Research Theory of Change
A Practical Tool for Planning and Evaluating Change-oriented Research

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What is a Theory of Change?

A Theory of Change is a model of a change process. It describes the causal relationships between a research project or program and its intended results (outputs, outcomes, and impacts), framed as a set of testable hypotheses about how and why change happens.

What is it used for?

Research project and program **planning**, **monitoring**, and **evaluation** to support learning and improve effectiveness.

Its principles are transferable to multiple contexts including education programming, development projects, and other change-oriented initiatives.

Why should I use it?

Use of this tool will help make your research project or program design more *realistic* and *relevant* by:

- Encouraging critical thinking, integration, and collective visioning among team members and collaborators;
- Facilitating co-ownership of the research process, and transparency and accountability to results;
- Helping to identify and engage key actors at project/program boundaries (boundary partners); and
- Understanding diverse roles in change processes.

When used *ex ante,* a Theory of Change provides a framework and guide for project or program planning and implementation.

Use of a Theory of Change throughout a research initiative's lifespan can support the informed adaptive management of research projects or programs by stimulating learning about what strategies work and where additional attention and resources need to be directed in order to achieve intended outcomes.

A Theory of Change supports *ex post* assessment, providing a set of hypotheses about the change process that can be tested empirically.

Overview of Key Concepts and Definitions

The **Sphere of Control** constitutes the direct actions undertaken and outputs produced by a project/program.

- **Activities:** Actions conducted by the project or program (e.g., background scoping and preparation work, defining research questions, project design, literature review, fieldwork, planned communication and/or engagement with relevant stakeholders or boundary partners, etc.).
- **Outputs:** Knowledge, fora, and processes generated by the **activities**.
- **Tailored Products:** Resources that package knowledge for specific audiences.
- **Dissemination:** How knowledge produced is communicated to target audiences.

The **Sphere of Influence** is where the project aims to influence or bring about change via the people the project or program works with and through.

- **Outcomes:** Changes in knowledge, attitudes, skills, and relationships that manifest as changes in behaviour during and after the project/program.

The **Sphere of Interest** models indirect changes that fall outside the direct influence of the project, which may manifest as outcomes or changes in the social, economic, or environmental conditions. These changes result in new uncertainties, where new research entry points and questions are identified.

- **Impacts:** Changes in flow (e.g., higher annual income, increased water discharge from a river) or state (e.g., socio-economic status, water quality in a reservoir), resulting wholly or in part from a chain of events to which the research has contributed.
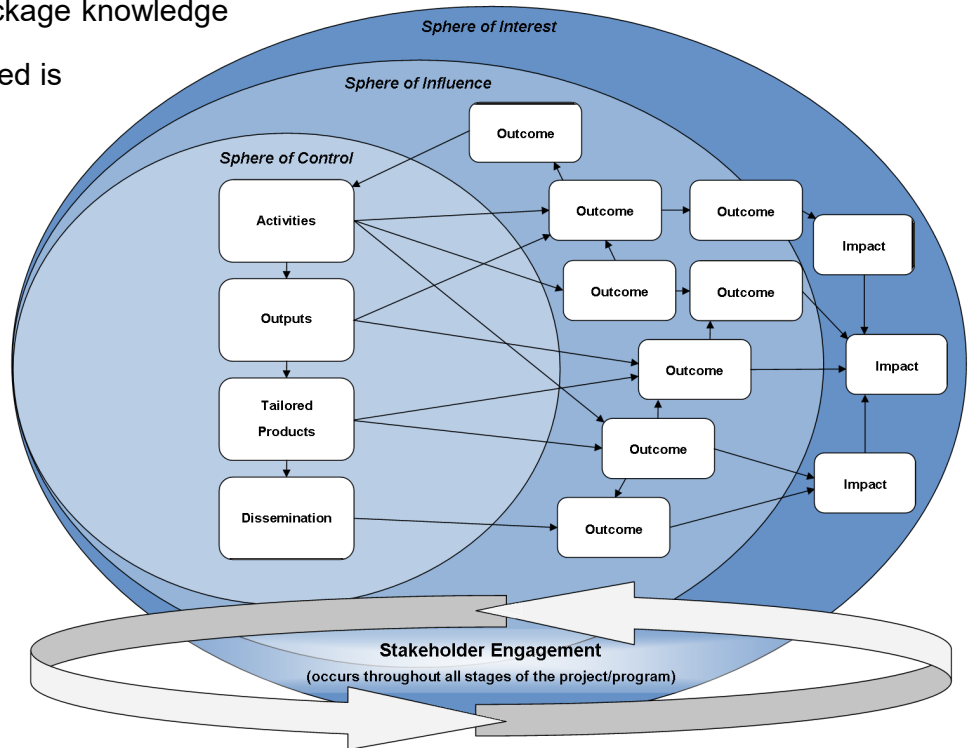
Figure 1. Interactions between elements of a Theory of Change[1].

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1. This diagram builds on ideas from Outcome Mapping (Earl, Carden, & Smutylo, 2001),and conceptualizes the change process with: 1) relatively declining influence of an intervention over time and space, within spheres of control, influence, and interest; and 2) outcomes defined as behaviour change that is influenced by changes in knowledge, attitudes, skills, and relationships of key actors in the system.

How do I develop and apply a Theory of Change?

1. Host a workshop to develop a model for the research project/program

A Theory of Change model is typically developed in a workshop setting. A facilitator leads the discussion. Depending on financial resources and feasibility, it is recommended to invite:

- Members of the research project or program team;
- Partners and collaborators; and
- Other key stakeholders who will be informed, consulted, or involved by the project or program.

There is no perfect way to develop a Theory of Change, but experience suggests that it is helpful to begin by defining an overall purpose[2] and then iteratively developing a model of the main activities, actors, processes, outputs, and outcomes.

Research projects typically have a pre-conceived set of activities and outputs (i.e., as developed in a funding proposal), so it is convenient to begin working logically from those, thinking through:

- Specific activities that are intended to make a contribution to the purpose;
- Relevant actors and their roles within the system in which the project or program is operating;
- What the intended outputs are and how they are expected to be used;
- What identified actors are expected to do differently as a result of the project or program; and
- Underlying theories and assumptions about the main causal relationships (i.e., how and why a given result will be realized).

A Theory of Change model is typically presented in the form of a figure and accompanying narrative. An evidence table can also be developed to identify indicators and a list of evidence sources to track the achievement of outcomes.

It is important to revisit and iteratively revise the model throughout the project or program lifespan to ensure that activities and partnerships are sufficient and appropriate to achieve the intended outcomes.

Materials needed to document a Theory of Change model:

- ☑ Sticky wall kit
- ☑ Pens, paper, flipcharts
- ☑ Digital model template
- ☑ Evidence table template

2. Empirically test the Theory of Change

As a basis for monitoring and evaluation, it is valuable to identify indicators and/or measures of success for key steps in the Theory of Change, define the evidence needed to demonstrate or refute that they have been realized, and identify the data and data sources required. This supports a systematic collection of information needed to assess and explain the achievement of outcomes.

Evidence can be collected at planned intervals during the project or program to monitor progress and inform adaptive management, as well as after completion of the project or program to evaluate actual outcomes against the hypothetical Theory of Change. Such evidence could be sourced from key informant interviews, surveys, or documents demonstrating the use of knowledge produced by the research and changed behaviours.

Sample Questions for Facilitation

Purpose

What change do we aim to make a contribution to?

Activities/Outputs

What kind of processes, tools, and strategies are needed?

Who do we need to involve and how?

What knowledge, attitudes, skills, and relationships do we need to build? How do we accomplish this?

Outcomes

Who will do what differently as a result of the project's activities, outputs, or antecedent outcomes?

At what level do these expected changes occur?

What is the reason (theory and assumption) for this change?

What further changes will be triggered?

This is not an exhaustive list of facilitating questions. A comprehensive list of questions can be found here.

Indicators

What are the key outcomes that are expected, and how will they manifest?

What measures or indicators can be used to assess outcomes?

What sources of evidence exist, and how could this information be sourced?

For each key actor or set of actors, what outcome(s):

- Are expected at a minimum (expect to see)?
- Would indicate moderate success (like to see)?
- Would indicate a high level of success (love to see)?

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2. The overarching goal to which the research aims to contribute (but is not accountable for). For example, the elimination of poverty.