Using logic models

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what works centre for
local economic growth

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Logic models

What is a logic model?

A logic model is a way of structuring thinking about policy interventions.

It helps designers of policies and interventions (programmes and projects) focus on needs, how the policy or intervention aims to address these needs and what are the intended outcomes and long-term impacts.

It prompts consideration of each step from objectives through inputs, activities, and outputs to outcomes and makes sure that the links between the steps make sense.

Figure 1. Logic model

Logic models can prompt you to check what the evidence says about each step and whether an activity is likely to lead to the intended outcomes. It is a useful way to set out how you expect an intervention to work and to communicate this to other people.

Logic models may be developed at different stages of the policymaking process. However, in an ideal world, a logic model should be an integral part of the policy development process and should be updated as the intervention evolves.

This guide and the accompanying checklist are designed to support you through the process of developing a logic model.

> ### Caution
>
> Don't get trapped into thinking a logic model is simply about filling in a template. To avoid this trap, we strongly recommend discussing the logic model with your colleagues and funders, asking does each step make sense, and is it consistent with the evidence?
>
> A logic model should be a collaborative process. Test it with others, and against the evidence, and come back to it as the intervention develops to reflect on the steps and the relationship between them.

Why is a logic model useful?

Logic models can be used at every stage of policy or intervention development and implementation to:

- Help understand the policy or intervention in a systematic way
- Help think about the theory of change that underpins the intervention and whether it reflects the evidence about 'what works'
- Identify flaws in the plan or risks which may reduce effectiveness
- Increase the likelihood that a policy or intervention will be effective
- Provide a framework for monitoring and evaluating a policy or intervention
- Give confidence to stakeholders and funders that the policy or intervention is well designed
- Help frame the narrative (how to talk and write about the policy or intervention)
- Summarise the strategic fit of a policy or intervention

Logic models and theory of change

'Logic model' and 'theory of change' are often used interchangeably, but they are different.

A logic model sets out specific activities and outputs of an intervention and links them with the need and intended outcomes. A logic model is usually shown as a linear process moving from needs to outcomes and often does not include discussion of assumptions and external

factors that may affect the intervention. This provides a simplified version of the policy that is easier to communicate.

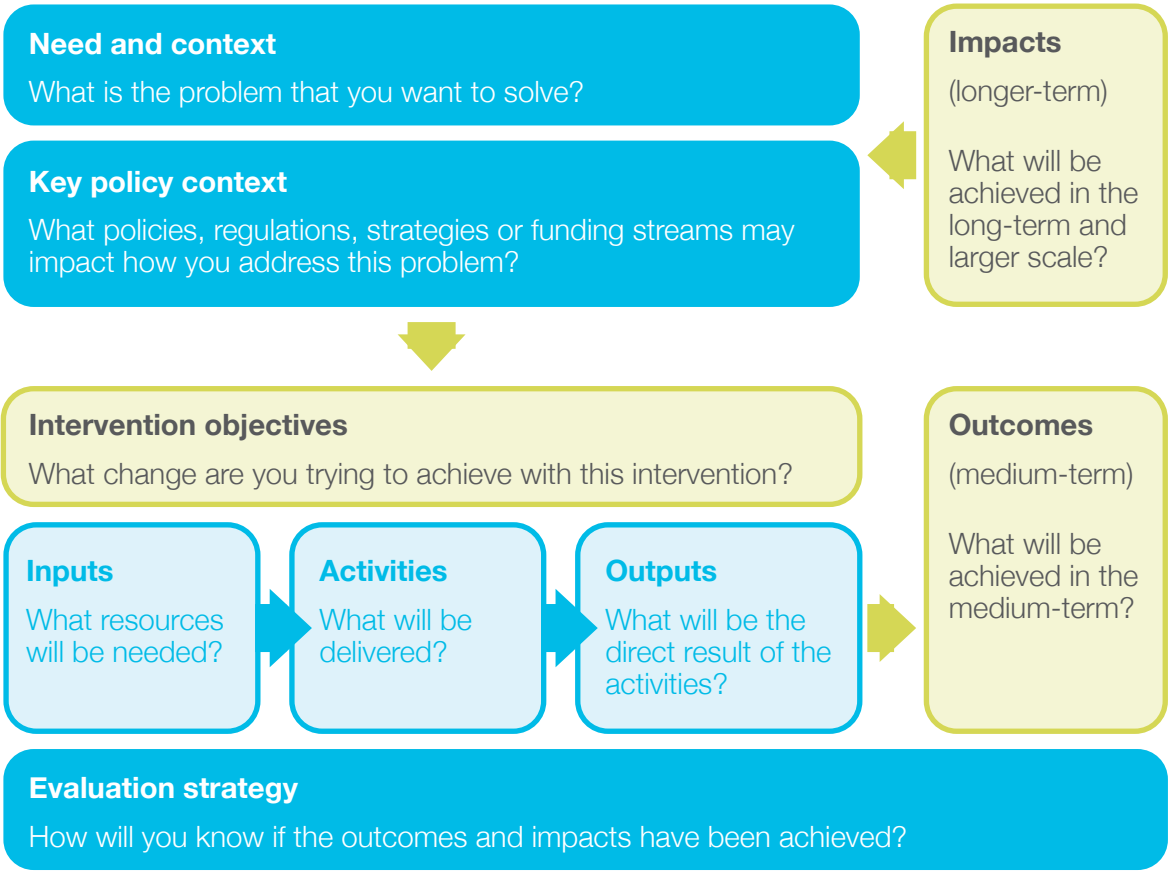
A theory of change explains the rationale for why you think the intervention will achieve the intended outcome. Assumptions and external factors are usually included, as the focus is on exploring the theory and evidence behind the chosen interventions.

Your logic model should be based on a theory of change, using evidence - including research or prior experience - to understand the links between the steps of your logic model, and explain why you chose that mix of inputs, activities, and outputs.

Logic model steps

Both the image above (Figure 1) and the one below (Figure 2) show a logic model. These are two of many logic models templates. You can use these, or similar, templates and modify them according to your needs. But remember, developing a logic model should be a process and not simply about filling in a template.

Figure 2. A logic model template



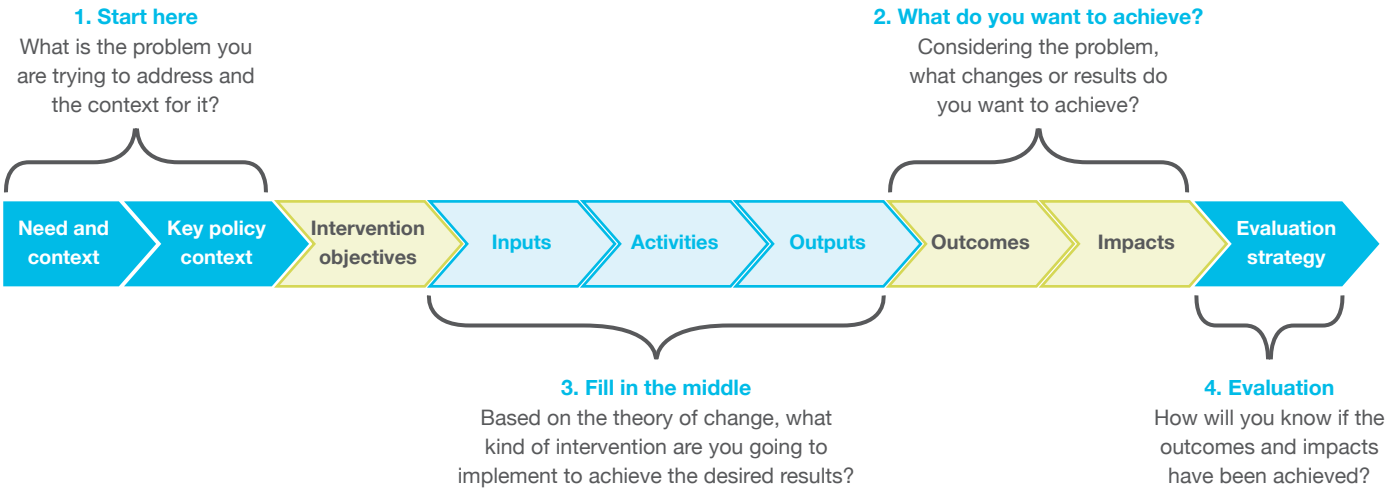
Before you start

Make time: Give yourself and your team enough time to develop your theory of change, discuss the model, complete all the steps needed to produce it and to double check the relationships and assumptions.

You may want to run this process across several meetings. This would also allow you to have separate sessions to think about different sections of the logic model, or to separate out sense checking or testing. This also gives the opportunity to bring in others to provide external challenge.

Start with the end in mind: We recommend starting with needs and context, followed by the objectives, outcomes and impacts – i.e. the results you hope the intervention will achieve. Clarifying these can help shape the intervention and focus on what you want to achieve. We suggest you think these through before you look at the intervention inputs, activities, and outputs, as shown in the image below (Figure 3).

Figure 3. How to approach completing your logic model



Use our example project at each step: Throughout this guide, we include an example to illustrate each step of a logic model, as well as some of the thinking that would underpin that logic model. This example is based on a training programme that aims to reduce unemployment and reduce the skills gaps shortages in logistics and warehousing. This example is simplified to fit in the guide, in practice more detail would be included.

You'll find this example logic model, in full, at the end of this guide. We've also included at the end of the guide a second example using a birthday cake. Using an example outside of your day-to-day experience can help to better understand the logic between steps.

01

Context

Need and context

The first step of a logic model is to identify the problem you are trying to solve. Describe the problem and the context, drawing on relevant statistics and other information that help explain the context.

Ask

- What is the problem you are trying to address?
- What is known about the problem?
- What is causing the problem?
- Who or what does this problem affect?
- What data and information do you have to answer these questions and what is missing?
- What assumptions are you making? Do you have evidence to support them?

> Tip:
>
> Be as specific as possible and include all the relevant evidence and information.

Boosting skills in logistics: Need and context

Example

- There is high unemployment in the area
- Local employers in logistics and warehousing are unable to recruit staff with the skills and qualifications they require

Thinking and evidence

Unemployment is high compared to regional average and previous years

This is based on analysis of unemployment data published by DWP and ONS, as well as skills shortage data from a recent survey of local employers commissioned by the combined authority.

Key policy context

The policy context refers to the policy levers available that can help you solve the problem, including, policies, regulations, strategies, funding, and political commitments.

The policy context is often specific to a point in time, for example a government running a funding competition, or increased political commitment following publication of a new strategy.

Ask

- Is there any funding available? What are the aims or constraints of that funding?
- Are there any central or local government policy levers (e.g. interventions, regulations, or funding) that are relevant or can help to solve the problem?
- Are there local or central political priorities or commitments related to the problem?
- How will these policy levers impact the need or the intervention?

Boosting skills in logistics: Policy context

Example

- UK Shared Prosperity Fund funding
- Devolved Adult Education Budget
- Mayoral priority to reduce unemployment and support more residents into good jobs
- Economic strategy has identified logistics and warehousing as a priority sector

Thinking and evidence

Will seek to align outcomes with those set out in funder documentation.

Other sectors are also facing skills shortages, but warehousing and logistics are a priority in the economic strategy.

02

Results

The outcomes and impacts are what the intervention hopes to achieve – i.e. what will change due to the intervention?

We recommend starting with the end in mind, by focusing on these before setting out the inputs, activities, and outputs. Clarity on what you want to achieve will help select the right mix of activities.

Intervention objectives

The objectives are the changes you are trying to achieve. They define the purpose and goals of your intervention.

The objectives must be aligned with the need identified in the first step, but often they are narrower than need and context, as you may not have the resources required to fully address the problem. For example, the need may be a high unemployment rate and your objective to help a small group of people into work by delivering training.

Tip

SMART criteria can help you define your objectives. The objectives should be:
S - specific
M - measurable
A - achievable
R - relevant
T - time-bound

Ask

- What is the purpose of the intervention?
- Are those goals realistic for the budget and timescales for this intervention?

Boosting skills in logistics: Programme objectives

Example

Support 200 previously unemployed people into work, including 125 into logistics and warehousing roles

Thinking and evidence

This is narrower than the need but will be a positive step towards addressing both the skills shortage and unemployment.

The objectives and outcomes figures align. The activities will need to factor these in, as well as any expected dropout.

Impacts

Impacts are the longer-term, broader, changes produced by the intervention. These are usually linked back to the need and context, so may include political priorities (e.g., "more residents in good jobs")

Because impacts are often quite broad, it will not always be possible to measure these or attribute them to the intervention. However, thinking about them when developing an intervention helps clarify what you are trying to achieve and to test the relationship between the need and the intervention. For example, one intervention may not be able to both create more high-skilled jobs in the region and also help residents move into the labour market - be clear that your intervention cannot do everything for everyone.

Ask

- What are you trying to achieve (long-term and broader objectives)?
- What changes are you expecting to see after the intervention is completed? How do you expect the context to change?

Boosting skills in logistics: Impacts

Example

- More residents in good jobs
- Reduction in unemployment
- Reduction on skills shortages

Thinking and evidence

The impacts set out here reflect the need and context.

The goal to reduce unemployment means that the activities will need to be focused on people out of work, and not skilling-up people in work

Note that 'increasing productivity' isn't included, as that would be much harder to attribute.

Outcomes

Outcomes are the medium-term results or changes produced by the intervention. They should be observable, measurable and easily attributed to the intervention. As outcomes often involve change, they may be expressed as an increase or decrease.

Outcomes are often not within your control, unlike outputs (discussed later). For example, you can deliver six courses (output), but you cannot guarantee that the course participants will move into employment.

Ask

- What are you trying to achieve in the medium term?
- What do you expect to change due to the intervention?
- How will you know if the intervention has been a success? What would be different?

Boosting skills in logistics: Outcomes

Example

- 80% of participants have moved into work (any sector)
- 50% of participants are now working in logistics and warehousing

Thinking and evidence

Before agreeing the specific activities, the outcomes were x% have moved into work. Percentage values were added later.

Percentages are based on learning from previous projects:

- Not all participants will complete the programme or manage to move into work
- Participants may find work elsewhere

Intervention delivery

Inputs

The inputs are the resources to be used to deliver the intervention. They include human resources (i.e. staff time), budget, third-party commitments, infrastructure, and in-kind contributions.

Ask

- What will be needed to deliver the intervention?
- What resources are available to deliver the intervention?
- Do you have the resources needed to deliver the intervention?

Make sure to consider all the resources the intervention will need, even if the intervention may not have pay directly for them (for example, staff time, rooms, and venues, etc.)

Tip

At an early stage, it might just say “staff and funding”, particularly if it is one intervention in a broader programme. Once you have a budget, you can add more detail.

There is no need to include lots of detail in the boxes if you are trying to keep things simple, but make sure you are not making unrealistic assumptions about what is available.

Boosting skills in logistics: Inputs

Example

- £600,000 funding
- Staff time – skills officer, comms team, evaluation lead
- Delivery provider
- Will need businesses to offer work placements

Thinking and evidence

Before the budget was available, this just said "staff and funding."

Learning from previous projects showed that comms team and evaluation lead will be involved throughout.

Recruiting businesses will be key to this project's success; we shouldn't assume they will be involved.

Activities

The activities are what the intervention will deliver. They should generally include a verb as they indicate action, for example **recruit** participants, **deliver** workshops, **create** grant documentation.

This section of the logic model shouldn't look like a task list, but those tasks should be considered as they will have implications for your inputs, and how well you can achieve your outputs and outcomes.

Tip

Go back and forth between the activities and inputs. Have you included all the resources you need?

Ask

- What needs to be done to achieve the objectives?
- What will the intervention do? Be specific.
- Who will deliver these activities?
- Who are the beneficiaries? Based on the targeted participants, do you need to adjust the activities?
- Are these activities relevant? Do they link to the outcomes and the problem? What is the evidence that they are effective?
- Do you have all the resources needed to deliver these activities? If not, you may need to adjust your activities.
- What is missing? What is not needed?

You may want to come up with a list of activities that is bigger than what you can deliver with your inputs and then remove ones that are not a good fit.

Boosting skills in logistics: Activities

Example

- Commission and deliver a six-week course (30 hrs pw)
- Develop a 2-week work placement, matching participants to recruited businesses
- Provide assistance with job search

Thinking and evidence

Evidence from What Works Growth shows that training and work placements are effective in helping unemployed people move into work.

There is evidence that in-work training is more effective than classroom-based. For people not yet in work, we will try a work placement as a substitute.

If we do an impact evaluation, we'll add activities around keeping in touch with the control group.

Outputs

The outputs are what is produced by the activities, often called 'deliverables'. They can be observed and measured in the short-term. Outputs are usually within your control. For example, the number of times you offer the course or the number of participants completing.

Ask

- What do you expect to produce or deliver because of the activities?
- How many of each output would you expect?
- What is the evidence that these outputs will lead to the outcomes?

Boosting skills in logistics: Outputs

Example

- Eight rounds of the six-week course delivered
- 220 participants complete work placements and achieve the qualification

Thinking and evidence

These outputs include both the course sessions and the number who complete the course and qualification.

Lessons from previous projects informed how many participants are likely to complete the training.

If there's an impact evaluation, recruitment will need to be higher.

Remember

Outputs are not what you are trying to achieve, but a key step towards achieving your outcomes and impacts, which address your original need. However, funders may be measuring your success through number of outputs. You will need to balance these two when considering your evaluation strategy.

04

Evaluation strategy

When an intervention is implemented, you want to know if the outcomes and impacts have been achieved. An impact evaluation can be used to establish the effects of the intervention, but it is not always feasible, especially for smaller interventions. Even when an impact evaluation is not feasible, there is always value in capturing good quality monitoring data to help inform future policymaking.

Ask

- What do you want to understand, and what information you will need?
- Will an impact evaluation be possible (i.e. will you be able to randomise selection into treatment or establish a comparison group in some other way)?
- If an impact evaluation is possible:
  - What outcomes do you want to evaluate? Be as specific as possible.
  - What do you want to understand – what works or what works better?
  - How will you establish your comparison group? Will this require any amends to the intervention design (e.g., the recruitment process)?
  - What data will you require? What data will you need to collect and how will you do this?
  - When will you evaluate?
  - How will you evaluate?
  - Who do you need to have involved?

Our 8-step guide to better evaluation can help you think through these questions.

The evaluation strategy is not always included in the logic model. However, considering evaluation can help improve the quality of the intervention design (even if you do not go on to evaluate), by making you think in more detail about how the intervention will work and the assumptions you have made. Thinking about it early also maximises options in terms of evaluation and helps ensure you have the processes and structures in place that will enable evaluation. These are useful to have even if evaluation is not currently possible – as they give options for evaluation if priorities change in the future.

Remember

There is nothing more frustrating than realising you do not have what it is needed to evaluate an interesting, well-received and successful intervention.

Boosting skills in logistics: Evaluation strategy

Example

- Impact evaluation that will randomise participants, tracking participants' and control groups' destinations
- Evaluation will focus on understanding employment outcomes (i.e. whether participants secure employment)
- Data collection will start at recruitment, so will be important for evaluation lead to be involved at the start
- Destinations will be tracked for six months after each course finishes, including those who don't complete the qualification

Thinking and evidence

If we get sufficient budget and support, we will pursue a Randomised Controlled Trial.

Based on similar previous projects, we will likely have sufficient demand for the programme to randomise.

05

Sense check

Once you have completed each section, check the logic between all the steps. This is another chance to test assumptions.

Ask

- Strategic fit:
  - Why do you want to achieve these outcomes?
  - Are the need, objectives and outcomes aligned?
  - Is there evidence that these activities will lead to the outcomes and impacts?
  - Have you considered other activities and found your selection to be the best option?
- Whether it is deliverable:
  - Are the outcomes realistic?
  - Can you run the activities with the inputs you have?
  - Are the outputs reasonable based on the inputs and activities? Can you deliver the outputs based on the activities?
  - Have you considered the full timescales of activities, including preparatory and follow-up stages?
  - Are you making any assumptions on available resource, or when delivery can start?
- Connections between the steps:

Tip

A good way to sense check your logic model is to present it to someone (i.e. tell the story).

Discussions and questions can help to improve your logic model.

Tip

Our evidence reviews and toolkits are a good source of information and can help you find the evidence to develop and sense check your logic model. They are available at: https://whatworksgrowth.org/evidence-topics/

- Do the connections between the steps make sense?
- Is there evidence to support the connections between the steps?
- Is there anything missing? What can be dropped?
- What assumptions are you making?

Our logic model checklist can help you sense check your logic model.

> ### Remember
>
> Your logic model will likely change as you develop the project. For example, you narrow the scope based on a smaller budget, or must adjust to different timescales. As you get more clarity on inputs and activities, the outputs and outcomes may also need to be adjusted.

Key things to consider when developing a logic model

Gather the evidence: Use all the information available (data, diagnostics, evidence reviews, etc.) to ensure the logic model is evidence-based, internally consistent and the relationship between the steps are logical and realistic. Our evidence reviews and toolkits are intended to help with this process. For more information visit: https://whatworksgrowth.org/resources/

- **Keep it simple:** You are working in a complex area, where no one intervention will solve all the issues, but a simple logic model can help give clarity on your intervention.
- **Start early:** If possible, develop a basic logic model right at the start to outline objectives and initial thoughts on what activities you will need.
- **Collaborate:** Give colleagues the opportunity to talk through and unpick the mechanisms expected to play out through the proposed intervention - just explaining the intervention to new people or asking ‘why’ and ‘how’ can really help. You may want to bring colleagues not involved in the project as a critical friend to look for assumptions and test your logic.
- **Be specific:** Including details on how and why you expect the outcomes and impact to be met helps you better test assumptions.
- **Go back-and-forth:** Come back to the steps and check them a few times during the process.
- **Never too late:** It is never too late to develop a logic model. You can use it to think about lessons learnt, to adapt your intervention partway through, or shape your messaging.

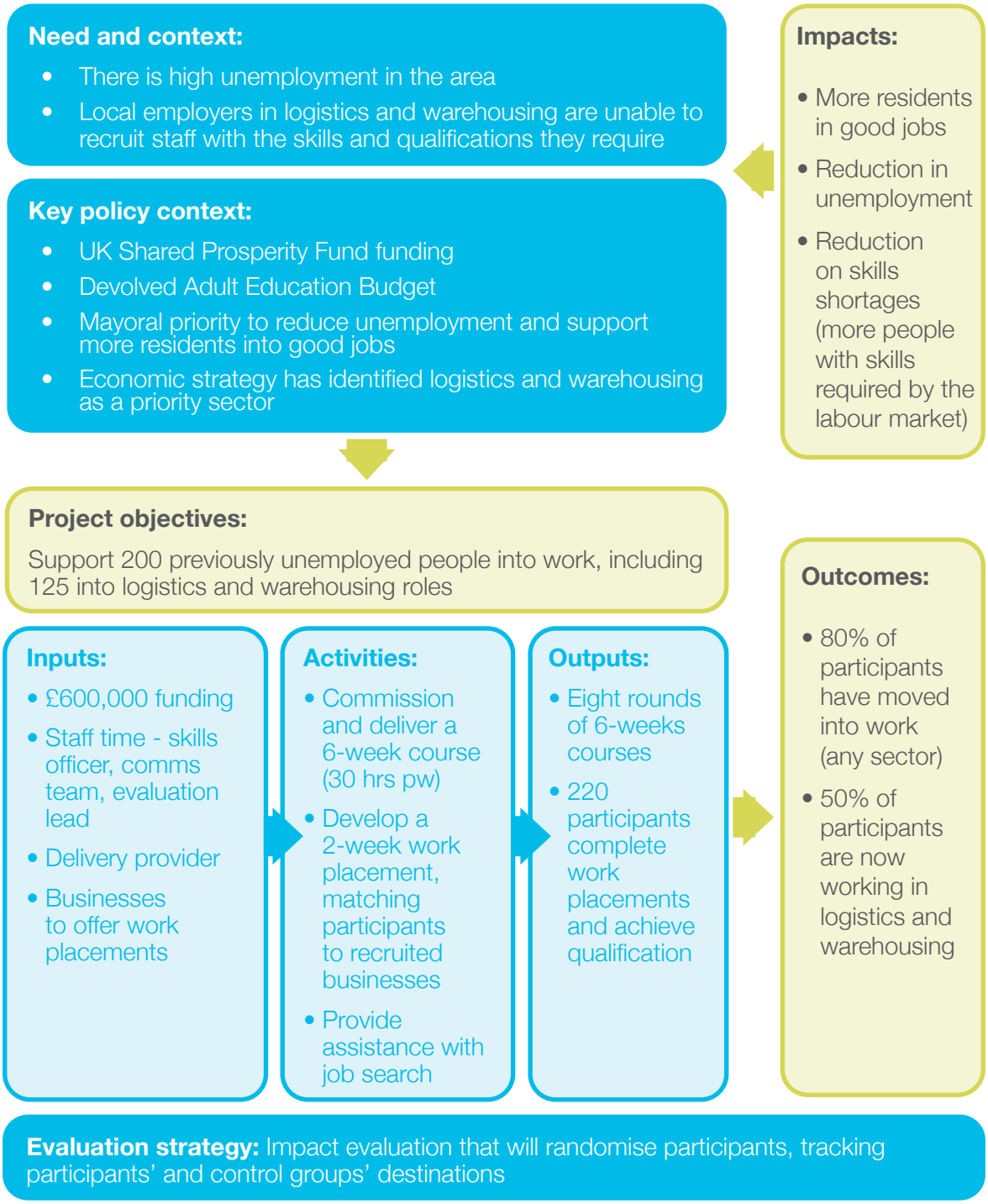
Further information

You can find further information on logic models at:

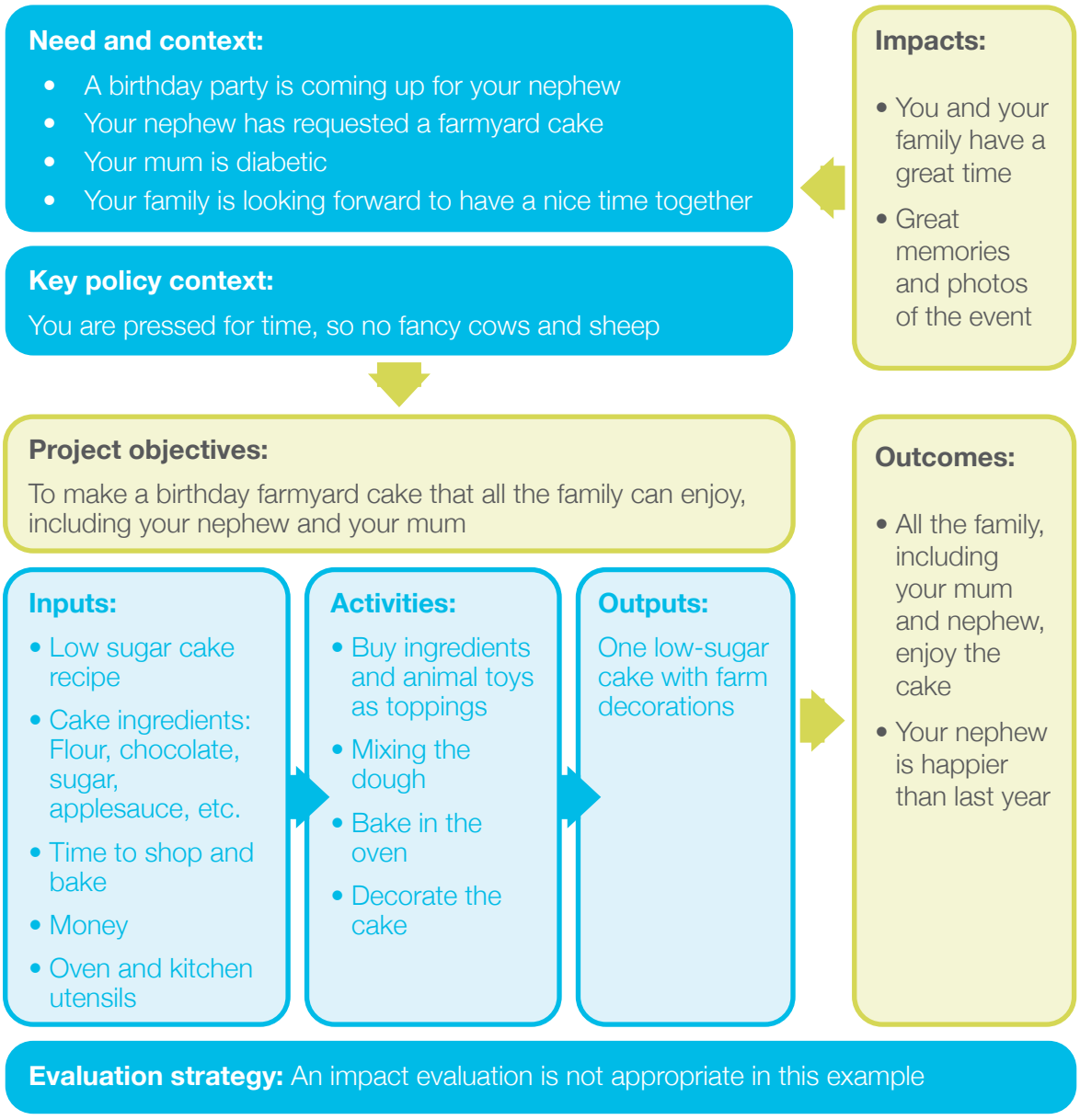
- Logic model training: https://whatworksgrowth.org/events/making-use-of-logic-models-practical-training-for-local-economic-growth/
- Powell and Henert, *Developing a logic model: Teaching and training guide*. University of Wisconsin, 2008. See: https://fyi.extension.wisc.edu/programdevelopment/logic-models/
- Early Intervention Foundation, Running a Theory of Change Workshop: A quick reference for workshop facilitators. Available at https://www.eif.org.uk/resource/running-a-theory-of-change-workshop-a-quick-reference-for-workshop-facilitators

Examples

Example 1: Training programme



Example 2: Birthday Cake



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