Engaging with evidence toolkit

A practical resource to strengthen capabilities for evidence use and expert engagement

Created by:
Nesta

With support from:
The Capabilities in Academic Policy Engagement (CAPE) partnership, funded by Research England, United Kingdom Research and Innovation

nesta

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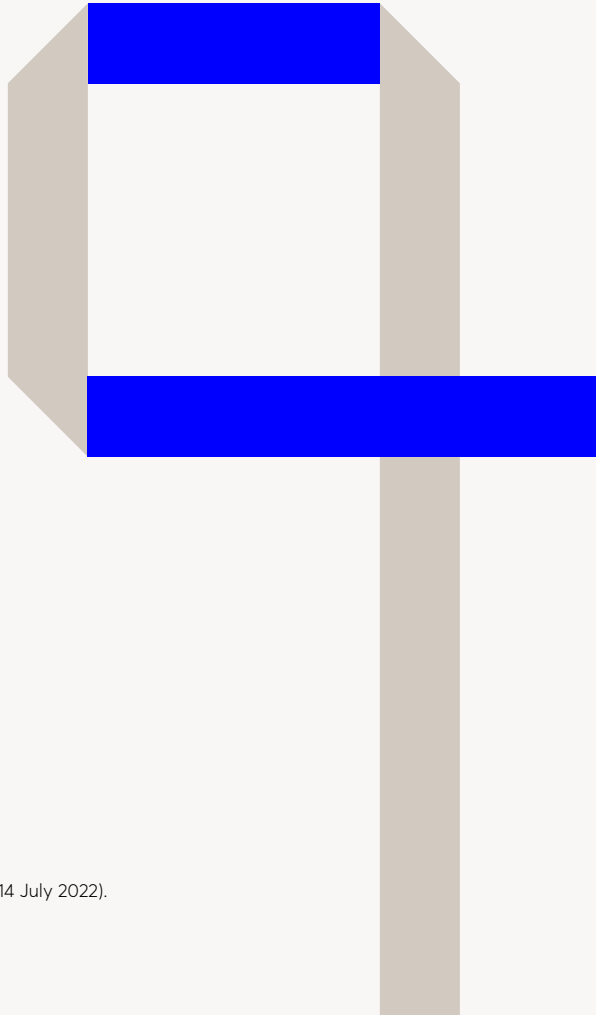


1 Tennant, G. & Morgan, K. (2022) *Using evidence to make policy more effective.* Available at: www.nesta.org.uk/project-updates/using-evidence-make-policy-more-effective/ (Accessed 14 July 2022).

About Nesta

Nesta is the UK's Innovation Agency for Social Good. We design, test and scale solutions to society's biggest problems. Nesta has three missions: to give every child a fair start, help people live healthy lives, and create a sustainable future where the economy works for both people and the planet. For over 20 years, Nesta has worked to support, encourage and inspire innovation. They work in three roles: as an innovation partner working with frontline organisations to design and test new solutions, as a venture builder supporting new and early stage businesses, and as a system shaper creating the conditions for innovation. Harnessing the rigour of science and the creativity of design, Netsa works relentlessly to change millions of lives for the better. Find out more at www.nesta.org.uk.

About CAPE

The Capabilities in Academic Policy Engagement (CAPE) project is a partnership between University College London (UCL) and the universities of Cambridge, Manchester, Northumbria, and Nottingham, in collaboration with the Government Office for Science, the Parliamentary Office for Science & Technology, Nesta, and the Transforming Evidence Hub. Funded by Research England, it has been created to support effective and sustained engagement between academics and policy professionals in different geographical and policy contexts across England, enabling greater understanding and cooperation between universities, national government, Parliament and regional and local authorities.

Funded by:

Contents

What is this toolkit for?

This is a toolkit on how to utilise, synthesise, scrutinise, and engage with evidence and expertise for policy development.

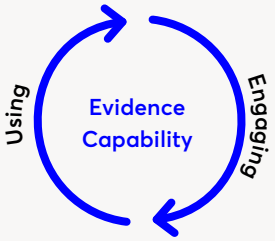
It's been designed by Nesta to help busy people improve their ability to use the available evidence and expertise in practice.

It will help you to understand how to harness data, information, knowledge, and wisdom (aka evidence) to inform live problems, and understand what 'good' and 'better' evidence use means in policy practice.

It will support you to access diverse forms of expertise and engage with the UK scientific community to progress your goals.

It offers a range of interactive activities that you can use to determine what evidence and expertise is needed for what purposes - and the principles, processes, methodologies, and tools that can support this work.

We call these *evidence use and expert engagement capabilities.*



This toolkit serves as a resource within an already rich landscape of diverse and useful resources and initiatives. Many evidence capability development tools already exist, but they are often developed for particular contexts and have different distribution routes and access points. In many ways, this toolkit is a synthesis of much of the work that has been done before us. It weaves different resources together to help you apply them quickly in practice. Therefore, while many of the guidance notes and activities have been created specifically for this toolkit, we also draw on content developed by others that are signposted with references and links so that you can more easily access their valuable work.

Who is the toolkit for?

The toolkit is designed to be used by anyone looking to develop evidence use and engagement capabilities for policy. You might work within national, regional, or local government, a public institution, or a non-profit. You may have different roles, and within your group have very different disciplinary and professional backgrounds. Whilst it makes explicit reference to the UK policymaking landscape, the tools can be used by anyone engaging with evidence and expertise in practice. The toolkit assumes no prior knowledge of how to use evidence and engage with experts in a policy context.

What capabilities does this toolkit support?

Determining what evidence and expertise can be used towards what purpose when faced with competing priorities and demands for time and attention can be a daunting task. The development of the underpinning and mutually supportive evidence use and expert engagement capabilities benefits from different actions across multiple dimensions and levels. Throughout this toolkit, we'll provide a range of tools to help you to better work through the 'how-to' of engaging with integrating evidence and expertise within your decision-making processes.

Evidence use capabilities:

What is 'good' or 'better' evidence to inform decision-making?
What types of evidence are useful, for what purposes?

The questions we ask, and the types of evidence, including research evidence, that can help us answer those questions

The processes that create evidence, the methods that are employed, and the quality assurance underpinning those methods to clarify assumptions made

The judgements that are made across both evidence production and consumption processes, the environments in which these judgements happen, and the conditions that allow for evidence to be used in practice

Expert engagement capabilities:

What helps strengthen the use of expertise within decision-making?
How can we engage with the scientific community in the UK and beyond?

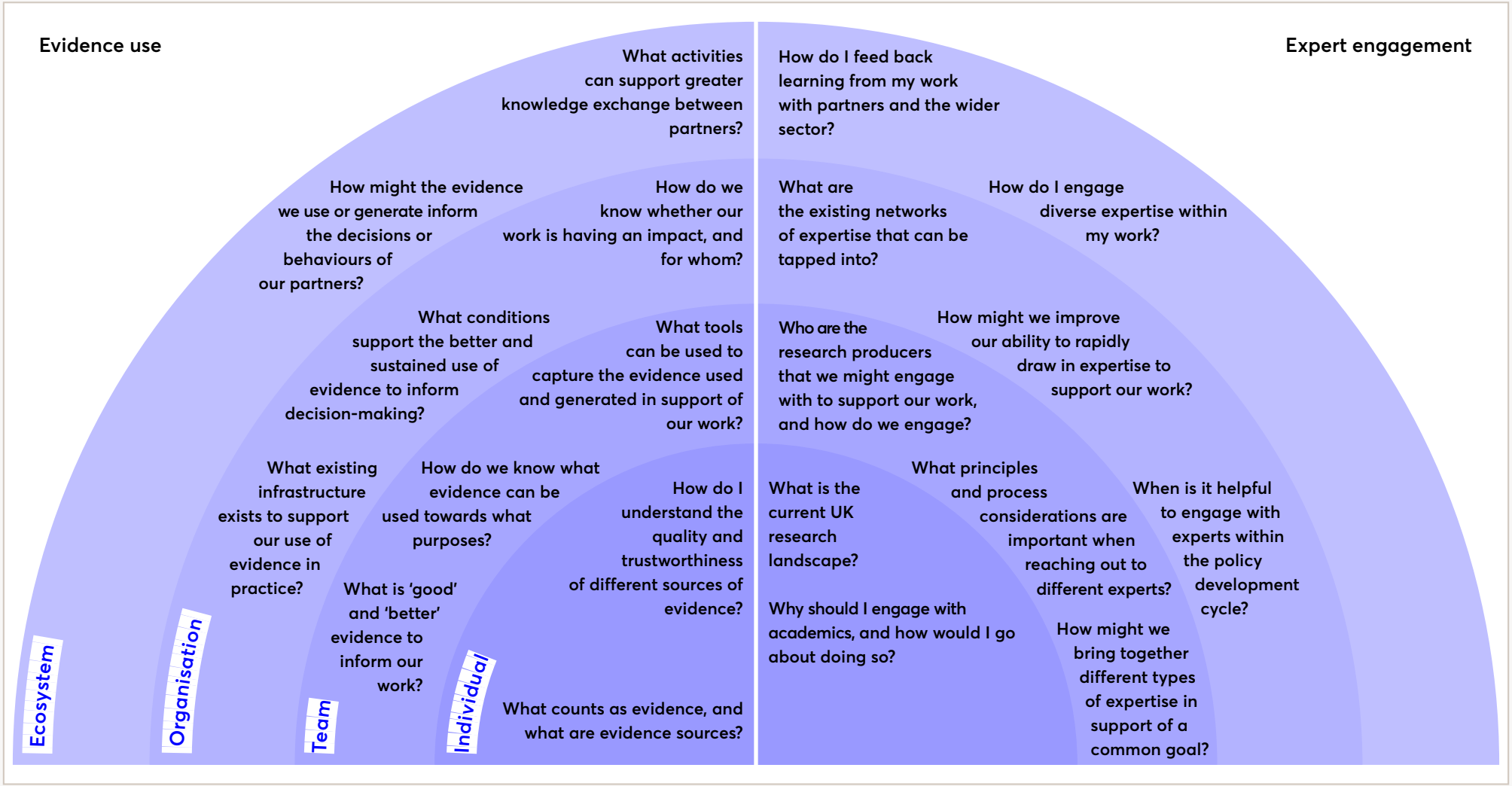
The roles, functions environments, and incentives within the academic community; demystifying the UK research landscape

The methods, principles, and mechanisms that can be used to integrate diverse expertise within decision-making and encourage mutual trust and collaboration

The structures and processes that allow for the agile and sustained use of expertise in practice and strengthen routes for engagement

This toolkit takes a multi-level approach to support the development of evidence capabilities.

Capability development for both evidence use and expert engagement involves action across each of the individual, team, organisation, and ecosystem levels. This reflects work in similar areas of capability development such as Nesta's Playbook for innovation learning.[2] The content and activities presented in the toolkit are designed to be adapted for use depending on your roles, purposes, context and needs across these levels of learning.



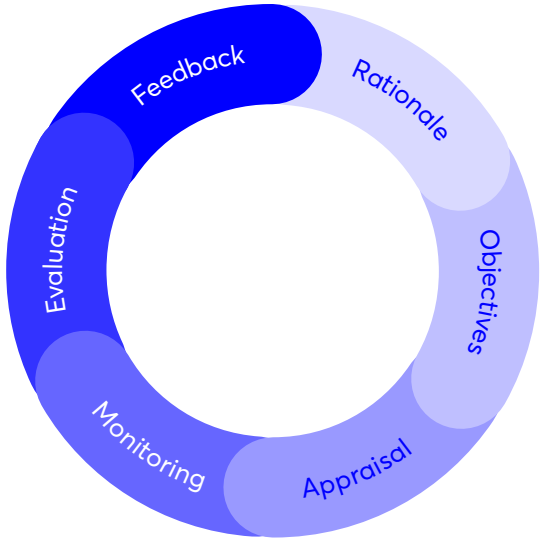
2 Leurs, B. & Roberts, I. (2018) *Playbook for innovation learning*. Available at: media.nesta.org.uk/documents/nesta_playbook_for_innovation_learning.pdf (Accessed 14 July 2022).

How the toolkit has been structured

This toolkit has been structured around different stages of the ROAMEF policy cycle, to help align the range of tools, methodologies, and activities provided to different purposes and timeframes.

The Rationale, Objectives, Appraisal, Monitoring, Evaluation and Feedback (ROAMEF) cycle is a framework used by His Majesty's Treasury to summarise key stages of policy development. It offers a simple representation to navigate a complex set of processes. Whilst this toolkit uses the ROAMEF framework to structure content and activities, we acknowledge that in reality, none of the stages are isolated and rarely occur as a linear process.[3, 4]

Each module of this toolkit contains a combination of written content, activities, case studies and points of reflection. Modules have been intentionally designed to iteratively work through evidence capability development that supports each stage of the policy cycle.



The ROAMEF policy cycle

- **Module 1: The introduction to evidence use** sets the scene for what evidence informed decision-making means in practice and how to engage with research expertise.
- **Module 2: Rationale and Objectives** explores how evidence and expertise can be used to articulate the rationale for a policy intervention and why there is the need for change supported with initial evidence. As we move through the policy cycle we develop objectives to outline the intended goals of our intervention.
- **Module 3: Appraisal** explores how evidence and expertise can support the identification and assessment of policy options.
- **Module 4: Monitoring** explores how evidence on the implementation and delivery of a policy intervention is gathered.
- **Module 5: Evaluation** considers the evidence on impact and value.
- **Module 6: Feedback** explores processes for feeding back learning from evidence to influence future decisions.
- **Module 7:** Explores ways to embed learning introduced within the toolkit into practice.

3 Rutter, J. & Hallsworth, M. (2011). *Making policy better. Improving Whitehall's core business*. Institute for Government. Available at: www.instituteforgovernment.org.uk/sites/default/files/publications/Making%20Policy%20Better.pdf (Accessed 14 July 2022).
4 HM Treasury (2020). *The Green Book: Central Government Guidance on Appraisal and Evaluation*. Available at: www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent (Accessed 14 July 2022).

How to use this toolkit

This toolkit has been designed to be used by individuals and teams to work through seven modules of content and activities that support evidence capability development. Modules and sub-sections can be used to suit your current priorities, time availability, and unique capability development needs.

Each module provides learning objectives that build on previous content and are designed to allow for iterative capability development. Suggested timings have been provided alongside each subsection to help you understand how long you will need to read, complete activities, and reflect on your learning. This modular format enables you to adapt the toolkit to suit your current working structure, development objectives, and available timeframes - you could set aside a half day to complete activities within a module, or an hour to complete a particular activity relevant for your work.

The activities provided are interactive, and can either be completed and saved in interactive PDF format or printed. Once you have completed an activity, take time to share, reflect and update your thoughts with others. The content generated through activities can be used as a helpful building block for future activities and as a source of evidence for your own work.

Before you begin:

To get the most out of this toolkit we recommend that you:

- Allocate a facilitator to help guide activities and discussion, and we provide activity instructions to support this throughout. Annex A provides suggestions on how to run sessions on learning objectives covered within the toolkit that are aligned with current capabilities of participants.
- Bring a current live problem or policy challenge that you'd like to address, or a decision that you'd like to inform with evidence and expertise (it's okay if this isn't yet refined!).
- Consider your different evidence capability needs at the individual, team, organisation, and ecosystem level - and how different content can be used to address these needs.
- Carve out dedicated time and space to undertake these activities within your existing work plans.
- Complete the activities in a team or group setting, and consider who you'd like to engage as you work through different content.

How to support complex learning pathways

Development of evidence capabilities involves learning across a multitude of knowledges, skills and attitudes.[5] For those wanting to support either their own related learning or that of others, effective approaches to such rich and complex learning often structures the experience as a repeated progression across four levels of knowledge attainment: factual, conceptual, procedural, and creative learning. As we move through the layers, we gain the knowledge for better evidence capabilities.[6]

Each module is structured with a set of learning objectives that are designed to lead you through this multi-level pathway from foundational factual knowledge and comprehension relating to evidence use and expert engagement, to more advanced evaluation and creation competencies. By progressing through different modules of the toolkit, individual learning pathways can flexibly be formed based on your understanding of who needs to learn what, using what tools, via what activities. If you are a facilitator, you can piece together different learning objectives presented throughout this toolkit into unique curricula that fit the needs of your context and audience. Additional facilitation guidance can also be found in Annex A.

Creative: Advanced knowledge for judging quality of evidence use, or creating novel approaches to engagement to suit a particular policy problem.

Procedural: This is knowledge critical in carrying out activities to achieve goals, such as classifying your project stakeholders for different evidence engagement activities at different points in policy development.

Conceptual: Understanding how facts can be organised to show the interrelations and functions between elements, such as how notions of validity, bias, ambiguity and policy problems are informed by evidence use.

Factual: Information to help identify key terminology and specific details relating to evidence use in policy and academic communities.

5 Baartman, L.K. and E. De Bruijn. (2011) 'Integrating knowledge, skills and attitudes: Conceptualising learning processes towards vocational competence'. *Educational Research Review*, 6(2), pp.125-134. doi.org/10.1016/j.edurev.2011.03.001

6 Anderson, L.W. and Krathwohl, D.R (2001). *A taxonomy for Learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York: Addison Wesley Longman

I want to...

Module 1:

Introduction to evidence use and academic engagement

1A: Evidence use in practice

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- Describe the ROAMEF policy cycle
- Understand the difference between data, information, knowledge and wisdom as evidence types
- Apply tools to identify and prioritise different evidence sources
- Analyse the reasons for using evidence in practice
- Evaluate the barriers that exist to evidence use in practice within your context
- Create questions to sit beneath your policy area and expand on your initial challenge

Supporting activities:

How Assumptions can Affect Outputs from Evidence

Mapping, Organising and Prioritising Evidence: Data, Information, Knowledge and Wisdom

Expanding on our Policy Questions: The 'What, Why and How'

Mapping the Barriers and Enablers to Using Evidence

1B: Engaging with research expertise

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- Identify the value of using research evidence
- Understand the research funding landscape, including key research producers
- Apply tips and entry routes to reach out to researchers and prepare for interviews
- Analyse characteristic academic performance objectives, operating contexts, and incentives
- Evaluate the key barriers and facilitators to engaging with evidence
- Create personas to inform your approach to engaging with research producers

Supporting activities:

Understanding and Engaging with Research Producers for Our Work

Personas: Understanding, Identifying and Engaging Researchers

Module 2:

Rationale and Objectives

2A: Bringing people together

60 | 250

- Describe how-to formulate a policy problem
- Explain principles and enablers of co-creating a problem frame with stakeholders
- Use futures thinking to help conceptualise our policy goals
- Appraise different routes that support research-policy engagement
- Propose ways to identify and engage with experts through advisory groups
- Create a process plan to establish an expert advisory group

Supporting activities:

Designing Future News Stories

Systems Mapping: Understanding Stakeholder Needs, Prioritising Issues, and Understanding Evidence Gaps

Expert Advisory Groups: Why and how do we engage? Principles and Design

2B: Bringing the evidence together

85 | 165

- Remember the breadth of methods available
- Understand the factors and tools that can support the appraisal of evidence quality, trustworthiness, and relevance
- Apply an evidence search strategy to identify relevant sources of evidence
- Analyse processes and tools for evidence synthesis
- Evaluate evidence claims using the AORTA framework
- Create an action plan to integrate insights from evidence into your work

Supporting activities:

Methods 'Safari'

Appraising Evidence using the AORTA framework

Module 3:

Appraisal

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- Identify what elements you may appraise as part of your policy
- Understand how different cognitive heuristics and biases biases affect work, including appraisal processes
- Apply strategies to mitigate against biases
- Analyse methods for Collaborative Decision-Making: Delphi and Multi-Criteria Analysis
- Explain different touch-points in academic/policy partnerships, and the motivational, process, and alignment considerations that happen across both systems
- Create a plan of considerations for commissioning evidence from expertise sources

Supporting activities:

Understanding and Overcoming Biases in Appraisal Processes

Examining Key Considerations When Forging Partnerships for Evidence Use and Expert Engagement

Module 4:

Monitoring

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- Describe the differences between monitoring and evaluation
- Understand policy logic models and theories of change as tools for monitoring and appraisal
- Apply processes to develop your policy Theory of Change and challenge underlying assumptions, context and risks that exist within means-ends relationships
- Apply the principles and process considerations for defining monitoring indicators
- Create a monitoring plan

Supporting activities:

Theories of Change: Interrogating Assumptions, Principles, and Processes

Meaningful Measurement: Creating a Monitoring Plan

Module 5:
Evaluation

- Explain how evaluation paradigms may influence yourself and other stakeholders
- Understand the difference between contribution and attribution
- Apply the standards of evidence as a tool for understanding confidence of causal inference
- Apply Process Tracing tests to hypotheses within a Theory of Change
- Compare different evaluations methods: Randomised Control Trials, Cost-Benefit Analysis, Process Tracing, and Most Significant Change
- Design your own Randomised Controlled Trial
- Identify the different methods for defining and measuring value

Supporting activities:

Articulating and Evidencing Alternative Hypotheses: Combining Process Tracing with Contribution Analysis

Evidencing Lived Outcomes with Most Significant Change

Designing Randomised Controlled Trials

Module 6:
Feedback

- Remember different learning mechanisms that support learning at the levels of: individual, group and system
- Evaluate the use of different learning mechanisms across different audiences in practice
- Apply learning mechanisms and feedback loops to your own monitoring, evaluation, and learning strategy
- Understand the COM-B model of behaviour change to explain how evidence in feedback can lead to change
- Remember the key attributes of influence, persuasion, and effective communication
- Create a persuasive evidence-based story to engage a key stakeholder

Supporting activities:

Exploring Mechanisms for Learning

Learning & Feedback Strategies

Storytelling

Module 7:
Embedding and Sustaining

- Reflect on your individual progress against the toolkit's learning objectives.
- Identify what actions can be taken to help translate learning into sustained changes at the individual, team, organisation, and ecosystem level
- Illustrate action planning as a means of continued implementation of evidence use into practice.

Supporting activities:

Collective Action Planning

Hack this toolkit

This is the beta version of the Engaging with evidence toolkit.

It's a first attempt at bringing together tools, resources, and activities that support the use of evidence and expertise within policy. We know that there's more to learn from this work and that we may have omitted useful resources, and we'd like your help in identifying and filling these gaps.

Help us create the beta version by sending us:

1. Corrections and edits of any errors.
2. Additional resources that we can signpost.
3. Completed activity templates.
4. Stories of how you have used this toolkit or developed evidence capabilities in your own context.

Please send any feedback to evidence@nesta.org.uk with 'Engaging with Evidence Toolkit: Version 2.0" as the subject line. Your inputs are greatly appreciated!

Module 1

Introduction to evidence use and expert engagement

Evidence Use in Practice

Module 1 is split into two parts - the first part of the module (1A) introduces what we mean by evidence informed decision-making in practice, whilst the second part of the module (1B) focuses on the 'how to' engage with research producers and expertise in policy development. In Module 1A - 'Evidence Use in Practice' - we will give an introduction to evidence-informed decision-making. We start by exploring the realities of using evidence in practice. We'll then look into what 'evidence' means in our own context, before exploring the benefits of evidence use. We'll then consider how to align evidence with purpose to determine how different evidence sources can support different questions. Finally, we will look to understand the enablers and barriers to evidence use in practice within your own context.

Module 1A	OVERVIEW	205
Contents	• Evidence for decision-making: theory and practice • What is evidence? • Why use evidence in policy and practice? • Aligning the evidence to our questions • Understanding factors that enable (or hinder) evidence use in practice	
Learning Objectives	• **Describe the ROAMEF policy cycle** • **Understand the difference between data, information, knowledge and wisdom as evidence types** • **Apply tools to identify and prioritise different evidence sources** • **Analyse the reasons for using evidence in practice** • **Evaluate the barriers that exist to evidence use in practice within your context** • **Create questions to sit beneath your policy area and expand on your initial challenge**	
Activity Overview	1 How assumptions can affect outputs from evidence 2 Mapping, organising and prioritising evidence: data, information, knowledge and wisdom 3 Expanding on our policy questions: the 'what, why and how' 4 Mapping the barriers and enablers to using evidence	
Additional Reading	Using Research Evidence Practice Guide	POST: Understanding Research Evidence Mobilising Evidence for Good Governance

Evidence for decision-making: theory and practice

What does it mean to use evidence to inform decision-making?

—

We know that many factors affect decision-making. From the values we hold, to the ways our environments shape our decisions,[1] when considering decision-making in policy, evidence can be one part of a broader realm of factors and features that ultimately influence how decisions are made. While the uses of evidence and their function within decision-making can vary, one way to break this down is to differentiate between evidence that is used for applied purposes and evidence that contributes the theoretical underpinnings and understanding of knowledge.[2]

The demand for and generation of evidence can be seen as ways of engaging others in reducing ambiguity and uncertainty - looking for gaps in and opportunities to update what we know.

A range of decisions are made to reduce bias, uncertainty and ambiguity throughout both evidence consumption and evidence production processes. For decision-makers in policy, evidence is used to help reduce the ambiguity or uncertainty involved when needing to make a choice.[3] For evidence producers, ambiguities and uncertainties are found within the wider body of evidence that their work may be contributing to.

Yet decision-making and evidence production do not happen in a void. Instead these decisions are situated within policy, operational and institutional contexts that drive the kinds of decisions that are made, towards what purposes.

Throughout this module, we incorporate questions, activities, and actions that encourage you to reflect on what drives how decisions are made and where evidence and expertise can be used to inform these decisions, from what sources, and in response to what needs.

1 Marceta, J. A. (2020) 'The moral philosophy of evidence-based policy making', *Transforming evidence for policy and practice.* Available at: transforming-evidence.org/blog/evidence-based-policymaking-cannot-avoid-its-moral-implications (Accessed 14 July 2022).
2 Nutley, S., Walter, I. and Davies, H. (2007) *Using evidence. How research can inform public services.* Policy Press. doi: 10.1332/policypress/9781861346650.001.0001
3 Cairney, P. Oliver, K. and Wellstead, A. (2016) 'To bridge the divide between evidence and policy:reduce ambiguity as much as uncertainty', *Public Administration Review*, 76(3), pp. 399-402. doi: doi.org/10.1111/puar.12555

Influences to decision-making

As Figure 1.1 demonstrates, many factors affect decision-making. Often, the pressing influences on decisions will vary based on context and we might expect to see different influences given different weights, at different times. The use of evidence in practice can often feel like it's in tension with core considerations such as political influence or the complexity of the environments in which decision-making takes place.[4]

Alternatively, it can be seen as a multidimensional construct that involves a range of problems, ideas, processes, and sources that interact with each other.

We argue that for evidence use to be effectively engaged, it should be understood as one piece of a broader decision-making puzzle and be situated within the realities and environments of where and how decisions are made.

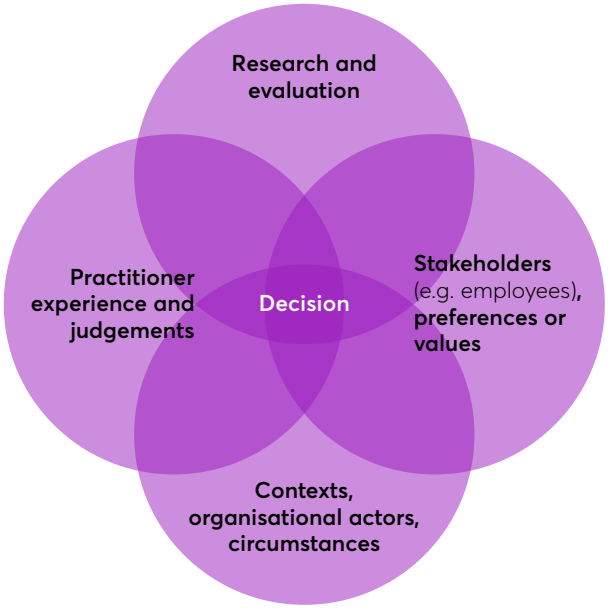


Figure 1.1: Factors influencing decision-making (Adapted from Centre for Evidence-Based Management)[5]

Reflection Point:

- In your context, what are the current influences on decision-making? Are these different to the model provided in Figure 1.1? You might consider, for example, political mandates or manifestos that drive overarching institutional priorities.
- In what ways might these influences be weighted above others? Why is this?

4 Cairney, P. and Oliver, K. (2018) 'How should academics engage in policy making to achieve impact?' *Political Studies Review*, 18(2), pp. 228-244. doi: doi.org/10.1177/1478929918807714

5 Breckon, J. *Using research evidence: A practive guide.* London: Nesat & Allicance for Useful Evidence. Available at: media.nesta.org.uk/documents/Using_Research_Evidence_for_Success_-_A_Practice_Guide.pdf (Accessed 14 July 2022).

Inclusive and context dependent evidence

There are **values, judgements, external pressures and expectations** that influence how evidence is produced, our understanding of what evidence is and what it means, and how it can be used in practice.

It is a highly political process to exercise power to determine who describes the world and its most important problems, and with what evidence. It is not just a technical process. In reality, we might cherry-pick evidence that is aligned with the decision we'd like to take, or the values we carry when undertaking our work - even if this evidence isn't considered to be 'rigorous' by scientific standards. Similarly, given many complex problems involve balancing the needs and concerns of multiple stakeholders, we might decide to prioritise our evidence use and generation efforts on some concerns over others.[6] This may also be affected by the tendency to go to the 'usual suspects' when determining who is in the room where decision-making takes place.

Our understanding of claims made from a source of evidence, and what we consider to be 'true', have been influenced by those who have controlled how evidence has been created, and brought to the present in the manifestations we see today.

Similarly, the process of evidence production is one filled with social choice. Different forms of evidence may hold assumptions about how the world works, and could exclude particular voices. This is especially due to the systematic exclusion of perspectives that reflect diversity of thought and experience, which can contribute to marginalised forms of knowledge. For example, The Higher Education Statistics Agency (HESA)[7] released data on the 2020/2021 academic year that demonstrated that of the 21,135 professors with known ethnicity within the UK, 11% were Black, Asian, Mixed or Other. In comparison, the Office for National Statistics (ONS) estimated that this group represented 15.2% of the population of England and Wales in 2019.[8]

Reflection Point:

Reflect on the inherent power dynamics, processes of inclusion or exclusion, representation, and principles that might be present in the evidence you're engaging with, the actors you're engaging with, and the environments in which these actions are taking place.

Ask yourself:

- → Who writes the evidence? Who benefits from the evidence? Who is missing from the evidence?
- → What disciplines are present? What values are represented? What judgements were made, and how might these judgements have been influenced by biases?
- → Who creates the norms for evidence use and generation, and who normally participates in these processes?

6 Parkhurst, J. (2016). 'Appeals to evidence for the resolution of wicked problems: the origins and mechanisms of evidentiary bias'. *Policy Sciences*, 49(4), pp.373–393. doi:10.1007/s11077-016-9263-z.
7 Jisc (2022) *Higher Education Statistics Agency.* Available at: www.hesa.ac.uk/ (Accessed on: 6 October 2022)
8 Office for National Statiscs (2021) *Population estimates by ethnic group and religion, England and Wales: 2019.* Available at: www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/articles/populationestimatesbyethnicgroupandreligionenglandandwales/2019 (Accessed on: 28th October 2022)

ACTIVITY 1:

How assumptions can affect outputs from evidence

Overview:

In this activity you will explore how different conclusions can be drawn from the evidence base. Work through the case study in your teams to consider how different experts' analyses and findings can vary - even when using the same baseline data.

Background:

When researchers and experts analyse the same data to test the same hypotheses, it's not uncommon for them to draw different conclusions.[9] This is not a reflection on the articulation of the research question nor quality of evidence. Instead it arises from the assumptions and processes used to reach these conclusions. With this in mind, it is important to be aware of sources of possible variances, to seek multiple opinions, and to encourage the transparent sharing and scrutiny of data and analytical processes.

9 Botvinik-Nezer, R. Holzmeister, F. Camerer, C.F. et al. (2020) '*Variability in the analysis of a single neuroimaging dataset by many teams*', Nature. 582, pp. 84–88 doi: doi.org/10.1038/s41586-020-2314-9

Instructions

In your teams read the case study below then discuss the following questions.

1. What happened to explain this variance across the evidence studies?

After you have completed the activity, review answers

2. What should your colleague do now to proceed?

After you have completed the activity, review answers

Click here for discussion and reflection prompts

ACTIVITY 1:

How assumptions can affect outputs from evidence[10]

A colleague has come to you with a challenge: They need to develop a groundwater quality protection policy for a local area and want good evidence to inform their design and planning. Your colleague has commissioned five expert evidence studies on the current levels of groundwater pollution in the area, asking for a summary map illustrating the levels of pollution. They've come to you to help interpret the results and decide what to do next.

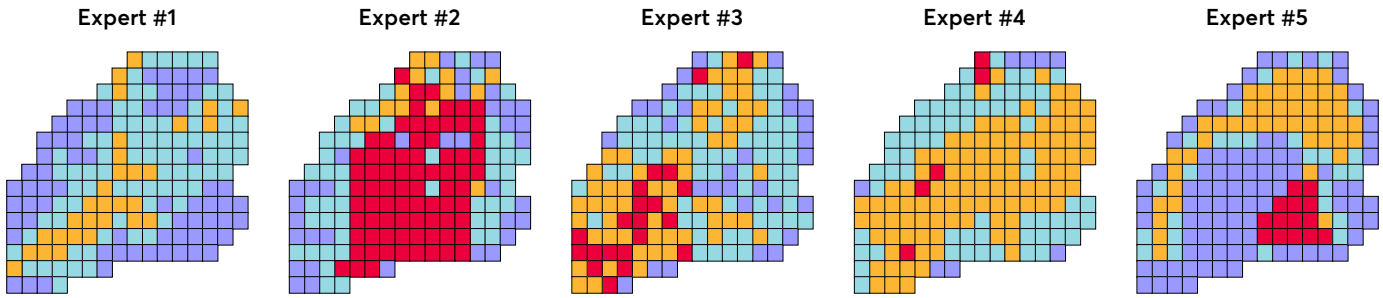


Figure 1.2 *Summary maps on pollution levels from five different expert consultants. Adapted from: Christian, J. et al. (2006).* [10]

The results have now been shared with you. Despite all experts receiving the same data and brief and all having internationally respected reputations, the results are different. There is no other data set available for you to validate the studies against.

Each pixel represents an area. Their colour reflects the level of pollution and concern from very high (red) to very low (blue). As you can see, each expert has returned a figure indicating different levels and also sub-geographical patterns of pollution.

10 Adapted from: Christian, J. et al. 2006. 'A framework for dealing with uncertainty due to model structure error', *Advances in Water Resources*, 29, pp.1586–1597. Doi: doi.org/10.1016/j.advwatres.2005.11.013

What is evidence?

Our understanding of evidence can vary depending on the environment that we're working within and the purpose of evidence use.[11] The model on the right presents a framework for understanding how different conceptions of evidence can be categorised. This framework situates evidence generation, and use, within a wider journey of analysis- that travels from data, to information, to knowledge, to wisdom.

The starting point in this process is **data** - anything that we observe, capture, or describe becomes a data point. However, often we are not looking towards a single point of data as our evidence and instead look for significance and patterns across that data which turns this into **information**. Information makes a higher level description of what we find meaningful. By combining the patterns and trends that are present in this information, we develop **knowledge** about the way a system behaves and use this to explain our assumptions about how pieces of information fit together. This can be developed further and as we learn about different systems over time, our knowledge turns into **wisdom**. Often in policy the narrative can be that the evidence is just the data - and not necessarily capture the process that transforms data to information, information to knowledge, and knowledge to wisdom.

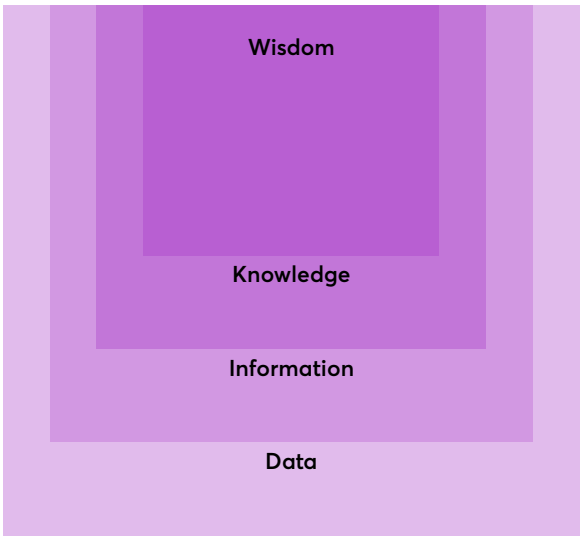


Figure 1.3: A framework for understanding different types of evidence

	Wisdom	Knowledge	Information	Data
Definition	Assumptions about how something might behave based on different forms of knowledge acquired over time	Theoretical or practical understanding of a specific subject gained through experience	Patterns or sequences between data points that describe the significance of something	An observation that is captured, observed or described without any context. Qualitative data describes narrative responses to who, which, what, where and why questions. *Quantitative data expresses* answers to 'how many', 'to what extent' or 'how much' questions
Example	Meaning drawn from trends	Analysis of trends from survey data	Trends drawn from multiple individual's incomes	Data point of an individual's income
	Talking to a meteorologist	Analysis of patterns of rainfall	Patterns of rainfall	Rainfall

Table 1.1: Examples of data, information, knowledge and wisdom. Drawn from various sources. [12, 13]

11 Parkhurst, J. (2017) *The politics of evidence: from evidence-based policy to the good governance of evidence.* Oxfordshire: Routledge.
12 Ackoff, Russell (1989). "From Data to Wisdom". *Journal of Applied Systems Analysis.* 16, pp. 3-9.
13 INASP (2016) *Evidence-Informed Policy Making (EIPM) Toolkit.* Oxford: INASP. Available at: www.inasp.info/sites/default/files/2018-04/EIPM%20Toolkit-Ed2-FULL.pdf Accessed 13 July 2022.

ACTIVITY 2:

Mapping, organising and prioritising evidence: data, information, knowledge and wisdom

Overview:

This activity will help you to identify the types of evidence - including data, information, knowledge and wisdom - that you might draw upon to inform a live policy challenge. You will explore the different sources of these evidence types, and will consider their priority and accessibility when making important decisions in relation to your live policy challenge.

Background:

In any decision-making process, different forms of evidence can be encountered and used. Each evidence type and source will have benefits and limitations - from ease of access, to the robustness of the methodology used. By mapping, organising, and prioritising evidence, you can start to identify what evidence means in your own context, and where there might be opportunities to use or generate evidence to fill gaps within your own evidence base. For example, the Evidence Commission report on evidence use to address societal changes categorised evidence into eight types: behavioural/implementation research, evaluation, modelling, data analytics, qualitative insights, evidence synthesis, technology assessment/ cost-effectiveness analysis and guidelines.

Instructions

Part 1:

1. Write down your live policy challenge.
2. Identify all of the data, information, knowledge and wisdom that may be involved before, after and during this challenge (directly affected by or influencing your challenge). Map these directly onto the Activity Sheet 1 provided.

Part 2:

1. Group the data, information, knowledge and wisdom identified in Step 1 into the different evidence sources provided in Worksheet 2. Add your own sources as required.
2. Discuss your findings as a group, reflecting on the following questions:
   a. Are there any sources that contain more evidence types than others? What does this tell us?
   b. Are there any more sources that are missing?
   c. Would you change the title of any of the sources?
   d. What judgements did you make within this process? How difficult was it to map evidence to specific categories?

Part 3:

1. On Activity Sheet 3 prioritise your evidence by arranging your evidence sources on the 2x2 matrix

→ Discuss your ideas as a group; what have you listed? What does evidence mean to you?

ACTIVITY 2:

Mapping, organising and prioritising evidence: data, information, knowledge and wisdom

Part 1

Write your policy challenge here:

→ Write the data, information knowledge and wisdom that is relevant to your challenge in the boxes provided.

ACTIVITY 2:

Mapping, organising and prioritising evidence: data, information, knowledge and wisdom

Part 2

→ Use the categories to note different sources of the data, information, knowledge, and wisdom that you have identified. Add new source categories if required.

Subject Expert Opinion	**Stakeholders / Partner Agencies**
Research Evidence	**Citizens**
Practice Experience (that of yourself or peers)	
Organisational Context and Circumstance	

ACTIVITY 2:

Mapping, organising and prioritising evidence: data, information, knowledge and wisdom

Part 3

Use the grid on the right to prioritise your evidence sources

- → Don't forget to add the new evidence sources!
- → You might need to split evidence sources from certain stakeholders across the grid.

Subject Expert Opinion

Citizens

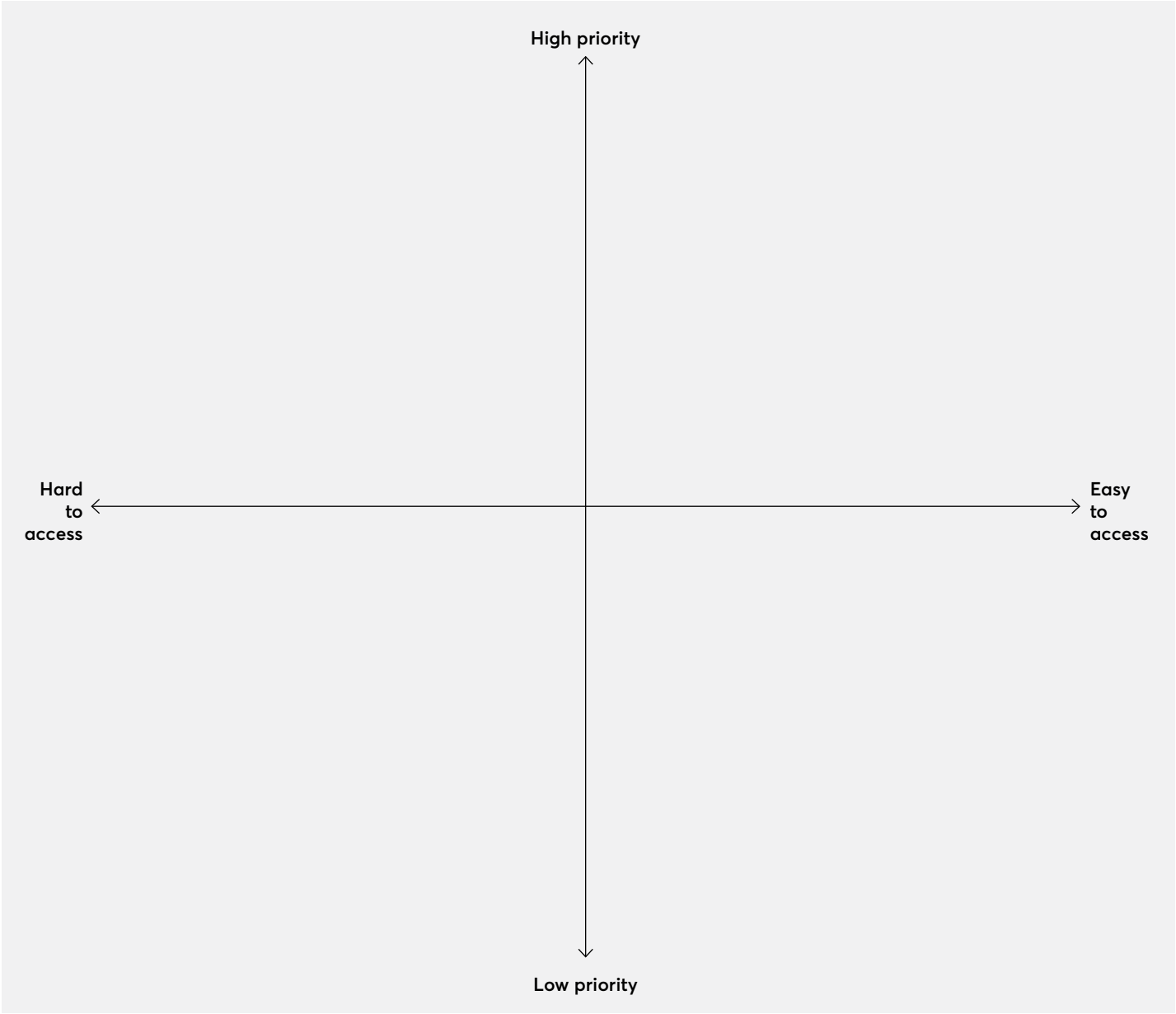
Research Evidence

Organisational Context and Circumstance

Practice experience (that of yourself of peers)

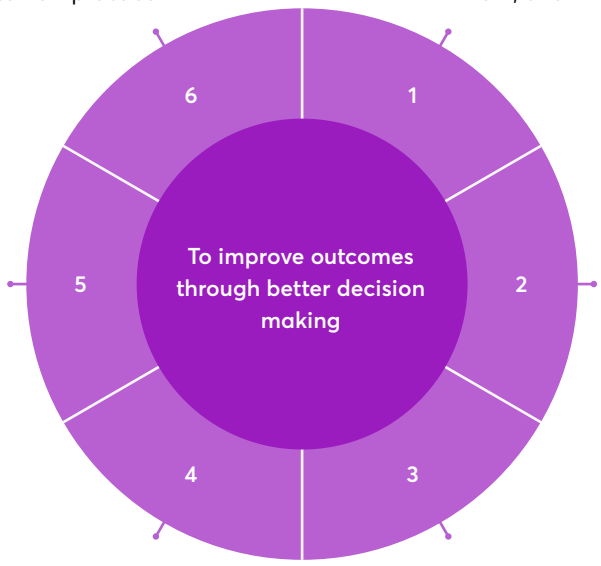
Other (create your own category)

Stakeholders / Partner Agencies



Why use evidence in policy and practice?

We use evidence to improve outcomes through better decision-making. Figure 1.4 sets out six reasons for evidence use in policy, though you may have additional motivations to add.



To learn from success and failure: Evidence can help ensure lessons learnt from previous experiences are integrated into new practice

To increase effectiveness and efficiency: Understanding whether a policy, programme, or operational process is working or not, for whom, and why, to inform policy development.

To challenge biases: Evidence can help to understand, navigate, and reflect upon your and other people's preconceptions and how these manifest, as informed by previous experience, emotion or beliefs. We'll explore more about common biases and mitigation strategies in Module 3.

To make the case: To bring in impartial information to make objective recommendations. This leads to a more persuasive campaign for why a process, system or service should change and helps to create buy-in within your organisation.

To reduce uncertainty: Using the available evidence can help reduce ambiguity in what the best decision to take may be.

To enhance accountability and provide transparency: The use of robust, trustworthy evidence, and transparency about motives, methodology, and assumptions inherent within decisions can help strengthen trust in decision-makers and decision-making organisations

Figure 1.4: Why we use evidence in policy making

Reflection Point:

We share some of the benefits of using evidence in decision-making, but this is not exhaustive. Consider you or your team's motivation for using evidence in decision-making:

- How do your own motivations for using evidence differ from the reasons here?
- To what extent are you already using evidence for these purposes? Which types of evidence that you use might are especially helpful for these purposes?

Case Study:
How Covid-19 is changing the evidence-use landscape

In many ways, the Covid-19 pandemic helped to re-shape and re-spark the demand for evidence to support urgent and critical decision-making. Throughout the pandemic, policymakers were supported by a range of activities geared at improving collaboration between evidence producers, and those who use research to rapidly adapt to unprecedented circumstances.

Why has evidence been so important in the backdrop of Covid-19?

—

At the start of the pandemic it was important to understand the actions that would be effective at slowing the spread of the virus. The UK's Scientific Advisory Group for Emergencies (SAGE) rapidly compiled and assessed evidence to issue and inform UK government, while many others also sought to rapidly generate and communicate new evidence to support SAGE's understanding of the pandemic and its consequences.[14] Policymakers adapted the restrictions based on live data and evidence, **increasing the effectiveness** and efficiency of control measures.[15] As the situation worsened within the UK, different levels of restrictions were placed on citizen's activities; from limitations to daily exercise in public, to reductions in social contact with friends and family. Asking citizens to make these sacrifices required a robust, **persuasive case to be made**. By bringing in impartial and respected advice that had been produced, assessed, synthesised and communicated by experts, such as SAGE - it helped to foster higher public buy-in, and improve levels of policy compliance.

There was also a movement to **increase the openness and transparency** of the evidence base informing policy decisions. The UK Government published the research, models and expertise behind much of its policies and often invited experts to talk at the daily Covid briefings,[16] and regularly updated its website with the latest evidence provided to, and outputs stemming from, SAGE meetings.[17] The scientific community similarly mobilised to help rapidly get the evidence needed to decision-makers' fingertips: The International Public Policy Observatory (IPPO) was formed to assess evidence from different geographical and institutional contexts to inform decision-makers about the best ways to mitigate social harms associated with Covid-19, while the University College London's EPPI centre created a "living systematic map' of Covid-19 research so that existing and emerging evidence could be continuously added and made publicly available.

As priorities between decision-makers and evidence producers aligned to help **manage risk and uncertainty** associated with pandemic causes and consequences, methodological innovations, such as rapid evidence assessments, allowed

14 Breckon, J. (2020) *How Covid-19 has changed the use and communication of evidence.* Available at: www.nesta.org.uk/blog/how-covid-19-has-changed-use-and-communication-evidence/ (Accessed 14 July 2022).
15 Dunn, P. Allen, L. Cameron, G. Malhotra, A, M. Alderwick, H. (2020) *COVID-19 policy tracker 2020: A timeline of national policy and health system responses to COVID-19 in England in 2020.* Available at: www.health.org.uk/news-and-comment/charts-and-infographics/covid-19-policy-tracker (Accessed 14 July 2022).
16 Prime Minister's Office. (2022) *Collection: Slides, datasets and transcripts to accompany coronavirus press conferences.* Available at: www.gov.uk/government/collections/slides-and-datasets-to-accompany-coronavirus-press-conferences (Accessed 14 July 2022).
17 Government Office for Science & Scientific Advisory Group for Emergencies. (2020) *News story: Government publishes SAGE minutes.* Available at: www.gov.uk/government/news/government-publishes-sage-minutes (Accessed 14 July 2022).

for the quick consolidation and communication of evidence to understand what might and might not work. This helps foster a **culture of constant learning, and unlearning**; reviewing evidence, making decisions, and revisiting this as new evidence emerges. It's also supported an **increased ability to challenge biases** by providing scientific literature to a more varied audience,[18] to challenges against cognitive and authority bias when tackling vaccine hesitancy.[19]

Reflection Point:

- What benefits of using evidence for decision-making did this case study highlight?
- What were some of the limitations of using evidence that this case study highlighted?
- How else did Covid-19 affect the way evidence is used for decision-making?

18 Berenbaum, M. (2021) 'On Covid-19, cognitive bias and open access', *PNAS*, 118(2). doi: doi.org/10.1073/pnas.2026319118

19 Azarpanah, H. Farhadloo, M. Vahidov, R. et al. (2021) 'Vaccine hesitancy: evidence from an adverse events following immunisation database, and the role of cognitive biases', *BMC Public Health*, 21. doi: doi.org/10.1186/s12889-021-11745-1

Aligning the evidence to our questions

How do you decide what evidence is useful, for what purposes? When we are considering the breadth and depth of different evidence that we might use or generate, it can be quite overwhelming to navigate the multitude of evidence types- such as the data, information, knowledge, and wisdom explored earlier- and methods for evidence generation. Determining the best evidence is dependent upon first understanding what questions that evidence is able to inform, and then looking more closely at the quality that underpins how the evidence has been generated.

Different evidence production methods have quality frameworks that we can refer to, to check biases and assumptions in the research production process. Over the last decade, there has been a proliferation of evidence frameworks, matrices, hierarchies, and checklists that have been created to help us make sense of what an evidence base is able to tell us, understand the quality underpinning that evidence,[20, 21] and ensure the alignment of the evidence against the questions at hand. A mapping of evidence frameworks used in UK Social Policy can be found in Nesta's Mapping Standards of Evidence report[22] and we'll return to ways we can use these checklists for understanding the relevance, trustworthiness, and rigour behind different sources of evidence in Module 2.

The 'What', The 'Why', and The 'How'

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By first framing the questions that our work seeks to address, we can begin to make sense of the differences or unique strengths between evidence claims in both evidence we use and evidence we might generate. One way to do this is by breaking down our current policy challenge into questions that help describe (the 'what'), questions that help explain (the 'why') and questions that help intervene (the 'how').

To describe	What	**What** is happening? For whom? Where?
		What are the key trends of change?
		What intervention(s) are we considering to tackle our challenge?
		What is the value of those intervention(s)?
		What ultimate impacts do we want through our work?
To explain	Why	**Why** is this a problem?
		Why do we want to intervene in this area?
		Why do things change?
		Why do some interventions not work as expected?
To intervene	How	**How** should we respond to this challenge?
		How should we implement the proposed policy solution(s)?
		How can we assure that a proposed policy solution will resolve your policy challenge in this context?
		How can we learn from previous evidence about this challenge?
		How can we monitor the performance of a policy solution?
		How do we drive improvement of a programme?

Table 1.2: Framing the 'What', 'Why' and the 'How' questions

20 Petticrew, M. & Roberts, H. (2003) 'Evidence, hierarchies, and typologies: horses for courses', *Journal of Epidemiology & Community Health*. 57, 527-529. doi: dx.doi.org/10.1136/jech.57.7.527
21 National Centre for the Dissemination of Disability Research. (2005) 'Technical Brief Number 9: What Are the Standards for Quality Research?', *Focus*. Available at: ktdrr.org/ktlibrary/articles_pubs/ncddrwork/focus/focus9/Focus9.pdf (Accessed 14 July 2022).
22 Puttick, R. (2018) *Mapping the Standards of Evidence Used in UK Social Policy.* Available at: www.nesta.org.uk/report/mapping-standards-evidence-used-uk-social-policy/ (Accessed 14 July 2022).

ACTIVITY 3:

Expanding our questions: the 'what, why and how'

Overview:

This activity helps you to expand on your initial policy challenge using what, why and how questions. These questions draw on different types of knowledge to help you to describe, explain and intervene to build a well rounded understanding of your policy question.

Background:

In the philosophy of knowledge, there are three types of knowledge[23] we generate: knowledge to describe, to explain and to intervene. All questions can be reframed directly to correspond to these three knowledge types: knowledge that describes (what), explains (why) and intervenes (how). Research questions are used to help researchers to focus their research and narrow down broad topics of interest into specific fields of study. Policy questions can go further than this and look to focus on the action; how will change be achieved? The formulation of your policy question will influence the remainder of your work - and help you narrow down the types of evidence you can use to inform different aspects of your work, and actions you can take to access or generate evidence that aligns with these questions.

Instructions

1. Write the live policy challenge that you're grappling with in the centre of the template
2. Expand on this by breaking it down into what, why and how questions and adding these to the relevant section. Use the prompt questions on the worksheet to guide you.

23 Adapted from Blaikie, N. (2007) 'Major Choices in Social enquiry' in *Approaches to Social Enquiry - Advancing Knowledge.* Second edition. Cambridge: Polity Press. Pp. 6-8.

ACTIVITY 3:

Expanding our questions: the 'what, why, and how'

To describe	What	**What** is happening? For whom? Where?
		What are the key trends of change?
		What intervention(s) are we considering to tackle our challenge?
		What is the value of those intervention(s)?
		What ultimate impacts do we want through our work?
To explain	Why	**Why** is this a problem?
		Why do we want to intervene in this area?
		Why do things change?
		Why do some interventions not work as expected?
To intervene	How	**How** should we respond to this challenge?
		How should we implement the proposed policy solution(s)?
		How can we assure that a proposed policy solution will resolve your policy challenge in this context?
		How can we learn from previous evidence about this challenge?
		How can we monitor the performance of a policy solution?
		How do we drive improvement of a programme?

What...?	Write your challenge here:	Why...?
How...?		

Understanding factors that enable (or hinder) evidence use in practice

There are a range of factors and contextual differences that can either facilitate or hinder the use of evidence in practice. Here, we've identified some common factors that influence our ability to use evidence such as evidence literacy and ability to access evidence. Many of these might manifest as barriers and facilitators that are unique to your own context, such as professional norms around evidence use, knowledge sharing systems, and levels of staff turnover.

Generating a better understanding of where and how these barriers or enablers manifest at an individual, organisational, or socio-political level can help to create strategies for developing the 'enabling environments' that allow evidence use to flourish.[24]

Availability & Accessibility

Ability to access evidence can vary from open access to limited information, sometimes stored behind a paywall. There may be ample evidence for the topic you are exploring or it may not yet exist.

Relevance

Evidence can vary in its relevance. The evidence available to you may be from elsewhere with different contexts and it may not be clear the extent to which it will be applicable in your situation.

Robustness

Some evidence is more robust than others and you will need to be able to critically assess the robustness of what is available to you.

Agreement

There may be different levels of understanding of the claims being made by evidence, methods underpinning evidence, or language used.

Time

You will often face time constraints to discover, process and summarise evidence which will have an impact on the sources you can use. New evidence will take time to be produced.

Power

External influences, including biases and politics, will affect the use and uptake of evidence.

24 Oliver, K. Innvar, S. Lorenc, T. Woodman, J. & Thomas, J. (2014) 'A systematic review of barriers to and facilitators of the use of evidence by policymakers', *BMC health services research*, 14(2). doi: doi.org/10.1186/1472-6963-14-2

Improving access to evidence

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Access to evidence can be a key factor to being able to use it to inform decisions. This is especially true for research evidence, and peer-reviewed journal articles, which can require payment in order to obtain access.

There are a number of strategies you can use to access free and open resources, including:

- Explore this list of trusted open access research resources
- Where you encounter a paywall try adding details of the article to Open Access Button which will either signpost you to free sources or automatically request a copy from the author.
- Reach out to researchers directly via networks such as LinkedIn, Twitter, or via email.
- Utilise evidence summaries. These are often freely available and provide an actionable summary of research in the area. Try looking at UK What Works Centres, the UK Parliament's POSTnotes or the House of Commons Evidence Briefings.
- Within the scientific community, there have been efforts to increase the transparency and accessibility of research, to help users better interrogate the assumptions underpinning research processes, and encourage the reproducibility of research results.[25]

25 Van der Zee, T. Reich, J. (2018), 'Open Education Science', *AERA Open*. 4(3) doi: doi.org/10.1177%2F2332858418787466

ACTIVITY 4:

Mapping the barriers and enablers to using evidence

Overview:

This activity will help you explore the different barriers and enablers to using evidence effectively at an individual, organisational, and socio-political level.

Background:

An extensive amount of research exists on the factors that can both inhibit and facilitate evidence use in practice, spanning numerous fields from healthcare to teaching. A systematic review of 145 studies on the barriers and enablers to evidence use in policy practice looked to update and expand on previous reviews in this area. From the detailed analysis of these studies the most frequently reported barriers were poor access to quality research and insufficient timely research outputs. The most common enablers included collaboration between researchers and policymakers and improved relationships and skills demonstrating the importance of relational approaches.[26]

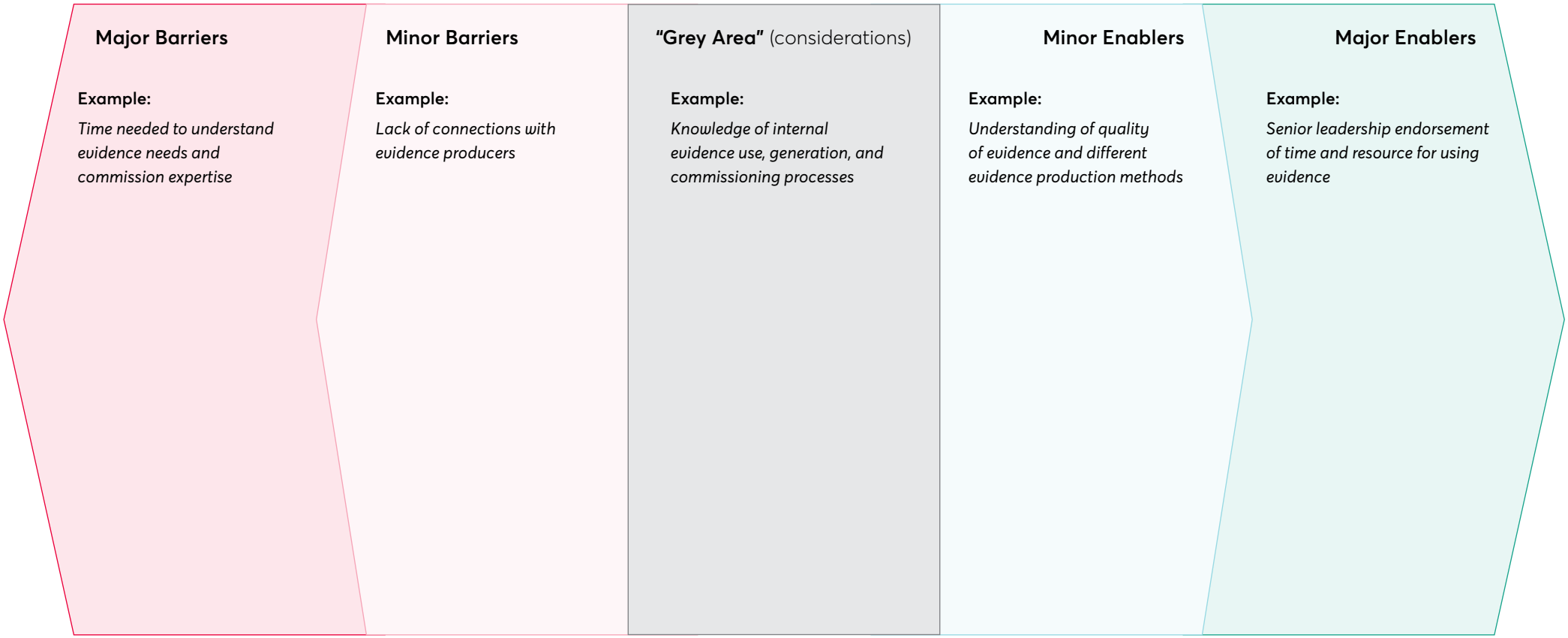
Instructions

1. Consider the barriers and enablers to using evidence within your policy challenge and think about whether these would be classified as major or minor. Discuss your thoughts with your team and add your responses to the activity sheet. You may find that some fit best within the central 'grey area'.
2. Discuss whether these exist at the individual, organisational or socio-political level. Write your reflections in the space provided.
3. Reflect on how these barriers and enablers are relevant to the types and sources of evidence you identified in Activity 2.

26 Oliver, K. Innvar, S. Lorenc. T. Woodman, J. Thomas, J. (2014) 'A systematic review of barriers to and facilitators of the use of evidence by policymakers', *BMC Health Services Research*. 14(2), doi: doi.org/10.1186%2F1472-6963-14-2

ACTIVITY 4:

Mapping the barriers and enablers to using evidence



→ Are there different barriers and enablers for you at an individual level, organisational, and socio-political level?

→ How might the barriers and enablers differ between different conceptions and definitions of evidence?

Engaging with research expertise

In this next section, we'll be narrowing in on the unique value add that working with research evidence and research expertise can contribute to our work. We'll start by looking at the research process, and consider the range of research producers - including academics - that we might engage with to inform different aspects of our work, whilst considering what quality engagement means in practice. We'll then dig into the broader ecosystem of research funding and production, including the roles, incentive structures, and functions of higher education institutions, before exploring how to engage individual experts and researchers. Finally, we'll use personas and provide interview guidance to support you to engage with individual experts.

Module 1B	OVERVIEW		155
Contents	• Understanding research and research producers • Demystifying the UK research landscape • Engaging with higher education institutions • Engaging with individual experts		
Learning Objectives	• **Identify the value of using research evidence** • **Understand the research funding landscape, including key research producers** • **Apply tips and entry routes to reach out to researchers and prepare for interviews** • **Analyse characteristic academic performance objectives, operating contexts, and incentives** • **Evaluate the key barriers and facilitators to engaging with evidence** • **Create personas to inform your approach to engaging with research producers**		
Activity Overview	5 Understanding and engaging with research producers for our work 6 Personas: understanding, identifying and engaging researchers		
Additional Reading	Science Advice in the UK	The nature, scale and beneficiaries of research impact	How government can work with academia

Understanding research evidence and research producers

What is the unique value-add that research evidence can bring, in addition to other forms of evidence? And how do you know what research, or research producers, to engage with? Examining research processes is what makes research evidence valuable, and the broader landscape of where and how it is produced, by what actors, and with what incentive systems, can help us to better understand who, where and how to engage.

There are multiple benefits to engaging with research evidence and research outputs as one type of evidence. Our definition of research evidence comes from Nesta's Using Research Evidence Practice Guide,[27] which states that:

"When we refer to 'research evidence', this includes evidence from published research articles and papers, or unpublished sources such as internally conducted evaluations. Research is only one sort of evidence, but has the advantages of greater rigour, relevance and independence when compared to some other types of evidence."[28]

As the authors of Nesta's *What Counts as Good Evidence?* report state:

"The conduct and publication of research involves the explicit documentation of methods, peer review and external scrutiny, resulting in rigour and openness. These features contribute to its systematic nature and help provide a means to judge the trustworthiness of findings. They also offer the potential to assess the validity of one claim compared to another."[29]

27 Breckon, J. *Using research evidence: A practice guide. London: Nesta & Alliance for Useful Evidence.* Available at: media.nesta.org.uk/documents/Using_Research_Evidence_for_Success_-_A_Practice_Guide.pdf (Accessed 14 July 2022).
28 Frost, S et al., (2006). *The evidence guide: using research and evaluation in social care and allied professions.* London: Barnado's.
29 Nutley, S. Powell, A. & Davies, H. (2013) *What Counts as Good Evidence?* Available at: www.nesta.org.uk/report/what-counts-good-evidence/ (Accessed 14 July 2022).

The research process

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The research process is at the crux of what research producers - including academics - do. It has the same requirements and similar sequence to any other form of analysis, whether for policy or any other programme. Understanding this process can help you to identify where different forms of expert engagement can support the use and generation of evidence in your work.

There are many ways to produce research evidence, but every research method has embedded within it a clear set of assumptions around what knowledge is. In the same way that we have different values, judgements, evidence, and learning across decision-making processes, research producers are also making decisions that underpin the research process and that influence the results.

Research producers make decisions about the scope, plan, and execution of their research at each stage of the research generation process, as represented in Figure 1.5. Each stage attempts to uncover assumptions, reduce the influence of biases and reduce uncertainty which serves as the foundation for understanding the quality of research. Alongside this process, there may also be different levels of collaboration between researchers, and decision-makers- including different opportunities for the co-production of research outputs and considerations for the inclusion of co-creative principles within and across the research process.[30]

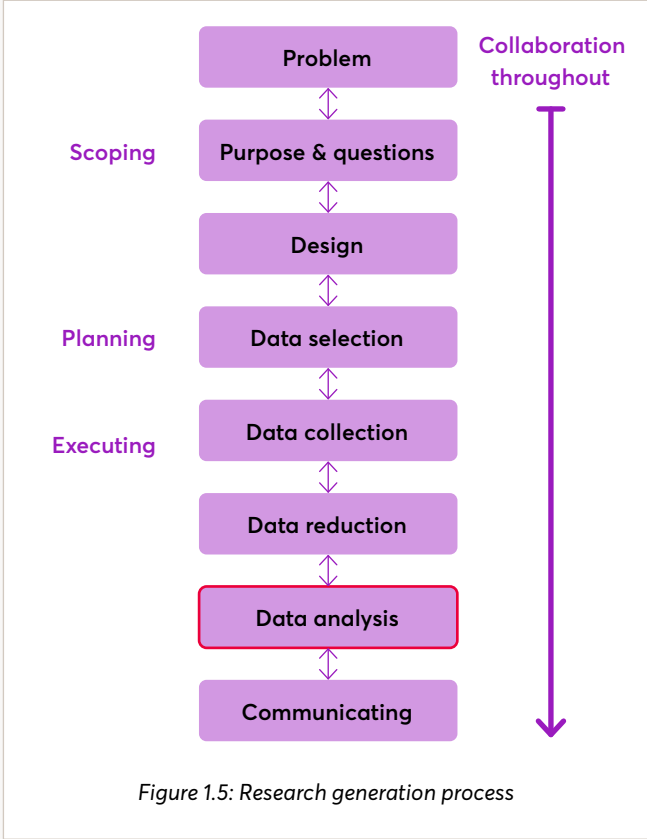

Figure 1.5: Research generation process

30 University of Newcastle. University of Zagreb. University of Tartu. (2018) *Principles for promoting the impact of SSH research by co-creation: key issues in research design and communication.* Available at: www.researchgate.net/publication/328249120 (Accessed 14 July 2022).

ACTIVITY 5:

Understanding and engaging with research producers for our work

Overview:

Who are research producers and how would you engage with them? In this activity you will identify a range of different research producers - namely, different organisations that produce research - that you might engage with to inform your work. You'll then reflect on the ways you may have engaged with these research producers in the past- paying particular attention to factors that enabled these engagements, and the quality and usefulness of these experiences.

Background:

Research is produced by a number of different actors, for a number of different purposes. Understanding this landscape will allow you to tailor your engagement and approaches to reflect the cultures and requirements of each producer. Some examples of research producers may include expert institutes, research innovation organisations (RIOs), donors, consultants, the media, academics or higher education institutions. When considering how to contact and engage with research producers, you can utilise your networks, or tap into existing government guidance, such as the Consultancy Playbook or GO-Science's Guide to Engaging with Academics.

Instructions

1. In your teams look at the research producers provided in the activity template.
   a. Are there any research producers missing from this list? If so, add these into the empty spaces available.
   b. What do you consider to be an engagement, and what does this look like in practice? Examples might include gathering advice about a particular issue, reading a report or research output, or having an informal conversation about your work.
2. Add a red ●, amber ●, or green ● dot next to those who you have engaged with during the course of the project or programme that you are currently working on. These should reflect the overall quality of the engagement.
   a. If you haven't engaged with an actor before, make note of this with a purple dot ●. Think about why this might be. Have there been any barriers to this?
   b. You can also consider research producers you have worked with in other projects - not just those relevant to your live problem.
3. Discuss your findings as a team and consider any patterns that may be emerging. Take note of where the volume, and quality of engagement takes place. Reflect on:
   a. Why is this? Where are there gaps in current engagement, and how might these be strengthened?

ACTIVITY 5:

Understanding and engaging with research producers for our work

Public Agencies
Engagement experience:

Expert Institutes
Engagement experience:

Professional Bodies
Engagement experience:

What Works Centres
Engagement experience:

Foundations
Engagement experience:

Parliament
Engagement experience:

Industries
Engagement experience:

Think Tanks
Engagement experience:

Charities
Engagement experience:

Central Government Departments
Engagement experience:

Judiciary
Engagement experience:

Donors
Engagement experience:

Consultants
Engagement experience:

General Public
Engagement experience:

Cabinet Office
Engagement experience:

Campaigner / Civil Society
Engagement experience:

Academics
Engagement experience:

Media
Engagement experience:

Higher Education Institutions
Engagement experience:

Engagement experience:

Engagement experience:

Engagement experience:

Engagement experience:

→ What constitutes a quality engagement?

→ Why is this?

→ Where are there gaps in current engagement, and how might these be strengthened?

Demystifying the UK research landscape

The process of research production does not happen in a silo, and is instead influenced by a vast and diverse UK research ecosystem. By examining this more in depth, we can better understand how the academic community and decision-making community can come together, and via what touchpoints and engagement activities.

Research funding and science advice in the UK[31]

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Many of the benefits of engaging with research outputs, and academics, are enabled by a broader research and development investment and knowledge capital system that exists within the UK. This plays a driving role in the way research evidence is conducted. The Research on Research Institute (RoRI) has created a freely available interactive map[32] of the research funding landscape that looks at how different research fields may be supported by different funders.

Much of the funding for research evidence is the result of a series of push and pull mechanisms between His Majesty's Government, and a number of agencies, other government departments, and higher education institutions. In the 2021 Science Advice in the UK report, Hopkins, Foxen, Oliver and Costigan outline these different routes in detail.[33]

Importantly, within the last 10 years, increased funding towards collaboration mechanisms has sparked attention to routes through which academics and external stakeholders - including policymakers - can collaborate. Many of these mechanisms are supported with funding from the UK Research Innovation (UKRI), the overarching body that coordinates the funding between the UK's research councils. It is a non-departmental public body that is responsible for:

- Making independent decisions on funding allocation
- Supporting strategic connections between higher education institutions, research organisations, businesses, charities and government
- Encouraging and investing in collaboration
- Developing mechanisms, enablers and levers to support research on current government priorities.

As an example of UKRI's strategy to put science advice and evidence use at the heart of decision-making, Research England - which is responsible for overseeing funding, engagement and knowledge transfer with English higher education providers - have invested in a number of initiatives to support academic-policy engagement. These span from those that focus on disseminating and communicating academic research, through to more collaborative approaches. There are also many other forms of public and charitable funding for research, e.g. from public bodies, local authorities and the devolved administrations.

31 Hopkins, A. Foxen, S. Oliver, K. & Costigan, G. (2021) *Science Advice in the UK*, Foundation for Science and Technology & Transforming Evidence. doi: 10.53289/GUTW3567
32 Research on Research Institute (RoRI). (2019), *RoRI Research Funding Landscape*. Available at: researchonresearch.org/research-funding-landscape (Accessed 14 September 2022).
33 Hopkins, A. Foxen, S. Oliver, K. & Costigan, G. (2021) *Science Advice in the UK*, Foundation for Science and Technology & Transforming Evidence. doi: 10.53289/GUTW3567

Government structures for science capabilities

GO-Science, Chief Scientific Advisers, and Areas of research interest[34]

The Government Office for Science (GO-Science) is responsible for science advice in the UK - including national science strategy and overseeing national science capability. GO-Science is led by the Government Chief Scientific Adviser (GCSA) who, in turn, reports to the Cabinet Office and Prime Minister. The majority of UK government departments have a Chief Scientific Adviser (CSA), who works under the leadership of the GCSA. This network of CSAs and their offices is responsible for advising the GCSA on policy, whilst also having departmental responsibilities. Whilst these may vary across each department, the CSA's role will standardly include:[35]

- provide advice to ministers and senior officials on science and engineering matters
- ensuring that the department's policies are supported by quality science and engineering advice available
- identify and share good practice in STEM-related areas, including the use of scientific advice in policymaking

They work in partnership with a range of roles within government to ensure the use of scientific and engineering advice is fully embedded into policy procedures. In some instances, the CSA may also act as Head of the Science and Engineering Profession (HOSEP) within their department. The Science and Engineering Profession, supported by GO-Science and the Heads of the Profession, embeds the role of science and engineering across government.

Departments will have a number of formal and informal ways of engaging with experts, but this will vary across departments. One route through which academics can feed into policy-making and transfer knowledge to departments is through Science Advisory Councils (SACs) and Committees (SAComms). There are also advice networks and bodies (formal and informal) that function within the regions and the devolved administrations, as well as agencies and public bodies at the national level - we'll explore more on considerations for creating an academic advisory group in Activity 9.

Chief Scientific Advisors

Visit the .GOV website to see the current Chief Scientific Advisers. Get in contact with their office to find out how they can support your engagement with academics. Alternative arrangements should be in place for departments that do not currently have a CSA and in this case try reaching out to the GSE Profession.

Areas of Research Interest (ARIs) are a series of questions published by a government department that give details on its main research areas, departmental research systems, data publication policies and research and development strategies.

CSA offices can support you to engage with academia through the Areas of Research Interest within your department. ARIs aim to support futures thinking and steer the production of research in areas that can be of future benefit for government departments to tap into. They were introduced in response to the 2015 Nurse review of the UK Research Councils with the aim of aligning scientific research evidence from academia with policy development and decision-making. For more information on ARIs and links to the departmental ARIs visit the .GOV website.

34 Hopkins, A. Foxen, S. Oliver, K. & Costigan, G. (2021) *Science Advice in the UK*, Foundation for Science and Technology & Transforming Evidence. doi: 10.53289/GUTW3567
35 Gov.uk (2022) *Chief Scientific Advisers.* Available at: www.gov.uk/government/groups/chief-scientific-advisers (Accessed on: 28th October 2022)

Reflection Point:

If you don't work for a government body, is there an equivalent role or body in your organisation that can help support you to engage with higher education institutions or researchers?

Engaging with higher education institutions

It's a distinctive feature of the UK to have a broad Research and Development investment and knowledge capital, and to feature so many higher education institutions (HEIs) across its ecosystem.

In the UK, HEIs started as a place of teaching and learning, and grew to be institutes of research production. HEIs within the UK are also increasingly placing importance on civic and regional engagement, with many embarking on creating Civic University Agreements – a civic strategy rooted in a robust and shared analysis of local needs and opportunities and co-created with local partners.[36]

What Universities Do:

Education and Training

Research

Civic and Regional Engagement

HEIs are very complex, and each HEI can operate in different manners- with centres of decision making switches between operational offices, schools and faculties. Some of the silos teams experience within government are mirrored in the academic landscape. Within an HEI, there may be different levels of engagement of academics within an organisation, but part of the value of engaging with an academic may be that they are well networked both inside, and outside a university. Often, too, there can be a lack of incentives around interdisciplinary research - as present structures can limit the ability of staff time and funding to be shared across departmental boundaries given different levels of independently managed budget centres and teaching demands.

Funding for higher education institutions

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There are a number of quality markers which rank HEIs, performance in teaching and research, and providing scientific advice is in keeping with the missions of HEIs.

Some academics have had close connections with policymakers for decades, but there has been a transformation in activity at the university level in the last ten to fifteen years. This transformation has been partly driven by financial incentives. In the UK, HEIs receive funding from: tuition fees and education contracts (£18.9 billion); funding body grants (£5.1 billion); Research grants and contracts (£6.2 billion); and other sources of income, such as donations, endowments and consultancy (£8 billion).[37] Together these sources pay for salaries, infrastructure and research costs. Universities are charities. Surplus is reinvested into facilities and infrastructure, or used to manage short-term fluctuations. Universities roughly break even on teaching home students but often make a big loss on research. Research relies on income cross-flows from teaching - which means that costs quoted for research can look large but are only covering a fraction of the actual cost to the HEI of releasing their staff to undertake research activities.

When considering engaging with an HEI, especially on more formalised partnerships, it's important to consider these funding routes and their implications, as institutional context may influence an individual's decision about how to engage.

Researchers can undertake some consultancy work outside the HEI system, but may not be able to use their university's logo, or the association with the institution. On the other hand, consultancy can also be deterred by HEIs because they can't generate publications from it, especially if the Intellectual Property (IP) is owned by the consultancy client.[35]

36 UPP Foundation (2022) *Civic University Network* Available at: upp-foundation.org/about-us/civic-university-network/ (Accessed on 6 October 2022)
37 Jisc (2022) *Higher Education Statistics Agency.* Available at: www.hesa.ac.uk/collection/c17031 (Accessed on: 6 October 2022)

HEIs receive research funding through what's called a 'dual support system.' Research funding comes from two streams: (1) specific research project funding and (2) performance-based, quality-related (QR) funding.

Research England distributes the former (with QR funding); UKRI the latter (with grants). QR funding is awarded to HEIs on the basis of research excellence, through the Research Excellence Framework (REF). The REF process was the first exercise to assess the impact of research outside of academia, by asking HEIs to demonstrate the impact of research.[38] It defines impact as 'an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia.'

QR funding is first separated into three 'pots' that assess the contribution of research to output, impact and environment. High value is placed on the impact case studies submitted by an institution, documents outlining the impact of research undertaken - you can find examples from 2014 available here. This means that a successful impact case study can potentially lead to a substantially higher cash value than a publication.

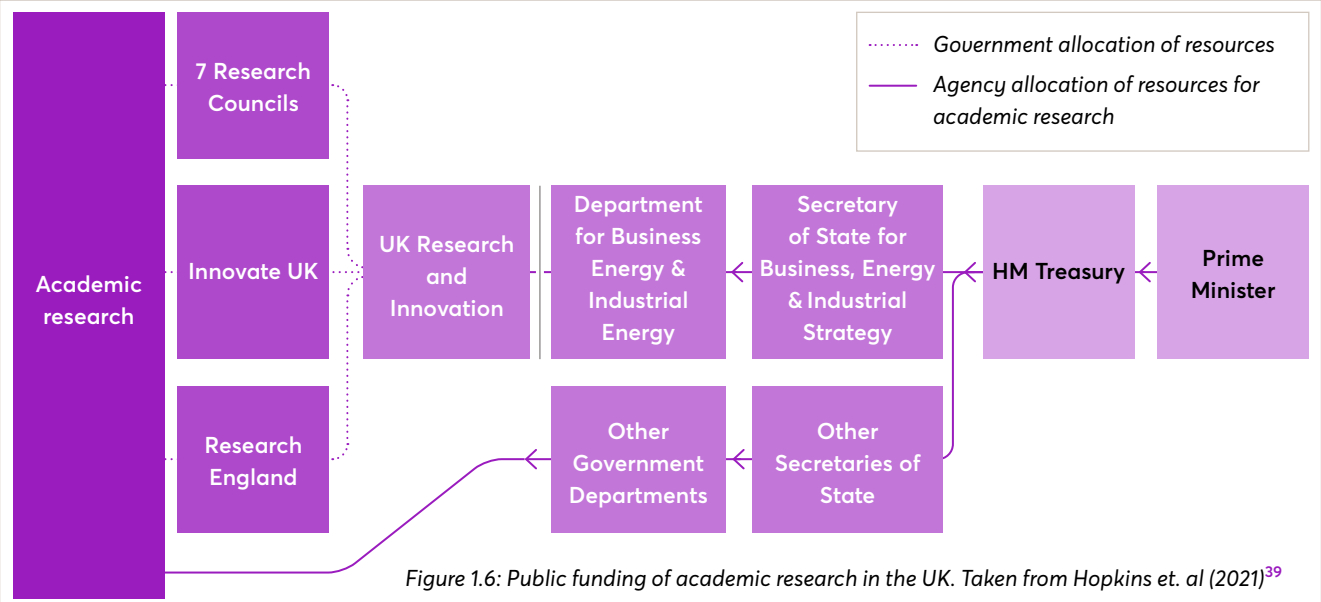

Figure 1.6: Public funding of academic research in the UK. Taken from Hopkins et. al (2021)[39]

POP QUIZ[40]

In 2020/21, how many higher education institutions were there in the UK?

Show answer

In 2014, how much of the research produced by UK HEIs was deemed to be 'world leading' or 'internationally excellent?

Show answer

How many of the UK's 22,855 University professors are Black?

Show answer

Which HEIs in the UK have the most 'policy impact'?

Show answer

38 REF 2021 (2022) *About the REF*. Available at: www.ref.ac.uk/about-the-ref/ (Accessed on: 28th October 2022)
39 Hopkins, A., Foxen, S., Oliver, K. & Costigan, G. (2021) *Science Advice in the UK. Foundation for Science and Technology & Transforming Evidence*
40 Jisc (2022) *Higher Education Statistics Agency*. Available at: www.hesa.ac.uk/collection/c17031 (Accessed on: 6 October 2022

Policy support units

One method for engaging with higher education institutions, and the academics within them, is through policy support units. These units can often act as 'evidence brokers' and translators between policymakers and the university. They can act as an entry point to access expertise from across the university, and provide responsive support such as convening knowledge exchange events, providing high level research summaries, and communicating research through platforms such as blogs and podcasts. Many of these teams and universities across the UK have formed a community of universities committed to increasing the impact of research on policy: The Universities Policy Engagement Network (UPEN). It offers a dedicated contact point for policymakers, a collective response to requests for evidence, organises knowledge exchange events, and develops best practice amongst universities in policy engagement activities. Additionally, consortiums such as Capabilities in Academic Policy Engagement (CAPE) and the Transforming Evidence Network (TEN) are working to help generate new evidence and promote best practice of how to drive structural improvements of what works, when, how, and why when it comes to knowledge exchange in the UK and beyond.

Policy support unit

If you are a policy professional interested in engaging with a higher education institution but are unsure who to contact, try reaching out to a Policy Support Unit. You might also consider the region in which a university is based, or their academic specialism, before reaching out. Your department's CSA Office may also be able to help recommend an existing contact to get in touch with.

Case Study:

Older people transforming policy, planning and research

This study draws from an impact case study submitted by Northumbria University Newcastle (NUN) for the 2014 REF.[41] It describes a research project that sought to understand whether the involvement of older people as co-researchers in the policy and planning of service provision would improve outcomes and the impact on the lives of older people., Although the Department of Health had previously pioneered numerous initiatives to engage older people in the development of services, this group historically faced numerous barriers that limited their participation in decision-making processes. Instead, researchers at NUN sought to go beyond the use of engagement strategies to understand whether the active participation of older people in the research process could lead to improved outcomes for service users.[42]

Funded by the UK Joseph Rowntree Foundation (JRF), findings from this study transformed the UK's approach to designing and delivering health and social policies. Researchers provided knowledge of the context, circumstances and mechanisms that optimised the involvement of

41 University of Northumbria at Newcastle. *Impact Case Study: Older People Transforming Policy*, Planning and Research. Ref 2014. Available at: results.ref.ac.uk/(S(akprrboev31bnyg2avgfvsul))/Submissions/Impact/1943 (Accessed 14 July 2022).

42 Jan Reed, Glenda Cook, Vera Bolter and Barbara Douglas (2006) *Older people 'getting things done': Involvement in policy and planning initiatives.* Joseph Rowntree Foundation. Available at: www.jrf.org.uk/report/older-people-getting-things-done-involvement-policy-and-planning-initiatives (Accessed 31 October 2022).

older people in the services that were typically complex and required substantial support.
As a result:

- The UK Department for Health granted £2 million funding to the Northumberland Care Trust to trial new services and mechanisms using this approach, appointing older people to governance and strategy roles.
- In partnership with Northumbria University, North Tyneside Council redesigned its model for sheltered housing services by including older people in service planning processes.
- The Law Commission Consultation on Adult Social Care cited the research, recommending the imperative inclusion of older people in policy, service planning and service delivery. This approach was supported by the 2013 Care Bill and subsequently included in the 2014 Care Act, which placed individuals at the heart of adult social care decision-making processes.

Reflection Point:

Can you identify the enablers and levers that contributed to evidence usage by policy stakeholders? What aspects of the science advice and research funding landscape have contributed to making this happen?

Show answers

Engaging with individual experts

Good scientific advice in public decision-making has many benefits, from establishing an accurate formulation of the problem to understanding and evidencing causality. Different individual experts can offer different types of advice depending on your purpose, and their own experience and expertise.

It is helpful to undertake your own initial research to help direct your engagements and build an understanding of the types of advice you need, and from where - be it individuals within different research producing institutions, or those with lived experience of a problem your work is trying to solve.

Expert advice can provide valuable evidence to your policy proposal, however these will be influenced by individual values, incentives and the context in which input is sought. Some experts may be more inclined to focus on providing facts, whereas others might have interests in the scope of policy options with a desire to either limit or expand on this. Experts have been shown to overestimate their own objectivity and we must therefore be aware of the costs of using experts unwisely which can introduce less accurate information with serious knock-on consequences on policy.[43]

Tapping into the advice of HEIs at the individual level

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Higher Education Institutions generally have two kinds of personnel: academic and professional services staff. Both can serve as a useful means of tapping into the expertise available through HEIs. For example, you might reach out to a knowledge mobiliser (a professional services staff) within a Policy Support Unit who can connect you to a relevant body of evidence, or to individual experts, like an academic with subject expertise in an area relevant to your work.

Academics are one of a range of experts that you might expect to engage with to inform your work. Much of the existing literature on what works to improve academic-policy collaboration points to the benefits of fostering individual relationships and trust between decision-makers and academics.[44] As expert advisors, they can often bring a wealth of evidence, wisdom, and ability to advise on a broader evidence base, or work with you to generate evidence in support of your live policy work. Some of these benefits have been outlined to the right.

Benefits of engaging with academic experts

- Can serve as a form of institutional memory - providing an external perspective to changes over time
- Can access funding for research
- Can help us answer or inform different aspects of our live policy challenges and questions we might have about the outcomes we're working towards, the actions we want to take, or the mechanisms and contexts underpinning our work
- Can access to breadth of evidence and language
- Can access to broader networks and bodies of evidence
- Can help us challenge our biases and assumptions
- Have the ability to operate outside political influence that might exist in our own contexts
- Can serve as a source of wisdom
- Can provide longitudinal perspectives
- Can provide cross-cutting views with multi-disciplinary insights
- Have experience teaching and translating complex ideas to others

43 Sutherland, W. Burgman, M. (2015), 'Policy advice: Use experts wisely', *Nature*. 526, pp 317-318. doi: doi.org/10.1038/526317a

44 Oliver, K. Hopkins, A. Boaz, A. Guillot-Wright, S. Cairney, P. *What works to promote research-policy engagement?* [Pre-publication]

When engaging directly with individuals, it is important to build positive relationships and understand the individual drivers and barriers to engagement, and the multiple pressures that academics face. Some academics, for example, will be teaching focused and therefore will be limited in what they can do collaboratively with external stakeholders. Consider the career incentives, esteem and motivation of the academic alongside any academic promotion framework they may be working to. Figure 1.7 provides an example of an academic career progression ladder.[45]

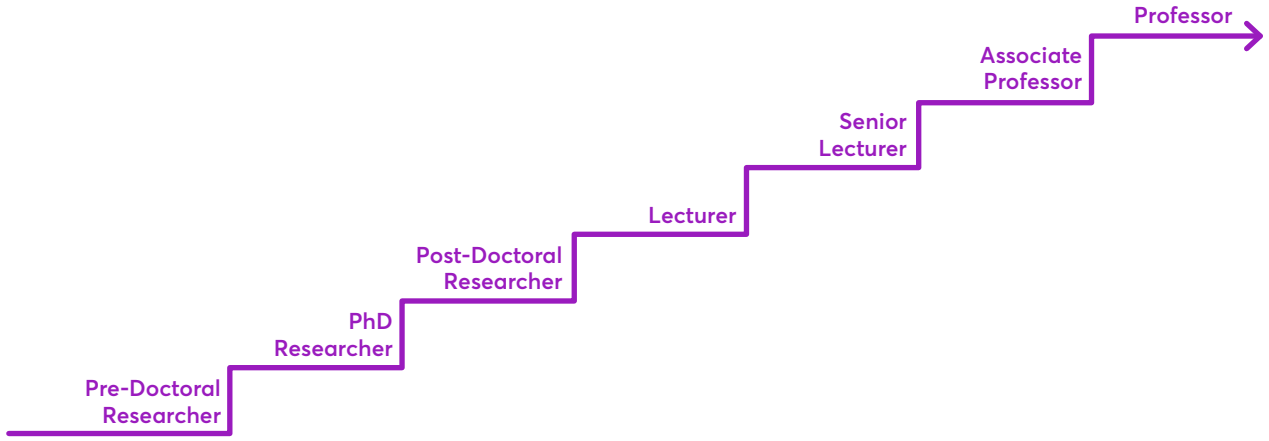

Figure 1.7: An example of an academic career ladder, drawn from University College London (2018).

Context and incentive considerations for academic engagement

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When engaging with higher education institutions and individual academics, it's important to consider some of the realities that are shaped by academic culture and context. The below table highlights key context and incentive considerations for engagement.[46, 47, 48]

45 University College London. (2018) *UCL Academic Careers Framework*. Available at: www.ucl.ac.uk/human-resources/sites/human-resources/files/ucl-130418.pdf (Accessed 14 July 2022).
46 Sasse, T. & Haddon, C. (2018) *How government can work with academia*, Institute for Government. Available at: www.instituteforgovernment.org.uk/sites/default/files/publications/IfG_government_academia_June_2018.pdf (Accessed 14 July 2022).
47 University of Newcastle. University of Zagreb. University of Tartu. (2018) *Principles for promoting the impact of SSH research by co-creation: key issues in research design and communication*. Available at: www.researchgate.net/publication/328249120 (Accessed 14 July 2022).
48 Hopkins, A. Foxen, S. Oliver, K. & Costigan, G. (2021) *Science Advice in the UK*, Foundation for Science and Technology & Transforming Evidence. doi: 10.53289/GUTW3567

Higher Education Institutions	Individual Academics
When engaging with higher education institutions (HEI) and individual academics, it's important to consider some of the realities that are shaped by academic culture and context: [49, 50, 51]	
• **Incentives:** While recent findings from the CAPE Policy Engagement Survey[52] indicate that academics are motivated for their work to have real world impact, career incentives that allow for pay and promotion don't always reward policy engagement, or the requisite skill sets for engaging with decision-makers aren't well-supported or prioritised by academic institutions.	• **Workload and Time Pressures:** As we explored earlier, higher education institutions earn their funding in a competitive environment and you should be aware of the multiple pressures on academics time including winning grants, research and teaching.
• **Collaboration:** Within an HEI there will be both academic and professional services staff. However there will be differences within these job families that may limit how they can work collaboratively with external stakeholders.	• **Career Incentives:** Academics may be working to careers frameworks and promotions processes unique to their institution and will all have individual career incentives including pressures to publish. Understanding these motivations will support engagement.
• **Siloed Working:** The complex and diverse nature of HEIs brings about challenges when looking to collaborate. This can mean that the examples of siloed working experienced in government are often mirrored in the academic landscape - such as difficulties in communicating across departments, management systems, or decision-making structures.	• **Career Stage:** Consider the type of academic you are engaging with, from early career researchers such as postdocs or PhD researchers to senior lecturers and professors. Different academics will have different suitability and varied time, freedom and confidence to engage.
• **Status as Charities:** HEIs operate as charities, relying on funding from tuition fees and education contracts, funding body grants, research grants and contracts as well as other income streams such as from donations, endowments and consultancy. Whilst their charitable status offers benefits such as tax relief, it can also restrict the reinvestment of excess funds, which are often required to cover facilities and infrastructure costs.	• **Tangible Asks:** It is important to give academics a tangible ask so that they can go back to their institutions and justify the use of their time. Be as specific as possible, offering details on things such as partners, publication titles and timelines.
• **Financial Constraints:** Whilst there is money flowing through institutions, they roughly break even on teaching home students - and often make losses on research which relies on income cross-flows from teaching.	• **Networks:** Many academics are part of existing networks and might be able to connect you with a range of additional actors, or other academics, to support you.
• **Priorities of the Institution:** Conducting responsive, consultancy-style projects in response to a specific policy demand may deter from the main activities of the university, such as teaching, or contributing to novel pieces of research. This will link to financial incentives and budgetary constraints.	• **Trust Takes Time:** Taking time to understand the individual will help you to build a long lasting and positive relationship with open communication that can be mutually beneficial
• **Conflict of Interests / Academic Priorities:** The financial processes involved with commissioning research from an HEI may lead to clashing incentives that may lessen an academic's willingness to engage. For example, the ownership of intellectual property generated between a consultancy project and an academic or the likelihood of generating publications from a piece of work.	
• **Specialities and Expertise:** All HEIs institutions are different and can have varying levels of policy engagement specialism that reflect their areas of expertise or previous engagement experiences.	

Table 1.3: Key context and incentive considerations for engagement. Drawn from various sources.[49, 50, 51]

49 Sasse, T. & Haddon, C. (2018) *How government can work with academia*, Institute for Government. Available at: www.instituteforgovernment.org.uk/sites/default/files/publications/IfG_government_academia_June_2018.pdf (Accessed 14 July 2022).
50 University of Newcastle. University of Zagreb. University of Tartu. (2018) *Principles for promoting the impact of SSH research by co-creation: key issues in research design and communication*. Available at: www.researchgate.net/publication/328249120 (Accessed 14 July 2022).
51 Hopkins, A. Foxen, S. Oliver, K. & Costigan, G. (2021) *Science Advice in the UK*, Foundation for Science and Technology & Transforming Evidence. doi: 10.53289/GUTW3567
52 Parker, R. et al. (2022) Perceptions and experiences of academic policy engagement in UK Higher Education Institutions. Capabilities in Academic Policy Engagement (CAPE). Available at: bit.ly/perceptions-and-experiences-academic-policy-engagement (Accessed 6 October 2022)

ACTIVITY 6:

Personas: understanding, identifying and engaging researchers

Overview:

In this activity you will design and use personas to air assumptions and de-mystify researchers so that you can better engage with them in the future. Personas are no substitute for the real thing, but they are a good tool for quickly brainstorming initial thoughts on how you might engage with different academics. Example personas have been provided in Annex B.

Background:

Personas are a great research tool that can allow you to explore the needs, behaviours, experiences and goals of your target stakeholders. The process of researching and creating personas allows you to focus on real people, as opposed to an abstract, general audience, and can be helpful in stepping outside of yourself to recognise the different needs and priorities of others.[53] This in turn can help you to identify and build personal relationships with different forms of expertise. We've provided tips for interviewing individual experts below - but you might also consider other ways that they can engage with your work- such as internal seminars, participation in advisory boards, or sharing relevant evidence sources.

53 Dam, R, F. Siang, T, Y. (2022) Personas - *A Simple Introduction*. Available at: www.interaction-design.org/literature/article/personas-why-and-how-you-should-use-them (Accessed 23 August 2022).

Instructions

Part 1: Creating personas

1. Identify a researcher producer of interest to your team's work. You may choose to complete this activity for more than one institution or individual.
2. Create a persona for this person / institution using the activity template provided. Use information available online to populate the 'about me', 'my motivation' and 'my research' sections.
3. Consider your what, why and how questions from Activity 3. How might these questions align to this persona - who would be best placed to support you?
4. Consider the value-add of approaching these individuals by discussing the following questions in your teams:
   a. What value could their perspective bring to your role and to your team?
   b. What is the value of engaging for your live policy challenge? Reflect on your current priorities and what they could advise on
   c. What is the value of engaging for the wider organisation?
5. Consider opportunities for alignment and how you might engage by discussing the following questions:
   a. How does their motivation overlap with your policy problem?
   b. What might facilitate engagement with this person / institution? What activities could you undertake together?
   c. What barriers might hinder engagement with this person / institution?

Part 2: Interview Guide for Expert Engagement

1. Decide on one person or organisation who you feel is best placed to support your team with your policy challenge. This might be a research producer that you want to engage with, or an individual academic with expertise in your area of work.
2. Read through the guide on outreach to prepare for an interview, then develop your own interview questions using the template provided.

ACTIVITY 6:

Personas: understanding, identifying and engaging researchers

Part 1: creating personas

→ Identify a researcher or research institution of interest to your team's work

1

Name: **Department**

Title: **University**

→ Use information available online to populate this section about the individuals you have selected

2

About Me **My Motivations** **My Research**

→ Consider the What / Why / How questions from Activity 3. How might this person/ organisations be positioned to support you?

3

What...? (to describe) **Why...?** (to explain) **How...?** (to intervene)

→ Consider the value-add of approaching these individuals by answering these questions.

4

What value could their perspective bring to your role and to your team?

What's the value of engaging for your live policy challenge? *(Reflect on current priorities: what questions could they inform? What work could they advise on?)*

What's the value for engaging your organisation?

ACTIVITY 6:

Personas: understanding, identifying and interviewing researchers

Part 2: Developing an interview guide for expert engagement 1/2

When you reach out

What individuals or organisation do you want to engage with via an interview to support you with your live policy challenge?	*Introduce yourselves and the purpose of the interview. Confirm consent for any recording that will happen.* *Allow for silence: your interviewee may be taking time to reflect or construct what they want to say. Pay attention to non-verbal cues, and capture the most remarkable quotes, resources, or expression.* *We recommend doing an interview in pairs. One person can be taking notes, while the other is present with the interviewee.*

Developing Interview Questions

Provide more background to your team and policy question in order to build rapport with the interviewee then ask general questions to help get to know the interviewee.

- *Can you tell me a little about yourself and your work in X area?*
- *What's been your experience with X ?*

Think about the unique value that this expert can contribute to your work to help frame some questions around your current priorities:

- *Do you have any experience of working with this subject area in the past? If so, what areas and with who?*
- *Have you worked with any local partners or stakeholders that we might also be connected to? Can you tell us about your experience of working with them?*
- *Could you recommend any papers, resources or contacts that might be useful to us?*

Try using a mix of open-ended questions, and follow-up with 'why' or 'tell me more about that':

- *What are your thoughts on X paper?*
- *What does a good X look like?*
- *What's the difference between X and Y?*
- *How might X change in different contexts?*

Practice talking about controversial or negative views:

- *Some people tell us this... / Some people say...*
- *What's your take on that? What's your opinion?*
- *Looking across time...*
- *How do you think things will be different in five years?*
- *What are some of the things you want in the future*

Prioritise your questions to ensure you cover the fundamentals before running out of time. If you can, give them an opportunity to ask questions about your work!

Add possible interview questions here.

Think about interview questions which will validate assumptions about your policy, or fill knowledge gaps.

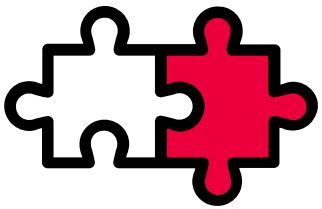
ACTIVITY 6:

Personas: understanding, identifying and interviewing researchers

Part 2: Developing an interview guide for expert engagement 2/2

In the spaces provided, capture key quotes, observations, and insights from the interview.

Quotes	Observations	Insights
Any notable statements your interviewee makes, i.e. the things that stick out in your mind. Sometimes the way in which people phrase a response tells you more about their experience than notes can.	*Capture the ways in which your interviewee physically reacts to questions, or their stance/facial expressions when they are providing answers. What are they expressing but not saying?*	*Capture the key points of your questions and the interviewee's response to them. What are the main insights you need to remember, what points do you want to return to, to ask follow up questions on. Add them here.*



Module 2

Rationale and objectives

Bringing people together

Module 2 explores how academic expertise and evidence can be used to support the first 2 stages of the ROAMEF cycle; rationale and objectives. The first part of the module (2A) focuses on the processes by which evidence and expertise are brought together for clarifying rationale and objectives. The second part of this module (2B) then focuses more closely on the methods and tools by which evidence can be brought in and combined for policy development. In Module 2A - 'Bringing People Together' - we explore how we engage different perspectives together to inform our understanding of a policy problem, and its associated rationales and objectives. This develops evidence of the contexts, goals, and mechanisms of change that we draw upon for resolving policy challenges. Importantly, these types of evidence guide us in identifying and drawing boundaries around the kinds of expertise we need to engage to clarify different aspects of our policy problem. We finish with a consideration of different routes for academic-policy engagement for strengthening evidence capabilities, including academic advisory groups.

Module 2A	OVERVIEW	250
Contents	• Formulating policy problems • Co-creating problem frames with stakeholders • Routes for research-policy engagement • Expert advisory groups	
Learning Objectives	• **Describe how-to formulate a policy problem** • **Explain principles and enablers of co-creating a problem frame with stakeholders** • **Use futures thinking to help explore our policy goals** • **Appraise different routes that support research-policy engagement** • **Propose ways to identify and engage with experts through advisory groups** • **Create a process plan to establish an expert advisory group**	
Activity Overview	7 Designing future news stories 8 Systems Mapping: understanding stakeholder needs, prioritising issues, and understanding evidence gaps 9 Expert advisory groups: why and how do we engage? Principles, participants and design	
Additional Reading	Open Policy Making Toolkit	The Futures Toolkit Problem Structure: on the nature of, and reaching agreement about, goals What works and why in government-academic engagement? Scientific advisory committees: code of practice

Formulating policy problems

Understanding the problem that a policy seeks to address is the basis for how we make the case for any policy intervention. This is a critical component of the policy's rationale and objective.

In a political landscape, a policy problem defines what the policy is trying to address, and influences the potential interventions you look to investigate and implement. Good problem formulation is hard, but essential. Poor problem formulation can result in confusion, delays, ineffective use of resources and even unintended and undesirable outcomes. For all decision-making that impacts the experiences and opportunities of multiple groups, a thorough formulation of the problem, including understanding of its origin, distribution, significance and scale is essential to its likely success. It is clarity about the nature and extent of shared understanding of the problem that provides us with the criteria to define what is 'good' or 'better' use of evidence and academic engagement in our decision-making.

Reflection Point:

Take some time to consider the questions below and discuss your thoughts with your team.

- What is a policy problem? Think of some examples you have encountered in your team.
- Where do you find policy problems have been formulated?
- What evidence is useful when formulating the policy problem, and how do you develop this? Consider broader sources of evidence such as consultations, manifestos, issue papers, user research, emergencies, incidents, etc.
- What examples can you think of where poor problem formulation resulted in unintended outcomes?

Articulating policy problems

—

Formulating a problem involves articulation of what needs to be changed and why. We typically articulate policy problems with a mix of concepts, terms and vocabulary.

Often the understanding of their meaning is intuitive and it can be helpful to explore whether that understanding differ across your stakeholders. Developing a **shared understanding** of these concepts when working with a mixed vocabulary between stakeholder groups can mitigate ambiguity, confusion and inaccuracies in other stages of policy development. Some common definitions include:

Issue: An undesired system characteristic to be resolved. Think of it as a part of a problem.	→ E.g. Air quality in London
Need: A need is an issue specific to an individual or group.	→ E.g. Safer walkability to local amenities for residents in specific area
Goal: A desired outcome that is seen as important even if other goals are not met. It is a fundamental objective that is an end, not a means in itself.[1]	→ E.g. Reduce congestion traffic emissions
Mission: An ambitious goal for a multi-sector, societal challenge.[2]	→ E.g. Reduce by 90% plastics entering the global marine environment by 2025
Vision: An image of a preferred future. It is more than a goal statement – it connotes, not denotes, what that achievement of future goals feels like and look like.[3]	→ E.g. Improved quality of home and family time for all Londoners

Table 2.1: Common definitions for articulating policy problems

Reflection Point:

—

Considering how to formulate and structure problems applies to all areas in which you might need to develop your policy rationale and objectives. For further exploration of your own problem areas, reflect on the following questions:

- Reflect on how this applies to your problem area, and consider how different stakeholders might understand this differently
- **Read** the article:
  Problem Structure: on the nature of, and reaching agreement about, goals
  by Colin Eden, Fran Ackermann
- What are your core takeaways?
- What did this prompt in terms of your policy question or in your approach to academic engagement?

1 Eden, C. & Ackermann, F. (2013) 'Problem structuring: on the nature of, and reaching agreement about, goals'. *EURO Journal on Decision Processes*, 1(1-2), 7-28. doi: doi.org/10.1007/s40070-013-0005-6
2 Mazzucato, M. & Dibb, G. (2019) *Missions: A beginner's guide*. UCL Institute for Innovation and Public Purpose, Policy Brief series (IIPP PB 09)
3 Bishop, P. C. & Hines, A. (2012) *Teaching about the Future*. New York: Palgrave Macmillan. doi: 10.1057/9781137020703

Structuring a policy problem

—

The way we structure a problem will influence and direct the way we respond to it.

To support the formulation of a problem for policy development, we benefit from developing our understanding and evidence about three core structural features of policy problems: a problem's embedded goals, its underlying mechanisms of change, and the boundaries that define its scope.

Problem Feature	GOALS[4]	MECHANISMS	BOUNDARIES[5]
What is it?	Goals are one component of any policy definition. They articulate an eventual change in outcome to be realised. A policy rationale for change and objectives to be delivered are embedded within its goals. Policy problems usually involve multiple, nested goals. Goals are often interconnected, and not independent of others. IIt can be challenging to have oversight of the (supporting) relationships between policy goals. We can use visual approaches to explore these interrelationships, such as 'systems mapping of needs, issues and and priorities', as explored in Activity 8.	Mechanisms help us identify and explain the relationships and behaviours that are the causes of our policy problem. They thereby also give us understanding of the ways that action can lead to change and resolve a problem. Mechanisms inform our understanding of the situated nature of why any one particular need or goal of interest arises in one context, but not another.	Boundaries are demarcation of what is considered part, and what is not, of a policy problem. Boundaries are defined around the goals and mechanisms considered as part of the analysis of a problem situation. Problem boundaries determine the scale and scope of our policies, and thereby the use of evidence and engagement that support them.
How can evidence and stakeholder engagement be used?	To inform understanding of **what** the experience of the problem is, and what values and priorities influence the motivation to resolve the problem - such as agendas and interests. This includes understanding of a potential desired futures and what theise might look like.	To inform understanding of **why** problems and issues arise and **what causes** them, the nature of goals to improve them, and their interactions within different contexts. This includes understanding of how contextual factors influence **how** actions could lead to change and improvements of outcomes.	To inform **where** and **how** to prioritise time, resource, and effort, based on the desired areas of influence, reach legitimate action, and priorities of greatest and urgent need.

Table 2.2: Core features of policy problem structuring

4 Eden, C. & Ackermann, F. (2013) 'Problem structuring: on the nature of, and reaching agreement about, goals'. *EURO Journal on Decision Processes*, 1(1-2), 7-28. doi: doi.org/10.1007/s40070-013-0005-6

5 Ulrich, W. (2005) 'A brief introduction to Critical Systems Heuristics (CSH)'. Available at: projects.kmi.open.ac.uk/ecosensus/publications/ulrich_csh_intro.pdf (Accessed: 1 December 2021).

Problem formulation with evidence and stakeholder perspectives

—

A problem formulation identifies the critical issues policy aims to resolve and makes explicit an understanding of how these arise from the relationships between the understanding of policy challenge goals, mechanisms of change and problem boundaries. These have been illustrated below, using the liveability of a city as an example.

There are a range of tools that support collaborative problem formulation and help to answer the related following questions, such as theories of change in Module 4, and Activity 8 of this module.

A problem frame includes:

What changes in social, environmental, economic **outcomes** are targeted?

What causal **mechanisms i**nfluence the problem?

What **evidence** is used?

Which **stakeholder perspectives** are represented?

Where is the **problem boundary** defined?

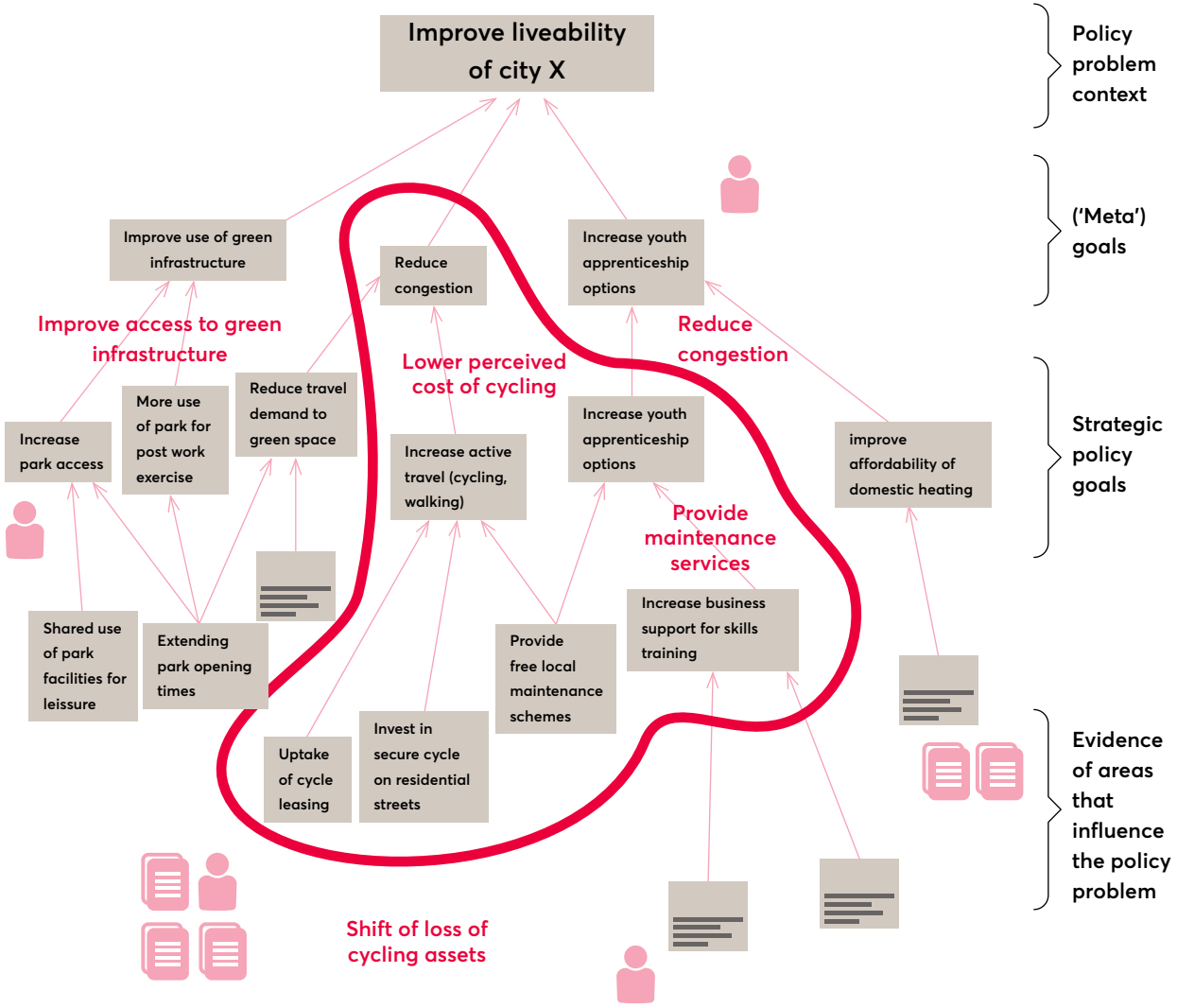


Figure 2.1: Problem formulation with evidence and stakeholders

ACTIVITY 7:

Designing future news stories

Overview:

In this activity you will create a news article from the future, celebrating the outcomes of your policy. This will help you to think about the visions and missions framing your policy challenge and consider how different objectives, outcomes and rationales for action may be experienced or perceived by different audiences.

Background:

This exercise is an example of one tool within a broader set of methods that help us think about futures. The Foresight team, based in the Government Office of Science (GO-Science), supports futures thinking within the UK government. The Futures Toolkit[6] provides a set of tools to embed long-term strategic thinking in the policy process. It can be used to explore different future scenarios, identify change drivers and strategic issues, and identify knowledge gaps within the team.

Instructions

Complete the template provided to produce a future news story celebrating the outcomes from your policy challenge.

1. As a team, discuss what you think success will look like for your policy challenge. This will differ depending on the audience of your newspaper.
2. Pick a newspaper title, the year, create a headline and add some key points to the article.
3. Create headline success statistics, quotes from stakeholders affected by your policy and add images to show how this might look and feel in the future. Examples of stakeholders might be local citizens, business owners or government representatives. This will vary depending on your policy area and interest.
4. Populate the side articles with reflections on things that went wrong or could have gone more smoothly, and what might happen next.

Think aspirationally, and have fun with this! Futures exercises such as this one are also an opportunity to explore the hopes, empathy, positivity, and creativity influencing our policy or project goals.

6 Government Office for Science (2017) *The Futures Toolkit: Tools for Futures Thinking and Foresight Across UK Government*. Available at: assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/674209/futures-toolkit-edition-1.pdf (Accessed 13th July 2022).

ACTIVITY 7:

Designing future news stories

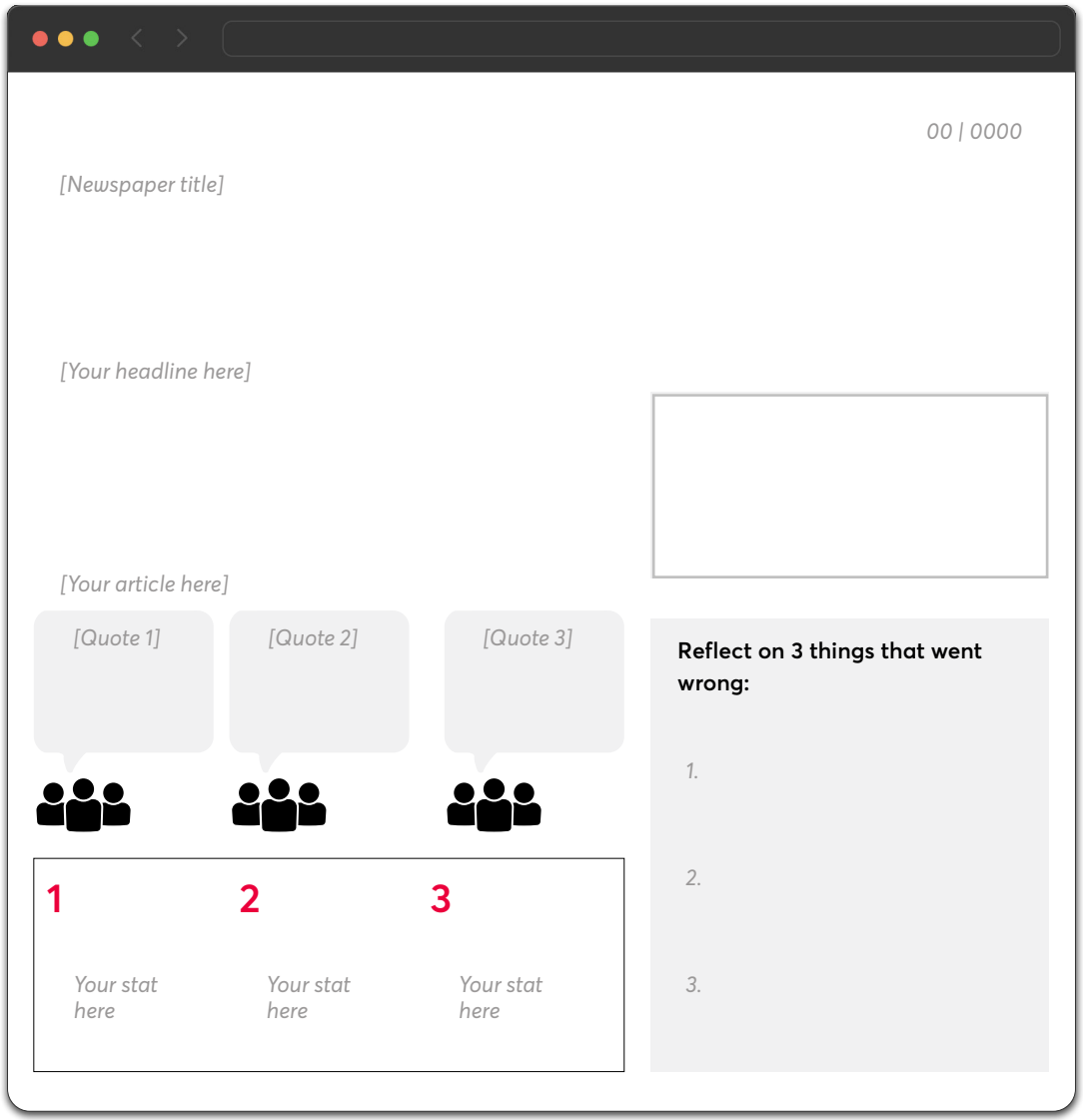
Your Policy Challenge:

What's your (succinct) headline? What's the biggest difference you hope to make in one place or many?

Summarise in a few sentences and/or bullets what has happened

What would different stakeholders say about your policy's impact in the future?

Create future statistics that would indicate success



Pick a date for your future story!

Upload or draw an image: What will this look / feel like?

Consider three likely barriers to progress

Co-creating problem frames with stakeholders

Different stakeholders have diverse knowledge of the policy problem frame due to their unique experiences, backgrounds, needs, agendas and responsibilities. Problem frames are therefore best co-created with stakeholders.

Stakeholders' perspectives of the problem play an important role and serve as a key source of evidence in policy problem formulation. Policy makers have a role in bringing together these stakeholders together into a process that explores their different needs, expertise, and experience. This helps create a shared understanding of the problem frame (including state of evidence of the problem goals, mechanisms and boundaries), and ideally increases alignment between their goals. Six principles for better use of evidence and expert engagement for co-creation of policy rationale and objectives are:

Allow a **range of world views** and objectives, encouraging a diversity of voice.

Encourage the **participation** of different stakeholders in the problem framing process to allow for the inclusion of different goals, aspirations and assumptions.

Significant **uncertainty** is expected and tolerated, as causal mechanisms will not always be immediately understood.

Aim for **exploration** rather than optimisation. Minimise the pressure for participants to be immediately useful and instead keep the conversation open and exploratory.

Quantification should not be the primary focus and end goal - typically aim for **little or no quantification** as this could prevent achieving other parameters.

Use a **systems** perspective to look at the problem wwithin a network of stakeholder needs.

Figure 2.2: Principles and enablers to co-creating problem frames. Taken from Yearworth & White (2014).[7]

7 Yearworth, M. & White, L. (2014) 'The non-codified use of problem structuring methods and the need for a generic constitutive definition', *European Journal of Operational Research*, 237(3),932-945. dio: 10.1016/j.ejor.2014.02.015

Effective participative problem framing

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Co-creation benefits from a shared language that avoids jargon and enables shared meaning and alignment of interest within a group.

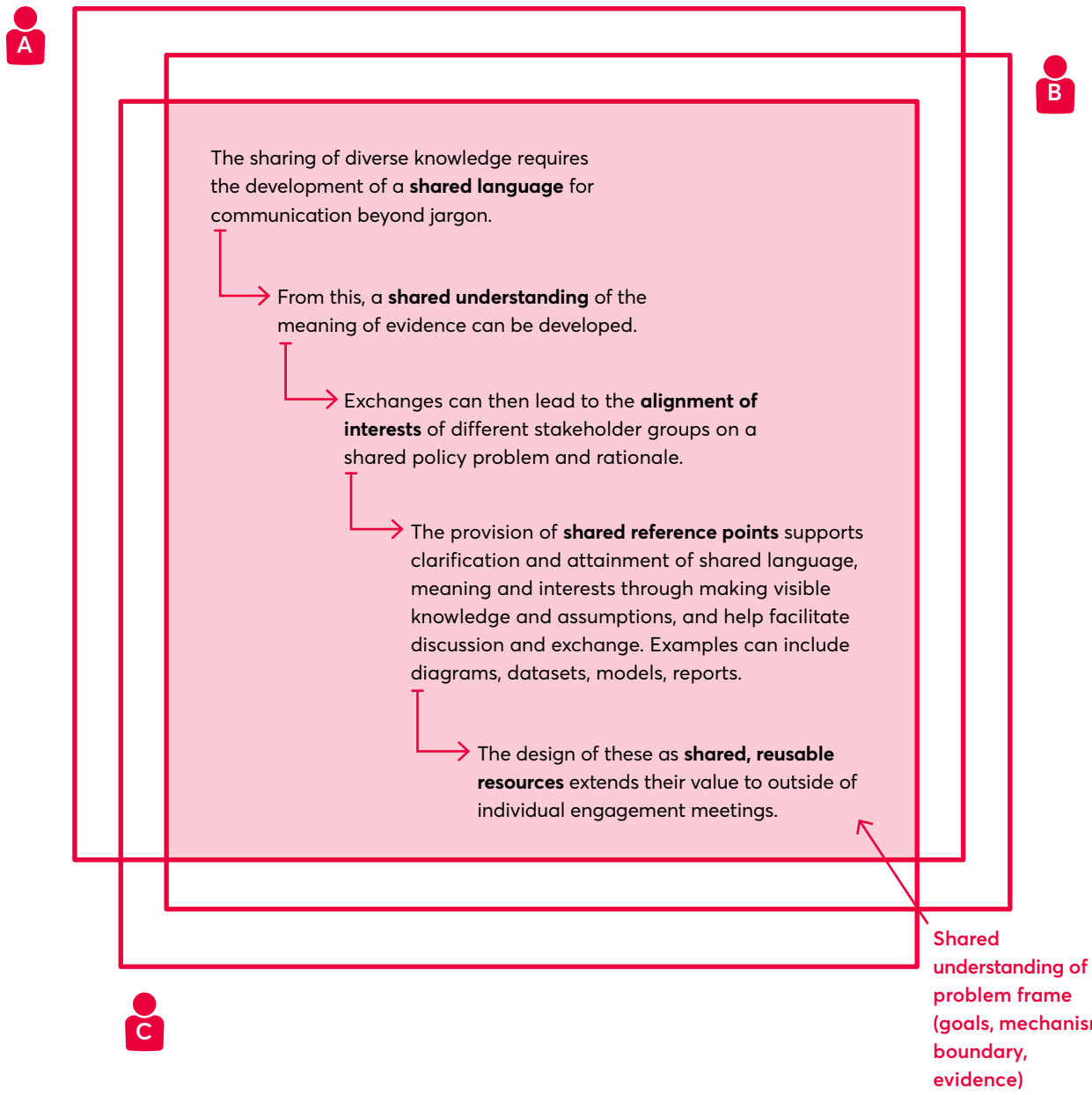


Figure 2.3: Effective participative problem framing

'Co-approaches' to problem structuring, evidence use, intervention design, and knowledge mobilisation

—

Increasingly, 'co-approaches' are seen as a promising way to promote inclusivity, distribute accountability, and unearth richer insights when undertaking meaningful partnership working. They include a range of participatory and creative methods that can challenge the power imbalances that exist in the decision-making processes. Within the evidence informed decision-making landscape, for example, co-creation approaches are seen as a promising means of:

- inducing context-specific norms and practices in how evidence is used[8]
- ensuring interventions or services meet the needs of users (such as the process of co-designing an evidence capability learning programme)[9]
- knowledge mobilisation of research to inform decision-making.

Navigating which 'co-approach' to use - from co-design, to co-creation, to co-production - can be difficult. To support determining what 'co-approach' is most helpful for your needs, we recommend the following resources:

- Beyond Sticky Notes:[10] This resource helps differentiate between the different definitions of 'co-approaches' from a design perspective. It also provides information on co-design, the principles and processes involved, the social movement aspect of co-design and the conditions that can support co-design to succeed. There is also access to a free book chapter and a co-design planning tool on Miro.
- This article[11] on the use of co-approaches to mobilise knowledge in the management of health conditions. This looks at the reasoning behind the adaptation of co-approaches, how they look to achieve knowledge mobilisation and what can be done in future to better meet the principles of these approaches.

8 Metz, A. Boaz, A. and Robert, G. (2019) 'Co-creative approaches to knowledge production: what next for bridging the research to practice gap?', *Evidence & Policy: A Journal of Research*, Debate and Practice, 15(3), pp.331-337. doi: 10.1332/174426419X15623193264226

9 Morgan, K. Lee, S. (2022) *Co-designing learning for evidence use and engagement*. Available at: www.nesta.org.uk/project-updates/co-designing-ways-to-improve-evidence-gathering-and-use/ (Accessed 23 September 2022).

10 Beyond Sticky Notes (2022) *What is co-design? A brief overview.* Available at: www.beyondstickynotes.com/what-is-codesign (Accessed 13 July 2022).

11 Grindell, C. Coates, E. Croot, L. O'Cathain, A. (2022) 'The use of co-production, co-design and co-creation to mobilise knowledge in the management of health conditions: a systematic review', *BMC Health Services Research*, 22, 877. doi :doi.org/10.1186/s12913-022-08079-y

ACTIVITY 8:

Systems Mapping: understanding stakeholder needs, prioritising issues, and understanding evidence gaps

Overview:

This activity combines a number of different techniques for creating a systems map of your policy rationale and objectives. It will help you to understand different stakeholders' needs and to interrogate the goals, mechanisms and boundaries framing your policy challenge. This is important for identifying the types of evidence and expert engagement needed to support your work.

Background:

Systems mapping explores the complex dynamics and interconnections at play within a system, and allows for the identification of uncertainties, knowledge gaps and potential points for intervention. It involves employing a number of tools that often use a visual depiction to display information, including cluster maps, stakeholder mapping, Ishikawa diagrams (otherwise referred to as fishbone, these outline the causes and effects of a problem), and causal loop diagrams. GO-Science's Systems Thinking toolkit[12] is a good place to discover tools to support this process.

12 Government Office for Science (2022) *An introductory systems thinking toolkit for civil servants*. Available at: www.gov.uk/government/publications/systems-thinking-for-civil-servants/toolkit (Accessed 13th July 2022).

Instructions

Part 1: Stakeholder needs

1. Write out all the stakeholders related to your policy challenge: Who are they? What are their different needs? How might they formulate the problem? We have grouped these by members of society, government, corporate and academic, but you can add additional categories as needed.
2. Position the stakeholders and their needs on the map provided. Think about whether they are central, related or peripheral to your work.

Part 2: Root cause analysis of the problem using 'five whys'

3. Write your live policy challenge in the first empty box. Then ask yourselves, 'why is this a problem?'
4. Continue asking 'why is this a problem', using the previous response as a reference and bearing in mind the stakeholders identified in Part 1. Consider prompt questions such as: Why is this an issue? Why have you angled it this way? Why is that important?

Part 3: Codifying problem frames

5. Map the themes generated from both the root cause and the stakeholder mapping activity into the centre circle of the worksheet.
6. Group these themes together by their commonalities in the outer circles of the worksheet. Give each of these thematic groups a title. This will serve as the 'problem boundary' that can support future evidence use and generation efforts.
   a. Here, you're practising a kind of synthesis - talking through this with your team can be helpful in driving consensus about what the core problem boundaries are!
7. For each of these thematic groupings, identify where you might need to further use or generate evidence as relevant to this theme. You might also draw on work from other elements of the toolkit, including:
   a. Your answers from Activity 3: Expanding Our Questions: The 'What, Why and How'
   b. Your answers from Activity 2: Mapping, Organising and Prioritising Evidence: Data, Information, Knowledge and Wisdom
   c. Your answers from Activity 5: Understanding and Engaging with Research Producers for Our Work

→ **Remember:** This is a discursive, iterative process! The boundaries that we create around our evidence needs might be restricted by what you can control, or where current priorities lie. Try not to get bogged down in making a big system map, and instead focus on finding out what you need to know that you don't already know by creating boundaries around problem frames. You can always come back to this at a later stage and add to it over time.

ACTIVITY 8:

Systems Mapping: understanding stakeholder needs, prioritising issues, and understanding evidence gaps

Part 1

Create the stakeholders related to your policy challenge.

→ Who are they?

→ How might each articulate their needs relating to the policy challenge?

Write your policy challenge:

Society (Citizens, Community Organisations, Non-Governmental Organisations and foundations)	**Government** (Central government, arm's-length bodies, and local government)
Stakeholder **Their need in relation to the challenge:**	**Stakeholder** **Their need in relation to the challenge:**
Stakeholder **Their need in relation to the challenge:**	**Stakeholder** **Their need in relation to the challenge:**
Stakeholder **Their need in relation to the challenge:**	**Stakeholder** **Their need in relation to the challenge:**
Stakeholder **Their need in relation to the challenge:**	**Stakeholder** **Their need in relation to the challenge:**

ACTIVITY 8:

Systems Mapping: understanding stakeholder needs, prioritising issues, and understanding evidence gaps

Part 1

Corporate (Private Organisations, Small Businesses)	Academia (Universities and Research Centres)	Other:
Stakeholder Their need in relation to the challenge:	Stakeholder Their need in relation to the challenge:	Stakeholder Their need in relation to the challenge:
Stakeholder Their need in relation to the challenge:	Stakeholder Their need in relation to the challenge:	Stakeholder Their need in relation to the challenge:
Stakeholder Their need in relation to the challenge:	Stakeholder Their need in relation to the challenge:	Stakeholder Their need in relation to the challenge:
Stakeholder Their need in relation to the challenge:	Stakeholder Their need in relation to the challenge:	Stakeholder Their need in relation to the challenge:

ACTIVITY 8:

Systems Mapping: understanding stakeholder needs, prioritising issues, and understanding evidence gaps

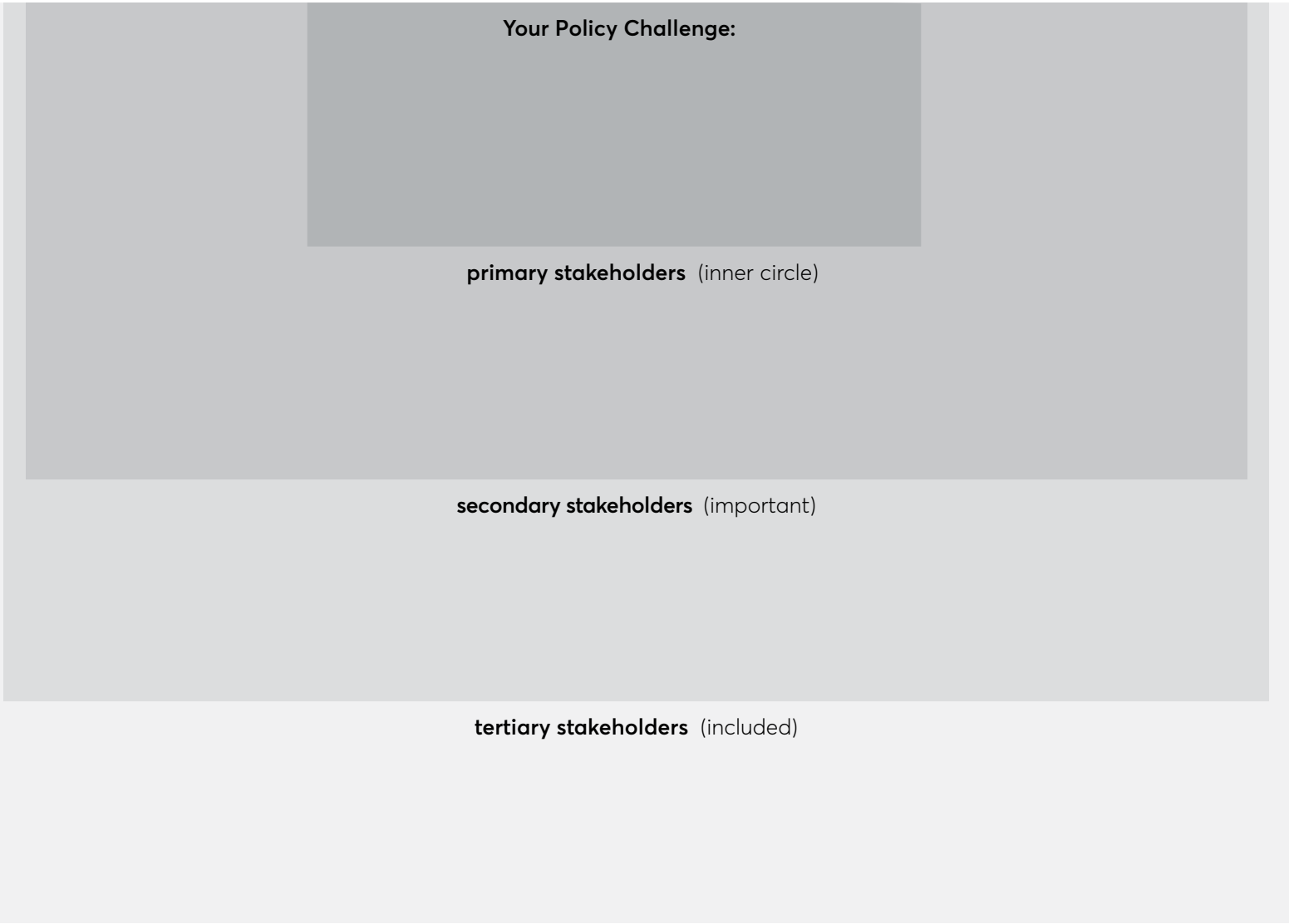
Part 1

3/3

Map your stakeholders by relevance to your policy challenge.

→ Are there any clusters of closely related stakeholders?

→ What are the common themes that are emerging about the needs of your stakeholders?



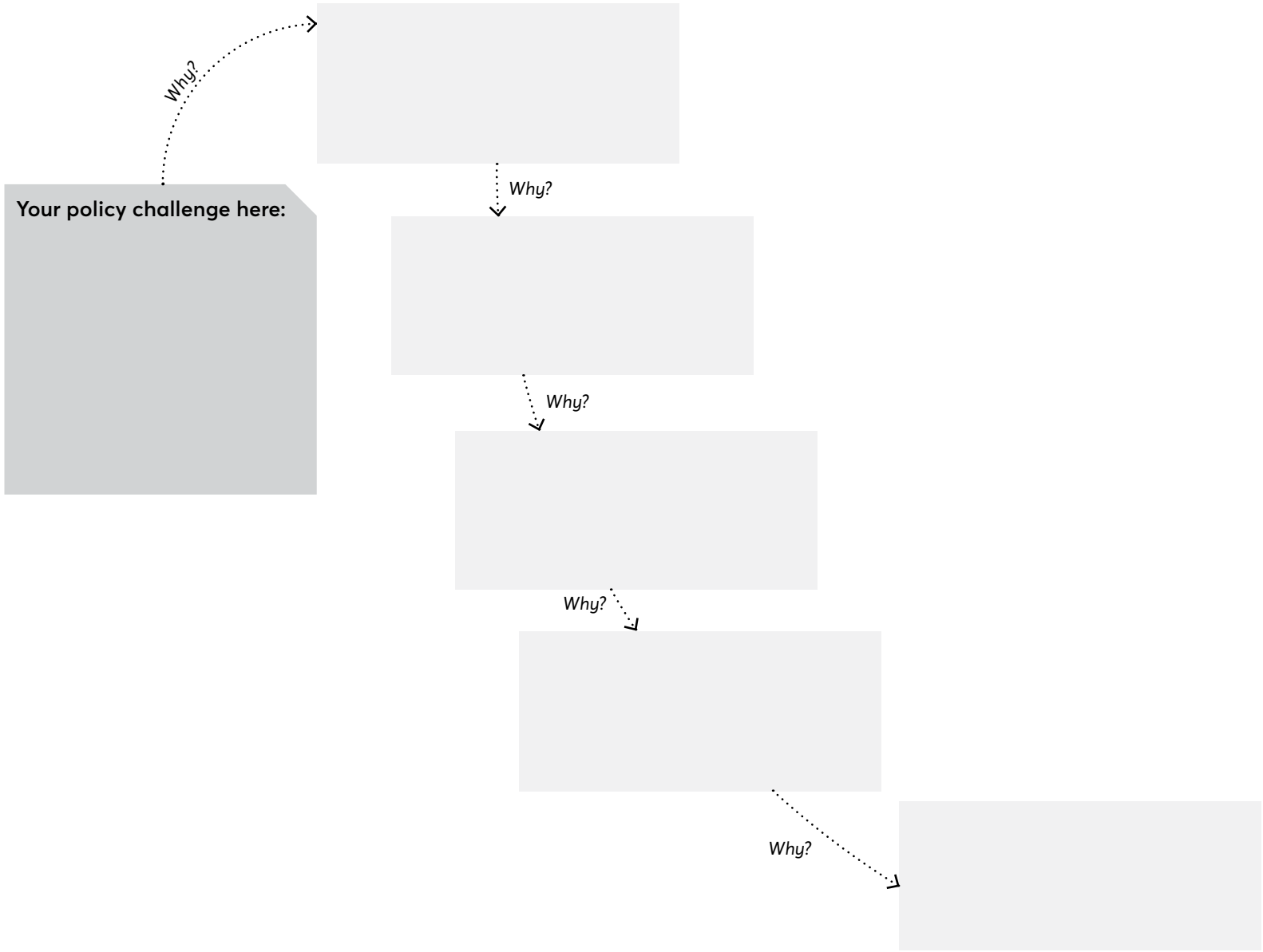
ACTIVITY 8:

Systems Mapping: understanding stakeholder needs, prioritising issues, and understanding evidence gaps

Part 2

Start to identify the root cause(s) behind your policy challenge by repeadly asking yourself 'why is this a problem?'.

→ What are the common themes that are emerging about the root causes? Note them below:



ACTIVITY 8:

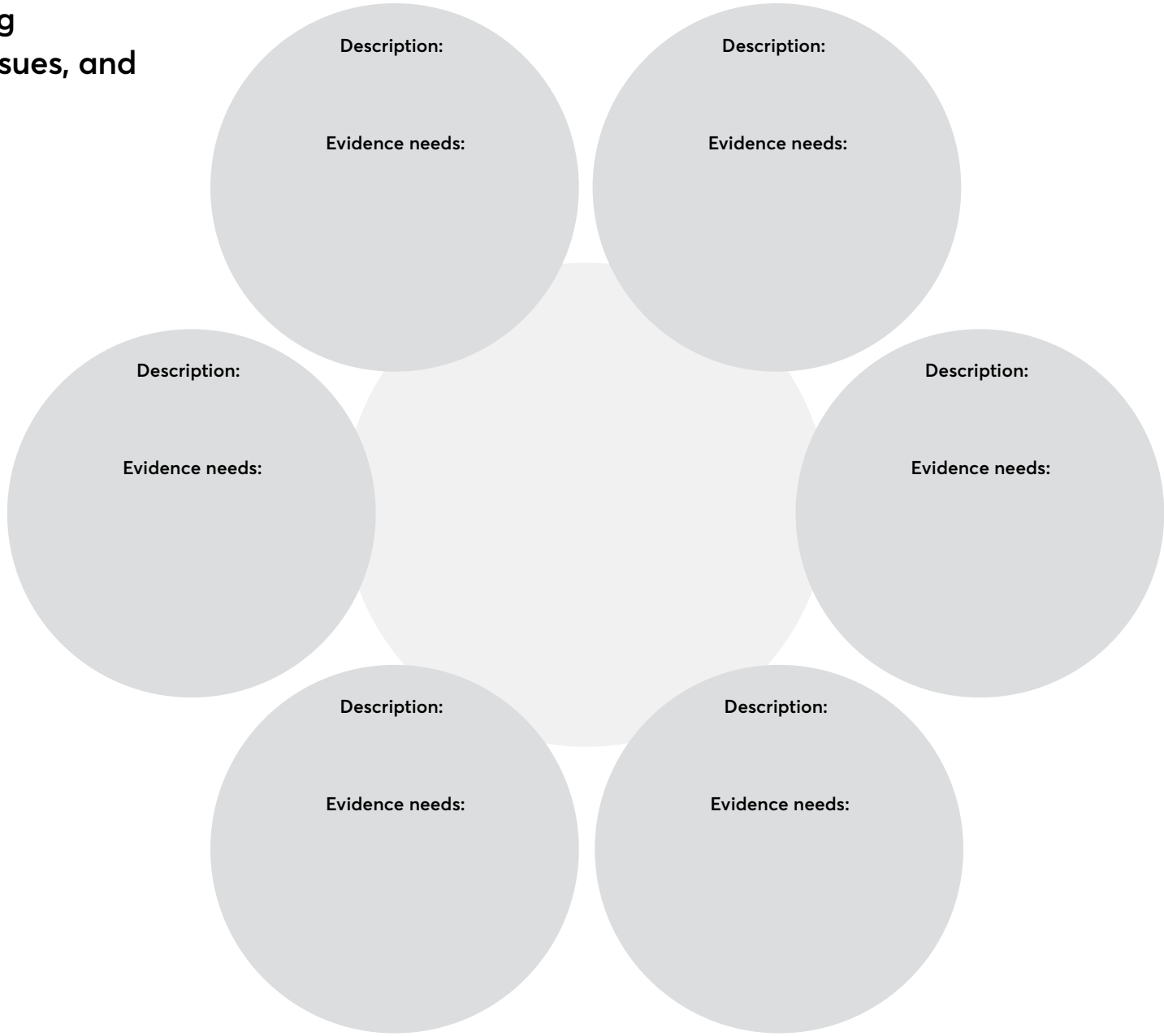
Systems Mapping: understanding stakeholder needs, prioritising issues, and understanding evidence gaps

Part 3

Paste all the themes generated from the stakeholders needs and root cause exercise into the central circle.

Group them by commonalities into clusters and label the outer circle titles. Add a description of the boundaries around this problem.

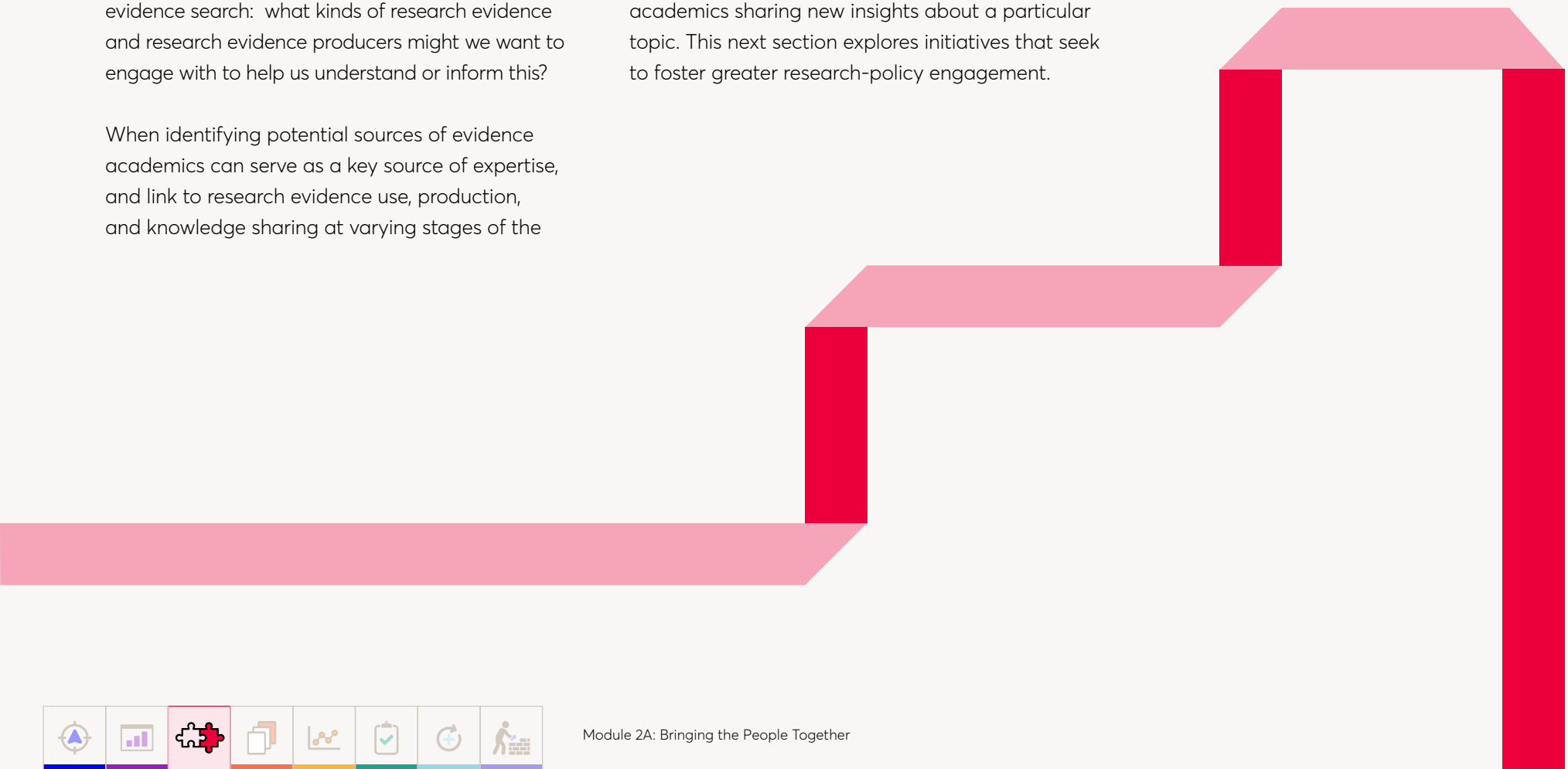
Identify where you might need further use of, or to generate, evidence as relevant to this theme.



Routes for research-policy engagement

Creating problem frames allows us to surface where, and what kinds of, evidence and academic expertise might be needed to help navigate uncertainty or challenge assumptions about our work. By exploring the ways that stakeholder needs, issues, and vision come together, we can start to build consensus around evidence gaps that might exist within our problem frames. This can help steer our evidence search: what kinds of research evidence and research evidence producers might we want to engage with to help us understand or inform this?

When identifying potential sources of evidence academics can serve as a key source of expertise, and link to research evidence use, production, and knowledge sharing at varying stages of the policymaking process. As explored in Module 1, integrating academic expertise and research evidence can support a range of policy functions. There are a multitude of ways that this engagement might take shape in practice - from reading a research output, to inviting academic participation in workshops to construct problem frames, to academics leading a policy evaluation, to academics sharing new insights about a particular topic. This next section explores initiatives that seek to foster greater research-policy engagement.



Linear, relational, and systems approaches to research-policy engagement

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To help explore and evaluate different forms of engagement between academic research and government, the Transforming Evidence Hub conducted a mapping of research-policy engagement initiatives internationally.[13] These have been classified under three generations of thinking: linear, relational, and systems.[14]

Linear approaches to research-policy engagement are characterised by a focus on the dissemination of research outputs.[15]

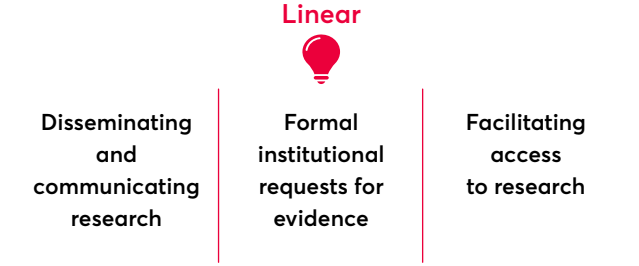

Figure 2.4: Linear approaches to research-policy engagement. Taken from Best and Holmes (2010).

They include efforts to communicate and disseminate evidence, formal research requests, and facilitating access to research, and can be thought of as 'push' approaches to research-policy engagement. As an evidence user this often means engaging with research outputs or summaries of an evidence base.

An example of a linear approach are evidence gap maps (EGMs), which provide a visual and systematic representation of what we do and do not know about an existing evidence base. By displaying summary characteristics of a research evidence base, such as intervention costs, strength of the evidence base, or evidence of effectiveness, evidence gap maps can help simplify the process of accessing and interpreting the rigour and relevance of research evidence. In the UK, many What Works Centres[16] use evidence maps to help display the evidence base against particular subject areas and interventions, such as the toolkits to support evidence use use provided by the What Works Centre for Local Economic Growth (WWCLEG). Similarly, internal knowledge management systems, which we'll explore in Module 6, can help improve the way research conducted within an organisation is managed, used, and communicated to inform future use.

13 Hopkins, A,N. & Oliver, K. *Mapping research-policy engagement initiatives internationally*. Available at: transforming-evidence.org/projects/mapping-government-academic-engagement-initiatives-internationally (Accessed 13 July 2022)
14 Best, A. & Holmes, B. (2010) 'Systems thinking, knowledge and action: towards better models and methods', *Evidence & Policy*, 6(2), 145-159. doi: 10.1332/174426410X502284
15 Hopkins, A,N. (2020) "Pushing' research evidence only gets us so far', *Transforming Evidence for Policy and Practice Blog*. Available at: transforming-evidence.org/blog/pushing-research-evidence-gets-us-only-so-far-with-linear-approaches-having-sever-limitations (Accessed 13 July 2022).
16 Evaluation Task Force (2013) *What Works Network*. Available at: www.gov.uk/guidance/what-works-network (Accessed 13 July 2022).

Relational approaches to research-policy engagement involve sharing knowledge between researchers and policymakers.[17]

Figure 2.5: Relational approaches to research-policy engagement. Taken from Best and Holmes (2010).

Relational initiatives aim to move beyond the 'push' approaches towards 'pull' approaches, in which evidence generation activities and use activities are driven by policy demand. Relational initiatives emphasise knowledge sharing as a social process, and focus on how collaborations and partnerships can be formed through activities such as skills building and network creation between academics and decision-makers. Capacity building activities, such as fellowship schemes developed by Cambridge Centre for Science and Policy, can help foster professional partnerships, while training initiatives such those developed by Nesta can equip policymakers with skills to engage with research evidence, and offer opportunities to invest in building relationships.

Systems approaches look at how to create change in cultures, infrastructure and leadership strategy to support research-policy engagement.[18]

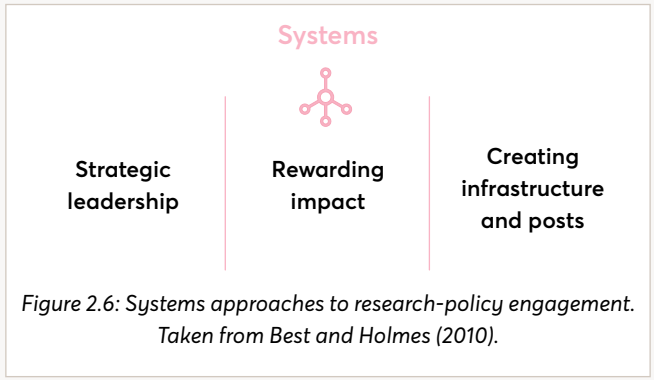

Figure 2.6: Systems approaches to research-policy engagement. Taken from Best and Holmes (2010).

Systems initiatives take into consideration the ways that a multitude of environments, actors, and relationships might come together towards a mutually beneficial purpose. Activities for systems and structural improvements to research-policy engagement might include new incentive systems, the creation of infrastructure and posts, or the integration of collaborative principles within research and policy processes. One example of a systems approach is the Chief Scientific Adviser's (CSA) Office within UK government departments, which helps to integrate access and use of science and engineering advice into the policymaking process.

Reflection Point:

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In your teams, reflect on the ways in which you engage with research evidence and academia.

- Can you identify which kind of engagement you have used?
- What other routes for engagement might you consider from across the nine linear, relational and systems initiatives provided?

17 Hopkins, A,N. (2020) 'Building relationships across research and policy sectors: what's being tried?', *Transforming Evidence for Policy and Practice Blog*. Available at: transforming-evidence.org/blog/sharing-knowledge-is-social-and-complex-depending-on-contexts-capacities-and-relationships (Accessed 13 July 2022).

18 Hopkins, A,N. (2020) 'Shaping real change at the boundaries of research and policy means transforming systems', *Transforming Evidence for Policy and Practice Blog*. Available at: transforming-evidence.org/blog/transforming-systems-is-needed-to-shape-real-change-at-the-boundaries-of-research-and-policy (Accessed 13 July 2022).

Expert advisory groups

One approach that can be used to strengthen research-policy engagement is establishing expert advisory groups. Expert advisory groups are a common relational way for organisations to integrate a diverse set of expertise from academic and non-academic experts into their work. Advisory groups can take a number of formats, be facilitated in different ways, and have different participants- with examples highlighted in Table 2.3. Their differences reflect the different roles and contributions they can make to different stages of the policy cycle.

When establishing these groups, consider the components that can support the success of your advisory group, which might include:

- **Purpose:** The purpose of the advisory group, and the relevant problem frames, evidence needs, or stages of the policy cycle that an advisory group can support with.
- **Principles:** Consider the principles for participation, for example using principles for co-designing shared in Figure 2.3.
- **Types of Expertise:** Clarity on who you consider to be an expert. This can range from those with lived experience around a problem area, to practitioners, to academic experts.
- **Equity and Diversity:** Consider how you might ensure diversity and equity in membership to support the development of an evidence base that incorporates different understandings of the problem.
- **Levels of Seniority:** When considering academic expertise, for example, consider where early career researchers, PhD students, postdoctoral researchers and lecturers can offer new perspectives and different levels of flexibility and availability
- **Inclusion:** What voices are included or excluded from these groups and how you can put in place mechanisms that ensure the inclusivity of diverse thought? This might include remuneration for participating, or considerations for outreach that ensure diversity in socio-economic and geographic representation.
- **Operational Processes:** Consider what contracts, internal commissioning processes, and terms of reference might need to be established and whether these take place at an individual, or institutional level.

19 UCL. *Policy Advisory Groups and Roundtables Guidance*. Available at: www.ucl.ac.uk/public-policy/sites/public_policy/files/policy_advisory_groups_and_roundtables_guidance.pdf (Accessed 13 July 2022).

	Common roles	Contribution to ROAMEF Cycle	Structure and Organisation
Sandpits	Often set up when establishing policy 'Rationale and Objectives'.	Bring together different expertise and disciplines in typically multi-day, intensive events to develop ideas for new projects in need of new research and evidence.	UK research councils and agencies help organise. Some universities run their own thematic sandpits.
Roundtables	Often set up when establishing policy Rationale and Objectives, and/or Appraisal and Monitoring.	Make targeted contributions to evidence sharing, review, and synthesis.	Many different group facilitation methods can be used from e.g. open policy toolkit, futures toolkit, etc.
Lead expert advisory groups	Often set up when establishing policy Rationale and Objectives and contributes throughout project ROAMEF stages.	Advise on project boundaries; review of evidence; knowledge of relevant expertise systems.	Typically a senior, highly experienced academic acts as Chair. Common formats are to circulate briefing papers and invite written responses before meetings. Membership is often unremunerated.
Project steering group or boards	Often set up at the start of project, and contributes throughout project ROAMEF stages. Sometimes specifically used for engagement and scrutiny of policy Monitoring and Evaluation strategies.	Focus can be on both project evidence, as well as programme delivery mechanisms.	Can be internal / external.

Table 2.3: Examples of different expert advisory groups

→ Remember: the role of advice, and science advice, within decision-making

As discussed in Module 1, the process of evidence creation and evidence use is political. Both the demand and supply of evidence are shaped by the organisations and individuals who set and carry agendas.[20] When seeking policy advice through expert engagement, reflect on the nature of advice you seek.

For example, the academic experts that we engage with will have different perceptions of their roles when providing expert advice to government, and make choices about their approach to engagement based on this perceived capacity. In his influential book exploring the possible tensions experts face when providing policy advice, 'The Honest Broker: Making Sense of Science in Policy and Politics',[21] Dr. Roger Pielke Jr distinguishes between the different roles that science, and researchers, might play in society. These include:

1. The **Pure Scientist** who focuses on providing facts
2. The **Science Arbiter**, who responds to specific questions posed
3. The **Issue Advocate**, who focuses on raising awareness and impacting upon a specific policy problem
4. The **Honest Broker** of Policy Options, who might seek to clarify or expand the policy choices available.

20 Sarewitz, D. Pielke Jr, R, A. (2007) 'The neglected heart of science policy: reconciling supply of and demand for science', *Environmental Science & Policy*, 10, pp. 5-6. doi: doi.org/10.1016/j.envsci.2006.10.001
21 Pielke Jr, R, A. (2007) *The Honest Broker: Making Sense of Science in Policy and Politics*. Cambridge University Press.

ACTIVITY 9:

Expert advisory groups: why and how do we engage? Principles, participants, and design

Overview:

In this activity you will review examples of expert advisory groups set up by governments to support decision-making. You will reflect on a series of questions related to the principles, participants, and design of advisory groups and then think about establishing your own. Terms of reference may be a valuable tool when thinking about establishing groups such as these.

Background:

Expert advisory groups can be structured in a variety of ways, from lead expert advisory groups to project steering groups. Once the experts have been gathered together, they can take a number of different conversation formats, such as roundtables and sandpits. These variations are covered in more detail in Table 2.3. Depending on the structure, function and make up of your group, the guidance on setting this up may vary.
There will be considerations surrounding the coordination, management, diversity and delivery of your group. The UCL Policy Advisory Groups and Roundtables Guidance[22] provides helpful information on these issues, or GO-Science's Code of Practice for Scientific Advisory Committees and Councils.

22 UCL. *Policy Advisory Groups and Roundtables Guidance*. Available at: www.ucl.ac.uk/public-policy/sites/public_policy/files/policy_advisory_groups_and_roundtables_guidance.pdf (Accessed 13 July 2022).

Instructions

Part 1: Learning from Expert Advisory Groups

1. Research expert advisory groups related to your policy challenge. You can use the examples below from gov.uk's list of groups:
   - UK Border Expert Advisory Group
   - Expert Advisory Group on AIDS
2. For each example, reflect on the questions provided in the activity sheet. Consider:
   - Is there anything you would do differently?
   - How might you apply learning from these case studies into the creation or running of your own advisory group?

Part 2: Designing your Own Expert Advisory Group

1. Consider how you might go about establishing your own expert advisory group. Complete the template provided to explore the principles, participants, design and features for your own advisory group.
2. Outline an action plan for setting up your own advisory group.

ACTIVITY 9:

Expert advisory groups: why and how do we engage? Principles, participants, and design

Part 1

		Principles	Participants	Design and Features
Write your policy challenge here:	**From the Case Study**	*What efforts, if any, are made to ensure inclusivity in the expertise identified?*	*What kind of expertise is needed, in support of what purpose?*	*What are the main features of this format?*
	For your own advisory group			
	From the Case Study	*How might you establish a shared language, shared meaning, shared interest, shared reference points, or shared resources between experts that may have different perspectives?*	*What are the experts able to gain from participating in your group? Consider their individual motivations*	*What are the strengths and weaknesses of this format?*
	For your own advisory group			
	From the Case Study	*What principles are considered? For example: openness, transparency or inclusion.*	*Is there variety in seniority? How is this achieved?*	*What, if any, other features could complement this format?*
	For your own advisory group			

ACTIVITY 9:

Expert advisory groups: why and how do we engage? Principles, participants, and design

Part 2

What process would you undergo to establish this group?

First steps

Longer term

Bringing the evidence together

In Module 2B, we will look at how we can bring the evidence together to inform our work. We start by examining the breadth of methods for evidence generation and understanding how these can be aligned to different purposes through a Methods Taxonomy. We then explore practical tools and processes that support the search, appraisal, and synthesis from multiple evidence types, to help us understand how to find and assess evidence that is trustworthy and relevant to our work. We'll then put this learning into practice through a simulation activity, to assess the claims made from multiple evidence types and consider their implications to our live policy challenge.

Module 2B	OVERVIEW		165
Contents	• Understanding methods for producing evidence • Methods taxonomy: aligning the method to the purpose • Using evidence in practice: search, appraisal and synthesis		
Learning Objectives	• **Remember the breadth of methods available** • **Understand the factors and tools that can support the appraisal of evidence quality, trustworthiness, and relevance** • **Apply an evidence search strategy to identify relevant sources of evidence** • **Analyse processes and tools for evidence synthesis** • **Evaluate evidence claims using the AORTA framework** • **Create an action plan to integrate insights from evidence into your work**		
Activity Overview	10 Methods safari 11 Appraising evidence using the AORTA framework		
Additional Reading	**Mapping the UK Standards of Evidence in Policy and Practice**	Quality Assurance Frameworks including **AMSTAR**, **PRISMA**, **GRADE**	**Guidance for Uncertainty Assessment and Communication**

Understanding methods for producing evidence

The suitability of evidence is informed by purpose.

Scrutinising what kind of evidence is suitable for what purpose in policy development involves engagement with the diversity of methods. There is a rich range of evidence types that can be used in policy, and each has associations with different methods of creation.[23] Each method for data collection, analysis, synthesis, and engagement is unique and has distinctive ways of combining assumptions, inputs and preferences for the production of evidence. This means that scrutinising whether a methodology or piece of evidence 'fits' better or worse with your policy work requires us to have some insight about their similarities and differences.

To help appraise what methods make sense for what evidence use, the overarching question is to clarify what the purpose of intended evidence use is. What questions need to be answered? (see Module 1). What engagement needs to be supported for what outcomes?

For each of the three analysis focus areas, the table below highlights typical research questions, typical evidence needs, and provides examples of some of the common families of methods developed to suit their creation. This is of course a simplification, as we can adapt a family of methods such as, for example, user research methods, to create evidence not only about intended outcomes, but also evidence about the viability and risks associated with possible policy actions.

23 Petticrew, M. & Roberts, H. (2003) 'Evidence, hierarchies, and typologies: horses for courses', *Journal of Epidemiology & Community Health*. 57, 527-529. doi: dx.doi.org/10.1136/jech.57.7.527

As a rule of thumb, the methods that are used to generate evidence can be split between different purposes:

Analysis Focus	Questions	Evidence Needs	Typical Methods Families and Uses
Outcomes	**What** are the changes we want to see? What futures do we want? → E.g. reduced traffic congestion	For evidence of needs, issues, objectives, goals, hopes and visions	**Problem Structuring:** Used to pull together the pieces that make up a problem including goals, mechanisms and boundaries **User Research:** Used to explore specific changes by understanding user needs and specifically linking this to individuals. **Visioning:** Used to share ideas through the use of narratives. Methods that are creative and speculative in design including news or stories from the future.
Mechanism and Context	**Why** do different behaviours and policy outcomes happen? How do things work and how does change happen in the world? → E.g. lack of availability of cycling infrastructure and perceptions of risk and commuting safety	For evidence of trends, projections, forecasts, structures, drivers of change and causal relationships of influence	**Pattern-based Descriptive Methods:** Used to provide a summary description of events, structures, relationships of influence, and behaviours. These can be broken down into a set of methods that provide evidence about the past and methods that provide evidence about the future. **Methods to Model System Behaviour:** Used to understand and represent how everyone in the future will behave, through the representation of mechanisms.
Action	**How** can we resolve policy problems? What can we do based on what we know, and what will the impact be? → E.g. provide free cycle maintenance services and increase availability of secure cycle storage outside of homes	For evidence of options, decisions, pathways, uncertainties, opportunities, risks, robustness	**Exploring Pathways:** Used to explore and identify pathways to impact by mapping, road mapping, or backcasting. **Evaluation of Impact, Process, and Value:** Used to understand the kinds of impacts and value of a particular pathway of action. We'll explore more on different ways to understand and define value in Module 5. **Exploring Uncertainty:** Used to help explore different elements of uncertainty.

Table 2.4 : Matching Methods With Purpose

Methods taxonomy: aligning the method to the purpose

Using these three lenses on purposes - outcomes, mechanisms and context, and action - as a guide, we highlight aoutline the variety of methods available for evidence use and engagement.

You may recognise and engage with many of these methods already, and some may be less familiar. The use of many of these methods in evidence and expertise engagement are covered in more-detail throughout this toolkit. At this stage we look to draw attention to the possible diversity of the methods, and illustrate that there is typically a wide range of choices with different implications for methods selection. New methods are also continuously being developed, experimented with, and adapted for use in policy work, such as the Policy Lab's work on Experimental Policy Design Methods.[24]

→ **Beware the Methods Trap!**

When working with evidence sources and experts, you might encounter strong beliefs that favour specific methods or disciplinary approaches to evidence or research production, or dismissive attitudes towards other methodologies. This risks being led into a 'methods trap' - in which the method used is based on pre-existing preferences for a specific method and may not be a great fit for generating the evidence that informs understanding of the problem. Avoid the methods trap through engaging stakeholders in discussions of how a method fits the evidence use purpose.

The definitions provided in the Methods Taxonomy provide an abstract of what the method entails but each has a wealth of clarifications and guidance underpinning their use.

Our definitions have been compiled using the Open Policy Making Toolkit, the Magenta Book, the Futures Toolkit, the Parliamentary Offices for Science and Technology's (POST) Understanding Research Evidence Guide and the SAGE Publishing Research Methods Methods Map . Those that have been highlighted are methods that we explore more in-depth within this toolkit.

Reflection Point:

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Think about the research methods we have outlined in the methods taxonomy, and reflect on the following questions:

- Are there any methods that you are unfamiliar with and would like to learn more about?
- How many of these methods do you typically engage with?
- What methods do you use or engage with that might be missing from this taxonomy?

24 Sabherwal, S. and Sharma, N. (2022). *Launching our experimental policy design methods.* Available at: openpolicy.blog.gov.uk/2022/05/18/launching-our-experimental-policy-design-methods/ (Accessed 4 November 2022).

Methods taxonomy for evidencing policy goals

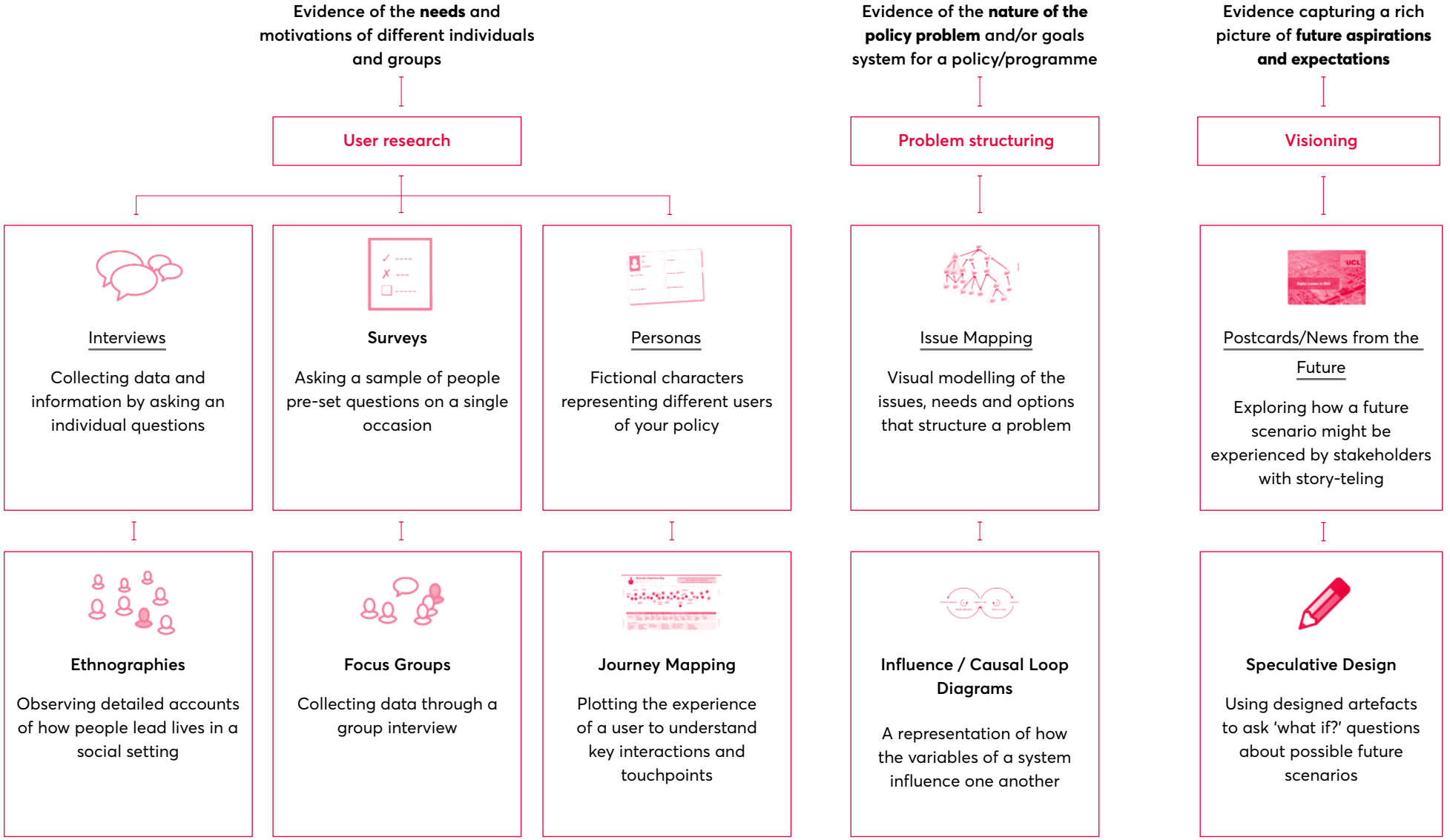

Figure 2.7: Methods taxonomy for evidencing policy goals

Methods taxonomy for evidencing mechanisms and context

Pattern-based summary description of events, structures, relationships of influence, and behaviours

Causal representation of mechanisms driving system behaviour

Describing historical and current behaviour and context

Systems Mapping

Tools that model complex behaviours emerging from interconnections within a system

Systematic Reviews

Review of with pre-specified protocol for source inclusion and findings treatment

Descriptive Statistics

Mathematical tools describing patterns in data with summarising, organising and visualising

Trend Analysis / Time Series

Analysis of how visible or emerging pattern of events suggests change

Describing future system behaviour and context

Pattern-Based Learning

Reasoning about observed and expected system behaviours developed from previous exposure

Projections

Prediction of future situations based on current trends and assumptions

Change Over Time Graphs

Speculative sketching of possible future trends in variables of interest

Forecasting

Using a mixture of current and historic information to provide a detailed outline that describes a plausible future

Drivers of Change Ranking

Sorting of identified future influences by levels of certainty and significance

SWOT

Exploration of relevant strengths, weaknesses, opportunities, and threats of different options

Modelling system behaviour

System Dynamics

Models of stocks, flows and feedback loops to understand non-linear system behaviours

Trend Regression

Estimation of a relationship of influence between one or more variables

Agent Based Modelling

Computational model to explore emergent patterns of activity from individual behaviours

Logic Models

Visual depiction of a policy's inputs, activities, outputs, outcomes, and impacts

Figure 2.8: Methods taxonomy for evidencing mechanisms and context

Methods taxonomy for evidencing policy action

Figure 2.9: Methods taxonomy for evidencing policy action

ACTIVITY 10:

Methods safari

30

Overview:

This activity will familiarise you with the methods that you might come across when engaging with different evidence and research outputs, as aligned with the different purposes of those methods. Referring back to the methods introduced in the Methods Taxonomy, you will determine what you already know (the 'mild' methods), and the methods you are unfamiliar with (the 'wild' methods). This activity can be used to help you understand where you (and your team) might benefit from additional learning about methodologies, and help you to identify what methods could be used to generate evidence to support your policy challenge, and by who.

Background:

Different stakeholders will utilise different methods to generate evidence, but may value certain methods they are used to or have greater experience with. This activity is designed to unearth some of these innate preferences and explore any additional method capabilities that may be present within your team that you can tap into when using, interpreting and generating evidence.

Instructions

Part 1: Reflection on evidence that you would like to generate

1. Write out your live policy challenge in the space provided.
2. Reflect on the methods that you have used so far, and identify areas where additional evidence generation is needed If you have completed module Activity 8 it may be helpful to use your reflections from this activity to explore how different methods can help generate evidence as aligned to these needs.
3. Refer back to the Methods Taxonomy, and consider:
   a. Which methods might help you to fill these evidence gaps?
   b. Are you more familiar with certain methods and are there any you would like to learn more about?
   c. Is there someone in your team with good knowledge of particular methods you are less familiar with?

Part 2: Method Selection

1. Consider whether any particular methods would be useful for evidencing your policy's:
   a. Goals;
   b. Context and mechanisms;
   c. Actions.
2. Within each evidencing section, select three methods that you are more familiar with ('mild') and three that are less familiar with ('wild').
3. Explore the reasons behind your choices and note these down on the template. This can be a helpful starting point for learning more about both the methods knowledge that exists within your team, and where you might benefit from learning more about a particular method.

ACTIVITY 10:

Methods safari: An overview of methods for evidence use and generation: methods for outcomes, mechanisms, and actions

	Mild Choose three methods per category that you are *more familiar with*, would feel *more confident* in conducting or interpreting their results in support of your policy		Wild Choose three methods per category that you are *less familiar with*, would feel *less confident* in conducting or interpreting, and that you want to consider learning about or using in support of your policy	
Current policy challenge:	3x 'mild' methods for evidencing policy goals	why did you choose these?	3x 'wild' methods for evidencing policy goals	why did you choose these?
Evidence used so far:	3x 'mild' methods for evidencing policy mechanisms and context	why did you choose these?	3x 'wild' methods for evidencing policy mechanisms and context	why did you choose these?
Evidence gaps:	3x 'mild' methods for evidencing policy action	why did you choose these?	3x 'wild' methods for evidencing policy action	why did you choose these?

→ Methods Taxonomy

Using evidence in practice: search, appraisal, and synthesis

This section explores the processes and tools that can support efforts to search for, scrutinise, appraise, and synthesise different types of evidence that come from different sources.

When we are using evidence, we want to be able to explore ways of searching for and scrutinising evidence, to assess what the evidence is claiming and practice interpreting it. This often means critically engaging with and appraising different evidence types to explore how confident we can be in the claims that evidence is making, or its relevance to different aspects of our live policy challenges - including the outcomes we are working towards, the actions we take, and mechanisms that explain how change happens. Often this means practising or engaging with forms of evidence synthesis, in which insights from multiple evidence types and sources are drawn together to inform decision-making.

Evidence search strategies

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Understanding where, and what kinds of evidence, to search for is an important component of evidence use.

While there are different approaches to searching for evidence, doing so in a systematic way can ensure you find the information you need in a responsible and transparent way. It can also improve efficiency and often save you time, and can minimise the influence of any personal bias. When developing a search strategy, we recommend following these six steps, adapted from the INASP Toolkit on Evidence Informed Decision-Making:[24]

1 **Understand the request for evidence.** Think about what it is that you are trying to find out and why. In this stage you should explore the scope for the request, think about the format of information you require, and any timelines you may be working towards.

a. Consider the What, Why, and How Questions generated in Module 1 to help steer your search, or the problem frames generated in Activity 8 to help steer your search

2 **Familiarise yourself with the topic.** Before beginning a deep dive into specialist evidence, try to build an overall awareness of key concepts and terminologies. Think about any current or ongoing debates on the issue - are you up to date with these current affairs?

3 **Use your network.** A great place to start is to explore your existing network and determine if you can be directed towards the best sources, debates or put in contact with key stakeholders. You may find it helpful to connect with colleagues working in similar fields and to use this to expand your networks.

a. You might also consider the key stakeholders and the different perspectives and they may have, as conducted in Activity 8.

b. **Remember:** Academics and universities can be a helpful source of information for steering you towards evidence related to your search. You might want to draw upon

4 **Choose the right evidence type.** There is likely to be a wealth of evidence about your question and research topic existing either within your own organisation, or externally. Think carefully about what evidence type will be most relevant to you - and the value that this brings to your question. If searching for research evidence, you might want to reflect on whether to use primary or secondary sources, or concentrate on published or grey literature.

a. **Remember:** It is likely you will need to synthesise a variety of evidence types to inform different aspects of your live policy challenge

5 **Choose your sources of evidence.** Once you have thought about the types of evidence you might want to engage with, consider where you will access these. Are they easily available online, or does your organisation have a membership to online journals or library access? There may also be others who have already conducted similar evidence searches and have produced evidence reviews that you can utilise, such as those produced by What Works Centres.

a. **Remember:** You can draw upon the evidence types generated in the research producers explored in Module 1

6 **Search effectively.** A key benefit of a search strategy is streamlining your evidence search process. Try to select and be consistent with keywords and search terms, and document the terms, types, and sources included within your search. This ensures that the search falls within the boundaries created against different aspects of your challenges, and allows for the replication of a search by others in the future. If your search engine has a filter functionality, consider how to use this to access the types and sources of evidence you have previously identified as useful.

24 INASP (2016) *Evidence-Informed Policy Making (EIPM) Toolkit.* Oxford: INASP. Available at: www.inasp.info/sites/default/files/2018-04/EIPM%20Toolkit-Ed2-FULL.pdf Accessed 13 July 2022.

Evidence definitions

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- **Body of evidence:** A collection of evidence that is used to substantiate trust in a statement or belief.
- **Critical Appraisal:** The process of assessing and interpreting evidence considering its validity, trustworthiness and relevance to a particular context.
- **Evidence Type:** The different formats of evidence we can obtain: e.g., evidence from RCTs or from systematic reviews. This evidence could be quantitative or qualitative.
- **Evidence Source:** Where is the evidence obtained from? Sources can include journals and databases and can be direct (primary source) or a reproduction.
- **Evidence summary:** A summary of the best available evidence relevant to a topic or idea.
- **Evidence synthesis:** Bringing together information from a multiples sources and/or disciplines to inform an overall understanding of what has been found.
- **Grey literature:** Literature that is not formally published.
- **Primary source:** First hand account of a topic under investigation. They provide the 'raw data'.
- **Secondary source:** Provides a second-hand explanation or analysis of a primary source(s) and thereby reproduces the information from the original document.

Critical appraisal of evidence

Critical appraisal is the process we undertake to make sense of the different claims made by evidence. It helps us determine how confident we can be in the evidence that we use, and its relevance to our own work.

This includes critically examining the basis of the evidence claim, including perspectives presented by evidence, the methods employed, the technical quality, appropriateness, and relevance, and the nature and extent of the claim made. Critical appraisal often involves the systematic use of key criteria to examine the 'quality' of a research evidence output applied to all evidence outputs in the same way. It draws upon the different stages of research production processes to allow us to critically assess the evidence, by providing a systematic score or qualitative assessment of:

- **Biases** within research outputs
- The **strengths** and **weaknesses** of the methods employed
- The **usefulness** of the of the research
- The **validity** of its findings
- The ability of evidence to **answer a particular question**, not just the quality of the output.

Tools to support critical evidence appraisal

There are a variety of tools and guides that can be used to support the process of appraising different types of evidence. These often draw upon the quality assurance standards used by research producers - from analysts within our organisation, to different academics, or knowledge intermediaries. These producers may use different quality assurance tools to help make it easier to understand the quality and robustness of different evidence types, and appraise whether this has been achieved when engaging with an evidence output.[25]

Other examples of tools that support critical evidence appraisal can be found in Table 2.5. The usefulness of these tools can vary depending on the sector, research method, and context. They can reflect the critical scrutiny of a single evidence type and source, an evidence base or bodies of evidence, or the critical appraisal of multiple evidence types, and tend to focus on the internal validity of evidence. These tools have been created by research producers, users, and knowledge intermediaries to support this process.

25 Gough, D. (2021). *Appraising Evidence Claims. Review of Research in Education*, 45(1), 1–26. Available at: journals.sagepub.com/doi/full/10.3102/0091732X20985072 (Accessed 17 October 2022)

Critical appraisal tool	What is it?	Why use it?	Where to find more?
Methodological Guides, and Standards, and Quality Assurance Processes.	Researchers and research producers use methodological guidance, standards, and quality assurance processes to mitigate against different forms of bias that emerge throughout the research process. Quality standards can be generated in a number of ways - such as around a method, or within an organisation in a way that reflects best research practice.	Used to support research evidence generation, and the critical appraisal of a single research evidence study.	The Critical Appraisal Tools Programme[26] has a set of publicly available critical appraisal tools for single research studies. The Aqua Book[27] is the Treasury's guidance document on producing quality analysis for the UK government. It acts as a good practice guide to those working with analysis and analytical models. Although this looks at analysis use, many parallels can be drawn to evidence use, including financial benefits to understand future costs and the need for policy simulation, which will require evidential inputs.
Evidence Frameworks, including Standards of Evidence	Many organisations that produce or disseminate evidence use different evidence frameworks, such as standards of evidence, to help determine quality generation, communication, and use about an evidence base. Other quality assurance frameworks in use include the Maryland Scientific Methods Scale,[28] AMSTAR,[29] PRISMA and GRADE.[31]	Used to support critical appraisal of: • Specific interventions: including well-defined programmes through to thematic topics and areas, such as 'homework' • Bodies of evidence: such as an evidence review or meta-analyses on a topic • Organisation's readiness: such as an organisation's ability to evaluate or replicate interventions • Quality of an individual evaluation: such as how robust the study is and how confident we can be in its findings with single interventions	In 2018, Nesta conducted a mapping of the UK Standards of Evidence frameworks[32] which demonstrates a range of evidence frameworks that have been used in the UK in support of Social Policy.
Tools to support research synthesis	Systematic reviews use explicit and repeatable methods to find, select and synthesise all available evidence on a topic. They define a clear research question and require a high standard of rigour that is equivalent to that needed for primary research.	These types of tools have been developed to support practical aspects of system mapping and research synthesis including: • Coding and data extraction • Reporting of primary research • Data management • Teaching and learning of meta-analysis.	The Evidence for Policy and Practice Information (EPPI) Co-ordinating Centre host a series of publicly available tools and guidance[33] to support the production of systematic reviews.

Table 2.5 - Useful tools for critical evidence appraisal: what are they, why would you use them and where to find more information

26 Critical Appraisal Skills Programme. *CASP Checklists.* Available at: casp-uk.net/casp-tools-checklists/ (Accessed 13 July 2022).
27 HM Treasury (2015). *The Aqua Book. Guidance on producing quality analysis for government.* Available at: www.gov.uk/government/publications/the-aqua-book-guidance-on-producing-quality-analysis-for-government (Accessed 14 July 2022).
28 What Works Centre for Local Economic Growth (2016) *Guide to scoring evidence using the Maryland Scientific Methods Scale.* Available at: whatworksgrowth.org/public/files/Methodology/16-06-28_Scoring_Guide.pdf (Accessed 13 July 2022).
29 AMSTAR (2021) *AMSTAR Checklist.* Available at: amstar.ca/Amstar_Checklist.php (Accessed 13 July 2022).
30 PRISMA (2021) *Welcome to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)* website! Available at: prisma-statement.org// (Accessed 13 July 2022).
31 GRADE (2022) *Welcome to the GRADE Working Group.* Available at: www.gradeworkinggroup.org/ (Accessed 13 July 2022).
32 Puttick, R. (2018) *Mapping the Standards of Evidence used in UK social policy.* London: Alliance for Useful Evidence. Available at: media.nesta.org.uk/documents/Mapping_Standards_of_Evidence_A4UE_final.pdf (Accessed 13 July 2022).
33 EPPI Centre (2022) *Tools.* Available at: eppi.ioe.ac.uk/cms/Default.aspx?tabid=184 (Accessed 13 July 2022).

Is it authoritative, objective, relevant, timely, accurate? The AORTA framework for evidence scrutiny

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The AORTA framework, inspired by the Parliamentary Research Handbook,[34] provides a framework for scrutinising and appraising evidence from a variety of different evidence types and sources. It tries to avoid being sector or method dependent in an effort to avoid the 'methods trap', by focusing on the usability of the varying evidence outputs that you might engage with. This tool can be helpful when seeking to appraise multiple sources and types of evidence that may have been produced using a variety of methods or that represent different stakeholder perspectives, not just research evidence.

Reflection Point:

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If you were to add any criteria to this checklist, what would you add?

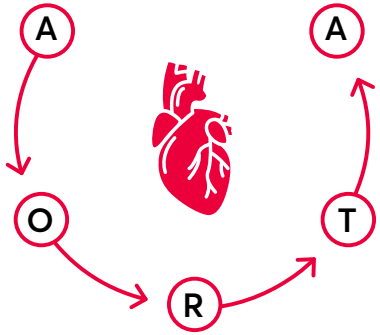
34 Houses of Parliament (2017) Parliamentary Research Handbook. Available at: www.parliament.uk/business/publications/research/parliamentary-research-handbook/ (Accessed 13 July 2022).

Is it authoritative, objective, relevant, timely, accurate? The AORTA framework for evidence scrutiny

Authoritative

Where information comes from is as important as what the information is

- Who produced this information?
- What are the qualifications or achievements of the author or organization that the information comes from?
- Who funded the research? What were their motivations to do so?
- Has the author been transparent about their assumptions and approach?



Accurate

Not all sources are created equal, it's important to crosscheck and question

- What methodology was used? Was it appropriate?
- What was the sample size, demographic, location, etc.?
- Have similar studies been carried out, or viewpoints given, that contain different insights?
- Has this study been replicated elsewhere, what were the findings?
- Has it been peered reviewed?

Objective

Research is created for a purpose, it's important to interrogate the agenda behind it

- Is the study demonstrating any biases in:
  a. Formulating their research question
  b. Sampling
  c. Implementation
  d. Data collection
  e. Data analysis
  f. Conclusions and recommendations
  g. Publishing
- What assumptions has the author made? What are they and how do they affect it?
- Was the study created for a specific purpose?

Relevant

Many thing are interesting, but they're not always useful to your audience

- What context did this take place in? How relevant is this context to my own?
- Whose voices are included or excluded from this research?
- Is it pitched at the right level to share with your audience?
- What audience was this information created for; how does that align with your audience?

Timely

Certain domains move quicker than others, beware of outdated information

- How important is it for you to have the latest information on this topic?
- Is the information provided up to date?
- Has anything happened since its publication that could affect it?
- Does the evidence analyse past trends, or make future predictions?
- Does it have a date on it?

Figure 2.10: AORTA Framework. Adapted from Houses of Parliament (2017)

Evidence synthesis

—

"A good synthesis enlarges and deepens possibility space – deepening how well we understand a phenomenon and so expanding what options are open to us. But the value of any synthesis depends on what it aims to achieve and for who. This will vary greatly depending on social, institutional and political contexts." (Muglan, 2021)

Using evidence often involves interpreting and synthesising insights from multiple evidence sources, such as those mapped in Module 1. In considering the evidence outputs that we engage with, we might practice synthesising from a range of different evidence sources to inform different elements of our policy or challenge.

The practice of synthesis is both intuitive, and also a distinct skill that can be developed, and there is growing interest in how best to do this. The value of any synthesis will depend on its purpose: on what it is aiming to achieve and for who. Some synthesis will prioritise understanding whilst others may prioritise action, and in each case the synthesis may prioritise the present with an urgent need to act, or the future.

The academics that we engage with can also support synthesis. They are likely to have an intuitive understanding of a broad range of evidence sources, and be able to share and synthesise work from the breadth of sources that they interact with on a daily basis.

Purpose	Present	Future
Understanding	*Power to explain a current phenomenon* *Retrospective judgement*	Insights that surface in the future from the emergence of new disciplines
Action	*Decisions on actions to be taken now*	Decisions to act that are justified by the potentially dynamic or cumulative nature of the results.

Table 2.5 - Summarising the purpose of different evidence syntheses. Taken from Mulgan (2021).

Stages of Synthesis

1. Mapping relevant factors, inputs, causation, models, relationships, ideas and attempting to put them into a common language.
2. Ranking these inputs, models or insights in terms of explanatory, causal or predictive power.
3. Attempting mergers or combinations (sub-syntheses).
4. Clarifying trade-offs and complementarities.
5. Clarifying knowledge and power: for example, which areas are well or badly understood, and which ones are amenable to power and influence.
6. Jumping to new concepts, frames, models or insights that use these inputs but transcend them.
7. Interrogating and assessing these new options and judging how much they create or take away value.

35 Mulgan, G. (2021) *The Synthesis Gap: reducing the imbalance between advice and absorption in handling big challenges, from pandemics to net zero.* Available at: covidandsociety.com/synthesis-gap-reducing-imbalance-advice-absorption-handling-big-challenges-pandemics-net-zero/ (Accessed 13 July 2022).

Reflection Point:

Consider your current live policy questions, and problem frames explored earlier in this module. Consider:

- In what ways do you practise synthesis in your work?
- In what ways do you engage with existing evidence synthesis?
- How might different stakeholders that you engage with practice synthesis skills?

ACTIVITY 11:

Reading evidence critically using the AORTA framework

Overview:

This activity will help you to put a variety of competencies into action, including; evidence searching, critical reading, critical scrutiny of evidence sources, critical appraisal and the synthesis of these insights.

Background:

Conducting critical scrutiny in groups, such as reading groups, can improve evidence literacy, encourage research use amongst peers and help to develop a shared, deeper understanding of the evidence being appraised.[34] Try it out in this activity by creating a reading group to review the evidence you locate!

Instructions

1. Considering your policy challenge, the search strategies outlined above, and the sources of evidence explored in Module 1, locate up to four pieces of evidence that could be used to explore this challenge further. Try to locate a variety of sources, including sources that utilise different methodologies. For example, you may find that an existing evidence summary, such as one provided by a What Works Centre[35], might be useful for this exercise.
2. Read these evidence sources, reflecting on the AORTA criteria as you do this.
3. Using the scorecard provided in the activity template, review each source of evidence. Ask yourselves:
   - What can you learn from the evidence about the rationale or objectives for your policy challenge?
   - What can you learn about potential solutions and their effectiveness?
   - What would you recommend as the next steps?

→ **Top Tip:** Smaller groups are better for this kind of intense evidence scrutiny.

BONUS ROUND:

4. If you have extra time as a group, split into small teams. Use the evidence and questions provided to prepare a 2-minute presentation that you will deliver back to the other teams, as if you are pitching a policy recommendation and/or proposed next steps to a Minister.
5. One person from each group will report back this 2 minute summary of your group's position.

34 Morgan, K. (2018) *Dissemination is dead, so do this instead.* Available at: www.nesta.org.uk/blog/dissemination-dead-so-do-instead/ (Accessed 13 July 2022).

35 Evaluation Task Force (2022) *What Works Network Guidance.* Available at: www.gov.uk/guidance/what-works-network (Accessed 13 July 2022)

ACTIVITY 11:

Reading evidence critically using the AORTA framework

Evidence type and source	Authoritative	Objective	Relevant	Timely	Accurate	Total Trustworthiness Score (1:Low, 5:High)
						1 2 3 4 5
						1 2 3 4 5
						1 2 3 4 5
						1 2 3 4 5

- What are the claims being made by the evidence provided? How do they differ from each other?
- What can the evidence claims tell you about the outcomes, actions, and mechanisms underlying the policy challenge?
- What do you recommend as next steps to help put insights from this evidence into practice?

1.

2.

3.

4.

5.

Module 3

Appraisal

Module 3 explores how expertise and evidence can be used to support the third stage of the ROAMEF cycle: appraisal. We first explore the ways in which evidence and expertise can be integrated within appraisal processes, and how to navigate between different options when determining actions to take within a policy. This draws on aspects of behavioural science, such as how we engage with bias and subjectivity when appraising evidence throughout the ROAMEF policy cycle. We then introduce methods and techniques that can be used in collective appraisal and decision-making: the Delphi technique and Multi-Criteria Analysis. Finally, we look at practical considerations for forging partnerships and commissioning of evidence and expertise.

Module 3	OVERVIEW		200
Contents	• Navigating options and choices: appraisal processes • Judgement within appraisal: heuristics and biases • Methods in collective appraisal: Delphi and Multi-Criteria Analysis • Commissioning evidence: partnerships and engagement		
Learning Objectives	• **Identify what elements you may appraise as part of your policy development** • **Understand how different cognitive heuristics and biases biases affect work, including appraisal processes** • **Apply strategies to mitigate against biases** • **Adapt methods for Collaborative Decision-Making: Delphi and Multi-Criteria Analysis** • **Explain different touch-points in academic/policy partnerships** • **Create a plan of considerations for commissioning evidence from expertise sources**		
Activity Overview	12 Understanding and overcoming biases in appraisal processes 13 Examining key considerations when forging partnerships for evidence use and expert engagement		
Additional Reading	Collective Intelligence Design Playbook	CCID Mechanisms for group decision-making	Government Commercial Function
	Intellectual Property Office online training	The Green Book Central Government Guidance on Appraisal	The Green Book supplementary guidance: multi-criteria decision analysis

Navigating options and choices: appraisal processes

Making decisions around different aspects of our policy is inherent within the appraisal process. We frequently have to explore what options we have, characterise their attributions, assess how they compare, and make evidence-informed judgements between them for better policy development. Appraisal processes help us to assess what our options are, and how we decide what actions to take.

For the purpose of this toolkit, we take an evidence lens to appraisal processes by asking:

- What are the different factors that we need to appraise within our work?
- What is the process through which we draw evidence and expertise together to make informed choices?

Official guidance on appraisal has been outlined in HM Treasury's Green Book Guidance on Appraisal and Evaluation. This sets out how to appraise policies, programmes and projects alongside providing guidance on monitoring and evaluation before, during and after policy implementation. The Green Book defines appraisal as:

- *"**Appraisal** is the process of assessing the costs, benefits and risks of alternative interventions - or policy actions - to meet objectives. It enables decision makers to understand the potential effects, trade-offs and impacts of different options by providing an objective evidence base for decision-making."*[1]

The appraisal process doesn't happen in a silo.

It often involves working with a range of stakeholders to make collaborative decisions that help mitigate against bias and align priorities towards a common cause.

Where do different 'options' for policy appraisal come from?

There are diverse methods and tools used for generating ideas and options for policy interventions. Some approaches generate ideas by researching and learning from similar policies and drawing inspiration from previous efforts, such as the United Nations' work collating Sustainable Development Goals (SDGs) Good Practices compilation of success stories and lessons for implementation.[2] Others use creative approaches employing design methods for brainstorming, developing and prototyping innovative ideas for policy options, such as those employed by Nesta's Design and Technology practice. Increasingly we also see the integration of computational techniques in policy options development, such as the use of statistical modelling techniques in identifying possible-but-uncommon energy supply mixes with capacity to achieve a net zero economy.[3]

1 HM Treasury (2020). *The Green Book: Central Government Guidance on Appraisal and Evaluation*. Available at: www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent (Accessed 14 July 2022)
2 Tahtinen, T., Costa, N., Long, Y., Wong, E. and Pereira, N. (2020) *SDG Good Practices: A compilation of success stories and lessons learned in SDG implementation*. Available at: sdgs.un.org/sites/default/files/2020-11/SDG%20Good%20Practices%20Publication%202020.pdf (Accessed on: 08 August 2022)
3 Department for Business, Energy and Industrial Strategy. (2020). *My 2050*. Available from: my2050.beis.gov.uk/ (Accessed on: 08 August 2022)

In this section, we explore the factors that can influence the appraisal process, and how we can go about making collaborative decisions in a way that helps to mitigate against undesirable impacts of bias and align different priorities when working with others.

There are a range of aspects that we might wish to appraise within a policy. This includes the evidence we use to inform it, the expertise we might engage with, and the actions we might undertake in support of our policy goals.

Appraisal can also take place across different time horizons: from appraising previous actions, evidence and trends to inform current understanding, to the appraisal of the 'robustness' of a future decision- that is, whether or not a decision might do well even in unforeseen circumstances.[4]

Below, we provide some examples of elements that you might appraise as part of your policy.

4 HKalra, N. Hallegatte, S. Lempert, R. Brown, C. Fozzard, A. Gill, S. Shah, A. (2014) 'Agreeing on Robust Decisions. New Processes for Decision Making Under Deep Uncertainty. Policy Research Working Paper, No 6906. Washington: World Bank. Available at: https://openknowledge.worldbank.org/handle/10986/18772 (Accessed 04 August 2022).

POP QUIZ [5]
How reliable is our gut instinct?

This quiz aims to get you thinking about influences that might occur within appraisal processes. We recommend completing this with others, if possible.

For each question discuss as a team and note down two answers:

1. What do you think the Great Britain (GB) wide perception of the answer is?
2. What do you think the actual answer is?

Out of every 100 people 20 years or over, how many do you think are either overweight or obese?

GB perception:

Actual:

Show answer

Out of every 100 people how many do you think do not affiliate themselves with any religion?

GB perception MORI poll:

Actual:

Show answer

How old do you think the average person in your country is?

GB perception MORI poll:

Actual:

Show answer

Reflection Point:

Following the pop quiz, take some time to reflect on the following:

- Either as an individual, or as a team, what process did you undertake to establish an answer?
- Within the questions, what key terms might have multiple meanings for different audiences?
- Did the framing of the question influence how it was answered? How?
- Did you consider how the measures used in response to the questions are defined, collected and weighed? How relevant are these measures to the decision or problem that the question is trying to address?
- What are some of the personal influences that might have altered your perception of the answer?
- If completing this activity as a team, how did the dynamics of the group influence the answers?

5 Duffy, B. (2016) *IPSOS Views. Perils of Perception*. Available at: www.ipsos.com/sites/default/files/2016-06/015.1_PerilsOfPerception_March2016.pdf (Accessed 05 August 2022).

Judgement within appraisal: heuristics and biases

There is a wealth of information about how human judgement and behaviours are shaped and formed. Increasingly, the field of behavioural sciences is used as a lens to aid decision-makers across the globe to design, implement, and evaluate policies.

It combines insights from psychology, cognitive science and social science to understand how individuals appraise information, make choices between options and influence collective behaviours to achieve better outcomes for citizens.[6] Insights from behavioural science can support our efforts in improving the generation and use of evidence and engage with expertise in practice. In this section, we consider how biases and heuristics - the systematic mental shortcuts that affect the way we think and act - can manifest when using or appraising different evidence and expertise across the ROAMEF policy cycle.

Understanding where, and in what capacity, these biases might manifest within our work is a good starting point for considering the strategies we might use to mitigate against these biases, also explored in this section.

Biases in evidence use, generation, and expert engagement

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There are a range of biases that might manifest within evidence generation, use, and expert engagement efforts.

As we explored in Module 1, a core part of research evidence generation are the processes undertaken by researchers to reduce bias that can affect the rigour and validity of research results. In addition to this are the processes taken by evidence consumers to reflect on their biases when interpreting the evidence claim. These biases might reflect personal preferences or values, while others can reflect broader institutional norms that shape appraisal processes, such as the values and judgements that influence what an institution might consider to be trustworthy evidence.[7] When engaging with experts or undergoing an appraisal process, the process of deliberation can introduce biases such as tendencies to seek group reinforcement and consensus.

The need to systematically explore heuristics and biases throughout the policy cycle

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Having an awareness of our cognitive biases allows us to adapt policy decisions to create behaviourally informed problem frames, strategies and solutions.

Nobel Prize Winners Daniel Kahneman and Amos Tversky describe human behaviour as operating between two systems: System 1 thinking (thinking fast), and System 2 thinking (thinking slow).[8] System 1 thinking refers to the automatic, intuitive, effortless version of making decisions. It involves both learned and internalised capabilities (such as riding a bicycle), and some more innate instincts (such as knowing that riding that bicycle on a busy highway is dangerous). System 1 takes complex information and simplifies it by using simple rules of thumb via mental short-cuts known as heuristics. System 2 (slow) thinking, on the other hand, is reflective, slow, and deliberate. It's what most people would need to do to support deep thinking (such as the process of learning how to ride a bicycle).

6 Dolan, P. Hallsworth, M. Halpern, D. King, D. Vlaev, I. (2010) *Mindspace: Influencing behaviour through public policy.* Available at: www.instituteforgovernment.org.uk/sites/default/files/publications/MINDSPACE.pdf (Accessed 05 August 2022).
7 Parkhurst, J.O. (2016) 'Appeals to evidence for the resolution of wicked problems: the origins and mechanisms of evidentiary bias', *Policy Scenes*. 49, pp. 373–393. doi: doi.org/10.1007/s11077-016-9263-z
8 Kahneman, D. (2011)*Thinking, fast and slow.* New York: Farrar, Straus and Giroux

Context helps shape the heuristics that can influence our memory, judgements, and preferences. These subsequently shape the range of biases that we encounter within evidence and engagement processes.

Heuristics affect all of us and are thought to serve an adaptive purpose, allowing us to reach difficult decisions quickly, a vital trait in dangerous or threatening situations. The heuristics and biases in System 1 thinking allow us to move quickly, and not overinvest energy into the deeper, slower System 2 process. If our brains can operate via System 1 thinking, then they generally won't bother with System 2 thinking. This is crucial when we're thinking about how people might interact with a service or policy, as it's often over-assumed that more time is spent on System 2 than is actually done. This can sometimes cause us to make decisions that aren't aligned with the realities of human behaviours, both within policies and services we design, and in the interactions we undertake with stakeholders.

Researchers have studied many (over 100!) cognitive biases that can manifest within our work. The cognitive bias 'cheat sheet'[9] offers an overview by grouping biases into four broad categories of practical problems we tend to especially encounter, when we have; 1) too much information; 2) not enough meaning; 3) a need to act fast; 4) to know what to remember.

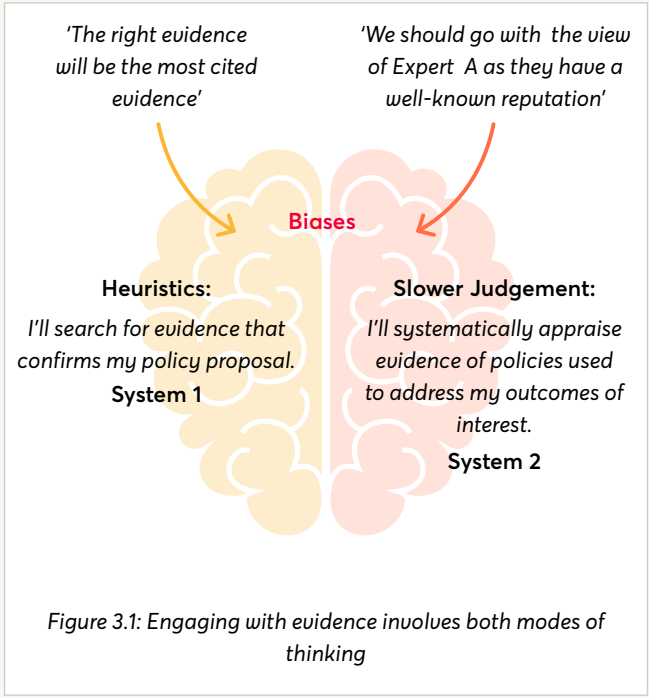

Figure 3.1: Engaging with evidence involves both modes of thinking

9 Benson, B. (2016) Cognitive bias cheat sheet. *Better Humans*. Available at: betterhumans.pub/cognitive-bias-cheat-sheet-55a472476b18#.mzm6g85vn (Accessed 15 July 2022).

Behavioural science in government

Since 2010 the Behavioural Insights Team has supported governments to apply behavioural insights to inform policy, improve public services, and deliver positive results for people and communities. They support a range of partners to ensure programmes and policies reflect the ways that people actually behave, and design and test interventions that are informed by human behaviour.[10] In their 2018 report, *Behavioural Government: Using Behavioural Science to Improve How Governments Make Decisions,* they outline how behavioural science can affect different aspects of policy making.

These include:

- **Noticing:** This refers to how information and ideas are presented. Framing effects mean that ideas and issues can be judged on their presentation as opposed to their substantive content. This can be further influenced by the perceived importance of an issue with those that are deemed more important attracting more attention.
- **Deliberating:** This refers to how ideas are assessed and debated. Interactions within teams can foster biases, with tendencies to align to the majority view, overestimate the level at which an idea is shared, understood and accepted.
- **Executing:** This refers to how decisions are planned and actioned. Execution can be affected by optimism bias and an illusion of control.

Cognitive bias in the UK civil service

While it's often assumed that politician's ideologies influence evidence demand, an experiment conducted by the Department for International Development (DFID) and the World Bank Group, shows that civil servants, too, are prone to biased interpretations results of evidence influenced by their own preferences.

In the study, policy professionals were shown identical pieces of data, told that the results came from a good quality impact evaluation, and were asked to report what they thought the impact of a programme was based on this. However, participants were presented with different framings of what the data represented that had been randomly rearranged: one table framed the data as the effect of skin cream on a rash; the other was about the effect of increasing the minimum wage on poverty. 65% gave the correct answer when interpreting the impact of a perceived skin cream intervention, but just 45% with the second framing of an inequality intervention.[11] An additional survey on preferences to inequality showed that those participants who received evidence of a failing programme for the poor's incomes were more likely to make errors if they believed inequality was good, whereas there was no such relationship in the case of the skin cream framing.

Reflection Point:

- How can System 1 (thinking fast) and System 2 (thinking slow) be used to explain the study's results?
- What surprises you about this case study?

10 Hallsworth, M., Egan, M., Rutter, J. and McCrae, J. (2018) *Behavioural Government: Using behavioural science to improve how governments make decisions.* The Behavioural Insights Team. Available at: www.bi.team/publications/behaviourtableal-government/ (Accessed 08 August 2022).

11 Dercon, S. (2018) *Public servants and political bias: Evidence from the UK civil service and the World Bank.* Available at: voxdev.org/topic/institutions-political-economy/public-servants-and-political-bias-evidence-uk-civil-service-and-world-bank (Accessed 15 August 2022)

Mitigation strategies against common biases

There are a number of reflexive questions you can ask yourself to foster a greater awareness of what biases might manifest in your work and how, and strategies that can help mitigate against these biases. These are outlined on the following page. This isn't meant to be an exhaustive list, but instead an indication of some of the common biases you might encounter within evidence use and expert engagement processes. To note, we've excluded common biases relevant to evidence generation - each method will have its own quality assurance process to mitigate against bias within the evidence production process, as explored in Module 2.

Reflection Point:

Consider how engaging with academics might support (or hinder) you to overcome the biases that can influence the design of your policy or public service. This might include:

- The ways in which collaboration with academics can provide gravitas and trustworthiness that may be more highly regarded in some spheres.
- The ways in which collaboration with external experts can generate additional interest, particularly when they are a well known name. However, this can open the door for authority bias and a tendency to be more influenced by the expert voice.
- The ways in which drawing upon insights from multiple experts, using collective decision-making methods which are (further explored later in this section), can help to address authority biases. that might be present
- The ways in which external opinion can help challenge assumptions and provide new perspectives, by highlighting where biases might currently exist within yourself, your team, or the organisation.

Common biases, reflective questions, and mitigation strategies within evidence use and engagement

Common Biases in Evidence Use	Common Biases in Engagement
Confirmation bias: Holding on to beliefs despite new information that tells against it.	Bias blind spot (The Dunning-Kruger Effect): The tendency to underestimate your own susceptibility to bias.
Question: *When met with information that contradicts your existing belief, do you scrutinise it fairly? Do you change your beliefs?* Mitigation: *Build in opportunities to revisit assumptions, gather feedback and review the quality of evidence*	**Question:** *How susceptible to bias do you believe you are?* Mitigation: *Learn about the different biases that might affect you and debiasing techniques that can be used to mitigate against this. Seek and offer feedback to build a better ability to estimate individual ability*
Availability bias: Being selective about what information to consider, with most attention being given to information that is vivid, concrete, emotion-laden, most easily available, or recent.	Authority bias: The tendency to attribute greater accuracy to the opinion of an authority figure (can also be a dominant figure in a group) and be more influenced by that opinion
Question: *Are you more likely to use evidence that is easy to obtain, created recently, or is given to you?* Mitigation: *Incentivise team members to share novel or divergent information and encourage the use of crowdsourcing information*	**Question:** *Do you attribute greater trust in evidence recommended/created by those in positions of authority?* Mitigation: *Use structured protocol such as he Delphi method to make expert advice as useful as possible*
The backfire effect: The tendency to strengthen one's belief when presented with evidence that conflicts with that belief.	Conformity bias: Suppressing opinions or dissent to conform to a group consensus.
Question: *When presented with evidence that conflicts with your beliefs, have you been driven to find alternative evidence that better aligns with your belief?* Mitigation: *Present new information in a way that encourages people to consider and reflect on what is being presented*	**Question:** *How comfortable are you to openly object to a popular opinion?* Mitigation: *Allow people to submit questions or concerns anonymously*
Anchoring/First Impression Bias: Jumping to conclusions based on information or ideas gained early on in the decision-making process.	In-Group Out-Group Bias: A pattern of favouring members of one's in-group over out-group members.
Question: *Do you give time and energy to all ideas, both new and old?* Mitigation: *Consult with experts, such as academics, to challenge ideas and offer breadth of knowledge*	**Question:** *Do you encourage empathy in group discussions?* Mitigation: *Designate part of the group to challenge assumptions and find weakness - this is known as 'red teaming'*
Optimism bias: The tendency to overestimate the probability of positive events or effects and underestimate for negative events or effects.	Shared Information Bias: The tendency for group members to favour discussing information that all members are already familiar with as opposed to information only some members are aware of.
Question: *Do you attribute greater trust to positive outcomes?* Mitigation: *Explore multiple options to spread your risk and consider 'no-regret' scenarios - options that yield benefit regardless of what ends up happening*	**Question:** *Are you ensuring there is opportunity to discuss ideas that may be new to you?* Mitigation: *Build diverse decision-making teams including gender, identity and cognitive style diversity*

Table 3.1 - Common biases, reflective questions, and mitigation strategies within evidence use and engagement. Definitions have been adapted from the Collective Intelligence Design Playbook[12] the report on How to Make Good Group Decisions[13] and the BIT Behavioural Government Report.[14]

12 Peach, K. Berditchevskaia, A. & Bass, T. *Collective Intelligence Design Playbook*. Available at: www.nesta.org.uk/toolkit/collective-intelligence-design-playbook/ (Accessed 15 July 2022).
13 Berditchevskaia, A. Bertoncin, C. (2021) *How to make good group decisions*. Available at: media.nesta.org.uk/documents/Collective-Intelligence-Good-Decision-Making.pdf (Accessed 05 August 2022)
14 Hallsworth, M., Egan, M., Rutter, J. and McCrae, J. (2018) *Behavioural Government: Using behavioural science to improve how governments make decisions*. The Behavioural Insights Team. Available at : www.bi.team/publications/behaviourtableal-government/ (Accessed 08 August 2022).

ACTIVITY 12:

Understanding and overcoming biases in appraisal processes

45

Overview:

In this activity you will critically examine the biases that might take place within an appraisal process. Using a live element of your work that requires appraisal, you'll explore how different biases can affect your work, and explore strategies you can undertake to overcome these.

Background:

Understanding how our biases affect our work can help us to understand and reduce unintended consequences that stem from the unconscious influences on decision-making processes. Some biases might occur at a systematic level, whereas others might be a result of the choices, environment and social norms that take place within an institution. In addition to the strategies introduced in Table 3.1, there are a range of resources available to help mitigate against biases in different contexts. These include:

- The Behavioural Government: Using Behavioural Science to Improve How Governments Make Decisions report
- The Collective Intelligence Design Playbook
- The BIT Barrier Identification Tool, which can be used to identify the barriers to changing our habits that exist, from physical or mental capabilities to factors within the physical and social environment.

Instructions

1. Consider: are there any decisions you are currently grappling with that may require appraisal? This might be aligned with your live policy challenge, or some of the appraisal examples shared in this module. Write the decision you are appraising in the box provided.
2. Next, consider what biases might manifest within this decision. Select three biases to interrogate from the list provided.
3. For each bias selected, reflect on the following questions:
   a. How might this bias affect the appraisal process?
   b. What are some of the strategies you could undertake to mitigate against this bias?
4. Write your answers in the boxes provided.

ACTIVITY 12:

Understanding and overcoming biases in appraisal processes

The decision are you appraising:

For example: Evidence | Partnerships | Expertise | Objectives | Benefits | Costs | Actions

Pick 3 of these biases to consider:

Anchoring Bias: A tendency to jump to conclusions by basing decisions on information or an idea gained early on in the decision-making process. Also known as first-impression bias. This can also occur if there is a very dominant or confident individual in the group.

Authority Bias: The opinions of those with the highest social status, or greatest seniority, get prioritised.

Confirmation Bias: Interpreting all new evidence as confirmation of existing belief/theories, or rejecting information that doesn't confirm existing views.

Conformity Bias: When people suppress opinions or dissent to go along with group consensus. Also known as group think.

In-Group Out-Group Bias: A pattern of favoring members of one's in-group over out-group members. This can be expressed in being more positive and helpful towards one's in-group, at the expense of others.

Optimism Bias: Overestimating the probability of positive events or effects and underestimating the probability of negative events or effects.

Shared Information Bias: The tendency for group members to spend more time and energy discussing information that all members are already familiar with (i.e., shared information), and less time and energy discussing information that only some members are aware of (i.e. unshared information).

		How might this bias affect you?	Write down strategies or tactics to overcome this bias.
Bias 1	Anchoring Authority Confirmation Conformity In-Group Out-Group Optimism Shared Information		
Bias 2	Anchoring Authority Confirmation Conformity In-Group Out-Group Optimism Shared Information		
Bias 3	Anchoring Authority Confirmation Conformity In-Group Out-Group Optimism Shared Information		

Methods in collective appraisal: Delphi and Multi-Criteria Analysis

When engaging with a wide range of stakeholders to inform our policy decisions, collective review and consensus building activities with partners can help reduce ambiguity and mitigate against biases, enhancing policy effectiveness.

Effective processes enable a diversity of perspectives to be considered when determining what evidence informs different aspects of our policy. In this section, we consider the 'how-to' of different group-based approaches by introducing methods that integrate expertise from a range of stakeholders into complex appraisal processes.

Different stakeholders we engage with across the ROAMEF cycle each bring different perspectives, knowledge and specialities to the table. Their judgements, memory and preferences will be influenced by their working contexts and experiences, in turn shaping distinctive internal biases and motivations. Such differences can also be present with those we might engage with that come from the same sector. Within academia, for example, a common differentiation is made between the perspective and the role of a researcher engaged with policy (explored in Module 2) such as those who act as issue advocates, or honest brokers.

There are many methods to aid collective appraisal and decision-making that help to systematically capture a diversity of thought and understanding in support of evidence use. We explore two methods that illustrate some of the key principles and mechanisms used in collective appraisal processes: the Delphi technique and multi-criteria analysis (MCA) - both included within the methods taxonomy for evidencing policy action introduced in Module 2 .

Example tool for collaborative decision-making

The All Our Ideas[15] research project developed a tool for collective decision-making that aims to make consensus-building processes easier. This tool enables users to create a survey to vote between different decision or idea options, by using the best features of both quantitative and qualitative methods. It helps prioritise ideas from those participating in the voting process, whilst also allowing new information and insights to arise as would happen in an interview or discussion. Utilising the scale and speed offered through online methods, this tool offers an effective new form of social data collection that can reach a wide variety of audiences.

15 All Our Ideas. *Bringing survey research into the digital age.*Available at: www.allourideas.org/ (Accessed 05 August 2022).

Delphi method for obtaining expert consensus

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The Delphi technique is a group-based forecasting method developed in the 1950s as a way to explore expert perspectives and degrees of consensus around a particular topic.[16, 17] It is typically used to answer questions of 'what could be?' through an iterative process combining multiple experts' opinions.

Whilst the specific details of a Delphi approach can vary, its fundamental architecture comprises a series of 'rounds' of consultation with a group of experts. Experts anonymously submit their position on a particular issue, and then iteratively review and revise their responses. The process is repeated until a final agreement is reached. Between each round of review, participants are given an opportunity to view the results of preceding rounds, to aid their individual reflection and review, and allow participants to amend their responses in light of other responses. At this stage, experts are also invited to give anonymous feedback on their perception of strengths and weaknesses of other responses. Repeating the process allows the experts to build on previous findings and ultimately reach a consensus. The process of utilising the Delphi Method can be found in Figure 3.2.

The Delphi technique illustrates how an approach that creates a safe, often anonymous, environment for reflection and feedback on assumptions, claims and beliefs can be used to uncover and reduce the impact of biases in collective evidence use and decision-making. It should be noted that strict Delphi studies can be complex and time consuming to execute. Defining a point at which an accepted degree of consensus is reached can be difficult. In cases where a fast-paced decision needs to be reached, the principles of Delphi can more flexibly be drawn upon to help drive deliberation and consensus building activity. These include:

- **Diversity:** Seeking feedback from a group of experts with a range of perspectives and experiences can help to ensure the diversity of thought when tackling appraisal of options and evidence.
- **Anonymity:** Providing a space for anonymous feedback and discussion can reduce group-based biases, among others.
- **Equity:** Reflecting on anonymous feedback can reduce authority bias and the tendency to seek opinions from the *usual suspects*, challenging systemic power imbalances.

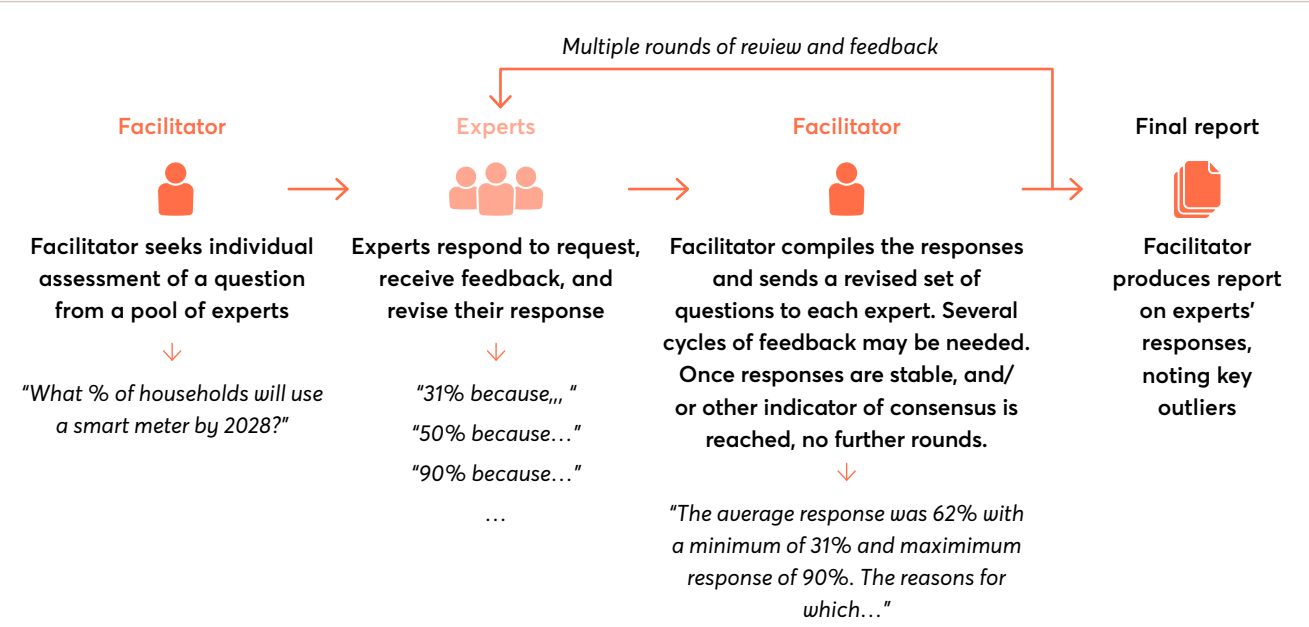


Figure 3.2: Key stages of the Delphi Technique, adapted from Barrett and Heale (2020).

16 Barrett, D. & Heale, R. 2020 'What are Delphi Studies?', *Evidence-Based Nursing*, 23, pp. 68-69. doi: dx.doi.org/10.1136/ebnurs-2020-103303

17 Hsu, C. Sandford, B. (2010). 'Delphi technique', *Encyclopaedia of Research Design*. pp. 344-346.. SAGE Publications, Inc., doi: dx.doi.org/10.4135/9781412961288.n107

Multi-Criteria Analysis (MCA) for appraising policy options

—

Multi-criteria analysis is a label for a range of methods used to compare different policy options and how they perform towards meeting multiple policy objectives and criteria.

MCA techniques can be used to identify either a single most preferred policy option, or to rank a series of options which could then undergo further appraisal. It involves the appraisal of a complex policy project beyond evidence of its monetary impact. MCA involves construction of a problem hierarchy that determines what core performance criteria are considered for a problem. It also identifies multiple alternative options or solutions to that problem. A weighting system is then established for the core comparison criteria, often through consultation with experts, to allow for the ranking of alternative solutions. The process of undertaking MCA can be found in Figure 3.3.

A key benefit of MCA techniques is the ability to deal with large amounts of complex information in a consistent way, minimising the influence of human error and bias. It makes explicit beliefs and assumptions that have informed appraisal of multiple policy aspects, providing transparency and an audit trail. The processes preceding this require evidence-informed judgement in establishing objectives, criteria and weightings.[18]

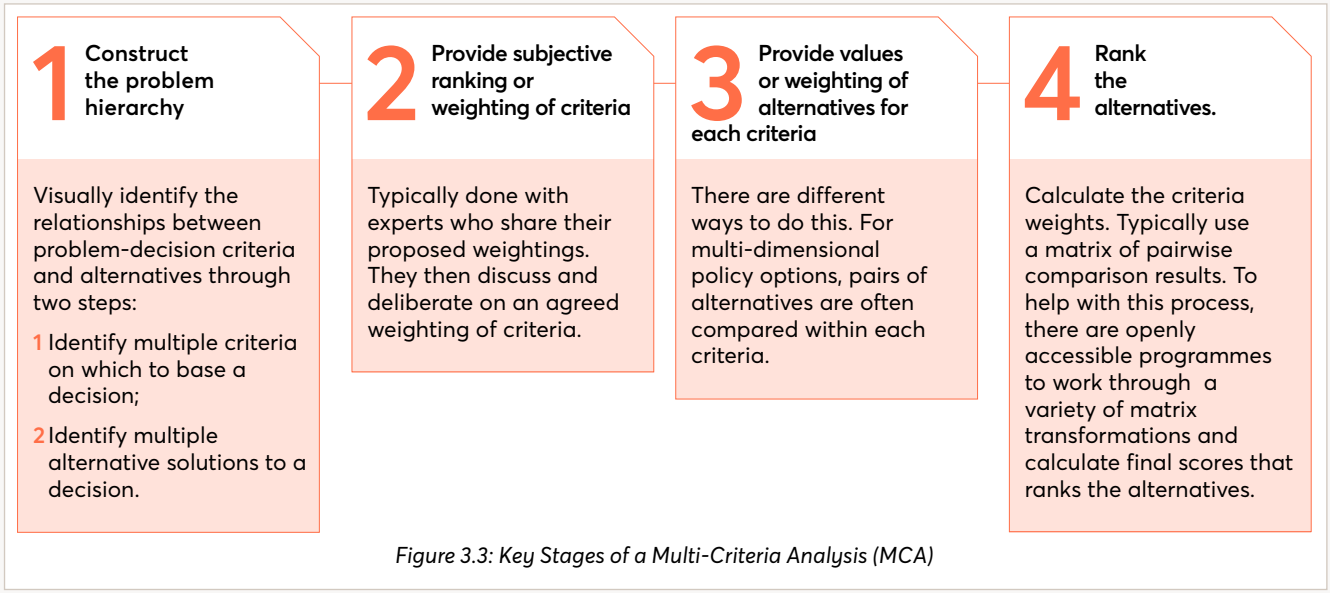


Figure 3.3: Key Stages of a Multi-Criteria Analysis (MCA)

18 Department for Communities and Local Government. (2009) *Multi-criteria analysis: a manual*. Available at: eprints.lse.ac.uk/12761/1/Multi-criteria_Analysis.pdf (Accessed 15 July 2022).

Case Study: **Drug harms in the UK**[19]

This case study provides an example of how Multi Criteria Analysis (MCA) has been used to understand the evidence of harmful drugs to individuals and society as supported by policy professionals in health, policing and social care. Using expertise from a range of stakeholders, MCA was used to score the impact of drugs against sixteen criteria of harm.

What was the problem hierarchy, and who was involved?

In 2010, a multi-criteria decision analysis was used to help build on previous research that had sought to develop a rational scale to assess the harm of various drugs.[20] Whilst prior research had provoked interest and debate, concerns were raised around aspects of the methodology, which had excluded the choice of different criteria of harm and lacked weighting between these criteria. To address these limitations, a MCA approach was adopted.

The analysis used a two stage process, first establishing the harm criteria and then establishing a weighting mechanism. During a special meeting of the UK Advisory Council on the Misuse of Drugs (ACMD) 16 harm criteria were identified, with nine of these relating to harm that the drug produces for individuals and seven relating to harm to others. These criteria were sorted into five clusters, representing physical, psychological and social harms (Figure 3.4).

Following this, a meeting of the Independent Scientific Committee on Drugs (ISCD) developed a model to assess and score harms for 20 drugs relevant to the UK. The group included ISCD experts, two external experts and a facilitator with expertise in decision analysis modelling. The meeting was used to review the harm criteria put forward by the ACMD, score each drug and assess the relative importance of criteria using an open discussion format.

What was the scoring and weighting process?

During the scoring process drugs were scored on a scale of 0-100, with zero indicating no harm and 100 indicating the most harmful drug for a specific criterion. Subsequent drugs were scored relative to this, for example a score of 50 reflecting a drug that is 50% as harmful in a criterion, with care taken to ensure the scale reflected equal increments of harm. Consistency checking was used to ensure the comparability of and minimise the influence of biases on scores, while open discussion enabled reflection and adjustment of scores.

There are contextual differences to the ways in which 'harm' is understood and defined. To address these differences, the discussion posed the questions "how big is the difference in harm between drugs?" and "how much do you care about that difference?" Experts assessed weights within each of the determined clusters of harm criteria, with the most harmful criterion being assigned a score of 100.

Remaining criteria were then judged against this scale with this process repeated to allow for each cluster to be compared against each other. This accounted for the fact that a 100 weighted criterion in one cluster may be more or less harmful than a 100 weighted criterion in a different cluster.
The result of this process meant all units of harm for every criteria, across every cluster, were equated.
A final normalisation process occurred to combine the measures of harm for each criteria which gave each drug a total harm score that summed to 1.

What were the results?

Figure 3.5 shows the total harm score for the twenty drugs with harm to users (blue) and harm to others (red) separated. The most harmful drug to users was heroin, with alcohol being the most harmful drug to others. The results were also provided by indicator. Using a multicriteria decision analysis allowed the complex issue of drug misuse to be investigated considering a range of health, economic and social issues.

Whilst this instigated interest and discussion, concerns were raised about the absence of choice of criteria and the lack of weighting between these. Limitations of the approach include the focus only on harms, negating any potential benefits of the drugs such as income from taxation and the judgement required for the weighting process.

19 Nutt, D, J. King, L, A. & Phillips, L, D. (2010) 'Drug harms in the UK: a multicriteria decision analysis', *The Lancet*, 376(9752), pp. 1558-1565. doi: doi.org/10.1016/S0140-6736(10)61462-6
20 Nutt, D. King, A. Saulsbury, A. Blakemore, C. (2007) 'Development of a rational scale to assess the harms of drugs of potential misuse', *The Lancet*, 369(9566), pp. 1047-1053. doi: doi.org/10.1016/S0140-6736(07)60464-4

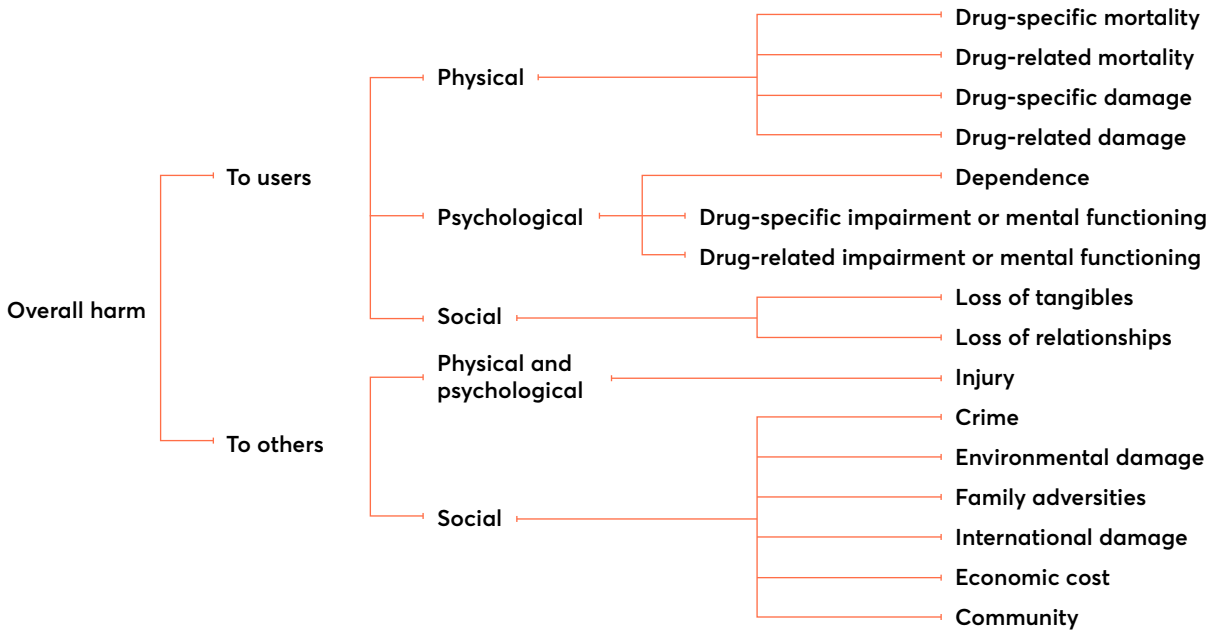


Figure 3.4: Problem hierarchy of drugs harm with clustered psychical, psychological and social outcomes. Taken from Nutt, D, J. King, L, A. & Phillips, L, D. (2010)[21]

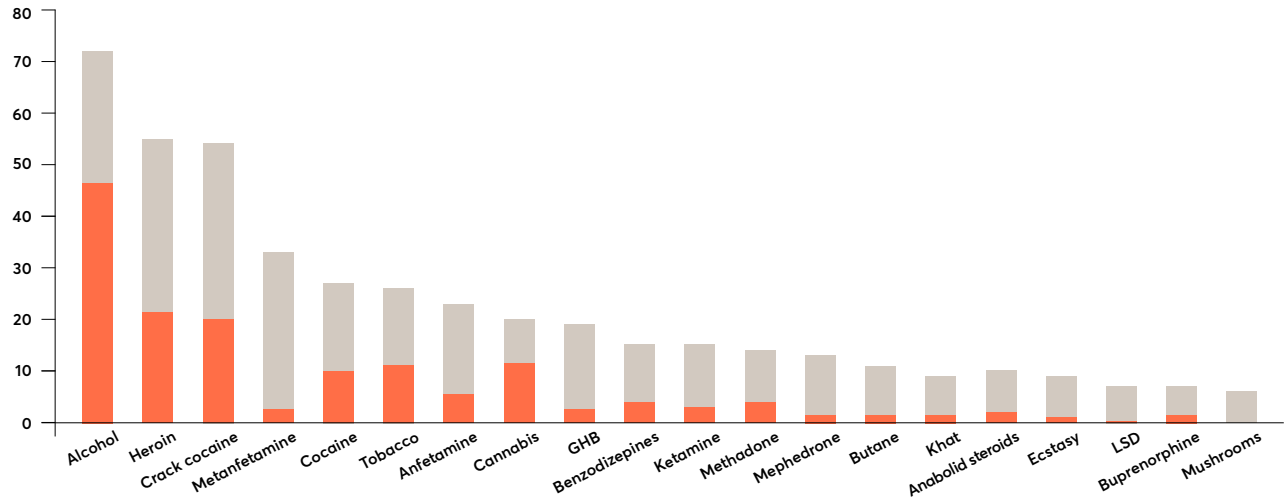


Figure 3.5: Final multiple criteria scores of harm caused by different drug options taken from Nutt, D, J. King, L, A. & Phillips, L, D. (2010)

Reflection Point:

When engaging with a range of different academics in support of different aspects of your policy, Delphi and Multi-Criteria Analysis can be helpful methods to capture and apply diverse expertise in practice.

Consider how might you integrate these methods within your approach to expert engagement, for example within setting up an expert advisory group (as explored in Activity 9)? What might be the benefits or drawbacks of engaging with 'well known' academics in these approaches?

21 Nutt, D, J. King, L, A. & Phillips, L, D. (2010) 'Drug harms in the UK: a multicriteria decision analysis', *The Lancet*, 376(9752), pp. 1558-1565. doi: doi.org/10.1016/S0140-6736(10)61462-6

Commissioning evidence: partnerships and engagement

This section aims to help you explore practical process and operational considerations when seeking to undertake partnerships to support evidence use and expert engagement within your own context.

Using evidence and expertise to support decision-making often requires forging relationships and partnerships that enable the exchange of knowledge and ideas at different stages of the ROAMEF cycle. The different partnerships we might engage with might take different forms that range from informal relationships to formal, multi-year agreements. They may also require different agreements, principles, or process considerations that lay out how evidence, funding, and resources might be exchanged in pursuit of common goals.

Commissioning of evidence and expertise requires exploring the business processes within your organisation.

We might commission a range of different evidence producers, like those explored in Module 1, to support us with different aspects of our policy - such as commissioning a researcher to undertake an evidence review to inform our policy rationale, or an evaluation partner to support us in the evaluation of our policy. While this section emphasises how to engage with academics and universities, these principles and operational considerations can be used to inform how you might engage with a range of different evidence or research producers to inform your work.

Understanding incentives when forging partnerships: an academic perspective

—

Throughout the partnership or evidence commissioning process there will be a number of different incentives that affect the evidence producers or experts that you interact with.

When engaging with academics, for example, there might be specific links to context, career progression, and research agendas that differ from your own expectations or experience. These can subsequently shape how the partnership is forged. Here, we outline some of the core incentive considerations that might influence academic ability to engage in partnership:

Relationships: What kind of incentives might exist? How might they vary for different partners?

Permissions: What permissions might be needed for the partnership to progress? How does this fit with existing commitments?

Learning/informing future research: How can the partnership contribute to future learning and research, and for whom? What different perspectives can be drawn on?

Funding: What are the funding considerations on both ends? How might these fit within existing commitments and incentive structures?

Intellectual Property: Who has ownership of any of the products from the partnership? What is able to be shared freely and what might be subject to restrictions? What agreements do you need in place to allow for the exchange of intellectual property?

Impact: How can all members of the partnership demonstrate and reference impact through this partnership?

Expert engagement

Your department or organisation may already have a protocol in place to commission work from experts such as academics. Reach out to relevant colleagues - for example your Chief Scientific Advisers Office - to learn more about what the commissioning and/or procurement process entails. It may also be helpful to build networks with legal and commercial colleagues to explore areas such as intellectual property and confidentiality, or to learn from others in your department who might have already undergone similar commissioning work.

Case Study:
Linking policy evidence with academic partnership

The case study below explores an example of where HM Government set the stage for forging effective partnerships with Higher Education Institutions. In an Areas of Research Interest statement,[22] the Foreign, Commonwealth and Development Office (FCDO) acknowledges the value of expert input from academics and note the importance of Research Excellence Framework (REF) outcomes for both academics and the Higher Education Institutions (HEI) that they work for. The statement further outlines how and in what capacity academic insights might be used by the department. This helps create norms and boundaries of what partnership working- and subsequent agreements- might look like in practice

In recognition that a core component of REF involves academic ability to communicate the impact of their work, FCDO provided guidance on what was considered to be research impact, as well as details of how the department could provide evidence of partnership through simple, factual statements to note the nature and impact of interactions. This helped the department increase consistency of feedback to academic partners. It also increases transparency around the challenges in evaluating and reporting research impact given the differences in how expertise is used in practice, which include:

- **Outcomes.** Policy results often arise from a combination of voices and factors, which make identification and attribution of discrete outcomes challenging.
- **Impact.** Impact often emerges following a gradual, long-term process, making evidence-based reporting on engagement challenging for partners
- **Ongoing Relationships** that allow for ongoing ad hoc learning are often more impactful than single articles or books but can be difficult to evidence.
- **Use of Research Evidence.** Evidence may be a good piece of research in its own terms, however may not always affect the course of policy.
- **Social Media Influence** may result in significant impact, but is difficult to evidence compared to more traditional publication methods.
- **New Insights** can spark new debates and raise new questions that were outside of the researcher's primary intentions.

22 Foreign & Commonwealth Office. (2020) FCO areas of research interest: coronavirus (COVID-19) update, May 2020.
Available at: www.gov.uk/government/publications/fco-areas-of-research-interest-ari-2020-coronavirus-covid-19-update/fco-areas-of-research-interest-coronavirus-covid-19-update-may-2020 (Accessed 15 July 2022).

Reflection Point:

Take some time to read the FCDO case study above and reflect on the following questions:

- What might the implications of this statement be for an academic? What might their reactions be?
- Noting the challenges mentioned by the FCDO, have you encountered anything similar in your work and interactions with academics?
- Think back to the a) linear, to b) relational, and c) systems approaches to promoting academic-policy engagement that we explored in Module 1. What routes to research-policy engagement do you think are presented in this case study? What are some implications for effective partnership development?

In a survey administered to higher education institutions within the CAPE consortium, the most frequent reason academics engaged with policy was because 'they believe their research will help to make a difference in the world'.[23]

23 Parker, R. et al. (2022) *Perceptions and experiences of academic policy engagement in UK Higher Education Institutions.* Capabilities in Academic Policy Engagement (CAPE). Available at: bit.ly/perceptions-and-experiences-academic-policy-engagement (Accessed 18 October 2022)

ACTIVITY 13:

Examining key considerations when forging partnerships for evidence use and expert engagement

Overview:

In this activity you will simulate forging professional partnerships in support of evidence use and generation. Using a range of scenarios you'll explore the core factors, touch points and areas of alignment or misalignment when engaging with others to support evidence use or generation in your live policy challenge. You will be encouraged to think both empathetically and operationally about the individual and institutional considerations that might come into play when creating these partnerships to commission evidence and expertise.

Background:

When building academic partnerships there are different types of engagement that might take place across the linear, relational and systems mechanisms explored in Module 2. Within these activities, 'pulling' evidence and expertise into decision-making sometimes requires establishing operational and procedural agreements to help make the partnership a reality. Different institutions will have their own operational systems to support establishing partnership agreements and understanding these different approaches can help ease engagement efforts in support of effective, longer-lasting partnerships.

In HM Government, a 2020 survey conducted by GO-Science noted that commissioning evidence was a common mechanism through which academic engagement takes place[24] The review identified and proposed a number of ways to improve the processes of commissioning evidence across Government, including the establishment of the Evaluation Taskforce, availability of broader research and evidence framework agreements, and plans to streamline departmental procurement processes to better align the commissioning of evidence and expertise with the time realities of policymaking.[25]

24 Government Office for Science. (2022) *Guidance:Writing and using Areas of Research Interest.* Available at: www.gov.uk/government/publications/writing-and-using-areas-of-research-interest/writing-and-using-areas-of-research-interest (Accessed 10 August 2022).

25 Government Office for Science (2019) Realising our ambition through science: A review of Government Science Capability. Available at: assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/844502/a_review_of_government_science_capability_2019.pdf (Accessed 10 August 2022).

Instructions

For this activity, you can either use your own scenario of where you would like to form a partnership to help commission evidence or expertise, or use the mock scenarios provided that give examples of how you might engage with an academic.

Using your own scenarios

1. In the box provided, describe a scenario in which you will be commissioning evidence and expertise, outlining the partner(s) that you'd be working with. Example scenarios might include:
   a. Synthesising existing evidence to inform an aspect of your policy problem;
   b. Evaluating the effectiveness of a particular policy;
   c. Embedding a researcher in your team on a fellowship opportunity.

2. Work through each of the core partnership considerations provided to explore how you might best engage with this expert. Use the worksheet to give answers to each question:
   a. How might the expert that you're engaging with answer this question?
   b. How would you answer this question?
   c. Where might there be alignment or disagreement within these core considerations? How might you overcome any disagreement?

You can also refer back to the academic personas created in Activity 6, or use the Persona template to better understand the individuals and institutions you're engaging with. Try to distinguish between the more personal barriers and enablers and the more logistical barriers and enablers as you work through each core consideration.

Using one of the scenarios provided

1. Read through the mock scenarios that describe different partnerships that range from formal to informal.

2. Select one of the scenarios to work with, based on what feels most relevant to your work.

3. Work through each of the core partnership considerations provided to explore how you might work with the expert described. Provide answers to each question:
   a. How might the expert that you're engaging with answer this question?
   b. How would you answer this question?
   c. Where might there be alignment or disagreement? How might you overcome any disagreement?

4. Repeat Step 2 with a second scenario. Consider what the key similarities and differences were in the partnership engagement process between these scenarios.

ACTIVITY 13:

Examining key considerations when forging partnerships for evidence use and expert engagement

The scenario in which I will be commissioning evidence or expertise:

How will I approach this expert? Do I have first hand experience of engaging with them? If so, how can I strengthen this relationship?

What kind of partnership is being formed, and what mechanism supports this partnership? (Consider the activities for research-policy engagement shared in Module 1)

Alternative Scenarios:

1. You need to commission an evaluation project to assess the success of a policy.

   Your budget is over £10K, and as such it has been placed as an opportunity on www.contractsfinder.service.gov.uk. You are being supported by procurement experts within the civil service. The project is time bound (> more than three months) and involves specific deliverables. It will generate new perspectives for you in relation to the programme you are evaluating.

   Anna is selected for the work.

2. You want to recruit an academic to act as an advisor to a new policy that you are designing.

   The academic will be recruited and paid in line with normal public appointment recruitment practice. The role is time bound (i.e. it has a start and end date) and has a clear remit.

   Maya is one of your candidates.

3. You need an evidence summary produced for a report which you need to deliver in 6 weeks.

   You need rapid support from an academic expert in the area. You approach Anna - someone whom you have met before and who is recognised for her expertise in the area. The work is likely to involve a tight time frame with approximately 3 to 5 delivery days from the academic.

4. You meet Alexander, an academic at a conference, and you begin an informal conversation.

Create a persona

→ Identify an academic or research organisation of interest to your team's work

1

Name: **Department**

Title: **University**

→ Use information available online to populate this section about the individuals you have selected

2

About me **My motivations** **My research**

→ Consider the What / Why / How questions from Activity 3. How might this person/ organisations be positioned to support you?

3

What...? (to describe) **Why...?** (to explain) **How...?** (to intervene)

→ Consider the value-add of approaching these individuals by answering these questions.

4

What value could their perspective bring to your role and to your team?

What's the value of engaging for your live policy challenge? *(Reflect on current priorities: what questions could they inform? What work could they advise on?)*

What's the value for engaging your organisation?

Scenario 1

Core considerations	How might the expert that you're engaging with answer this question?	How would you answer this question?	Where might there be alignment or disagreement within these core considerations? How might you overcome any disagreement?
Relationships *What kind of incentives might exist, for what partner?*			
Permissions *What permissions might be needed?* *How does this fit with existing commitments?*			
Learning / Informing future research *How can the partnership contribute to future learning? What perspectives can be drawn on?*			
Funding *What are the funding considerations?* *How do these fit with existing commitments and incentives?*			
Intellectual Property *Who has ownership of products?* *Can these be shared freely?* *What agreements need to be in place?*			
Impact *How will the outputs from this partnership be used?* *How can impact be demonstrated and referenced?*			

Scenario 2

Core considerations	How might the expert that you're engaging with answer this question?	How would you answer this question?	Where might there be alignment or disagreement within these core considerations? How might you overcome any disagreement?
Relationships *What kind of incentives might exist, for what partner?*			
Permissions *What permissions might be needed?* *How does this fit with existing commitments?*			
Learning / Informing future research *How can the partnership contribute to future learning? What perspectives can be drawn on?*			
Funding *What are the funding considerations?* *How do these fit with existing commitments and incentives?*			
Intellectual Property *Who has ownership of products?* *Can these be shared freely?* *What agreements need to be in place?*			
Impact *How will the outputs from this partnership be used?* *How can impact be demonstrated and referenced?*			

Module 4

Monitoring

In this section we look at the fourth stage of the ROAMEF policy cycle: monitoring. We start with an overview of the multiple roles and contributions of monitoring across the policy cycle. We then introduce the tools of policy logic models and Theory of Change to explore expected and realised impact from policy intervention(s). We look at the ways that these tools can be used to monitor evidence use and generation. We consider practical ways to unearth assumptions and evidence needs underpinning different policy activity monitoring. We finish with exploring the practical requirements to effectively monitor activities and what makes good performance indicators through the use of case studies.

Module 4	OVERVIEW	215
Contents	• Monitoring: evidence for policy decisions • Policy logic models and Theories of Change • Monitoring progress with indicators	
Learning Objectives	• **Describe the differences between monitoring and evaluation** • **Understand policy logic models and theories of change as tools for monitoring and appraisal** • **Apply processes to develop your policy Theory of Change and challenge underlying assumptions, context and risks that exist within means-ends relationships** • **Apply the principles and process considerations for defining monitoring indicators** • **Create a monitoring plan**	
Activity Overview	14 Theories of Change: interrogating assumptions, principles, and processes 15 Meaningful measurement: creating a monitoring plan	
Additional Reading	The Green Book	The Magenta Book
	Upstream Collaborative: Meaningful Measurement	Theory of Change in Ten Steps

Monitoring: evidence for policy decisions

This section explores different tools that can support the use of evidence and expertise within the monitoring of our policy challenges. Monitoring asks the question; 'what is happening now to achieve our intended goals?' It involves the continual systematic collection and review of data with the aim of measuring progress against objectives from implementation plans.

Monitoring is an important part of the policy cycle as it allows us to understand what is happening over the course of project delivery and implementation. By monitoring immediate evidence during implementation of a policy, we can make informed decisions on whether to take timely corrective action to policy design or objectives. This in turn helps to realise policy goals and key benefits for stakeholders. It also promotes transparency of our work and allows us to hold ourselves accountable to delivery plans - or learn from instances where delivery may not go to plan.

Official guidance on monitoring has been outlined in HM Treasury's Green Book Guidance on Appraisal and Evaluation,[1] which sets out how to appraise policies, programmes and projects alongside providing guidance on monitoring and evaluation before, during and after implementation. The Green Book defines monitoring as:

- **Monitoring** is one of the key mechanisms we have to track progress and delivery of an intervention by collecting data both during and after implementation. It enables us to measure the effectiveness of our intervention at achieving the intended outcome and use this to improve current and future decision-making.

The partnership between monitoring and evaluation —

Monitoring and evaluation are complementary activities that are often approached and planned together. Both have data needs and requirements, and both contribute to policy evidence base. In practical terms how we approach them, we ideally plan their design together. We'll be exploring evaluation in more depth in Module 5.

Increasingly, importance is being placed on opportunities and processes for learning that allow for the translation of monitoring and evaluation outputs into practice. By incorporating 'learning' within a monitoring and evaluation strategy, you can help to make sure that the evidence you're generating can translate back into policy design and implementation. We share more on approaches to facilitate learning from evidence and expertise in Module 6.

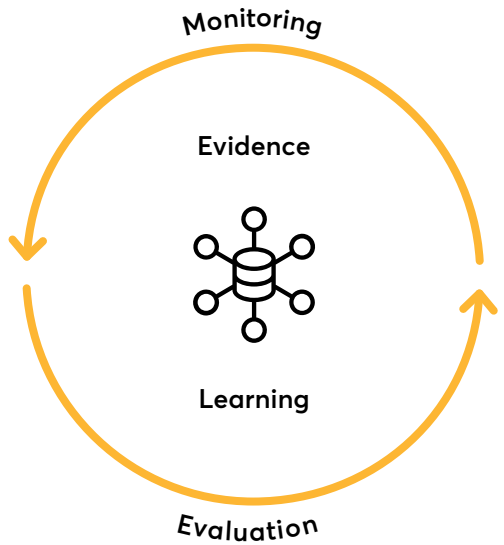


Figure 4.1: Evidence use, generation and learning happens across monitoring and evaluation plans

Think about your experiences with monitoring:

- Where have you used a monitoring strategy before?
- How have you used this to feed into any future changes?

1 HM Treasury (2020). *The Green Book: Central Government Guidance on Appraisal and Evaluation*. Available at: www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent (Accessed 14 July 2022)

Policy logic models and Theories of Change

Two common tools used for developing a shared understanding of the changes and impacts you are expecting to see from policy activities are policy Theories of Change and 'logic models'. These will often be found in the scoping and framing sections of monitoring and evaluation plans as a means of understanding where and how different forms of evidence, from theory to indicators of success, be used to assess the effectiveness of a programme. Theories of change and logic models sit within the methods taxonomy for **evidencing policy mechanisms and context** we introduced in Module 2.

A policy **logic model** is used to describe **what** impact is expected from a policy intervention. Logic models use a common, often visual, template to outline the sequence of proposed actions, events and impacts.

A **Theory of Change** is used to describe **why** we expect any given sequence of events and impacts to occur. It explains change rather than only describing the change as a logic model will do (though logic models can be used to develop a Theory of Change). It also summarises key assumptions and uncertainties that feed into an explanation.

Logic models

Logic models can be used as a precursor to a Theory of Change. They often use a visual representation of the sequence of activities and events by which a policy intervention results in outcomes. The typical components of logic models are displayed in Figure 4.1.

Input →	Activity →	Outputs →	Immediate outcomes →	Intermediate outcomes →	Ultimate impact
1 Identify resources used for a programme or intervention e.g. grant funding, information, people.	2 Identify what activities are being delivered.	3 Identify what has been delivered.	4 Identify any changes effected for key stakeholders, positive and negative, including economic, environmental, social, and personal.		6 Identify the net change for key stakeholders, including wider economic and social impacts.
Grant funding, information, people.	**A training programme, events, consultations with businesses.**	**Number of grants leveraged, number units distributed.**	**Increased knowledge or capability for managing the business.**		**Greenhouse gas emission reductions, increase in productivity.**

Figure 4.2: The key components of logic models

Theories of Change

—

A Theory of Change describes why we believe a particular approach will be effective, showing how change occurs in the short, medium and long-term. Theories of Change are helpful guides to determining where and how different forms of evidence and expertise can contribute to our understanding of our policy goals, actions, and mechanisms. Theories of Change can help you to:

- **Identify what you do and do not know.** Exploring and organising which causes lead to what consequences can help you to determine what you know, what you still need to learn, and where there are gaps or assumptions in your current knowledge about a complex intervention and the types and sources of evidence that can be used or generated to address your policy challenge..
- **Explore causal links.** By outlininge how inputs and activities will lead to different outcomes, as experienceds at different levels of a the system or by different stakeholders, it can help you uncover the actions needed to enact your vision.
- **Communicate your change.** Your Theory of Change can provide a narrative for understanding and communicating the change you are looking to achieve to your stakeholders, and how evidence fits within the broader story of how change is expected to happen. They can also serve as a shared reference points to enabled the co-creation of problem frames with stakeholders.
- **Monitor Progress.** Use your Theory of Change as an effective monitoring tool to measure progress against expected changes throughout the implementation of an approach.

However, a Theory of Change is not:

- An exhaustive presentation of all of the components of the problem or potential solution.
- Merely a pretty document or tick box exercise. It can be used as a monitoring and evaluation tool and can be updated as your project evolves.
- A static document: you should expect your Theory of Change to develop over time as new learning is generated to inform new priorities or decisions.

Developing a Theory of Change

There are a range of approaches and existing resources that can be used to help you develop a Theory of Change, with each usually involving similar steps as outlined below:

1 **Develop a logic model** with clear results chains and explicit causal links (a basic Theory of Change).

Additional methods can also be used for this step, including logframes, benefits mapping, goal mapping, or systems mapping. Take a look back at the methods taxonomy in Module 2 to refresh yourself on other methods for evidencing policy mechanisms and context.

2 **Identify assumptions and risks** underlying the Theory of Change.

3 **Identify other contextual factors** associated with the results chain to produce a refined Theory of Change.

4 **Identify remaining questions.** What are areas of uncertainty? What are important weaknesses in the evidence base? What are intermediate outcomes that can measure progress towards the ultimate outcome?

As demonstrated in Figure 4.3, evidence can be used to strengthen our understanding and confidence in our vision statement, outcomes, actions and mechanisms, as well as the causal links between these. If you are yet to develop a Theory of Change for your work, a template is available in Activity 14 in this module, along with other supporting resources and templates.

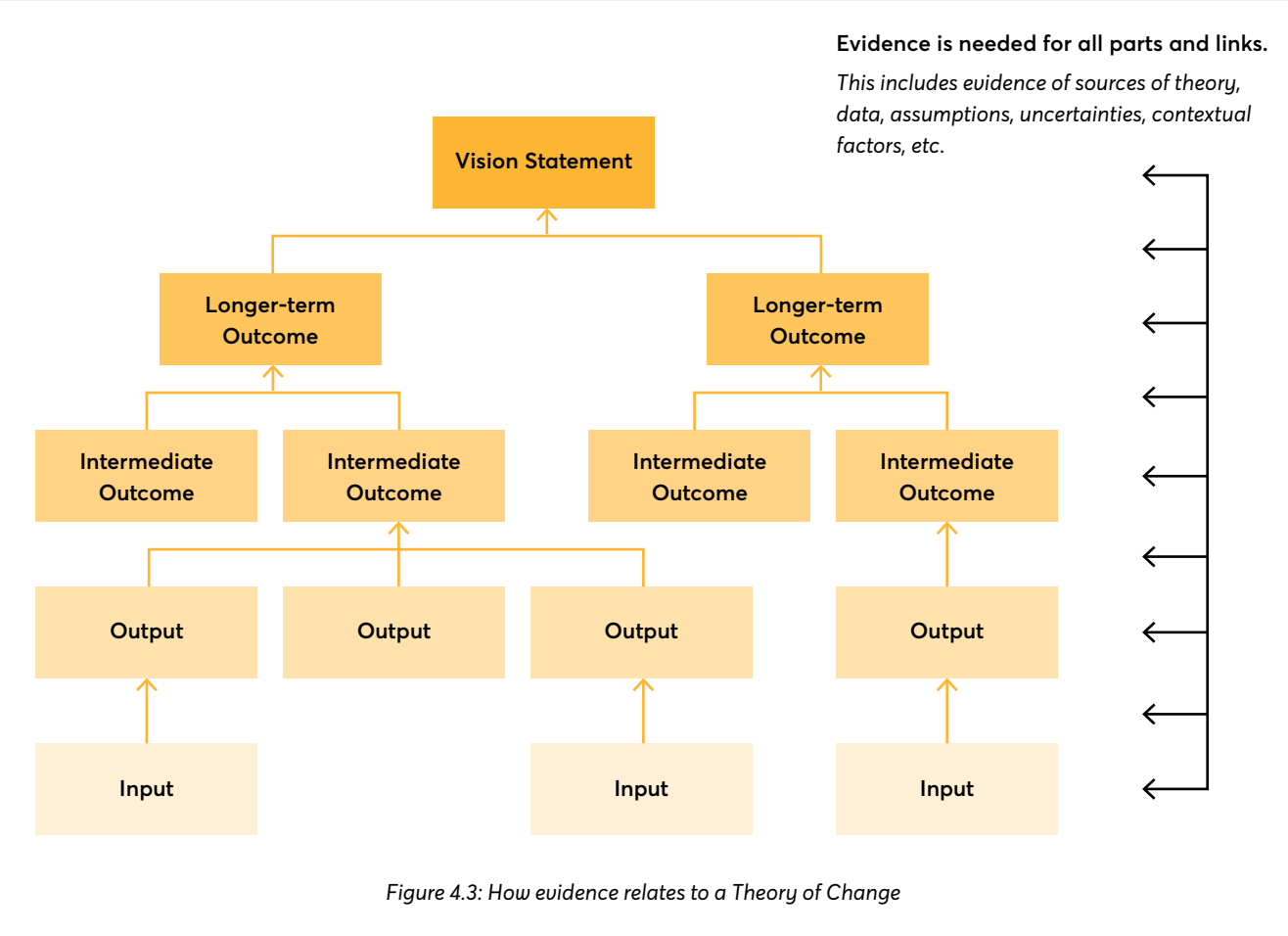


Figure 4.3: How evidence relates to a Theory of Change

Unpacking the causal links within our Theory of Change

—

Within a Theory of Change, the connections between our inputs and outputs, or our outputs to our outcomes, are the foundation of our means-ends relationships. These links help set out how and why change will happen between the different aspects of our programme - how we know our actions lead to outcomes, and why.

These means-ends relationships can also be framed as different hypotheses, or testable beliefs, about future value creation. The hypotheses within our Theories of Change can help serve as a means to organise and understand which evidence and expertise can be used to confirm, or challenge, the claim about how our actions will lead to the changes we expect.

Within the hypotheses that exist within your Theory of Change, we can consider how the evidence we gather about policy outcomes, actions, and mechanisms can come together - and how we can test, or deny, whether the hypothesis will hold true in our contexts. Here, the 'why' that sits behind a means-ends relationship represents the conditions that need to be in place to make the theory work. They explain the logic behind the overall programme and each of the links within our Theory of Change, and help us understand.

The link between the policy and expected outcome is about multiple causal pathways that can only be understood in relation to a given context (Cartwright and Deaton, 2018).[2]

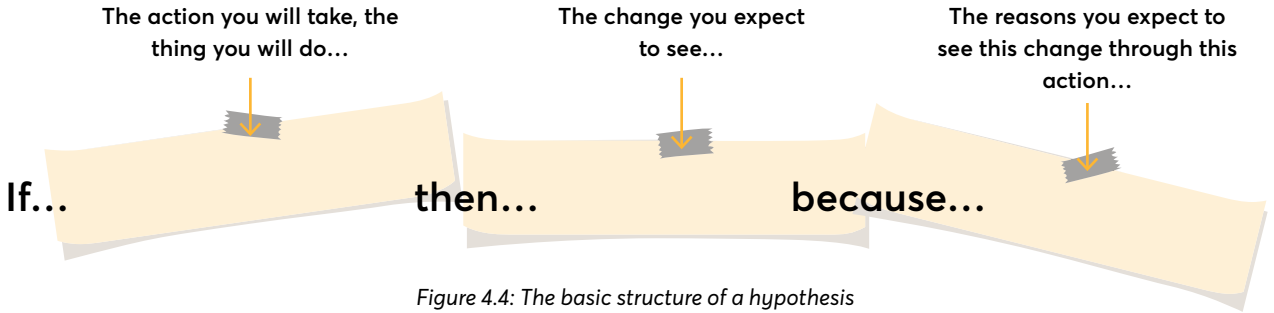


Figure 4.4: The basic structure of a hypothesis

Making our assumptions explicit

—

Making assumptions explicit helps us to better understand where, how, and under what conditions our actions can lead to the changes we want to see.[3]

Assumptions underpinning how actions might lead to a particular change help steer where and how additional evidence may need to be gathered or generated to challenge or support our understanding of a means-ends relationship - or hypothesis - claim. This can serve as an important stepping stone for both building our confidence in whether a theory will hold true in practice through evidence use, and steering evidence generation efforts such as through evaluation. Understanding these assumptions can also serve as a blueprint for understanding how these actions might be replicated in different contexts and environments, and what needs to be in place for that replication to be a success.

It can be helpful to refer back to the methods taxonomy in Module 2 and use or generate evidence to inform, or challenge, the different assumptions that exist within your Theory of Change. This evidence might be organised by assumptions about actions, expected outcomes, and contexts and mechanisms that enable a link within the Theory of Change to hold true.

2 Cartwright, N. Deaton, A. (2018) 'Understanding and misunderstanding randomised controlled trials' *Social Science & Medicine*. 210, pp.2-21. doi: doi.org/10.1016/j.socscimed.2017.12.005

3 National Council for Voluntary Organisations. (2020). *How to build a theory of change.* Available at: www.ncvo.org.uk/help-and-guidance/strategy-and-impact/impact-evaluation/planning-your-impact-and-evaluation/identify-the-difference-you-want-to-make/how-to-build-a-theory-of-change/ (Accessed 08 August 2022).

Unpacking the causal links and making assumptions explicit within a Theory of Change

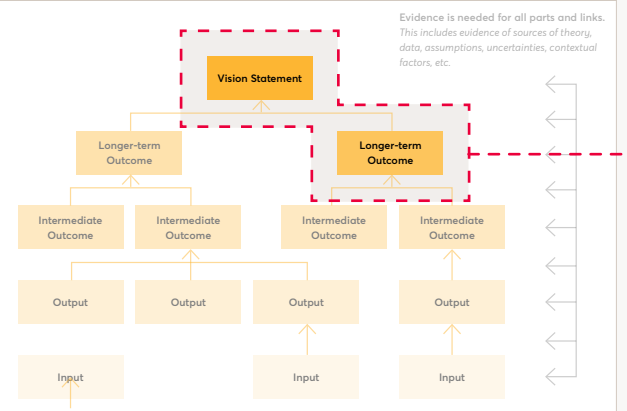


Figure 4.3: How evidence relates to a theory of change

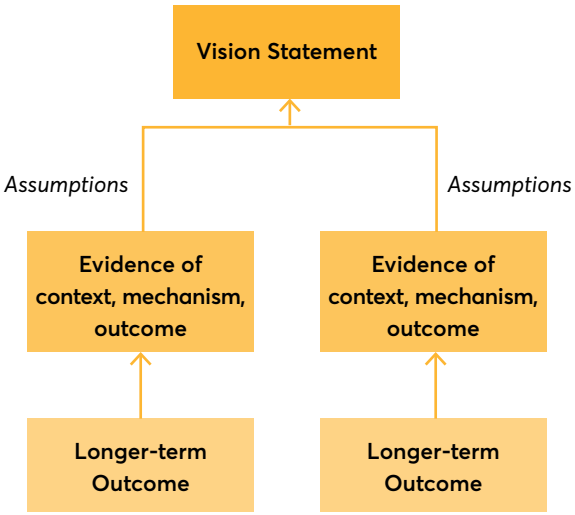


Figure 4.5: Unpacking links within a Theory of Change

Assumptions, Risks, and Mitigations	Evidence of Contexts, Mechanisms, and Outcomes
What factors, processes, and conditions need to be in place to enable these progressions? What risks might we encounter within this link, and how might we mitigate against them?	How does our action link to our objective? What is the problem that is being addressed by this link? What external factors will influence results? What evidence can we use, or generate, to support our understanding of this link?

Table 4.1: Questions to steer evidence use and expert engagement within a causal link

Identifying assumptions: the individual, social, material tool

—

One tool that can be used to help explore and identify assumptions is the Scottish Government's Individual, Social, Material (ISM) tool.[4] It was created to help policymakers consider the range of contextual factors that shape people's behaviour at the individual, social, and material levels, and can help us to think about what types of contextual assumptions we might make when designing or delivering a policy:

- **The individual context:** This includes the traits held by an individual that affect the choices and behaviours they make such as values, attitudes, skills, and personal evaluation of costs and benefits.
- **The social context:** This includes factors that exist beyond an individual but still have the power to shape individual behaviours. This includes networks, relationships, institutions, and understandings shared amongst groups such as social norms.
- **The material context:** These are factors in the wider environment and world which both shape and constrain behaviour. This can include 'hard' influences such as technologies and regulations as well as 'soft' influences such as the schedules of everyday life.

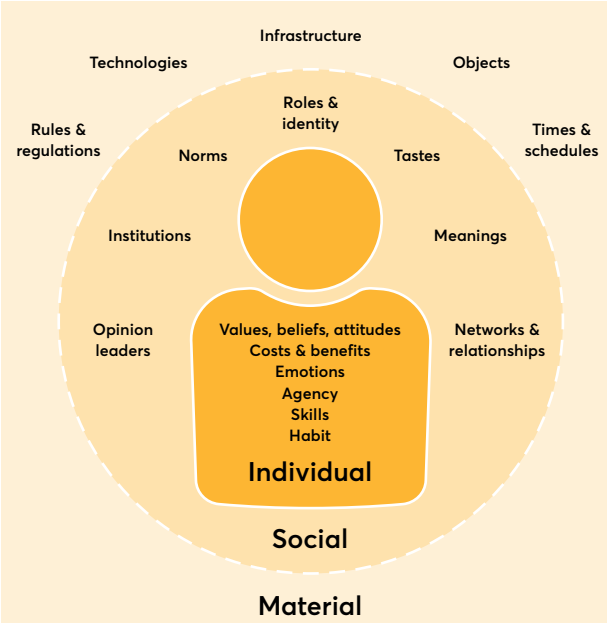


Figure 4.6: The Individual, Social, Material (ISM) Tool, taken from Darnton, A. & Horne, J. (2013)

4 Darnton, A. & Horne, J. (2013) *Influencing behaviours - moving beyond the individual: ISM user guide.* Available at: www.gov.scot/publications/influencing-behaviours-moving-beyond-individual-user-guide-ism-tool/ (Accessed 15 July 2022).

ACTIVITY 14:

Theories of Change: interrogating assumptions, principles, and processes

Overview:

In this activity you will explore the means-ends relationships within a Theory of Change. You'll unpack the assumptions underpinning these relationship links, and determine what evidence might be used or generated to support your confidence in different outcomes, actions, and mechanisms. If you already have a Theory of Change for your current policy challenge then you should use this and jump straight into Part B of the activity.

Background:

If you are interested in further developing your Theory of Change or understanding the process involved, there is a wealth of guidance that publically exists. Examples include the NPC 'Theory of Change in Ten Steps', Nesta's 'Theory of Change Worksheet', and Matter of Focus' digital software OutNav, used for developing Theories of Change and mapping evidence against progress. Alternatively, check whether your organisation uses standardised templates for developing a Theory of Change.

Instructions

For this activity, if you already have your own Theory of Change, then begin at Part B to interrogate different assumptions, principles, and processes underpinning it. If you do not have a Theory of Change for your policy challenge, consider using this opportunity to create one. Alternatively, an example Theory of Change has also been provided in Annex C.

Part A: Creating your own Theory of Change

1. Outline the vision or mission statement of your policy challenge in the space provided. Consider what evidence you have to support this.
2. Next, write out the longer-term outcomes you expect to see that will contribute to this broader vision. For each outcome, outline your supporting evidence.
3. Complete these steps again for each level of the Theory of Change.
4. Look across each link in your Theory of Change. What evidence do you have to support the causal link between each means-ends relationship?
5. Consider whether there are any links that lack sufficient evidence, or where you are less confident in the strength of the hypothesis between these links, and note these down as areas in need of additional evidence use or generation.

Part B: Critiquing your own Theory of Change

1. Familiarise yourself with the Theory of Change you'll be using. Identify any areas of uncertainty, or where you would like to explore the assumptions and evidence base underpinning a particular means-ends relationship.
2. Select one link in your Theory of Change and write it in the boxes provided. For example, from an output to an outcome or from an outcome to an impact. There is no 'right' way of diving into an existing Theory of Change, so you can start with any pair comparison.
3. For your chosen link, write out a hypothesis statement in the following format: *If we observe input/activity/output/outcome within context, then we expect input/activity/output/outcome because reason.* For some links, it might make sense to keep the hypothesis to a simple 'if, then' statement, and come back to the other hypothesis components.
4. Using the hypothesis statement as a reference point, work through the provided questions to interrogate the underpinning assumptions as related to the actions, outcomes, contexts and mechanisms represented within the link.
5. Against each question, consider the evidence you have or need to gather or generate to confirm or challenge the assumptions within this link, and help you assess how confident you are in whether the link will hold true. It can be helpful to think back to different types of evidence you generated in Activity 2.
5. Repeat this process with another link in your chosen Theory of Change. Try to vary which links you interrogate. For example, if you chose a link between an output to an outcome, try looking at a link between an outcome and a longer-term impact.

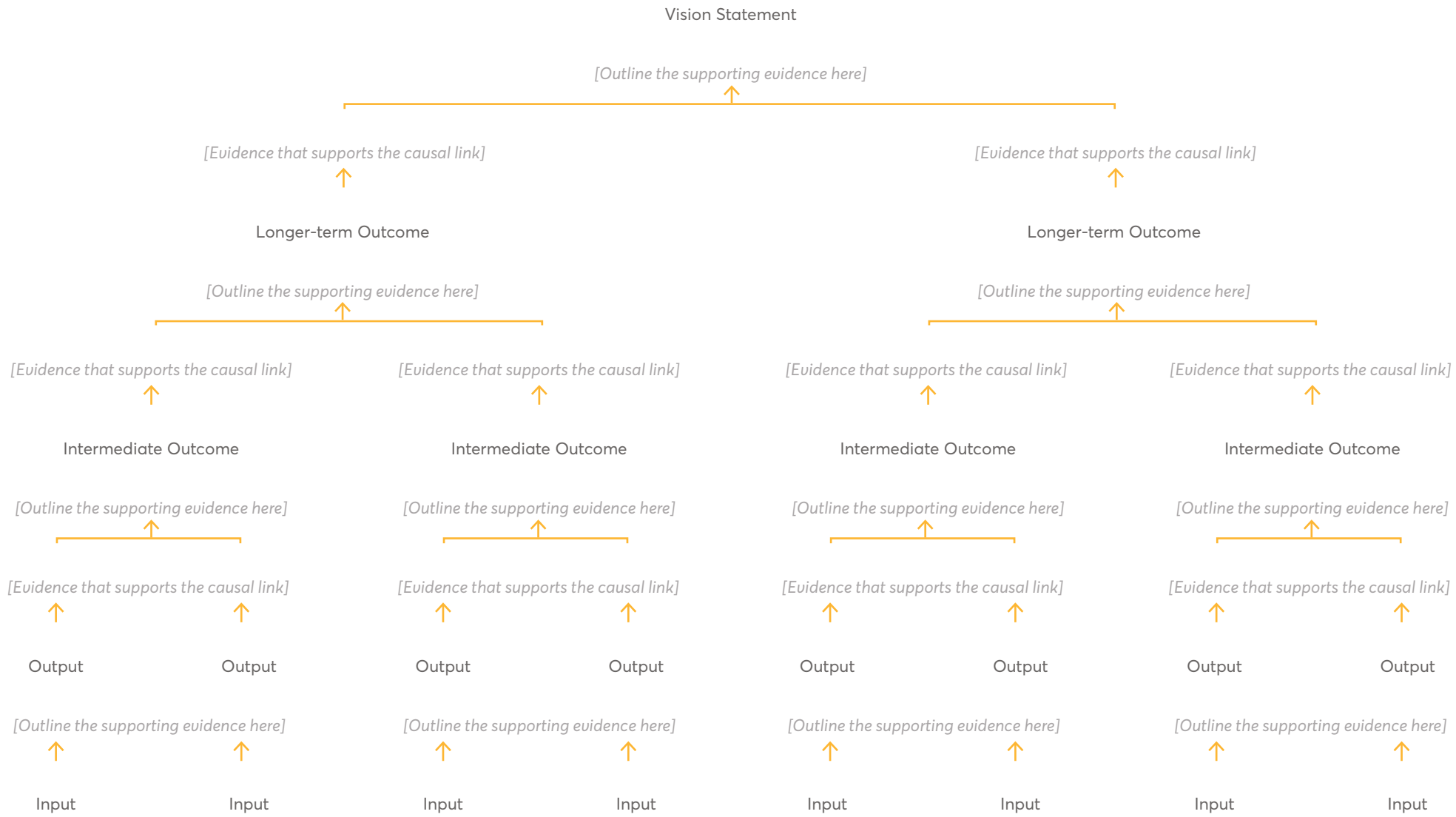
Top Tip:

Exploring different links within your Theory of Change can be a great reference point when engaging with experts. You might consider what expertise can be helpful in informing or challenging different assumptions made explicit by articulating and interrogating your Theory of Change.

ACTIVITY 14:

Theories of Change: interrogating assumptions, principles, and processes

Part A: Creating your own Theory of Change



ACTIVITY 14:

Theories of Change: interrogating assumptions, principles, and processes

Part B: Critiquing your own Theory of Change

Select a link within the Theory of Change: →

Write out a hypothesis underpinning this link:

If we observe *[input/activity/output/outcome]* *within* *[context]* *, then we expect* *[input/activity/output/outcome]* *because* *[reason]* .

	Assumptions, Risks, and Mitigations		Interrogating the Problem; Actions; Outcomes; Context and Mechanisms			
	What factors and processes need to be in place to enable this progression?	*What risks do you foresee within this link, and how might you mitigate them?*	*What is the problem to be addressed by this link? What external factors influence this problem? What stakeholders experience this problem?*	*What action will we take? Why have we decided to take this action against this problem?*	*What goal or outcome is this link working towards? Why has this goal been selected? How?*	*What are some of the contextual factors that might affect this link? (Consider individual, social and material contexts.) What mechanisms, or theory about how things work, underpin this link?*
Your response						
Evidence you can use (consider data, information, knowledge, wisdom)						
Evidence you can generate						
Confidence of whether this link will hold true	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

Monitoring progress with indicators

Identifying indicators is an important part of data-driven monitoring of progress. Indicators drive what we actually measure to understand progress towards our goals. Yet the process of deciding what indicators to use to measure progress can be difficult. Determining what indicators to use, and creating data capture strategies to inform progress towards goals can be incredibly difficult when there are a range of actors, priorities, and preconceptions of what progress looks like.[4] Additionally, we need to be cognisant that indicators incentivise behaviours that demonstrate progress against an indicator rather than its intended outcome (see box below).

Principles for defining indicators

—

Within monitoring, we might ask ourselves: What are we defining as progress towards our goals? What metrics are important to capture, at what time periods? How do we capture these? And how might these metrics be used to inform changes in policy design and delivery? A good starting point is understanding what progress towards your goals might look like for different actors and activities that you undertake within your policy, then determining what data to use or gather to monitor progress towards them.

When considering how to monitor your intervention there are a number of principles that can underpin your approach to selecting good indicators. Some principles for good indicator taken from the BEIS Monitoring and Evaluation Framework are:[5]

Simple
The indicator should have a clear definition and be easily measurable. The calculation and interpretation of the indicator should be understood in the same way across different stakeholders.

Relevant
It should be clear how the activity influences the indicator and what good progress looks like. Consider relating the indicator to the intervention's Theory of Change.

Timely
The indicator should use easily accessible data that does not have a lag which is difficult to explain.

Reliable
The indicator should be objectively verifiable, robust, use a good quality data source and be applicable over time.

Comparable
The indicator should be consistent with other indicators within a policy area. Consider developing a Key Performance Indicator (KPI) framework against which projects can report.

4 Oliver, K. (2022) 'Assessing national institutional capacity for evidence-informed policymaking: the role of a science-for-policy system', *Publications of the European Union*. doi: 10.2760/951556

5 Department for Business, Energy and Industrial Strategy (2020) *BEIS Monitoring and Evaluation Framework*. Available at: assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/947722/beis-monitoring-evaluation-framework.pdf (Accessed 15 July 2022).

When a measure becomes a target

—

Goodhart's Theorem states that when you make a particular performance indicator a policy target, and put enough at stake, it ceases being a good measure.[6] This can be explored through the example of schools being measured on the proportion of students achieving 5 A*-C grades at GCSE level. When aiming to meet this target, schools were encouraged to focus their resources on the pupils at the sharp end of this target: those predicted to achieve four grade Cs and one grade D. Yet the effort and resources invested on these pupils risks being disproportionate, or at the expense of others. After the introduction of this target some schools saw average grades decreasing, which led to the additional introduction of an average grade as a target.[7] This example highlights the complex nature of performance indicators and reinforces the importance of thorough consideration of the objectives of policy and the potential impact of measurement on this.

Gathering monitoring data

—

To monitor progress, we can use existing data sets, or generate our own through primary data collection. Data collection can be undertaken by a wide range of methodologies that we explored in the Methods Taxonomy in Module 2 such as surveys and interviews. Capturing, and conducting analysis of monitoring indicators, also requires consideration of data infrastructure - what will support the organisation, sharing, and consumption of this data to support future use, as well as data privacy, ethical consent, and sharing agreements. There may also be instances in which you can't find a suitable indicator to monitor progress. In these instances, consider the proportionality and usefulness of the monitoring indicators already at your disposal by weighing up the indicators you do have, or by defining or using an additional proxy to monitor progress.

Measuring evidence use in Government

—

The sense about science transparency of evidence framework demonstrates how a broader strategy can be developed through a range of different metrics. In this example the framework looked to assess how transparent government departments were about the evidence behind the policy using metrics in a broader sense: evidence to track the use of evidence!

Reflection Point:

—

You might also want to consider how to ensure you're monitoring in support of Equity, Diversity, and Inclusion (EDI) goals. This can help ensure equity in future iterations of policy design and implementation.

6 Strathern, M. (1997) 'Improving ratings: audit in the British University system'. *European Review*. 5(3), pp 305-321. doi: doi.org/10.1002/(SICI)1234-981X(199707)5:3%3C305::AID-EURO184%3E3.0.CO;2-4

7 Wiliam, D. (2001) *What is wrong with our educational assessments and what can be done about it?* Available at: www.researchgate.net/publication/258423441_What_is_wrong_with_our_educational_assessments_and_what_can_be_done_about_it (Accessed 15 July 2022).

Where to find existing indicators

—

In addition to generating our own monitoring data through primary data collection methods, there are a number of existing indices that have been created to foster alignment between individuals or institutions working towards common goals. Depending on the sector or questions at hand, there may be a range of pre-existing measurement and monitoring tools that can support the identification and use of indicators to monitor progress. These have often gone through various scrutiny and peer review processes to ensure their transferability and use across multiple stakeholders. Examples of these indicators can be found below.

As with searching for and scrutinising evidence in Module 2, searching for indices that reflect the unique needs of your policy area can benefit from thinking around the AORTA framework. Additionally, experts, academics and other knowledge intermediaries can be a great source for signposting or compiling valuable indices.

Meaningful measurement: exploring performance and monitoring indicators

—

The Thriving Places Index identifies the local conditions for wellbeing and measures whether those conditions are being delivered fairly and sustainably.[8] It has been developed to give an easily accessible dashboard that allows users to explore data by region across a broad range of indicators. This index provides a vitally important tool in monitoring the progress of the Government against its commitment to social capital improvements as part of levelling up the country. More about HM Government's plans for Levelling Up can be found in the Levelling Up the United Kingdom white paper, which looks to provide analysis and context to the cause of economic and social disparities across the UK.

Thriving Places Index

Instructions

1. Read the Levelling Up the United Kingdom White Paper Summary Document and take a look at the Thriving Places Index.
2. Using these resources, reflect on the following questions in your teams:
   a. What are the different ways that levelling up can be expressed through the measures presented in the thriving places index?
   b. Are there any measures that might be missing?

SDG Indicators Metadata repository

Subnational indicators explorer

Household satisfaction survey templates

BEIS/Nesta Spacial Research and Develpment tool

Databank of Development Indicators

Data, Measures and Analysis on Wellbeing

8 Centre for Thriving Places.(2022) *Welcome to the Thriving Places Index.* Available at: www.thrivingplacesindex.org/ (Accessed 05 August 2022).

Case Study: **Coventry City of Culture 2021**

The UK City of Culture Initiative was developed by the Department of Digital, Culture, Media and Sport (DCMS) to encourage the use of culture and creativity as a catalyst for positive change. Coventry was awarded the UK City of Culture 2021, and this case study explores the Monitoring and Evaluation (M&E) strategy undertaken in support of the programme, including core impact targets, process considerations, and methods and tools employed throughout.

The Performance and Evaluation Strategy, published in 2019 and set to run until 2023/2024, was jointly developed by the University of Warwick, Coventry University, Coventry City Council, and the Coventry City of Culture Trust. It sets out logic frameworks for the intended impact of activities on the city and its people alongside cultural, social, economic, health and wellbeing, and other impacts.

Figure 4.7: Coventry Cathedral[9]

Working in partnership across stakeholders, Coventry identified four legacy impacts as part of the City of Culture Initiative:

1. Coventry's **citizens positively influence and shape the city** they want to live in
2. Coventry's culture contributes to the **social and economic prosperity** of the city and region
3. Coventry is a **global and connected city**
4. Coventry is recognised as a **future-facing pioneering city**

Process considerations

—

The core considerations for designing this M&E strategy included:

- **Timelines:** The main programme of activities was delivered between May 2021 - April 2022. Even though the year of Coventry's activity is during that time frame, the outline of the performance and evaluation strategy was a six year process which allowed for additional collaboration and determination of the performance monitoring and evaluation strategy. This was published two years ahead of the programme activity.
- **Partnerships:** The initiative involved working closely with local universities, the Coventry City of Culture Trust, Coventry City Council, City Partners, and external consultants, who all contributed to different aspects of the programme. For example, local universities played a leading role in informing the performance evaluation strategy and tracking progress towards outcomes.
- **Co-Creation:** 50% of the programme was not pre-set, but instead co-created with residents using cultural producers embedded in community groups across the city. "Co-creation" of activity was a central tenet of the Coventry approach and this extended to the selection of performance indicators.
- **Governance:** An impartial Technical Reference Group with representatives across stakeholders was used to advise on evaluation practices, and rigour, including methods, data aggregation and dissemination. They met quarterly, and also supported the M&E activities through guidance on appropriate methodological approaches, validation of surveys and ethics around the collection of data.
- **Logic Frameworks:** Logic frameworks were developed at the start of programming, and used as core reference points throughout.

9 Wikimedia Commons, Coventry Cathedral. Available at: commons.wikimedia.org/wiki/File:Coventry_Cathedral_2018.jpg (Accessed 02 November 2022).

- **Data Collection:** The collection of monitoring data was supported by Coventry Local Authority Household Surveys, which have been running on a yearly basis since 2016. These were used to help understand who was participating in different cultural activities across the city.
- **Outputs and Transparency:** Mid-term and end-term reports were used to communicate progress. This included sharing baseline and midline results, with updates signed off by the Technical Reference Group
- **Funding:** £1 million of £30 million in total funding for the initiative was committed to evaluation activities

Choosing outcomes and aligning indicators

For each of the four key identified impacts, a series of agreed-upon outcomes were defined. The development and selection of the indicators was established through an iterative process collaborating with key stakeholders, and highlighted a range of principles that were used in determining these indicators.[10] These included:

- **Breadth and Depth:** Using a range of data collection and analysis methods spanning both quantitative and qualitative measures.
- **Completeness:** Data gaps are identified, mitigated against and explained.
- **Available and Feasible:** Data is readily and consistently available to allow tracking of indicators. Maximise the use of existing data.
- **Integrity:** Data is protected from deliberate bias and/or manipulation.

Several indicators were drawn from the Coventry Household Survey, which gathered data that met a number of core indicator criteria. An example showing the organisation of these outcomes and relevant outcome indicators drawn from data gathered from the Coventry Household Survey is given in Table 4.1.

Outcome	Outcome indicator
Increase in civic pride	Increase in levels of neighbourhood and city centre satisfaction
	Programme is representative of the city's population and underrepresented groups
	Events delivered based on geographical considerations
	% of residents engaged in local community arts and cultural activities
	Increase in cultural participation in all neighbourhoods / represented groups
	Increase in cultural participation from neighbourhoods with low participation

Table 4.2 - Coventry City of Culture evaluation: Example outcomes and relating outcome indicators, taken from the University of Warwick, Coventry University, Coventry City Council (2020)

Linking performance measurement and evaluation

The evaluation methodology was developed alongside the performance monitoring and measurement framework. This was done to ensure the alignment of both methodologies to the data collection and analysis requirements, allowing requirements to be identified early in the design process and, where necessary, addressed through appropriate performance indicators. Gaps within the performance measurement data helped identify where there was additional need for evidence, and the evaluation plan also emphasised that partnerships with local universities could be leveraged to complement the evaluation plan and deepen learning.

As part of the performance measurement strategy, it was important that the City of Culture programme was able to explore the heterogeneity of activity participation was fully captured. Additional granularity was needed in data collection to understand the discrepancies in needs, interests and reactivity to cultural interventions across stakeholder groups. This also meant the inclusion of social value measurement processes leveraged within the design and evaluation framework.

10 University of Warwick, Coventry University, Coventry City Council. (2020) *Performance Measurement and Evaluation Strategy*. Available at: coventry2021.co.uk/media/1drpwr4p/pm-e-strategy-january-2020.pdf (Accessed 15 July 2022).

ACTIVITY 15:

Meaningful measurement: creating a monitoring plan

45

Overview:

In this activity you will explore some of the principles and process considerations for creating your own monitoring plan, and will identify helpful indicators for tracking progress against your policy challenge.

Background:

There are a number of existing resources that support the development of monitoring strategies. Often, government departments will refer to their own guidance for monitoring, evaluation, and learning. For example, guidance from the Department of Transport can be found here.

Alternatively, the Nesta Upstream Collective report on meaningful measurement explores how local government innovators are realigning measurement and evaluation practices to better fit the complexity and interconnectedness of social challenges.[11] The report stresses that evidence is more than just data. Often we are well versed at gathering monitoring data, capturing indicators such as the number of people that access a service, or where these people live. A common challenge arises when undertaking the process of analysis to turn this data into evidence (as explored in Module 1). To ensure the outputs from monitoring translate to changes in practice, it's important to be confident that the data being gathered is meaningful and that you understand how it can most effectively be used.

11 Lloyd, J. (2020) Meaningful Measurement. Available at: www.nesta.org.uk/report/meaningful-measurement/ (Accessed 09 August 2022).

Instructions

1. Write your policy challenge in the space provided.
2. Each theme corresponds to a different process consideration you might have when developing your own performance and monitoring indicators. In the spaces provided, write down your response to the prompt questions in relation to your policy challenge.
3. In the space provided, add an additional theme you'd like to address as part of your monitoring plan.

ACTIVITY 15:

Meaningful measurement: creating a monitoring plan

Write your policy challenge here:

Theme 1:
Process
What governance process will help steer the monitoring process? To what extent will co-approaches be used?

Theme 2:
Outcomes and Value
What outcomes do you want to keep track of and report on? What outcomes are closely associated with the value of the intervention?

Theme 3:
Defining Indicators
What indicators will you use to monitor progress? How will you determine these indicators? (Consider Breadth and Depth; Completeness; Availability and Feasibility; and Integrity)

Theme 4:
People & Partnerships
What stakeholders might you consult as part of the monitoring, evaluation, and learning process? What kind of partnership agreements need to be in place? How might local and diverse forms of expertise, or ongoing research expertise, be leveraged to benefit this work?

Theme 5:
Data Sources and Storage
How will you gather data? What existing data sources or expertise can you use? What infrastructure can support data capture, sharing, and analysis?

Theme 6:
Timelines
What are the timelines for monitoring? When are the main programmes of activity being delivered, and when should a monitoring strategy be developed and deployed?

ACTIVITY 15:

Meaningful measurement: creating a monitoring plan

Theme 7:
Tools and Reference Points
What are the timelines for monitoring? When are the main programmes of activity being delivered, and when should a monitoring strategy be developed and deployed?

Theme 8: **Outputs**
What outputs might you create from your monitoring plan?

Theme 9:
Transparency and Communication
Who do you want to share monitoring outputs with? How might you keep stakeholders updated on monitoring outputs?

Theme 10:
Funding and Resourcing
What funding is available from the total budget to contribute to monitoring, evaluation, and learning activities?

Theme 11:
Evaluation and Learning
How will your monitoring plan be aligned with evaluation and learning strategies? How will the data captured be translated into changes in practice?

Write your own theme here:

Module 5

Evaluation

Module 5 focuses on how expertise and evidence can be used to support the fifth stage of the ROAMEF cycle: evaluation. We first consider some of the primary questions that evaluation generates evidence responses to. The challenges in evidencing either complete attribution or partial contribution by policy to observed impacts in the world are explored. We next turn to the practical choices faced in selecting evaluation methods and approaches, and reflect on the ways different research and evidence paradigms have shaped different evaluation styles over time and some of the practical ways by which we evidence either contribution or attribution claims. We look at methods for contribution evaluation, using Process Tracing to test alternative hypotheses within your Theory of Change, and the Most Significant Change (MSC) method for evidencing impact when indicators might be hard to define. We then focus on Randomised Controlled Trials (RCTs) as an experimental evaluation method to measure causal impact, and introduce Nesta's Standards of Evidence as a tool for understanding confidence in causal evidence claims. Finally, we look at the complexities we encounter when determining, defining and measuring the value of policy interventions.

Module 5	OVERVIEW			255
Contents	• Evaluation in a complex world • Evaluation evidence and methods: understanding paradigms and styles • Evidencing contribution • Evidencing attribution • Levels of evaluation confidence: using Nesta's standards of evidence • Evidencing value			
Learning Objectives	• **Explain how evaluation paradigms may influence approaches to evidence** • **Understand the difference between contribution and attribution** • **Apply standards of evidence as a tool for understanding confidence of causal inference** • **Apply Process Tracing tests to hypotheses within a Theory of Change** • **Compare different evaluations methods: Randomised Control Trials, Cost-Benefit Analysis, Process Tracing, and Most Significant Change** • **Design your own Randomised Controlled Trial** • **Identify the different methods for defining and measuring value**			
Activity Overview	16 Articulating and evidencing alternative hypotheses: combining process tracing with contribution analysis 17 Evidencing lived outcomes with most significant change 18 Designing Randomised Controlled Trials			
Additional Reading	HM Magenta Book on Evaluation and Appendices	BetterEvaluation Knowledge Platform	Running RCTs in Innovation, Entrepreneurship and Growth	Supporting public service transformation
	ESRC Impact for Funding Opportunities and Communicating Impact	Research Impact Planning Guide	How to design a randomised controlled trial	Guide for Uncertainty Communication

Evaluation in a complex world

Evaluation asks whether our policy activities are making a difference, for whom, where, when and how.

Official guidance on evaluation has been outlined in HM Treasury's Magenta Book and HM Treasury's Green Book. The Green Book defines evaluation as:

- ***Evaluation*** *is the assessment of an intervention's design, implementation and outcomes*[1]

Evaluation helps us answer the question of 'what works' within our policies, by exploring the impacts of a policy intervention on the outcomes that we care about. Different evaluation methods can also support our understanding of additional nuance in determining impact - such as what is the impact, for whom, under what circumstances, and due to what factors. Importantly, evaluations are not static, one-off activities, but can instead be understood as a collaborative learning process responsive to the questions we'd like to answer influenced by context, and imbued with value. Evaluation is often complementary to our monitoring plans, whereby additional analyses of monitoring evidence collected can be fed back into wider project delivery and change decisions.

We often work in partnership with a range of stakeholders, both internally and externally, to support evaluation in practice.

Different experts that we engage with can help steer components of an evaluation process, from scoping the questions that the evaluation seeks to answer, to supporting data collection, analysis, and translation of evaluative findings into practice. For example, we might engage with a range of stakeholders when determining what value an evaluation seeks to measure, or to help ensure the findings of that evaluation benefit those involved. We might also engage with a range of research producers, who may have expertise on relevant theories, or who can help ensure suitable methods are employed to answer the questions of interest and mitigate the undesirable influences of biases we are prone to when evaluating the impact of our own work.

In this module, we introduce you to a range of evaluation concepts and approaches that help us evaluate impact, process, and value as outlined in the Methods Taxonomy for Evidencing Policy Action introduced in Module 2. Each of these methods has its own quality assurance processes and underpinning values, and can provide different evaluative findings to answer different aspects of your policy problems.

1 HM Treasury (2020). *The Green Book: Central Government Guidance on Appraisal and Evaluation*. Available at: www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent (Accessed 14 July 2022)

Demonstrating contribution or attribution?

—

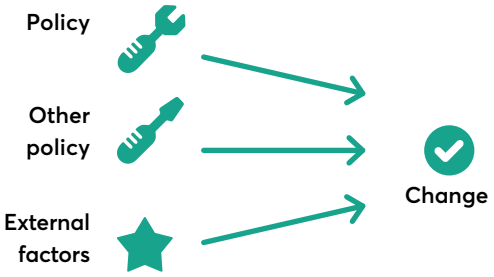
It is crucial to recognise the difference between **contribution** or **attribution** by a policy intervention to an observed change in the world. Attribution describes a direct causal link between policy and observed outcomes. Contribution, on the other hand, occurs when a policy has helped to cause the observed outcome but is one of multiple causal influences.

Proving that a change in the world is the direct causal result from a policy intervention can be really difficult, especially when working in complex policy environments. This is often due to other concurrent factors not part of the intervention in question that can also simultaneously influence our outcomes of interest. Additionally, there may be unexpected and even uncontrollable events that see us adapt the design and implementation of our policies, meaning our underlying Theories of Change might fundamentally change. Increasingly, government guidance on evaluation such as the Magenta Book focus on the usefulness of a range of methods, and their many possible combinations, in dealing with these complexities.

When evaluating a policy, we need to differentiate between **contribution** and **attribution**; were there many factors influencing the change we are observing, or was our intervention the sole cause?

Attribution
Sole cause

Where a policy is the sole cause that observed outcomes are achieved.



Contribution
One of several causal influences

Where a policy helped to cause the observed outcomes, but there are other factors influencing the change.

Figure 5.1 Attribution and Contribution of Policy Impact

Reflection Point

Consider a policy to increase the uptake of smart meters in residential homes. You may find that after the introduction of a smart meter (an intervention), the household energy consumption is reduced (an outcome). This change may have happened because household members are more aware of times during the day of excessive usage (a reason).

- However, can you be certain that the installation of the smart meter was the sole cause of the energy use reduction (attribution)?

Show answer

- Can you think of other factors adding to the complexity of evaluating the contribution of the smart meters?

Show answer

2 Energy Saving Trust. (2021) *Energy at home: Guide to smart meters*. Available at: energysavingtrust.org.uk/advice/guide-to-smart-meters (Accessed 23 August 2022).

Evaluation evidence and methods: understanding paradigms and styles

As evidence users, reflecting upon how our ideas have been constructed and the different paradigms that might have influenced how evidence is produced and consumed can help clarify why it might be preferable to use one method instead of another in a given context.

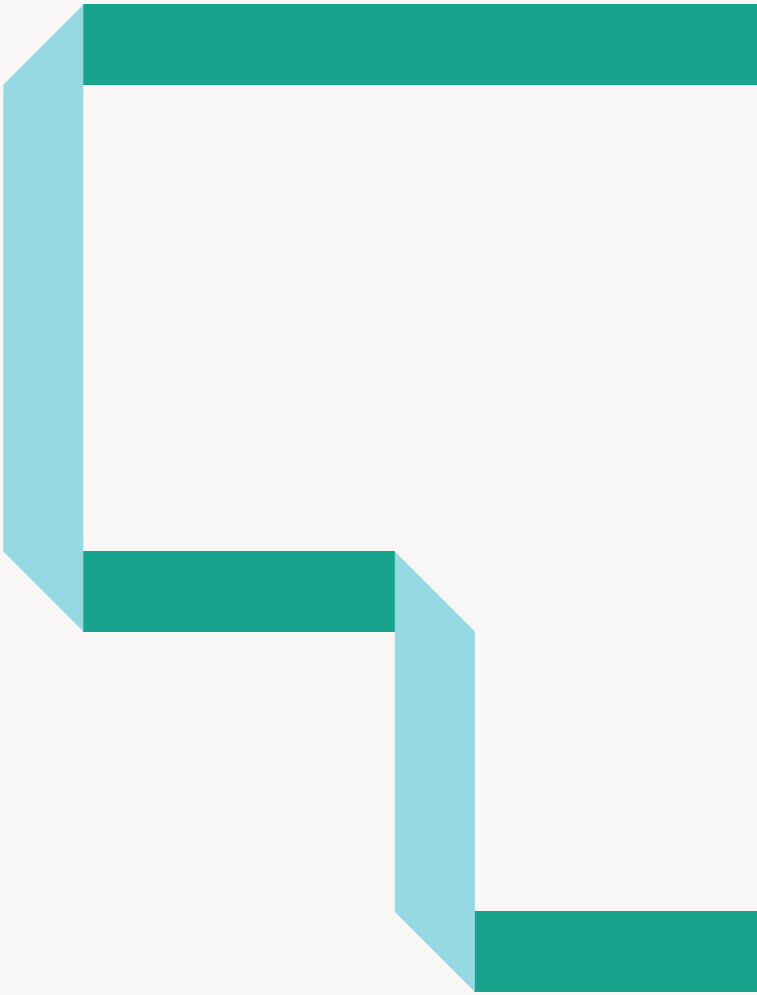
Paradigms are sets of beliefs or thought patterns about the nature of the world and how to inquire into it.

Understanding the different paradigms shaping an evaluation process can help us generate a better understanding of how we, and the stakeholders we engage with, carry different assumptions about the nature of the world and how we go about producing evidence about it. It can also help us understand what methods and tools we want to use, when and why.

Different research producers that you might commission or engage with to undertake an evaluation will have different notions of what 'truth' and 'knowledge' means in practice. They will have different preferences for the method of inquiry required to help better understand that truth. So how are current ideas of knowledge created and prioritised? By whom? And how do our own social constructs and surrounding work cultures influence our production and use of knowledge, including evaluation evidence?

A research paradigm consists of ontology, epistemology and methodology.

Table 5.1 illustrates these different types of assumptions underlying all evidence work and provides examples of how they differ across different paradigms. As different paradigms have emerged over time, it can also give context for why different 'styles' of evaluation methods have tended to be more fashionable and influential in different communities, and at different times. It is very common for evaluation scientists and policy evaluators to make use of a diverse range of methods to match the evaluation problem faced - even if these methods have historically been associated with different paradigms. By giving even a little bit of additional attention to the paradigm assumption underlying our work, we can often more easily identify what questions we want to ask to achieve alignment between potentially conflicting beliefs between stakeholders, and have confidence the evaluation process and results reflect the questions and outcomes we care about.



Illustrating different evaluation styles and associate paradigms		Positivism	Constructivist	Critical
Associated evaluation 'style'	What evaluation methods have been developed within this paradigm or been closely associated?	Quantitative research methods such as statistical methods in impact evaluation.	Qualitative research methods which focus on capturing breadth of perspectives and lived experiences of outcomes and process.	Mixed approaches combining positivist and constructivist principles through use of middle range theory such as realist evaluation methodologies
Ontology	What's out there to be known? What is reality?	There is a single reality	There is no single reality, rather multiple realities	Realities are socially constructed and under constant internal influence
Epistemology	What can we know and how? How do we create knowledge about it?	Reality can be measured Focus on reliable and valid tools Objectivity is important	Reality needs to be interpreted Interactive link between researcher and participants Values are made explicit	Reality and knowledge are influenced by power relations that exist within society
Methodology	How can we set about acquiring knowledge?	Experimental Quasi-experimental	Heuristic Ethnography	Mixed methods Participatory

Table 5.1 - Overview of different research paradigms and historically closely associated 'styles' of evaluation (adapted from various sources) [3, 4, 5, 6]

3 Patel, S. (2015) *The research paradigm – methodology, epistemology and ontology – explained in simple language.* Available at: salmapatel.co.uk/academia/the-research-paradigm-methodology-epistemology-and-ontology-explained-in-simple-language/ (Accessed 23 August) 2022).

4 Dudovskiy, J. *Ontology*. Available at: research-methodology.net/research-philosophy/ontology (Accessed 23 August)

5 Proofed. (2022) *Research Paradigms: Explanation and Examples.* Available at: proofed.co.uk/writing-tips/research-paradigms-explanation-and-examples/ (Accessed 23 August)

6 Mertens, D. 2019. "An Introduction to Research and Ethical Practice" in *Research and Evaluation in Education and Psychology : Integrating Diversity with Quantitative, Qualitative, and Mixed Methods* 5th Edition. Los Angeles: SAGE Publications. Available at: www.sagepub.com/sites/default/files/upm-binaries/29985_Chapter1.pdf (Accessed 26 August 2022).

Common evaluation types and methods

In Module 2 we explored the wealth of methods available for producing evidence for policy and classified these under three families of primary focus of contribution to understanding: 1) outcomes, 2) mechanisms and context, and 3) action. Whilst this module hones in on some of the common methods used for evaluating impact, process, and value within UK policy, there are many more evaluation methodologies that can be employed to investigate different evaluation questions. In order to give confidence about the selection of a suitable method, we always need to question what assumptions about what and who is presented, in what way and at what level of specificity are embedded within.

A helpful starting point for steering decision-making around the kind of evaluation we need is to think about the overarching types of questions an evaluation aims to answer about an intervention. Table 5.2 provides definitions of some of the typical types of evaluations and evaluation questions you might come across in your work. For each evaluation type some of the methods discussed later in this module are highlighted for those wanting insight into how such evaluations can work. Whilst this module hones in on some of the common methods used for evaluating impact, process, and value within

UK policy, there are many more evaluation methodologies that can be employed to investigate different evaluation questions.

Evaluation Type	Evaluation Definition[7]	Questions it Helps Answer	Example Tools [8]
Impact Evaluation	Involves an assessment of what changes have occurred, the extent of those changes, and whether they can be attributed to the intervention and a comparison of benefits to costs. It supports understanding of the intended and unintended effects of outputs, as well as how well SMART objectives were achieved.	Does the intervention improve a specific outcome? To what extent? For whom?	Randomised Controlled Trials Most Significant Change
Value for Money Evaluation	Whilst impact evaluation demonstrates and quantifies outcomes, it cannot on its own assess whether those outcomes are justified. Value-for-money evaluation considers such issues, including whether the benefits of the policy are outweighed by the costs, and whether the intervention remains the most effective use of resources.	Is the intervention an effective use of resources? Are the benefits equitably distributed? Do the benefits of a policy justify the costs?	Cost Benefit Analysis Cost Effectiveness Analysis
Process Evaluation	Involves assessing whether an intervention is being implemented as intended, whether the design is working, what is working more or less well and why. It supports understanding of internal processes used to deliver outputs, alongside what was actually delivered and when.	Did the implementation go as planned? What can be learnt from the implementation?	Process Tracing Realist Evaluation

Table 5.2 - An overview of different evaluation types, the questions these answer and the method that can be used

Reflection Point:

In your teams consider and discuss the following questions:

- What questions are you currently grappling with that require evaluation?
- Who might you partner with to conduct an evaluation? Consider stakeholders mapped in Activity 8 of Module 2, or the Research Producers mapped in Activity 5 of Module 1.
- What support for evaluation currently exists within your department, or where you might commission evaluation from?
- Which of these evaluation methods is more familiar to you? Which are less familiar?

7 HM Treasury (2020) *The Green Book: Central Government Guidance on Appraisal and Evaluation.* Available at: www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-governent (Accessed 27 July 2022).

8 HM Treasury (2020). *The Magenta Book Annex A: Analytical methods for use within an evaluation.* Available at: assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/879418/Magenta_Book_Annex_A._Analytical_methods_for_use_within_an_evaluation.pdf (Accessed 27 July 2022)

Evidencing contribution

Evaluative evidence often aims to shed light on the credibility of causal claims about the impact an intervention has made on observed results. More often than not, this involves engagement with the evidence about the nature and extent of contribution an intervention makes within a complex, changing, interrelated policy context, rather than its sole attribution of impact.

When we iteratively devise and test alternative causal hypotheses for parts of our Theory of Change, it helps challenge the biases and assumptions behind any initial 'gut instinct' or dominant hypotheses. When we can then also demonstrate how different types of evidence have been used to test these hypotheses, we can transparently identify, develop and report on the areas of weaker and stronger confidence about the accuracy of our causal claims about an intervention.

Two closely related tools are thereby used in transparently evaluating policy contribution. The first is the expected *Theory of Change* for a policy intervention. The second tool is the articulation and testing of alternative *hypotheses*. In Module 4 we explored Theories of Change and the use of policy logic models to develop them, and also explored the general structure of a hypothesis, which is a "testable belief about future value creation".[9] ("if … then … because …"). Figure 5.2 illustrates the steps involved in systematically developing the evidence for policy undertaking contribution analysis. As you move through the process, each step increases confidence about the accuracy of the contribution claim.

The result of a comprehensive contribution analysis should be a reasonably credible *contribution narrative* - a story that identifies the contribution a policy intervention has made towards outcomes, and the evidence for which a reasonable person would agree with.[11] Four conditions can be used to assess contribution claims and causal hypotheses:[12]

- **Plausibility.** The intervention is based on a reasoned Theory of Change. The chain of results and the underlying assumptions of why the intervention is expected to work are sound, plausible, and agreed upon by key players.
- **Fidelity.** The activities of the intervention were implemented as intended in the design and delivery plan..
- **Verification.** The Theory of Change is verified by evidence. The chain of expected results occurred, the assumptions held, and the (final) outcomes were observed. Alternative hypotheses were considered.
- **Recognising.** External factors influencing the intervention were assessed and shown not to have made a significant contribution, or if they did, their relative contribution was recognised.

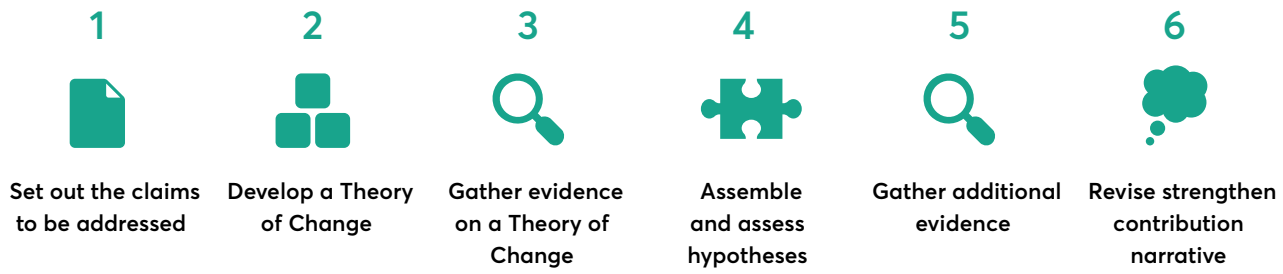


Figure 5.2 - Step by step process for contribution analysis[10]

9 Schrage, M. (2016) *The Innovator's Hypothesis: How Cheap Experiments are Worth More than Good Ideas*. Massachusetts: MIT Press Ltd.
10 Mayne, J. (2008) 'Contribution analysis: An approach to exploring cause and effect,' *ILAC Brief 16*. Available at: www.researchgate.net/publication/46472564_Contribution_analysis_An_approach_to_exploring_cause_and_effect (Accessed 16 August).
11 Mayne, J. (2012) 'Contribution analysis: Coming of age?' *SAGE journals*, 18(3), pp. 270-280. doi: doi.org/10.1177%2F1356389012451663
12 Befani, B. and J. Mayne. (2014). "Process Tracing and Contribution Analysis: A Combined Approach to Impact Evaluation." *IDS Bulletin*, Volume 45(6), pp. 17-36. Available from doi.org/10.1111/1759-5436.12110.

Method: process tracing hypothesis tests

—

There can be many possible hypotheses explaining why a certain change in the world is observed. In order to either confirm or reject hypotheses, we typically draw together multiple evidence sources, and consider the ways they either strengthen or weaken our confidence in them.

One diagnostic tool for consistently exploring and describing the implications any evidence source has for a given hypothesis are the 'tests' developed in the 'process tracing' evaluation method. Four logical tests appraise whether a piece of evidence suggests a causal hypothesis is necessary to establish causation, and whether it is sufficient to establish causation for a policy's impact. The four tests to assess causal hypotheses are defined in Table 5.3.

These evidence tests for causal hypotheses can be either to retrospectively evaluate how strong our evidence for contributed policy impact is. They can also be used in earlier planning and design stages of the ROAMEF policy cycle to identify what evidence sources would be desirable to help test causal claims in future. **The earlier we explore future needs for evidence, the more efficiently and effectively we can engage with partners to explore what evidence sources already exist and what is needed to support access, or what additional evidence should be collected when and by whom.** By identifying additional evidence planning and collection earlier, we can reduce reporting burden on partners, and achieve greater cost effectiveness for all stakeholders involved in evaluative evidence production and use.

UNNECESSARY TO CLAIM CAUSATION

Straw in the wind

Evidence that is 'nice to have' and lends support to confirming the hypothesis if observed. As it is neither necessary nor sufficient, passing this test will affirm relevance but not confirm the hypothesis. Failing will affirm a lack of relevance but will not eliminate the hypothesis. E.g. a developer stating their smart meters are saving household energy expenditure.

Pass: Affirms relevance but does not strengthen hypothesis

Fail: Does not eliminate hypothesis but is weakened

SUFFICIENT TO CLAIM CAUSATION

Smoking gun

Evidence strengthens the hypothesis if observed. This covers reports we would ideally like to see if the hypothesis is true but are likely difficult to find. Sufficient but not necessary. If the test is passed, the hypothesis is confirmed. If this test fails, the hypothesis is not eliminated. E.g. smart meter developers report that the policy support was critical to provide a stable supply chain and de-risk their capital investment

Pass: Confirms hypothesis

Fail: Does not eliminate but is weakened

INSUFFICIENT TO CLAIM CAUSATION

Hoop test

These are pieces of evidence we would expect to see if the hypothesis is true. Necessary but not sufficient to confirm the hypothesis: if this test is passed it affirms relevance but does not confirm the hypothesis. E.g. households with supported smart meters have reduced energy bills.

Pass: Affirms relevance but does not strengthen hypothesis

Fail: Eliminates hypothesis

NECESSARY TO CLAIM CAUSATION

Double decisive

Strengthens the hypothesis if observed and if not observed the hypothesis is weakened e.g. investment provided and confirmed by financial accounts. Necessary and sufficient. E.g. comparative analysis of firms supported and those not by a policy demonstrate policy support was critical to smart meter development successes.

Pass: Eliminates all rival hypotheses
Pass: Confirms explaining contribution hypothesis

Fail: Eliminates hypothesis

Table 5.3 - The four tests of process tracing to assess causal hypotheses: 'the straw in the wind', the 'hoop', the 'smoking gun', and the 'double decisive' test. Adapted from Collier (2011).[13]

13 Collier, D. (2011) *Understanding Process Tracing*. Cambridge University Press. Available at: www.cambridge.org/core/journals/ps-political-science-and-politics/article/understanding-process-tracing/ (Accessed 16 August 2022).

ACTIVITY 16:

Articulating and evidencing alternative hypotheses: combining contribution analysis with process tracing

Overview:

This activity provides you with a structured analytical framework for articulating your working hypotheses related to your Theory of Change, as well as explore possible alternative hypotheses to challenge these. We use a set of universal logical tests to assess whether the different sources of evidence you are engaging strengthen or weaken confidence in your working hypotheses.

Background:

Methods such as contribution analysis and process tracing are increasingly used in the evaluation of policies. They focus on reducing uncertainty about the role that your intervention plays in contributing to a particular change. They belong to a family of methods that force us to systematically consider alternative hypotheses about how a change might occur, and unpack the evidence base and its strength behind each of these. They offer a way to understand the additionality of your intervention amidst other cross-Governmental policies, as well as consider factors that could contribute to the change being observed that were not initially anticipated in your Theory of Change. When developing alternative hypotheses, consider how collaborating with additional experts, such as academics, can help identify or challenge contribution claims towards your intended outcomes, as well as appraise the evidence used to justify your Theory of Change. More information on process tracing can be found from INTRAC and Better Evaluation.

Instructions

1. Refer back to your Theory of Change or take some time to understand the CAPE Theory of Change example provided in Annex C of this toolkit.
2. Select one causal link between the activities and outcomes sections of the Theory of Change you are working from.
3. In the space provided in Box 1 on the worksheet, write out your hypothesis statement for your chosen link: **[the action we will take]** will cause **[the outcome we predict]** because **[of these reasons]**.
4. Next, consider what alternative explanations there may be for why the action taken will cause the expected outcome. Use the same prompts in the following boxes to create three alternative hypotheses for alternative explanations for how the intervention could lead to the intended outcome.
5. Under each hypothesis statement, write down different observations you might expect or like to see if that hypothesis held true. Finally, in the bottom box, identify what sources you could draw on to provide evidence supporting these observations. To help you appraise the strength of different sources in evidencing the claimed causal links, refer back to Table 5.3 for the definitions of the four necessary/sufficient tests. Can you think of any evidence sources that would pass the 'smoking gun' or 'double decisive' tests?.
6. Finally, reflect on how you might strengthen your original hypothesis statement:
   a. How strong is your current evidence for proving or disproving your hypotheses?
   b. Can you demonstrate how you have considered evidence for the existence of possible alternative causal influences on outcomes?
   c. How could some of the research producers that you engage with support you with this work? Can they help identify plausible hypotheses? Do they have access to data to validate or reject some of the considered hypotheses? Consider some of the mechanisms for integrating expert engagement explored in Module 2.
   d. What other links in your Theory of Change could benefit from this exercise?

Example hypothesis statement:

[Installing smart meters in homes] will cause **[reduced household energy consumption]** because **[household members will be aware of the amount of energy they are using in real time]**.

→ Example alternative hypothesis (1): **[Installing smart meters in homes]** will cause **[reduced household energy consumption]** because **[the data collected will help energy companies to develop 'smart grids' that understand where and when energy is needed, thus saving the amount used in consumers' homes]**.

→ Example alternative hypothesis (2): **[Installing smart meters in homes]** will cause **[reduced household energy consumption]** because **[it will incentivise household members to save money on energy consumption]**.

→ Example alternative hypothesis (3): **[Installing smart meters in homes]** will cause **[reduced household energy consumption]** because **[household members will be aware of their carbon footprint]**.

ACTIVITY 16:

Process tracing for contribution analysis: articulating and evidencing alternative hypotheses

1. Your hypothesis statement

will cause *[the action we will take]*

because *[the outcome we predict]*

[of these reasons]

Observations

Hoop Test **Evidence:**	**Double Decisive Test** **Evidence:**
Straw in the Wind: **Evidence:**	**Smoking Gun:** **Evidence:**

2. Your alternative hypothesis

will cause *[the action we will take]*

because *[the outcome we predict]*

[of these reasons]

Observations

Hoop Test **Evidence:**	**Double Decisive Test** **Evidence:**
Straw in the Wind: **Evidence:**	**Smoking Gun:** **Evidence:**

ACTIVITY 16:

Process tracing for contribution analysis: articulating and evidencing alternative hypotheses

3. Your alternative hypothesis

will cause *[the action we will take]*

because *[the outcome we predict]*

[of these reasons]

Observations

Hoop Test	Double Decisive Test
Evidence:	**Evidence:**
Straw in the Wind:	**Smoking Gun:**
Evidence:	**Evidence:**

4. Your alternative hypothesis

will cause *[the action we will take]*

because *[the outcome we predict]*

[of these reasons]

Observations

Hoop Test	Double Decisive Test
Evidence:	**Evidence:**
Straw in the Wind:	**Smoking Gun:**
Evidence:	**Evidence:**

Method: Most Significant Change

—

The Most Significant Change (MSC) technique uses evidence collection and analysis to engage the beneficiaries of a policy in the evaluation of its impact.[14]

A policy can impact different beneficiary groups in diverse ways. In order for a Theory of Change to accurately reflect all of its associated outcomes, desirable and undesirable, we need to understand the lived experiences and insights of these stakeholders. The MSC evaluation method collects and analyses personal stories of change to develop the impact evaluation evidence base of and refine a policy's Theory of Change. As a process, it can be especially useful when outcomes, and relevant indicators, are difficult or even inappropriate to define or capture. Stakeholders are involved from the outset, helping to decide on the types of change to be recorded - searching for the impact - and also contributing to the analysis by reading, discussing, and synthesising stories. A range of tools can be used to support stakeholders in their collective appraisal of what stories of experienced change following a policy they agree accurately reflects a policy's significant impacts.

There may be difference in how MSC is conducted depending on the context and type of intervention but the basic process includes:[15]

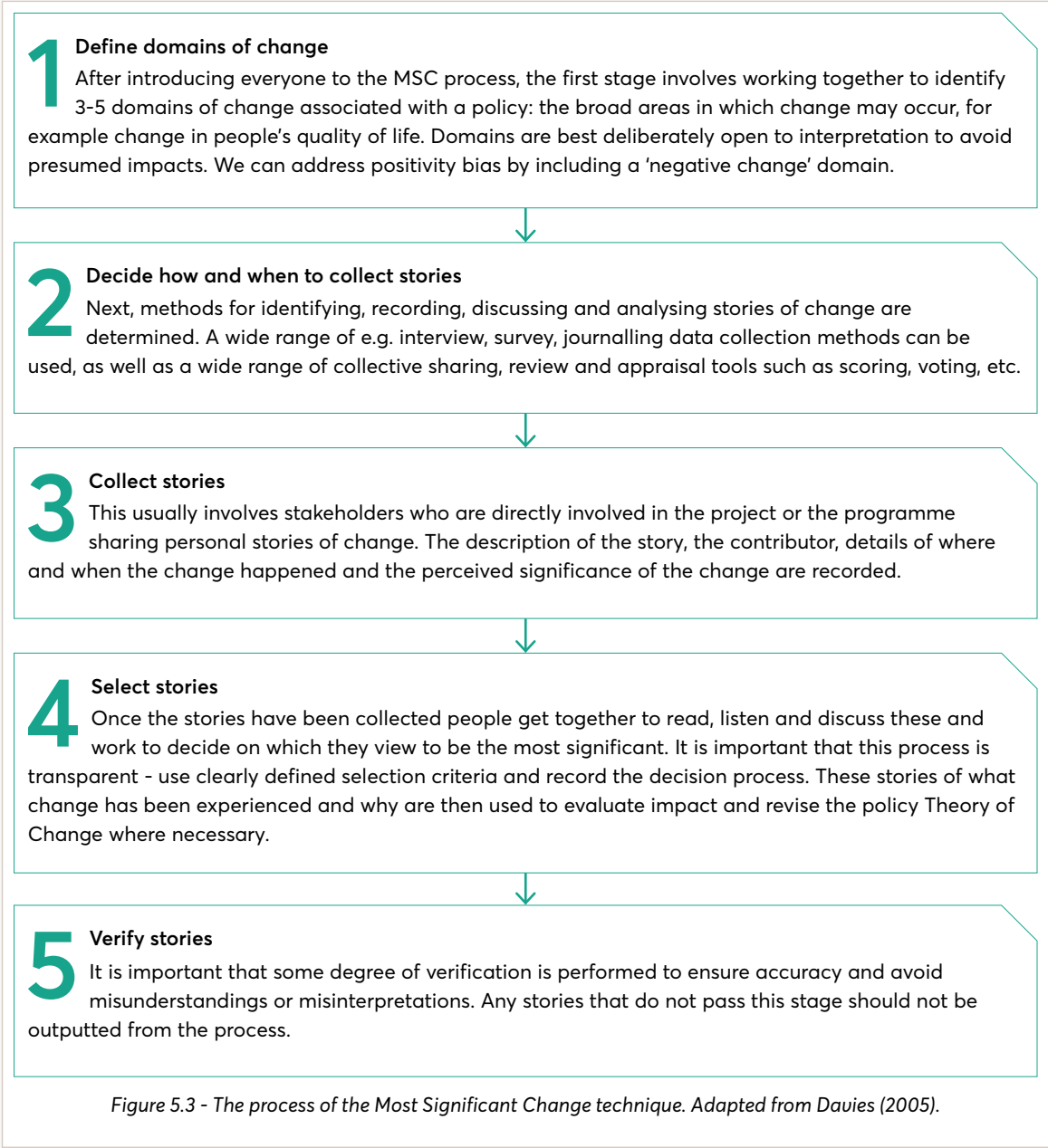


Figure 5.3 - The process of the Most Significant Change technique. Adapted from Davies (2005).

14 Davies, R. (2005) The 'Most Significant Change' (MSC) *Technique: A Guide to Its Use*. doi: dx.doi.org/10.13140/RG.2.1.4305.3606

15 INTRAC. (2017) *Most Significant Change*. Available at: www.intrac.org/wpcms/wp-content/uploads/2017/01/Most-significant-change.pdf (Accessed 23 August 2022).

ACTIVITY 17:

Most Significant Change

Overview:

In this activity you will reflect on the learning that has been generated through the delivery of your live policy challenge. Using a technique called Most Significant Change (MSC), you will evaluate the changes made to your team's day-to-day practices as a result of responding to the policy challenge. It will help you to establish what has worked well, what changes have been negative, and to generate findings that can be shared with your wider team mates and colleagues.

Background:

The Most Significant Change was developed initially by Rick Davies as a method for monitoring and evaluating a programme when performance indicators were either unavailable or unsuitable before its commencement. The Overseas Development Institute (ODI) guide provides an overview of the technique, detailed description of the process and an example of the technique in practice. To see an example of MSC in practice, capacity.org have published the findings of a self-evaluation process using MSC to evaluate organisational learning and development.

Instructions

1. Refer back to the policy challenge you have been working on throughout this toolkit.
2. Consider the direct and indirect changes to your team's practice that have occurred so far as a result of this policy challenge. Discuss the main **themes** of these changes and populate the spaces provided at the top of the activity sheet. Example themes could include: behavioural changes, cultural changes, specific process changes at an organisational or team level, improved policymaking ability. We recommend having one last domain for capturing any potential negative changes experienced as a result of delivering the programme.
3. Under the relevant theme heading, use the spaces provided to answer the question: *What have been the most significant changes for you or your team as a result of this policy challenge?* These stories should be simple; try to keep them to around 50 words and use a succinct beginning, middle and end structure. Add as many stories under as many themes as you wish.

If you are working as a team:

4. Share your stories by reading them aloud or giving everyone the time to read each others' answers.
5. *Vote!* Every member of the team now votes for their first and second choice story that they feel demonstrates the most significant change.
6. Once the votes have been counted, discuss which stories have received the most votes? How could you use these to share learning and practice with others? Who would you want to engage with these findings more widely? If so, you could explore some of the feedback mechanisms discussed in Module 6.

ACTIVITY 17:

Most Significant Change

Theme:					Negative change
Story title:					
Your story in 50 words:					
Votes:					
Story title:					
Your story in 50 words:					
Votes:					
Story title:					
Your story in 50 words:					
Votes:					
Story title:					
Your story in 50 words:					
Votes:					
Story title:					
Your story in 50 words:					
Votes:					

Evidencing attribution

When evaluating claims of directly attributable policy impact, we need processes that assess whether assumptions about sole causal influence are robust, and whether different types of bias have been accounted for in our evidence base.

These could materialise as, for example, conformity bias within a policy team preferencing established beliefs about how a policy impacts beneficiaries, and thereby missing the opportunity to account for other causal influences on observed outcomes. There may also be biases introduced into observed activities during policy implementation by, for example, behavioural adjustments by prospective beneficiaries in order to increase the likelihood of inclusion in the policy scheme, consequently introducing other inaccuracies into impact measurement.

A common evaluation approach is to identify a comparison group that is similar to the policy participant group in all ways except for receipt of policy benefits. When we are able to 'control' for all possible non-similarities between these groups, we end up with intentionally designed 'experiments'. The method most widely known achieving such experimental conditions is the Randomised Control Trial (RCT), though there are some less common situations in which we can encounter 'naturally occurring experiments'.[16]

The process that creates an identical comparison group is the randomised assignment of eligible participants into either a group who receive policy 'treatment', or assignment into a group who do not (the 'comparison' or 'control' group).

In policy contexts where random assignment is difficult, inappropriate or impossible, evaluators often make use of 'quasi-experimental' approaches. Here the evidence of impact is generated from comparison groups not created by random assignment, but instead identified from being as similar as possible to the treatment group in terms of baseline (pre-intervention) characteristics.

Data availability on participants, experiences and contexts of policy design and implementation is critical to the use of either experimental or quasi-experimental approaches in impact attribution. Both are therefore typically very dependent on effective engagement with multiple stakeholders for access to data, coordinated or even collaborative planning for data collection, as well as recruitment activities. Additionally, in cases of randomised access to policy benefits, the ethical dilemmas that arise require transparent and inclusive exploration of options and mitigative actions.

Method: Randomised Controlled Trials

—

Why conduct Randomised Controlled Trials (RCTs)?

Randomised Controlled Trials, or RCTs, are experimental designs that allow you to attribute the outcomes that you are observing to the intervention that you are delivering.

RCTs randomly allocate participants to control and intervention groups. Randomisation creates groups that are comparable before an intervention - which means that any group-level differences we observe afterwards can reliably be attributed to the intervention and not other factors. RCTs allow us to make stronger claims about cause-and-effect - and attribute change we are seeing to the intervention.

RCTs are best suited for single, discrete interventions that allow for randomisation of the intervention to take place, and are not always suited for the evaluation of complex policies. This is due to the necessity of being able to randomise and control for confounding factors that could explain the impact that you're observing. For example, looking at one causal link within your Theory of Change, you might expect an RCT to

16 Hopkins, A., Breckon, J. and Lawrence, J. (2020) *The Experimenter's Inventory: A catalogue of experiments for decision-makers and professionals.* Nesta. Available at: www.nesta.org.uk/report/experimenters-inventory/ (Accessed 23 August 2022).

help provide a better understanding of the causal inference of one of the hypotheses. However, this isn't always feasible when there are a range of interventions within a policy where randomisation and the ability to establish a control group is limited.

Randomised Controlled Trials are one of a broader range of experimental methods that allow you to 'test' an intervention. Nesta's Experimenter's Inventory is a catalogue of experiments of different shapes and sizes. The inventory provides simple advice on the pros and cons of different designs when seeking to test different solutions or interventions through experimentation.

How to conduct an RCT

The steps below outline some of the key components and process considerations of RCT design and implementation, however, it should be noted that this information is not exhaustive. Each RCT will differ depending on the intervention and environment in which it is working, but this list will give you a helpful starting point when using evidence from an RCT or looking to commission your own. Additional resources to ensure quality assurance of an RCT can be found in the background section of Activity 18.

1 Intervention design

Some interventions will better lend themselves to an RCT compared to others: RCTs work well for simple, linear and well defined research questions. All interventions should first come with a clear logic model which defines the inputs, activities, outputs and expected outcomes of the process. Many RCTs will ask impact questions such as '*did a programme work?*' but can also ask other questions such as '*which intervention variation produced the highest impact?*'.

2 Research question

To support the articulation of a research question when seeking to understand or determine the attribution of our policy intervention to the outcomes that we care about- we can use the **PICOT** framework: **P**opulation, **I**ntervention, **C**ontrol, **O**utcomes, and **T**imings. Table 5.5 below demonstrates how a question can be reframed using the PICOT framework.[17]

3 Participants

When deciding on participants for an RCT, the participant population should be as representative of the population that the research is trying to impact as possible. It may be helpful to develop a series of inclusion and exclusion criteria as part of a broader recruitment strategy. Once you have decided on the makeup of the participant body you will also have to consider the strategy for onboarding these people onto the project, including obtaining informed consent, ethical considerations and any adjustments that may need to be made to cater for different individuals.

17 Northern Arizona University. (2022). *Evidence Based Practice: Ask: Write a focused clinical question*. Available at: libraryguides.nau.edu/c.php?g=665927&p=4682772 (Accessed 19 August 2022).

4 Power calculations

The ability of an experiment to detect differences between treatment and control groups is through a process of determining statistical significance.[18] Power calculations that can be used to calculate the required sample size for an RCT, and ensure a minimum detectable effect (MDE) from the evaluation of the intervention can be observed. You can use this tool developed by the Behavioural Insights Team to conduct a simple power calculation for individual level randomisation, or learn more through the Abdul Latif Jameel Poverty Action Lab's (J-PAL) Quick Guide To Power Calculations.[19]

5 Randomisation

As the name would suggest, randomisation is a critical feature of an RCT. Designing an RCT requires determining a unit of randomisation, either at the individual level (such as pupils receiving a teaching intervention) or by clusters (such as groups of individuals in a certain school). There are also a number of different techniques to randomisation that help guide our understanding of how an intervention affects populations differently, such as through stratification.

6 Outcomes

Outcomes of interest should be outlined in the research question and considered in more detail at this stage. Consider both primary and secondary outcomes and determine *if* and *how* these outcomes can be measured. There are different instruments, scales, variables, timings, and sources that can support the identification of outcomes, some of which we explored using indices in Module 4.

7 Data collection

There are different instruments, scales, variables, timings, and sources that can support the consideration of data collection methods that can be used to gather evidence of our outcomes. Surveys are a popular method for exploring the impact of an intervention. When considering baseline and endline surveys be aware of issues of attrition and non-response.

8 Analysis

Once data has been collected the analysis can begin to determine the impact of offering the intervention as opposed to not offering the intervention on the outcome(s) of interest. You can also conduct different checks to ensure that the outcome of the intervention can be attributed to the intervention, and is not due to confounding factors or other forms of bias.

9 Validity

In RCTs there are two types of validity: internal and external. Internal validity refers to the extent to which the cause-effect relationship can be proved. Internal validity is necessary but not sufficient for external validity. External validity refers to the extent to which the results will be generalisable and replicable of other samples and populations.

18 Gupta, S. Kopper, S. (2021) *Power Calculations*. Available at: www.povertyactionlab.org/resource/power-calculations (Accessed 26 August 2022).
19 Doyle, M, A. Feeney, L. (2021) *Quick guide to power calculations*. Available at: www.povertyactionlab.org/resource/quick-guide-power-calculations (Accessed 23 August 2022).

RCT: an example

Figure 5.4 illustrates the two key features of an RCT, the introduction of a control group and randomisation, in a trial testing the level of productivity in employees. To unpick this example further, consider the introduction of a workplace policy that allows employees more flexibility in choosing their work hours. How would you know whether those practising flexible working are showing increased productivity as a result of this flexible work schedule, and not because of other factors that improved their ability to be more productive? In an RCT you control for all of the other factors that could also affect the outcome.

To conduct this RCT you would first randomly allocate employees into two groups, one where the intervention of flexible working is introduced and the other a control group that continues with business as usual. The outcomes are measured for both groups and compared for differences. When randomisation is successful it creates two statistically equivalent groups which helps to eliminate selection bias and create a control group that is as similar as possible to the treatment group. RCTs allow us to understand **attribution** and to know that it wasn't something else outside of the flexible working arrangement that improved an employee's ability to be more productive. The control group allows us to understand the **counterfactual**; what would have happened in the absence of the intervention.

Reflection Point:

Think about the nine steps we introduced on how to conduct an RCT.

- For this example what information would have been fed into each of these stages?
- Can you create an example research question using the PICOT framework?

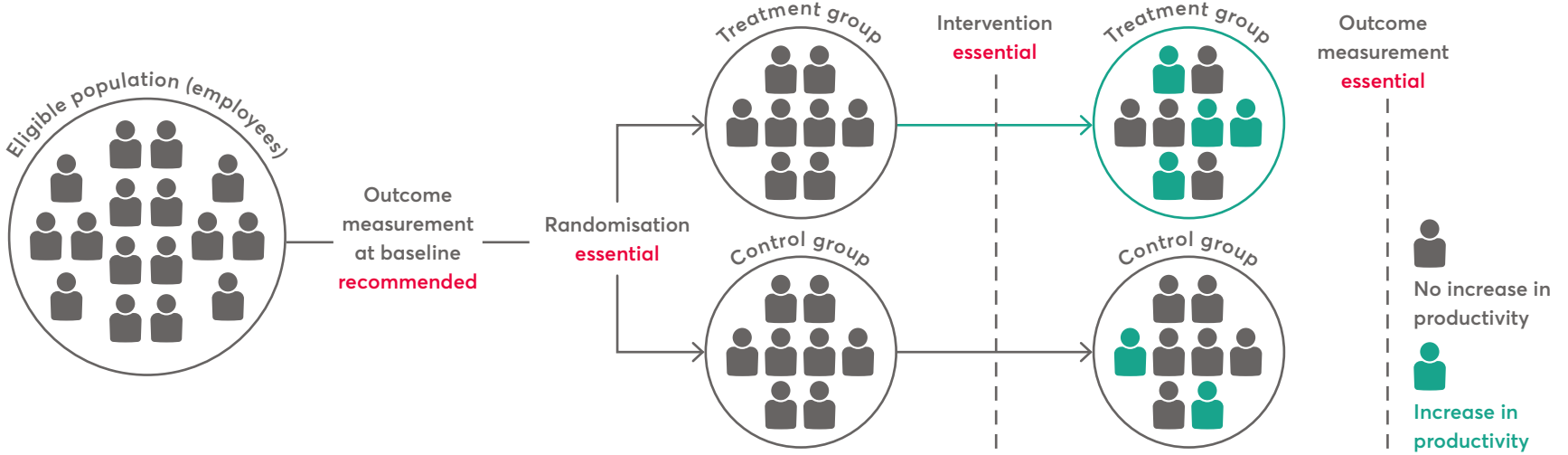


Figure 5.4: The process of conducting an RCT, adapted from Edovald, Firpo and Roberts (2016).[20]

20 Reproduced from Edovald, T. Firpo, T. & Roberts, I. (2016). *Running randomised controlled trials in Innovation, entrepreneurship and growth: An introductory guide. Innovation Growth Lab.* Available at media.nesta.org.uk/documents/a_guide_to_rcts_-_igl_09aKzWa.pdf (Accessed 11 August 2022).

ACTIVITY 18:

Designing Randomised Controlled Trials

Overview:

In this activity you will design a Randomised Controlled Trial (RCT) to assess the effectiveness of a stress-reduction intervention. Using a scenario provided, you'll work through a series of steps to design an RCT; this includes defining the problem and research question, designing the intervention, selecting the sample, exploring analysis considerations, and considering how you would go about collecting and sharing findings.

Background:

Randomised Controlled Trials are a design-led approach to evaluating evidence of a causal link between an intervention and change.[21] The inclusion of randomisation helps to reduce bias and supports the methodological rigour that is applied throughout the process, and is useful for testing whether the specific, discrete interventions cause specific outcomes. When designing a trial, or working with a research producer within this process, there are a number of resources you can draw on. This includes the Innovation Growth Lab's guide to running RCT's or Nesta's Early Years Toolkit which includes a randomisation guide, data clearing and merging guide and an analysis guide. When using the findings from an RCT to inform your work, the Cochrane Risk of Bias Tool[22] is also a useful resource for checking how bias has been accounted for at different stages of the research process.

21 Hopkins, A., Breckon, J. and Lawrence, J. (2020) *The Experimenter's Inventory: A catalogue of experiments for decision-makers and professionals.* Nesta. Available at: www.nesta.org.uk/report/experimenters-inventory/ (Accessed 23 August 2022).

22 Sterne J, A, C et al. (2019) RoB 2: a revised tool for assessing risk of bias in randomised trials. *BMJ.* 366.

Scenario

You work in a large IT organisation. The company has experienced multiple restructurings and downsizings. Consequently, the workforce has been reduced from more than 6,000 to fewer than 4,500 employees. According to the HR Director, the restructurings and downsizings have been very stressful for employees and have led to fear of job loss and anxiety.

They recommend deploying a stress-reduction programme that includes on-site chair massage therapy, a technique that has been successfully tried by several multinationals technology corporations. As little research exists on the effects of on-site massage therapy, you insist on running a pilot programme first and designing a RCT to determine whether the impact of on-site chair massage therapy on the stress and anxiety levels of employees can be measured in a valid and reliable way.

Instructions

1. Read the scenario provided.
2. Work through the research design process using the prompts on the worksheet.
3. Once you have worked through each component, revisit your research question to ensure it follows the **PICOT** research question format: **P**opulation, **I**ntervention, **C**ontrol, **O**utcomes, and **T**imings.
    - For example, you might reframe the research question 'What effect does parenting have?' to 'What is the impact of receiving parenting educational materials in the first 2 years of being a parent relative to receiving no materials on children's development in maths at age 2?'

ACTIVITY 18:

Designing Randomised Controlled Trials

Population and Intervention Design	Control and Outcomes	Collection and Analysis of Data
Who does this scenario affect? What is the sample and sample size? What is the inclusion and exclusion criteria for the sample?	**How will you randomise?**	**What measurements will you use for primary and secondary outcomes? How will you collect data? Will they be a direct measure, or proxy? When will they be collected?**
What is the problem that the intervention seeks to address?	**What is the control group?** *Consider the comparison you want to make.*	**What analysis will you use? What checks might be needed to control for bias?**
What is the intervention and what are the characteristics of the intervention? *Consider the who (recipients and provider), what (materials and procedures), how (delivery mode), where (location), and when/how much (dosage) and why (theory/rationale).*	**What are the conditions of your treatment and control group?** **What will the expected outcome look like?** *Consider primary and secondary outcomes.*	**How will you share findings?**

Create a research question for this scenario using the PICOT framework (Population, **I**ntervention, **C**ontrol, **O**utcomes, and **T**imings**):**

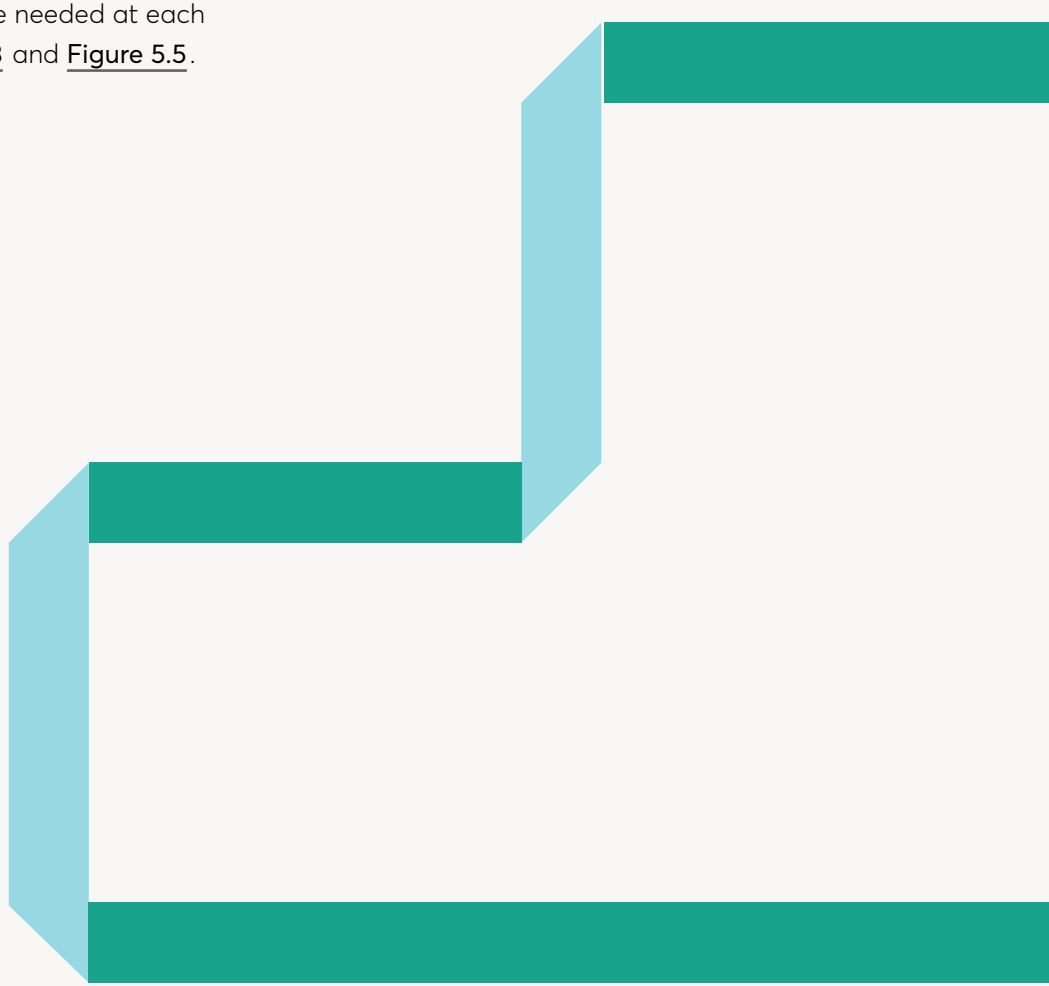
Levels of evaluation confidence: using Nesta's standards of evidence

Nesta have created a standards of evidence framework that can be used to appraise how much confidence you can place in causal claims of an intervention's impact.[23]

The five-level framework can be widely applicable to different policy and research areas. As a tool for both evidence generation and use, it focuses on helping understand the confidence users have on the level of causal inference of an intervention - whether sole *attribution*, or partial *contribution*.

Nesta's Standards of Evidence start with showing how to move from intended action or behaviour, via a Theory of Change, to a correlational understanding of impact that demonstrates early evidence of promising impacts, to experimentally evidenced impact, to independent replication of that intervention, to larger scale dissemination and replication of an intervention. We can think about this in terms of a pipeline or evidence journey: as products and services move up the five levels, so does our confidence that they will have a positive impact on the intended outcome.

A full description of the Standards of Evidence, and the corresponding evidence needed at each stage, can be found in Table 5.3 and Figure 5.5.



23 Ludlow, J. Puttick, R. (2013) *Nesta Standards of Evidence.* Available at: media.nesta.org.uk/documents/standards_of_evidence.pdf (Accessed 23 August 2022).

Five standards of evidence

Level 5 Ready for dissemination	You have manuals, systems and procedures to ensure consistent replication and positive impact	At the final level you would expect to see multiple replication studies across different areas or locations and a demonstration of a high level of scalability whilst maintaining direct, positive impact on the outcome at a reasonable cost. This could be through methods such as replication evaluations, future scenario analysis and fidelity evaluation.
Level 4 Independent replication and reasonable unit cost	You have 1+ independent replication evaluations that confirm these conclusions	At Level 4 you would expect an independent replication of an evaluation that demonstrates the impact of your intervention and therefore adds to the level of confidence you can have in that impact, for example through endorsement via commercial standards or industry kitemarks. At this level, you would also expect evidence of standardised intervention processes and delivery at a reasonable cost.
Level 3 (Quasi) experimentally proven impact	You have evidence that supports your hypothesis of causal influence	Evidence at Level 3 supports beliefs held about causality. This evidence often uses a control or comparison group using specific quasi-experimental evaluations of impacts. It typically also demonstrates how other possible explanations have been considered.
Level 2 Early evidence of promise	You capture data that shows the positive change that you wanted in your Theory of Change and/or policy plan, but you cannot confirm it caused this	At Level 2 you would expect data to start signalling an effect of your intervention and suggest some promise. At this stage, data can begin to show effect but it will not evidence direct or sole causality. This evidence can be generated through methods such as pre and post surveys, panel studies, and regular interval surveying.
Level 1 Evidence-informed Theory of Change	You can describe what you do and why it matters, logically, coherently and convincingly	The first level of the standards require evidence that provides an account of the impact you want to have. This is done by providing a logical reason, or set of reasons, for why your intervention could have an impact and why that would be an improvement on the current situation using tools such as theories of change. This can be built on existing data and research and can be represented in a visual diagram, as a narrative, or both.

Figure 5.5: Nesta's Standards of Evidence. Taken from Ludlow and Puttick (2012).[24]

24 Ludlow, J. Puttick, R. (2012) *Standards of Evidence for Impact Investing.* Available at: media.nesta.org.uk/documents/standards_of_evidence_for_impact_investing.pdf (Accessed 27 July 2022).

Case Study: Multisystemic Therapy (MST)

This case study explores how Nesta's Standards of evidence can be applied to help us interpret causal confidence in an intervention. It breaks down the evidence journey of Multisystemic Therapy (MST) using the different levels of the standards of evidence. Using this we can follow the process by which the researchers behind MST created confidence in the causal link between intervention and impact and ultimately were able to scale the intervention to many beneficiaries.

MST is a method of tackling antisocial behaviour in young people aged 11-17 who are at risk of going into care due to their offending behaviour. It is an intensive family and community based intervention that looks to build on family strengths by helping parents or carers improve their skills for managing their young person's behaviour to keep them safely at home, in school and out of trouble.[25] By walking through the five levels of the Nesta Standards of Evidence we are going to explore how confidence increased in the impact of MST as an effective intervention.

Level 1: MST UK and Ireland have published their Theory of Change, Figure 5.6,[26] illustrating the primary assumption that antisocial behaviour in young people is driven by a combination of influencing risk factors associated with the systems in which these young people are embedded: peers, school and community. This gives us **Level 1** of our standard of evidence: an account of the improvement we are targeting and a logical reason as to why this intervention could work.

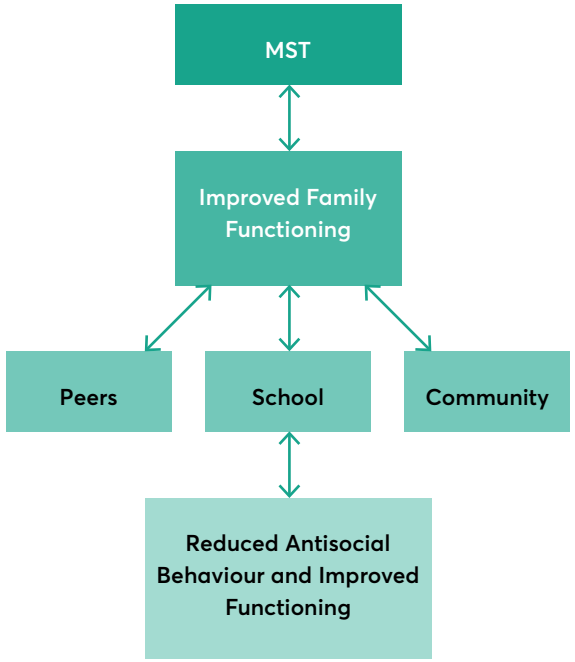


Figure 5.6: Taken from the MST UK and Ireland Theory of Change.

Level 2-3: From 2004-2010 the Brandon Centre in Camden initiated the first UK randomised controlled trial (RCT) of MST. The trial aimed to test whether MST plus management as usual are more effective than management as usual at preventing re-offending by young people aged 13-17.[27] A significant decline in the probability of reoffending and in the number of offending behaviours post treatment was observed for those participants who were given the MST intervention. It is at this stage in the standards that we start to demonstrate causality in between the intervention and impact due to the randomised, controlled nature of the trial, thereby increasing our confidence in this impact.

Level 4: In 2004 a crucial replication of the 1995 RCTs was conducted by an independent group of researchers in Norway.[28] With this increase in the body of evidence supporting the intervention more confidence can be drawn about its impact. In addition to this, there is evidence to suggest that developer-led trials can generate higher effects when compared to studies conducted by independent research teams, so having this external replication built further confidence in MST.

25 MST UK & Ireland. *Multisystemic Therapy.* Available at: www.mstuk.org/about/about-2 (Accessed 27 July 2022).
26 MST UK & Ireland. *Theory of Change.* Available at: www.mstuk.org/about-mst-uk-i/theory-change (Accessed 27 July 2022).
27 National Institute for Health and Care Excellence. (2011) *Multisystemic therapy for young people with antisocial behaviour.* Available at: www.nice.org.uk/sharedlearning/multisystemic-therapy-for-young-people-with-antisocial-behaviour (Accessed 27 July 2022).
28 Ogden, T. Halliday-Boykins, C. (2004) 'Multisystemic Treatment of Antisocial Adolescents in Norway: Replication of Clinical Outcomes Outside of the US', *Child Adolescent Mental Health.* 9(2), pp. 77-83. doi:10.1111/j.1475-3588.2004.00085.x

Level 5: The final level requires multiple, varied replications. MST has over 20 impact evaluations that demonstrate the programme impacts on different outcomes, some of these with slightly different populations. Alongside this, an effective system for disseminating the programme with a high level of fidelity has been developed. For example, if you would be interested in delivering MST locally, the MST UK team will guide you through the stages of the MST site development process which covers a range of areas from needs analysis of local population to recruitment and training, to ensure the conditions needed for the MST intervention to be effective are in place (such as the contexts and mechanisms within links of our Theory of Change we explored in Module 4). Not only does this example offer the replicability required at Level 5, but also the scalability to ensure the conditions that allow for the intervention to be effective reach as many beneficiaries as possible.

Evidencing value

Value can be a challenging concept to define and a complex metric to measure. Different stakeholders may hold different perspectives on the relative value of different activities or events in different contexts.

Additionally, stakeholders may have different beliefs about the 'objects' being valued, where some may be considering the value of the inputs provided, others the value of outputs generated, and others still the value of different outcomes achieved. Further still, not all value generated by policy is direct, tangible or measurable. There may be several outcomes that result from policy action that cannot be measured, such as a sense of community identity, or increased 'soft power' in international diplomatic engagement. A proxy for the idea of 'value' can be to determine how much the process meets its goals, has achieved impact, or is consistent with its Theory of Change. When using this proxy we can see it is important to have a clearly articulated purpose, mission and objectives to help communicate our definition of value. A Theory of Change of a policy is a great reference point for clarifying definitions and perceptions of value as they outline assumptions of key outcomes, impacts, and inputs provided. Clarity of the underlying Theory of Change for a policy will help to steer your monitoring efforts throughout implementation.

Three types of values you are likely to encounter are:

Public Value: Public value refers to the benefits which are, theoretically, accessible to all members of society. The value created when public money is translated into outputs and outcomes which improve people's lives and economic well being.[29]

Social Value: Social value is defined through the Social Value Act (2013) which requires all public sector organisations and their suppliers to consider how the services they commission and procure can improve the economic, social and environmental wellbeing of an area.[30] The Act also encourages commissioners to take a value for money approach and not just opt for the lowest cost option.[31]

Value for Money: Good value for money is defined by the National Audit Office as the optimal use of resources to achieve the intended outcomes.[32] There are multiple approaches to measurement outlined in The Magenta Book and explored in the following section.

'Value for Money' is used to describe a set of different but closely related evaluation framings. The National Audit Office[33] uses three 'E' criteria to assess the value for money of policy work, and observe that increasingly evaluation of a fourth 'E' is included in value assessment as illustrated in Figure 5.7:

- **Economy:** Spending Less.
- **Efficiency:** Spending Well.
- **Effectiveness:** Spending Wisely.
- **Equity:** Spending Fairly.

29 Moore, M. (1995) *Creating Public Value: Strategic Management in Government.* Harvard University Press.
30 Local Government Association. *Social value – achieving community benefits.* Available at: www.local.gov.uk/our-support/financial-resilience-and-economic-recovery/procurement/social-value-achieving-community (Accessed 05 August 2022).
31 Mulgan, G. Breckon, J. Tarrega, M. Bakhshi, H. Davies J. Khan, H. Finnis, A. (2019) *Public Value How can it be measured, managed and grown?* Available at: media.nesta.org.uk/documents/Public_Value_WEB.pdf (Accessed 05 August 2022).
32 National Audit Office. *Value for Money.* Available at: www.nao.org.uk/successful-commissioning/general-principles/value-for-money/ .(Accessed 05 August 2022).
33 National Audit Office. *Assessing value for money.* Available at: www.nao.org.uk/successful-commissioning/general-principles/value-for-money/assessing-value-for-money/ (Accessed 15 July 2022).

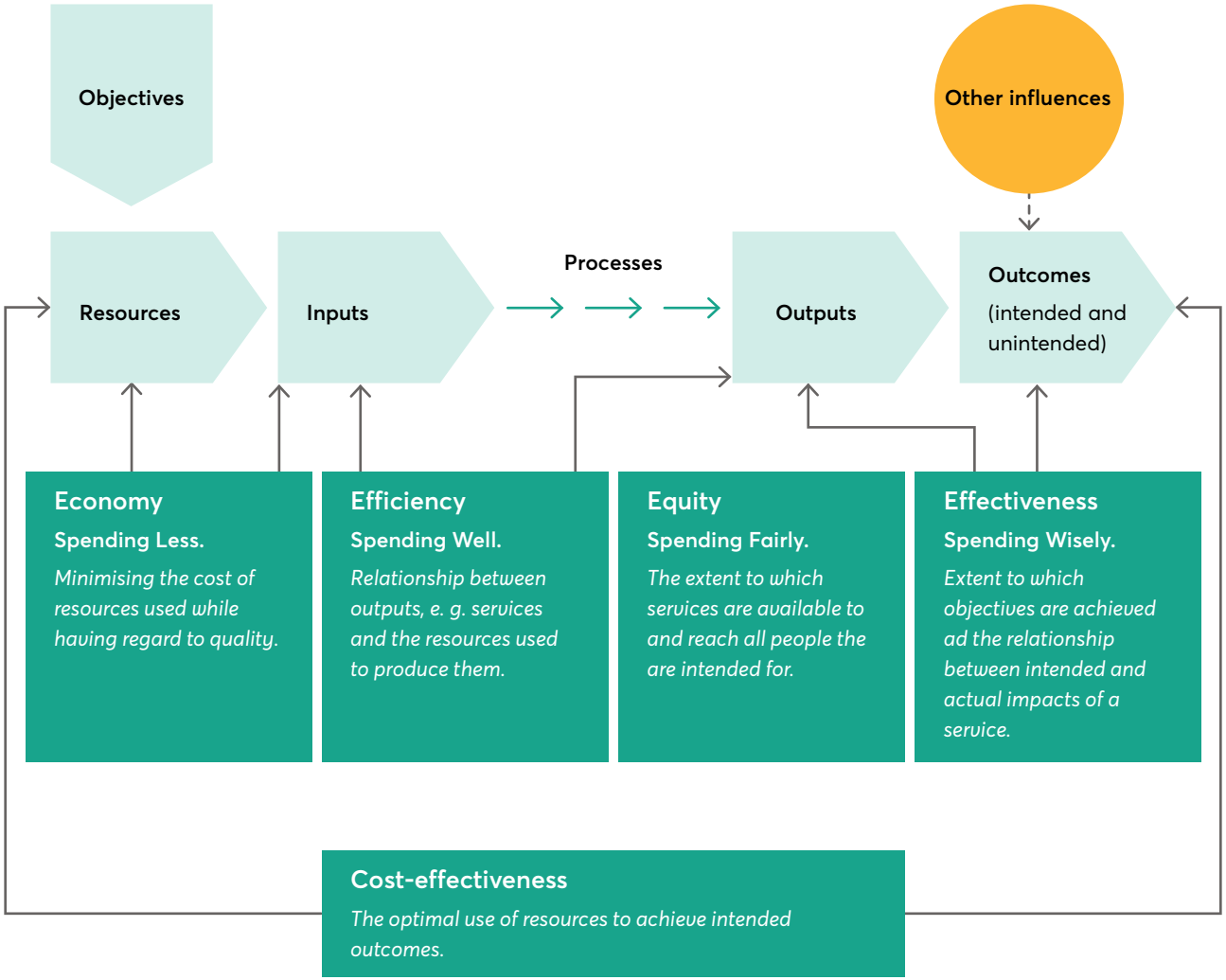


Figure 5.7: 4 'E's measurement of value adapted from the UK National Audit Office [34]

Reflection Point:

How would you measure value?

Think about how you might attribute value to your policy work:

- Where has the value come in?
- How do public value, social and value-for-money impact your policy?
- What are some of the descriptors that you might have used or may use when you're thinking about describing to someone what the value is of your particular policy program or policy project?
- If someone claims there is value, what might be the kinds of things you want to report on?

34 National Audit Office. *Assessing Value for Money*. Available at: www.nao.org.uk/successful-commissioning/general-principles/value-for-money/assessing-value-for-money/ (Accessed 26 oct 2022)

Method: Cost Benefit Analysis

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Cost Benefit Analysis (CBA) describes a set of methods primarily developed by economists for characterising the comparative economic efficiency of one or more options. CBA considers the value for money of a potential policy intervention by looking at the ratio of costs to benefits to appraise and evaluate options before they happen. It can be a useful method for exploring different policy options and identifying what can be learnt from differences in resultant cost-benefit ratios. CBA can also be referred to as *social* cost benefit analysis, especially when there is an intentional focus on opening up the perspective by which we think about value and expanding this beyond the purely financial.

There are several steps involved in performing a CBA which are briefly described below. For more information use this HM Treasury guidance. Consider how these steps might relate to an area of your work, and the potential costs and benefits you can identify within a policy intervention.

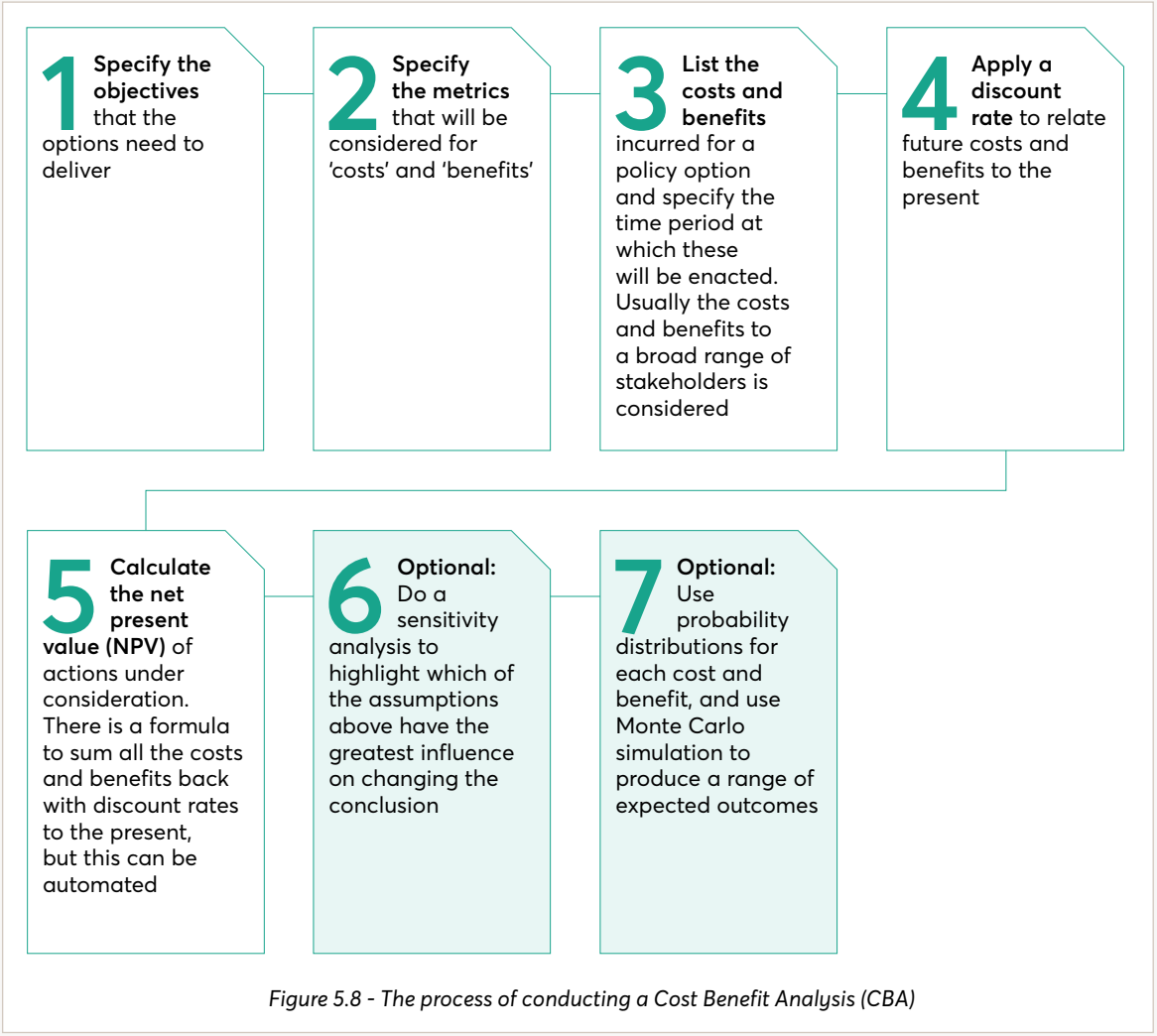

Figure 5.8 - The process of conducting a Cost Benefit Analysis (CBA)

It is likely that you have already experienced or identified some challenges when working with CBA. Many can be significantly improved by engaging stakeholders in exploring and developing the evidence used for their construction, e.g. identified benefits, measurements of costs, proposed discount rates, etc.

- **Identifying the costs and benefits of a policy action can be very challenging.** Historically there are several examples when the real benefits or costs of a programme were not anticipated, and a CBA at the time would therefore have blocked that action (e.g. the removal of lead from petrol).
- **Quantifying the costs and benefits of a policy action can be very challenging.** Analysts have various tools to integrate into CBA to try and enhance the accuracy of these quantifications: 'opportunity cost', 'willingness to pay', 'deadweight loss', etc.
- **Quantifying policy outcomes is problematic** as often there are un-measurable and broad-ranging values and priorities of stakeholders.
- **The discount rate is a subjective figure.** We are often prone to bias for short-term gains over longer-term gains.
- **Framing of choices as cost-efficiency can lead to problematic policy destabilisation**, as by framing policy choice differences with such a seemingly simple metric, it omits the complex system dependencies that need to be considered whenever a new policy change is introduced.
- **CBA is sometimes treated as a decision support tool – it is not.** What it is is a way of framing (appraising) some of the differences between decision options. For robust decision analysis other objectives, future uncertainties and their interactions need to be considered.

Reflection Point:

Think about a time that you have been involved with a CBA exercise.

- What were your observations about the process?
- Could you highlight any processes that worked well or any areas for improvement?
- How might you mitigate these problem areas in the future?

Reflection Point

—

Gas boiler comparison with heat pumps

Heating is responsible for about 15% of the UK's total emissions[35] and currently almost all homes are heated by burning gas to warm the water that flows through our heating systems. An alternative, green solution to this is to stop using gas and instead rely on electricity which is relatively easy to produce without generating carbon. Heat pumps can collect heat even on days that feel cold and are more efficient than gas boilers which turn around 80% of the energy they get from gas into heat from your home, compared to up to 250% for heat pumps.

If you were to put this example through a CBA analysis you would need to consider the potential costs involved with heat pump roll outs: capital costs of the pump, installation costs, refitting costs, training skilled engineers and running campaigns to inform the public. On the other hand, potential benefits could include reduced demand for gas, avoided carbon emissions and improved reputational impact. Both the heat pump and gas boiler will create CBA timelines such as those in Figure 5.8 with different costs and benefits occurring at various points in the life cycle. By completing the steps above you can output a cost benefit ratio that allows you to consider monetary and social value with a single metric outcome. This variation of CBA is known as Cost **Effectiveness** Analysis.

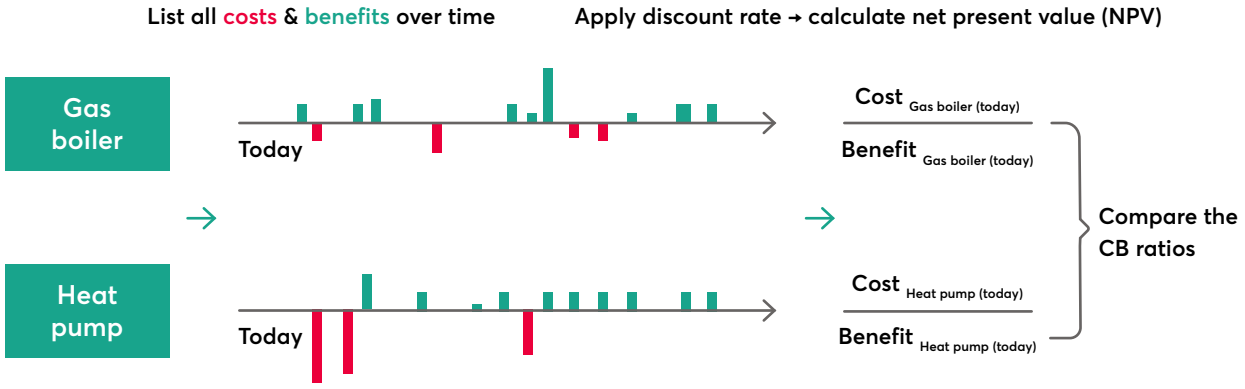

Figure 5.9 - The process to calculate a cost benefit ratio

35 Zanetti, O. & Murria, L. (2022) *Cut your home's emissions by getting a heat pump.* Available at: www.nesta.org.uk/project-updates/cut-your-homes-carbon-emissions-by-getting-a-heat-pump/ (Accessed 15 July 2022).

Module 6

Feedback and pathways for influence

Module 6 explores how evidence and expertise can be used to support the final stage of the ROAMEF cycle: feedback. This considers how the evidence we use and generate over the course of a policy lifecycle can facilitate learning and change for different stakeholders groups. First we introduce how different learning modes, types, and mechanisms can be used to inform the inputs, activities, outcomes and impacts of our policies. We then explore how different feedback activities can facilitate behaviour changes for policy beneficiaries. Finally we look at specific ways that insights from policy can be used to engage change through persuasion, influence and storytelling.

Module 6	OVERVIEW	215
Contents	• Feedback for learning and change • Understanding learning: modes, types, and mechanisms • Understanding change using the COM-B model of behaviour • Feedback to engage change: persuasion, influence and storytelling	
Learning Objectives	• **Describe different learning mechanisms that support learning at the levels of: individual, group and system** • **Consider the use of different learning mechanisms across different audiences in practice** • **Apply learning mechanisms and feedback loops to your own monitoring, evaluation, and learning strategy** • **Use the COM-B model of behaviour change to explain how evidence in feedback can lead to change** • **Identify the key attributes of influence, persuasion, and effective communication** • **Create a persuasive evidence-based story to engage a key stakeholder**	
Activity Overview	19 Part 1: Exploring mechanisms for learning Part 2: Learning & feedback strategies 20 Storytelling	
Additional Reading	BIT Barrier Identification Tool	Upstream Collaborative: Systems Change in Local Government European Commission Guide to communicating research
	The Experimenter's Inventory	ODI Guide for becoming a policy entrepreneur

Feedback for learning and change

For the purpose of this toolkit, we define feedback as **the processes we undertake to learn from experience and evidence to influence behaviour change and future decisions**.

Although feedback sits as the final stage in the ROAMEF policy cycle, it is something that is embedded throughout. Feedback often has the aim of enhancing performance and the insights we gather from our feedback processes can be used as the basis for delivering future improvements. As we gather evidence and synthesise insights, feeding back these experiences and lessons isn't necessarily done as a final, one-off event at the end of a programme or project. Instead, the process can be iterative, responsive, and adaptive, continually informing how the evidence and expertise that we engage with can be used to challenge our assumptions and influence our decisions throughout policy design and implementation.

This module provides a number of models and mechanisms to explore how different types of evidence (data, information, knowledge, and wisdom) can be used to facilitate learning and change, and how to support these practically in support of policy. To help us consider the components that enable the feedback of policy to happen in practice, we will consider how to facilitate the feedback of learning for ourselves, how to facilitate the feedback of learning for others and how to persuade, influence and tell a compelling narrative.

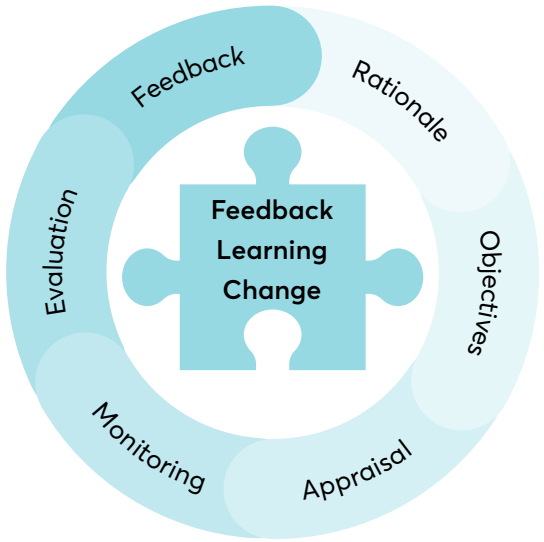

Figure 6.1: Feedback, learning and change takes place across all stages of the policy cycle

Reflection Point:

Think about your live policy challenge:

- In what ways are you currently facilitating the feedback of learning and change within your policy?
- How do these activities vary between different rationale development and monitoring?

Understanding learning: modes, types and mechanisms

feedback generates learning. At the heart of evidence-informed decision-making is learning: from the insights that evidence is able to provide us, from policy success and failure, and from diverse forms of expertise that are able to challenge our assumptions and inform our understanding of policy problems, outcomes, actions and mechanisms. To support learning through evidence and expertise, we can look at different modes, types and levels of learning and reflect on different mechanisms we can use to facilitate learning with feedback for change at different levels in our policy work.

Modes of learning

We can differentiate between three modes of learning that influence our use and engagement with evidence and expertise in our work:

- **Explicit Learning:** The acquisition of formalised, visible and clearly articulated knowledge, for example learning from written information and formalised procedures. Tacit learning is often designed specifically for broad scale and consistent dissemination across an organisation.[1]
- **Tacit Learning:** Acquiring knowledge that is tied to the senses such as unarticulated mental models, movement skills, physical experiences, intuition, or implicit rules of thumb.
- **Dynamic Learning:** The process of "learning through doing" or learning that arises from active interaction between an individual and the internal and external environment of the organisation. This includes features of both explicit and tacit types of knowledge.[2]

Reflection Point:

Think about the learning that occurs within your teams. Consider:

- What kind of learning have you taken part in? How might you categorise this as explicit, tacit or dynamic?
- How could experts help contribute to this knowledge? For example, when working with academics, what kind of learning can they facilitate?

1 McKenzie, F. (2021) *Building a Culture of Learning at Scale: Learning Networks for Systems Change. Prepared by Orange Compass for the Paul Ramsay Foundation.* Available at: www.orangecompass.com.au/images/Scoping_Paper_Culture_of_Learning.pdf (Accessed 27 July 2022).

2 Mitchell, V, W. Harvey, W, S. Wood, G. (2022) 'Where does all the 'know how' go? The role of tacit knowledge in research impact.' *Higher Education Research & Development*. 41(5), pp. 1664-1678. doi: doi.org/10.1080/07294360.2021.1937066

Types of learning

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There are different types of learning that help us conceptualise the kinds of assumptions that different learning activities can contribute to: single loop, double loop, and triple loop.

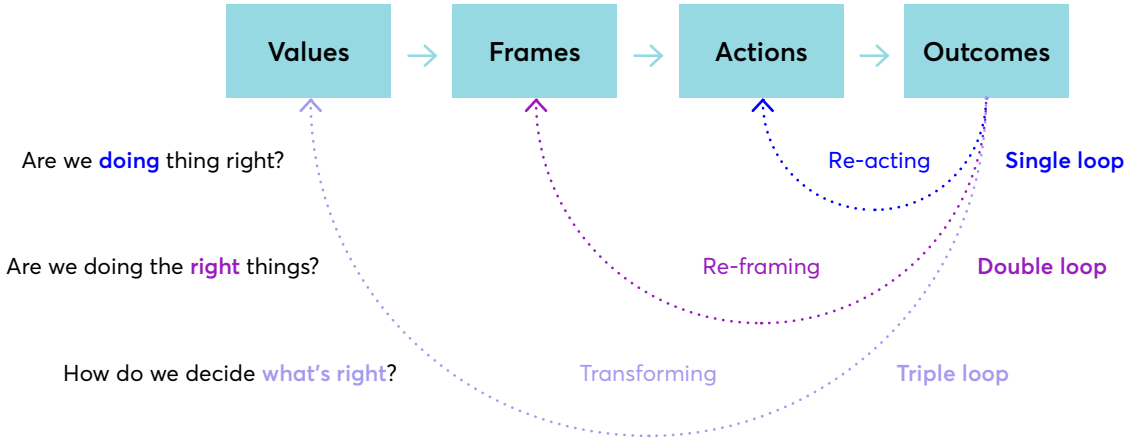

Figure 6.2: Types of Learning: Single, Double and Triple Learning Loops. Adapted from Argyris and Schon (1974).[3]

Single Loop Learning: *Re-acting*

Single loop learning considers the outcomes in relation to actions and asks the question: '*are we doing things right?*'. Single loop learning looks at whether planned activities are being achieved and will suggest immediate actions to get back on track. Possible errors are detected to enable short term improvements, mostly focused on day to day problems in operation, implementation or assumptions impeding the delivery of activities. Helps us to challenge our **operational assumptions**.

Double Loop Learning: *Re-framing*

Double loop learning connects outcomes and actions with how they have been framed and asks the question: '*are we doing the right things?*'. This involved a deeper reflection on emerging patterns and trends over a longer period of time. This can be over a single location or look to compare across locations and can look at how interaction occurs with partners and communities. Key to double loop learning is a reflection on pathways for change and organisational norms - not only thinking about the what but also the *how*. Helps us to challenge our **causal assumptions**.

Triple Loop Learning: *Transforming*

Triple loop learning looks to reflect on the overall approach of a programme. It looks to ask, '*how do we decide what is right?*' and will take a longer time to conduct to allow a deeper consideration of principles and goals. Helps us challenge our **paradigmatic assumptions**.

3 Argyris, C. & Schön, D. (1974). *Theory in Practice Increasing Professional Effectiveness*. San Francisco: Jossey-Bass Publishers. [Adapted from Hargrove, R. (2002). *Masterful coaching*. Revised edition. Jossey bass]

Mechanisms of learning

—

Learning happens at different levels: it can happen within ourselves and our teams, within our organisational context and within our wider ecosystem.[4]

Each level will require different types of support and collaboration with different partners and stakeholders. Understanding the interrelation of both learning level and the partners this involves is crucial to realise the full benefit of the learning, understanding how to feedback the evidence from this learning and how to translate this to decision-making. In the subsequent pages, we outline examples of different learning mechanisms that can be undertaken at the individual level, within a group, between groups, and at the system level. Importantly, each of these mechanisms will have supporting conditions that enable them to be effective within your own context.[5]

Learning at the individual level

Learning within a group

Learning between groups

Learning at the system level

4 McKenzie, F. (2021) *Building a Culture of Learning at Scale: Learning Networks for Systems Change*. Prepared by Orange Compass for the Paul Ramsay Foundation. Available at: www.orangecompass.com.au/images/Scoping_Paper_Culture_of_Learning.pdf (Accessed 27 July 2022).

5 www.nesta.org.uk/report/what-motivates-adults-learn/

Learning at the individual level

Learning at the individual level looks at you and your cognitive pathways; what you are doing, why and how. This requires support to be flexible, reflective, adaptable and aware. Individual learning is not limited to this solo context. When learning within a group or system level we also learn at the individual level and will need support mechanisms in place, such as space for individual reflection after group discussion.

There is often a presumption that if you 'throw people in the deep end', learning happens. This does not, however, always work in practice. Learning is dependent on what you already know, therefore onboarding and supported learning is important.

We can better recognise this condition for better support of individual level learning by understanding the role of **schema** - organised units of knowledge based on past experience that can be accessed to guide current understanding or action. The use of our existing schema can serve as a structure that helps fast track the process of learning. We can then introduce new concepts and ideas by attaching new learning to this existing knowledge. Here, we are adding to the schema. As you gather evidence and begin this process of learning at the individual level, schemas reinforce. Consider a Theory of Change - this acts as an explicit schema which establishes what is already known. Your individual level learning can strengthen or alter this schema of policy.

Example mechanisms for learning at the individual level:

Acquiring

Searching for information
Playing a game
Listening to podcasts

Doing

Creating a presentation
Analysing a problem
Reviewing a report

Reflecting

Journalling
Writing public pieces

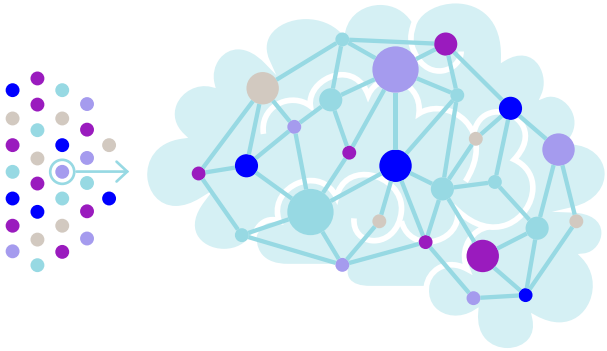

Figure 6.3: Understanding schema.

Learning within a group

At a group level the focus shifts to coming together to learn, for example in teams or at an organisational level. Organisational culture can play an important role in group learning, as can institutional memory. The institutional memory of an organisation can be improved by; building an explicit knowledge management strategy, identifying key organisational or team based capabilities and skill sets and improved use of technology to create processes in which employees can continually update and access useful information.

Learning within a group can be supported through knowledge management functions and mechanisms such as storytelling and mentoring schemes. Dorothy Leanard, at Harvard Business School, has conducted extensive research into how to preserve and transfer critical, experience-based knowledge between 'generations' of employees, sometimes known as a *knowledge cascade*.[6] Employees are often more likely to want to engage with their peers to strengthen their own capabilities by improving confidence and motivation to learn and adapt new knowledge and behaviour. If the knowledge cascade is structured, visible and transparent, it is seen as more trustworthy.

Example mechanisms for learning within a group:[7]

Applied Learning Opportunities

Communities of practice
(Internal) Action learning sets
Brown bag lunches / "Campfires"

Peer Learning

Journal clubs
Mentorship
Coaching
Work shadowing

Storytelling & Translating Knowledge

Podcasts
Reports
Toolkits
Guidelines

Access to Information

Databases
Online repositories of previous learning
Briefings

Reflection Point:

Learning through a Theory of Change

Throughout this toolkit, many of the activities introduced help promote learning with your peers from diverse evidence types and expertise to help identify how evidence can be used and generated in support of your policy challenge. As our policy interventions evolve, learning from the evidence we use and generate, such as through monitoring and evaluation activities, can be supported with tools such as theories of change, as explored in Module 4.

- What are some of the different possible uses of a Theory of Change in supporting learning within a group?
- What practical steps or processes could increase its effectiveness in supporting learning?

They can serve as a useful roadmap for identifying where and how improvements have occurred, and change course as is needed as our assumptions are confirmed, updated, or challenged.

6 Leonard, D. Martin, J. (2019) 'How your Organisation's Experts can Share their Knowledge', *Harvard Business Review*. Available at: hbr.org/2019/12/how-your-organizations-experts-can-share-their-knowledge (Accessed 27 July 2022).
7 Leonard, D. Swap, W. (2004) 'Deep Smarts', *Harvard Business Review*. Available at: hbr.org/2004/09/deep-smarts (Accessed 27 July 2022).

Learning between groups

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Learning at a group level can also occur between groups, such as with external collaborations or engaging between academics and policy teams. When facilitating learning between groups you may consider mechanisms that help explore consensus, involve collaboration and differences of beliefs, are channelled through institutional frameworks and mechanisms, or include effective communication strategies. Some of these mechanisms have been highlighted already when considering how learning takes place between researchers and decision-makers, such as academic advisory groups explored in Module 2.

Different mechanisms will have different strengths to suit different purposes. When considering how to facilitate learning across sectors, think about which activity is most fit-for-purpose: for example, are you looking to build consensus or to communicate information?

Example mechanisms for learning between groups:[8]

Consensus building

- Delphi-Panels
- Conferences
- Collaborative planning sessions
- Academic advisory group
- Roundtables

Collaborative Learning

- Joint practice development
- Cross-sector communities of practice
- Action learning sets
- Establish peer networks
- Secondments

Institutional Framework and Mechanisms

- Behavioural frameworks, such as the Behavioural Insights Team's EAST (easy, attractive, social, timely)
- Toolkits
- Handbooks
- Evidence repositories

Effective communication

- Tailoring and targeting / framing
- Publishing reports or blogs
- Social marketing
- Awareness-building campaigns
- Hotlines and help desks

8 Langer, L. Tripney, J. Gough, D. (2016) *The Science of Using Science: Researching the Use of Research Evidence in Decision-Making.* Technical Report. London: EPPI-Centre, Social Science Research Unit.

Learning at the system level

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At a system level the complex and adaptive nature of the environment requires an ability to continually sense and learn from the system and adapt accordingly. A process of iterative inquiry takes place that draws from insights and wisdom from a diverse range of actors across the system. The learning process at a systems level can take much longer than at the individual level as the results may not manifest themselves equally or fully across all parts of the system. Systems scale learning is about the 'collective wisdom' as defined by the capacity of 'communities' or 'networks' to cooperate intellectually in knowledge creation, innovation and invention.[9]

This framework from the learning networks for systems change report provides high level guidance on the necessary conditions to enable learning as a social process – categorised under the headings: mindsets; relationships; processes; and structures.[10]

Mindsets

Take a decentralised approach
Structure for emergence
Let go of certainly

Relationships

Build trusted relationships
Install boundary spanners

Processes

Co-develop a learning strategy
Undertake collective sense-making
Encourage experimental action
Incorporate critical reflection

Structures

Build a collective memory
Create a simple evaluation framework

Reflection Point:

—

Think about the learning that you are exposed to in your role. How is this supported at an individual, team and departmental level - what different mechanisms are employed and what different barriers can be encountered at each level?

9 Gan, Y. Zhu, Z. (2007) 'A Learning Framework for Knowledge Building and Collective Wisdom Advancement in VIrtual Learning Communities', *Educational Technology & Society*. 10(1), pp. 202-226

10 McKenzie, F. (2021) *Building a Culture of Learning at Scale: Learning Networks for Systems Change*. Prepared by Orange Compass for the Paul Ramsay Foundation. Available at: www.orangecompass.com.au/images/Scoping_Paper_Culture_of_Learning.pdf (Accessed 27 July 2022)

ACTIVITY 19:

Exploring mechanisms for learning

Overview:

In this activity you will review a series of case studies that highlight how learning can be employed to support evidence use and facilitate feedback. Part 1 of this activity uses case studies to test your understanding of what evidence is being fed back, the kinds of assumptions and learning loops types that the evidence is informing, and the learning mechanisms that have been employed. In Part 2 you'll then design your own feedback strategy for sharing learning against your live policy challenge, and consider how different evidence and activities can be used to facilitate learning and confirm or challenge assumptions in your own work.

Background:

Learning loops are a useful concept for understanding and appreciating the different types of learning that can happen, and the kinds of assumptions that they challenge about our work. The first of these, single loop learning, looks at the surface level of what has happened. When you begin to look for further insights, understanding and reflecting on why things have happened and how they may need to be changed, you venture into double loop learning. This type of learning can be used to understand why a particular intervention may work better than others.[11] Triple loop learning involves understanding how others learn. It is at this point that you might ask how and why we want to change the things we have identified needs changing - it can be thought of as double loop learning about double loop learning.[12] Different learning mechanisms can be employed to support particular types of learning from diverse sources of evidence and expertise.

11 Argyris, C. & Schön, D. (1974). *Theory in Practice Increasing Professional Effectiveness*. San Francisco: Jossey-Bass Publishers. [Adapted from Hargrove, R. (2002). Masterful coaching. Revised edition. Jossey bass]

12 Authenticity Consulting, LLC. *Different Kinds of Learning (Loops of Learning)*. Available at: managementhelp.org/misc/learning-types-loops.pdf (Accessed 26 August 2022). [Adapted from: McNamara, C. (2005), Field Guide to Consulting and Organizational Development].

Instructions

Part 1: Case studies

1. Read the case studies in Annex D, starting with a case study that most closely reflects the partnerships you want to share knowledge with from your own policy challenge.
2. In the spaces provided against each case study, answer the prompt questions to consider the evidence being shared, the learning loops being employed, and how particular learning mechanisms will help facilitate that learning.
3. Reflect on what you have learned through the case studies, and whether any of the mechanisms employed might be helpful in your own feedback strategies. Write these down on a scale of least to most useful.

Part 2: Develop a feedback strategy

4. Write out the intended audience(s) of your policy challenge's feedback strategy. You might want to develop a strategy for sharing leaning within a particular group (e.g. within your department) or between groups (e.g. between your department and wider government or between central and local governments).
5. Under each of the learning types (single, double, and triple loop learning) write out the learning mechanisms that you have or could employ to facilitate knowledge sharing between the audience(s) selected.
6. Work your way through the questions provided for each learning type.

ACTIVITY 19:

Exploring mechanisms for learning

Part 1: Case Studies

Core Considerations	What kind of evidence is being fed back? What do you know about for what purpose, and how, this evidence has been generated?	What learning loop is being employed (single, double, triple) to better understand what assumptions?	What learning mechanisms are being deployed to help facilitate this learning?
Case study 1: *Knowledge Sharing Across Government — The Evaluation Task Force*			
Case study 2: *Knowledge Sharing Between Local Authorities — Action Learning Sets*			
Case study 3: *Sharing Learning Between Central Government and Local Government*			
Case study 4: *Learning Between Local Authorities — The Upstream Collaborative*			

ACTIVITY 19:

Exploring mechanisms for learning

How useful are they for the feedback strategies in your own policy challenge?

Least useful **Most useful**

ACTIVITY 19:

Exploring mechanisms for learning

Part 2: Develop a feedback strategy

Your policy challenge

Your audiences:

	Single Loop Learning *Are we doing things right?*	**Double Loop Learning** *Are we doing the right things?*	**Triple Loop Learning** *How are we deciding what is right?*
What Learning Mechanisms reinforce these? *Consider drawing from the list of the learning mechanisms for 'Learning within a Group' Learning Between Groups*			
What kind of evidence would you learn from? *Consider drawing from the evidence types listed in Module 1 Activity 2*			
What are you currently doing well?			
What could you improve?			
What might be challenges to undertaking these activities?			
How might you work around them?			

Understanding change using the COM-B model of behaviour

When considering the feedback of insights from our policies, we might consider the ways in which these insights can contribute to changes in behaviour of policy beneficiaries or stakeholders.

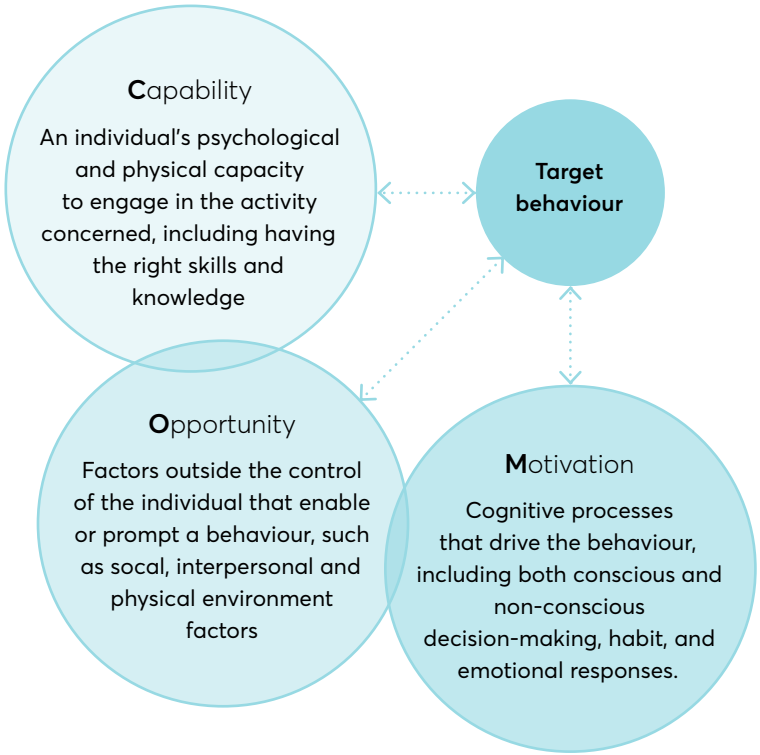


Figure 6.4 -The COM-B Model of Behaviour Change, adapted from Social Change UK (2019).

A helpful framework for understanding and organising the factors and barriers that allow for a change in action is the COM-B framework:[13] the Capabilities, Opportunities, and Motivations (COM) that allow for Behaviour (B) to change in practice.

In order to perform a particular behaviour, one must feel they are both psychologically and physically able to do so (C), have the social and physical opportunity for the behaviour (O), and want or need to carry out the behaviour more than other competing behaviours (M). The model positions behaviour change as a result of an interaction between these three components and as such interventions must target one or more of these in order to deliver and maintain effective behaviour change.[14]

Behaviour will occur only when the person concerned has the capability and opportunity to engage in the behaviour and is more motivated to enact that behaviour than any other behaviours.

When thinking about feeding back learning from our policy, the COM-B framework can be a useful tool for considering the types of interventions that can help overcome barriers to achieving a target behaviour. For example, by implementing different mechanisms that help feedback learning for ourselves and others, we might be helping overcome barriers to capability by building skills and knowledge. Alternatively, if we create structures and incentives that help enable that learning, we might be improving opportunities for learning to take place.

13 Michie, S. van Stralen, M, M. West, R. (2011) 'The behaviour change wheel: a new method for characterising and designing behaviour change interventions', *Implementation Science* 6, 42. doi: doi.org/10.1186/1748-5908-6-42

14 Social Change UK. *A guide on the COM-B Model of Behaviour*. Available at: social-change.co.uk/files/02.09.19_COM-B_and_changing_behaviour_.pdf (Accessed 27 July 2022).

Case Study: The science of using science

When thinking about feeding back learning from our policy, the COM-B framework can be a useful tool for considering the types of interventions that can help overcome barriers to achieving a target behaviour. The Science of Using Science project, led by researchers at the EPPI-Centre, University College London, in partnership with Nesta, performed a systematic review of the evidence-base on increasing the use of research evidence by decision-makers. The review used the COM-B framework to organise and map the different activities for translating evidence and evaluation into decision-making found within the evidence base. Mechanisms that were found to improve capability included:

The mechanisms in practice - what works well[15]

- **Awareness** - Building awareness and positive attitudes towards evidence use, through activities such as through social marketing. One example is the Department of Health and Social Care's first social marketing strategy: Changing Behaviour, Improving Outcomes.
- **Agreement** - Building mutual understanding and agreement on policy relevant questions and the kind of evidence needed to answer them. For example, The What Works Centre for Wellbeing used the Delphi method to select topics for an evidence review on wellbeing in culture and sport.[16]
- **Skills** - Evidence use can be supported through the development of skills needed to assess and make sense of evidence. An example of this are training initiatives such as Nesta's training course for evidence use.
- **Structures** - Creating structures and processes that promote the generation and use of evidence, such as Chief Scientific Adviser's offices.
- **Access** - Providing communication of and access to evidence, such as through tailored and targeted resources. An example of this are evidence gap maps and dashboards such as The Education Endowment Foundation's Teaching and Learning Toolkit, which aim to communicate evidence in an easy and accessible format.
- **Interact** - Evidence use can be supported by researchers and decision-makers interacting with each other to build relationships, trust, and exposure to different forms of social influence.

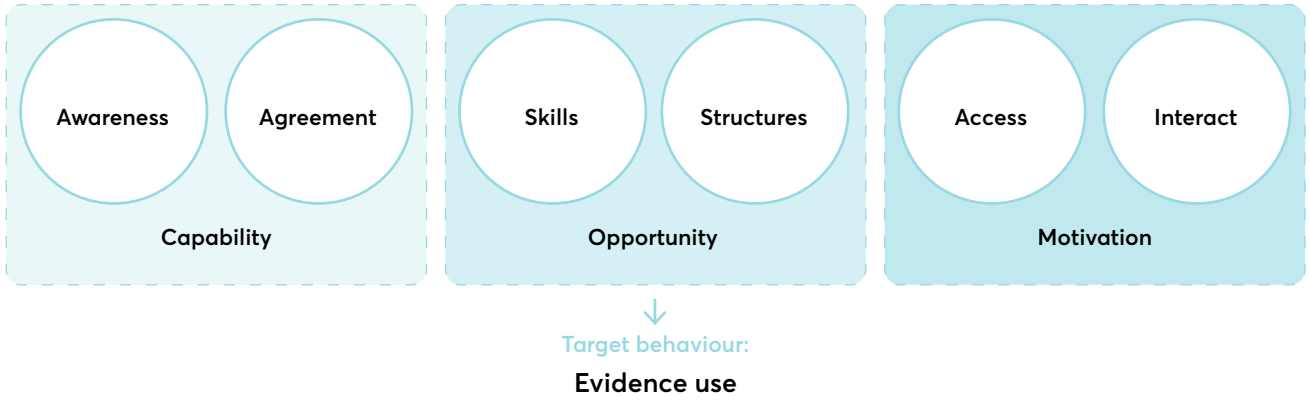


Figure 6.5 - Mechanisms to improve evidence use capability structured within the COM-B model of behaviour change. Taken from Breckon and Dodson (2016).

15 Breckon, J. Dodson, J. (2016) *Using Evidence: What Works?* Available at: media.nesta.org.uk/documents/using_evidence_what_works.pdf (Accessed 23 August 2022).

16 Daykin, N. et al. (2016) 'What works for wellbeing in culture and sport? Report of a DELPHI process to support coproduction and establish principles and parameters of an evidence review', *Perspectives in Public Health*. 137(5) pp. 281-288. doi: doi.org/10.1177%2F1757913916674038

Feedback to engage change: influence, persuasion, and storytelling

Within our feedback strategies, part of the reason for sharing learning might be to motivate others to work in new ways, grow from successes and failures, or encourage buy-in. However, encouraging new actions or the adoption of these insights can be an energy and resource intensive process that involves pushing against the boundaries of current practice, rules, and culture. You might need to persuade others to join the effort, engage them in understanding the challenge, and influence their behaviour to meet a need. In this section, we narrow in on specific mechanisms that can help overcome barriers to behaviour change and feedback policy work and findings to different audiences: influence, persuasion, and communication.

Influence: The capacity to shape the character, development or behaviour of someone or something or the outcome itself

Persuasion: The ability to shape what someone does or thinks in the moment using a combination of charisma, talent and technique

Communication: Being aware of not just what you say, but how you say it, and how others receive and perceive the message

Forms of influence

—

When feeding back insights from policy, this might involve influencing others to action in new, or different ways. Influence is your capacity to shape the character, development or behaviour of someone, something, or the outcome itself.

It often grows out of well nurtured relationships and includes a lot of the characteristics that steer how we collaborate with others. It is the end result of actions, behaviours and intentions that work towards adding value and building credibility and trust with different stakeholders that might be involved with our policy.

Figure 6.5 illustrates how your level of influence can fall on a spectrum between positional (as linked to job title or position in society) to personal (as linked to personal traits like charisma, popularity and social capital).[17, 18]

17 Duggan, K. Dahl, S. (2019). *How can you develop an innovative mindset? Our experience with Essex County Council.* Available at: www.nesta.org.uk/blog/how-can-you-develop-innovative-mindset-our-experience-essex-county-council/ (Accessed 19 August 2022).

18 Raven, B. H. (2008). The bases of power and the power/interaction model of interpersonal influence. *Analyses of social issues and public policy*, 8(1), 1-22. doi: doi.org/10.1111/j.1530-2415.2008.00159.x

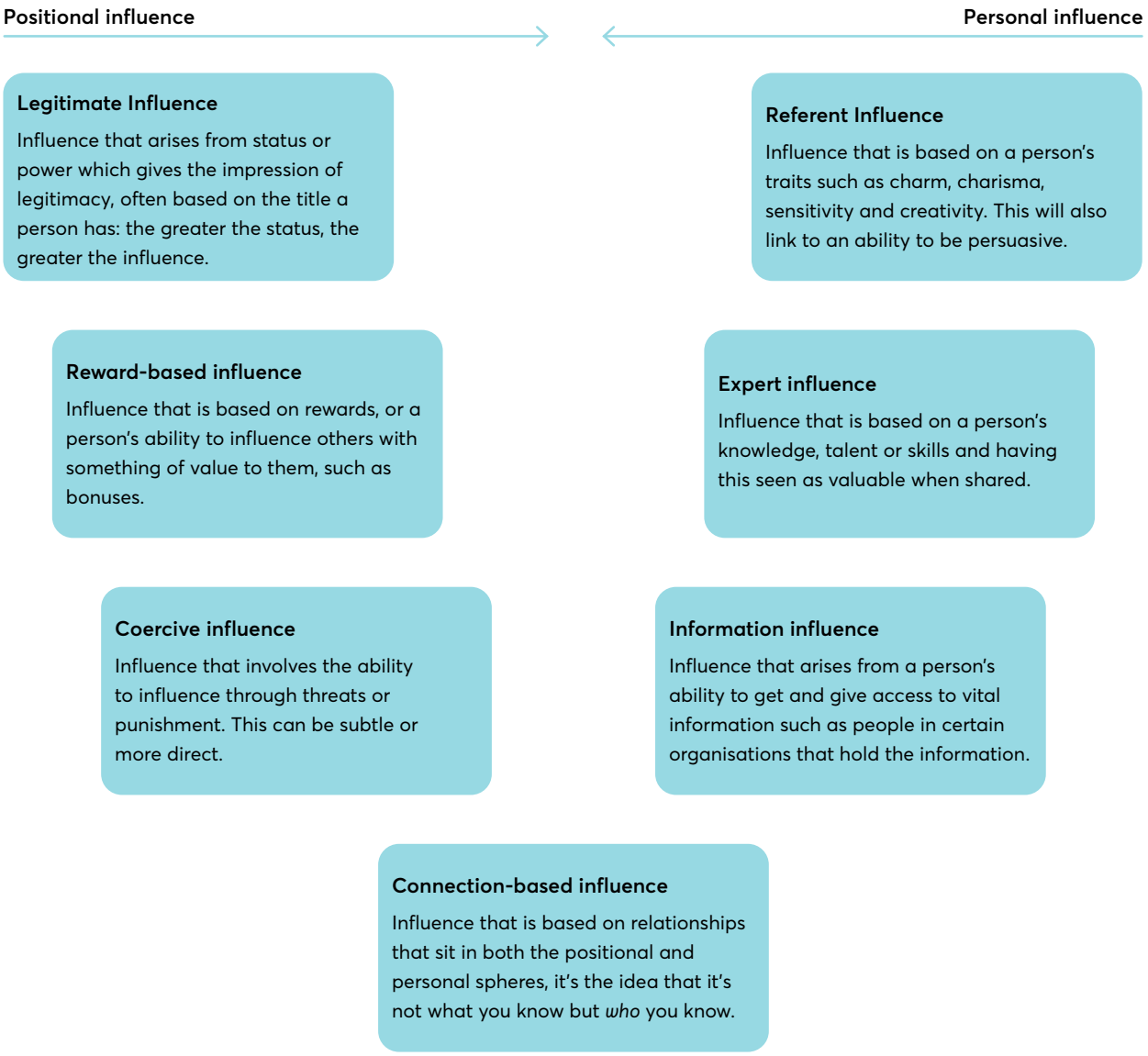


Figure 6.6 - Spectrum of influence from positional to personal. Adapted from Raven (2008).

Reflection Point:

Think back to both your policy challenge, and the stakeholders that you mapped in Activity 8 and reflect on the following questions:

- Who do you currently want to influence as part of your policy?
- What kind of influences, from personal, to positional, do you think you have?
- How might the evidence that you use or generate support your ability to influence others?
- When considering collaborating with different experts, such as academics, what kind of influence do they have? How might they contribute to your feedback strategy?

Forms of persuasion[19]

Persuasion is the ability to shape what someone does or thinks in the moment using a combination of charisma, talent and technique to achieve positive outcomes.

While closely linked to influence, persuasion is more of an 'in the moment' skill which requires less groundwork in relationship-building. For example, you can persuade someone having just met them - which matters when considering how to create the space and opportunity to influence someone. Persuasion involves exploring the ability to persuade others of your worth, or the worth of an idea.

We don't always have these well nurtured relationships with the people we need to influence, nor do we have the formal position of power. In these cases, often we need to ramp up our persuasiveness.

Forms of persuasion:

Reciprocity
The sense of obligation to give when one has received

Scarcity
People like something when there is less of it. When something is exclusive, its perceived value can increase

Authority
The use of credible information and people to persuade others. This could be authority gained from a position in hierarchy or through expertise in a subject area

Consistency
Ask for a small commitment and build on this - setting a precedent and asking someone to continue to follow this

Liking
We like people who are similar to, affirm and cooperate with us. It is easier to persuade people who are like minded and working towards a shared goal or vision

Consensus
We follow the actions of others and shy away from being sole objectors and conflict. This stems from a desire to be liked.

Reflection Point:

Reflect on the different forms of persuasion presented. Consider:

- Where have you seen this form of persuasion in practice?
- Were they effective at persuading the audience? Was there any change in action as a result?
- Could other forms of persuasion be used to increase buy-in?

19 Cialdini, R. (2016). *Pre-suasion: A revolutionary way to influence and persuade*. Simon and Schuster.

Communication through storytelling

A key factor in the way we share our policies, and the evidence that underpins them, is through communication. In this section, we'll narrow down on what the Science of Using Science Report[20] noted as one of the most effective ways to communicate evidence, feedback policy insights, and share knowledge: storytelling.

Stories are universal and they can bridge cultural, linguistic and age related divides. They appeal to a natural instinct within us, and are present in so many of our everyday interactions where they help us to spread information naturally. Storytelling helps tap into the empathy and experiential parts of the brain; the ones which would be active as if we were experiencing that situation ourselves. This is what gives the translation of evidence into stories potential impact as it becomes easier to capture the attention of others, and to remember what was shared.

Sharing stories can bring out many positive changes including:

- **Providing a means to share and interpret experiences** - they help you to reflect and reframe situations
- **Helping people to listen and learn** - they often bring unheard voices to the table, and help us elicit empathy for other viewpoints
- **Helping to raise awareness** of your own purpose and value, or that of an important situation
- **Helping to empower people** - help people to make decisions and demonstrate that something is possible
- **Transferring knowledge** in a simple way which aids learning
- **Persuading someone to act** and to change their behaviour
- **Changing people's minds** by bringing biases to the surface and helping people to see things in a different way
- **Providing entertainment** - making people laugh, cry, feel joy, feel pain, feel scared, feel happy.

The What Works Centre for Local Economic Growth acknowledge the importance of building a compelling narrative following their work with the Greater Manchester Independent Economic Review:

"The right presentation is central to ensuring that evidence moves from the page and into live political discourse. Central to this is the establishment of a narrative that effectively conveys the thrust of the evidence base in a way that is accessible and engaging to as wide an audience as possible. The creation of compelling narratives, built on a foundation of robust evidence have been at the heart of Greater Manchester's most significant achievements in the use of evidence from the Manchester Independent Economic Review to the recent devolution deal."[21]

20 Langer, L. Tripney, J. Gough, D. (2016) *The Science of Using Science: Researching the Use of Research Evidence in Decision-Making*. Technical Report. London: EPPI-Centre, Social Science Research Unit.
21 What Works Centre for Local Economic Growth. (2015) *Using evidence: Greater Manchester Case Study*. Available at: whatworksgrowth.org/resources/using-evidence-greater-manchester-case-study/ (Accessed 27 July 2022).

Storytelling is a skill that can be developed and there are a number of principles that good stories will use.

A good story will have **a selective batch of information** keeping the narrative concise and to the point. They will have a purposeful **structure** that is designed to elicit tensions and feelings and will have **meaning**, looking to deliver a message or lesson. A good story will be **simple** and easy to follow, authentic with a sentiment that is **genuine** even when the story is fictional. Good storytelling will be **relevant** and will mean something to the intended audience.

When crafting a story, a key ingredient involves understanding the audience for which the story is intended, by reflecting on what they need from the story, why they will listen, and their motivations.

Different people might value different kinds of rhetoric, which can steer our influence and persuasion efforts. There are three rhetorical appeals that are helpful to consider when developing a story: logos, pathos, and ethos. In storytelling consider the balance of these drivers and how you may need to adjust the rhetoric to suit the intended audience:

- Some people are going to be driven by the **logos**: the logic, the reason, the proof. Here, a person's preference will be for the facts, the figures and numbers; the things they consider important to push an idea through or give permission.
- Some people are driven by **pathos**: emotions and values. These types of people are affected when they hear a story about an individual going through harm.
- Some people are driven by **ethos**: credibility and trust. So where did this story come from? Who created it? Why did they create it? What experience did they have? What do they know?

You might consider tapping into existing story types to help your structure your story: the challenge story, the 'how-to' story, and the big idea story:

The Challenge Story
This story is about a protagonist overcoming seemingly insurmountable obstacles to turn their idea into reality. It is dramatic, inspiring, accessible, and emotionally moving.

The How-To Story
This story explains the process of solving and implementing a social problem. It inspires and provides hope and insights into emerging practices that are effective and explains how to employ these methods.

The Big Idea Story
This story focuses on describing a novel solution and explores how this fits within the bigger picture of creating social change.

ACTIVITY 20:

Storytelling

Overview:

Storytelling is a helpful tool for translating the evidence we generate into a persuasive narrative. In this activity you will create a persuasive story behind your policy challenge in a way that draws upon the evidence you might expect to use or produce as part of it - such as through your monitoring and evaluation strategies.

Background:

Stories can be used to change the system by providing support and space to build empathy and shift mindsets. They have the ability to appeal to the personal experiences of the audience, often making them feel real and the audience feel engaged. Storytelling can also be used to help the feedback process, turning feedback into something contextual and memorable to support future learning. There are a number of resources that explore the importance of storytelling and offer guidance on how to do this well. This includes: 'The Science of Storytelling: Why Stories Make Us Human, and How to Tell Them Better' by Will Storr, the Nesta blog on how storytelling can improve policy making, and this Harvard Business Review article on how to tell a great story.

Instructions

1. Write the audience you will be telling your story to in the space provided.
2. Answer the questions about your audience to build to strong picture of their motivations, needs, priorities and concerns.
3. Then, build the overarching narrative for your story by completing the statement: We want **[the audience]** to **[action]** how **[the things we're testing] [our focus]** in order to **[action]**. This will serve as the framework for your story.
4. Work through the questions in the activity worksheet. These will help you to delve into the real detail of the content and substance behind the story. Consider how to make the story compelling, relevant, evidenced, meaningful and motivating.
5. Present your story back to your team.
6. Reflect on the persuasive power of the story and look to identify elements where this could be strengthened.

ACTIVITY 20:

Storytelling

Who is the audience for your story?

You might consider drawing from the Stakeholders identified in Activity 2 in Module 1

Consider the following questions about your audience:

Who are you telling your story to?

What do they need from the story?

Why are they going to listen?

What motivates them?

What are their priorities and concerns?

How best might you communicate with them?

Build the Overarching Narrative for your story by completing the statement:

We want *[the audience]* to *[action]* how *[the things we're testing]* *[our focus]* in order to *[action]* .

→ **For example:** We want **local residents** to **experience** how **our smart meters** can **reduce energy consumption** in order to **lower household costs**.

ACTIVITY 20:

Storytelling

Build out the details of your story following the prompts below.

1. Problem

Describe the different elements of the problem.

2. Who

Who will be directly or indirectly affected by this issue and solution?

3. Idea

What is the idea, intervention or solution you are proposing?

4. Benefit

What does an inspiring outcome look like?

5. Evidence

What kinds of evidence is your audience interested in?

6. Headlines

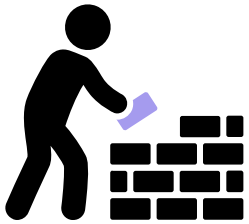
What evidence 'headlines' will support/validate this story?

7. Voices

What other stakeholders would influence your audience?

8. Delivery

How will you effectively deliver this story?



Module 7

Embedding and sustaining

Module 7 helps you consider how to continue to embed evidence use and expert engagement capabilities in practice. To do this, we identify what you have learnt at the individual, team, organisation, and ecosystem levels as a result of engaging with different toolkit components. We then outline potential actions for helping to sustain the application of evidence use and engagement learning in practice, before encouraging you to create your own action plan to support evidence use and expert engagement capabilities in practice.

Module 7	OVERVIEW	105
Contents	• Toolkit review and reflections • Actions to embed learning • Action planning	
Learning Objectives	• **Reflect on your individual progress against the toolkit's learning objectives.** • **Identify what actions can be taken to help translate learning into sustained changes at the individual, team, organisation, and ecosystem level** • **Illustrate action planning as a means of continued implementation of evidence use into practice**	
Activity Overview	21 Collective action planning	
Additional Reading	Innovative Capacity of Governments: A Systemic Framework	Reimagining Help Guide: An evidence-based approach to helping people reach their goals

30

Toolkit review and reflections

Use the table below to reflect on your experiences working with this toolkit. This might include individual or team reflections on different learning objectives, organisational reflections on the conditions needed to help sustain evidence use or engagement, or broader reflections on ecosystemic changes that could support collaboration between government and academia. A few examples have been suggested see if these resonate with you and then add your own learnings in the spaces provided.

Individual and Team	Organisational	Ecosystem
Example: I have learned about the different evidence frameworks that exist to help assess the quality and trustworthiness of different sources of evidence.	**Example:** The academic advisory group activity helped me understand how my organisation can diversify the networks of expertise that we use to fill core research gaps.	**Example:** It was great to learn about different incentive structures that exist between government and academia, and the different mechanisms that help strengthen cross-learning between the two, such as fellowships - it's made me want to learn more about these opportunities!

Table 7.1: Learning at the individual, team, organisational, and ecosystem level

Actions to embed learning

Consider the actions that can be taken to embed and sustain capabilities developed through this toolkit. We've provided examples of what this can look like at an individual, team, institutional, and ecosystem levels.

Individual Level

- Set aside time in your diary to learn and read about best practice. Consider placing a recurring time in your diary that's dedicated to learning, and explain the importance of respecting this to those you work with.
- Consider how to integrate learning around some of the tools, methods, and mechanisms into your professional development plans. Are there any informal or formal learning programmes you can place as key goals / milestones?
- Ensure you are introducing the tools and processes from this toolkit, such as Theories of Change or expert advisory groups, into your business as usual work.
- If your department has a network of evidence champions, consider taking on this role!

Team Level

- As a team, create time and space for reflective practice. This might be an opportunity to take stock on progress to date, reimagine future goals, or consider what evidence and expertise could support your work.
- Consider implementing some of the mechanisms for learning introduced in Module 6 - such as a reading group where team members can discuss an academic article and discuss its relevance to your work.
- Consider running sessions based on activities presented in this toolkit. Each subsection is designed so that it can be delivered within the team or with partners - perhaps as a lunch and learn or within a wider team meeting.

Organisation Level

- Role model examples of positive leadership that look to champion evidence-informed decision-making.
- Provide training and skill development in evidence literacy and use and encourage the value of this learning within the organisation.
- If you work in government, engage with the areas of research interest (ARI) process or familiarise yourself with existing routes to connect with experts in academia or elsewhere.
- Advocate for knowledge management systems that help organise diverse sources of evidence, or for organisation-wide research access.
- Introduce reward and recognition systems for processes that embed learning within the organisation, for example offering material incentives for teams to take the time after formal training reflect and revisit this.

Ecosystem Level

- Try to reach out to experts and academics relevant to your area of work. There was more information on how to do this in Module 1.
- Consider different activities that you can take part in that help promote the exchange of knowledge - such as events, cross-sector training, or fellowship programmes.
- Learn about Research and Development (R&D) spending processes within your department.

Action planning

Action planning is a useful approach to help you reach your objectives. It can help to focus your ideas and goals and outline the steps that need to be taken to achieve these. Action plans often focus on each objective individually, placing a distinctive timeline and set of clearly defined steps including any evidence to support this and potential challenges that could derail progress. There are a number of benefits to action planning, with many parallels to the benefits of evidence use, including:[1]

- **Building consensus:** Action planning can build beyond consensus on objectives and deliver a consensus on priorities and the desired process to achieve outcomes of interest. We have previously explored the importance of building consensus when considering co-approaches introduced in Module 2 and during the appraisal process with techniques such as the Delphi method.
- **Creating ownership:** By involving individuals who are knowledgeable and passionate in the area of the work in the development of the action plan you are likely to see realistic suggestions and contributions and a sense of ownership and accountability. Action planning gives an opportunity to allocate specific tasks so that everyone is aware of what aspects of the plan they are responsible for.
- **Clarifying timelines:** The process of planning is helpful when determining resources and planning timelines. Each action within the plan should have a clear completion date.
- **Identifying measures of success:** Measures of success can help to keep progress on track, particularly when there is a larger overarching objective. Identifying these will also open dialogue on the types of monitoring and evaluation that may be required.
- **Opportunity for reflection:** By taking the time to plan, you can consider any learnings from previous experiences or wisdom within your teams and departments. What actions have been helpful or unhelpful in the past and how will his impact on your plan?

1 Open Learn Create. *The importance of action planning.* Available at: www.open.edu/openlearncreate/mod/oucontent/view.php?id=53774&section=1.3.2 (Accessed 06 September 2022).

ACTIVITY 21:

Collective action planning

Overview:

Use this activity to review and reflect on the work you have done throughout this toolkit and translate it into an action plan moving forward. This might include exploring further actions to refine earlier activities or researching the methods from the method safari in more detail. Set yourself a timescale for the actions and, where possible, try to take stock and check in regularly with this plan.

Background:

All too often learning and change can fall short at the final hurdle: embedding this into practice. There are a number of things you can do to support longlasting and effective learning. Start by considering the needs of yourself, your team or your organisation and identify a route forwards to achieve this. Consider the barriers to implementing and sustaining change and think about how you can tackle these - are there behavioural barriers, or resource constraints, or perhaps barriers within your organisation's culture? Action planning provides a useful tool to break down the steps needed to realise and sustain change from learning programmes and focuses your thoughts on specific methods, stakeholders and timescales needed to do this. Remember to revisit your action plan - reinforce and reward change as it happens and learn from what might be working well.

Instructions

1. Consider the issue, evidence and challenges currently faced at the individual, team, organisational, and ecosystem levels. Answer the questions in the space provided.
2. For each level, identify one action you can take to embed the lessons from this toolkit into practice.
3. In teams complete the action planning template by outling how you will collectively complete this. Be specific with your plans, identify who is responsible for the action, who else may need to be involved, and include a timescale for completion.

ACTIVITY 21:

Collective action planning

1/2

Individual

Issue *What issues are we currently facing?*				
Evidence *What types of evidence might help us to address these issues?*				
Challenges *What challenges might we face in finding and using this evidence?*				
Action *What can we realistically do?* *Who will do what and by when?*	**The action:**	**Who is responsible?**	**Who is involved?**	**When does it need to be done by?**

Team

Issue *What issues are we currently facing?*				
Evidence *What types of evidence might help us to address these issues?*				
Challenges *What challenges might we face in finding and using this evidence?*				
Action *What can we realistically do?* *Who will do what and by when?*	**The action:**	**Who is responsible?**	**Who is involved?**	**When does it need to be done by?**

ACTIVITY 21:

Collective action planning

2/2

Organisation

Issue *What issues are we currently facing?*				
Evidence *What types of evidence might help us to address these issues?*				
Challenges *What challenges might we face in finding and using this evidence?*				
Action *What can we realistically do?* *Who will do what and by when?*	**The action:**	**Who is responsible?**	**Who is involved?**	**When does it need to be done by?**

Ecosystem

Issue *What issues are we currently facing?*				
Evidence *What types of evidence might help us to address these issues?*				
Challenges *What challenges might we face in finding and using this evidence?*				
Action *What can we realistically do?* *Who will do what and by when?*	**The action:**	**Who is responsible?**	**Who is involved?**	**When does it need to be done by?**

Annexes

ANNEX A:

Co-designing learning

This guidance provides recommendations for facilitating activities presented within this toolkit. It is especially relevant for team leaders or facilitators who seek to weave different components and activities introduced within the toolkit into a bespoke learning programme.

The navigation section of this toolkit provides some starters for choosing which content might be relevant for your training needs and provides an indication of the expected duration to cover the learning objectives realised through content, reflections and activities. Each module also provides a time estimate for how long it will take to review content and undertake activities within each sub-section. Below, we share guidance on how to tailor learning to meet the needs of different teams and align it with existing competency and capability frameworks. We then share practical considerations when facilitating workshops.

The process of co-design can be used to help ensure learning content is aligned to the needs of learning participants and shaped prior to delivery.

While many of the benefits of co-approaches to knowledge exchange, co-designed learning is also a promising means to ensure learning is valuable, applicable, and co-generated to meet different capability needs.[1, 2] When considering the development of evidence use and expert engagement capabilities, co-designing learning can help access diverse insights from participants with different roles and responsibilities. It can also help facilitate ownership of learning content, and drive the realisation of activities into practice by steering a better understanding of areas that may benefit from dedicating time and resource.

Aligning the toolkit to existing capability frameworks

Consider how the capabilities cultivated through this toolkit might link capability frameworks that exist within your organisation. For example, within HM Government you might consider alignment to career progression and competency frameworks such as the Success Profiles or Civil Service Competency Framework, those available through specific professions, or competency frameworks specific to Welsh Government or Scottish Government. You might also consider utilising capability frameworks that have been developed outside of the UK, such as the European Commission's Competence Framework for Innovative Policymaking.

1 Metz, A. Boaz, A. & Robert, G. (2019) 'Co-creative approaches to knowledge production: What next for bridging the research to practice gap?', *Evidence & Policy A Journal of Research Debate and Practice*, 15 (3). doi:10.1332/174426419X15623193264226

2 Morgan, K. Lee, S. (2022) *Co-designing learning for evidence use and engagement*. Available at: www.nesta.org.uk/project-updates/co-designing-ways-to-improve-evidence-gathering-and-use/ (Accessed 23 September 2022).

Guidance for co-designing learning

—

The questions provided below have been created to help you build an understanding of specific learning needs relevant to the team, and environmental factors that affect the suitability of the content.

To introduce co-design into delivery of workshops, we recommend hosting a co-design session or focus group with a representative sample of select members of a team or cohort. Through open dialogue, often structured around a series of questions, you can tease out these considerations and adapt the learning. Consider where particular activities could be tweaked or different case studies and examples introduced that are more relevant to the challenges your participants are facing. Some potential questions you might use have been provided in the interview guide template below.

Co-designing learning: questions template

—

The questions provided in this template seek to better understand the needs of the participants in relation to evidence use and expert engagement:

- How evidence is currently used and define evidence within their work
- Current evidence use capabilities and needs
- Engagement with academia to date
- Reflections on previous academic engagement experience, and capacity needs in this area.

The questions provided below were developed to align with the capabilities introduced within this toolkit. Additional surveys, tools, research methods that have been created to measure the use of evidence in policy and practice can be found at the ***Use of Research Evidence (URE) Repository of Methods.***

As you prepare for the co-design or focus group sessions, consider the following:

- Briefing participants on the purpose of the session
- Sharing how any personal data (names, contact emails etc.) will be collected, stored and used to inform the delivery of the workshops
- Whether the data collected (including participant responses) will be anonymised
- The use of additional data collection tools to enable anonymous responses, capture visualisations that may be helpful for the design workshops, vary the pace of discussion and to enable individual time for pause and reflection or create a more engaging experience for participants who may be experiencing interview 'fatigue'.

Question	Sub-Questions	Responses
In the context of your work and roles, how do you define evidence and why is it important to you and your team?	**Understanding** • In the context of your work, how is evidence defined? • Why is evidence important for you and your team's work? • How do you decide if you need evidence? • How do you decide what evidence is relevant to you and your policy problem? • How do you use evidence to make timely decisions? How important is timing when accessing evidence for policy design? At what point is it most beneficial to access evidence? • Do you tend to draw on evidence from external stakeholders (i.e. external to your department or government)? And if so, for what? **Access** • How do you source evidence? • How do you prioritise different forms of evidence? • Who do you source evidence from? • How well do you think you use evidence currently? • How have you identified experts you have wanted to work with? How did you find them? • In your experience, how important are trusted relationships in sourcing evidence? **Types of evidence/methods** • How confident are you in the use and interpretation of different evidence methods? • How do you prioritise different forms of evidence? • How important is it for you to diversify the evidence sources you utilise? How important is it that evidence is informed by diverse, external stakeholders (e.g. communities that will be affected by a policy?)	

	• How do you currently go about sourcing/conducting primary research of stakeholder needs? • How do you go about understanding if evidence is high or low quality? • Do you tend to use certain types of evidence (e.g. quantitative) and if so why? • How important is it that you understand the underpinning methodology of research and its limitations and weaknesses? **Contexts and networks** • What environment are you working in and how will this affect your access to and use of evidence? • Are there different contexts where you would adapt your use of evidence? For example, when socio-economic conditions are changing rapidly due to external factors and where, as a result, policy design and delivery schedules were necessarily changed? • Have you ever been able to mobilise evidence quickly to take advantage of a 'window of opportunity' for policy change?	
What are you and your team's capabilities for evidence use?	**Capability building** • What training have you/your team had in the use of evidence? • Who supports you and your team to use evidence effectively? • What strengths does your team have in terms of its use of evidence? • How would you like to build upon this success? • How would you like to build your capabilities for evidence use? • Can you describe the networks and organisations with whom you exchange information regularly?	

What are your team's experiences of working with academia and experts?	**Experience** • To what extent do you work with the academic community? • Who did you work with? • When you have worked with academics, how well has this experience met your evidence needs? • What conditions optimise your engagement with academics? **Understanding** • What are your motivations for working with academics? • In your experience, to what extent do academics understand the policy system? • What do you think academic priorities are? • In your experience, why do academics want to work with policy stakeholders?	
What current problem would you like to address or is there a decision that you need to make?		

Closing remarks

- Bring the focus group to an end, thanking participants for their time and for sharing responses.
- Ask participants whether they have any final questions or comments before wrapping up.

References:

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Top Tips: facilitating workshops

If you are planning to deliver the learning in this toolkit within a workshop we have outlined a series of tips and considerations below:

Delivery	Case Studies, Homework, and Feedback Mechanisms
Digital Use: The toolkit has been designed for digital use with interactive PDF features that support the iterative completion of activities using the templates provided. Consider using an interactive platform to complete activities, such as a Miro Board. Here, activity PDFs can be imported for collaborative use in a digital environment. **In-person workshops:** Activity templates can be printed or used as handouts. **Hybrid Learning:** We would encourage you to make any adjustments that support this, whether that be providing print outs in person or taking the time to provide virtual tech support prior to the workshop if virtual. **Visual Aids:** Consider how you will use visual aids, such as slide decks, to support the delivery of workshops. **Facilitation:** Consider having participants take on different roles, such as notetaker, facilitator, or time-keeper, for different activities. If using break-out groups, some activities might benefit from having an external facilitator allocated for each subgroup.	**Homework:** If running multiple activities, providing takeaway assignments can This give the participants time to reflect on the learning to date and prepare in advance of the future sessions. **Case Studies:** Consider any additional case studies that can be used to explore themes introduced within the toolkit, especially as align to subject areas of interest. **Feedback:** Consider implementing a feedback mechanism between workshops to see what methods and techniques the participants are responding to and what they may be finding less engaging. You can then consider how to respond to this and make any changes before future workshops.

ANNEX B:

Academic personas

Anna

Professor

Nottingham Business School | Department of Economics

About Me	My Motivations	My Research
I started my career at the Centre for Urban and Regional Development Studies (CURDS) in Newcastle, where an interest in patterns of spatial inequality grew. Since then, I have only ever worked at Higher Education Institutions (HEIs), achieving my academic credibility by publishing numerous papers in high profile journals. Right now, I want to build on my existing success and transition to leading larger research programmes and projects. This will help me progress to Professorial level. Outside work I love mudlarking and you can often find me trudging up and down the River Trent looking for treasures!	I'm passionate about reducing economic disparities between regional and local areas, and the role that the labour market can play within this. I like to work collaboratively across disciplines. My research and outputs have been funded by the Economic and Social Research Council. I have also undertaken studies and delivered informal advice to BEIS and DCLG. I last worked with DLUHC in 2018 and my connections have lapsed. I have good relationships with Tyne and Wear Council. My department is keen that my work on informing regional economic policies be developed as an impact case study for the next REF.	My research interests span employment change, non-employment, skills strategies, regional and local labour market issues, urban and rural economic development, economic wellbeing and sustainability and economic aspects of spatial planning / development. I use a mixed methodologies (quant and qual) have used data from the Understanding Society longitudinal programme.

ANNEX B:

Academic personas

Maya

Lecturer and UKRI Future Research Leader Fellow

The University of Warwick | Research Project: Entrepreneurship & Innovation

About Me	My Motivations	My Research
Before joining the new Productivity Institute at the University of Warwick as a Lecturer in Entrepreneurship and Innovation, I gained a PhD in Economics from LSE. I secured a UKRI Future Leader Fellowship in 2020 for a 5 year programme of research. I was recently appointed an Affiliated Researcher at the Bennett Institute for Public Policy. Outside of academia, I have worked with Start and Grow UK and Innovation Growth Lab at Nesta. I also provided external advisory support to the Canadian Treasury Board, the UK government and a Member of European parliament. When I find some time, I love spending time with my kids baking.	I'm an economist by trade, and am strongly driven to help others. I love partnering with stakeholders to ensure my research has a societal impact - this is a key requirement for my fellowship programme. I'm keen to help shape policy, and hope that my economist lens can provide a different perspective to social issues. Working between different institutions means I get to engage with a wide network of businesses, communities, researchers, practitioners and policymakers, and am able to glean their different perspectives on certain topics whilst raising general awareness of my expertise. This all adds value to my Fellowship.	I take an interdisciplinary approach to my research, drawing on my various academic experience across Economics and Public Policy. My UKRI funded Fellowship programme examines the links between innovation and performance in small businesses, including the roles of innovation networks, exporting and supply chain collaborations. I'm also interested in innovation diffusion, financialisation and energy economics, as well as econometric methods and quasi experimental methods of impact assessment.

ANNEX B:

Academic personas

Alexander

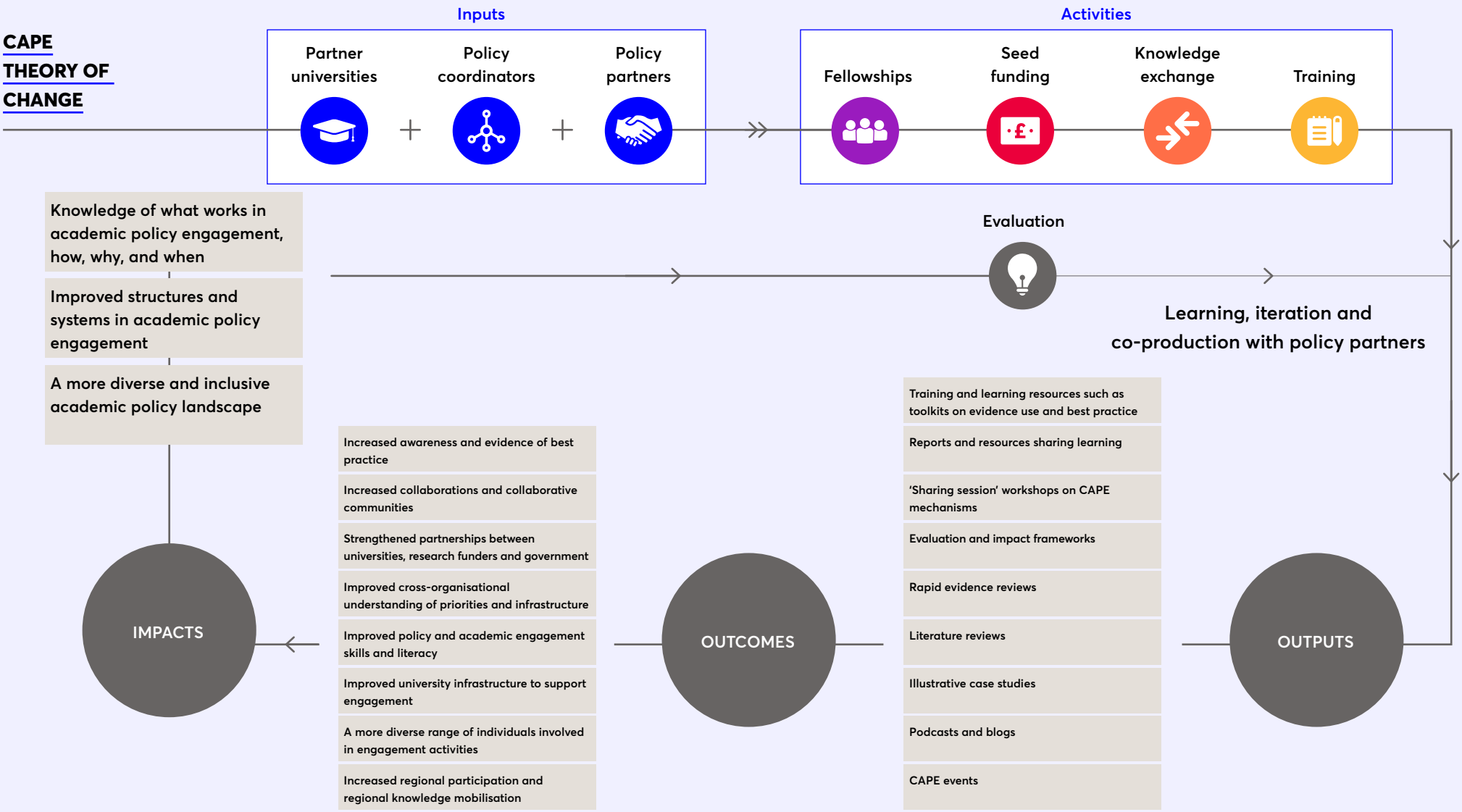
Postdoctoral Research Assistant

Northumbria University | Department of Architecture and Built Environment

About Me	My Motivations	My Research
Before joining Northumbria University to undertake my PhD, I worked in the social housing sector, holding a number of senior level roles in various housing associations in the North east of England. I am currently working on a portfolio of European Commission projects under the leadership of a senior Professor. This has given me great networks across Europe. While at Northumbria University I have carried out applied research in a variety of housing policy and practice areas, particularly focusing on examining the privatisation of local authority housing, as housing management. In my spare time, I have an allotment and it's a great place to relax after work.	I've always been driven by a desire to have an impact on people's lives. It was my industry experience that led me into academia where I am able to explore in detail, through academic literature and my own research, ways of approaching collaborative learning and the co-creation of knowledge. I love the variety that comes with being an academic. There are so many opportunities to create change by doing engaged/ co-designed research with service users. I am currently in the last 12 months of my contract and am considering my options. I'm unsure about whether to remain in academia.	My specific research interests are in sustainable regeneration and neighbourhood renewal, community involvement, organisation development and measuring the social return on financial investment into our communities. I am particularly interested in understanding the impact of external environments on housing associations, and translating these into strategic decisions.

ANNEX C:

CAPE Theory of Change: interrogating assumptions, principles, and processes



ANNEX D:

Case studies for Activity 19: exploring mechanisms for learning

Case study 1: Knowledge sharing across Government - The Evaluation Task Force

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The Evaluation Task Force (ETF)[4] is a joint Cabinet Office and HMT unit set up following the 2020 Spending Review to ensure robust evidence on the effectiveness of policies and programmes are at the heart of government spending decisions. Its purpose is to drive continuous improvements in the way government programmes are evaluated in order to inform decisions on whether they should be continued, expanded, modified or stopped. These decisions should improve public sector outcomes.

The ETF is principally focussed on impact and value for money evaluations and delivers a range of activities to tackle the main barriers to robust evaluation in government and foster a culture of evaluation and experimentation. These activities include:

- Providing advice and support to HMT Spending Teams, on the evidence and evaluation plans underpinning department's spending proposals to inform HMT spending decisions
- Providing advice and support to government departments on designing and delivering robust impact evaluation
- Encouraging and challenging departments to be transparent with their data and evaluation plans and findings and ensuring departments have various internal systems and structures in place
- Building relationships with key stakeholders across government, including the policy, analytical and finance professions to promote evidence-based policy.

Two examples of ETF activity:

1 2021 Spending Review

During the recent Spending Review, the ETF worked closely with HMT Spending Teams considering the quality of evidence underpinning department's spending proposals and checking whether departments are exploiting approaches to causal inference to understand if their idea works. The ETF team reviewed over 80 proposals and worked with HMT to set evaluation conditions in departments' spending settlements to improve the quality of evaluation for funded programmes. The ETF will be monitoring the delivery of funded interventions to ensure they are rigorously evaluated and to inform future spending decisions.

2 Policy That Works conference

The ETF led on the design and implementation of this event for the Civil Service. Twenty-four sessions were delivered over 3 days led by experts from government departments with some presentations from the What Works Centres, local government and research institutes. Topics covered included evaluation, policy design and innovation.

4 Evaluation Task Force. *About Us*. Available at: *www.gov.uk/government/organisations/evaluation-task-force/about* (Accessed 23 August 2022).

ANNEX D:

Case studies for Activity 19: exploring mechanisms for learning

Case study 2: Knowledge sharing between local authorities - Action Learning Sets

—

The Evolve programme[5] is led by the London Culture Forum in response to a desire to create opportunities to enable learning from the legacy of the London Borough of Culture, as well as supporting the professional development of local authority culture officers. The programme ran from 2020-2021 and was funded by the Greater London Authority. As a 'learning framework' it was deliberately designed to be a flexible programme that offers a breadth of opportunities for local government officers to engage in ways that suit their own capacity and interests, with a mix of space for reflection alongside high quality content. It also aimed to encourage collaborative working across the London boroughs. As well as funding cross-borough projects, the programme promoted Action Learning Sets (ALS).

Action Learning involves a group of individuals getting together in a structured and reflective way (hosted by a facilitator) to explore their own solutions to their ideas, questions or issues. Action Learning can take place face to face, or virtually. The method is the same for both options, and the experience can be equally impactful in a virtual context. Action Learning gives people the chance to step outside the pressures of their professional role and to view things from a different perspective. Working with a small group of others, participants get the opportunity to raise, discuss and learn about any issue that is significant for them.
In this case, local government officials were invited to make an expression of interest to join one of three ALS, consisting of around 6 members in each. They met 3 times online (due to Covid restrictions) with a facilitator, with the option to continue a self-facilitated set or to disband.

5 London Culture Forum. *A call out to join an Action Learning Set*. Available at: www.londoncouncils.gov.uk/node/37899 (Accessed 23 September 2022)

ANNEX D:

Case studies for Activity 19: exploring mechanisms for learning

Case Study 3: Sharing learning between Central Government and Local Government

—

The Department of Health and Social Care is funding the Social Care Innovation Network (SCIE), Think Local Act Personal (TLAP) and Shared Lives Plus to develop an Innovation Network that helps local areas take innovative approaches to social care which work. The Network has brought together councils, care providers, citizens, and national bodies to work collaboratively and creatively, in order to push the boundaries of what is possible to support the growth and spread of innovation. A focus has been to understand the implications for commissioning and commissioners. An Advisory Group made up of representatives of national organisations has helped to steer the Network.

Phase 1:

Sixteen councils and nineteen care providers took part in phase one of the Network. Councils were invited to join on the basis of demonstrating progress built on the foundations of:

1. An ambition to move forward with these (innovative) approaches, based on support from elected members and a commitment to shift resources towards funding innovative models of care and support
2. Some evidence of impact, whilst recognising that this sort of shift takes time and is not a quick fix
3. A demonstrable commitment to co-production with local residents and people accessing care and support.

The Network came together in two full-day workshops. To model a co-productive way of working together, ground rules for co-production were established and included:

1. Speak up and make sure people can hear you.
2. Recognise that no one person has the answer, put ideas together to find solutions.
3. Recognise that everyone is a partner.
4. Appreciate challenges, explain why things aren't working and think through solutions.
5. Be able to get a cup of tea and have a comfort break.

Three learning groups were established, bringing together councils, providers, and locally engaged citizens and people with lived experience. The groups are working on the key issues that came from Phase One workshops with the intention of testing and moving things along in practice so there is 'visible change on the ground' and wider learning that can be shared. The overarching framework for sharing that learning is that it is:

- Outcome oriented – focused on helping people have a life.
- Strengths-based – building on people's skills, capabilities and networks.
- Personalised – care and support is built around a person's needs and goals.
- Co-produced with people at the heart of decisions
- Proportionate – provide intensive support when it is needed.

Phase 2:

Phase Two of the project moved onto a discovery phase – to develop, through the established learning

groups, practical lessons on how to develop the conditions in which innovations can flourish or proliferate.

1. Developing the asset-based areas model in more depth.
2. Re-designing commissioning so that it supports innovation by becoming more citizen led. Commissioning is a process that public sector organisations use to plan, procure, deliver and evaluate services for local residents.
3. Taking self-directed support back to its roots so that it affords authentic choice and control and enables people to connect and contribute. Self-directed support is an approach that puts people at the centre of the support planning process and enables them to make choices about the services they receive.

In total, Phase Two involved 24 organisations consisting of local authorities, innovative organisations, and locally engaged citizens and people with lived experience. All the providers involved in the work are featured in the TLAP directory of innovations in community-centred support, colloquially known as the rainbow. The learning groups were asked to work on:

1. Describing the challenge clearly and draft a Theory of Change for participants to try, offer support and peer support. A Theory of Change is a visual picture which describes how we believe a policy, programme or initiative makes a difference to outcomes.
2. Identifying useful, practical, tangible activities for participants to try.
3. Capturing what people do, what worked well and what didn't work so well.
4. Creating recommendations and identifying unmet needs and future work required.

Each learning group was able to produce a series of outputs, made available on a centralised learning platform for the program: Social Care Innovation Network. These include:

- Blogs that captured learning group reflections and thoughts on the future.
- Reports from each of the learning groups. Including: 1) a model for asset-based areas, which can act as a self-awareness tool and offers ten points and behaviour changes which encourage asset-based approaches in a local area; 2) a "starter for ten" framework for commissioning for the future that sets out how commissioning can practically support the development of asset-based areas; 3) a report that outlines key trends in commissioning; 4) a report outlining the learning process of the network, including their Theory of Change.

ANNEX D:

Case studies for Activity 19: exploring mechanisms for learning

Case Study 4: Learning Between Local Authorities - The Upstream Collaborative

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The Upstream Collaborative was an active learning network of senior strategic practitioners from 20 pioneering local authorities and their partners brought together by Nesta in partnership with Collaborate from 2019-2020. These local government innovators were selected because of their experimentation in ways to address the complex challenges their communities face such as entrenched deprivation, inequality and pressured local services. By moving attention and resources upstream of service delivery, they explored how they can help create the conditions that enable citizens to thrive.

The programme followed three phases:

1. Discovery: Visits to each team to learn about their work and identify drivers, barriers and enablers. Data collection and analysis to identify patterns and commonalities.
2. Action Learning: A two day workshop enabling members to connect, give and receive support and develop an understanding of how their work fits in the wider system
3. Sharing: Insights from the discovery phase were used to draft the New Operating Models Framework, which was shared and discussed with the Collaborative and wider field at a series of online roundtables. Supported by Collaborate and Centre for Public Impact, the workgroups drafted ideas, iterated and blogged about the project. It is the output from this work that we published as the New Operating Models Handbook.

Meaningful Measurement

During the programme participants formed workgroups. The Centre for Public Impact facilitated the Meaningful Measurement Workgroup which paid particular attention to the underlying beliefs, values and principles of their measurement practice, using them to develop a set of shared values and principles which, from their experience, enable measurement for learning. This requires a reconsideration – not just of *why* we are measuring the activity, but *who* determines what we measure, how we measure, and who the measurement is truly for.

Members of the workgroup shared examples of approaches that they had used to practically develop the capabilities and infrastructure that can unlock measurement for learning including:

- Encouraging curiosity using Learning Pods - an internal reflective tool that uses a set of open-ended questions for staff to share learning in a dynamic, adaptive way.
- Regular meetings to reflect on values and principles underpinning the measurement approach.
- Building trust through Life Journey Mapping - a tool for eliciting meaningful conversations that identify opportunities for early interventions.
- Embedding empathy and understanding into social care assessments.
- Being authentic and practising deep listening.

The workgroup concluded that a developmental approach to measurement and evaluation based on experimentation, learning, and adaptation is a key enabler of new operating models in local government. A measurement for learning approach requires local authorities to consciously explore a cultural shift based on a collaborative, systemic, long-term mindset, which will enable a more fundamental change than simply introducing new tools alone.

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