



Llunio Lleoedd
ar gyfer Llesiant yng Nghymru
Shaping Places
for Well-being in Wales

Applied Systems Thinking Approach

Tools and Methods Guide



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This resource is available in Welsh

Contents

Introduction to this guide 4

Rich pictures 5

Pig model 7

Participatory systems mapping 11

Actor mapping 15

Analysing your mapping 17

Points of leverage analysis 19

Three horizons 21

Backcasting 24

Theory of change 26

References 29

Contact details 30

Introduction to this guide

This is a 'how to' guide for a range of systems tools and methods which support the activities described in the Applied Systems Thinking Approach guide. The tools included within this guide are by no means an exhaustive list, but rather an introduction into some of the more commonly used systems thinking tools. The guide will also signpost learners to other quality assured resources.

A core aim of this programme is to apply and integrate your learning into the work of your Public Services Board (PSB). When you use these tools and methods with your PSB and supporting teams, you are likely to need to tailor to your local context, bring in subject experts and engage with other stakeholders including local communities.

These tools and methods may also be useful when considering evaluation and measurement of change in systems.

Applied Systems Thinking Approach Activity

Tools and methods that support activity

Defining the system of interest

Rich pictures

Pig model

Context mapping

Mapping the system

Participatory systems mapping

Exploring the system

Actor mapping

Analysing your mapping

Points of leverage analysis

Describing the desired change

Three horizons

Backcasting

Theory of change

System evaluation

Points of leverage analysis

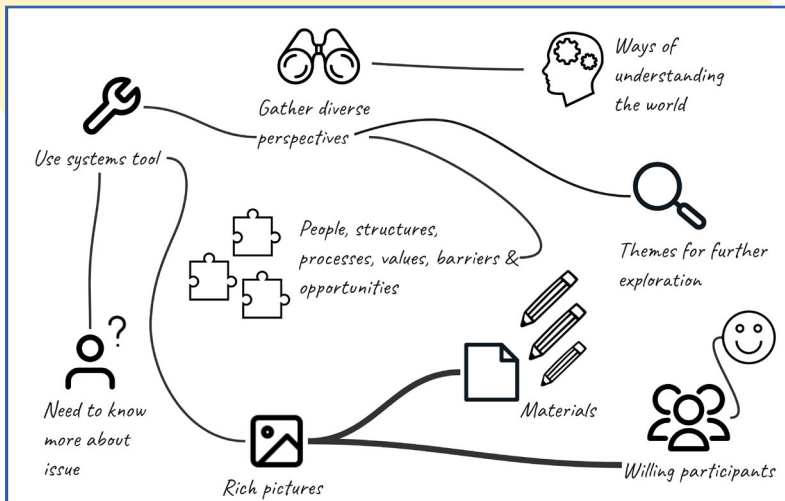


Rich pictures

What is it?

Rich pictures are a visual technique which can help you to understand different perspectives on a theme or an issue within a theme. Rich pictures show things, people, ideas, emotions, conflicts, assumptions and connections. They can be produced by individuals or in small groups and allow you to quickly generate a summary of what is important from different perspectives.

Example of a rich picture

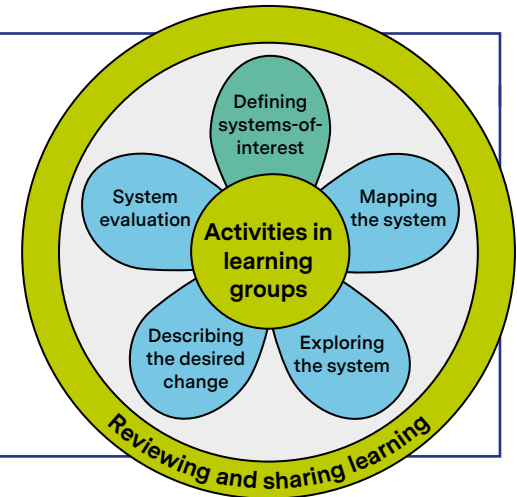


Adapted from: If a picture paints a thousand words: The use of rich pictures in Evaluation (Oakley, 2015)



When to use it

Rich pictures can help you work with others to understand perspectives on a theme or identify issues within a theme. From these, systems-of-interest can be agreed which will form the basis of the work you will undertake in the learning group and with your PSB colleagues.



How to use it

A rich picture exercise can be done online but you might find it easier to do it with pens and a large piece of paper. Rich pictures can be completed in around 20-30 minutes although you may find participants want to add more after they take a break and come back and look at their picture again.

To start with, outline the theme or issue within a theme you want people to draw a rich picture of.

Get people to start drawing, individually or collectively in small groups. There is no right or wrong way to do this and it may or may not include some text.

Allow time for participants to tell their story shown in their rich pictures and for group discussion on the similarities and differences between the rich pictures and if there are any surprises.

Considerations

- ▶ Rich pictures are best produced in person using paper and pens but can be developed online if you have access to drawing software.
- ▶ You can produce a guide with sample pictures to help unlock people's thinking.
- ▶ You need to emphasise that this is not about how good a person can draw and there are no right or wrong answers.
- ▶ Encourage people not to structure their rich picture and to use a minimal amount of text.
- ▶ Encourage people to include other viewpoints such as those who are affected by an issue as well as those who have the power to change an issue.
- ▶ You can ask people to include a representation of themselves in the picture.
- ▶ Rich pictures should not only consider problematic aspects of a situation but also assets and opportunities.

Supporting information



[An introductory systems thinking toolkit for civil servants \(Government Office for Science\)](#)

[If a picture paints a thousand words: The use of rich pictures in evaluation \(Pragmatica Ltd\)](#)

[Systems Mapping: How to build and use causal models of systems – chapter 2 \(Barbrook-Johnson & Penn\)](#)



Free Software for producing rich picture diagrams:
[Insight maker](#)

Links to 5 ways of working

Involvement



A rich picture is an immersive activity and can surface people's assumptions, beliefs and mental models of the world. Rich pictures can help people to come together to develop a common understanding and to take a more compassionate view when people hold different perspectives.

Collaboration



If a rich picture is developed collectively this can provide the start of collaborative efforts.

Pig model

What is it?

A pig model is a diagramming technique which supports you to think systemically by considering the perspectives of stakeholders affecting and affected by a theme or an issue within a theme.



How to use it

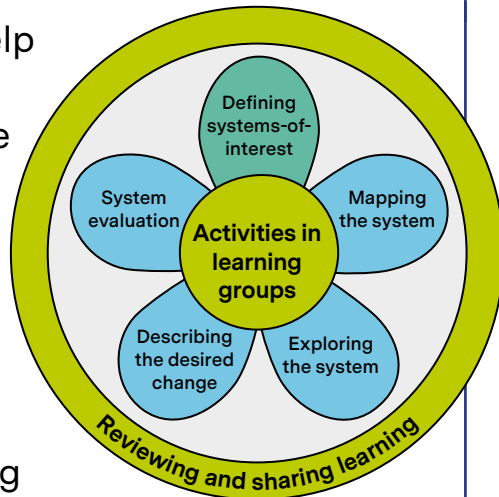
When undertaking this exercise in your learning group or with your PSB, use a large piece of paper and different coloured pens to highlight different stakeholders. This exercise could also be undertaken virtually using online collaboration software. Use the pig model template to create your own diagram.

If you have representatives from different stakeholders in your group, ask them for their perspective on a theme or issue within a theme. If the stakeholder is not directly represented and you are using insights from your learning group or PSB highlight this on your pig model. You may want to validate these insights by seeking additional information.

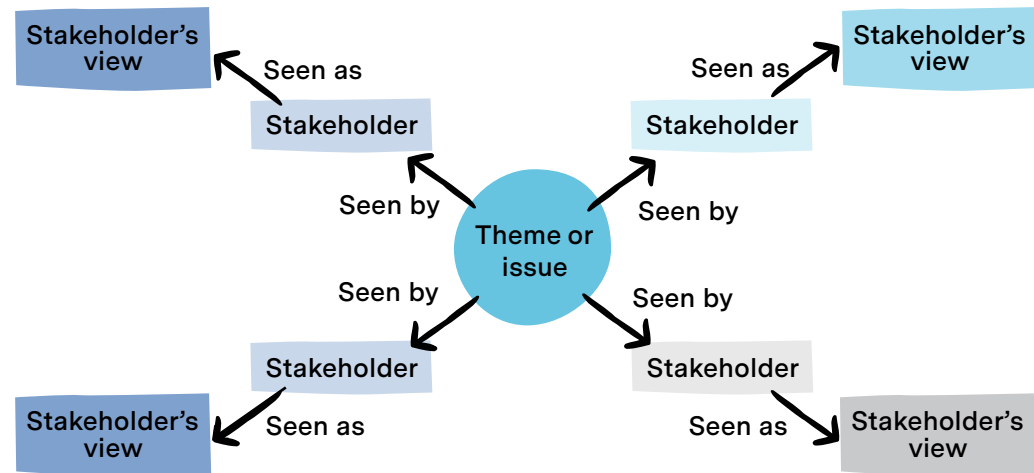


When to use it

Pig models can help you and your PSB consider the range of stakeholders and their different perspectives about a theme or an issue within a theme. This can help in determining the boundaries for your system-of-interest and who needs to be included when you undertake participatory systems mapping.



Pig model template



Adapted from: An Introductory systems thinking toolkit for civil servants (Government Office for Science)

Considerations

- ▶ The activity can be undertaken in 10-15 minutes to give you a quick overview of the stakeholders relevant to a theme or issue within a theme.
- ▶ Consider a range of people and organisations who have stakes in the theme or issue.

Those affecting the theme / issue		Those affected by the theme / issue
Owners	Actors	
People or organisations that enable or prevent change	Those who might be carrying out the tasks and activities to improve the situation of concern	These could be specific populations, community groups or organisations

Adapted from: An Introductory systems thinking toolkit for civil servants

The pig model can help you think about where to set the boundary for your system-of-interest and which stakeholders you want to include.

Once you have agreed your system-of-interest and the stakeholders who need to be involved, you might want to gain additional insights on stakeholders' perspectives by undertaking a rich picturing exercise.

Supporting information



[An introductory systems thinking toolkit for civil servants \(Government Office for Science\)](#)

Links to 5 ways of working

Involvement



A pig model helps you get a better understanding of your stakeholders' views. It provides a framework for understanding multiple perspectives and needs involvement from stakeholders.

Collaboration



If a pig model is developed collectively this can provide the start of collaborative efforts.

Context mapping

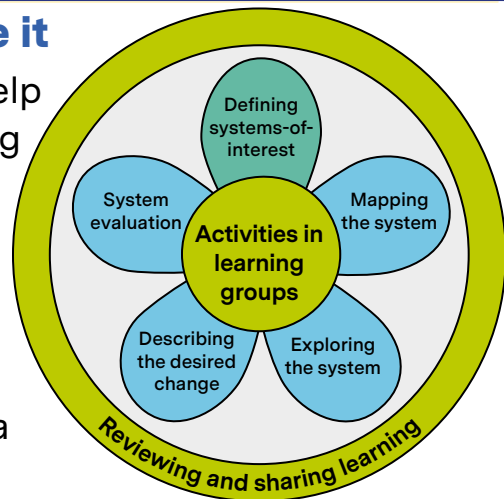
What is it?

Context mapping is a tool which helps you to consider the boundaries for your system-of-interest and what is under the control or influence of the stakeholders you have brought together to make improvements to a theme or issue within a theme. Collaboration is important here, as defining what different people believe is inside and outside of the focus of the work will help to uncover new insights about the situation. It builds understanding of what can be controlled or influenced and what constrains your options or actions.



When to use it

Context mapping can help you and your PSB making decisions around the boundaries for your system-of-interest by considering spheres of influence in relation to a theme or issue within a theme.



How to use it

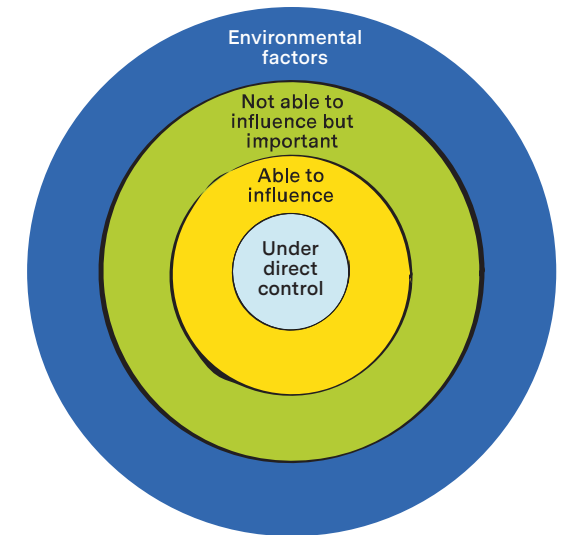
Ask participants to introduce the organisation or interest they represent and then describe the theme or issue within a theme you want stakeholders to focus on – add a descriptor at the top of the diagram.

Ask participants to consider factors which are under direct control first and then move to the next outer layer and finishing on environmental factors.

Once you have completed the mapping activity ask participants to review the map asking the following questions:

- ▶ Do you agree with where the factors have been placed? If not, why not?
- ▶ Is there anything that surprises you on the map?
- ▶ What do you think this means for determining the boundaries for your system-of-interest?

Context mapping diagram



Adapted from: An Introductory systems thinking toolkit for civil servants (Government Office for Science)

Considerations

- ▶ Think about the stakeholders you want to involve in the context mapping activity, are they those who can affect change (decision and change makers) or are affected by the theme or issue within the theme or both.
- ▶ Allow 20-30 minutes to undertake the core activity and then sufficient time to reflect on what the mapping tells the group.
- ▶ Activity is best undertaken in person but can also be undertaken online using collaborative software such as MIRO. If doing this online consider how you ensure the voices of those who are less familiar with using online tools are heard.

Supporting information



[An introductory systems thinking toolkit for civil servants \(Government Office for Science\)](#)

Links to 5 ways of working

Involvement



Context mapping is a tool that can help stakeholders consider their level of influence on a situation.

Collaboration



Context mapping allows users to explore the levels of influence of different stakeholders and set boundaries around a system-of-interest.

Participatory systems mapping

What is it?

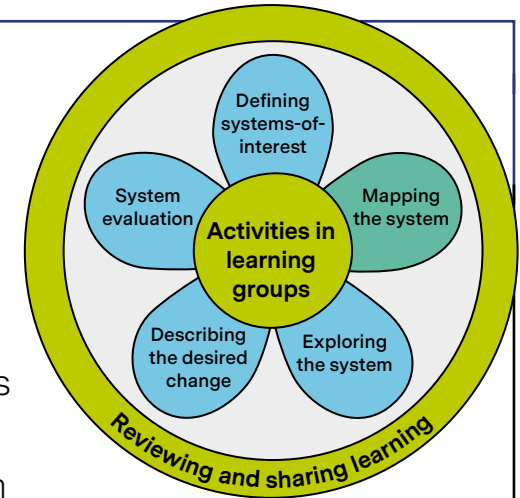
Participatory systems mapping is a diagramming technique to show the factors and relationships between factors in a system-of-interest. It is generated by stakeholders with knowledge of the system-of-interest. The systems mapping process helps shift the way we look at complex issues and can prompt us to ensure a diverse group of actors are intentionally connected and aligned to maximise efforts to improve a situation.



When to use it

Systems mapping can help you to work with others to:

- ▶ Consider the purpose of a system
- ▶ Identify what are the important factors in a system
- ▶ Look at relationships between factors in a system
- ▶ Help them see their role in the system and in changing the system
- ▶ Look at the intended and unintended consequences of changing factors in the system
- ▶ Consider subsystems
- ▶ Identify areas of focus for change

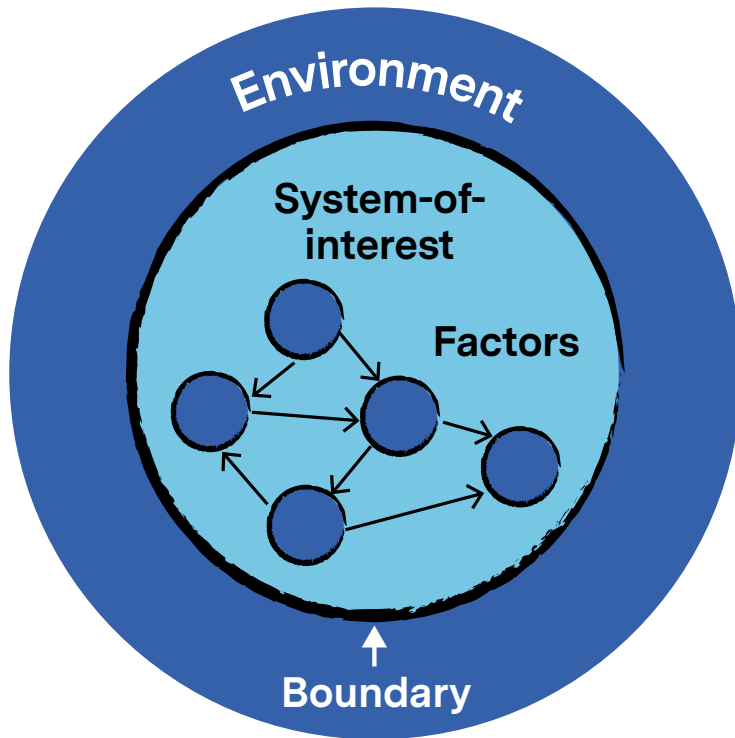




How to use it

The first part of any systems mapping exercise is to determine the boundaries for your system-of-interest. Essentially boundaries determine what is in your system to be mapped and what is left out (i.e. the wider environment).

It will be important to agree boundaries for your system-of-interest before you begin any mapping activity.



Start the mapping activity by asking participants to identify factors in the system-of-interest.

Features of factors		
Variables – they can go up or down	Can be functions, processes or outcomes	Labels for factors need to be short

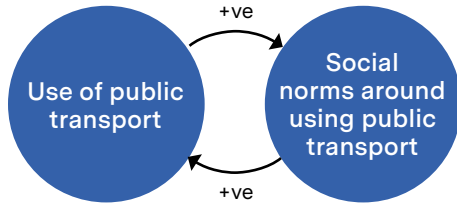
You can suggest some headings for factors but do not be too specific as this can constrain thinking.

Once the list of factors has been produced and agreed by the group you are working with to develop the map, you can then ask the group to start connecting the factors they think influence each other or are casually linked. You do not have to start with the outcome

Once you have a draft map you can ask participants to add direction to the relationships between factors (either positive or negative). Positive is where causally linked factors move in the same direction whereas a negative relationship is where one factor moves in one direction but the other factor moves in the opposite direction. If the group are uncertain of the direction of the relationship you can use a question mark (?).

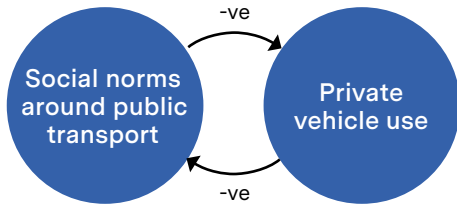
Simplified example of connecting factors on a systems map

Positive relationship



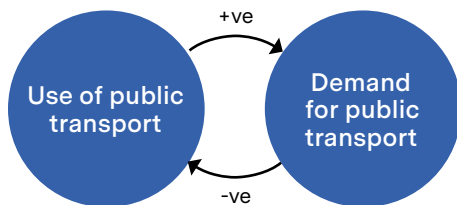
As use of public transport increases, social norms around using public transport are strengthened which in turn leads to more people using public transport.

Negative relationship



As social norms around using public transport increases, private vehicle use decreases which in turn strengthens social norms.

Negative and positive relationships



As the use of public transport increases the demand for more services increases. Without intervention (i.e. increasing the numbers of trains, buses and supporting infrastructure) the use of public transport will decrease as existing services become overcrowded and of poorer quality.

Considerations

- ▶ Choose your stakeholders carefully to reflect diverse perspectives on the theme or issue within the theme.
- ▶ Systems maps can become unwieldy if you identify and map too many factors. You are looking to create a map which allows for actionable complexity.
- ▶ You can limit the number of factors that are important to the system-of-interest depending on the purpose of the map.
- ▶ A systems map is a learning device and does not seek to be exhaustive but reflects the understanding of what is important to the stakeholders you bring together.
- ▶ Your systems map is generated at a point in time but as you work with your learning group and your PSB colleagues you may want to change it. Systems maps are best considered as live diagrams – after all a system is dynamic and will change over time.
- ▶ Systems maps are best created with an in-person workshop using paper, post-it notes and pens.
- ▶ Maps can be organised in ways which are meaningful to the people you are working with. Free mapping software is available if you want to use colour and highlight sub-systems in your map.

- ▶ If you are using your map with people outside those who created the map, consider the story you are trying to tell and what you want people to do after looking at the map.
- ▶ You may want to consider the strength of relationship between factors in the map and or those factors which are most likely to have an impact on the outcomes you are trying to change. It is at this stage that you may want to consider research evidence or additional data in addition to stakeholders' perceptions.

Supporting information



[An introductory systems thinking toolkit for civil servants \(Government Office for Science\)](#)

[Systems Mapping: How to build and use causal models of systems – chapter 5 \(Barbrook-Johnson & Penn\)](#)



Free mapping software:

[Kumu](#)

[yEd Live](#)

[Participatory Systems Mapper](#)

Links to 5 ways of working

Integration



Systems maps are a helpful way of visualising how different parts of your system-of-interest might interact.

Collaboration



Through the process of systems mapping stakeholders can consider a system-of-interest from several perspectives.

Actor mapping

What is it?

Understanding your system-of-interest can be achieved through identification and analysis of key actors, relationships, interactions and influence among the parts of the system.

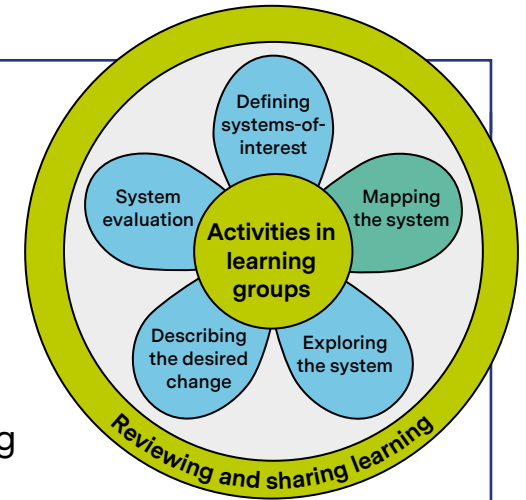
Actor mapping can help visually show the key organisations or individuals that make up a system, including how influential they are and how information flows (or not) through a system. From this you can determine where there are gaps or blockages within the system-of-interest, where there is energy and where there are opportunities to build new relationships.

Actor mapping aims to identify the factors or components that have a significant impact on the behaviour, outcomes, or dynamics of the overall system. Actor mapping analysis is integral to systems thinking because it helps to uncover the relationships and interactions that drive the functioning of the system.



When to use it

Actor mapping takes place after you have mapped your system-of-interest and when you want to gain a deeper understanding of the relationships within a complex system for informing decision-making.



How to use it

Carrying out actor mapping involves a systematic process of examining and understanding the relationships and interactions within a system.

Once you have your systems map you can start to identify the key elements or components within the system – these can be any entities relevant to the system including people, organisations and policies. You consider their roles, functions, and importance, and start to map the relationship and interactions.

To begin, gather relevant data and information about the relevant actors and roles within your system-of-interest and then map the relationships and interactions in your map. This can be done through desktop research examining

existing research and strategic documents (including organisational charts). Think about:

- ▶ Who core stakeholders might interact with frequently?
- ▶ Which organisations provide support?
- ▶ What other groups, boards or partnerships exist that influence decisions?
- ▶ Who funds relevant people or organisations?
- ▶ Where policy is set?

Once you have a list of the most influential actors, you can populate the list onto an actor map. It would then be valuable to bring stakeholders together to explore the relationships between actors on the map. This step is vital as you start to uncover the factors or elements in your system that play central role in influencing the overall system. With participants you might want to explore:

- ▶ How engaged each actor is with the system-of-interest
- ▶ The strength of relationship between your organisation/ partnership and the other actors on the map
- ▶ Connections between actors

From here, you can consider where there is momentum for change, what the leverage points might be and where there might be blockages.

Considerations

- ▶ This is likely to be an iterative process. You may wish to revisit and refine the analysis as the system evolves, as time passes, new data becomes available or if the objectives of the analysis change.

Supporting information



[Guide to actor mapping \(FSG\)](#)

Links to 5 ways of working

Collaboration



Actor mapping is a way to look at who is influential within the system and increase collaboration with diverse participants.

Involvement



Actor mapping is a process that is best undertaken with stakeholders.

Analysing your mapping

What is it?

To maximise the contribution your learning group or PSB can make, participants should be brought back together to systematically explore the maps and discuss what insights the maps give us from a range of perspectives.

There is not one tool to help you undertake this, but we have listed a series of questions you might want to explore at a further workshop with participants.



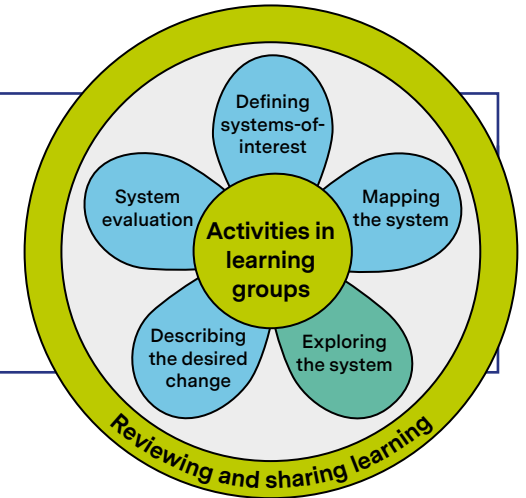
When to use it

Once you have your system and actor maps, it is important to pause and reflect with others on what the maps are illustrating.



How to use it

Key components of systems map analysis include:



Identifying and interrogating feedback loops

An important part of interrogating your systems map is to look at feedback loops. Feedback loops look at circular causality between factors in a system. Feedback loops can be balancing or reinforcing. A balancing loop is where a loop tends to restore a factor to its original value by dampening the original increase or decrease. A reinforcing loop is where a loop of cause and effect acts to reinforce any change in one of its factors. Reinforcing loops can be virtuous or vicious depending on whether the change is desirable or undesirable.

Asset mapping and gap analysis

Another way of analysing your map is to systematically work through your systems map, in collaboration with others, to understand where there are assets in your system-of-interest and where there are gaps. Assets and gaps might refer to policies, technologies, processes, skills, resources, roles, relationships, or structures.

Where might there be gaps in knowledge, research, evidence, or practice? Why might that be? It is important not to stifle innovation due to a lack of an evidence base but at the same time ensuring we are learning from previous experiences and working effectively. Any new intervention should be implemented on a 'test and learn' basis.

Interventions and outcomes analysis

You could also think about what kind of interventions are common within your system-of-interest, which work well and why? What can you learn about those that have not worked well? Have there been any unintended consequences of previous interventions?

Where on the map are interventions most likely to happen? Are efforts by multiple agencies being duplicated? How could these be aligned? Where are there gaps?

It might also be interesting to consider why there are so many interventions focussed on one part of the map. For example, is there strong evidence for an intervention at this point? How and where is power held and exercised in this part of the system?

It may be useful to overlay actor mapping over your systems map to consider where you can have influence in the system-of-interest, where there is existing momentum, where there are gaps and where you may be duplicating efforts.

Considerations

- ▶ There is no limit to the questions you can ask of your systems map, and so it might be worth spending some time in a working group considering what type of analysis would be most pertinent for your learning group or PSB and planning questions accordingly.

Supporting information



[Causal Loop Diagrams: A Short Handbook \(Cascade Institute\)](#)

Links to 5 ways of working

Collaboration



This activity works best with a range of perspectives from diverse participants.

Points of leverage analysis

What is it?

Leverage points are places within a complex system (an organisation, an economy, a city, an ecosystem) where a small shift in part of the system can produce big changes in other parts of the system. Points of leverage analysis can help you understand how to achieve the greatest amount of change in your situation of concern, due to the dynamics and relationships within the system-of-interest. Leverage points can also represent opportunities where participants can have greater impact by working together.

There are several frameworks that can be used for undertaking a points of leverage analysis.

One of these frameworks is the The Action Scales Model¹. This is a tool to help you work within complex adaptive systems to address an issue of concern and identify parts of the system where you or the PSB as a partnership can have influences through your expertise, resources or

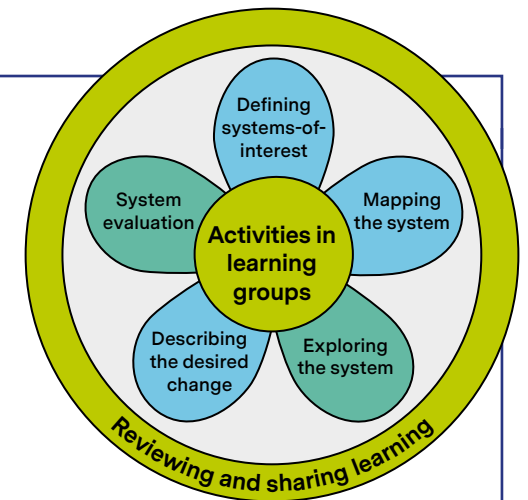
network. The Action Scales Model can help users think about where to intervene within a system to maximise the likelihood for greatest leverage. Furthermore, it can help evaluators conceptualise, identify and appraise actions within such a system.

Other frameworks include the 'Donella Meadows', '12 places to intervene in a system'² and the Iceberg Model³.



When to use it

Points of leverage analysis typically takes place once your goal for system change has been confirmed and your system-of-interest has been mapped. This type of analysis can also be used for evaluating change in a complex system.





How to use it

When analysing a map stakeholders should also be asked to reflect on what is surprising or interesting in the map, and what questions to explore in further analysis.

Identifying promising leverage points in your system works best if you have a good understanding of the different parts of your system and the relationships between them, using the tools described in this guide. These leverage points can be used as foundations for interventions or action.

Once leverage points have been identified, there is often a need to prioritise and identify where there will be maximum impact, or greatest leverage within the system. Changing beliefs, mindsets or paradigms offers the greatest leverage within a system but are harder to achieve.

It may be useful to consider involving wider stakeholders in this process, whose perspectives on the forces within the system may differ to yours and will allow you to gain a more holistic understanding.

Considerations

- ▶ Sometimes, the points that provide the most leverage are counterintuitive.
- ▶ If involving wider stakeholders consider when the best time for this is - at the start for a brainstorm or towards the end to review and comment on your work. This can be through workshops, surveys or interviews.

Supporting information



[An introductory systems thinking toolkit for civil servants \(Government Office for Science\)](#)

[Iceberg Systems Thinking Model \(NPC\)](#)

[The Action Scales Model: A conceptual tool to identify key points for action within complex adaptive systems \(ucl.ac.uk\)](#)

[Thinking in Systems A Primer – chapter 6 \(Meadows\)](#)

Links to 5 ways of working

Integration



This method ensures that the full range of consequences of an action are considered so that activity in one area of work can be shaped to complement, rather than undermines, the activities in others.

Collaboration



It is good to get a range of perspectives for this activity.

Three horizons

What is it?

Three horizons is a framework to help you think and plan for the longer term rather than being focused on the present where you might miss opportunities or make decisions that do not stand the test of time.

The model is particularly powerful when used in a workshop setting because it can draw together different knowledge and perspectives to build a shared vision of the future you want to work towards and the steps that are needed to get there. It can also help you to see the role that all three horizons can play in bringing about change. While the model is very visual and can be an excellent way to summarise an issue or illustrate a point, the process is often more important than the product.

The model can be applied to any issue to help think about:

- ▶ The need for the current situation to change (Horizon 1)
- ▶ A vision for the future (Horizon 3)
- ▶ Ideas for how to get there from where we are now (Horizon 2)

It can also be used to think about how things may change over time:

- ▶ Horizon 1: right now, current trends and issues
- ▶ Horizon 2: emerging trends
- ▶ Horizon 3: trends that might dominate the future, competing visions

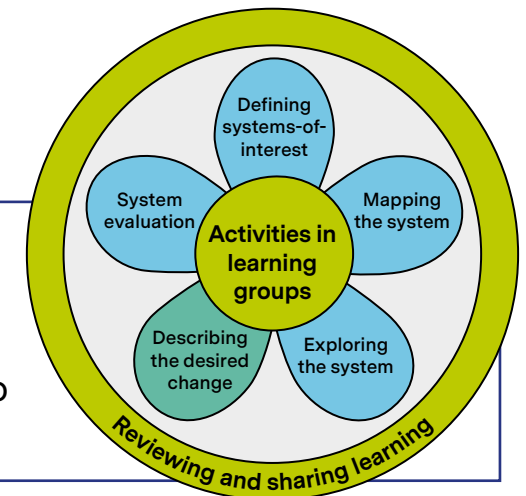
Or consider the different perspectives of stakeholders in any change processes:

- ▶ Horizon 1: the 'Power Holder'
- ▶ Horizon 2: the 'Innovator'
- ▶ Horizon 3: the 'Visionary'



When to use it

Once you have explored your system-of-interest and identified areas for change, the three horizons model can help you to consider a vision for the future.

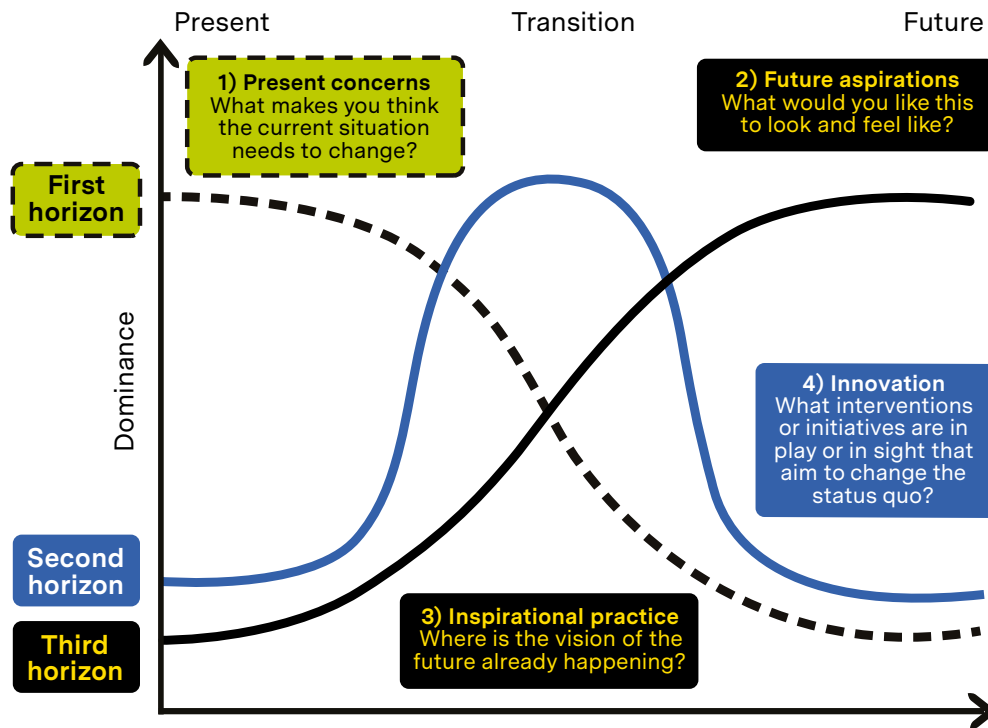




How to use it

The model can be used in several different ways, with varying level of detail.

A three horizons workshop can be held by asking the four questions in the image below:



Adapted from: Three horizons toolkit: A toolkit to help you think and plan for the long-term (Public Health Wales and the Office of the Future Generations Commissioner for Wales) and The Future is Ours toolkit (Save the Children Funda and School of International Studies)

This type of workshop can be done in as little as 30 minutes (5 minutes for each question and 10 for feedback). This will give you something very high-level but it will still be informative for you and engaging for your audience.

If you want something more detailed, you can leave groups to discuss each question for longer and/or provide evidence and materials to inform their discussions.

You could also use the model to ask additional questions:

- ▶ What elements of Horizon 1 should we keep in the future?
- ▶ Is the innovation the future or a shorter term trend or fix?
- ▶ What trends may influence Horizon 2 and 3 that could take our plan for change off-course?

Considerations

- ▶ All three horizons are present right now
- ▶ There are no right or wrong answers
- ▶ The process is more important than the product
- ▶ Use examples people can relate to
- ▶ It can be done on your own but the model is most effective when used by a group

Supporting information



[Beyond the present resource \(Public Health Wales and the Office of the Future Generations Commissioner for Wales\)](#)

[Futures toolkit for policymakers and analysts \(Government Office for Science\)](#)

[The Future is Ours toolkit \(Save the Children Fund and School of International Futures\)](#)

[Three horizons toolkit \(Public Health Wales and the Office of the Future Generations Commissioner for Wales\)](#)

Links to 5 ways of working

This tool can help you with long-term thinking and planning, involvement and collaboration.

Collaboration

This is an activity best done as a group.



Long-term

This activity can help look at what needs to be done now in order to achieve a shared vision.



Involvement

Including diverse voices and opinions is important to build a shared vision.



Backcasting

What is it?

Backcasting is an effective method for determining the steps that need to be taken to deliver a preferred future. It is good for:

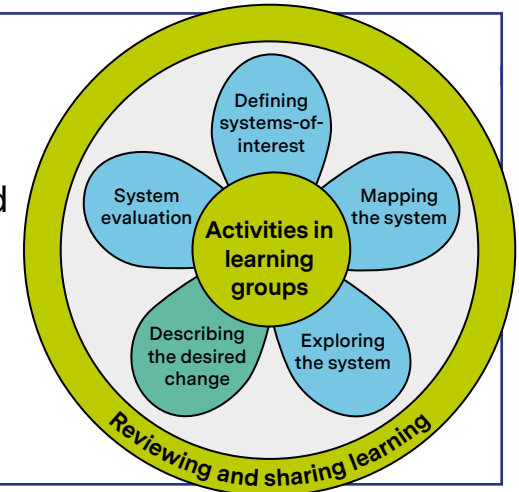
- ▶ Building shared purpose
- ▶ Identifying what is in the PSB or PSB partnerships control and what is not
- ▶ Determining who outside the PSB or PSB partnerships needs to be involved in making the future happen
- ▶ Creating a realistic picture of the scale of the task ahead

This method might be used following a three horizons exercise, when you have a preferred future.



When to use it

Backcasting is typically used when developing and testing strategy and/or policy and when you want to understand the conditions or events that can help a particular future to emerge. Use this method with a set of scenarios to understand options and prepare for a set of alternative feasible futures.



How to use it

Backcasting has six broad steps and takes over 2+ hours depending on the size of group and complexity of the issue.

- ▶ **Step 1:** Introduce participants to the Backcasting tool
- ▶ **Step 2:** Introduce the vision for a preferred future
- ▶ **Step 3:** Explore the key differences between today and the preferred future
- ▶ **Step 4:** Develop a timeline that outlines the key changes or activities which are needed to move from the current reality to the preferred future
- ▶ **Step 5:** Consider which changes or activities are within your sphere of control or influence and those which are outside of your direct influence (link to context mapping activity)
- ▶ **Step 6:** Agree next steps

Considerations

- ▶ An important aspect of this method is to identify and consider what lies within the control of the policy and change makers – and can therefore be delivered – and what lies outside their control and therefore needs to be managed.

Supporting information



[Beyond the present resource \(Public Health Wales and the Office of the Future Generations Commissioner for Wales\)](#)

[Futures toolkit for policymakers and analysts \(Government Office for Science\)](#)

[The Future is Ours toolkit \(Save the Children Fund and School of International Futures\)](#)

Links to 5 ways of working

Collaboration



This is another tool that can help build relationships and trust with participants.

Long-term



Backcasting ensures long-term thinking is built into strategic decision making.

Involvement



It is important that change makers and those affected by the change are involved in the process of identifying realistic steps to a preferred future.

Theory of change

What is it?

Theory of change (ToC) is an approach to mapping the causal logic between interventions (e.g. policies, strategies, programmes or projects), their impacts, and the assumptions they rely upon.

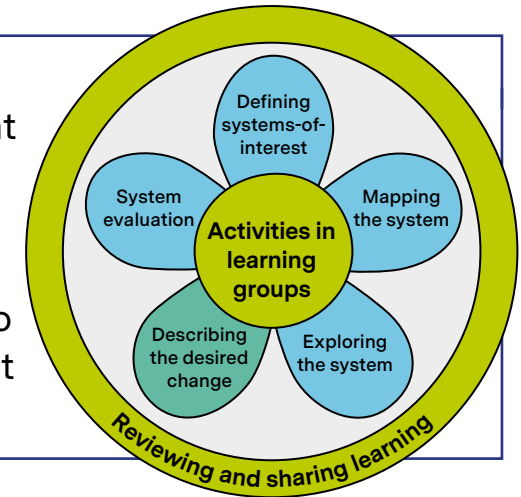
ToC diagrams come in many different forms, from simple flow diagram-type images, with maybe only a handful of boxes and one or two connections, through to large and complex diagrams with many boxes, connections, feedback loops and detailed legends.

What all ToC diagrams have in common is that they are attempting to map out the connections and pathways between an intervention and its outcomes. They all use some form of causal logic to describe what and how impacts might be created by an intervention.



When to use it

Once you have mapped where the current activity is happening in your system-of-interest and determined points of leverage for further activity, this is where you might develop a ToC with your PSB to test their theories and assumptions about how change might happen.

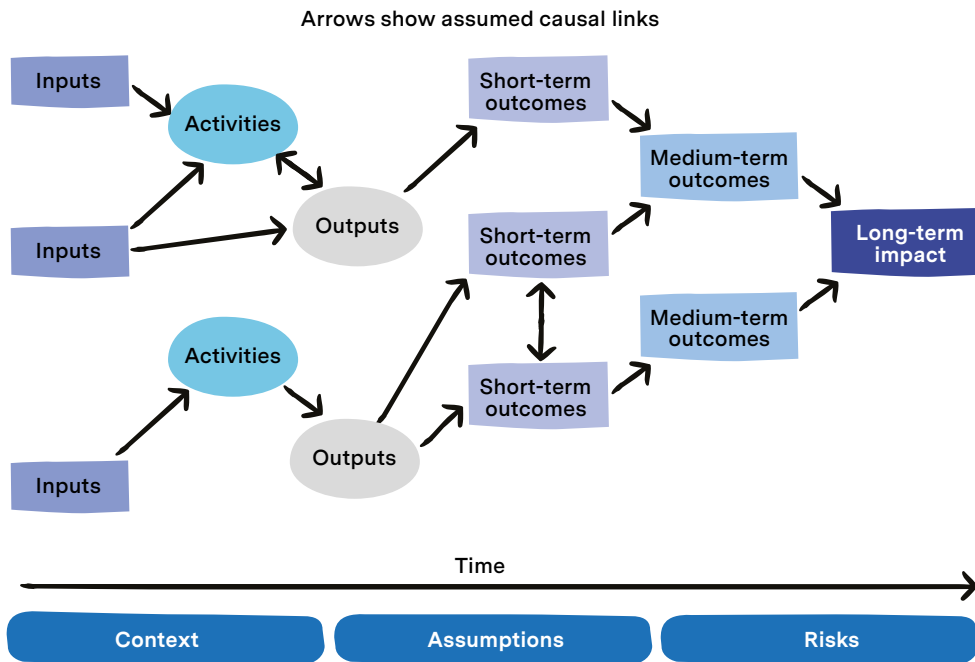


How to use it

Once of you have decided on the type of theory of change you require, select an appropriate template. There are many examples shown in the support resources. As a minimum your theory of change should include:

- ▶ **Inputs:** the resources (broadly defined) used or required.
- ▶ **Activities:** the actions, events, and undertakings of the intervention.
- ▶ **Outputs:** the immediate tangible products of the intervention. These tend to be easy to define and identify, akin to something like deliverables from a project.
- ▶ **Outcomes:** the potential short and medium-term effects of an intervention. These might be more difficult to measure and will be less tangible than an output.
- ▶ **Impacts:** the long-term effects of an intervention and/or the long-term changes it contributes to.

Example of a theory of change template



Adapted from: 'The Theory of Change Process – Guidance for Outcome Delivery Plans' from the UK Government Analysis Function

You can either start with your desired impact and work backwards or with start with your inputs and work forwards towards your outcomes and impacts.

Once you have agreed your ToC, a next step might be to start thinking about your outcome indicators, for your short-, medium- and long-term outcomes. An example is shown below:

Short-term	
Outcome	Indicators
People have used website X to understand the impact of their carbon footprint	By X [date], X% of people using website X % of people expressing intentions to change their travel behaviour
Medium-term	
Outcome	Indicators
People have reduced their use of internal combustion engine cars	% of people using active transport to travel to work % of people using electric vehicles

Considerations

- ▶ Depending on the purpose of your ToC, consider the level of detail needed.
- ▶ Co-producing a ToC with a range of stakeholders is important.
- ▶ You may wish to include assumptions you are making in your causal logic between the activities and outcomes and impacts, this will aid learning and evaluation It can also be helpful to add risks.

- ▶ There is no right or wrong in how to present a ToC but they tend to be linear due to the time aspect, which is often a key part of a ToC.
- ▶ It is possible to add feedback loops (e.g. the delivery of certain outputs might lead to additional resources or investment in a programme).

Supporting information



[Systems Mapping: How to build and use causal models of systems – chapter 3 \(Barbrook-Johnson & Penn\)](#)

[The Theory of Change Process – Guidance for Outcome Delivery Plans \(Government Analysis Function\)](#)

[Theory of Change Basics \(ActKnowledge\)](#)

Links to 5 ways of working

Collaboration



It is important to co-produce with stakeholders to ensure collective ownership.

Long-term



ToC can help you plan the short- and medium-term steps needed to achieve your longer term outcome.

References

- 1 Nobles JD, Radley D, Mytton OT. The Action Scales Model: A conceptual tool to identify key points for action within complex adaptive systems. *Perspect Public Health*. 2022 Nov;142(6):328-337. doi: 10.1177/17579139211006747. Epub 2021 May 15. PMID: 33998333; PMCID: PMC9720704.
- 2 Meadows, DH. *Thinking in Systems – A Primer*. 2009. London, Earthscan.
Available at: [Meadows-2008.-Thinking-in-Systems.pdf \(fit.edu\)](#) Accessed 26 July 2024.
- 3 NPC. The Iceberg Model. Available at: [The Iceberg Model - NPC \(thinknpc.org\)](#). Accessed 26 July 2024



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