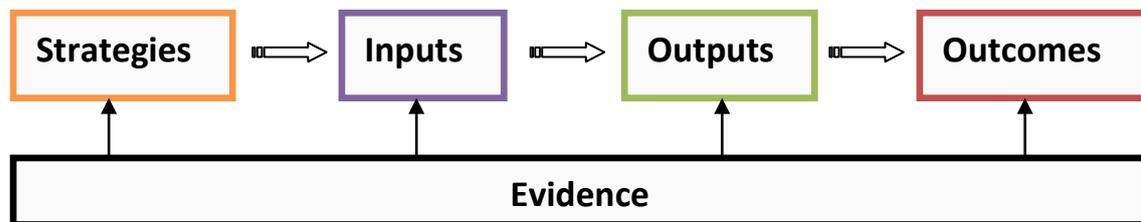


Introduction to Logic Modelling



Produced to support CES Practice Seminar Series

Seminar number 2:

Logic Modelling - supporting clear and achievable outcomes

Cork 8 February 2011

Belfast 9 February 2011

Dublin 10 February 2011

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The Practice Seminar Series

The Centre for Effective Services is hosting a range of practice seminars covering the main areas of its work. These seminars are an important part of the way that the Centre contributes to the development of effective evidence-informed policy and services for children and communities. The overall theme for the series, which has been identified following consultation with key stakeholders and funders, is:

Developing evidence informed practice for children, young people and families: the what, why and how.

The series will provide:

- Opportunities for practitioners and managers of children, young people and family services, and others with a stake in this work in Ireland, to engage and learn with world class practitioners, managers and researchers.
- Networking and peer learning opportunities for practitioners and managers working with children and young people.
- Training in approaches, skills and techniques, which will enhance the effectiveness of services or programmes being delivered to children, young people and families.
- An opportunity for practitioners and others to inform the CES of their development needs.

The **first practice seminar** took place in Dublin, Cork and Galway on 19, 20, 21 October 2010. It explored the theme of developing evidence informed practice for children and young people in terms of the 'what' and the 'why'.

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Introduction

This workbook is designed to help you to construct a logic model. The basic structure of a logic model is set out in Figure 1. In this workbook we will also consider how evidence can inform the development of the logic model.

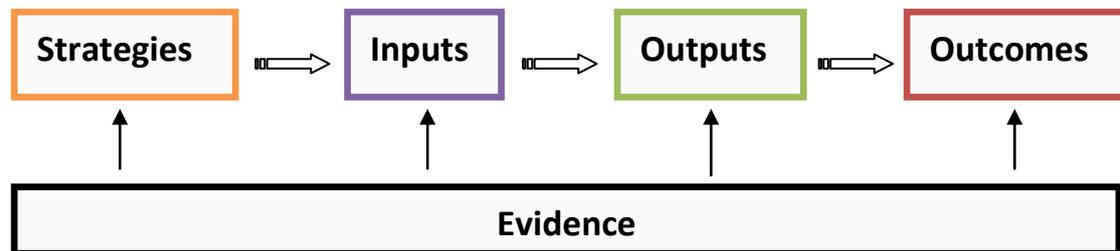


Figure 1 – Logic model core elements

Logic models graphically express the essential elements in any systematic attempt to organise resources around achieving particular goals and objectives. Logic models can provide a summary and overview of these elements, and capture the results of a theory-driven and rigorous strategic planning process in a simplified way. Services and programmes so designed are more likely to achieve results by encouraging a focus on outcomes from the start.

A model can be used internally, for example as a tool for monitoring and evaluating the work, and externally as a way of summarising the overall purpose and activities of an organisation to outsiders. They can also be a useful document in discussions with funders and others commissioning the work. In brief, developing a logic model can be useful to your organisation in a number of ways:

- As a tool to support service and programme design
- As a framework to develop your vision and goals for the future in a tangible, measurable way
- Helping to identify and understand the systemic nature of the work, the key linkages and cause and effect relationships
- As a basis for quality assurance procedures
- As a tool to help the organisation to balance its priorities, allocate resources and generate realistic plans
- As a means of informing funders and other stakeholders about the work.

It is important to note that a logic model is not reality – it is a statement of intent. Implementation will throw up all manner of challenges and unanticipated problems, and so flexibility is crucial as is the capacity to think on one's feet and make changes to the plans where necessary. However, too many changes, especially if these are reactive, can undermine the value of the logic model in the first place. So, a complex logic model is perhaps best seen as a high level statement which may require a separate implementation plan. Changes that are needed during implementation do not necessarily require changes to the overall logic model.

Adherence to a logic model is not inconsistent with flexibility and responsiveness, however, since good planning is more of a process than a one-off event. Good planning provides a basis from which to react to unexpected events, take advantage of emerging opportunities, and be creative in meeting needs. Being explicit about the 'logic' of interventions can help those involved to maintain focus on the desired changes, to concentrate efforts on the agreed goals, to avoid duplication of work across agencies, and to set appropriate standards for the work.

Structure of the Workshop

To help you to construct your model, the workshop uses a case study based on the fictitious case of 'Glenvale'. The process involves:

- Four exercises focussing on strategies, inputs, outputs and outcomes
- Considering how evidence can inform planning and implementation
- Getting feedback from group members and the facilitators
- Filling in a logic model template
- Presenting a completed logic model to the other group members
- Making links to your current work situation.

At the back of this workbook you will find:

- A graphic outlining common elements in logic models
- A worked example of the 'Glenvale' logic model
- A worked example of a strategy from the Glenvale model
- A short glossary of key terms
- Links to useful readings and online resources
- Routes to resources - a graphic with useful hyperlinks to resources.

The workbook begins with a brief explanation of two key concepts that underpin the process of developing a logic model; what is meant by 'theory of change', and what it means for practice to be 'evidence-informed'.

Two Important Concepts

Theory of change

It is commonly accepted that practice is most likely to be robust and effective when it is underpinned by a clear theory of change. Logic modelling is a way of expressing this theory of change, wherein particular programmes or interventions should be determined with reference to a clearly articulated description of the expected mechanisms of change.

A theory of change makes explicit the expectations around why providing Input X should lead to change in Outcome z, by way of Output Y. The theory should be formulated with reference to existing theory about how community needs arise and how change is achieved.

The theory of change clarifies the various inputs, outputs and activities, and outcomes that the programme or intervention hopes to achieve and how these are conceptually and practically linked. Providing the elements of a logic model is agreed by all stakeholders, it can then be a useful tool for monitoring programme progress over time.

Evidence-based and evidence-informed practice

Practice is also most likely to be effective when it is informed by evidence. It is useful to make a distinction between evidence-based and evidence-informed approaches. The term '**evidence-based**' is used to describe a programme that has consistently been shown to produce positive results by independent research studies that have been conducted to a particular degree of social scientific rigour. An evidence-based approach to designing and delivering services involves delivering programmes that have been proven to work. These programmes have been manualised, so that the underpinning theory is clear and precise steps to implementation can be followed. High 'fidelity' to the original programme is required. Examples of evidence-based programmes can be obtained from the Blueprints Model Programmes: www.colorado.edu/cspv/blueprints/modelprograms.html

The term '**evidence-informed**' is used to describe practice based on the integration of experience, judgement and expertise with the best available external evidence from systematic research. This approach involves sifting information gleaned from research and other sources such as practice wisdom, policy and consultations with users and experts.

As depicted in Figure 2 below, evidence can be drawn from a number of possible sources:

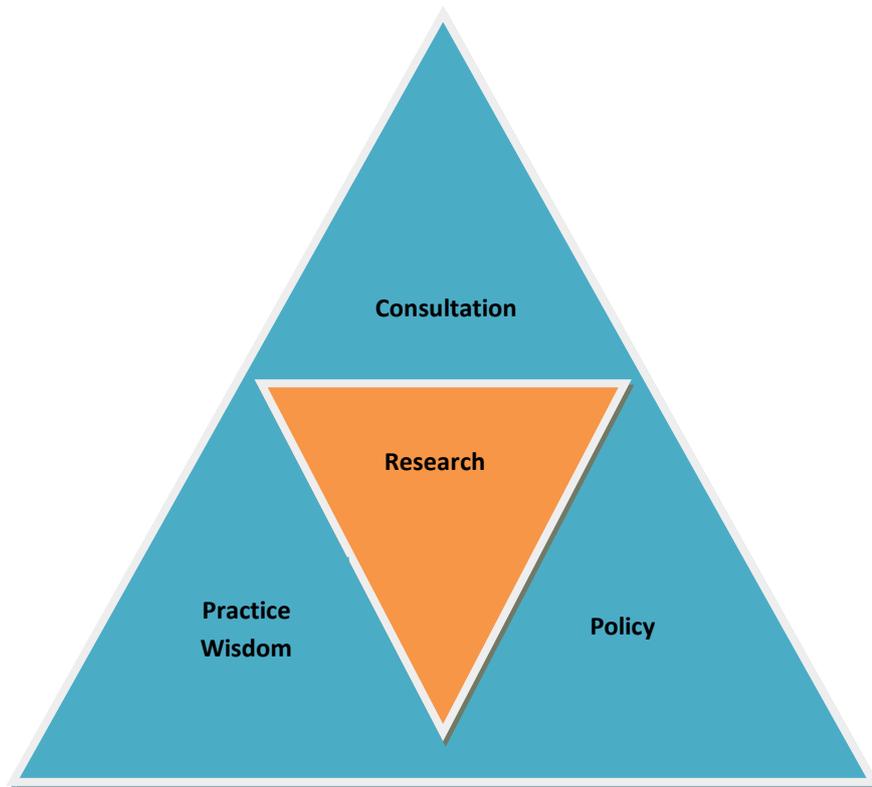


Figure 2: Sources of knowledge in evidence informed approaches

Evidence informs all aspects of planning and implementation. It can help in terms of:

- Clarifying reasons for the work, for example regarding a project's aim, underpinning philosophy or theoretical base
- Informing a needs analysis by helping practitioners to understand problems and issues, and to distinguish between symptoms and causes
- Identifying promising interventions from a range of well researched interventions and programmes
- Accessing well worked ideas about expressing outcomes and indicators
- Pointing to useful approaches to monitoring and evaluation
- Challenging decisions based on tacit understandings, ideology and politics.

The Case of 'Glenvale'

A local community group, who were concerned that current provision was failing to address the problems in 'Glenvale', gathered support, lobbied politicians, and successfully obtained €600,000 [£500,000] over three years from state and philanthropic sources. The group established the 'Glenvale' Development Project with a remit to:

Target the neediest effectively through innovative approaches to service provision.

The funding paid for:

- 3 full-time staff (backgrounds in social work, adult education, community health)
- Rent for office and two rooms for events and training
- Funds for activities, and to contract out part of the work
- Training for volunteers.

The scenario

The 'Glenvale' staff team were asked to develop the project's plans for the next three years. They gathered information from a variety of sources including (a) data collected for government and the local authority, (b) information from service providers and professional groups, (c) a study commissioned from a local university and (d) consultations with local residents.

Box 1: Synopsis of issues in Glenvale**Synopsis of issues in 'Glenvale' (information source in brackets)**

- Significant numbers of children in the two local primary schools are not scoring well in annual tests of their educational milestones (c).
- There is a high turnover of teaching staff in schools in the area (b).
- There is a scarcity of pre-school and child care provision in the area (a).
- The school principals have made it known to the local health services that over one third of their children are coming to school without breakfast (b).
- There is a higher than average rate of single parenthood with 24% of children living with a lone parent/guardian [17.8% national average] (a).
- Public health nurses/Health visitors have been documenting an ongoing higher than average rate of teenage pregnancies (b).
- 18% of young people between 10-17yrs use cannabis [15.7% national average] (c).
- 13% children living in consistent poverty [10.3 national average] (a).
- Over 25% of 5yr olds are overweight or obese (a).
- 6.5% of babies are of low birth weight [5.7% national average] and the breast feeding rate remains significantly below the 2005 rate of 41.3%, when there has been a national increase to 47% (a).
- 10% of the houses are sub-standard in 3 of the largest housing estates and the numbers of households in need of social housing is up by 24% (c).
- Concerns have been expressed in the neighbourhood about increasing levels of youth gangs drinking on the streets and vandalising property (d).
- Young people have complained about the state of the local youth work facilities, and there is a risk of funding being cut (d).
- Youth Justice programmes, delivered by youth workers are overwhelmed (b).
- The Local Authority has announced plans to develop a public space strategy (a).

Needs and Issues	Outcomes	Strategies
The team grouped the needs and issues as follows	The changes they most wanted to see could be expressed in terms of the following outcomes	To achieve these outcomes the team opted for three strategies
<ul style="list-style-type: none"> • Significant numbers of children in the two local primary schools are not scoring well in annual tests of their educational milestones (c). • There is a high turnover of teaching staff in schools in the area (b). • There is a scarcity of pre-school and child care provision in the area (a). • There is a higher than average rate of single parenthood with 24% of children living with a lone parent/guardian [17.8% national average] (a). 	That the children and young people of Glenvale would be ready to engage with the process of learning in school	Provide intensive support to parents
<ul style="list-style-type: none"> • Public health nurses/Health visitors have been documenting an ongoing higher than average rate of teenage pregnancies (b). • 18% of young people between 10-17yrs use cannabis [15.7% national average] (c). • Concerns have been expressed in the neighbourhood about increasing levels of youth gangs drinking on the streets and vandalising property (d). • Young people have complained about the state of the local youth work facilities, and there is a risk of funding being cut (d). • Youth Justice programmes, delivered by youth workers are overwhelmed (b). • The Local Authority has announced plans to develop a public space strategy (a). 	That services and facilities for young people would be first class	Promote user friendly services for young people
<ul style="list-style-type: none"> • 18% of young people between 10-17yrs use cannabis [15.7% national average] (c). • 13% children living in consistent poverty [10.3% national average] (a). • Over 25% of 5yr olds are overweight or obese (a). • 6.5% of babies are of low birth weight [5.7% national average] and the breast feeding rate remains significantly below the 2005 rate of 41.3%, when there has been a national increase to 47% (a). • 10% of the houses are sub-standard in 3 of the largest housing estates and the numbers of households in need of social housing is up by 24%(c) • The school principals have made it known to the local health services that over one third of their children are coming to school without breakfast (b). 	That the children and young people of Glenvale would be healthier	Enhance health provision in the area

From this basic understanding of their work the team developed the Glenvale Logic Model to express the Project's plans for the next three years. The logic model can be seen on **page 19**.

Exercise 1: Getting to Outcomes

It is a well-established principle in many fields of human services that effective interventions are generally 'outcomes-led' or results-driven. This implies that broad outcomes should be identified before activity begins, and that specific indicators of success that are measurable must be clarified as part of the process of specifying service content.

In logic modelling outcomes can be defined as: Results or changes from the programme [project or service or intervention] such as changes in knowledge, behaviour, practice, decision-making, policies, social action, condition, or status. Outcomes may be intended or unintended, and positive and negative. Outcomes fall along a continuum from immediate (initial; short-term) to intermediate (medium-term) to final outcomes (long-term), often synonymous with impact.

Question 1:

Based on the 'Synopsis of issues in Glenvale' (Box 1), what changes would you be seeking in terms of desired outcomes?

Try to state what final or end outcomes you would like to achieve (impact), then think of the preliminary (short term) and intermediate (medium-term) outcomes as cumulative steps along the way or contributions to the final outcomes. It may be helpful to think in terms of the following:

- **End outcomes:** related for example to health, education, economic activity, participation
- **Intermediate outcomes:** progressive change in local areas and increased capacity
- **Preliminary outcomes:** learning and development for individuals and groups.

Tip: Though it is often difficult to be precise, the more concrete you can be in terms of the results that you are seeking to achieve the better it is for planning, implementation and evaluation purposes.

Question 2:

What evidence has informed or might inform your choice of outcomes?

Refer to the 'Sources of knowledge in evidence informed approaches' (Figure 2)

In the real situation, to measure the change you are planning to bring about you would establish a baseline for your activities.

A baseline can be defined as: information about the trend, situation or condition prior to a programme or intervention

A baseline describes your starting point, and progress is the distance travelled towards achieving the desired outcomes. It is helpful to establish indicators that can serve as signs or markers of progress.

Question 3:

What indicators could show that the work is making a difference?

After receiving feedback on your ideas, complete the

Outcomes

section of the logic

model template. Include your proposed indicators.

Exercise 2: Developing Strategies

Being 'outcomes-led' means working back from desired outcomes to what needs to be done rather than working forwards from an aspirational goal. Different terms are often used interchangeably to express what needs to be done, such as intentions, strategies, goals, priorities and objectives, so the precise term is not important as long as you are clear about how you are using it. Here we use 'strategies' to refer to what needs to be done.

Strategies represent important choices between significant alternatives in terms of how the work will be done, for example:

Between target groups such as children or young people, or groups such as ethnic minorities

Between themes, for example rights, disability, education, leisure

Between approaches, for example, mentoring or parent support, or advocacy or training

Question 4:

Based on your answer to Question 1 in the first exercise what would be your strategies?

Although the 'Glenvale' case is a hypothetical situation, in reality it is important to be aware of the particular context when developing strategies. Is the proposed intervention, for example, ignoring education in an area of school failure and where no other response is evident, or targeting single parents when others are already doing so?

It is important to be explicit as possible about the rationale for these choices. So:

Question 5:

What is the thinking behind your choices?

Question 6:

What evidence has or might inform your choice of strategies?

Refer to the 'Sources of knowledge in evidence informed approaches' (Figure 2)

After receiving feedback on your ideas, complete the

Strategies

section of the logic model template.

Exercise 3: Understanding Outputs

In logic modelling, a distinction is made between what is done and the products of particular activities. Put in simple terms this is a difference between ‘what we do’ and ‘who we reach’, for example in terms of numbers and types of participants. This exercise is designed to help you to think about ‘outputs’.

Outputs can be defined as: The activities, products and participation generated through the work in terms of goods, services, activities and opportunities made available.

Question 7:

In relation to any one of your strategies, what activities would you propose?

You might find it useful to address the following issues, if possible and appropriate, specifying numbers, or percentages, or types:

- **What** you want to do (types of activities)
- **Who** you want to reach (users, clients, beneficiaries, or other agencies)
- **Where** it will happen
- **When** and how often it will happen (frequency)
- **How** it will be done.

It is useful to be as clear as possible about your thinking regarding the choice of activities, so:

Question 8:

What assumptions are you making about the relationship between the proposed activities and likely take-up?

Question 9:

What evidence has or might inform your activities?

Refer to the ‘Sources of knowledge in evidence informed approaches’ (Figure 2)

In the real situation, this section of a logic model would often be further described for example in a more detailed logic model focussing on one strategy (see graphic relating to the case of 'Glenvale' Strategy 1 Logic Model, **page 20**), or sometimes in a more detailed operational plan. This would specify, for example, who would be responsible for the actions, and what resources would support particular activities. It would also provide a more detailed timetable.

After receiving feedback on your ideas, complete the **Outputs** section of the logic model template.

Exercise 4: Being Clear About Inputs

Now that you have thought carefully about your intended outcomes, and your key areas of work, you need clarity about the resources or ‘inputs’ that you could bring into play in pursuit of your intentions.

Inputs can be defined as: Resources that go into a programme of work including staff time, materials, money, equipment, facilities, volunteer time.

List your anticipated inputs and discuss any issues arising. If you are intending to work in partnership, for example, what would you need to take into account in terms of planning or implementation?

The ‘Glenvale’ Development Project has the following resources funded over a period of three years.

- 3 full-time staff (backgrounds in social work, adult education, community health)
- Rent for office and two rooms for events and training
- Funds for activities, and to contract out part of the work

Would this level of resource be sufficient for the scale and type of work that you envisage?

Resources are always likely to be limited, so:

Question 10:

How realistic are your desired outcomes when you think carefully about resources?

Question 11:

What evidence has informed or might inform your thinking about inputs?

Refer to the ‘Sources of knowledge in evidence informed approaches’ (Figure 2)

After receiving feedback on your ideas, complete the

Inputs

section of the logic model template.

Presentation of the Model

As a final check on your thinking before presenting your logic model to the rest of the group for comment, you may wish to consider issues such as:

- **Clarity** – is it easy to understand?
- **Simplicity** – does it keep things as simple and straightforward as possible?
- **Accuracy** – how well does it show the relationships between the elements?
- **Comprehensiveness** – does it cover all the necessary elements?
- **Coherence** – does the whole make sense?
- **Realistic** – is what you are proposing within your capabilities?
- **Evidence informed** – in what ways is the model underpinned by evidence?

Be prepared to answer the last question by completing the

Evidence

 section of the logic model template.

Key Terms in Logic Modelling

A complete logic model provides a graphic representation of a programme or service showing the intended relationships between a series of organized activities and resources aimed to help people make improvements in their lives. Logic models are most useful for graphically expressing the essential elements in any systematic attempt to organise resources around achieving particular goals and objectives.

Element	Description
Assumptions	The suppositions made about a range of contingent factors (likelihood of success, stability of the situation, possibility of support, theory of change) influencing planning.
Baseline statements	Information about the trend, situation or condition prior to a programme or intervention.
Data	Information collected and used for reasoning, discussion and decision-making. In programme evaluation, both quantitative (numbers) and qualitative (views, opinions and experiences) data may be used.
Fidelity	The degree to which the activities undertaken in a programme are true to the design of the original programme on which it is based.
Goal	A broad statement that described the desired impact of a specific programme.
Inputs	Resources that go into a programme of work including staff time, materials, money, equipment, facilities, volunteer time.
Outputs	Number of units of service provided such as the activities, products, and participation generated through the work in terms of goods, services, activities and opportunities made available.
Outcomes	Results or changes from the programme such as changes in knowledge, behaviour, practice, decision-making, policies, social action, condition, or status. Outcomes may be intended or unintended, and positive and negative. Outcomes fall along a continuum from immediate (initial; short-term) to intermediate (medium-term) to final outcomes (long-term), often synonymous with impact.
Impact	The long term social, economic, civic and/or environmental consequences associated with the goals of the programme. Impacts may be positive, negative, or neutral, intended or unintended.
Indicator	The specific, measurable information that is used to track the success of an outcome.
Monitoring	Monitoring is a counting (or accounting) process concerned with the assessment of whether agreed inputs have been made as per Service Level Agreements and whether key targets for service uptake have been achieved.
Evaluation	Evaluation is a process that involves the systematic investigation of pre-determined questions preferably using scientifically robust (transparent and replicable) research methods. Evaluations can describe and assess the quality of implementation (process, or formative evaluations), or assess the relationship between outcomes for service recipients and the inputs made by the service (outcome or impact or summative evaluation).

Online and Other Useful Resources

Centre for Effective Services (2011) *What Works ProCESs Guide: Evidence-informed improvement for child and family services*. CES Resources. Centre for Effective Services, Dublin. Reference P02

Centre for the Study and Prevention of Violence, University of Colorado, Boulder – Blueprints Programmes

<http://www.colorado.edu/cspv/blueprints/index.html>

Strengthening Families Programme, Iowa State University

<http://www.extension.iastate.edu/sfp/>

Roduner, D., Schläppi, W. and Egli, W. (2008) Framework Approach and Outcome Mapping- A constructive attempt of synthesis. *Rural Development News*, 2. Available at:

<http://www.agridea-international.ch/?id=627>

Social Research Unit - video describing what a logic model is and how it is used in children's services

<http://www.dartington.org.uk/what-logic-model>

Theory of change and logic models

<http://learningforsustainability.net/evaluation/theoryofchange.php>

University of Arizona – online logic model builder

<https://cyfernetsearch.org/>

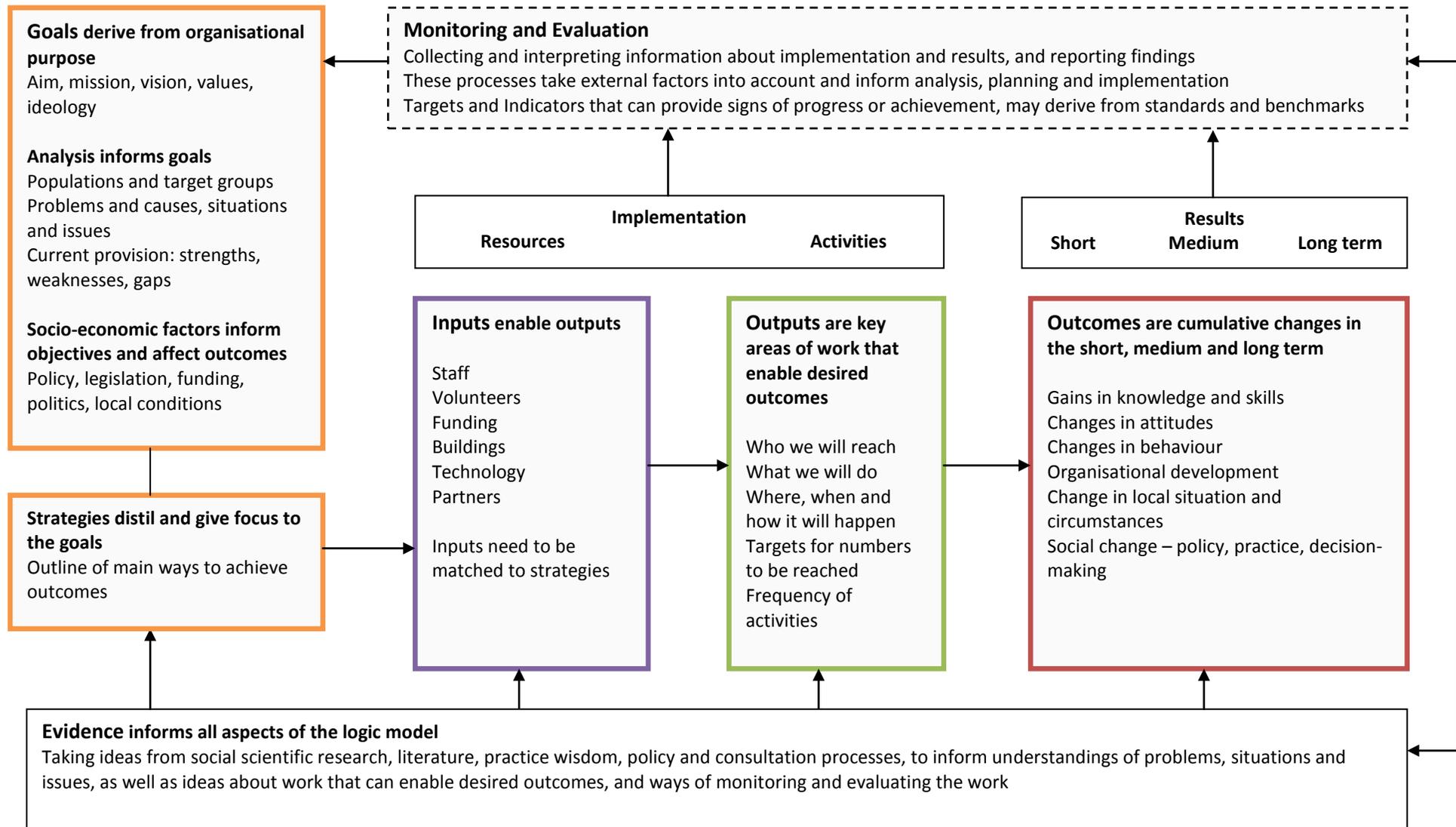
Wisconsin logic model guide

<http://www.uwex.edu/ces/pdande/evaluation/evallogicmodel.html>

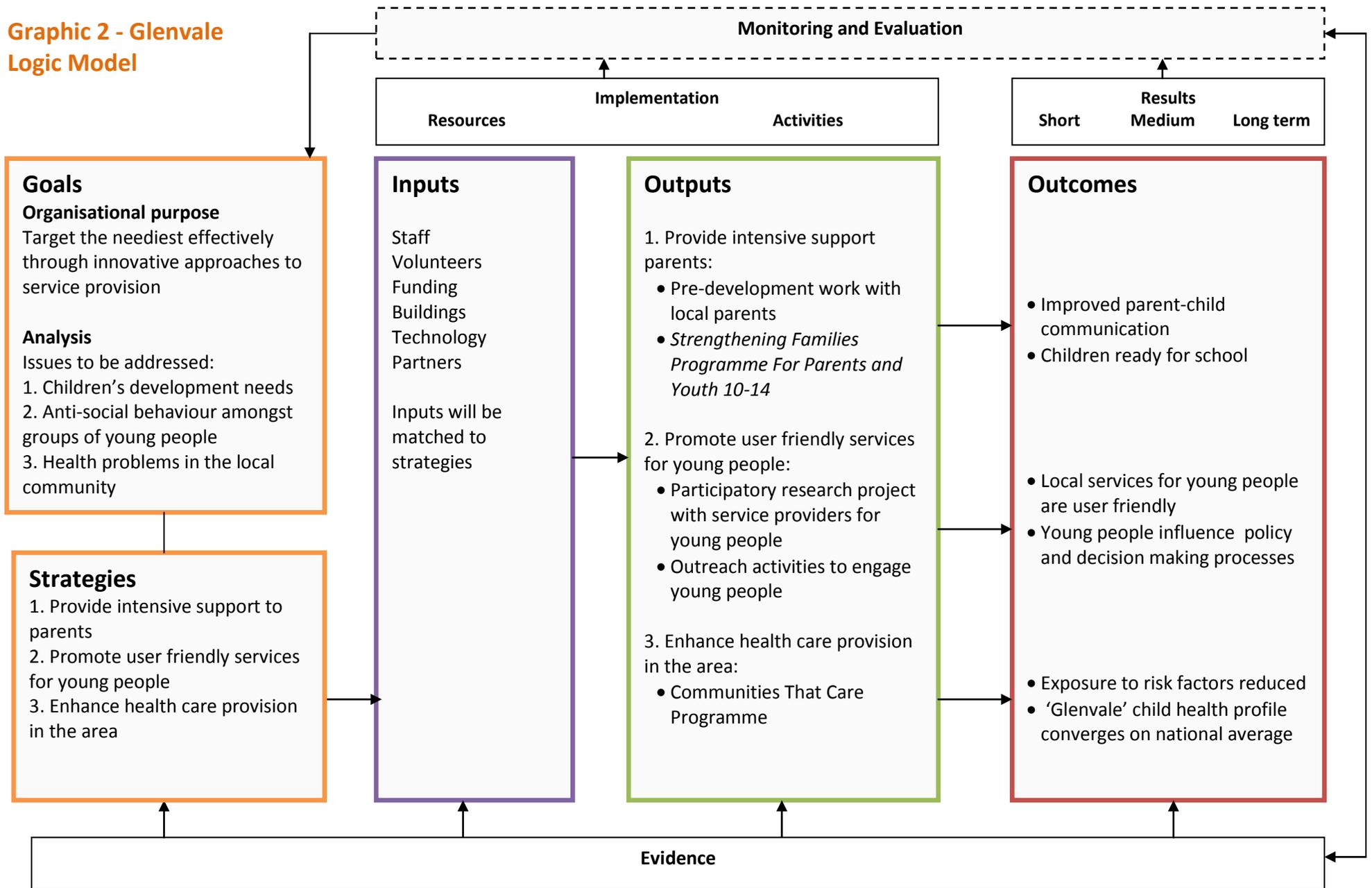
W.K. Kellogg Foundation, Logic Model Development Guide

<http://www.exinfm.com/training/pdfiles/logicModel.pdf>

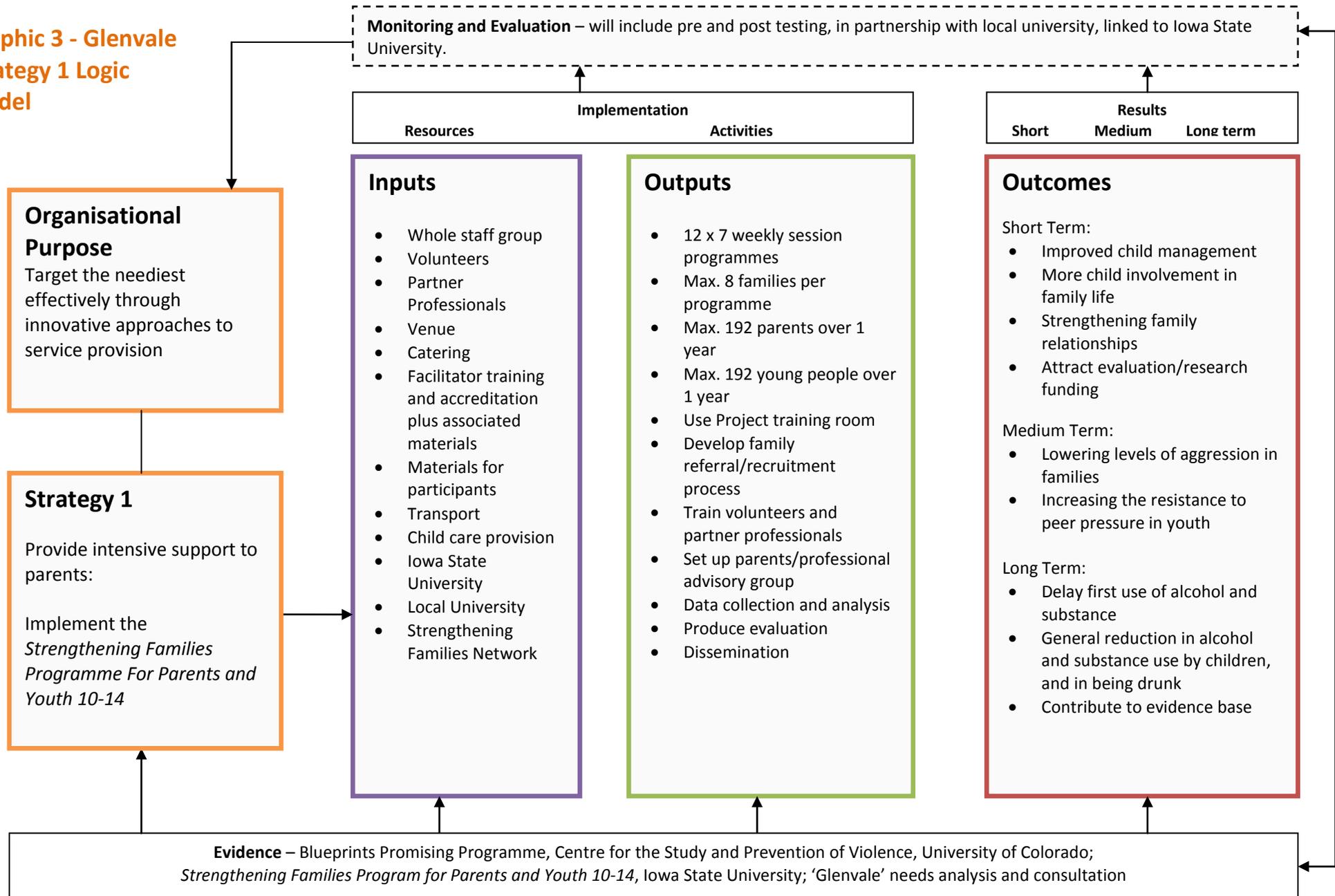
Graphic 1 - Common Elements in a Logic Model



Graphic 2 - Glenvale Logic Model

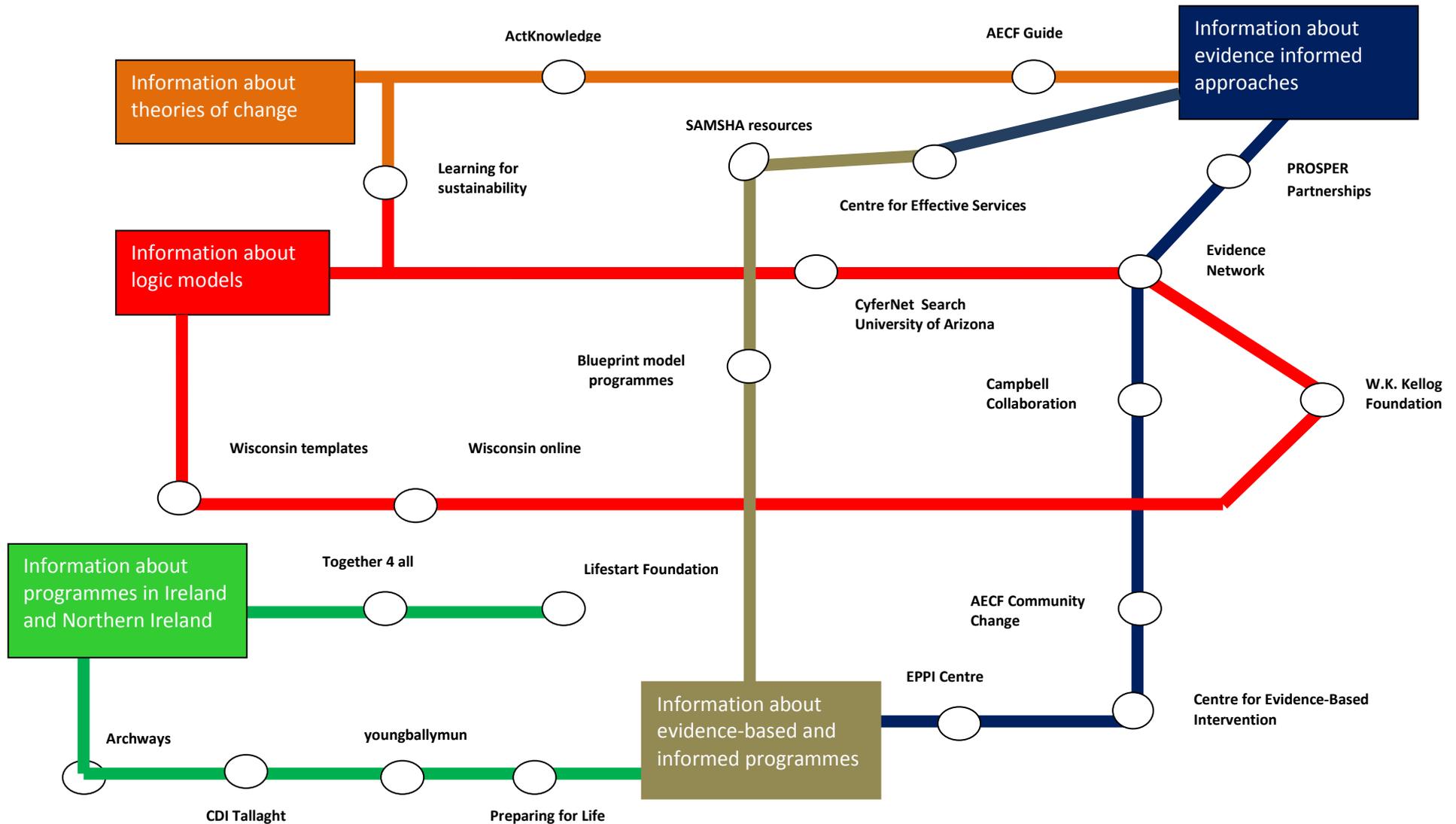


Graphic 3 - Glenvale Strategy 1 Logic Model



Click on the hyperlinked stations to access information about evidence based or informed programmes, as well as logic modelling and related concepts.

Graphic 4 – Routes to Resources



This route map is based on an original idea developed by the [Centre for the Use of Research and Evidence in Education](#) (CUREE) to make research accessible and useable for teacher and other educational practitioners.

The Centre for Effective Services

The Centre for Effective Services (CES) was established in 2008 and is funded by a partnership between philanthropy and government. It is part of a new generation of intermediary organisations across the world, supporting service providers and policy-makers to do their work. The organisation is based in Ireland and in Northern Ireland and its mission is to connect the design and delivery of services with scientific and technical knowledge about what works, in order to improve outcomes for children and young people and the families and communities in which they live.

The aims of CES are:

- To promote and support the application of an evidence-informed approach to policy and practice in child, family and community services
- To promote the development of collaborative, joined up working that is outcomes-focused across research, policy and service providing organisations
- To build capacity to take this work forward in the longer term by developing knowledge, skills and competencies

For more information about the work of the Centre, please visit www.effectiveservices.org