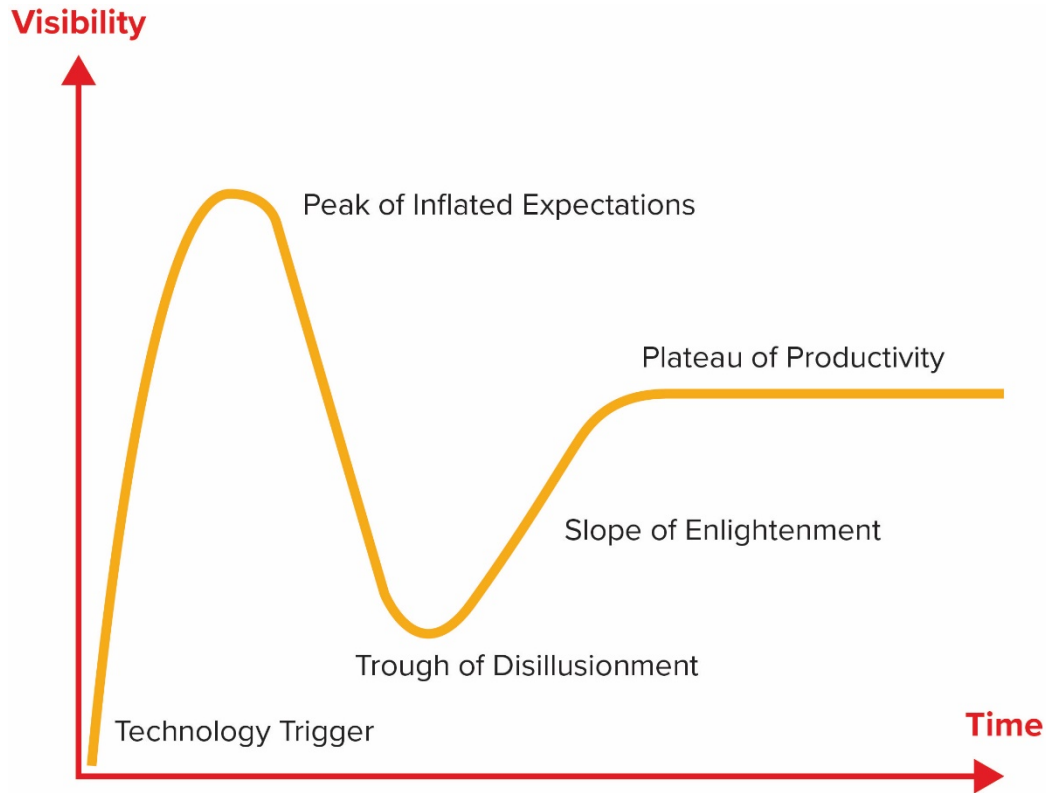
Making sense of change and uncertainty is complicated by how we ourselves form, share and express our views and insights.

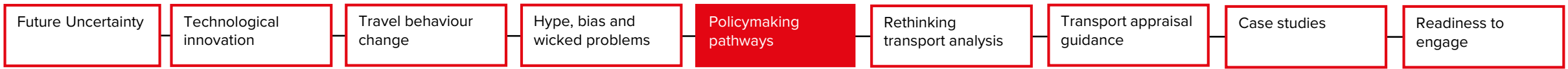
You will be introduced to the hype cycle that can ground our expectations on how far, how fast and in what direction innovations may take us.

Crucially, you and your stakeholders must be aware of and guard against the many unconscious biases we are prone to as individuals.

We will help you distinguish between complex and wicked problems. Wicked problems are not solvable due to divergence of values, lack of evidence and complex interactions with other issues.

FUTURES is designed to help you negotiate wicked problems.





Policymaking pathways

You will be introduced to, and asked to consider, the fitness for purpose of two contrasting policymaking pathways.

The regime compliant pathway (often seen as ‘business as usual’) culminates in predict and provide (demand-led supply).

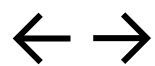
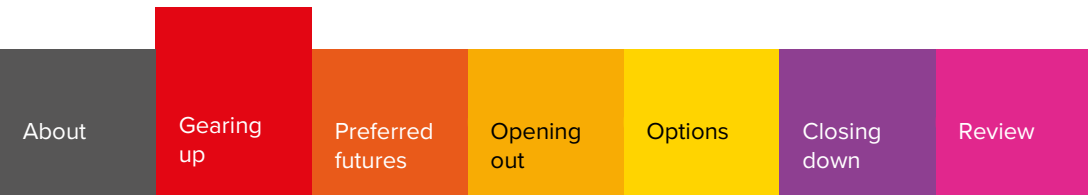
The FUTURES approach is regime testing and culminates in decide and provide (supply-led demand).

Regime compliant

- Predicted and practical outlooks
- Transport – economy coupling
- Weak planning
- Concealed uncertainty
- Justified decisions
- Benefit-cost analysis
- Predict and provide

Regime testing

- Plausible and preferred outlooks
- Access – economy coupling
- Strong planning
- Exposed uncertainty
- Guided decisions
- Real options analysis
- Decide and provide





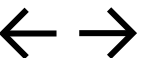
Rethinking transport analysis

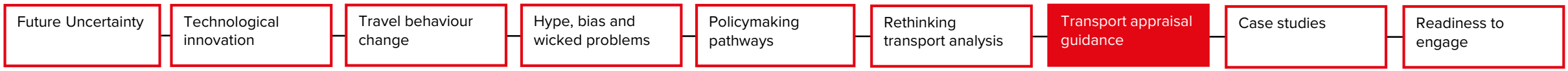
There are well-established norms on what constitutes ‘robust’ transport analysis. You will be encouraged to question these.

For example, if we are deeply uncertain about the future, how can we rely on a single ‘do nothing’ reference case against which to compare ‘do something’ options and develop business cases?

You will be encouraged to consider the importance of proportionate analysis, recognising the value of breadth versus depth, acknowledging the distinction between accuracy and precision and the need for narrative as well as numbers in communicating analysis effectively into the decision making process.

Such issues are crucial and the normative orthodox perspective on ‘robustness’ must be something you review.

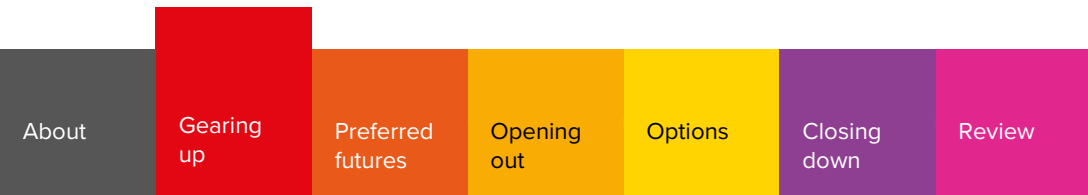


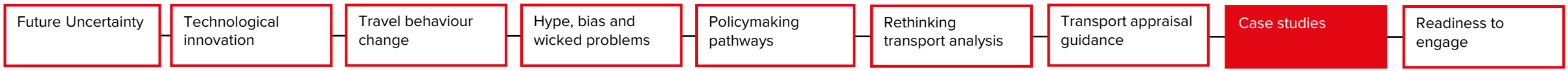


Transport appraisal guidance

Although there is a growing recognition of the value of approaches such as FUTURES, we understand this is being introduced into an orthodox transport planning environment and the related norms and expectations associated with transport appraisal.

Through our own extensive experience of this environment we will help you recognise how FUTURES can complement existing guidance and practice.



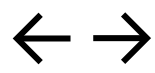
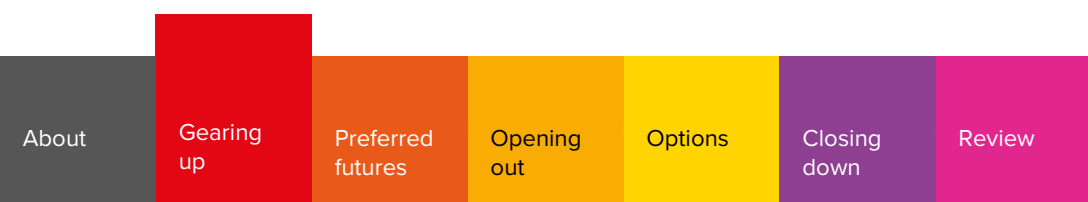


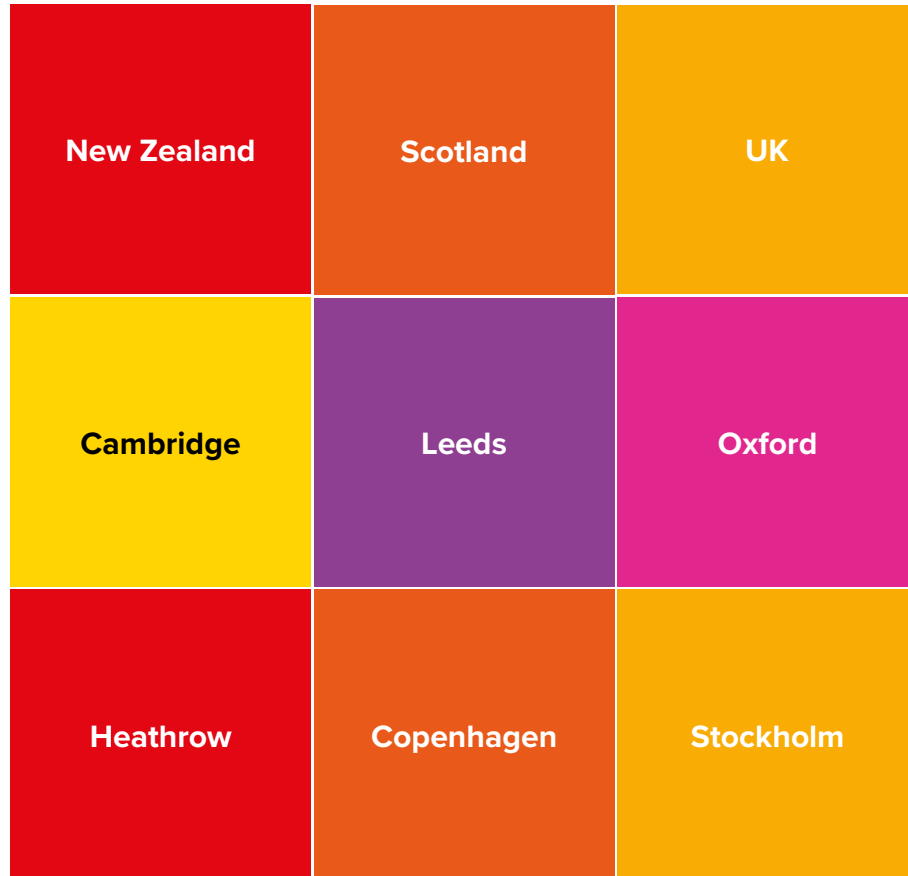
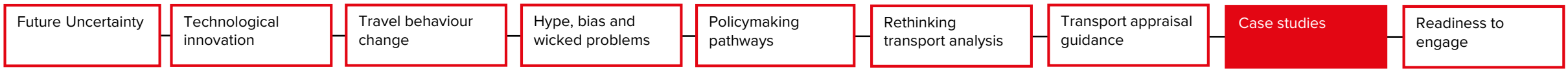
Case studies

Innovative ideas can test an organisation's or individual's risk appetite. We understand this.

We have worked with others supportive of the need for change to transport planning practice. We are like-minded in the need to adopt a learning-by-doing approach and to share the experiences of doing so.

We will share with you case studies in which decide and provide has been applied.





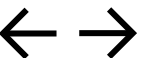
Case studies

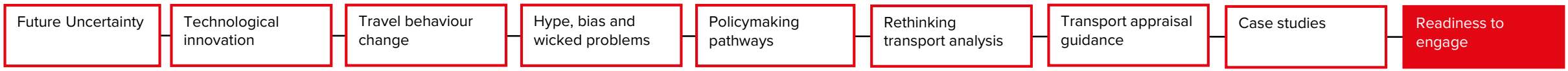
The FUTURES approach was triggered by work in the New Zealand Ministry of Transport which led to pioneering work by Transport Scotland. We are now also supporting the UK Department for Transport with this type of approach.

Clients are engaging with decide and provide as they recognise the need to embrace uncertainty and shape change. In the UK, we are already working with authorities in Cambridge, Leeds and Oxford in applying the FUTURES approach.

Major schemes such as our work with Heathrow airport can face a need to deliver outcomes with measures that can accommodate uncertainty. FUTURES-related advice has also been provided to stakeholders in Copenhagen and Stockholm.

By embracing FUTURES you will be in good company.



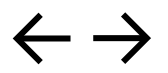


Readiness to engage

The **gearing up** stage concludes by inviting you and your stakeholders to reflect upon its coverage and come to a view about your readiness to engage with the FUTURES approach.

Do you have the appetite to proceed?

We will encourage you to draw up a statement of shared commitment, including a synthesis of your views about the approach, your hopes and concerns. This may prove to be an important point of reference as you move into the uncomfortable territory ahead.



Preferred futures

Features

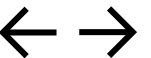
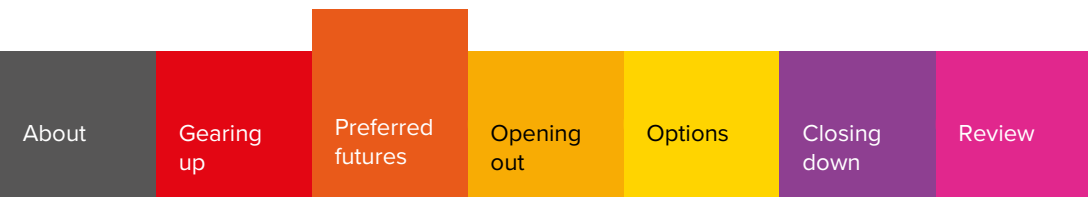
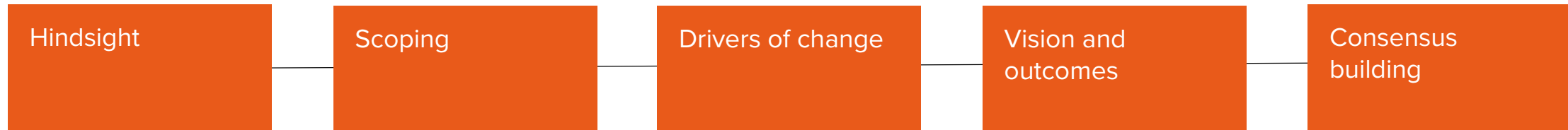
Examination of your past development of strategy and your motivations and views about the future, identification of drivers of change and achievable desired futures, and converging on a shared vision

Benefits

Confidence in a grounded approach to decide the future you want, supported by a process that brings constructive challenge while engaging you and your stakeholders

Outcomes

An overall shared vision, including objectives and outcomes, and an underpinning record of lessons, insights and rationale



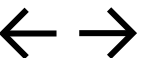
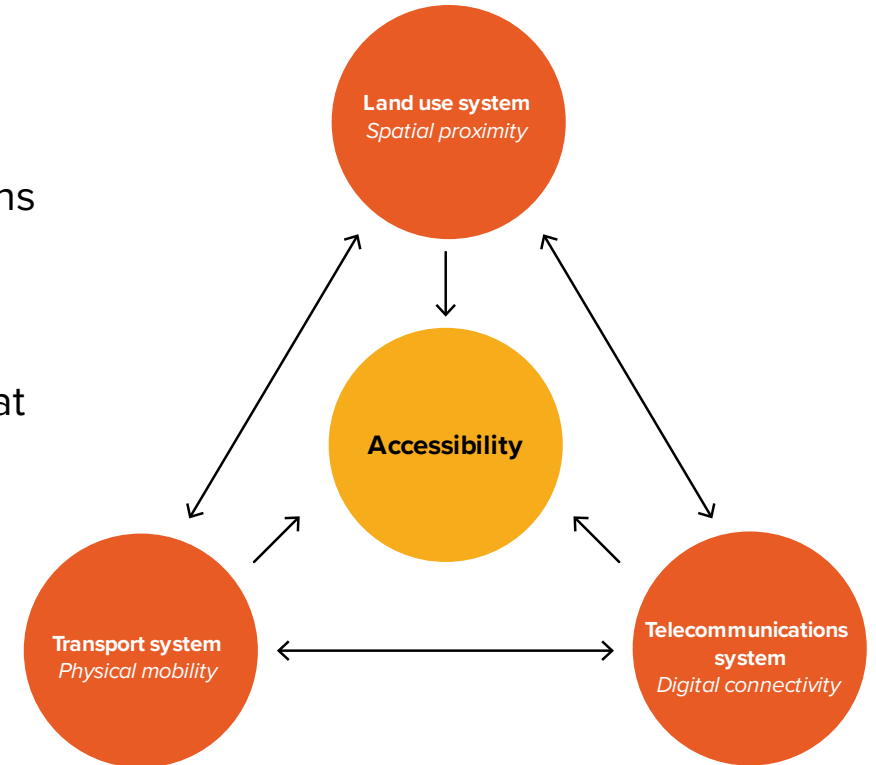
The **preferred futures** stage culminates in establishing your overall vision for a chosen future. It also establishes objectives and outcomes that reflect characteristics of this preferred future.

A vision's realisation depends on the support of those able to influence change, as well as external drivers of change.

FUTURES is therefore designed to help you co-create your vision and build consensus around it. It also helps you ensure that the vision is plausible in terms of the change taking place in society and in terms of future prospects of change.

Transport is a means to an end – it derives from pursuit of access to people, goods, services and opportunities. Accessibility underpins economic prosperity and social wellbeing. Your vision should reach beyond transport only and we will encourage you to be mindful of what we call the triple access system in articulating a preferred future for transport and society.

As with all stages, this one can be tailored to suit your needs, budget and timescale.





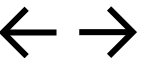
Hindsight

Although the future is ours to shape, some degree of path dependency is inevitable. At the outset of this stage it is valuable to look from the past to the present.

What were the earlier visions and strategies? What progress against them was made? What were some of the challenges encountered? Were there unanticipated consequences? Are there lessons for the future?

What problems have been apparent and are now apparent that forward planning should seek to address?

A combination of two or more of desk research, interviews and workshops can help you to start looking to the future.



Hindsight

Scoping

Drivers of change

Vision and outcomes

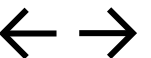
Consensus building

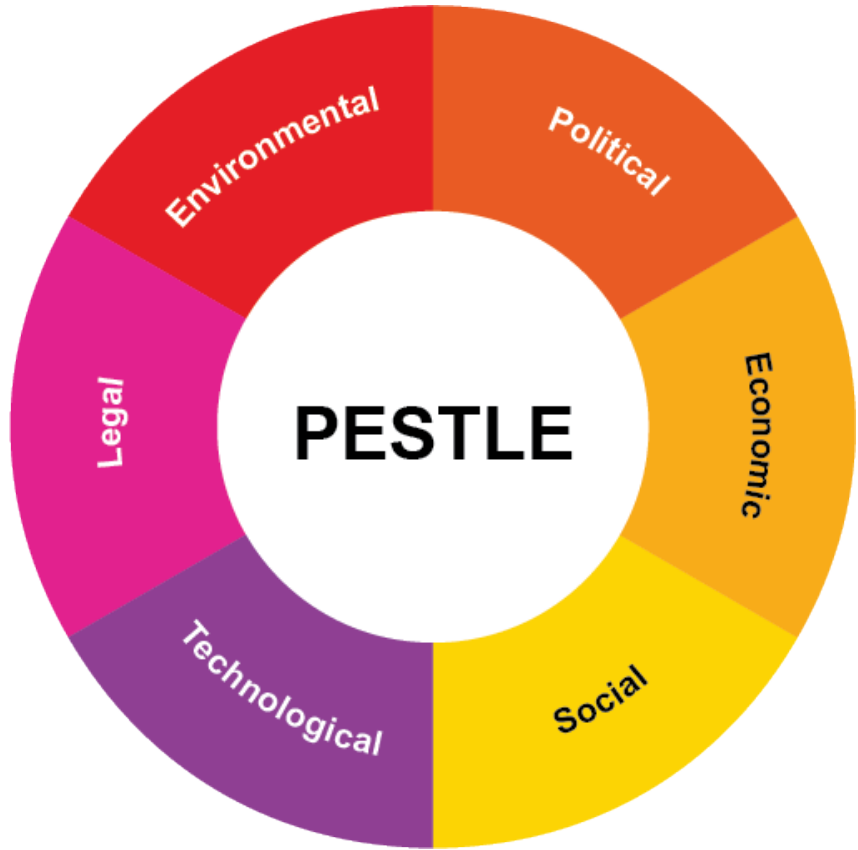


Scoping

An important preparatory step in working towards a vision is seeking to understand the motivations and views of stakeholders and the nature and extent of divergence across them. One-to-one interviews can be helpful in this regard – preferably face to face.

Meanwhile, horizon scanning is concerned with collating short accounts of recent and signalled potential future developments of relevance to your vision. This can involve desk study analysis and contributions from stakeholders and experts in building and sharing an understanding to inform the next steps.



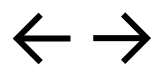


Drivers of change

There are multiple drivers affecting how transport and society evolve – within and beyond the immediate control and influence of you and your stakeholders.

Informed by earlier scoping work, PESTLE analysis is an opportunity for you and your stakeholders to surface a long list of drivers of change. These are then sorted according to their relative importance and uncertainty regarding the focus of your vision.

After a PESTLE analysis workshop, a summary paper of the first three steps in this stage can form the basis for guiding the development of your vision.



Hindsight

Scoping

Drivers of change

Vision and outcomes

Consensus building

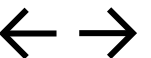


Vision and outcomes

Informed by the preceding steps, we'd advise arranging a visioning workshop with you and your stakeholders to identify desirable and realisable futures, and build consensus on one or more expressions of a *preferred* future.

Vision statements should be succinct but they should be accompanied by objectives and outcomes that reflect the important dimensions/characteristics of the vision. Ideally, these would be developed as part of the workshop or can be produced after it.

A follow-up engagement with senior decision makers can then translate the work above into a proposed vision, setting out its objectives and outcomes with an accompanying rationale.



About

Gearing
up

Preferred
futures

Opening
out

Options

Closing
down

Review

FUTURES
A Mott MacDonald and
UWE Bristol collaboration

Hindsight

Scoping

Drivers of change

Vision and outcomes

Consensus building

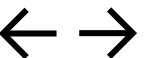


Consensus building

The steps within this stage are all designed to be participatory and engage you and your stakeholders. This provides strength through diversity for developing the vision but also builds consensus.

To extend consensus building entails reaching out to the electorate – the people and businesses who stand to be affected by pursuit of the vision. There are public engagement activities that can be undertaken during this stage to address this.

Your vision and its outcomes are critical reference points for what follows. Ensuring they are robust and widely understood and supported is key.



Opening out

Features

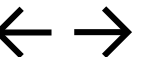
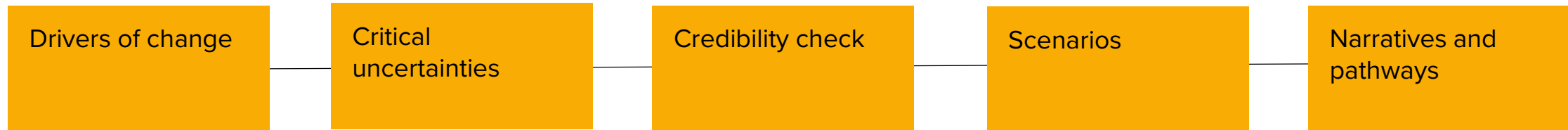
A participatory process to expose and understand uncertainty over the future and which develops a set of plausible scenarios to capture that uncertainty

Benefits

Confidence in coming to terms with the future circumstances affecting delivery of your vision and a shared appreciation of the critical uncertainties faced

Outcomes

A set of plausible future scenarios you can sign up to that provide a basis for subsequently testing your options for delivering your vision



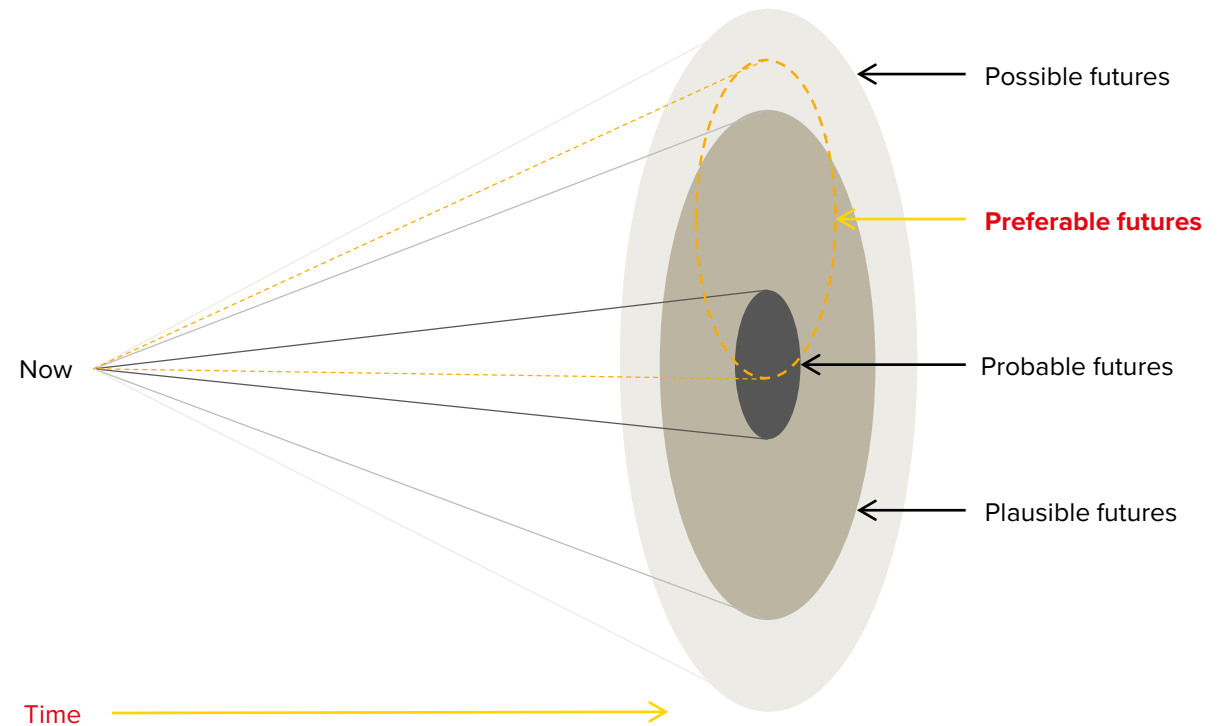
The previous **preferred futures** stage helps you to produce a vision with associated outcomes.

In that stage you and your stakeholders will have given some attention to change and uncertainty.

The **opening out** stage addresses this in more detail. It involves exposing and embracing the extent of uncertainty faced – uncertainty that will significantly affect the robustness of your forward planning.

The FUTURES approach in this stage will guide you through a scenario planning exercise in which plausible future contexts are identified.

In the later **closing down** stage, these will be used to stress test policy options you consider for adoption to realise your vision.



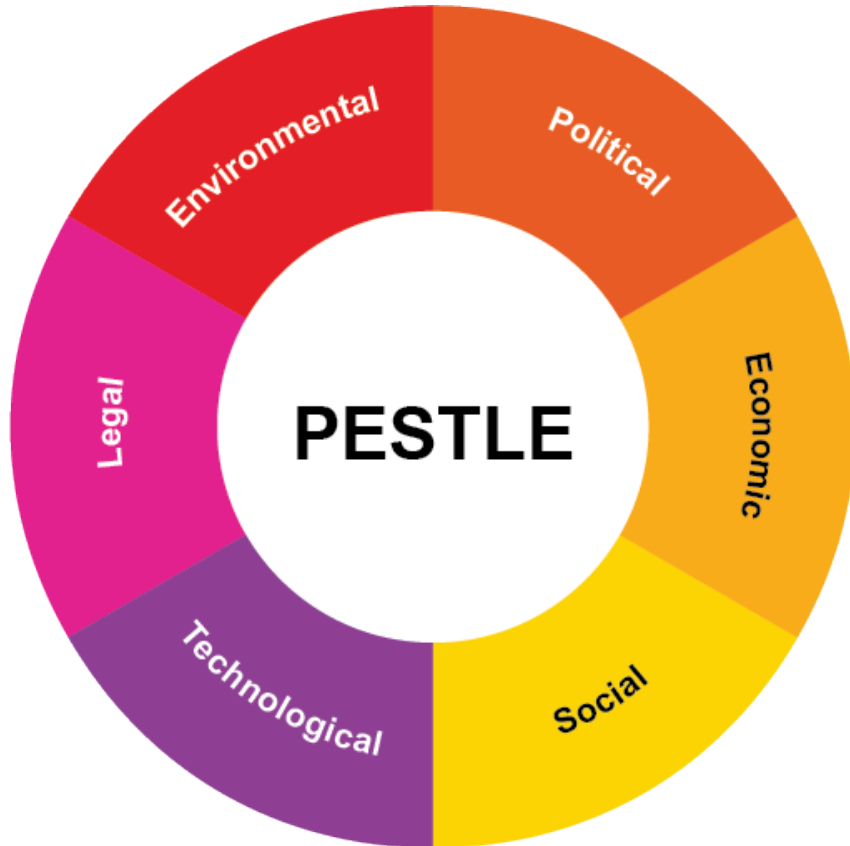
Drivers of change

Critical uncertainties

Credibility check

Scenarios

Narratives and pathways

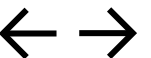


Drivers of change

This element also features in the previous steps. If the earlier stage has been completed you may already have what you need regarding this first step in **opening out**.

There are multiple drivers of change that affect how transport and society evolve – within and beyond the immediate control and influence of you and your stakeholders.

A PESTLE analysis workshop or similar (informed by desk study work) is an opportunity for you and your stakeholders to surface a long list of drivers of change. This exercise would be framed by a summary of the previous steps you have engaged in from FUTURES.





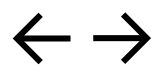
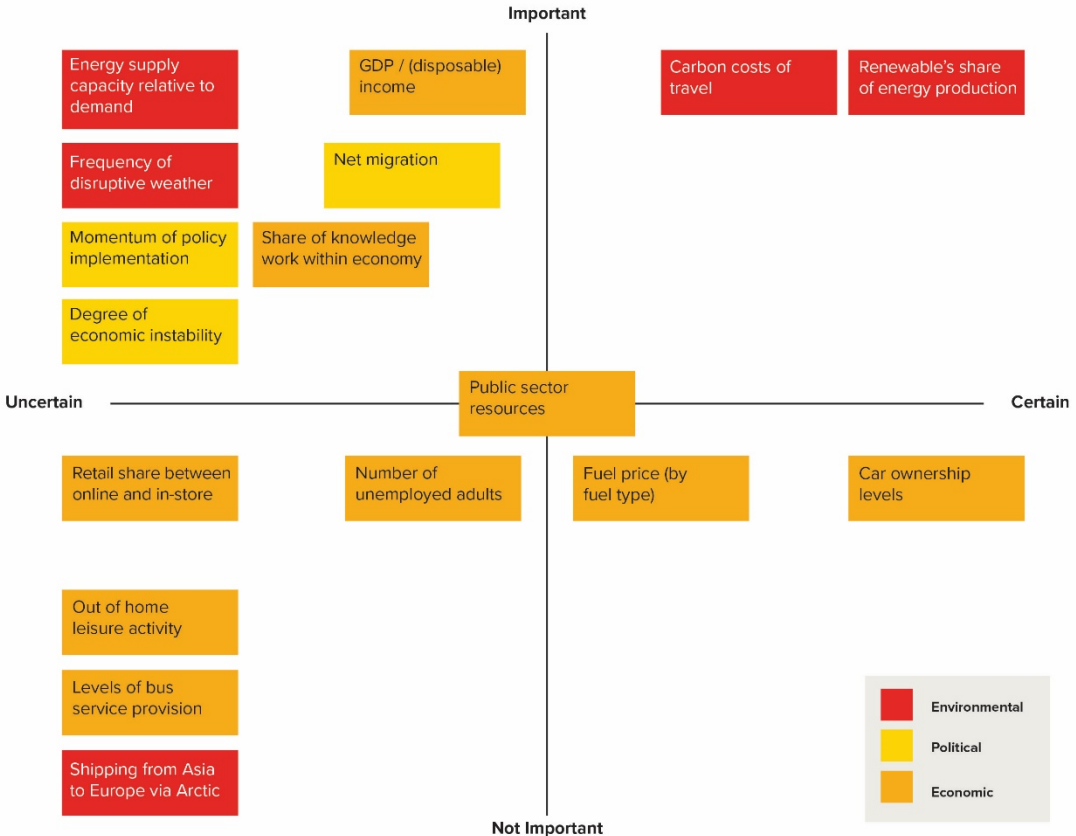
Critical uncertainties

We would consolidate the long list of drivers of change to remove overlaps and duplications and refine the wording of the identified drivers where appropriate.

A stakeholder workshop would then be convened. As is the case across the FUTURES, it is important that participants are mindful of unconscious bias in their deliberations.

The participants' task is to group the drivers of change according to how important they are (to the vision and outcomes) and how uncertain their state could be over time.

Working with you and your stakeholders, we would identify the most important drivers and in turn determine the critical uncertainties that forward planning should account for.



Drivers of change

Critical uncertainties

Credibility check

Scenarios

Narratives and pathways

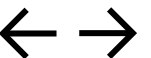


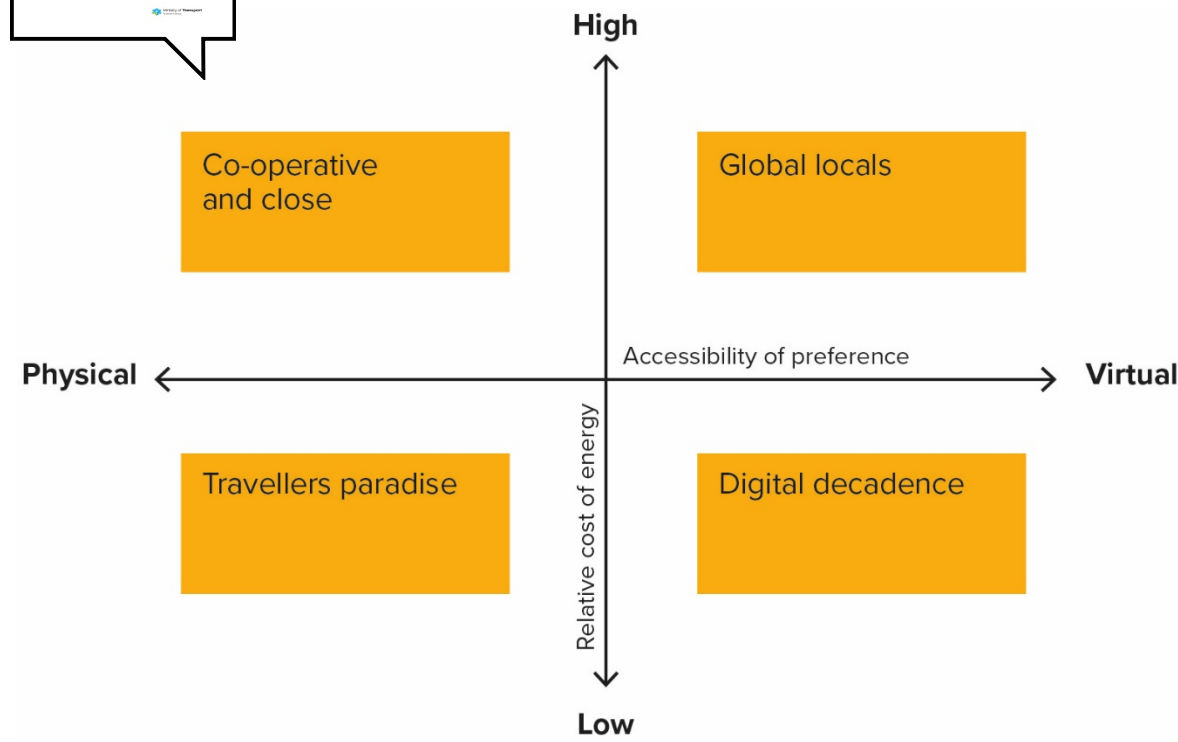
Credibility check

It provides additional assurance in the process to sense check the candidate critical uncertainties that have been identified.

In finalising the selection of critical uncertainties it is helpful to undertake further deskwork to identify wider documented opinion and justification for the uncertainties in question.

How the critical uncertainties play out (in combination) in different (plausible) ways is used to determine the basis for various future scenarios.



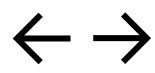


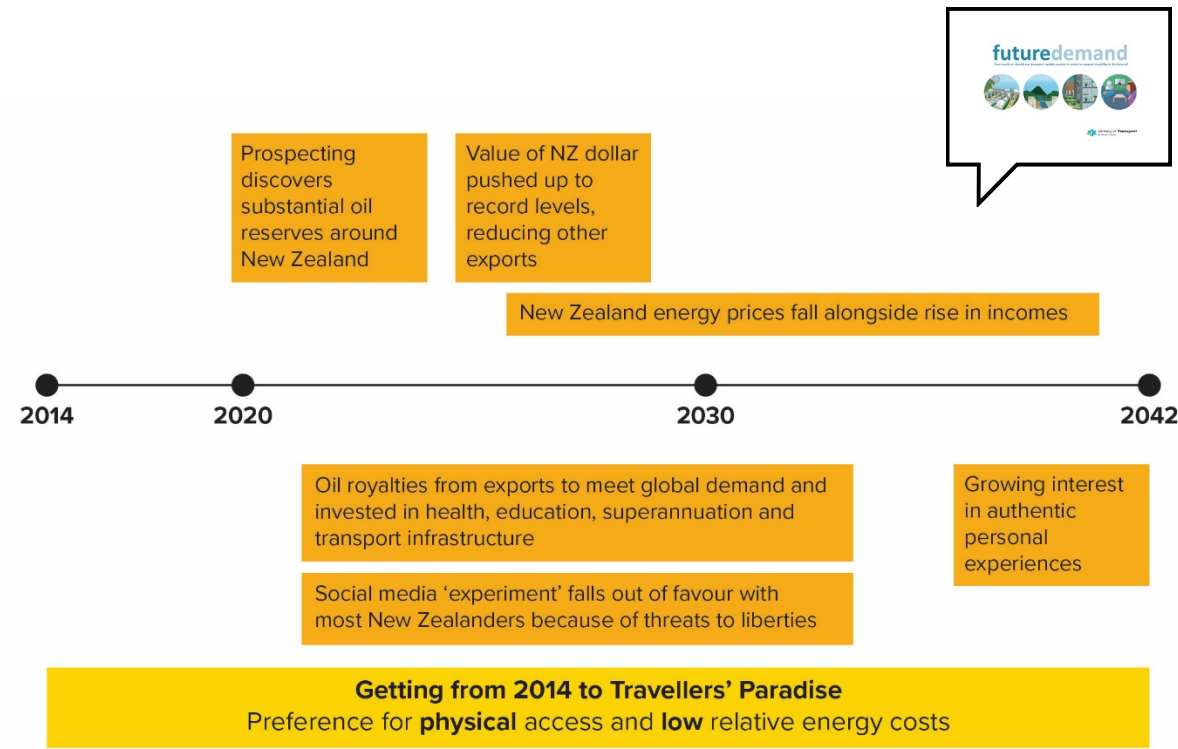
Scenarios

The example shown here uses only two critical uncertainties to create four scenarios. However, other approaches can accommodate more uncertainties to produce a set of plausible scenarios that could number more.

Preferably working with you and your stakeholders in a workshop setting, short narrative descriptions along with names for these scenarios would be developed. The narratives can be enriched by drawing upon the wider set of drivers of change identified earlier.

Crucial to the credibility of the FUTURES approach is that the scenarios produced are considered plausible to you and your stakeholders. Assurance of this is supported by their co-creation with the parties concerned.





Narratives and pathways

The depth of narrative developed for each scenario would depend on how you wish them to be used later. We would work up revised narrative content based on that emerging from the previous step.

If a vision and outcomes are agreed, the scenario narratives should reflect characteristics associated with those outcomes. This gives a sense of how closely the direction of travel from the present, implied by each future scenario, aligns with the direction of travel implied by the vision.

It can be helpful to illustrate 'plausible pathways' of development to understand the credibility of scenarios and how they could develop in future.



Options

Features

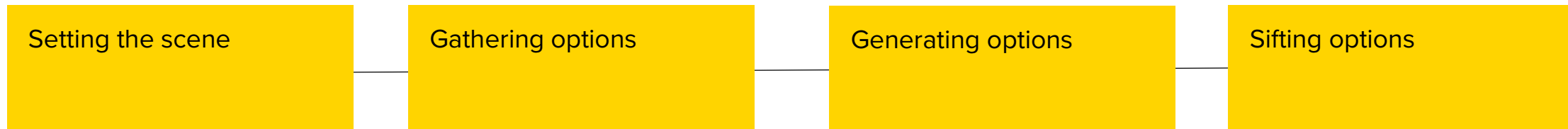
A scene-setting synthesis of earlier stages followed by, and informing the gathering, generation and sifting of candidate options.

Benefits

An opportunity to draw upon our global activities to inspire and inform how we work together with you to identify credible means to deliver your vision.

Outcomes

A shortlist of promising policy options that can be stress-tested in relation to future uncertainty



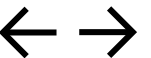


The **options** stage helps you explore and shortlist policy options that offer the prospect individually and/or in combination of helping to realise your vision.

Option generation principles are set out in official appraisal guidance. Of particular importance in the FUTURES approach is the need for unconstrained and diverse option generation that reflects consideration of the triple access system.

The stage's aim is to ensure you are mindful of possible options from elsewhere while generating your own with an appreciation of current socio-technical changes.

The outcome from this stage is a shortlisted set of candidate options arranged in a consistent form suitable for subsequent stress-testing both from the perspectives of political appetite and future uncertainty.

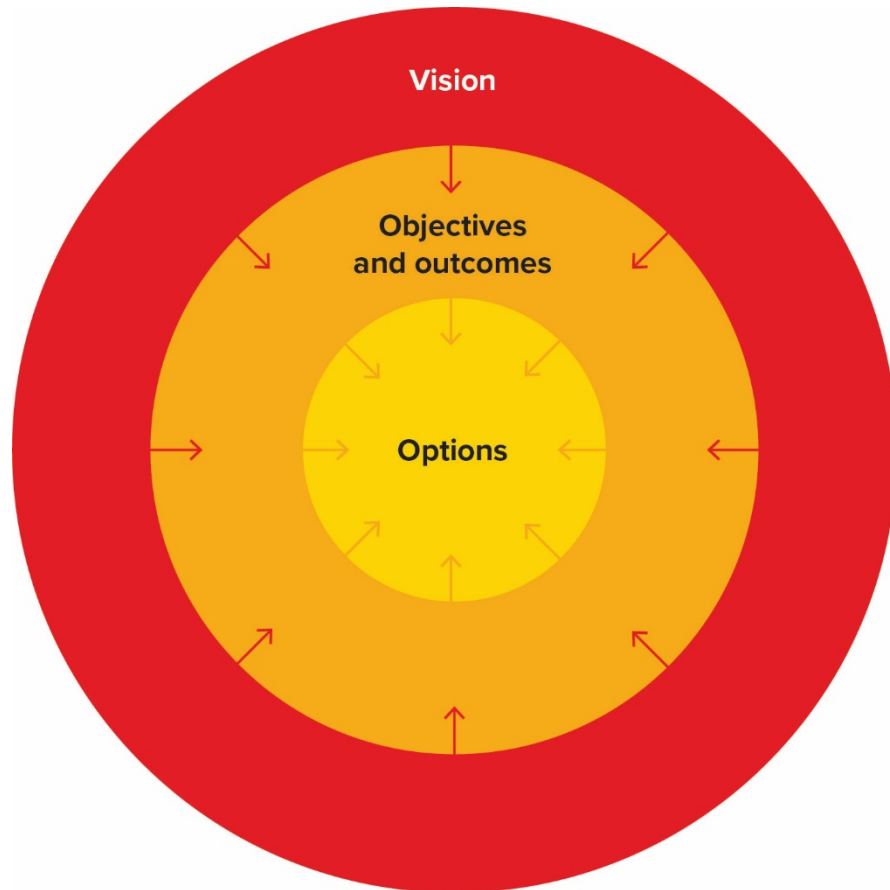


Setting the scene

Gathering options

Generating options

Sifting options

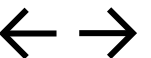


Setting the scene

As with other FUTURES stages, laying the groundwork is an important part of achieving effective results.

We would work with you to prepare an initial **scene setting paper**. This includes a synthesis of the insights and outputs from preceding stages – notably the problems you face, the vision that has been agreed and its objectives and outcomes, and the scenarios that reflect uncertainties over the future.

It is important to clarify with you what constitutes a policy option as distinct from a more defined policy measure. FUTURES is concerned in particular with helping you in your strategic planning. It is also beneficial to establish contextual factors that may have a bearing on option generation – such as acceptability, affordability and history.

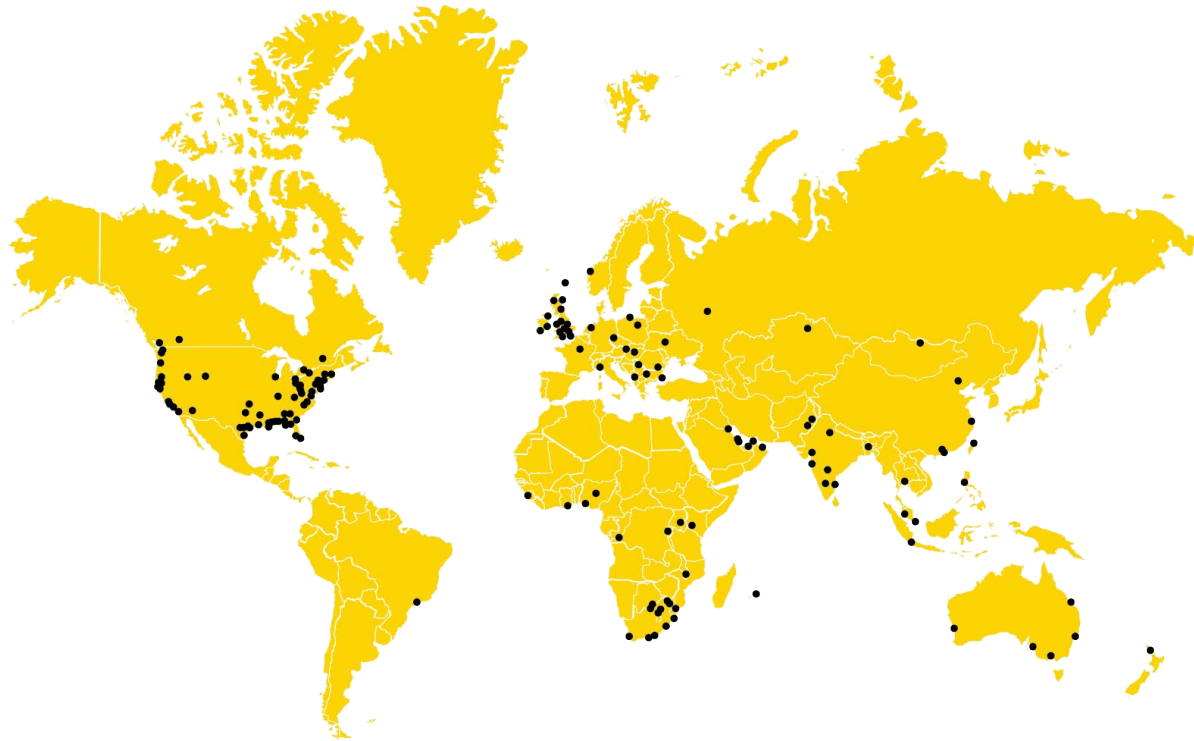


Setting the scene

Gathering options

Generating options

Sifting options



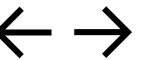
Map of Mott MacDonald offices

Gathering options

You and your stakeholders would ultimately determine potential policy options that could be considered in supporting your vision.

We believe it makes sense to gather insights as a precursor to helping you explore your own ideas.

Drawing on our global reach of experience as a company we can crowd-source examples of options considered elsewhere nationally and internationally that may be relevant to you. This will be combined with desk work alongside an account of your own previously considered policy options.



Setting the scene

Gathering options

Generating options

Sifting options

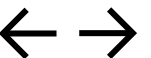


Generating options

Informed by the preceding steps, we would work with you and your stakeholders to generate an exciting and logical set of options to help achieve your vision.

A series of facilitated workshops and allied homework tasks can be used to draw out candidate options. We would encourage a breadth of participation, reaching beyond the transport sector and engaging a diversity of individuals. Focus should be placed on access as opposed to (only) mobility.

Participants would be asked to consider how emerging options relate to the vision and to one or more of its objectives and outcomes as well as to uncertainty over the future.



Setting the scene

Gathering options

Generating options

Sifting options

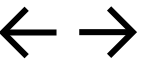


Sifting options

The final step in the **options stage** is to reach the point where a clear shortlist of candidate policy options has been identified and set out in an informative and consistent way for consideration.

An agreed template would be the basis for documenting each candidate policy option. It would then be helpful to consider how these options might be grouped and to identify overlaps.

The option generation step should already have been mindful of option viability in terms of political and wider support. However, wider public engagement events may be necessary to inform sifting and shortlisting of the most promising policy options.



Closing down

Features

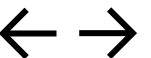
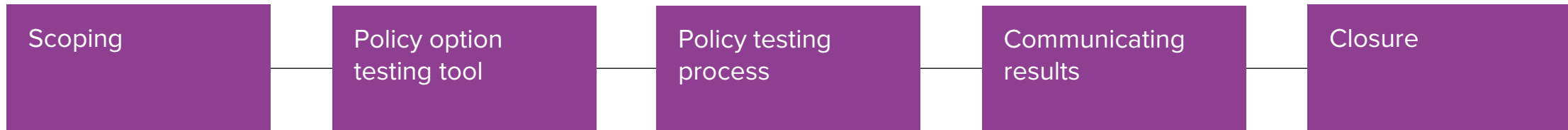
A process - flexible in terms of analytical depth – that helps you to examine the relative resilience and risk of your candidate options in the face of different plausible futures.

Benefits

Confidence that you can produce a strategy to deliver your vision that has more resilience to future uncertainty.

Outcomes

A report accounting for the journey you have been on and its key insights, and a set of options that can form the basis for producing your strategy.



The **closing down** stage concerns a reasoned approach to making sense of the set of candidate policy options and the different plausible future scenarios in which such options could play out.

Crucially you will wish to avoid policy making paralysis while ensuring your advice to policy makers highlights how different policies may perform in terms of yield (achieving effects aligned to the vision) versus risk (the possibility that uncertain future circumstances could cause a policy to fail or produce effects that are misaligned with the vision).

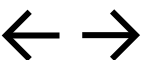
We would support you in developing a tool and wider process for stress testing your candidate policies and communicating this analysis to decision makers.

Key:



Plausible future contexts

	1	2	3	4	5	6	7	8
A	Yellow	Yellow	Yellow	Yellow	Orange	Yellow	Orange	Yellow
B	Red	Red	Orange	Yellow	Red	Orange	Red	Orange
C	Red	Red	Red	Orange	Orange	Red	Red	Orange
D	Yellow	Orange	Yellow	Yellow	Orange	Yellow	Red	Orange

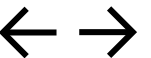




Scoping

At the outset of this stage we would work closely with you to understand your perspective on analytical robustness – the nature and extent of rigour expected in the closing-down process. Testing candidate policies against uncertainty is not an exact science and is uncomfortable.

Depending on your resources and the views of senior decision makers, we can tailor an approach to meet your needs – ranging from a single-day stakeholder workshop used to qualitatively test policy options in different future scenarios to a more extensive process introducing modelling that can combine quantitative and qualitative testing.



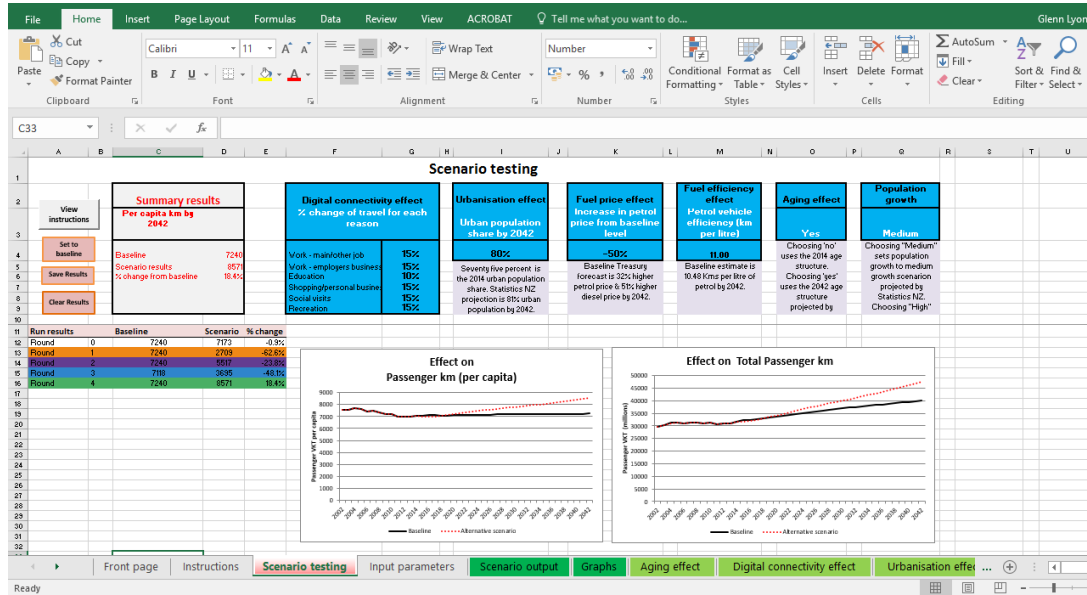
Scoping

Policy option testing tool

Policy testing process

Communicating results

Closure

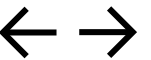


Policy option testing tool

At the strategic planning stage it is unlikely to be either cost effective or appropriate to employ conventional heavyweight modelling tools to test policy options in multiple future scenarios.

We can work with you to develop a simple spreadsheet model that uses elasticities to relate important input drivers to output measures that reflect the outcomes for your vision.

This allows policy options to be represented and their influence on outcomes in different future scenarios to be estimated. Such estimates help highlight the degree of robustness of different policy options. In simple terms, this offers a RAG (red/amber/green) assessment of an option's performance across scenarios.



Scoping

Policy option testing tool

Policy testing process

Communicating results

Closure

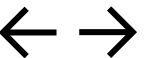


Policy testing process

Crucial to this stage and indeed the overall FUTURES approach is a recognition that the participants in the process – you and your stakeholders – are instrumental to the results. The tools and methods we employ are enablers of participant thinking, exchange of views, judgement and consensus building.

The process involves translating policy options into input assumptions for the tool. The results are then used as a basis for considered debate and judgement over the relative robustness of policy options.

It is important that assumptions and rationale are captured during the process so that the outcomes can be justified.



Scoping

Policy option testing tool

Policy testing process

Communicating results

Closure

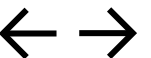


Communicating results

Conventional transport planning can conceal uncertainty (and therefore risk) in the course of simplifying advice and recommendations to decision makers.

Experience shows that the FUTURES approach can cause cognitive overload as uncertainty is exposed. Options need to be considered in light of this.

To mitigate against this, communication is key. We would help you to document and present results from the closing-down process in an accessible way. This involves drawing upon the philosophy and material spanning all of the FUTURES stages.



Scoping

Policy option testing tool

Policy testing process

Communicating results

Closure

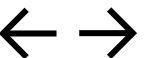


Closure

We aim to have taken you through a forward-planning process from which emerges a vision with objectives and outcomes, and in turn a set of policy options that can take you towards that vision in the face of uncertainty. These are then able to inform your forward strategy.

We would prepare a final report for you that synthesises the approach that has been taken, its key milestones and outcomes. As part of preparing this we would suggest including consultation with you and your stakeholders to capture lessons learned and commitment to shared ownership of the forward planning undertaken.

This is, of course, the ‘end of the beginning’ as attention turns to launching and implementing your strategy.



Review

This final **review** stage in the FUTURES approach involves us helping you to draw up an in-house plan that ensures that what has been accomplished during the approach can be built upon.

The plan would be tailored to your needs but it should take account of the following.

The world changes and what we know about it changes – strategic planning should be informed by ongoing monitoring and you should be prepared to periodically review and, if necessary, revise your strategy accordingly. This may involve re-running parts of the FUTURES approach (perhaps in a lighter touch way).

Your staff and stakeholders will change over time. It is important that individuals new to this approach are helped to understand, engage with and support it and in turn support your onward success.



Set against the social expectations to increase road capacity, the Ministry of Transport was wrestling with the uncertainty of changes to future demand created by new technologies, increasing urbanization and the need to respond to climate change. Its Future Demand initiative therefore explored whether the traditional approach of deciding how much to invest in road capacity based on the predict and provide model was still the best approach. The initiative concluded that uncertainty over future demand meant that a change was needed to move to a 'decide and provide' model. Having chaired the OECD's International Transport Forum, I can attest to the timely global importance of the FUTURES approach being offered by Mott MacDonald that builds upon this MoT work.

Andrew Jackson, Managing Director, Consulting Jackson & former Deputy Chief Executive, New Zealand Ministry of Transport

I am pleased to be working with Mott MacDonald and their approach is strongly supporting DfT plans to improve the resilience of our decision making in the face of uncertainty. This will ultimately help us to realise the opportunities, and avoid the risks, associated with the Future of Mobility.

Ian Sillett, Head of Futures, Department for Transport Office for Science.

CIHT FUTURES was an initiative with our members in 2015-16 which strongly endorsed the need for change in planning for the future – recognising the importance of shaping the future we want in the face of uncertainty. This has had a considerable impact on the way transport planning is being considered. We welcome the continuation of this work as it seeks to help us understand the complexities of responding to change.

Sue Percy, Chief Executive, Chartered Institution of Highways & Transportation

Mott MacDonald and its partners have provided critical input to the Williams Rail Review in scanning the future horizon, exposing the uncertainties that contextualise a new white paper for rail, and enabling options to deliver the government's vision to be tested against plausible future scenarios.

Eleanor Saunders, Digital and Innovation, Williams Rail Review, DfT

Having spanned the worlds of transport and land use planning for over 20 years (commonly characterised by predict and provide) I am now taking forward decide and provide with my clients – encouraging vision-led strategic thinking and introducing this into development planning. It's been a privilege to be part of the journey that now brings the FUTURES approach from Mott MacDonald and UWE Bristol to the market.

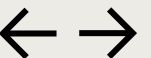
Lynn Basford, Co-founder, Basford Powers

The FUTURES approach expertly captures the 'decide and provide' approach we are taking to revising our National Transport Strategy in Scotland. We are in deeply uncertain times and our decisions must account for unknown change if we are to secure the outcomes we seek.

Fiona Brown, Head of Strategic Transport Planning, Transport Scotland

Having devoted my career to modelling and forecasting, I recognise the significant new challenges we face in the transport sector with new forms of uncertainty and risk. The approach pioneered by Glenn Lyons and others and now championed through FUTURES by Mott MacDonald is an important and essential contribution to strategic planning.

Luis (Pilo) Willumsen, co-author of Modelling Transport and author of Better Traffic and Revenue Forecasting



Interested in taking FUTURES forward? Interested in being part of a FUTURES user group?

Please let us know. If you have questions or comments please submit them to future.mobility@mottmac.com

The latest version of this FUTURES interactive guide (and further related information) can be found at www.mottmac.com/futures

Global and Europe

Glenn Lyons

Mott MacDonald professor of future mobility

glenn.lyons@mottmac.com

Annette Smith

Future Mobility technical director

annette.smith@mottmac.com

Paul Hammond

Global practice leader for infrastructure development and economics

paul.hammond@mottmac.com

North and South America

Shruti Malik

Future mobility principal planner

shruti.malik@mottmac.com

Asia Pacific and Australasia

Kate Mackay

Transport planning technical director

kate.mackay@mottmac.com

Middle East and South Asia

Ed Forrester

Future mobility planner

edward.forrester@mottmac.com