McMaster University

Family Medicine

David Braley Primary Care Research Collaborative

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Logic Models Part 2

Watch a recording of the session here

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January 26th, 2021

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Logic Models II

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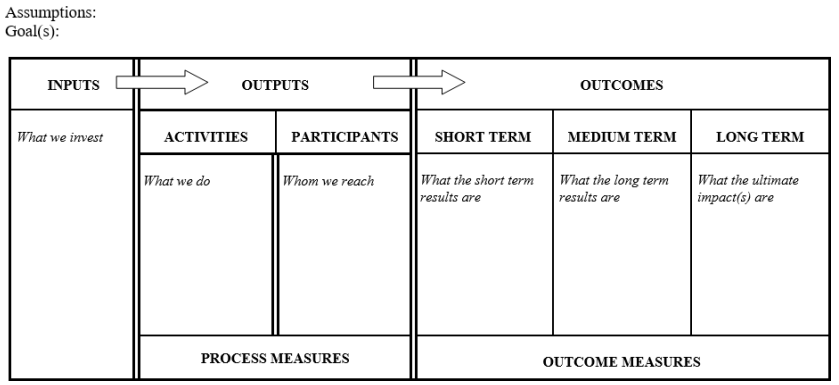
Learning Objectives

By the end of the session, you will be able to:

- Session 1:
  - Describe what a logic model is, and how it can be useful to your daily community program operations
  - Understand setting the goal of a community health program
  - Identify the input/output components of a logic model and how your data fits into it
- Session 2:
  - Identify short, medium, and long term outcomes for a logic model and how your data fits into it
  - Use a logic model for evaluation planning for your community health program

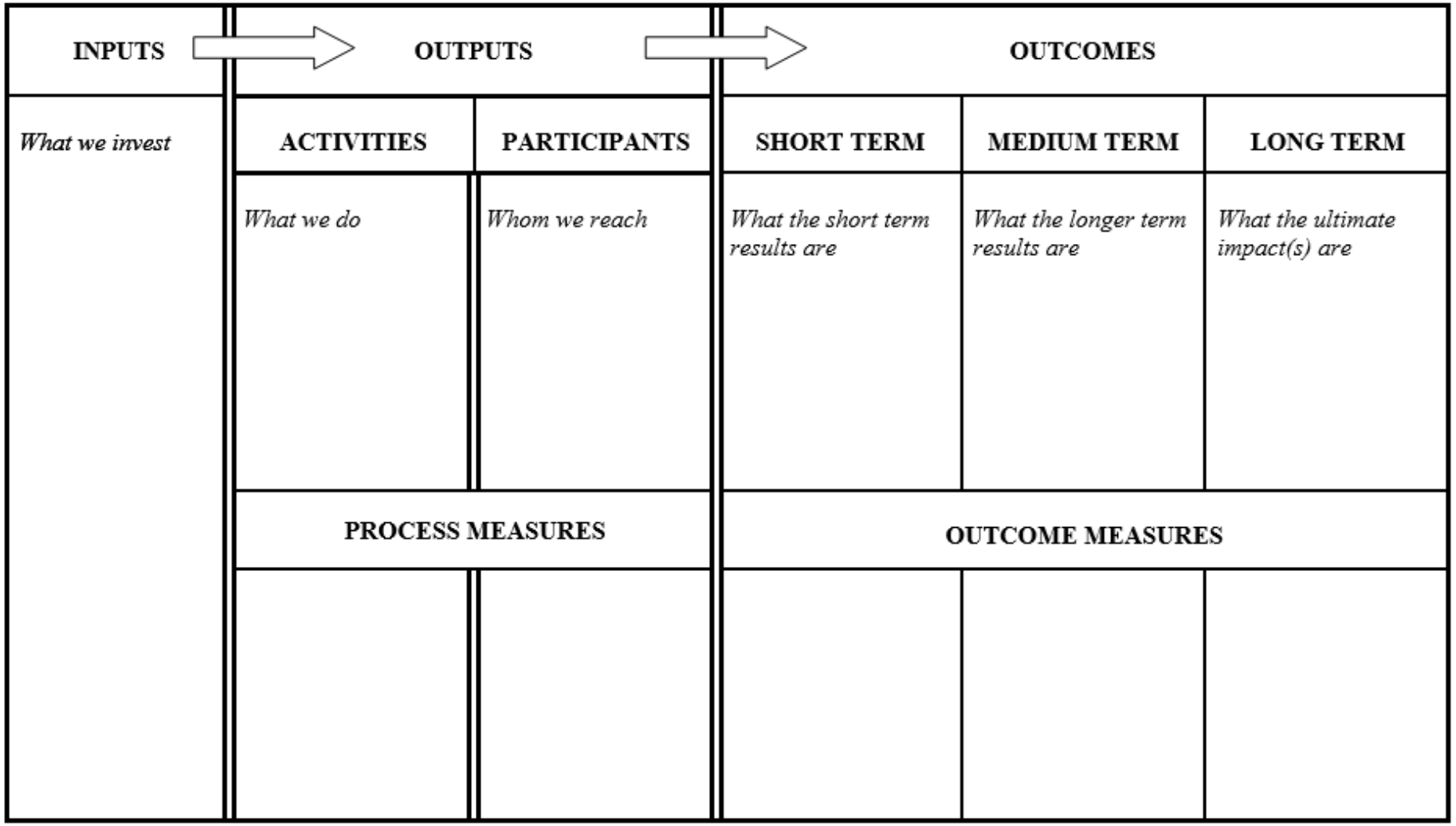
RECAP: What is a Logic Model?



- Provides a program overview that helps everyone understand how the program works and its objectives (expected outcomes) and the assumptions that underlie its delivery
- A diagram that describes a program and shows the relationships between program components
- All logic models contain the same core concepts:
  - **Goal** - what is the main aim of the program
  - **Inputs** - what goes into the program
  - **Outputs** - what comes out of the program (activities, participants)
  - **Outcomes** - the effect of the program (short, medium, long term)
- Some also include assumptions, evaluation measures, etc.

Overview of Logic Model Components

Assumptions:
Goal(s):



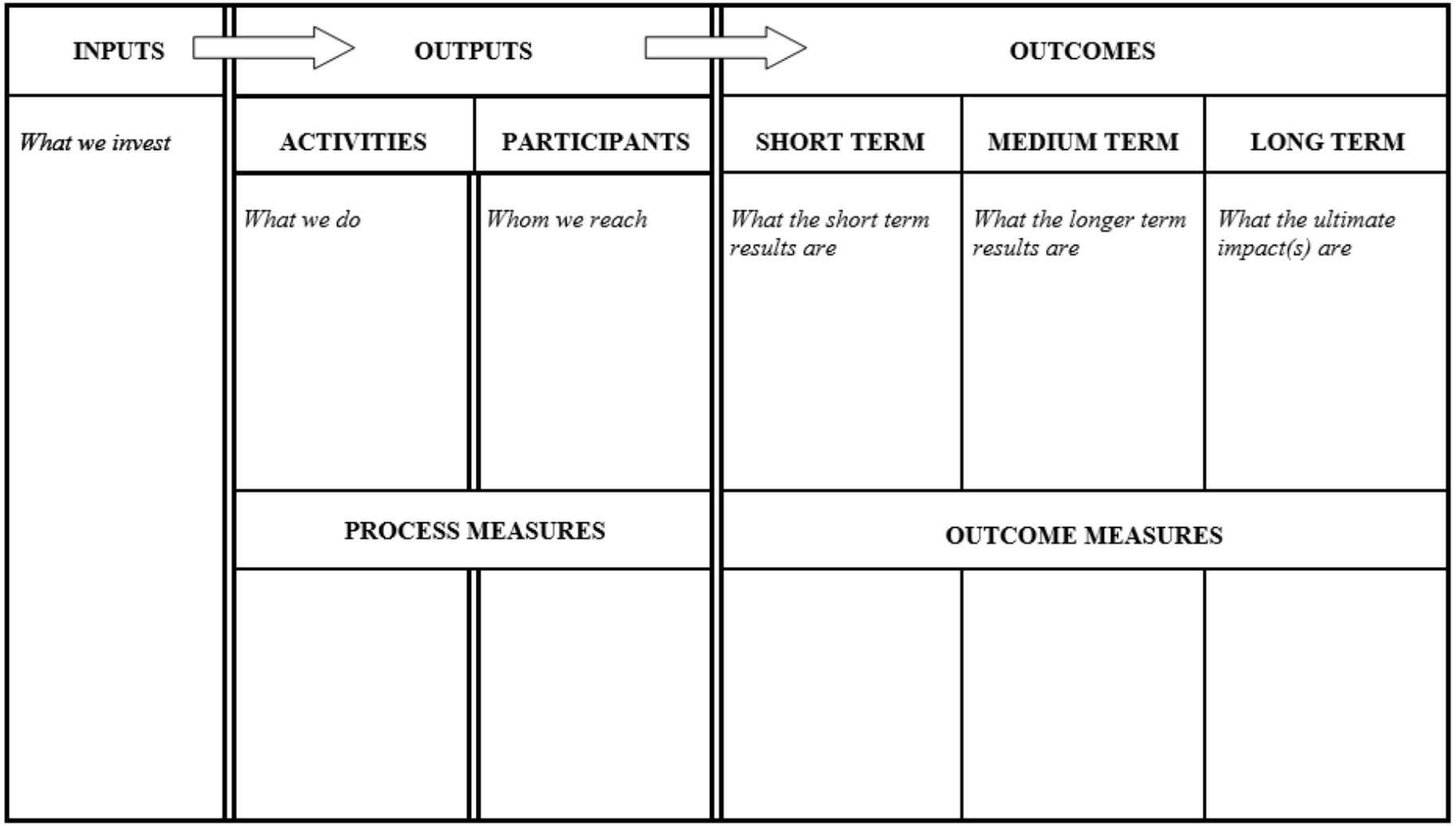
A Description of a Chronic Heart Failure Community Program

- Patients with severe CHF are discharged from hospital
- Within 7 days they are called by a Family Doctor (FD) and team
- The FD/team teaches them how to monitor their CHF - this may involve a visit with the patient
- The patient will then contact the FD/team at specified regular intervals to discuss their weight measurements, and breathing
- FD/team will discuss symptoms with the Cardiologist in the hospital
- Medication will be adjusted as needed by the Cardiologist, but the FD/team will facilitate the changes and continue to encourage the patient to monitor their symptoms
- The patient is discharged after 4 weeks, or sooner if stable

INPUTS	OUTPUTS	
	ACTIVITIES	PARTICIPANTS
What we invest FD team staffing time/resource Cardiologist time Patient having equipment to measure weight Communication strategy between patient/FD/ cardiologist; Strategy to measure symptoms of CHF longitudinally	*What we do* Identifying who is eligible to get the program Making initial contact with patients post-discharge Scheduling communication Monitoring CHF severity in each patient to determine when action needs to be taken Contacting the Cardiologist	*Whom we reach* Patients: - with severe CHF - at home in the community - discharged from hospital in last 7 days
	PROCESS MEASURES	
	Number of patients contacted Number of FD/Patient communications Number of medication changes by the cardiologist	Number of patients identified as meeting the eligibility criteria for the program Number of patients who consent to participate

Overview of Logic Model Components

Assumptions:
Goal(s):



Short Term Outcomes and Measures

- What a program can achieve in a short time frame (time frame could vary depending on the program) and how can this be measured?
- **First indicators of success** ➔ program is having an impact
- If short term outcomes are not being achieved, low likelihood that medium or long term will be achieved as well
  - **Need to revisit the inputs and outputs!**

- **Example: Smoking Cessation Program:**
  - Short term outcomes ➔ 'raising awareness of smoking as being harmful'
    - Measured by participant awareness of different smoking risks (e.g. knowledge of risk factors survey)

Medium Term Outcomes and Measures

- What a program can achieve in a medium time frame (time frame could vary depending on the program) and how can this be measured?
- Outcomes that take a little longer to change or impact compared to short term (e.g. behaviours)
- Another step in verifying that the program's activities are having the anticipated effect and the long term outcomes may be achievable

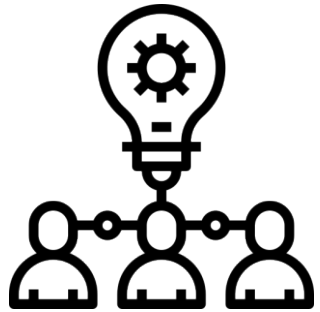
- **Example: Smoking Cessation Program**
  - Medium term outcomes ➔ 'participants have reduced the number of cigarettes smoked daily'
    - Measured by the number of participants who are smoking fewer cigarettes after 3 months compared to their baseline assessment (Behaviour survey at baseline and 3 months)

Long Term Outcomes and Measures:

- What a program can achieve in a long time frame (time frame could vary depending on the program) and how can this be measured?
- Should closely align with your stated program goal

- **Example: Smoking Cessation Program**
  - Long term outcomes ➔ 'participants have stopped smoking completely for at least 6 months'
    - Measured by % of participants achieving this outcome (another follow-up survey)

Short/Medium/Long Term Outcomes



ZOOM BREAKOUT EXERCISE: : Using the CHF Program example, what you do you think the short/medium/long term inputs of the program could be, and how could you measure them? - discuss in groups for 15 mins

Short/Medium/Long Term Outcomes

OUTCOMES		
SHORT TERM	**MEDIUM TERM**	**LONG TERM**
What the short term results are Community dwelling CHF patients: - are aware of the CHF Program - are aware that they should monitor their weight and symptoms daily - know how to monitor their weight and symptoms daily	*What the longer term results are* Community dwelling CHF patients monitor their weight and symptoms daily	*What the ultimate impact(s) are* Reduced readmissions for community dwelling patients with CHF

Short/Medium/Long Term Outcome Measures

OUTCOMES		
SHORT TERM	**MEDIUM TERM**	**LONG TERM**
What the short term results are	*What the longer term results are*	*What the ultimate impact(s) are*
OUTCOME MEASURES		
Knowledge about: - the CHF Program - how to and confidence in monitoring CHF at home - how often to monitor	Number of CHF patients monitoring their symptoms daily Daily weight and symptom plots for each community dwelling patient within the program	Change in readmission numbers before and after the program or between those assigned and not assigned to program

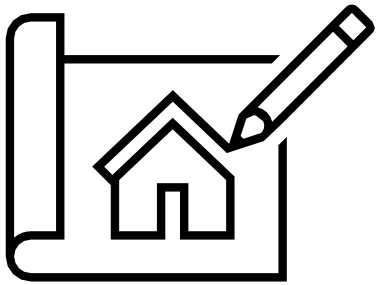
Completed Logic Model:

Assumptions: CHF readmissions are a concern and no current program; Healthcare provider capacity - FD will have enough team cap Cardiologist available and able to make med. adjustments without long delays

Goal(s): to better care for patients with CHF in the community and avoid hospital readmissions (Primary Care perspective)

INPUTS	OUTPUTS		OUTCOMES		
	ACTIVITIES	PARTICIPANTS	SHORT TERM	MEDIUM TERM	LONG TERM
What we invest FD team staffing time/resource Cardiologist time Patient having equipment to measure weight Communication strategy between patient/FD/ cardiologist; Strategy to measure symptoms of CHF longitudinally	*What we do* Identifying who is eligible to get the program Making initial contact with patients post-discharge Scheduling communication Monitoring CHF severity in each patient to determine when action needs to be taken Contacting the Cardiologist	*Whom we reach* Patients: - with severe CHF - at home in the community - discharged from hospital in last 7 days	*What the short term results are* Community dwelling CHF patients: - are aware of the CHF Program - are aware that they should monitor their weight and symptoms daily - know how to monitor their weight and symptoms daily	*What the longer term results are* Community dwelling CHF patients monitor their weight and symptoms daily	*What the ultimate impact(s) are* Reduced readmissions for community dwelling patients with CHF
	PROCESS MEASURES		OUTCOME MEASURES		
	Number of patients contacted Number of FD/Patient communications Number of medication changes by the cardiologist	Number of patients identified as meeting the eligibility criteria for the program Number of patients who consent to participate	Knowledge about: - the CHF Program - how to and confidence in monitoring CHF at home - how often to monitor	Number of CHF patients monitoring their symptoms daily Daily weight and symptom plots for each community dwelling patient within the program	Change in readmission numbers before and after the program or between those assigned and not assigned to program

Research and Logic Models

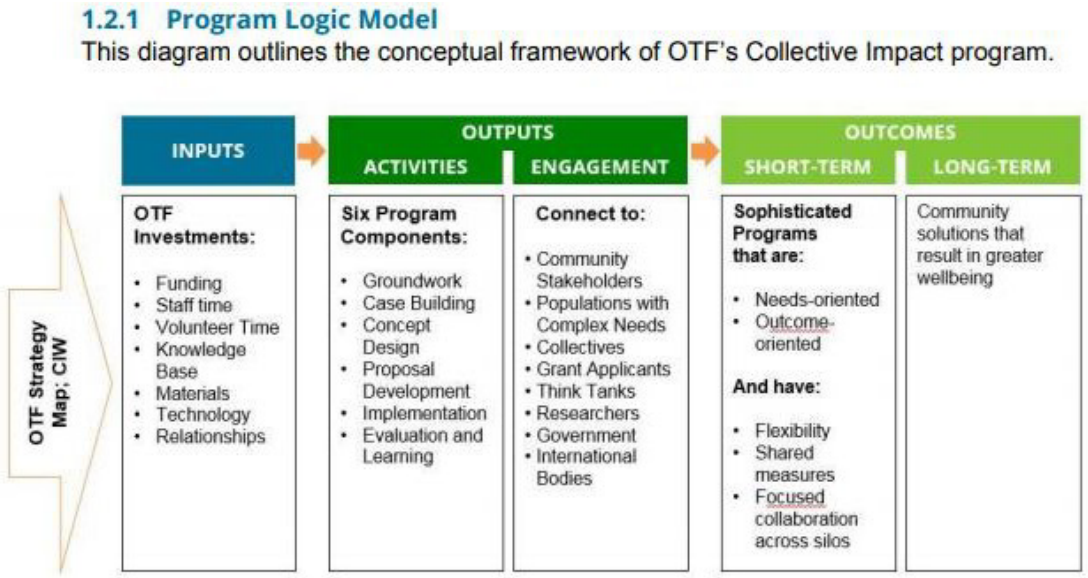


- Useful planning tool **before** writing a proposal
  - Clear vision = clear proposal
  - Any program where activities or actions occur
- Knowledge user partners
  - Involve as early as feasible
  - Iteratively work together

Research and Logic Models

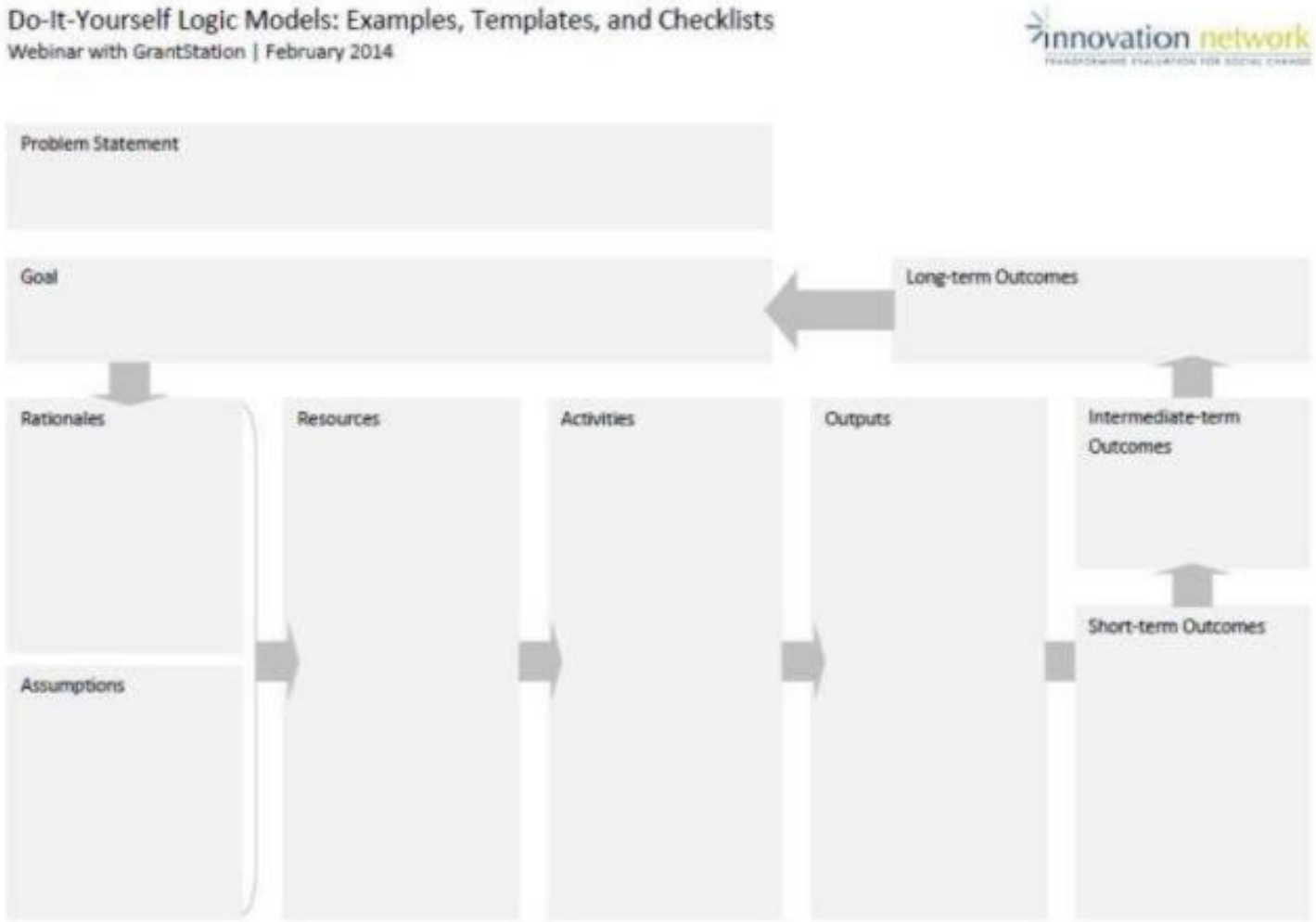
- Some funders require as part of a proposal
  Check if they have a template
- Ministry and NGO funding bodies are familiar with them and like to see them

Ontario Trillium Research Fund:



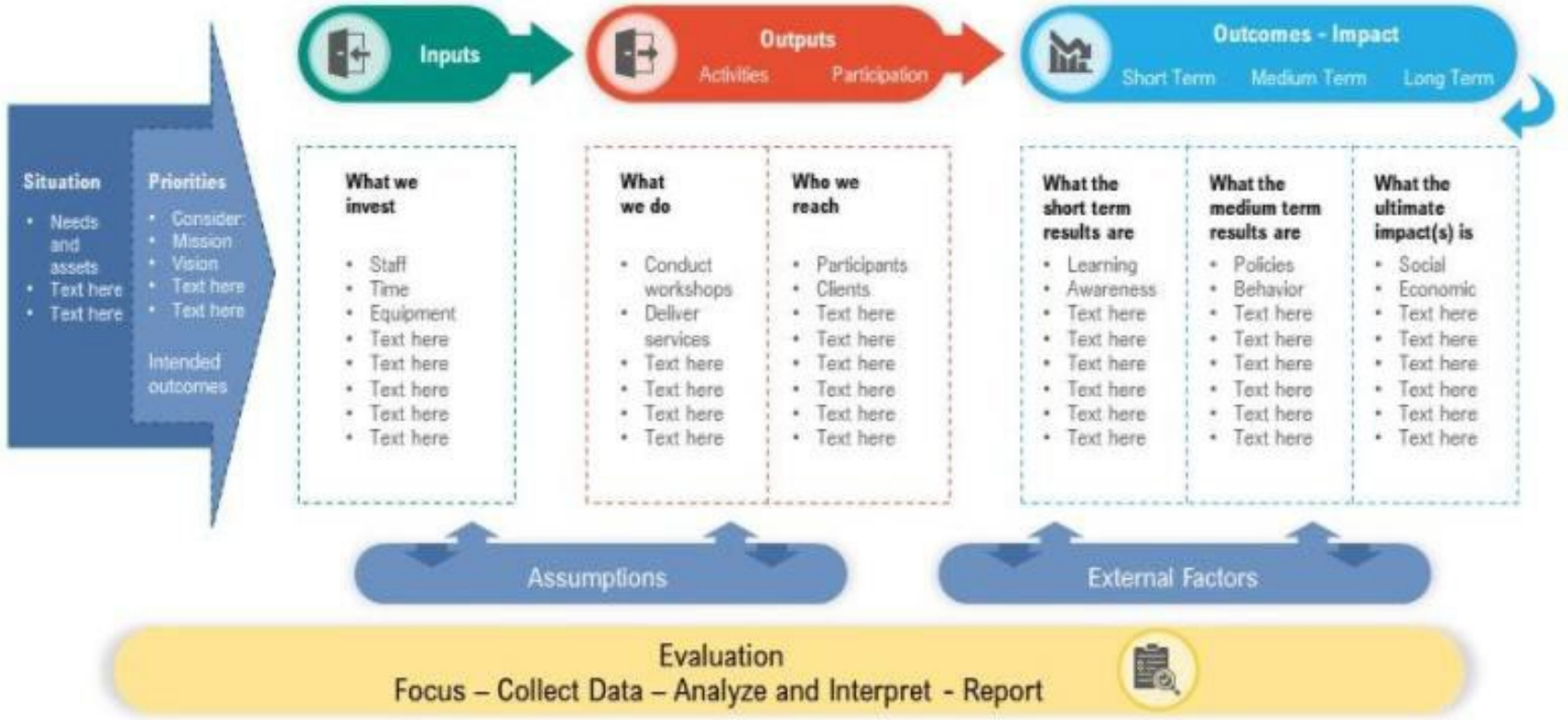
Other Logic Models

- Directional
- Adds Problem Statement and Rationale
- No evaluation...



Other Logic Models

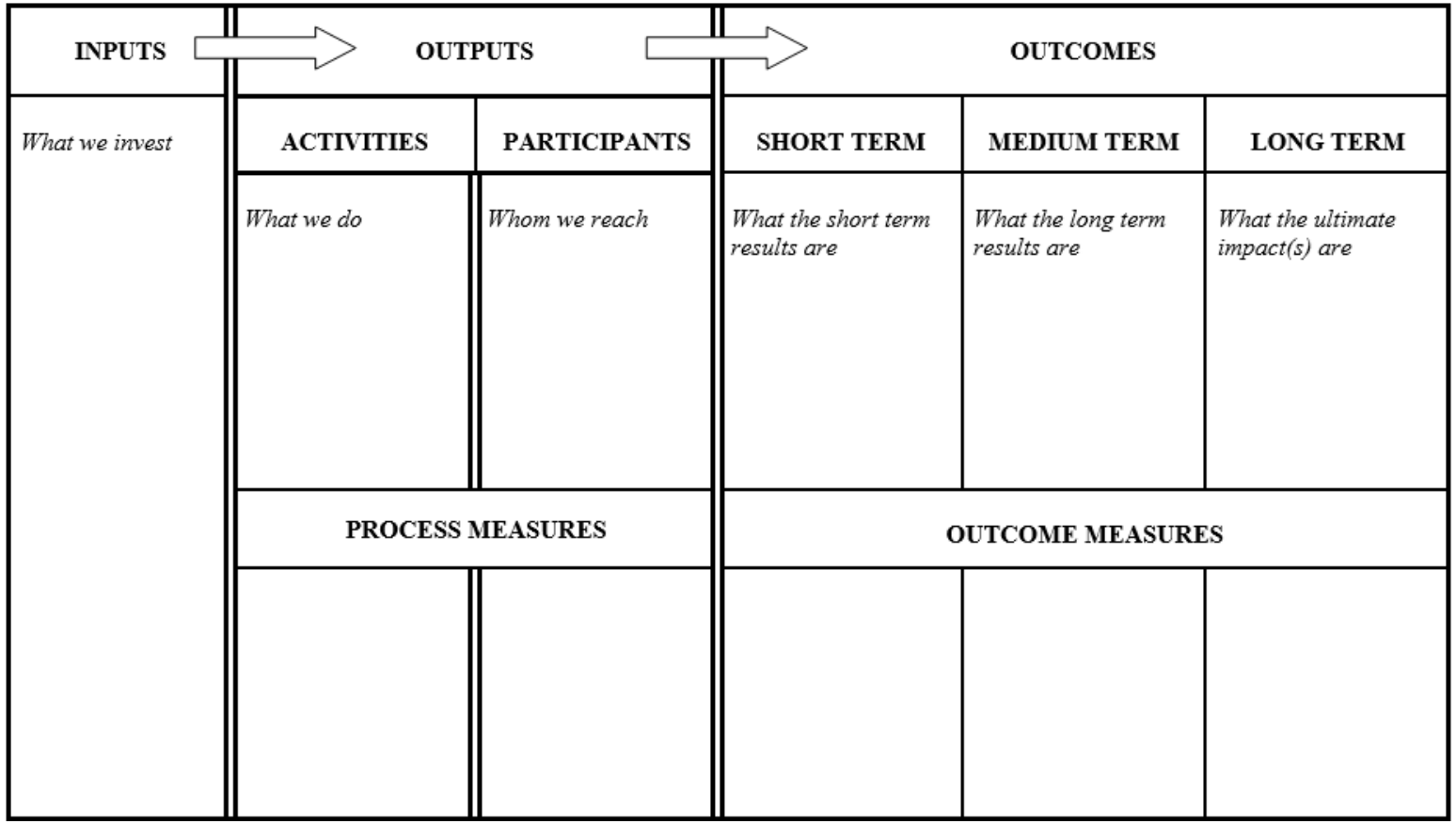
- Situation
  - Needs Assessment
- Priorities
- Evaluation is minimally represented



Research and Logic Models

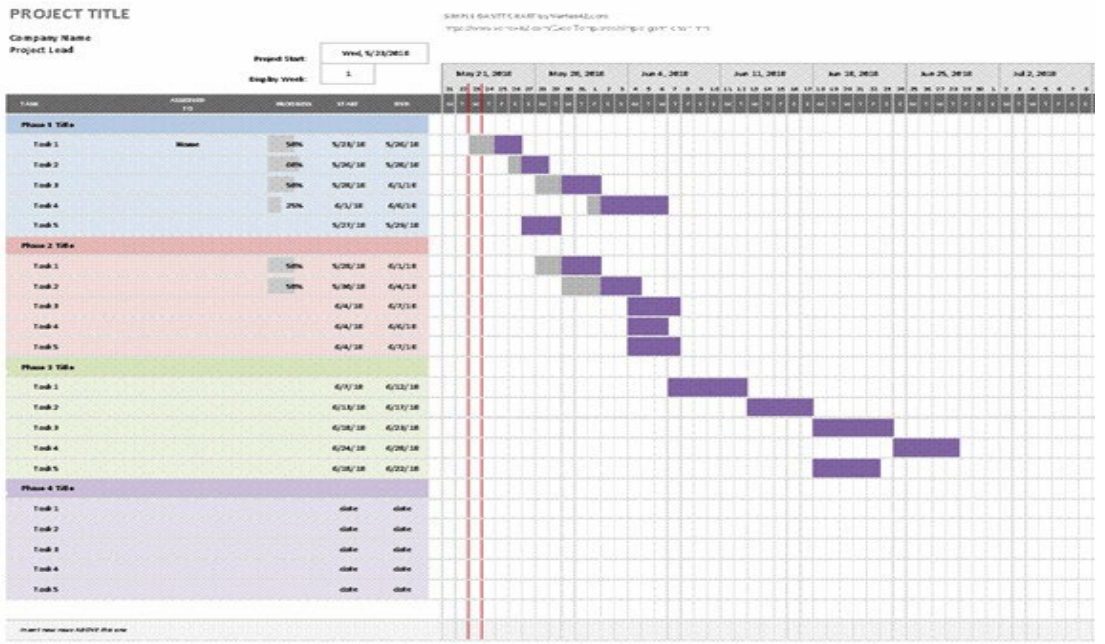
- Better example for research
- Focus on how each component will be measured *can plan ahead*

Assumptions:
Goal(s):



Complementary Documents

- Gantt Chart
  - Timeline w/ milestones and deliverables



- Workplan
  - For each activity and sub-activity
    - Who is responsible
    - What resources are needed
    - When will it occur
    - Anticipated challenges and mitigation strategies

****very detailed****

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Questions?

Thank you!

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