



Your guide to using **Logic Models**



Introduction

Purpose of this guide

This guide has been commissioned by NHS England, to provide support on logic modelling.

This guide is split into two sections - theory and practical use.

- The theory sections provides information about the background to logic modelling, its history, types and principles.
- The practical section provides templates and tips to help you build your own logic model.

Why use Logic Models?

Major transformational change is being planned and driven forward, to meet the challenges set out in the NHS Five Year Forward View and the ambition for integrated health and care by 2020.

The scale of the challenge means that no organisation will be untouched, every partner whether they are responsible for commissioning or delivery, will be involved.

And change at this scale and pace, across whole systems, will inevitably be visible and tangible to the public, patients or service users and their carers.

Programmes of change will be set up to fail if the fundamental thinking or design is flawed.

A logic model isn't a magic wand, but it will help with both the thinking and the planning, and help avoid some of the common pitfalls.

Logic models are simple tools which allow a systematic consideration of the key components of any change and the relationships between them and the overall vision.



[Video: What are the Benefits](#)



[Video: What are the Pitfalls](#)



[Video: Importance of Logic Models](#)



	Theory Section			Practical Section			
Introduction	What is Logic? ▾	The Logic Model ▾	Getting Started ▾	Constructing the Model ▾	Measurement & Evaluation	Enablers	Resources
Definition and Origins		Good Logic & Bad Logic		Key Concept - If Then		So What? Hypothesis & Theory	

Theory Section - What is Logic?

Definition and Origins

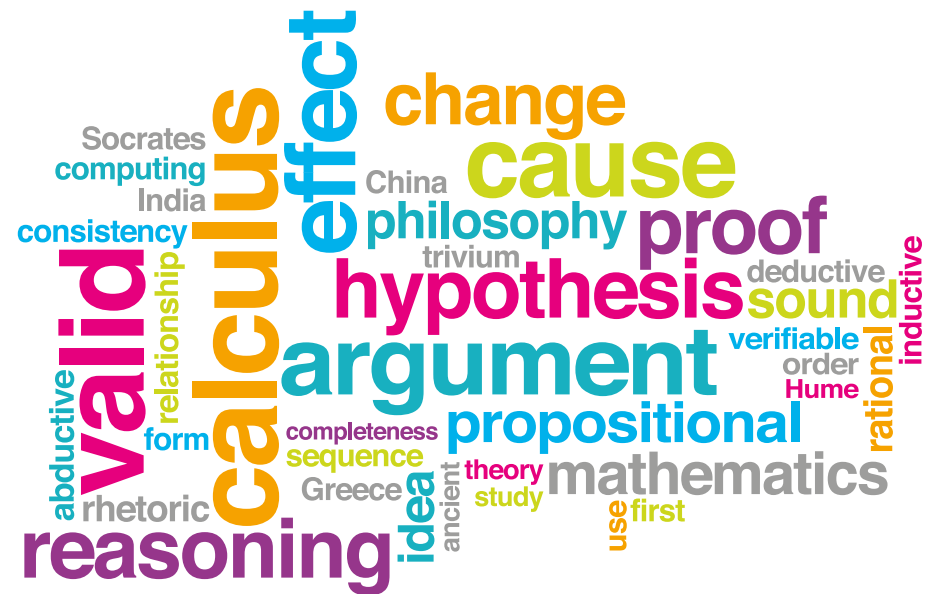
Logic in the broadest sense refers to a way of thinking that is based on reason and good judgement. It usually refers to thinking that is both valid and sound.

It also has a more formal background, as a discipline or school of thought, reaching all the way back to ancient Greece, India and China. The Word itself is greek in origin

It even can be described as a 'science' and is studied as part of mathematics and computing, especially calculus and will also be found in the study of philosophy in relation to epistemology (thinking about thinking!).

When studied as a formal science it is a system of codification using proof and inference.

Where deductive reasoning is being used, for example in making an argument, a proposition or a hypothesis, then logic is used to provide a systematic consideration of the components - and the links between them. As such, certain principles can be applied, to test the validity and strength of the logic and therefore the soundness of the overall argument.



“The art of thinking and reasoning in strict accordance with the limitations and incapacities of the human understanding”

Ambrose Bierce



Theory Section - What is Logic?

Good Logic Bad Logic

There are different kinds of logic and different kinds of reasoning. There are even 'laws' of logic which have been developed within the fields of philosophy and mathematics, to help determine what 'good' looks like. If you are interested in more information see the resources section of this guide.

But in broad terms much of this can be summarised very simply - by thinking about good and bad logic.

It is often easier to start with bad logic as this is easy to recognise and identify, in everyday life. Those times when a flawed argument is being put forward, because it is biased, inaccurate, incomplete or generalised. They are sometimes called logical 'fallacies'.

A circular argument is a kind of fallacy and easy to fall into. Programmes and projects often build up their own self-insulating logic. Actions thought to be right at one point may not be right later down the line - but once action is defined in a plan it is often not questioned.

Good logic is the reverse of the above. Where arguments or hypothesis are made with minimal bias, or at least where the bias is recognised and accounted for. And with attention paid to the completeness, consistency, accuracy and context.

In the scientific community, findings are subject to some common rules which follow these principles - was a study comprehensive enough and can it be repeated?

In Project and Programme work, the principles fit very well with the use of '**SMART**':

- S** Specific
- M** Measurable
- A** Achievable (is it repeatable)
- R** Realistic (is it biased or consistent)
- T** Timed



[Video: Good Logic and Bad Logic](#)

Good logic, bad logic...



- | | |
|--|---|
| <ul style="list-style-type: none"> > Valid and sound > Can be reasonably tested and verified > Consistency and completeness > 'Follows' - sequential an casual > Is acceptable as 'proof' > Based on a hypothesis / Theory of Change | <ul style="list-style-type: none"> > Invalid / negative premise > Logical fallacies - do not survive testing > Incomplete - 'logic gaps' > Non sequiturs - doesn't follow > Not acceptable / cannot be proven > Flawed assumptions / Zeitgeists |
|--|---|



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Theory Section - What is Logic?

If... Then

This is a key concept in logic - and right at the heart of logic modelling.

At its simplest, this is the crucial link between the components of any argument. If I do this... then I will get this. If this happens... then that will happen.

“If I get some milk then I can have a white coffee today”

“If I leave work on time then I can go for a swim”

“If I have time to finish this report then I will meet the deadline”

When we make a statement like this we have an end goal in mind - and pick out the activities that are going to make it happen.

When used in programme planning and evaluation, the ‘if then’ construct makes the link between the resources and activities used and the benefits expected:

- Certain resources are needed to operate your program.
- **If** you have access to them, **then** you can use them to accomplish your planned activities.
- **If** you accomplish your planned activities, **then** you will, it is hoped, delivery the amount of product and / or service that you intended.
- **If** you accomplish your planned activities to the extent intended, **then** your participants will benefit in specific ways.
- **If** these benefits to participants are achieved, **then** certain changes in organisations, communities or systems might occur under specified conditions.

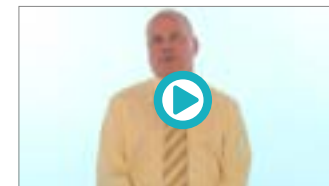
WK Kellogg Foundation - Logic Model Development Guide
2004

The basis of logic modelling... Logic

If x then y

The ‘if’ tells you this is about conditionality, and is related to probability - it is about creating a model of reality. This can be measured and tested/evaluated (but it’s not an exact calculation).

‘Then’ describes the effects you intent to have by doing the things you define in ‘if’. These are the measurable outputs and products - as well as the wider impacts, outcomes and system changes.



[Video: If X Then Y](#)



Theory Section - What is Logic?

So What? - Hypothesis and Theory

“If I had an hour to solve a problem I’d spend 55 minutes thinking about the problem and 5 minutes thinking about solutions.”

Einstein

The hypothesis is also known as the rationale or the ‘case’ for the change - it is the justification or argument for changing something from its current state to a different future state. It is the ‘so what’.

“A Hypothesis is a tentative statement that proposes a possible explanation.”

This is usually framed in terms of the problem that needs to be solved, or sometimes, the opportunity. This can be a whole stage in itself - taking the form of a scoping, viability or feasibility study for example, to understand the scope, scale and nature of the situation.

In academic circles, it is the hypothesis development stage that informs, and often secures funding for, the subsequent research or evaluation.

In health and care it is equally important - increasingly this stage is linked to the drawing down of funds such as those linked to the Sustainability and Transformation Plans or more locally in Business Cases. It plays out into operational settings as well, with contract negotiations often involving some level of justification being put forward, from the commissioning or the provider, for a variation in contract finances.

You may have a group of hypotheses - which together form a theory. Or the results of a set of hypothesis that have been tested, giving you a general theory. For example, a particular intervention in healthcare may have been ‘proven’ to work through implementation and subsequent evaluation - and will become ‘policy’ or ‘good practice’. At an individual organisation level this can also be a pilot or test phase that has been successful, leading to wider implementation or rollout.

“Theory is a generalised explanation based on a larger extrapolation”



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Theory Section - What is Logic?

So What? - Hypothesis and Theory

At this stage, you will be thinking through ‘what happens if we do this?’ as well as ‘what happens if we don’t do this?’. Change is usually only favoured if the ‘do nothing’ comparator can be proven to be ‘worse’ than the proposed change, usually in socio-economic terms.

When developing a hypothesis it is helpful to have certain checks and balances in place. This is sometimes referred to as ‘OPV’ - other people’s views.

Modelling builds on and relies upon the connections and relationships between evidence, knowledge, views and vision. So it is an important reality check to engage with people who have a stake in the end result. It is important for the acceptability and plausibility of any hypothesis. Who will benefit? Who will disbenefit? You can see how this links to equality impact assessments, which you would commence at this early stage - to give yourself a structured way of thinking through the impacts, particularly on protected groups.

“Faith is an island in the setting sun. But proof, yes proof is the bottom line for everyone”

Paul Simon, lyrics to ‘Proof (1990)

A useful and simple tool for proving a hypothesis is the ‘Five Whys’ - this could be used as an engagement opportunity, encouraging stakeholders to ask and answer the five whys for the proposed change. For example a brainstorm might look like this as a starting point:

If we integrate acute and primary care then we will improve the population’s health and wellbeing	
Why?	Because there is evidence that integration leads to better health outcomes and greater efficiency
Why?	Because integration reduces duplication and allows for a better use of the available resources
Why?	Because this in turn will allow for greater targeting of resources in accordance with levels of need
Why?	Because targeted care prevents exacerbation of health and care problems and aids self management
Why?	Because it fits better with the way people live their lives and their natural preferences and behaviours



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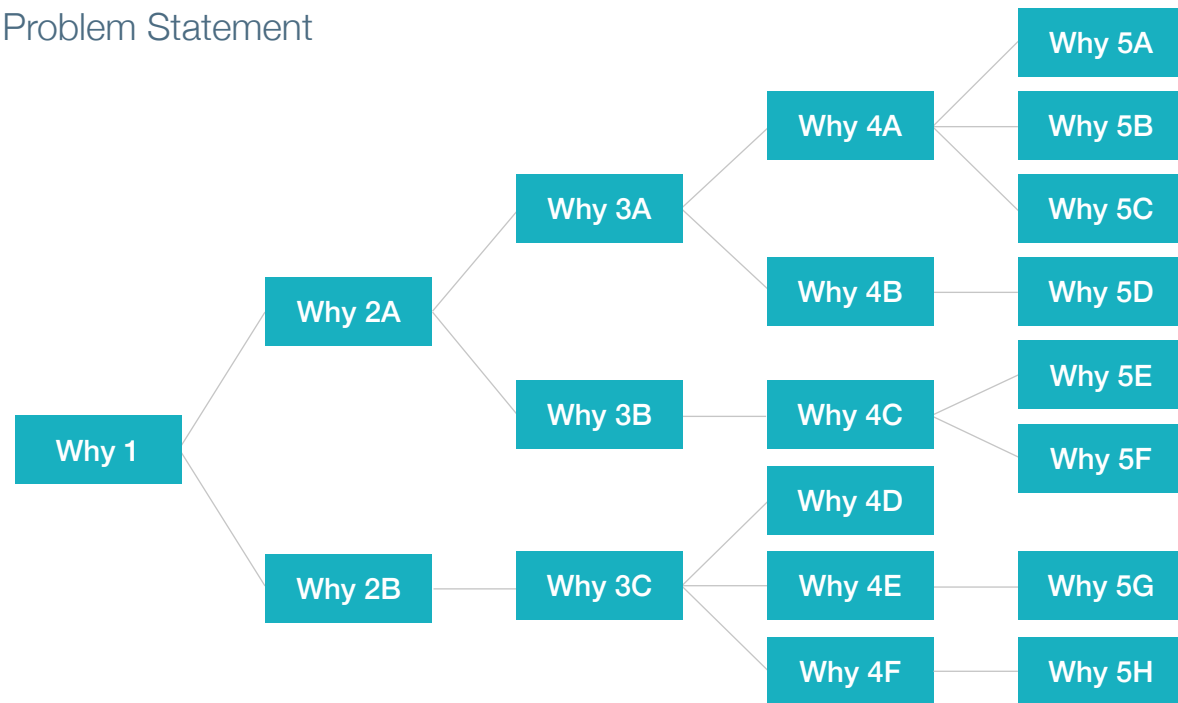
Theory Section - What is Logic?

So What? - Hypothesis and Theory continued

This can be refined further and linked into a 'hypothesis tree' as the various elements are separated out and the causal relationships are clarified:

This tool helps to elicit challenges to the hypothesis and shake out any flaws in the argument, at an early stage. The 'Hypothesis Tree' is useful if there is a main proposition, supported by sub-statements.

5 Why Analysis Problem Statement



Theory Section - **The Logic Model**

What is a Logic Model?

“A logic model is a graphic display or map of the relationship between a programme’s resources, activities and intended results, which also identifies the programme’s underlying theory and assumptions”

Kaplan and Garrett, 2005

The history of logic modelling as we know it now can be traced back at least to the 1960s where it was emerging in the fields of computer science, engineering and later crossing over into other management fields and academia. An internet search will produce many examples of its use in Non Governmental Organisations and Public Sector environments.

As the Logic Model enables the components of a programme to be set out in a consistent and comprehensive way, it is often used in evaluation. It provides the framework that can then be used to judge success against.

The HM Treasury Magenta Book sets the ‘industry standard’ for logic modelling in evaluation (and the Green Book is useful if you are using it for appraisal). The Magenta Book draws on the Kellogg logic model.

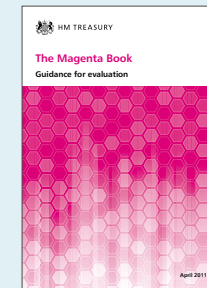


[Video: What is a Logic Model](#)



[Video: What makes a good logic model?](#)

Resource downloads



[HM Treasury
The Magenta Book](#)



[HM Treasury
The Green Book](#)



[Kellogg Logic Model
Development Guide](#)

Theory Section - **The Logic Model**

What is a Logic Model? continued

The Kellogg Logic Model Guide shows how the tool can be used for programmes and projects, as well as evaluation - as it makes the link between programme resources, activities and benefits, using the fundamental 'If Then' structure:

Certain resources are needed to operate your program.

If you have access to them, **then** you can use them to accomplish your planned activities.

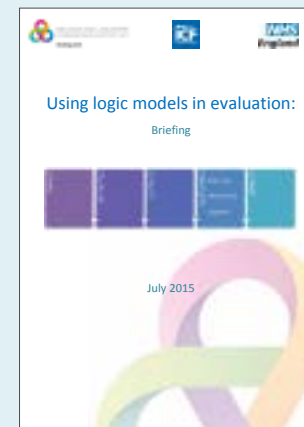
If you accomplish your planned activities, **then** you will, it is hoped, deliver the amount of product and / or service that you intended.

If you accomplish your planned activities to the extent intended, **then** your participants will benefit in specific ways.

If these benefits to participants are achieved, **then** certain changes in organisations, communities or systems might occur under specified conditions.

WK Kellogg Foundation - Logic Model Development Guide 2004

Resource download



[Using logic models in evaluation](#)

The MLSCU Strategy Unit have also carried out a literature review of logic models in evaluation, as part of support commissioned in 2015 for the NHSE Vanguard programme. This provides further information on the background, types of logic models and their use



Theory Section - **The Logic Model**

What is a Logic Model? continued

The promotion of logic modelling recently may in part be to address the 'logic gap' that can occur in large scale change, flagged by The Kings Fund amongst others:

“The main problem I see in most BCF areas is that the logic [is] often underdeveloped and or flawed, usually because system leaders have not done enough in the first instance of really thinking through the actual changes in service delivery and how these can actually change the way the system operates. Too often the initial focus is on funding and organisational issues.”

Dr Nick Goodwin, International Foundation for Integrated Care, The Kings Fund

Logic modelling is therefore used to introduce greater 'programme logic' and assist with the design of changes.

Designing a programme demands answers to difficult questions:

- What problem(s) are we attempting to address? Why should we intervene?
- What difference are we ultimately trying to achieve?
- Given this, what specific changes do we need to see? (for whom, when, etc)
- So what activities do we think will achieve these outcomes? Why and how do we think that these activities will achieve these results?
- What resources do we need to implement our activities?
- How will we measure progress?

Strategy Unit, Logic Modelling Training Materials for Vanguards, 2015

Resource downloads

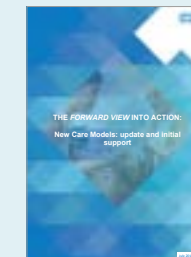
Logic Models are recommended in recent NHS England / Monitor publications and further guidance can be found in these:



[Monitor - Strategy Development toolkit](#)



[How to... understand and measure impact](#)



[New Care Models: update and initial support](#)



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Theory Section - The Logic Model

Principles

This is where the logic theory links to logic modelling. The fundamental basis of logic modelling is the application of the 'If Then' principle referred to earlier.

“Social programmes are... products of the human imagination: they are hypothesis about social betterment. Programmes chart out a perceived course whereby wrongs might be put to rights, deficiencies of behaviour corrected, inequalities of condition alleviated. Programmes are thus shaped by a vision of change and they succeed or fail according to the veracity of that vision.”

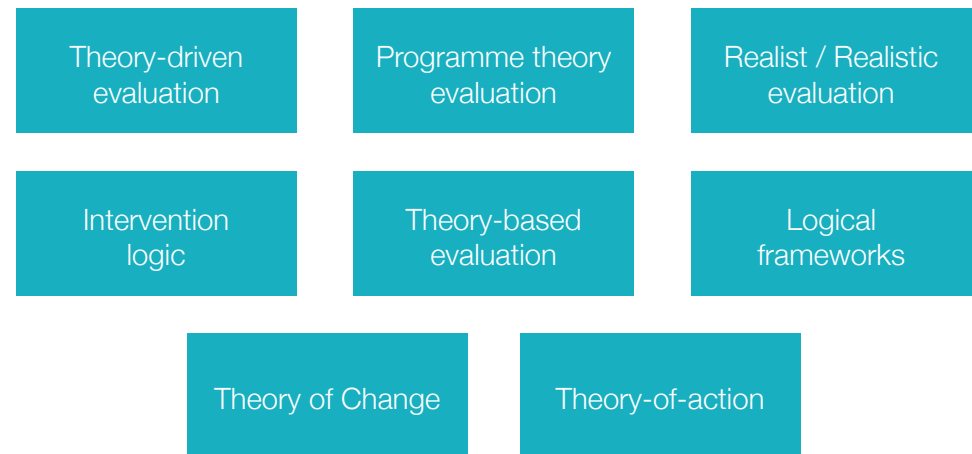
Ray Pawson and Nick Tilley 'Realist Evaluation' (2004)

All programmes are 'theories incarnate'. Not theory in an all encompassing high level sense, but, in the jargon, 'middle range' theory.

When applied to programme work, a theory is a description of the ways in which Intervention X is expected to achieve Effects Y. Which is the same fundamental use of 'If Then'.

This application enables the theory of the programme to be articulated, untangled and demystified.

A logic model will only be as good as the logic and thinking behind it. But as Captain Kirk said to Spock, "Logic alone cannot deal with unpredictable human emotions" - modelling builds on and draws out the connections, relationships and assumptions between evidence, knowledge, viewpoints, perceptions and vision. It makes more explicit the interdependencies.



Theory Section - **The Logic Model**

Principles

 continued

Logic models draw out the thinking and describe the action needed to make the change, by applying the 'If Then' filter to the theory and its linked activities, it is possible to start to put the above complexity into a more linear relationship, to sort out what matters to what:



- If we deliver our training package, then we will improve the care planning skills of care homes staff...
- If staff have better care planning skills, then they will be more able to cope in the event of a crisis...
- If staff are more able to cope in a crisis, then there will be fewer unplanned admissions to hospital...
- If there are fewer unplanned admissions, then more people will die in a setting of their choice.



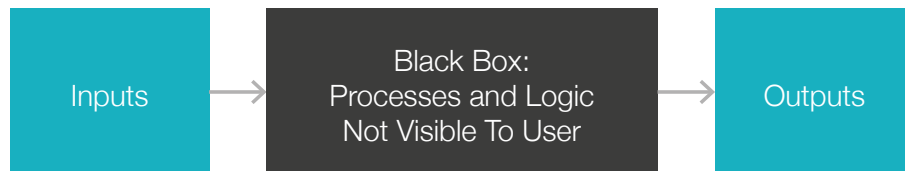
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Theory Section - The Logic Model

What makes a Logic Model different to a Plan on a Page?

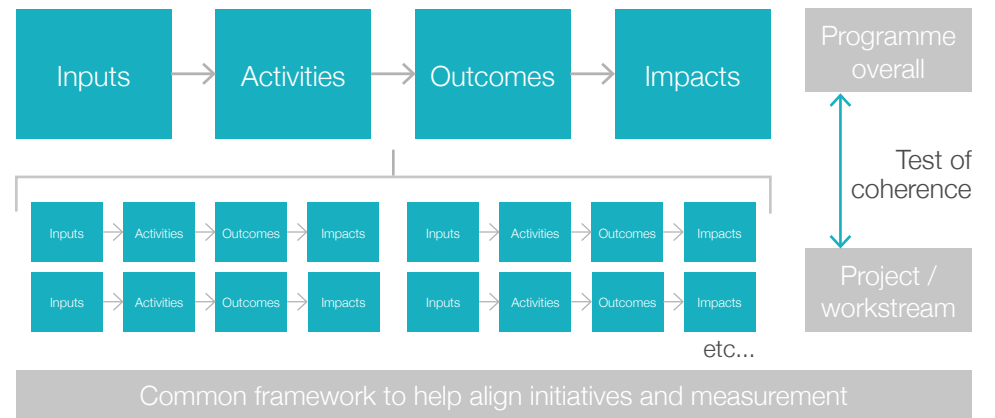
It could be argued that some NHS 'Plan on a Page' or System Models, or even Models of Care diagrams, are examples of logic modelling. To an extent, they include many of the components that are needed for logic modelling.

However they are often 'black box' models, which means that they often show the intended end results and some of the main input components like major programmes of work, but they don't show what happens in the middle - how the inputs get turned into outputs:



With some adjustment they can be used to show the way logic flows from the thinking, through the component parts, to the intended benefits.

Whilst there isn't one single template for a logic model, there are common elements, that take it from being a plan on a page to a model:



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Practical Section - Getting Started

Where do I start?

A logic model can be used at various points in a planning process, but it is often helpful to do it at the start, and then keep building on it and reiterating it, as more becomes known. You are using a simple template to iterate what is important - to codify what can be counted, and what counts.

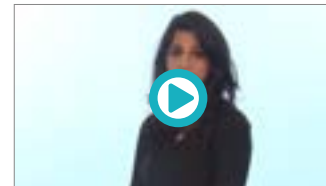
For evaluation it is used early on as part of the hypothesis development and iteration. Or sometimes, for retrospective exercises, it is done as part of the clarification process to understand which parts of something it would be helpful to measure, where they have already happened.

For the Vanguards, it was used to help set out the value proposition, similarly it can be used as part of a Business Case or Case for Change. It is also being used in Urgent and Emergency Care Plans to set out on one page the key elements of a 5 year plan.

It is usually best done as a collaborative process, as it is rare for all the knowledge required to be found just in one place or one person's knowledge. And it is helpful to 'proof' the logic using other people's views.

In all cases, the first version you produce will almost certainly be draft. It will open up more questions than it answers. It will highlight gaps in information that you need to dig out, and people that you need to engage with, to get a complete and accurate model.

Ideally, you will build this into your planning and review cycle to continue to verify and revise the model along with the evolution of the project and programme.



[Video: What will work for me?](#)



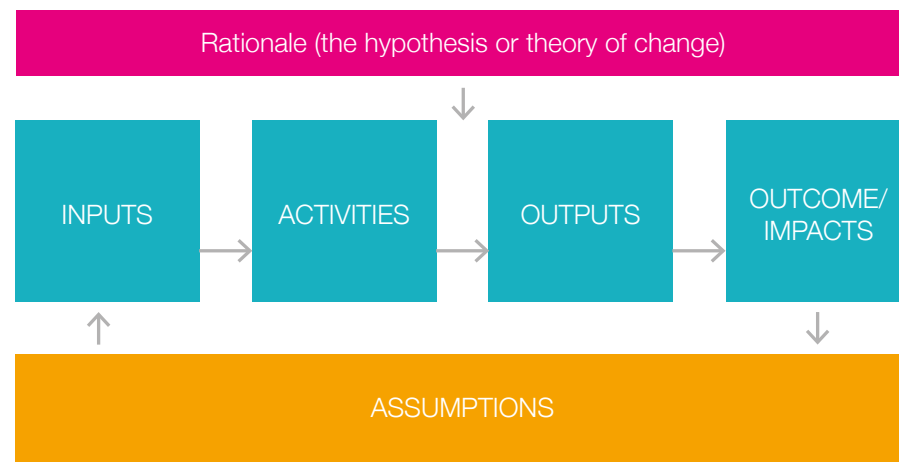
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Practical Section - Getting Started

The Basic Template

There is no one single template. There are principles and common components, as set out in earlier sections of the guide and the associated videos. It is scalable from small projects through to major complex 'theory of change' plans.

You can build your template using the basic template provided in this guide, to start with - and then adapt it to suit your purpose, as you learn what works best for you.



Before you start

Develop the hypothesis and assumptions in initial draft first, at least as a 'working' hypothesis' to give the basis for the model. Everything should follow from the intended results and be directly related to that and directly contributing to that.

You should also decide what your model is for and what level it is at. Is it a system model for example for a whole Sustainability or Transformation Plan; is it a programme model for example for a Vanguard or a BCF; or is it a scheme or intervention model. It maybe a detailed 'sub' model for elements within these.

This helps with making a judgement call on the level of detail and the language appropriate to your purpose.

For example a system model will 'talk about' populations, programmes and leadership whereas a model of a Neighbourhood Scheme will 'talk about' the teams and care processes that are targeted at certain groups or cohorts in the local population.

A useful principle is go from broad to narrow - it is better to include the wrong things at first than to inadvertently exclude the right thing!



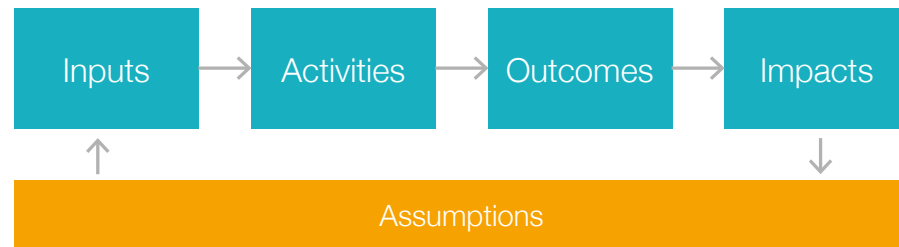
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Practical Section - **Getting Started**

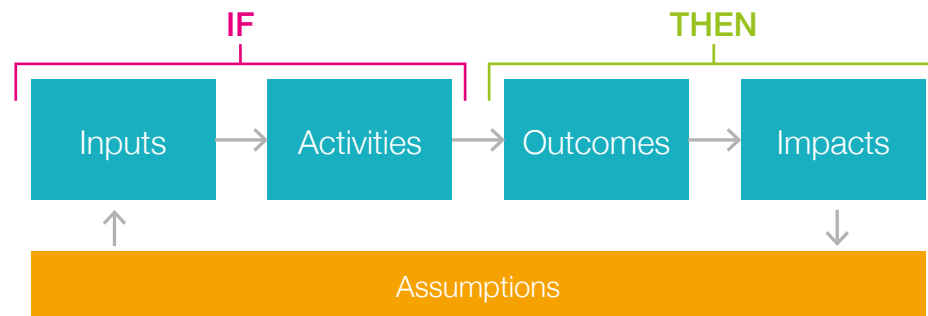
The Basic Template continued

A Basic Template

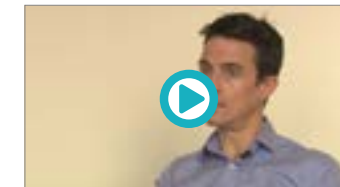
There isn't one single template for a logic model - but there are some key components. Many of the logic models use the following approach in terms of basic components and layout:



Note the way that the 'If Then' principle is playing out in the basic model:



[Video: What people find hardest](#)



[Video: What should be included](#)



[Video: What should be left out](#)



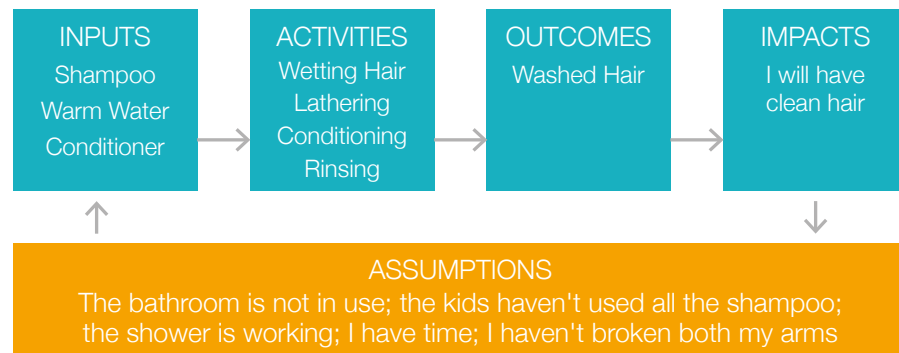
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Practical Section - **Getting Started**

Warm Up Exercise

If you haven't used a logic model approach before, try populating the basic template with some simple examples such as moving house, or washing your hair:

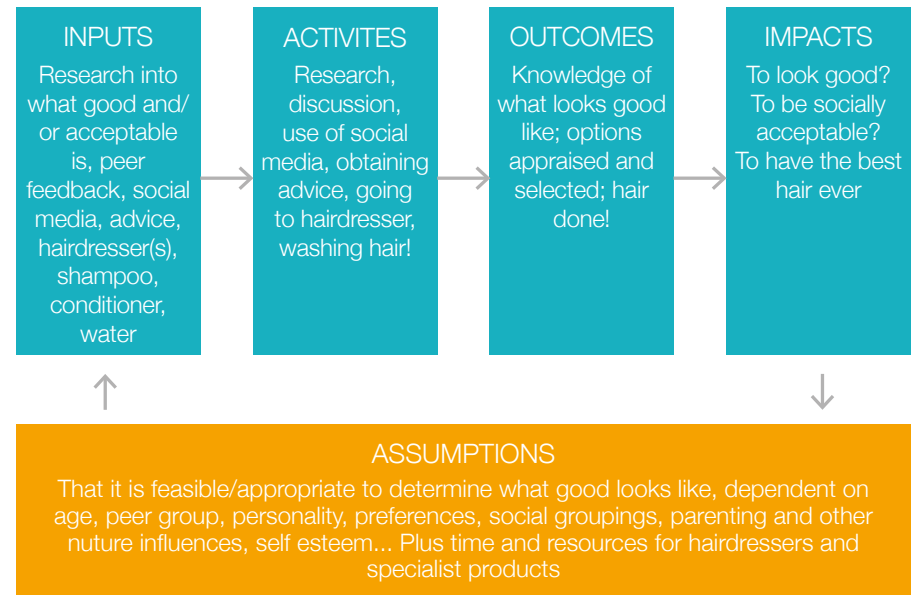
Situation - I want to wash my hair



Even with this simple example you can see how it starts to identify what counts where:



And you can get into many layers of complexity...



Practical Section - **Constructing the Model - Components**

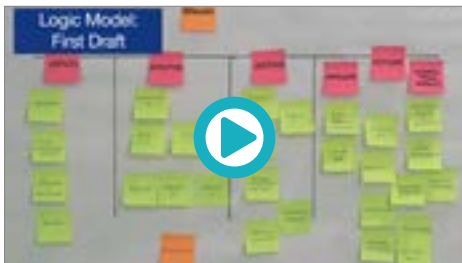
Constructing the Model - Videos



[Video: Start at the end](#)



[Video: Terminology](#)



[Video: Walkthrough](#)



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Practical Section - **Constructing the Model - Components**

Impact and Outcomes

Start with the end in mind. Everything else flows from the outcomes so its important to spend time on them.

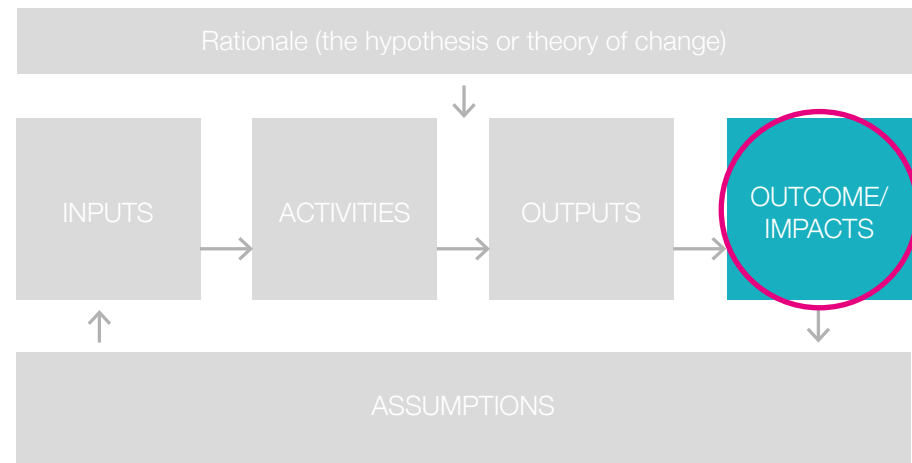
Mapping or harvesting outcomes is a good collaborative exercise, generating a shared understanding of the end goal and what success will look like. This helps to avoid any logic gaps.

Think broadly - it is better to include everything, than exclude something that may end up being the most important outcome! Approach this from as many perspectives as possible and involve a cross section of professionals, end users and stakeholders. What matters as an end goal will differ depending on who you ask.

Draw on the evidence base for your particular scope - what knowledge do you have about what improvement opportunities exist, what are the key gaps in care or quality and how will the end result improve these?

You might find it helpful to frame your outcomes as 'immediate/ short term' and 'medium to longer term' outcomes.

Examples of outcome frameworks including the NHS Outcome Framework, ASCOF (Adult Social Care Outcome Framework), Public Health Outcome Framework, BCF Metrics, Patient experience and activation measures and clinical outcomes. You may also be considering longer term changes such as system and lifestyle impacts, behavioural / cultural/ perception changes.



Practical Section - Constructing the Model - Components

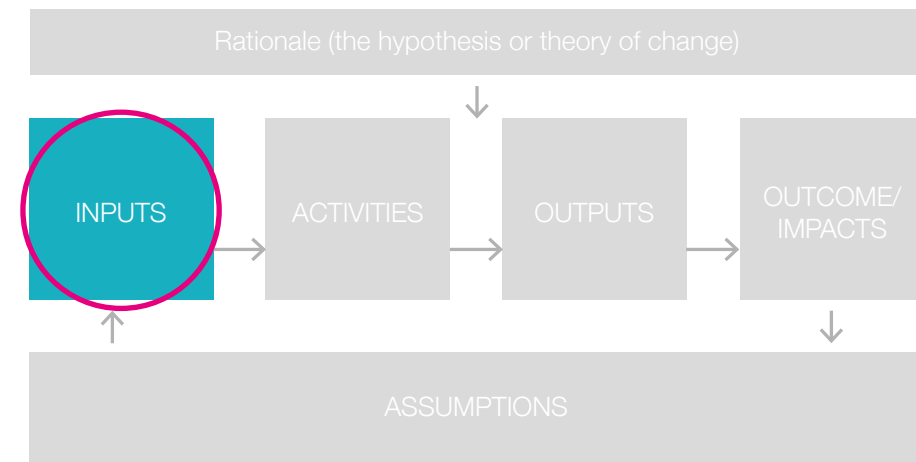
Inputs and Activities

The inputs and activities are usually generated after the outcomes - so that each element is directly related to the end outcome(s).

They can be generated separately or concurrently, both ways can work and a combination may suit you depending on the scale of your model and its detail. You might for example want to quickly do a storming exercise to list all the things that go into these categories and then spend more time on each one on its own. Often they are interdependent.

Inputs are the resources required - sometimes these are split into:

- Financial: existing investment; specific funding stream(s), contract values etc
- People: workforce/ capacity/ capability; community capacity and networks; end users
- Estates: buildings, sites and can also be 'places' or geographies/ communities
- Technology: ICT systems as a whole; and point of delivery systems and vehicles
- For policy related work inputs often include National Guidance and requirements



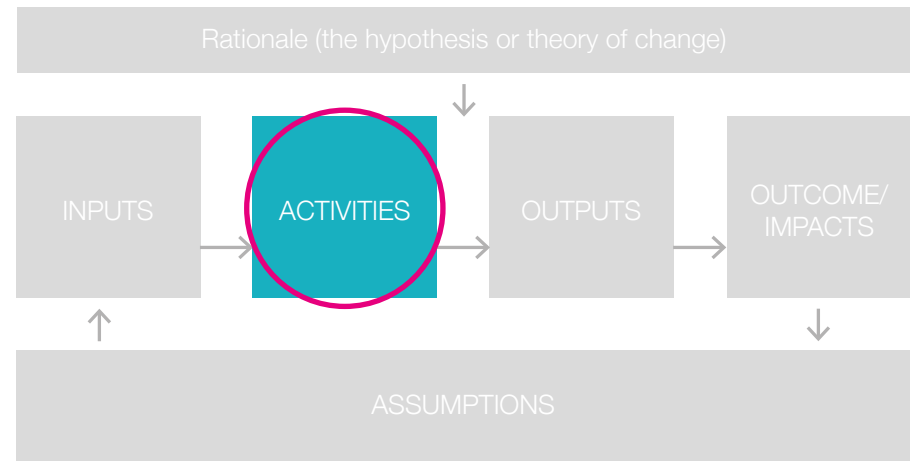
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Practical Section - **Constructing the Model - Components**

Inputs and Activities continued

Activities are the actual changes that will be made. Often these are the things you would usually track with Project and Programme management methods - the actions, decisions and milestones for example. Remember this is the “if” part of the model - if you do these things, then you will get the result. So you are looking to identify exactly what these things are in this section of the model.

Some models include processes within activities and others separate them out. You might want a specific focus on processes, by giving them their own box, if you are modelling something where LEAN principles are important (such as a CIP or QIPP scheme). Equally if you developing the quality not just the provision of care, specificity about process is helpful.



- | | | | |
|-------------------------|-----------------------------------|----------------------------------|---|
| Programmes/
Projects | Analysis,
Modelling,
Design | Procurement,
Contracting | Clinical &
Stakeholder
Engagement |
| Schemes/
Initiatives | Specification | Implementation
& Mobilisation | Interventions,
Service Activity |



Practical Section - Constructing the Model - Components

Outputs

Not all logic models have outputs as a separate component to outcomes. But it can be useful if you want to distinguish the products / deliverables of the change(s) as well as its effects.

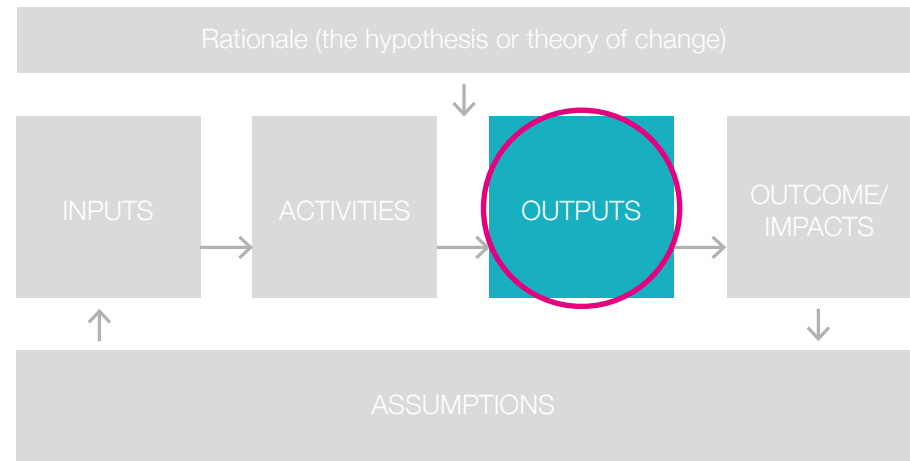
If your model is about a service development particularly if that involves any changes to estates or materials then it can be useful to include outputs linked to your configuration management planning. What will be physically produced or delivered?

Equally, if your model is for a change where the end result is visible to end users (patients, carers, professionals) then it can be helpful to model how the change will be experienced. What will the end user get?

Outputs can be tangible - things you can hold. Products such as aids or devices, information materials, assistive technology such as alarms, agreed specifications and/or Capital developments / alterations.

They can also be intangible - and this can often impact most on the experience of change. Intangible outputs include; provision (or change) of service, availability of clinical advice and support and change in referral routes or booking procedures.

In all cases, they are the quantifiable end product of the activities and inputs - and a major step in the direction of the overall change result that is described in the Outcomes or Impacts. In many cases they are the 'milestone deliverables'.



Practical Section - Constructing the Model - Components

The Whole Model - Check and Refine

You will shape and re-shape your model, crafting it and homing it before it feels appropriate.

Be self-critical and test your results: does the model seem plausible? Ask yourself:

- Are you using the language of change - reducing, improving, increasing, better, worse etc?
- Do the assumptions underpinning the model seem sensible?
- Does it flow reasonably well from the outcomes? Does anything jar or stand out?
- Will the activities generate the outputs you have described?
- Are the inputs sufficient to carry out the activities - are they too much?
- The model is not a programme or project plan - have you abstracted to the right level, to capture the main strands on one page without flooding the model with detail?

It is common to include a rationale which sets out the hypothesis/ theory of change. This is often a box at the top or side of the model, depending on which way your model 'reads'.

Similarly models often record key assumptions/ context in a linked box. Mapping these as part of your model is important to understand what will help or hinder you. You can link the logic model to other environment / horizon scanning and risk management activity you will be carrying out for the project or programme, such as PESTLE, Situation Analysis, Viability and Opportunity assessment or Ishikawa diagramming.

The complexity of context means that you are often modelling what you expect will contribute to the final outcome, rather than what will directly cause it, because the context is not within direct control and will can significantly influence what you do. Your assumptions should try to capture these and be updated regularly when more information is known.



[Video: How do you know where to stop?](#)



[Video: What works?](#)



[Video: What doesn't work?](#)



Practical Section - **Constructing the Model - Components**

The Whole Model - Check and Refine continued

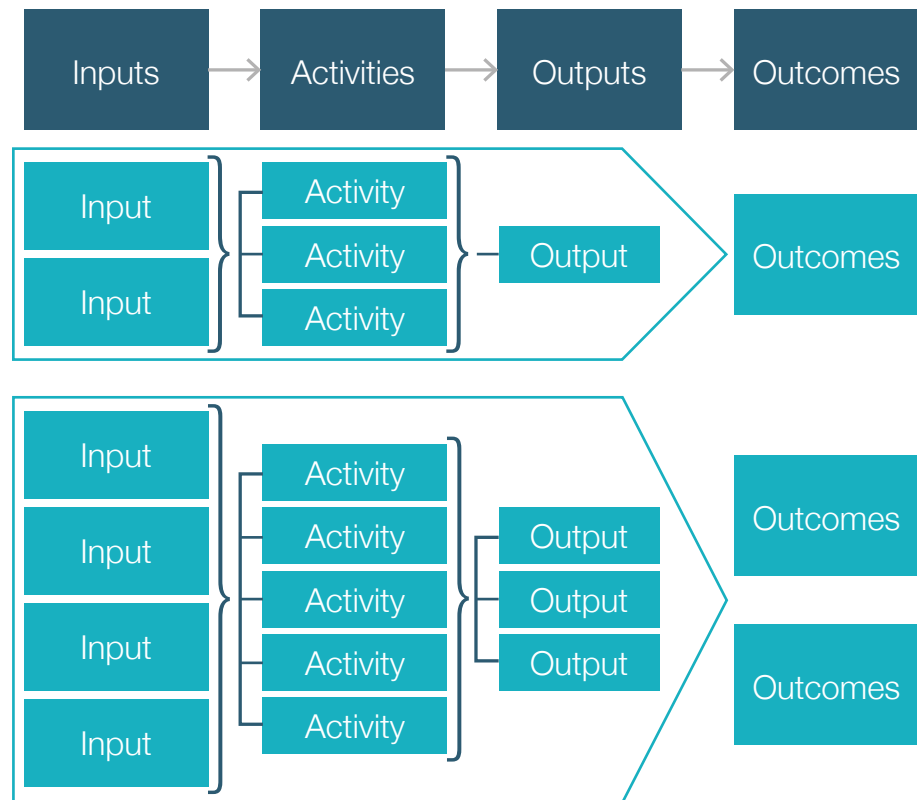
Grouping and Linking

It is common practice to group the items that are included on a model both for legibility and to demonstrate key links between the things that will be done and the effect. This is an exercise in causal mapping, similar in style to Root Cause mapping, but in logic modelling it is not as direct, particularly where the propositions are complex and uncertain.

It is likely that the outcomes will have more than one 'cause' or activity attributable to them, some of which will be outside the scope of the model. Causal relationships are by their very nature problematic, multiple and interacting. It isn't a simple or a singular exercise - it can take weeks or months and involve multiple stakeholders as a key process in a change programme but will reward the effort as it will enable a shared view of what will do what.

It is helpful to borrow from Systems Theory here and apply a dynamic and circular approach - acknowledging the main relationships whilst leaving room for an iterative approach. The assumptions box is useful here for narrating some of the reasons being applied to create linkages and draw out causal connections.

In order to prevent the model becoming 'spaghetti' some judgement is necessary to include only those that are the main impacts. A logic model is supposed to be able to describe the whole, rather than try and be a detailed plan. Use feedback loops and two way arrows sparingly and meaningfully, rather than over-relying on them to put across complexity.



Theory Section				Practical Section			
Introduction	What is Logic? ▾	The Logic Model ▾	Getting Started ▾	Constructing the Model ▾	Measurement & Evaluation	Enablers	Resources
Constructing the Model - Videos		Impact and Outcomes		Inputs Activities Processes		Outputs	The Whole Model

Practical Section - **Constructing the Model - Components**

The Whole Model - Check and Refine continued

Grouping or categorising items helps to represent the connections in a logical way whilst maintaining a flow through. However you do not necessarily want to group items as you would within an organisational or departmental context. Rather, you need to group according to the logical, causal relationships. Which group of things contributes to which outcome?

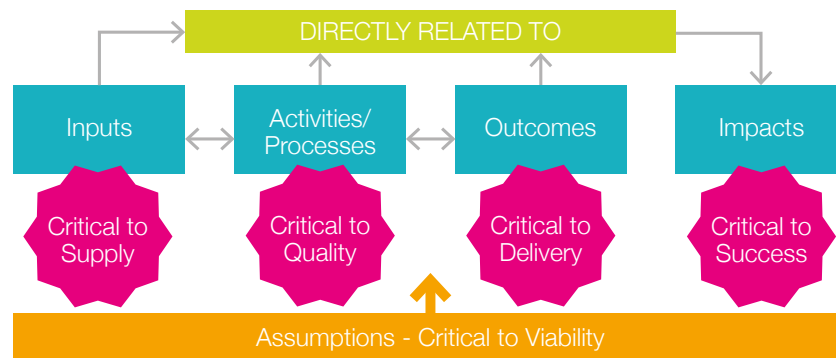
Bear in mind consistency with the level and type of model you were originally wanting to create - is it a system model or a scheme model, for example. For a system model, your groupings will be about population and partnership level groupings. For a scheme model your grouping will be at the level of teams and care processes.

The criticality of items you include (or decide to remove, if they are less critical) is also important - you can think of the items in each box in the following way:

You may also want to apply the 'SMART' lens onto the groupings as you create them, to check that in the process of 'chunking things up' this hasn't lost any of the important specificity or measurability of the whole - and that it is still a realistic, logical description.

This is a judgement call, as you need to sacrifice some detailed specifics in order to create groups and links whilst still keeping a meaningful whole. This can be difficult to determine so call on other people, particularly those who know the programme, to ask them if the model 'works' or if they would make other choices. Be open at this stage to check and challenge.

Often it is possible to link this stage of the process with the 'PMO' (programme management office approach), aligning the groupings to workstream headings, for example. But only if the workstream headings are logical - if not, then it may be a good time to challenge these



Practical Section

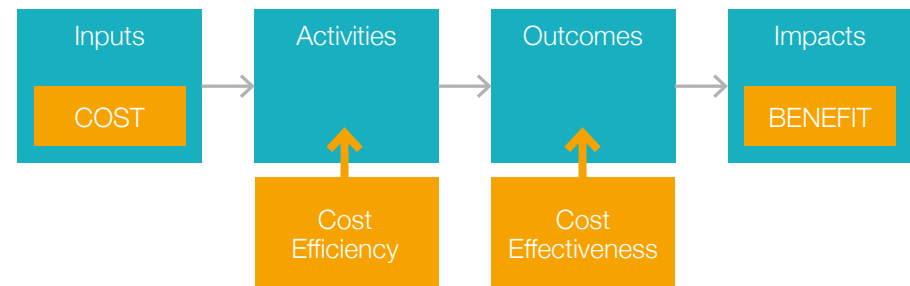
Measurement and Evaluation

Once you have built your logic model, then it is fairly straightforward to build a measurement framework using the components you have selected.

For example, a simple template could be drawn up based on a project logic model:

Element of model	Indicator	Source/ Method	Timing	Responsibility
Inputs	Cash funding spent against target	Accounts	Quarterly	Finance officer
	Hours of volunteer time	Project records	Each session	Volunteer Co-ordinator
Outputs	No. of Beneficiaries (by age, gender etc)	Registration forms	Each session	Session staff
	No. of sessions held	Project records	Each session	Session staff
Outcomes	Beneficiaries can describe how their life has improved	In depth interviews	As they leave the service	Volunteer researcher
	No. of beneficiaries with improved mental health	Mental Wellbeing Scale	As they enter and leave the service	Volunteer researcher

Logic Models are helpful starting points for more complex economic analysis or evaluation as well, as these rely on the 'weighing' the costs and benefits:



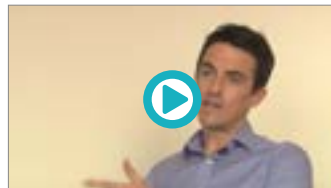
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Measurement and Evaluation

For more in depth analysis and formal evaluation there are various sources of support and advice - the University in your area is often a good starting point and can help identify experts or specialists either from their own institution or through partner agencies.



[Video: What impacts can be seen?](#)



[Video: Monitoring / Evaluation Framework](#)



[Video: Support and Advice](#)



[Video: Most helpful thing about logic modelling](#)



[Video: How do Logic Models help NHS England make their evaluations?](#)



Practical Section

Enablers - hyperlinks

The [NHS England](#) website signposts to resources available to support the [Five Year Forward View](#), information on the [New Care Models](#) or 'Vanguards' and [Planning Guidance](#).

There are various analytical resources including the Atlases, Spend and Outcome tools and Case Studies signposted at the [Right Care](#) website and at [HSCIC/NHS Digital](#).

NHS England Better Care Fund Guides are of wider use for other programmes:

- How to - Lead and manage Better Care implementation
- How to - Bring budgets together and use them to develop coordinated care provision
- How to - Work together across health, care and beyond
- How to - Understand and measure impact
- [Support for integrated care](#)
- [Making it Better - A guide to resources for improving Better Care Fund plans](#)
- [BCF Webinars including all archived content](#)
- Better Care Atlas
- [Better Care Exchange](#) - local examples and learning

[NHS IQ](#) Publish information on change models and theory, with links to tools, as well as offering training and leadership development, linked to the [NHS Leadership Academy](#) and [The Edge \(School for Health and Care Radicals\)](#). [NHS Scotland QI Hub](#) - also links to the archive of NHS Institute tools eg. Productive Series.

[NHS Improvement \(incorporating former Monitor\)](#) have developed a [Strategy Toolkit](#) and publish hypothetical scenarios and information on procurement, choice and competition.

The [Local Government Association](#) have produced resources to support Whole System Integrated Care, with a range of Pioneer case studies and technical tools.

For workforce best practice, guides and tools go to [Health Education England](#), and [Skills for Care](#) particularly for integrated care case studies. Other information is also available on [NHS Providers](#), [NHS Confederation](#), Professional Bodies such as the [RCGP \(Royal College of General Practitioners\)](#), [RCP \(Royal College of Physicians\)](#), [RCN \(Royal College of Nursing\)](#), [RCPsych \(Royal College of Psychiatrists\)](#). [NHS Clinical Commissioners](#) also has links to enabling/sharing Networks and Events.

Commentaries, research and evidence reviews can be found in 'Think Tank' type sources (consultancy/charitable/academic) such as [The Kings Fund](#), [Health Foundation](#), [Nesta](#); Picker Institute, [www.socialpolicy.org.uk](#), [SCIE](#); [Capsticks](#) and [Nuffield Foundation](#); [Nuffield Trust](#); [PIRU \(Policy Innovation and Research Unit\)](#), [the Leadership Centre \(Local Government\)](#), [HSMC \(Health Services Management Centre, Birmingham University\)](#), [BMJ](#), [ADASS \(Directors of Adult Social Services\)](#), [National Voices](#), [In Control](#), [Barnados](#) - there are others these are just a few who have recently published on integrated public services.

You can also follow organisations on social media and access info on [Slideshare](#).



Practical Section

Resources

Guidance on Logic Models & Evaluation

Top Five Resources - Start here!

- HM Treasury (2011, Supplements 2012) [The Magenta Book: Guidance for Evaluation](#)
- HM Treasury (2013, updated 2015) [The Green Book: Appraisal and Evaluation in Central Government](#)
- WK Kellogg Foundation (2004) [Logic Model Development Guide and Workbook](#)
- Midlands and Lancashire CSU Strategy Unit (2015) [Using Logic Models in Evaluation: Briefing](#)
- Evaluation Scotland (Undated) [Developing a Logic Model](#)

Further guides on logic modelling

- University of Wisconsin (2008) [Developing a Logic Model: Teaching and Training Guide](#)
- McCawley (2002) [The Logic Model for Programme Planning and Evaluation](#)
- Innovation Network (Undated) [Logic Model Workbook](#)
- Renger, R. and Titcomb, A. (2002). [A Three-Step Approach to Teaching Logic Models](#)
- Hummelbrunner, R. (2011) [Systems thinking and evaluation](#)
- Jordan, G. B. (2010). [A theory-based logic model for innovation policy and evaluation](#)
- McLaughlin, J. A. and Jordan, G. B. (1999). [Logic Models: A Tool for Telling Your Programme's Performance Story](#)

These are a selection - there are many other examples and resources, if you wish to find out more, an internet search using the terms 'logic model' or 'program logic model' will provide a further list and an image search will give lots of useful examples of layouts and content.

Examples of Logic Models

[NHS Sutton CCG Vanguard Value Proposition](#) - logic model on page 29 and 30.

[Moorfields Eye Hospital NHS Foundation Trust Vanguard Value Proposition](#) - logic model on page 11 and hypothesis tree on page 12.

[North East Urgent and Emergency Care Network - Vanguard Value Proposition](#) - Logic model on page 20; Activity workstream logic models pages 33 - 38.



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Resources

[National Cancer Vanguard Value Proposition](#)

- Logic Model Page 20 and workstream based models follow; also a set of Hypothesis Trees and underpinning Value Assessments pages 6 - 11.

[Leicester, Leicestershire and Rutland Vanguard Value Proposition](#)

- Whole Program Logic Model on Page 13 and further models for 'strands' on pages 22 - 27.

[Harrogate Vanguard Description](#)

- Logic Model on pages 12 and 13

[Haas, S. et al.](#) (2014) - Developing the Value Proposition for the Role of the Registered Nurse in Care Co-ordination and Transition Management in Ambulatory Care Settings

[University of York](#) - Example of logic model used to inform the search strategy and synthesis of findings within a systematic review

[Allmark, P. et al.](#) (2013) - Assessing the health benefits of advice services: using research evidence and logic model methods to explore complex pathways.

[Baxter, S. K. et al.](#) (2014) - Using logic model methods in systematic review synthesis: describing complex pathways in referral management interventions.

[Hayes, H. et al.](#) (2011) - A logic model framework in a primary care practice-based research network.

[Resources for Evaluation and Monitoring](#)

The HSCIC/ NHS Digital is a helpful starting point for metric development and information governance, with data sources and compendiums for both health and social care, including comparator benchmarking www.hscic.gov.uk

The [Right Care website](#) has a Resource Centre and links to tools including the series of condition specific and themed Atlases, Opportunity Locator and Spend and Outcome Tools, Casebooks and Commissioning for Value Packs. Commissioning tools and benchmarking resources are also available from [NICE](#).

Public Health England have an umbrella site for [Public Health Observatory](#) information and provides information and guidance on methodologies and sources of data such as lifestyle factors.

International Atlases are useful for benchmarking against change programmes and understanding the comparative scale and size of opportunities, available at www.dartmouthaltas.org; www.atlasvpm.org; www.hqsc.govt.nz; www.oecd.org.

Healthier North West London have published a [useful article and best practice guidance](#) on the use of Outcomes and Metrics.

The NHS Commissioning Assembly have recently produced a narrative [Commissioning for Outcomes, A Narrative from and for clinical commissioners](#) (2015) with useful further reading links.



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- The participants in the Logic Modelling workshops who helped shape the learning content of this guide.

Contact Us

For any queries or to discuss how Midlands and Lancashire Commissioning Support Unit could support you with logic modelling, contact Samantha Ruthven Hill, Portfolio Specialist, email: samantha.ruthven-hill@nhs.net

The Strategy Unit is committed to improving health and care in ever more challenging circumstances. Our team offers advanced technical skills, combined with practically-grounded strategic and operational experience. The Strategy Unit's customers include Vanguard programmes, STP areas, Test Beds, CCGs, NHS Trusts, the voluntary sector and the National Institute for Health Research. We are evaluation specialists and see evaluation as a core component of all strategies and programmes. For more information contact: fraser.battye@nhs.net

