

Your guide to impact and theory of change



Version 01



Who is this for?

This is a guide for those working in the life sciences

Industry, charities, funders, higher education and other research bodies, or healthcare providers and commissioners. Basically anyone who is developing or designing an intervention (project, programme, policy, strategy). You may be a researcher, healthcare practitioner or commissioner, project or programme manager or lead.

LifeArc worked with Walcott Communications to develop a theory of change to help purposefully plan for and monitor the impact of complex programmes in key thematic areas.

Use this guide to help you get started on yours. If you want more detail, the government's Magenta Book is a great resource.

“ A theory of change is essentially a comprehensive description and illustration of how and why a desired change is expected to happen in a particular context¹.”

[Magenta Book >](#)

LifeArc's long-term goal is to improve the quality of life and outcomes for patients by transforming the way diseases are identified and treated.



¹Source: www.theoryofchange.org/what-is-theory-of-change

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06 Monitoring and evaluation

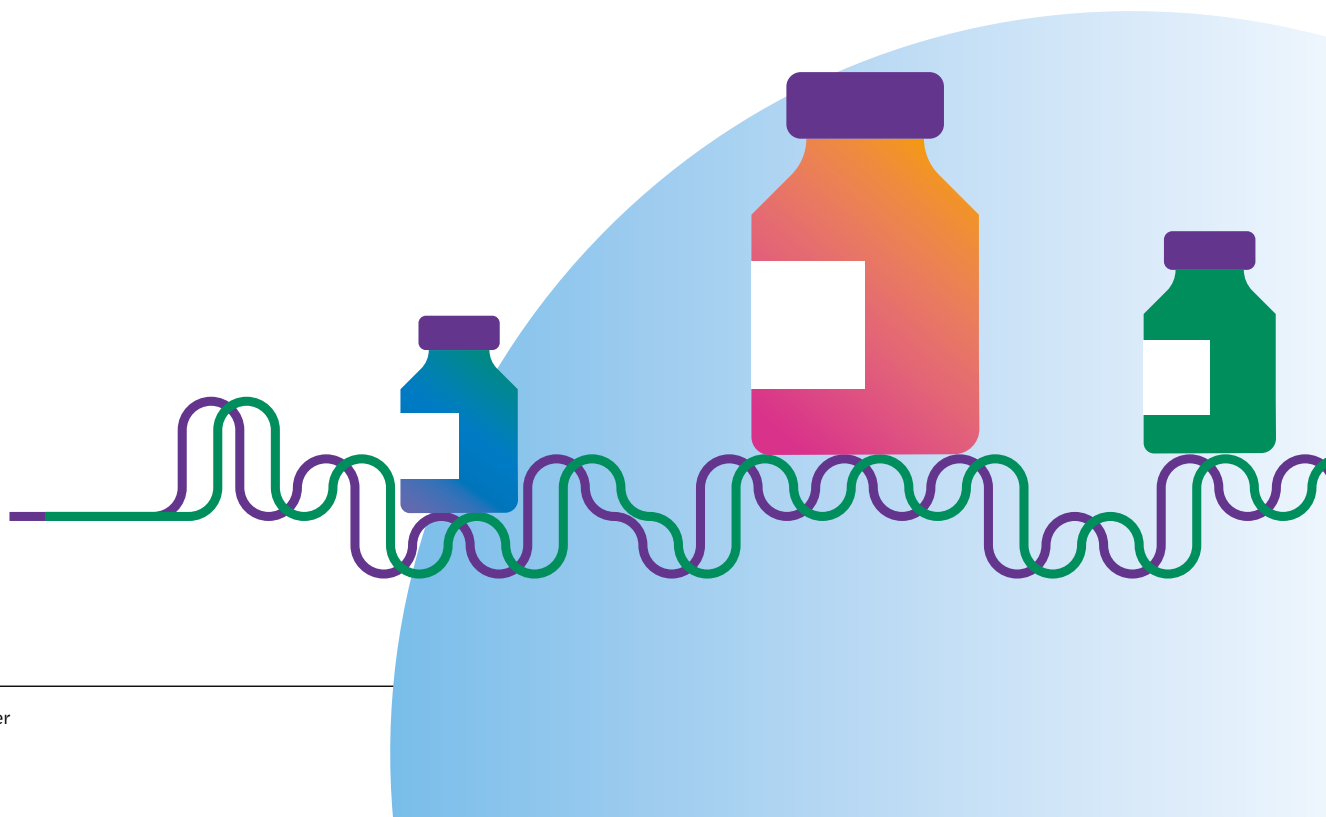
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01 Defining impact

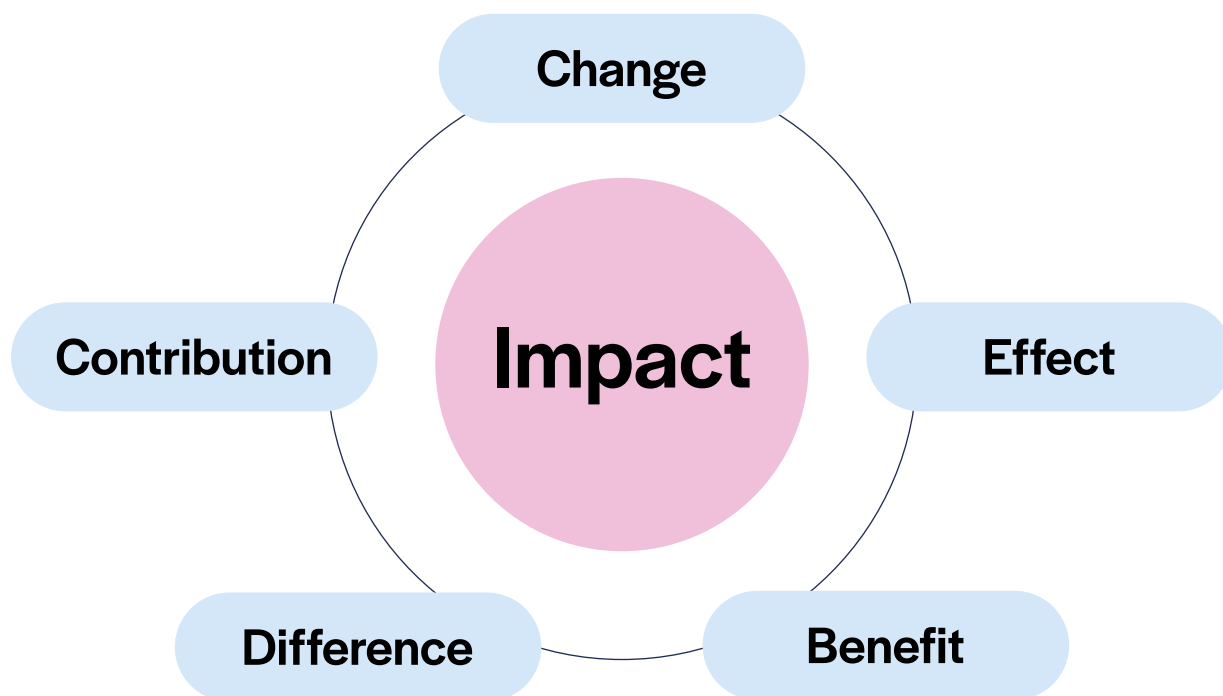
A general introduction to impact
and impact types



What is impact?

There are several working definitions of both **impact** and **research impact**

Most definitions include the following terms:

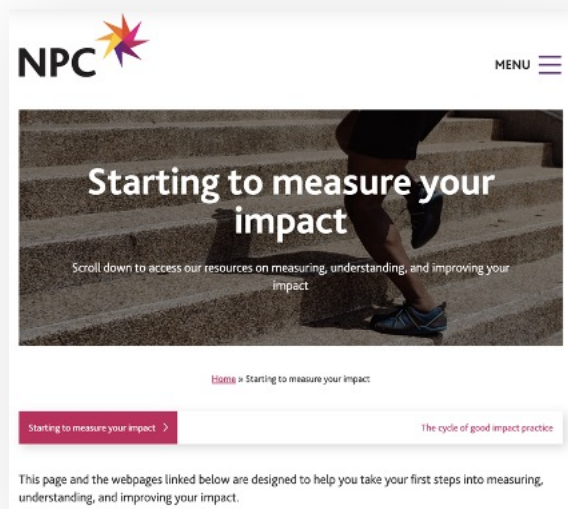


What is impact?



“ [Research] Impact is the demonstrable **contribution** that research makes to society and the economy, of benefit to individuals, organisations and nations.”

NIHR National Institute of Health Research
School for Public Health Research, Strategy for Impact

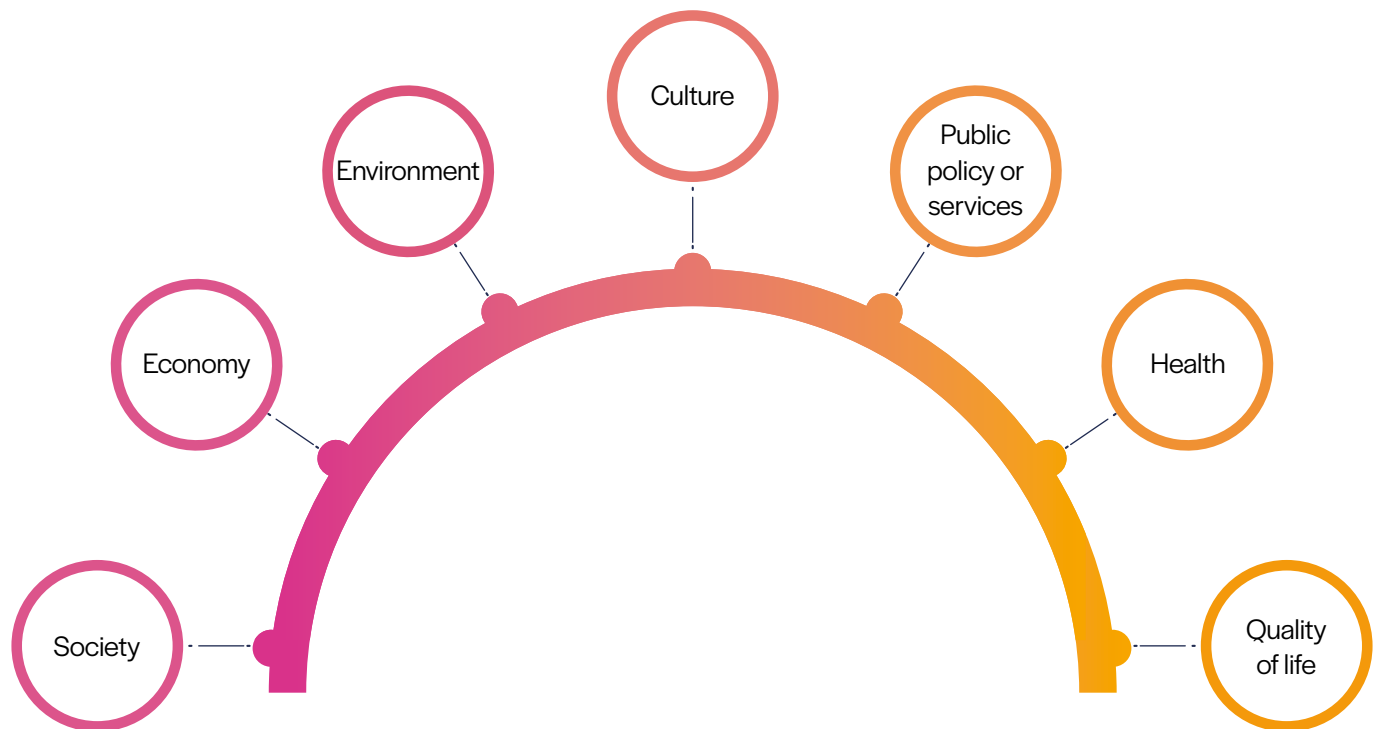


“ Impact practice is what an organisation does to plan, understand, communicate, and improve the **difference** it makes in the world.”

NPC New Philanthropy Capital

More specifically...

Impact describes an effect on, change, or benefit to...



Different types of impact

“Impact” may refer to changes and benefits in the following areas:

Understanding and debate



Advances in understanding, or methods and applications, across and within disciplines.



Cultural



Contribution to understanding of ideas and reality, values and beliefs.



Commercial and economic



Micro and macro-level contributions to costs and revenues, and returns, through growth and productivity.

Health and wellbeing



Contribution to public health, improving life expectancy, prevention of illnesses and quality of life.



Technological



Contribution to the creation of product, process and service innovations.



Environmental



Contribution to the management of the environment, for example, natural resources, environmental pollution, climate and meteorology.

Professional practice



Contribution to improved services, experience of, productivity, and/or training in professional practice.



Policy and law



Contribution to how policy makers act, how policies are constructed, and to political stability.



Educational



Contribution to curricula, teaching tools/methods, qualifications.

Social



Contribution to community welfare, quality of life, behaviour, practices and activities of people and groups.

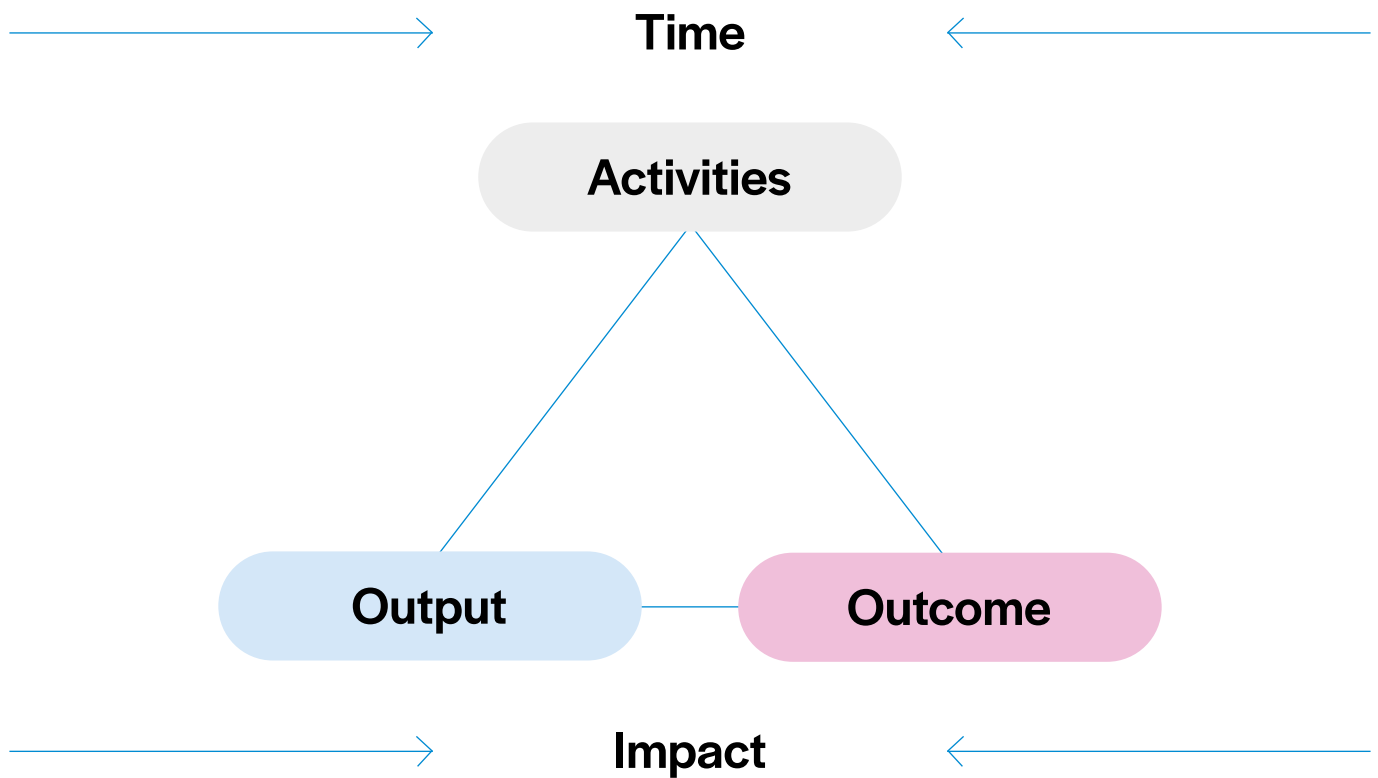
Output, outcome, impact

Impact is achieved over time and is the final change in a series of events that starts with the production of an **output**...

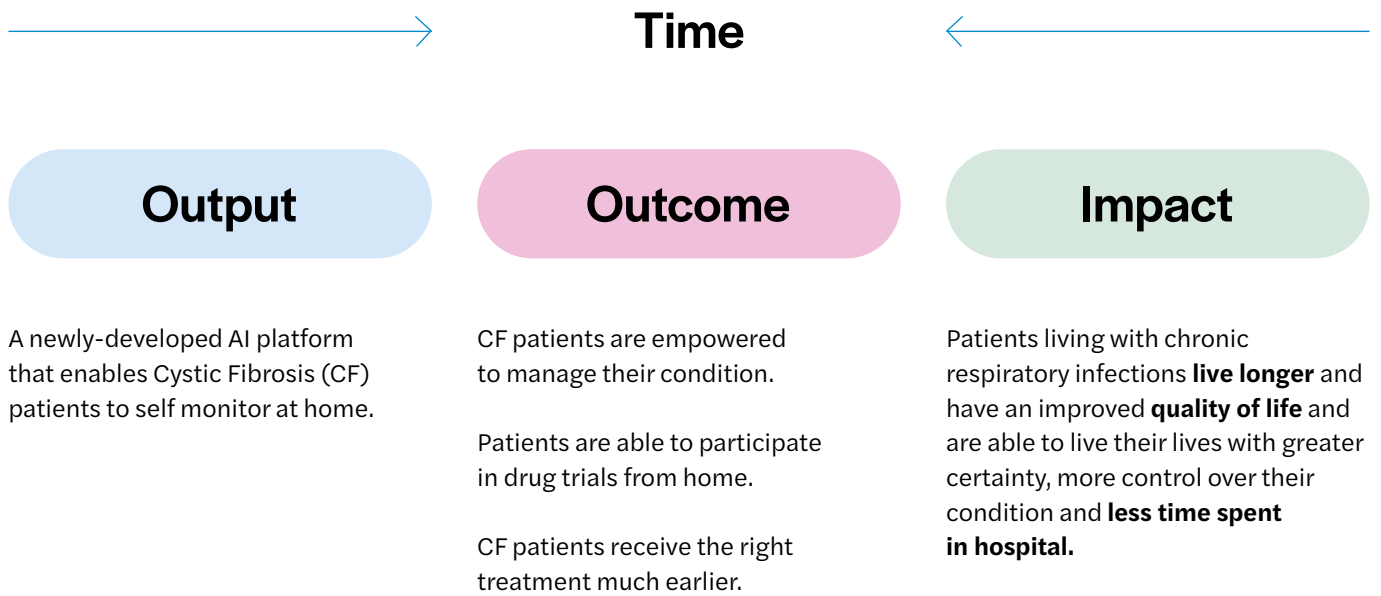
Though often presented in a linear diagram, this process is often not linear due to a variety of contextual factors which may be outside of your control.

which, through application or use leads to **outcomes**...

which eventually lead to the longer-term **impacts**.

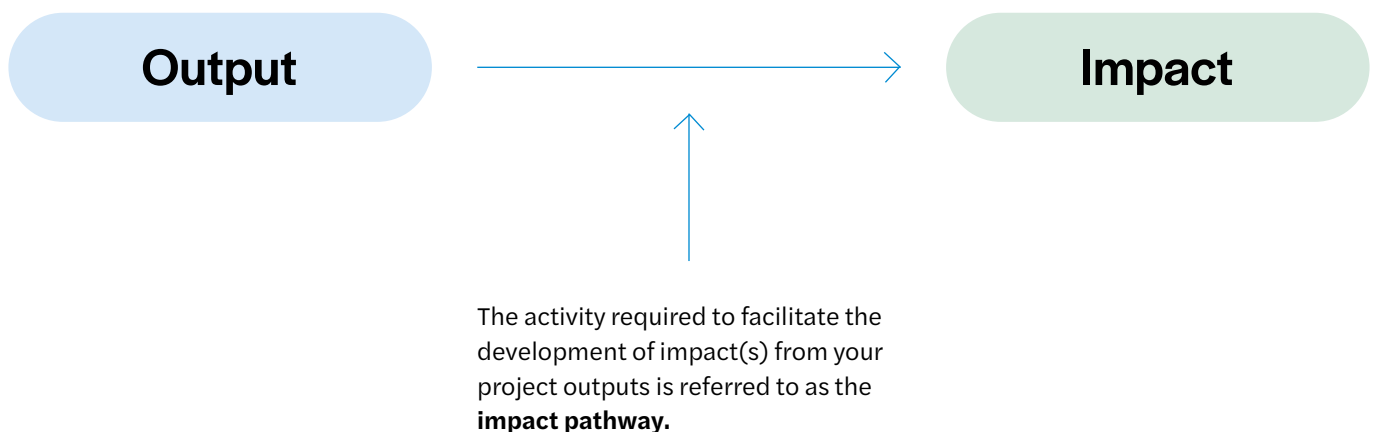


Example



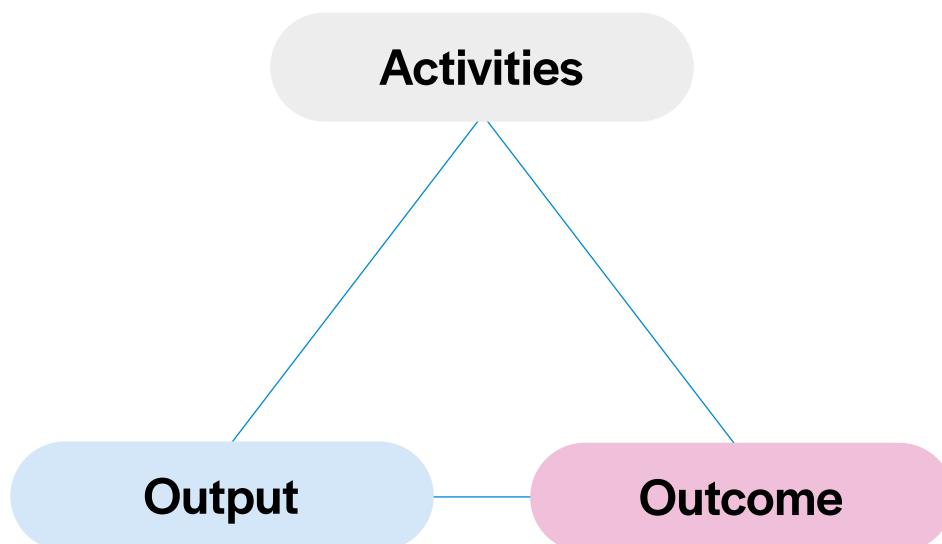
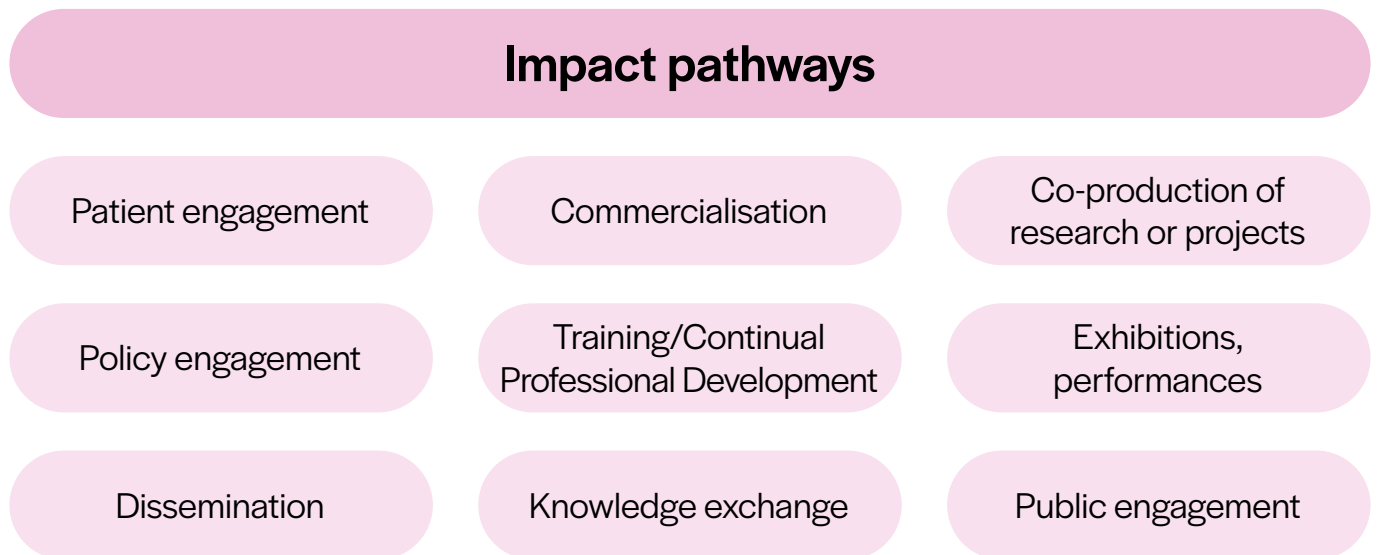
Impact pathways

How do you get from output to impact?



Impact pathways

Below are examples of the types of activities that organisations or individuals engage in to enable the take up and use of outputs, advancing them towards outcomes and eventual impact.



Note: This process may not be linear because of contextual factors which may be outside of your control.

02 Impact and theory of change (ToC)



What is the link between theory of change (ToC) and impact?

A theory of change (ToC) is commonly used across sectors, including non-profit and public sectors, to plan and evaluate complex projects and interventions. Theory of change helps organisations **conceptualise impact** and the **necessary steps** to achieve that result (i.e., what needs to happen, in what order, and who needs to be involved). Done properly, a ToC considers intervention context and helps to identify assumptions and potential risks.

“ Understanding the efficiency and effectiveness of interventions and their impacts is **critical to effective decision-making.**”

Magenta Book

“ Theory-based methods can be used to investigate net impacts by **exploring the causal chains thought to bring about change by an intervention...**”

Magenta Book

Impact evaluation and ToC is central to policy evaluation according to the government's Magenta Book.

[Magenta Book >](#)



03 Tools to help you develop, present and operationalise your theory of change



Tools to help you develop, present and operationalise a theory of change

a.
**How? When?
Where to develop
your theory of
change?**

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b.
**Forwards
mapping**

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c.
**Backwards
mapping (back
casting)**

Page 19

d.
**Logic
modelling**

Page 21



a. How? When?

Where to develop your theory of change?

This guide is created to help you develop your own theory of change

1. To develop your theory of change you need to be really clear on the problem you are trying to solve.
 - What is the challenge/theory you will be exploring?
 - Why is it important?
 - Who is it important for?
2. You should develop your theory of change (ideally) right at the beginning of your project/programme/research.
3. Your theory of change should then be considered throughout the whole process of the programme, to help you plan, communicate and monitor and evaluate the progress of your work.

The following guide walks you through the most common methods to create a theory of change. A theory of change is informed by data from different sources and will include stakeholder mapping and problem identification exercises (at the appropriate level of complexity for your intervention or project). As you will see in this section, the development process does not necessarily follow the same route as the final diagram or narrative. It can feel that you are jumping around, but this does help to ensure that the assumptions and understanding underpinning the theory of change are interrogated and tested as it is developed.



b. Forwards mapping

See Appendix B: Template 1

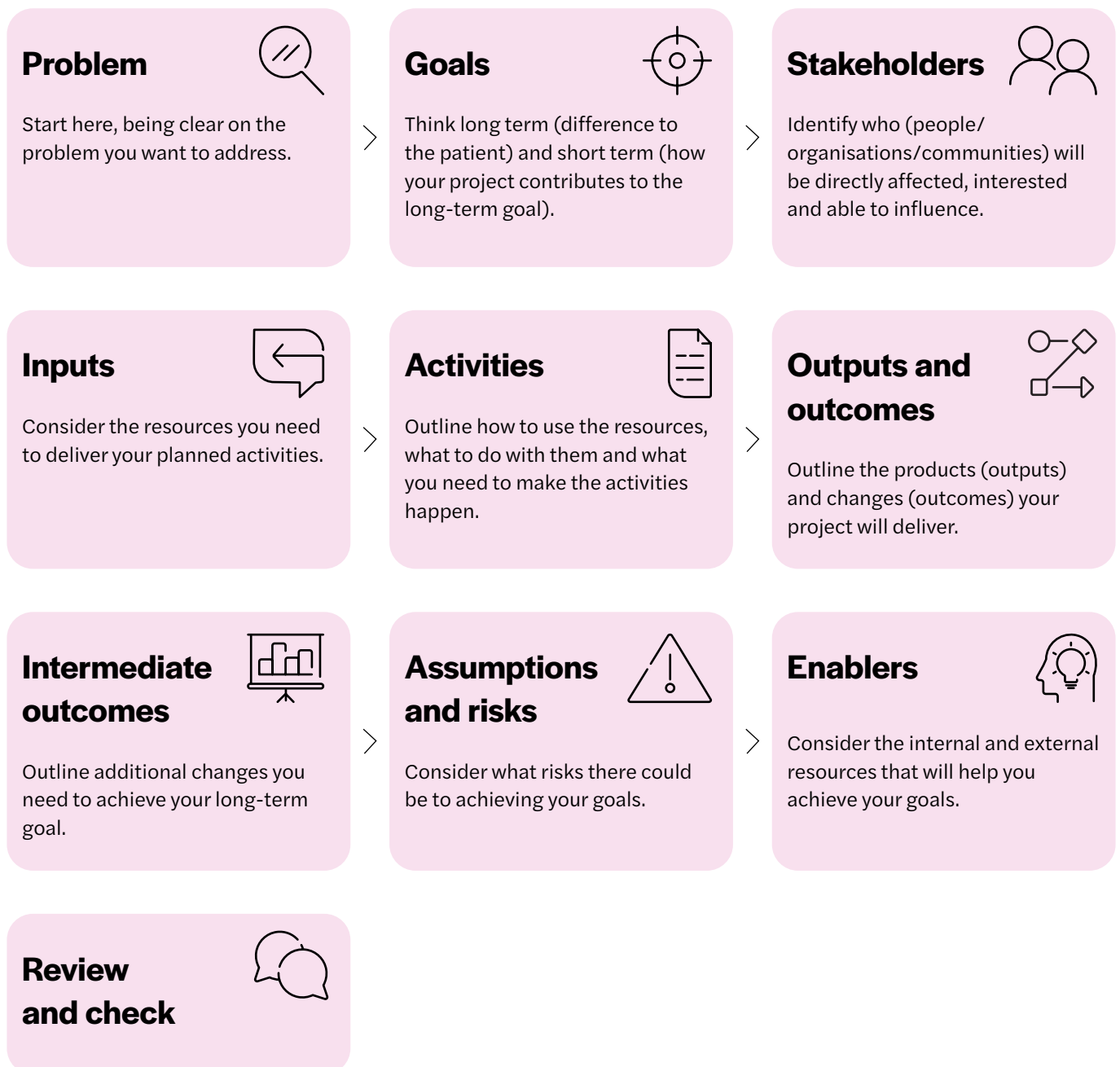
Approach: how to use the forwards mapping template

There are a number of ways to create your theory of change. The approach you take will depend on the complexity of your project or programme, the context within which you are working and the resources available.

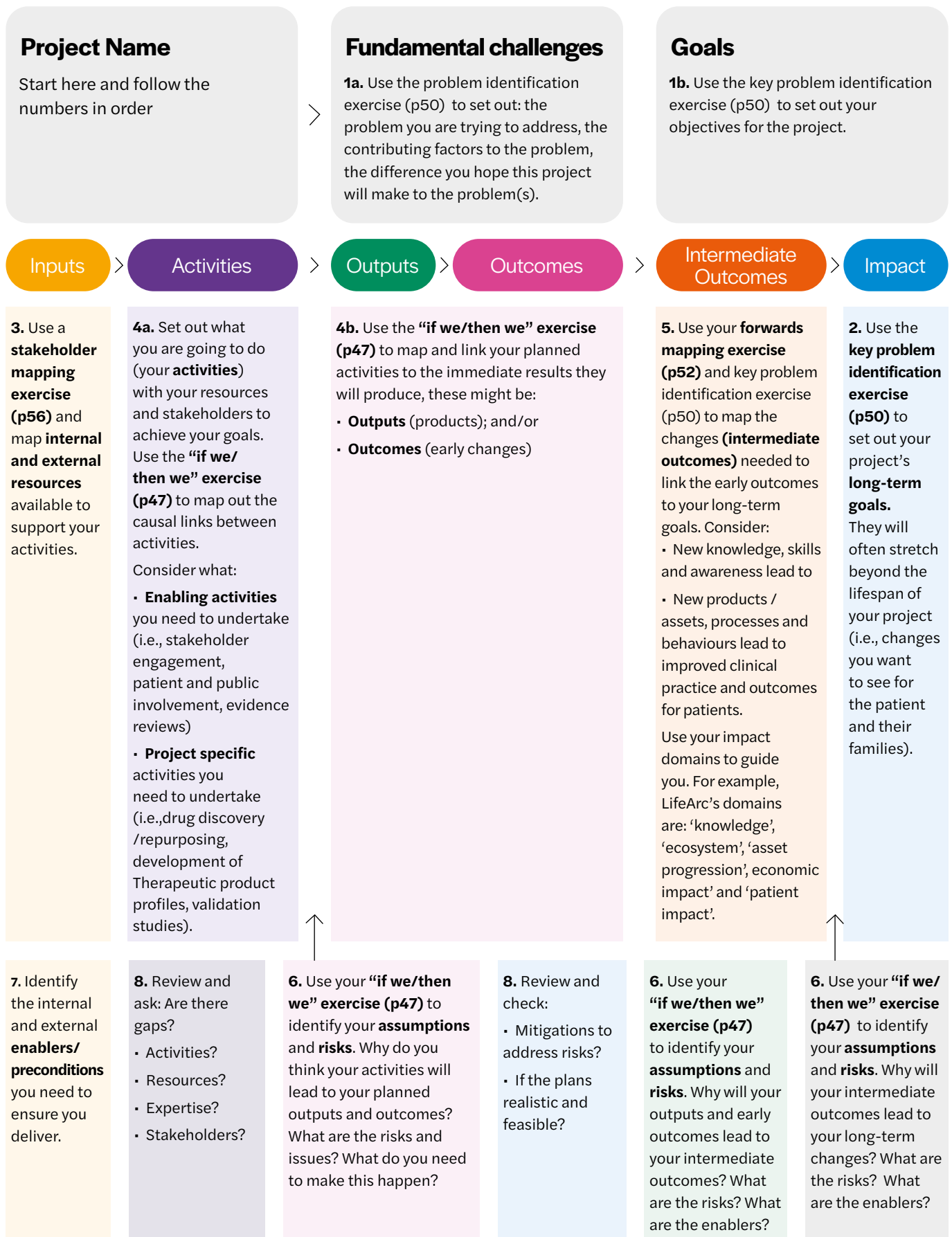
Below we describe the forwards and backwards mapping approaches to developing your ToC. Backwards mapping is the most commonly applied approach as it begins with the

desired impact and allows you to interrogate the required outcomes, outputs and activity in that order.

Forwards mapping, as the name implies, starts with activities and works forwards and is a good option if you already have an established programme of activities. It is useful for highlighting possible gaps between your planned activity and your intended impact.



Guide for using the forwards mapping approach



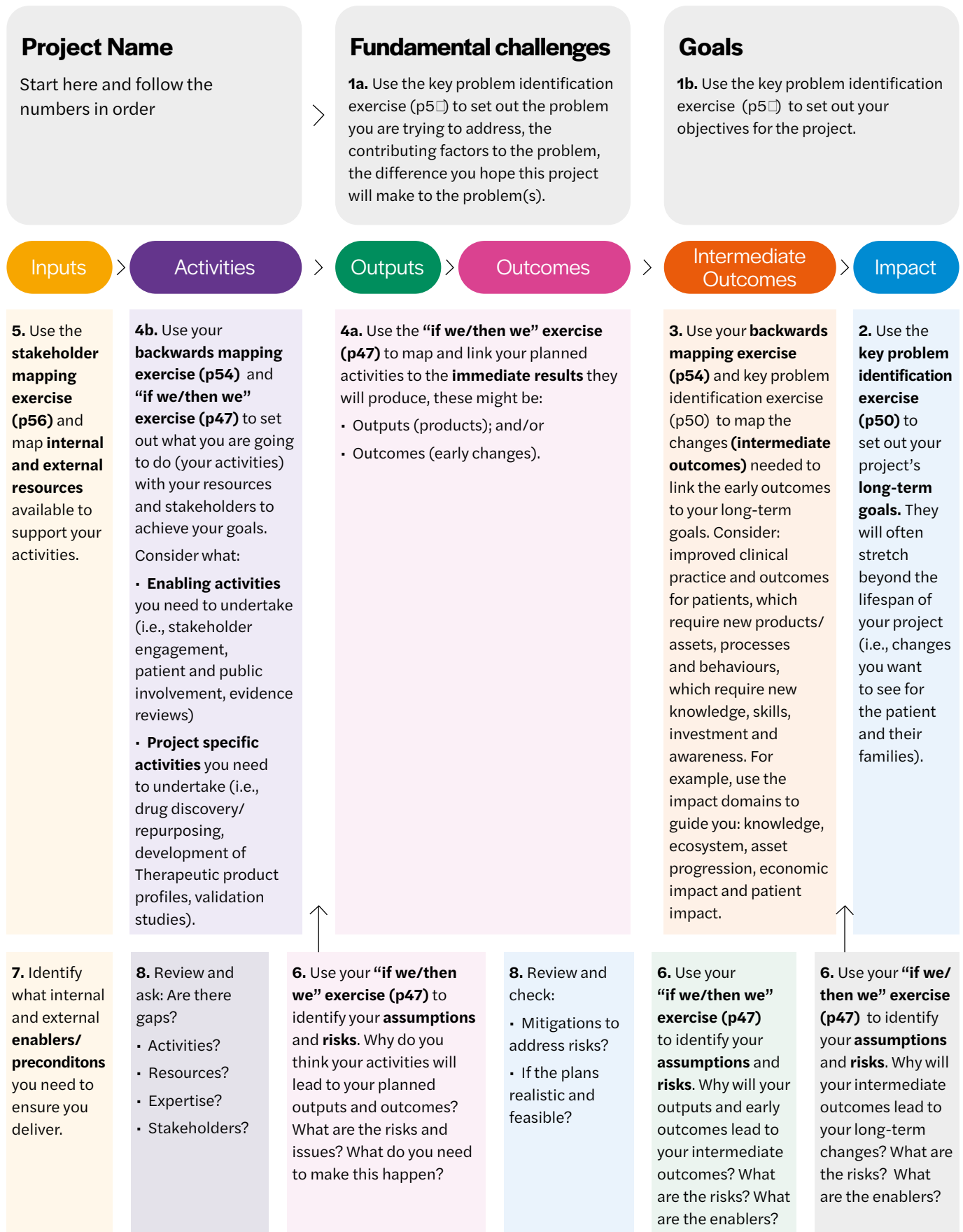
C. Backwards mapping

See Appendix B: Template 2

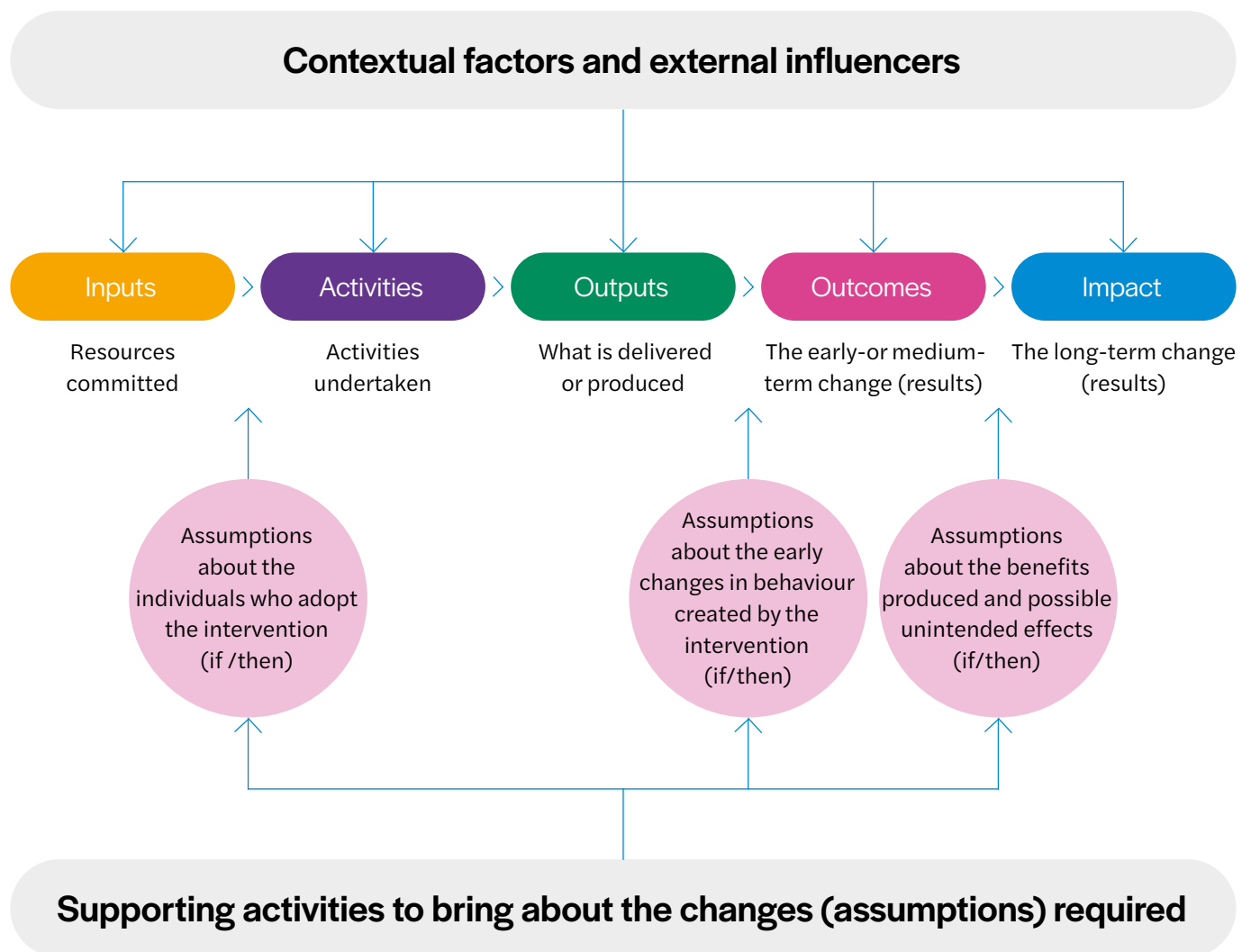
Approach: how to use the backwards mapping (back casting) template



Guide for using the backwards mapping (back casting) approach



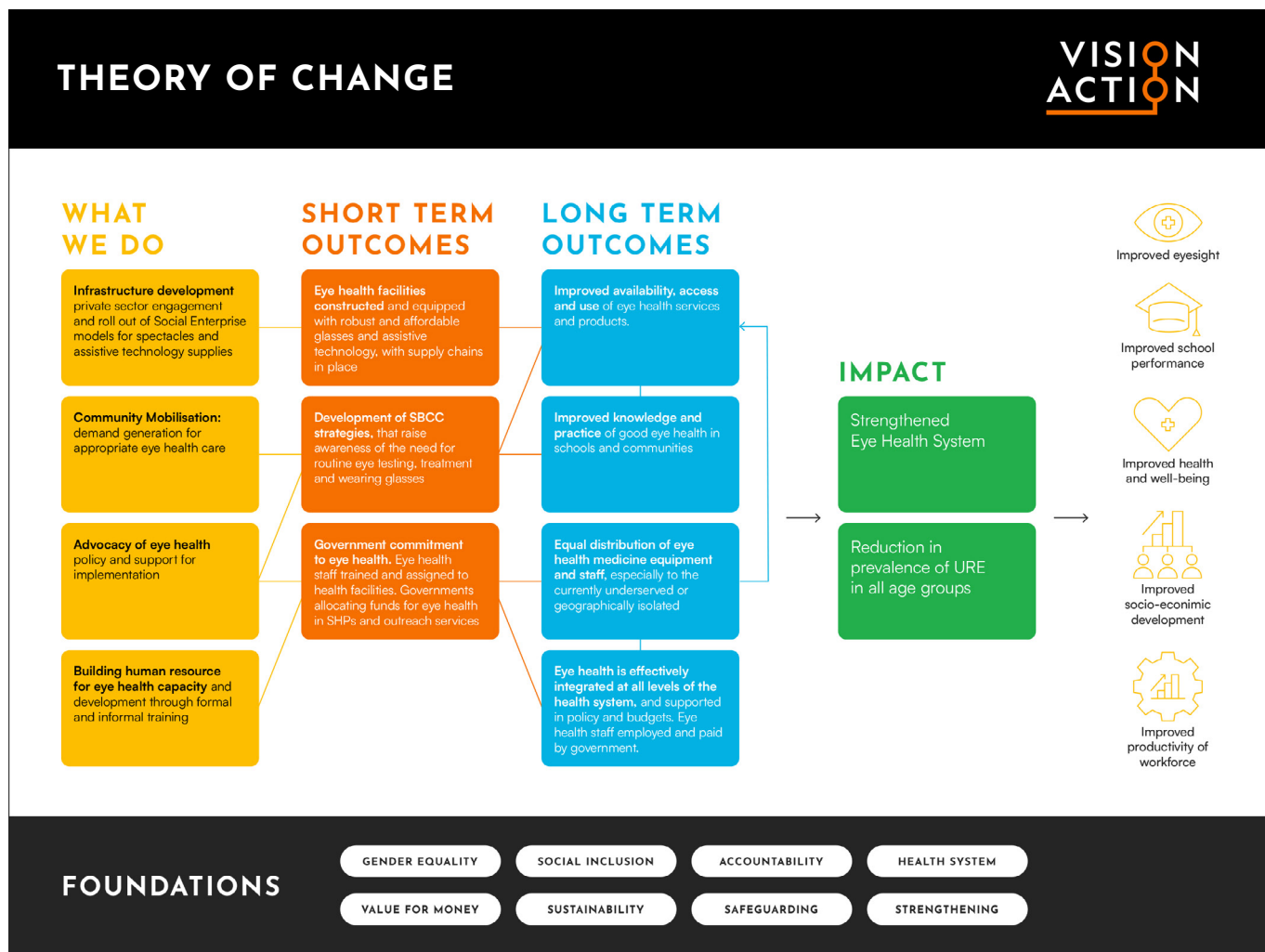
d. Example of a logic model



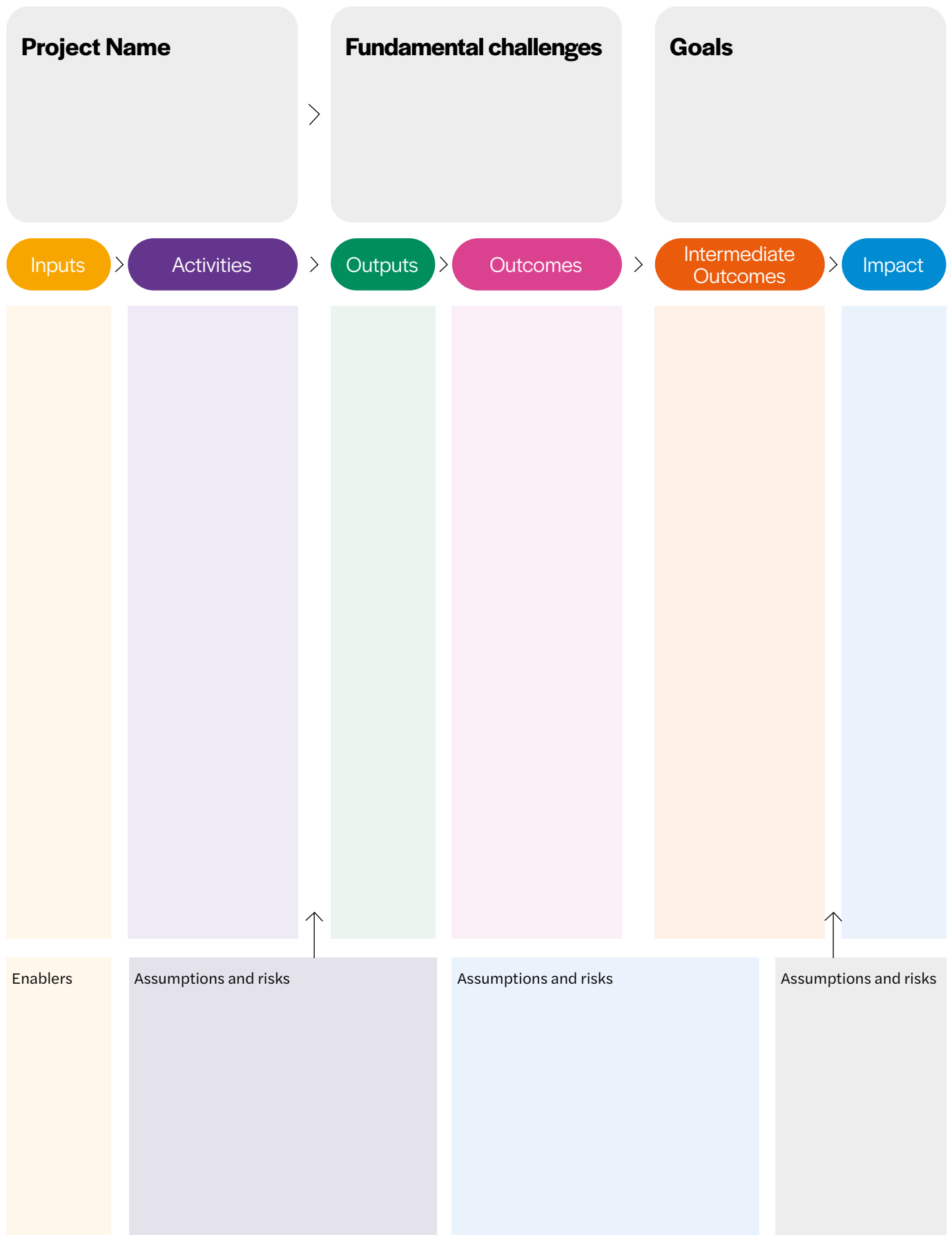
Example of applying a logic model layout

Vision action theory of change

©Vision Action 2023



Blank template: logic model



04 Presenting your theory of change as a narrative



How to produce a narrative using the C-CARE framework

Producing a narrative can help you to tell the story of your theory of change.

The C-CARE Framework gives a simple framework of prompts to capture what can often be ambitious, and complex projects.

Context

Set out the challenge (problem) you are trying to address and why it is important.

Changes

Set out the difference you hope your project will make to the challenge.

Assumptions

Set out how you think your project will achieve these changes (goals).

Risks

Set out the risks and issues that may prevent you from achieving these changes.

Enablers

Set out the internal and external things you need in place to achieve your impact goals.



05 Use and management of your theory of change



Use and management of your theory of change

a.

Use your ToC for strategic planning and learning

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b.

Use your ToC for Communication

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a. How to use your ToC for strategic planning and learning

The theory of change (ToC) process enables collective work to understand your strategic goals and priorities and produces a description and/or diagram (model) of your project/programme.

The ToC can be a helpful reference to **monitor progress towards your goals** and enables reflection and critical thinking. The ToC should be incorporated into existing programme and project management tools, where possible, by:

- Aligning programme and project objectives/milestone targets to planned activities, outputs and outcomes
- Ensuring the ToC outputs, outcomes and impact are built into/described in project initiation documents and plans
- Regularly reviewing progress against the ToC, including reviewing and capturing risk and issues, testing the programme's assumptions and ensuring enablers are in place. It should be a standing agenda item at quarterly or annual reviews of the proposed approach, depending on the area and your project needs
- Recording changes to planned activities, outputs and outcomes or strategic direction in the lesson log, recording outcomes (intended or unintended) in benefits log and risks/issues in the risks and issues log
- The ToC should be updated annually or as required (ensure this is dated and version controlled).



Top Tip

Internally, the ToC, can be shared with all project team members to ensure everyone has a clear sense of their area of activity or deliverable and how they contribute to the wider long-term programme goals.

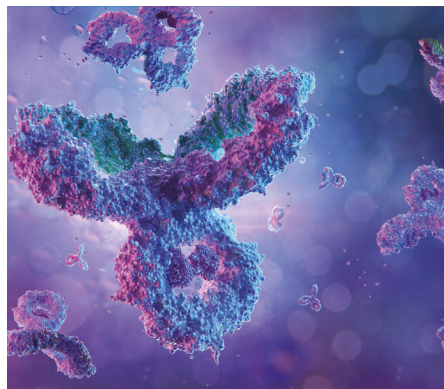
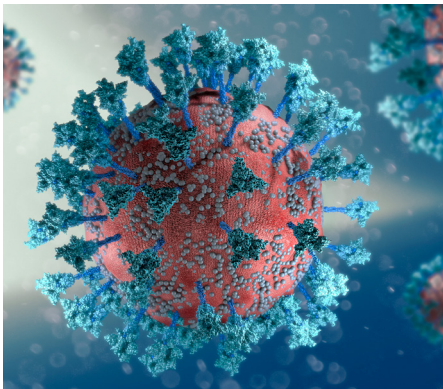
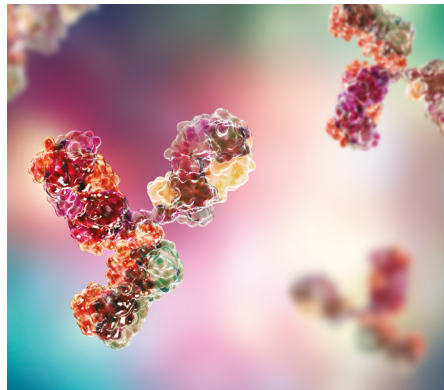
We recommend you **incorporate a version of the ToC** relevant to your audience's needs **in your programme's introductory slides and digital communication.**

b. How to use your ToC for communication

Your ToC is also a versatile internal and external communication tool

The ToC **concisely communicates the top-level outputs, outcomes and desired person impact** of your programme/project to external stakeholders, potential partners and collaborators. It enables all parties to assess, from the start, whether they are aligned in their intent.

Work with your communications teams to develop your ToC to ensure the information **reaches your intended audiences** and that they align to and inform your organisation's (corporate) messaging.



06 Monitoring and evaluation



Monitoring and evaluation

a.
**How to use
your ToC for
monitoring and
evaluation**

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b.
Monitoring

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c.
Evaluation

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d.
**Embedding
monitoring and
evaluation**

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e.
Example

Page 37



a. How to use your ToC for monitoring and evaluation

The theory of change (ToC) process enables collective work to understand your strategic goals and priorities and produces a description and/or diagram (model) of your project/programme.

The ToC can be a helpful reference to **monitor progress towards your goals** and enables reflection and critical thinking. The ToC should be incorporated into existing programme and project management tools, where possible, by:

- Using your theory of change (ToC) to help you identify your indicators for monitoring and evaluation.

Then you can decide on the evidence you will need to collect, and whether that evidence should be qualitative or quantitative, or both (see next slide for definitions).



b. Monitoring

Quantitative



Quantitative data helps you capture and monitor things you can count and measure, such as finance reports, performance reports, surveys.

Qualitative



Effective monitoring also captures qualitative data e.g. narratives through interviews, documentation, case studies. Qualitative data gives you rich data that answers the how and why to understand progress, risks, issues and lessons learned – or the lack of progress towards outcomes.

Outcomes



When outcomes occur during the project, capture them as well as monitoring activities.

Capture monitoring data throughout the project, including benefits and lessons learned.

Top Tip

Often, **the same data collecting activity can answer multiple questions.**

For example, evidence gathered from a survey or a single series of interviews can answer:

- What has worked?
- What needs improving (re: inputs and activities)?
- What benefits and changes have occurred (outputs, outcomes and impact)?

Use your logic model to inform your monitoring and evaluation activity.



C. Evaluation - definitions and who does them?

There are multiple definitions for evaluation, all around making an assessment, judgement or comparison.

The Government guide to evaluation defines it as “a systematic assessment of the design, implementation and outcomes of an intervention”, where it helps you to understand “how an intervention is being, or has been, implemented and what effects it has, for whom and why” (Magenta Book, 2020).

[Magenta Book >](#)

There are two main uses for evaluation: **accountability and learning**.

Who should conduct an evaluation?

Evaluations can be conducted **internally (self-evaluation)** or **by independent third parties**.

Independent evaluations are useful when you need additional resources, expertise and a level of independence from the programme/project (for accountability). The level of resource and time required depends on a number of factors:

- The complexity of the intervention/project/programme
- The scale of the evaluation
- The level of risk
- The level of ethics and governance needed

Evaluations work at any stage of the project/programme/intervention, but we recommend **building in evaluations as early as possible as part of your project planning**.

There are three main types of evaluation: impact evaluation, process evaluation and economic evaluation.

The evaluation type you need depends on your questions:

- To know what has changed, and the nature and scale of those changes, use an **impact evaluation**
- To know how you achieved those changes, what worked and what needs improving, use a **process evaluation**
- To assess value for money, use an **economic evaluation**.

For more information on project/programme evaluations, we recommend the Government guide to evaluation, the Magenta Book (2020).

[Magenta Book >](#)



Top Tip

Some projects and programmes may require all three evaluation types.

To identify your evaluation needs, start by understanding the purpose of your evaluation, who it is for, and what questions you need to answer.

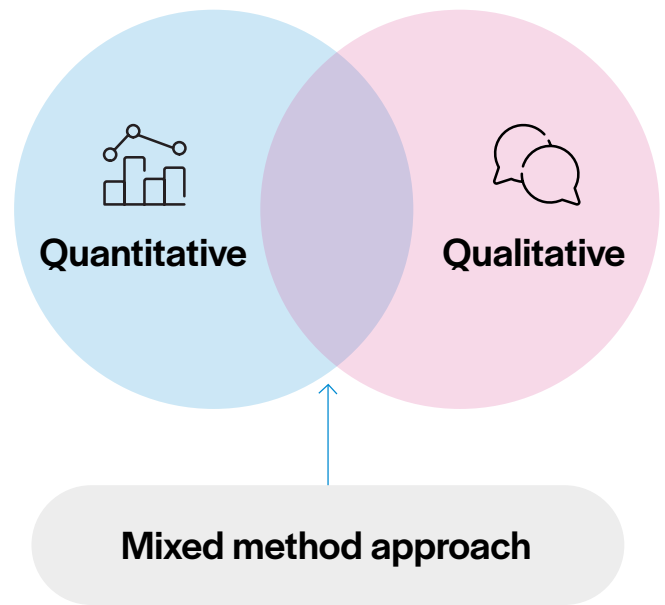
C. Evaluation data and methods

To monitor data, a mixed methods approach is useful. This collects quantitative (numbers) and qualitative (narrative) data.

Data comes from existing sources (secondary data, i.e., data collected for another purpose, such as citations, downloads, financial reports, benchmarking data) and new data (primary data, i.e., data you collect specifically for the evaluation, such as interviews, focus groups, case studies, review of documents).

Try to have more than one data source, so you can collate it to address your evaluation questions (often called triangulation).

We also suggest you **collect a baseline for your activities (i.e., where are you now) so you can measure progress.**



d. Embedding monitoring and evaluation ?

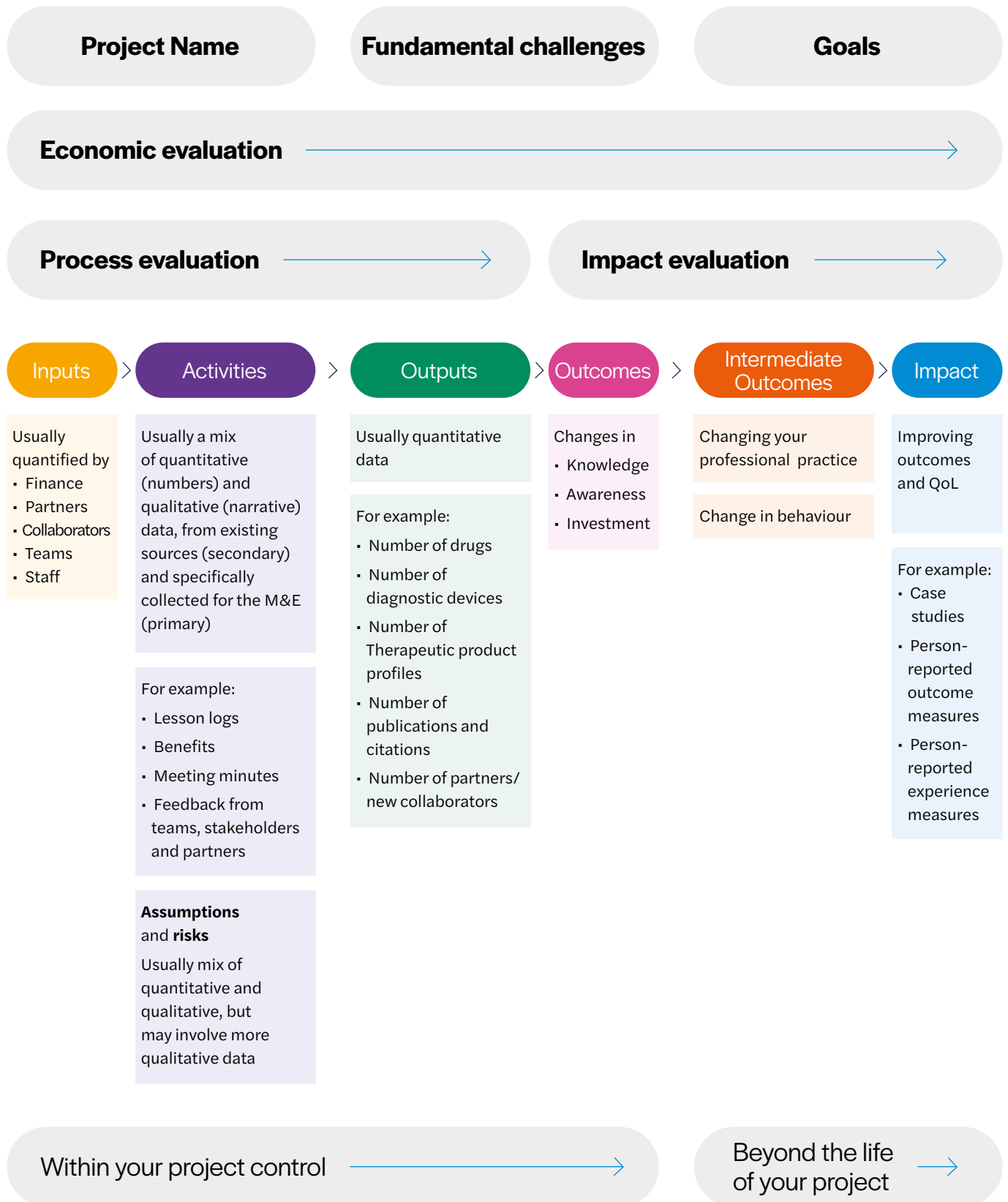
How to make it a daily practice

Develop your monitoring and evaluation plans at a project and programme level and what needs to be reported against the monitoring and evaluation framework. This helps you **plan for the evidence you need** and the appropriate level of rigour needed to evidence the outcomes.

Although it takes considerable time to develop a theory of change and set up all aspects, including your monitoring and evaluation, once you have the systems and processes in place, e.g. for collecting your evidence at every stage, it will be easier to embed this into your daily practice, and avoid the challenge of gathering evidence retrospectively.



e. Example - How to use your ToC for monitoring and evaluation



References

- NIHR National Institute of Health Research - School for Public Health Research, Strategy for Impact
- NPC New Philanthropy Capital
- Impact evaluation and ToC is central to policy evaluation according to the government's Magenta Book
- Magenta Book 2020
- Example of a theory of change presented as a logic model.¹



¹Source: p.25 Gov Magenta Book www.gov.uk/government/publications/the-magenta-book

07 Appendix A: Glossary



Glossary 1

Terminology

Problem or challenge statement

Definition

What is the problem you want to solve?

Who is your key audience?

The problem statement describes the problem, why it is a problem, its root causes and who it affects.

Example

Infectious disease adversely affects life expectancy and Quality of Life globally with the burden being disproportionately borne in low- and middle-income countries. More needs to be done to accelerate the translation of discovery science in antimicrobial resistance, emerging viral threats and neglected tropical diseases into impact for these patients.

Terminology

Inputs/resources

Definition

The resources applied in a project to address the problem statement.

Example

Time, money, people, infrastructure, existing evidence (research, experience, expertise).

Terminology

Interventions/activities

Definition

These are activities the programme/project undertakes to deliver the project day to day.

Example

Grant management, training activity for target groups, developing diagnostic tools, developing new treatments, patient and public involvement.

Terminology

Stakeholders/beneficiaries/end users (people, organisations and communities)

Definition

A **stakeholder** has a stake in what you are doing.

A **beneficiary** benefits from what you are doing, directly or indirectly.

An **end user** uses your outputs.

These people and organisations are directly affected by, interested in or can influence your research and impact.

You must work with them or engage with them at some stage to achieve your stated goals.

Example

Patients, families and carers, clinicians, researchers, charities, think tanks, industry, Higher Education Institutions, academics, decision makers (policy makers, commissioners, regulators).

Glossary 2

Terminology

Preconditions/milestones
(also called enablers in other toolkits)

Definition

These are the logical and sequential conditions needed for the causal pathways to successfully progress towards the stated impact.

Meeting the preconditions are within the control of the project or programme.

Example

Sufficient local staff are recruited to deliver the intervention.

Patient groups in low- and middle-income countries are recruited to engage in patient forums.

Terminology

Assumptions (on which the ToC is built)

Definition

The underlying beliefs about how a project will work, the people involved and its delivery context.

Assumptions are often unarticulated and require interrogation to surface.

These can include assumptions about the context in which activities will operate or more inherent worldview assumptions or values bases assumptions.

Example

Misinformation is a significant barrier to reducing the unnecessary use of antibiotics.

National government policy supports a universal health care policy.

Terminology

Outputs

Definition

These are the tangible final products/outputs that result from the activities, often expressed quantitatively.

Example

2 x diagnostic tools ready for clinical trial

3 x humanised antibodies

4 x new funds launched to support capacity building in translational skills

Glossary 3

Terminology

Outcomes (short term/intermediary)

Definition

The short-term and intermediary change, benefits, learning or other effects achieved through the implementation of your strategy/programme.

Short-term goals contribute to the long-term goal, which can be system-level changes, behavioural changes and knowledge and skills.

A useful way to think about intermediate outcomes is to express them as verbs. They are often realised after a project has ended.

Example

Reduced levels of unnecessary antibiotic prescribing.

Patients have access to a greater number of drugs that improve QoL.

Terminology

Impact/long-term goals

Definition

The broader change a project or organisation tries to achieve: why you do the activities that you are doing. The long-term goal is usually a change your programme or initiative contributes towards, rather than something it can achieve solely through its own effort.

Example

Reduced mortality for people with Cystic Fibrosis.

Patients in underserved communities have more affordable and accessible options for treatment of infectious diseases.

Terminology

Barriers to success

Definition

Potential risks, internal and external, that may undermine achieving the stated impact.

Example

There is an insufficient pipeline of research for rare diseases.

Terminology

Precursors

Definition

An indicator, factor or variable that comes before another in a causal pathway of related variables.

Example

Active collaboration is a precursor for getting buy-in from communities in community health interventions.

Glossary 4

Terminology

Indicators of success

Definition

A measurable parameter or value used to assess a project on an impact it aims to achieve.

Example

Uptake of new digital tools for diagnosis is an indicator of success for this technology-based global health intervention.

Terminology

Intervention

Definition

An action taken to shift the outcome of a combined pathway/set of variables.

Example

A theory of change can be designed to represent how collaboration across stakeholders can improve the implementation of a public health intervention addressing zoonotic disease.

Terminology

Causal pathway

Definition

A depiction of the links between variables and outcomes of interest that describes how they relate to one another.

Example

A theory of change makes explicit the causal pathways through which change happens.

Source: De Silva et al *Trials* 2014, 15:267 | Rogers 2014, UNICEF Methodological Brief, Impact Evaluation No.2 | Harries, Hodgson and Noble, 2014, NPC Creating Your Theory of Change

08 Appendix B: Tools and templates



Appendix B - Tools and templates

a.
**How to use
this template
library**

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b.
**“If we/then we/so
we” exercise**

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c.
**Template:
Key problem
identifier**

Page 50

d.
**Template 1:
Forwards
mapping
template**

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e.
**Template 2:
Backwards
mapping
template**

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f.
**Stakeholder
mapping
exercise**

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a. How to use this template library

Creating your own theory of change can help you to fully understand your planned intervention, where this might be a project, programme or portfolio of work, and deliver your desired impact.

Use **your guide to impact and theory of change** to explore what this means, and then work through the **templates** in this section, to help you create your own theory of change. This can help you with:

- Strategic decision making - what are the critical and priority areas for delivery?
- Internal project and resource management
- External communication, connection and engagement - both with existing and potential stakeholders
- Your organisational messaging and mission
- Demonstrating the difference that your intervention has made through effective monitoring and evaluation.

The aim is to help you set and keep your vision and focus. You can use these tools (templates) to help you with:

- Monitoring and evaluation
- Evidence collection.

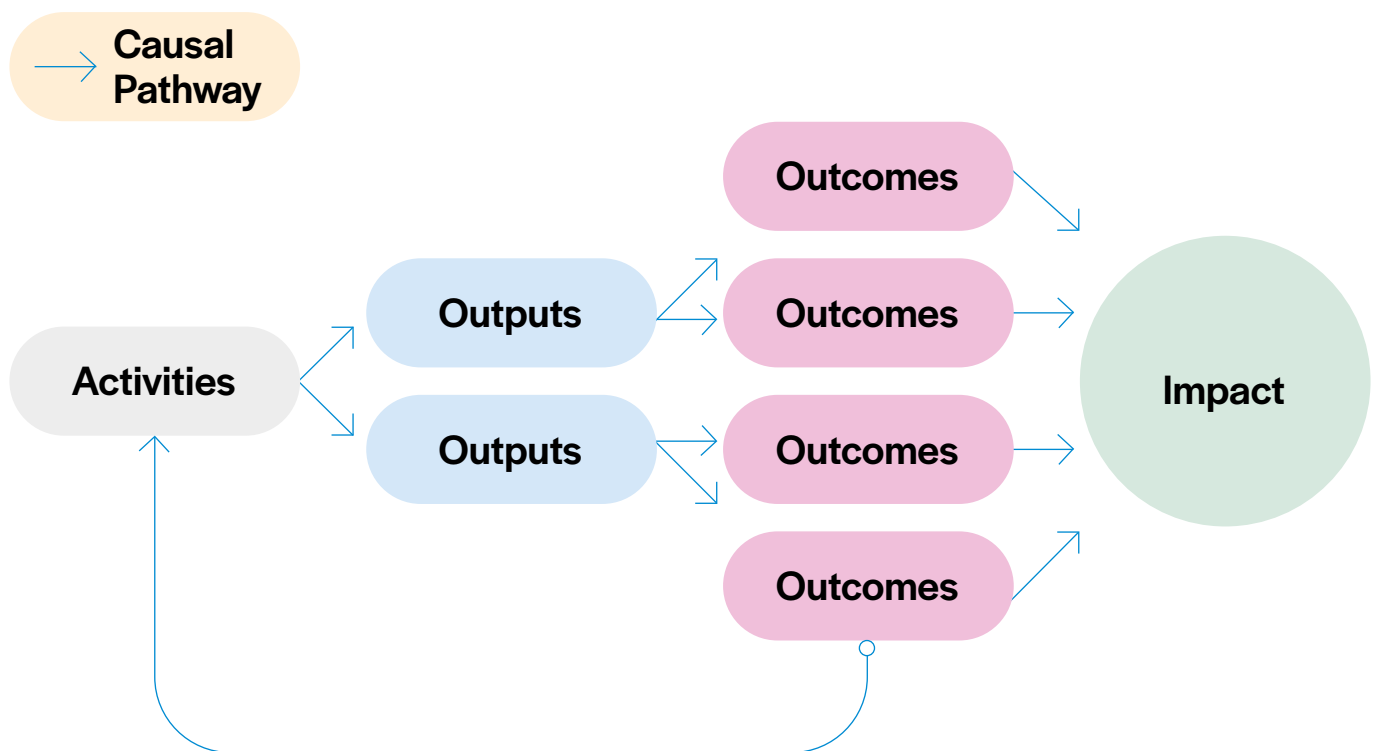


b. “If we/then we/so we” - causal pathways

Why creating a theory of change matters in the life sciences

Causal pathways create clear links between your long-term goals, your intermediate outcomes and outputs and the activities to achieve those.

The next few slides explain how to conceptualise the causal pathways that underpin your theory of change.



b. Understanding causal pathways

If we

What we do (activity)

If we invest in...

If we improve...

If we fund...

If we collaborate...

If we research/publish...

If we identify potential...

Successful candidates...

Then we

What we produce/ achieve (outputs and outcomes)

Then we validate

Then we increase our
evidence base

Then we derisk

Then we develop/produce
tools and tests for research/
clinical practice

Then we increase interest,
trust and confidence in our
partners and end users

So we

What we change (impact)

So we change the way
research in this area is
conducted

So we increase investment
into opportunities by our
partners and end users

So we improve/change
clinical practice

So we improve patient
outcomes

b. Example

To test repurposing treatments to reduce mortality from chronic and recurrent respiratory infections. Your causal pathway could look like this:

If we

Activity



collaborate on funding research projects to repurpose existing drugs and compounds to treat the vicious cycle of infection, inflammation and immune damage associated with cystic fibrosis and bronchiectasis.

Then we

Output



can identify potential new/repurposed treatments for tackling chronic respiratory infections and associated inflammation (for people living with cystic fibrosis/bronchiectasis);

Outcome



increase likelihood of industry/academia investing in its development to move along the translational pathway and bring together Chronic Respiratory Infection communities to foster new interactions and collaborations.

So we

Long-term goal



catalyse an accelerated translational pathway to enable people living with chronic respiratory infection to access new treatments, leading to improved patient outcomes*.

*improved patient outcomes include reduced treatment burden, new and personalised treatments to reduce chronic and recurrent respiratory infections leading to reduced lung function decline, morbidity and mortality.

c. Key problem identifier

Why creating a key problem identifier helps

Identifying a key problem you want to address can help you create boundaries around what is in and out of scope.

This will help you create and prioritise your approach and identify what factors contribute to the problem at the start.

The next slide is a template you can use with two key questions and prompts to identify your specific problem.



c. Template: Key problem identified

Key problem

What is a key problem your intervention will address?

What factors contribute to this problem?

List the factors in the space below:

d. **Template: Forwards mapping**

Problem

Start here, being clear what the problem is that you are trying to address.

Goals

Think long term (impact on patients) and short term (what your project will deliver that will contribute to the long-term goal).

Stakeholders

Identify who (people/organisations/communities) will be directly affected, interested, and who are able to influence others to help you consider who needs to be involved.

d. **Template: Forwards mapping**

Inputs

What resources need to be in place to deliver your planned activities.

Activities

Outline how you are going to use the resources, what you are going to do with them, and what you need to have in place to make this happen.

Outputs and outcomes

Outline the products (outputs) and changes (outcomes) that your project will deliver.

Intermediate outcomes

Outline the additional changes that are needed to achieve your longer-term goal.

e. **Template: Backwards mapping**

Problem

Start here, being clear what the problem is that you are trying to address.

Goals

Think long term (impact on patients) and short term (what your project will deliver that will contribute to the long term goal). Start to consider who your stakeholders are – who will be affected by these long- and short-term changes.

Intermediate outcomes

Working backwards from your goal, outline the additional changes that are needed to achieve your longer-term goal.

e. **Template: Backwards mapping**

Outputs and outcomes

Outline the products (outputs) and changes (outcomes) that your project will need to deliver to achieve your intermediate outcomes.

Activities

Outline the activities you will need to do to deliver your planned outputs and outcomes.

Stakeholders

Identify who (people/organisations/communities) will be directly affected, interested, and who are able to influence others to help you consider who needs to be involved.

Inputs

List what resources need to be in place to deliver your planned activities.

f. Stakeholder mapping

Who, when, why?

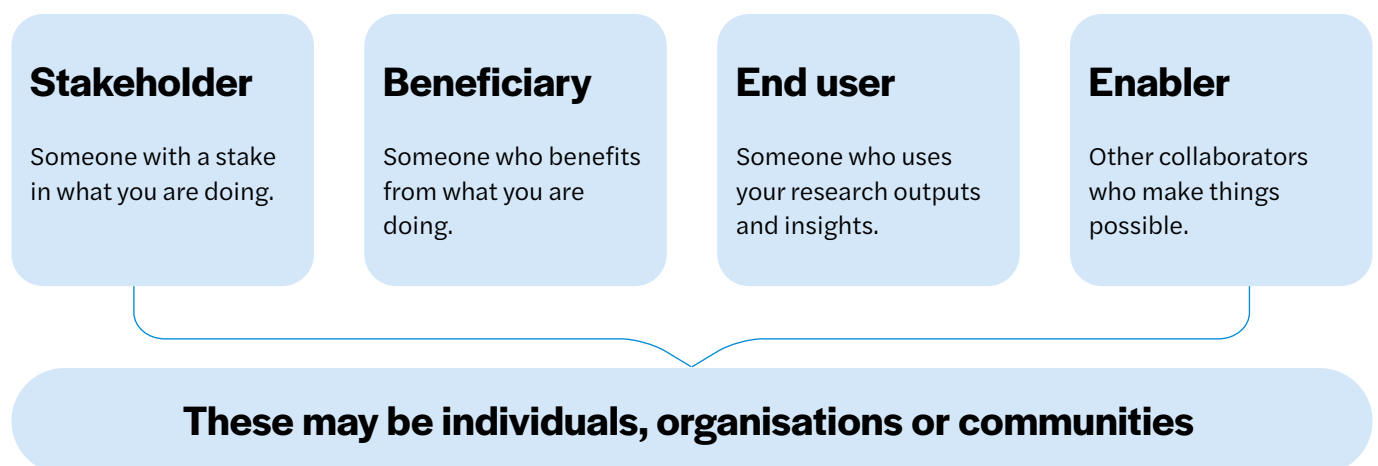
Stakeholder mapping is a key component of your theory of change and could be one of the most challenging and time-consuming exercises.

Think strategically about who should lead this for your intervention. For instance, you want someone with strategic knowledge of the ecosystem and of existing partnerships within your organisation.

Start a conversation about your stakeholders as soon as possible and engage your communications and business development teams in these discussions to help you identify stakeholders.

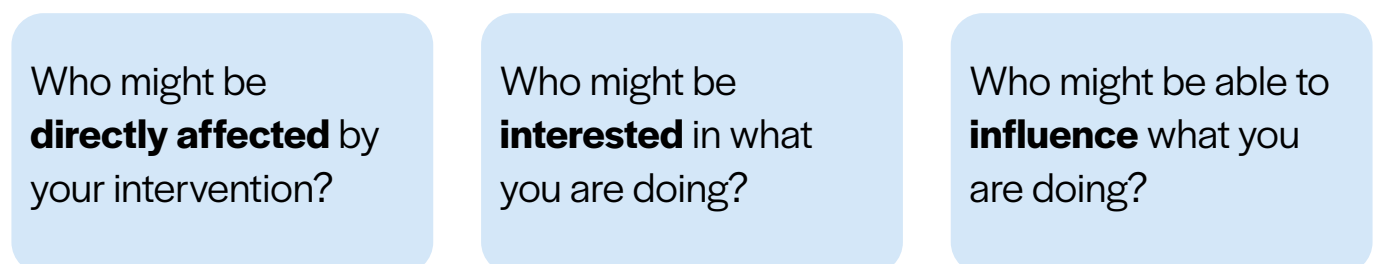
This is an ongoing reflection – not an exercise you complete in one session.

Agree on definitions



Who, when, why?

Name the organisations and groups. Then answer the questions as specifically as you can:





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