Designing a functional Monitoring and Evaluation system for your international project, program, and/or organization: A brief interactive workshop

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Objectives of this talk

1. Participants will demonstrate an understanding of the components of a functional M&E system
2. Participants will demonstrate how to create a Theory of Change (ToC)
3. Participants will demonstrate how to create a logic model
4. Participants will demonstrate how to create an indicator chart
The Mount Sinai Adolescent Health Center

ANGELA DIAZ, M.D., Ph.D., MPH
UAE and The MSAHC (NYC)
I need to have a functional M&E system

I need a Theory of Change (ToC) for my project

- A ToC is the thinking behind how a particular intervention will bring about results.
- The ToC shows outcomes/preconditions, it also outlines the *causal linkages in an intervention* between the shorter-term, intermediate, and longer-term outcomes.
- The identified changes are mapped –as the “outcomes pathway”– showing each outcome in logical relationship to all the others, as well as chronological flow.
Steps to creating a ToC

1. Identify a long term goal
2. Conduct “backward mapping” to identify the preconditions (outcome, output, activities, inputs) necessary to achieve that goal.
3. Identify the interventions and strategies that the project will perform to create the preconditions.
4. Think about indicators for each precondition that will be used to assess the performance of the intervention (could be done in the logic model development phase).
5. Write a narrative that can be used to summarize the various moving parts in the ToC.
Examples of ToCs

Early Childhood Education (ECE) Group’s Draft Theory of Change

Ultimate Social Impact: San Francisco’s 4- & 5-year olds are physically, emotionally, socially, culturally & academically prepared to become successful, healthy & happy adults

Penultimate Outcome: Infants, toddlers & preschoolers exhibit age-appropriate development

Long-term Outcome: Parents use ECE skills & actively engage in their children’s ECE

Long-term Outcome: Parents enroll all their 0-5 children in quality ECE

Intermediate Outcome: Parents are more confident in their parenting & less stressed

Intermediate Outcome: Parents are less fearful about enrolling children in ECE programs

Intermediate Outcome: Parents enjoy more social support & are less isolated

Intermediate Outcome: Parents understand what quality, safe ECE is & why it matters

Early Outcome: Parents understand child development concepts & behaviors

Early Outcome: Parents are knowledgeable about SF’s CDCs & other community ECE resources

Target for Change: Parents

Parents Pathway 1

Parents Pathway 2

Long-term Outcome: High-quality ECE is available for all SF 0-5 children

Intermediate Outcome: SF’s ECE programs are fully funded & supported by public policy

Intermediate Outcome: Increased funding for ECE in SF

Early Outcome: Policymakers understand ECE’s Social Return on Investment & its other benefits

Target for Change: Policymakers

Prepared by Eleanor A. Smith & Associates
Examples of ToCs

My Name is Kumar Foundation
Theory of change

Activities
- Children care and education
  - Providing birth certificates
  - Supporting children’s daily needs
  - Sending children to school
  - Bringing awareness on child welfare to families

- Community development
  - Developing community infrastructures (renewable energy, affordable housing, community hall) and community activities
  - Providing medical services and health information and guidance
  - Raising awareness around women’s rights, alcohol, violence, domestic abuse

- Employment
  - Assessing skills and career opportunities
  - Advocating for access to financial services
  - Advising for career start

- Women empowerment
  - Delivering trainings and support for employment
  - Providing social and health care for women

Short-term outcomes
- Giving the opportunity for each member of Lender community, of all age groups, to live in a self-sustaining way where begging is eradicated

- Recognition of community members by the government and increased access to education and social care
- Improved school attendance and education sustenance
- Enhanced personal development
- Improved social and family interactions
- Improved health and living conditions
- Increased skills and employability
- Improved employment and income situation, including for women
- Increased confidence and independence of women

Long-term outcomes
- Breaking the circle of poverty across generations in the Lender community
  - Greater resilience and financial sustainability
  - Greater community engagement and sense of community belonging
  - Higher level of emotional, physical and health well-being
Examples of ToCs

**Education**
- Engage communities and volunteers
- Create strong policy and partnerships
- Involve mentors and tutors
- Engage parents
- Develop social, emotional, and intellectual skills

**Supportive Communities**
- Data-driven plans and evaluations
- Build lasting solutions
- Address early drop out signs
- Develop language and literacy
- Support children wherever they are

**Effective Schools**

**Strong Families**

**Results:**
- Start school ready
- Read on track at grade 4
- Middle school success
- Graduate high school
- Work or school by 21

**Continued Support, Focus and Engagement**
Examples of ToCs

We help develop a sense of social responsibility & awareness of global issues, as well as build capacity among youth.

We provide engaged youth with the access to global opportunities, building their skills & creating a sense of belonging to a community of other actively engaged youth.

Youth Development

Youth Action & Participation

We impact shared values through our involvement in global social movements, ultimately influencing attitudes & behaviours towards creating a more sustainable world.

Societal Values

We strengthen global social movements by collaborating with other organizations to ensure youth participate & become key stakeholders in these efforts.
Think about your project and draft a simple ToC for it.
A logic model or logic framework is an attempt to depict program components so that activities are matched to outcomes.

The approach when shown as a matrix is called a *log frame* and when shown as a flow chart it is sometimes called a *logic model*. 
# Logic framework

## Program: Health Information Outreach Program

<table>
<thead>
<tr>
<th>INPUTS</th>
<th>ACTIVITIES</th>
<th>OUTPUTS</th>
<th>OUTCOMES</th>
<th>Why this project: short-term results</th>
<th>Why this project: intermediate results</th>
<th>Why this project: long-term results</th>
</tr>
</thead>
<tbody>
<tr>
<td>What we invest</td>
<td>What we do</td>
<td>Who we reach</td>
<td>What are the direct products of program activities</td>
<td>Why this project: short-term results</td>
<td>Why this project: intermediate results</td>
<td>Why this project: long-term results</td>
</tr>
<tr>
<td>Staff</td>
<td>Conduct workshops and meetings</td>
<td>Participants</td>
<td># of clients trained</td>
<td>Learning</td>
<td>Action</td>
<td>Conditions</td>
</tr>
<tr>
<td>Volunteers</td>
<td>Train</td>
<td>Clients</td>
<td># of service hours provided</td>
<td>• Awareness</td>
<td>• Behavior</td>
<td>• Health</td>
</tr>
<tr>
<td>Time</td>
<td>Deliver services</td>
<td>Agencies and</td>
<td># of workshops conducted in a month</td>
<td>• Knowledge</td>
<td>• Practice</td>
<td>• Social</td>
</tr>
<tr>
<td>Money</td>
<td>Develop products, curricula,</td>
<td>community-based organizations (CBOs)</td>
<td># of workshops conducted in a quarter</td>
<td>• Attitudes</td>
<td>• Decision-making</td>
<td>• Economic</td>
</tr>
<tr>
<td>Research</td>
<td>resources</td>
<td>Decision-makers</td>
<td># of completed media projects in a quarter</td>
<td>• Skills</td>
<td>• Policies</td>
<td>• Civic</td>
</tr>
<tr>
<td>findings</td>
<td>Facilitate access to information</td>
<td>Customers</td>
<td>Learning</td>
<td>• Opinions</td>
<td>• Social Action</td>
<td>• Environmental</td>
</tr>
<tr>
<td>Materials</td>
<td>Work with media</td>
<td>Clinical professionals</td>
<td>Action</td>
<td>• Motivations</td>
<td></td>
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</tr>
<tr>
<td>Equipment</td>
<td></td>
<td>Members of CBOs</td>
<td>Conditions</td>
<td>• Health</td>
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<tr>
<td>Technology</td>
<td></td>
<td></td>
<td></td>
<td>• Social</td>
<td></td>
<td></td>
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<tr>
<td>Partners</td>
<td></td>
<td></td>
<td></td>
<td>• Environmental</td>
<td></td>
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</tr>
</tbody>
</table>

## Assumptions
- Beliefs about the environment and community
- Should be confirmed before beginning the program

## External Factors
- Positive and negative influences
- Culture, economics, politics, demographics
- Should be confirmed before beginning the program
Logic model

Inputs
- Staffing
- Partnerships
- Youth
- Mentors
- Funding

Activities
- Policy assessment
- Education campaign
- Youth advocacy

Outputs
- Policy recommendation
- Number reached
- Number events

Short-term
- Creation of tobacco free policies
- Increased support for tobacco free policies and enforcement

Intermediate
- Compliance with tobacco free policies

Long-term
- Reduced exposure to second-hand smoke
- Reduced tobacco consumption
- Reduced tobacco-related disease and deaths
Difference between the ToC and logic model (LM)

1. The ToC gives the ‘big picture’ and summarizes work at a *strategic level*, while an LM illustrates a *program (implementation) level* understanding of the change process.

2. The ToC can give focus to the complex social, economic, political and institutional processes that underlie societal change. Whereas, the LM depicts only components directly connected to the program.
Difference between the ToC and logic model (LM)

- The development of a ToC usually begins from the 'top' – THE GOAL and then working backwards to map the outcome pathways.
- An LM on the other hand is usually designed after a ToC or intervention/program is developed.
- In other words, the LM usually does not start with the GOAL, but starts at the 'bottom', depicting the inputs, activities, outputs etc., that lead to the goal.
- The question that would be asked in developing a LM is ‘If we plan to do X, then this will give Y result’
<table>
<thead>
<tr>
<th>Theories of Change</th>
<th>Logic Models/Logical Frameworks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explanatory (‘if we do X then Y will change because’)</td>
<td>Descriptive (If we plan to do X, then this will give Y result’)</td>
</tr>
<tr>
<td><img src="image1.png" alt="Explanatory" /></td>
<td><img src="image2.png" alt="Descriptive" /></td>
</tr>
<tr>
<td>Starts with the goal and works backwards</td>
<td>Usually designed from the ‘bottom up’</td>
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<tr>
<td><img src="image3.png" alt="Goal &amp; Objective Setting" /></td>
<td><img src="image4.png" alt="Bottom Up Design" /></td>
</tr>
</tbody>
</table>

18
<table>
<thead>
<tr>
<th>Project:</th>
<th>Goal:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INPUTS</strong></td>
<td><strong>ACTIVITIES</strong></td>
</tr>
<tr>
<td>What we invest</td>
<td>What we do/ Who we reach</td>
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</table>

<table>
<thead>
<tr>
<th>Assumptions</th>
<th>External Factors</th>
</tr>
</thead>
</table>

19
Bicycle Helmet Public Information Campaign

**Situation**
- Funding for an informational campaign to encourage bicyclists to use helmets has been received

**Inputs**
- Three full-time staff members
- Volunteers with traumatic brain injuries
- Space and equipment (donated by a local nonprofit agency)

**Target Systems**
- Individuals and organizations aligned with riding bicycles for recreation and/or transportation
- Journalists and publications covering disability, athletic, and mainstream issues
- Bicycle helmet and bicycle manufacturers conducting marketing/public relations campaigns
- Community-based charities interested in bicycle helmet give-away programs
- Community and state chapters, and the national association on brain injury

**Activities**
- Gather current information on deaths due to bicycling accidents
- Gather information about rate of traumatic brain injuries from bicycle accidents currently documented
- Gather data about injury prevention from use of helmets when bicycling
- Develop press kits for media
- Develop and support use of Public Service Announcements for television and radio
- Attract key individual journalists to the issue of traumatic brain injuries from bicycle accidents
- Promote attention and award recognition to media attention on helmet use campaign

**Outputs**
- Special Report: Comparing Costs of Helmet Safety and Traumatic Brain Injury produced and shared with all local, state, and national TBI-related agencies
- Fact sheets produced on available data concerning incidence rates of traumatic brain injury and helmet safety programs distributed by local, state, and federal elected officials
- Establish national recognition program for effective helmet safety programs and solicits volunteer “celebrity” to work in association with this recognition effort
- PSA announcements about people benefited by helmet safety programs and people (including family members) experiencing injuries that they consider preventable through the wearing of a helmet while bicycling
- Contact Governors Committees for People with Disabilities concerning past “journalist awards” and also coverage (related through press kits) of helmet safety effects on TBI (including consumer stories)

**Outcomes - Impact**

**Short-Term**
- Bicycle riders will become more aware of benefits of wearing helmet while cycling
- Disability and mainstream journalists will be more aware of bicycle helmet use

**Intermediate**
- Bicycle riders will use helmets more frequently

**Long-Term**
- Frequency of deaths due to bicycling accidents will decrease
- Rate of traumatic brain injuries from bicycling accidents will decline

**Data**
- Focus groups measuring change in awareness
- Individual interviews with volunteer group of bicyclists
- Focus groups with disability and mainstream journalists
- Individual interviews with journalists to assess specific changes in awareness and understanding
- Focus groups to assess helmet use and attitude regarding helmet use
- Survey of TBI-related consumer organization to identify new information sharing campaigns implemented as a result of project activities and information sharing

**Dissemination Planning and Actions/Intensive Utilization Activities**
Think about your project and draft a Logic Model for it
I need an indicator chart for my project

- Indicators are used to measure the outcomes of interventions and to monitor the performance/outputs of programs or projects in relation to pre-determined targets.
- Indicators can tell us things such as:
  - To what extent our project or program outcomes have been met.
  - Is the amount of activities needed to realize change being attained?
  - Is there program fidelity?
  - Can we explain (mediation/moderation) change overtime?
<table>
<thead>
<tr>
<th>Level of indicator</th>
<th>Objective</th>
<th>Indicator</th>
<th>Target</th>
<th>Narrative</th>
<th>Measurement</th>
<th>Data source</th>
<th>Who/when</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome or Output</td>
<td>Objective of the indicator</td>
<td>Indicator written with SMART language</td>
<td>Can be % or a statistical significant value, or a frequency or rate</td>
<td>Explain the rational for the indicator and target and why is it attainable (include baseline data if feasible)</td>
<td>How the data will be analyzed in order to ascertain whether the target was achieved? What analytic test will be conducted? Keep it simple!</td>
<td>How will the data be captured and the tools to be used</td>
<td>Who will be responsible for collecting the data and what is the schedule for collecting and reporting the data? Who will verify the data?</td>
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</table>
## INDICATOR CHART TEMPLATE

<table>
<thead>
<tr>
<th>Level of Indicator</th>
<th>Objective</th>
<th>Indicator</th>
<th>Target</th>
<th>Narrative</th>
<th>Measurement</th>
<th>Data source (e.g., Tool)</th>
<th>Who/when</th>
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</table>
Specific: should be clear to people with basic knowledge of the issue, program or initiative and clearly articulated, well defined and focused.

Measurable: should be able to determine the degree to which there is completion or attainment. Using the same (ideally quantifiable) methodology and information, findings should be able to be replicated.

Achievable: should be realistic, practical, and attainable within operational constraints dependent upon availability or resources, knowledge and timeframe.

Relevant: should be tied to the aims and goals of the program/project and help to bring about the desired outcomes.

Timebound: should have clear deadlines expressed.
## Example of an indicator chart

### EOP indicator chart

<table>
<thead>
<tr>
<th>Level of Indicator</th>
<th>Objective</th>
<th>Indicator</th>
<th>Target</th>
<th>Narrative</th>
<th>Measurement / Tools</th>
<th>Data source</th>
<th>Who/when</th>
<th>Note</th>
</tr>
</thead>
</table>
| Outcome 1          | Adults will increase their knowledge of child development and the benefits of play | Adults receiving EOP training on all at least 10/13 modules will demonstrate an improved knowledge of child developmental milestones (0 - 5yo) during the training period and 3 and 6 month post training | 90% | The percentage of adults completing 10/13 of the modules who maintain ECD knowledge during training and up to 6 months post training is important to assess whether participants are maintaining ECD knowledge in order to recognize change in children they work with. It also will give us a sense of how well adults learn the content of the ECD modules and continue to know the content 3 and 6 months post training. | Target: \( \frac{y/x}{100} \geq 90 \)  
\( x \): total # of adults completing 10/13 training modules  
\( y \): # of adults completing 10/13 modules who show statistically significant improvement in subsequent assessment periods at pretest, posttest, 3 and 6 months. Comparisons will be made with pretest baseline with subsequent test. T-test will be used to assess significance at the .05 level.  
Qualitative analysis from focus group discussion |  | | Data will be given to the WWO Director of Research to analyze. Findings will be shared with the Program Manager. |
<table>
<thead>
<tr>
<th>Level of Indicator</th>
<th>Objective</th>
<th>Indicator</th>
<th>Target</th>
<th>Narrative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>The percentage of adults completing 10/13 modules who maintain ECD knowledge during training and up to 6 months post training is important to assess whether participants are maintaining ECD knowledge in order to recognize change in children they work with. It also will give us a sense of how well adults learn the content of the ECD modules and continue to know the content 3 and 6 months post training.</td>
</tr>
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<td>Outcome 1</td>
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<td>Adults receiving EOP training on all at least 10/13 modules will demonstrate an improved knowledge of child developmental milestones (0 - 5yo) during the training period and 3 and 6 month post training</td>
<td>90%</td>
<td></td>
</tr>
<tr>
<td>Measurement / Tools</td>
<td>Data source</td>
<td>Who/when</td>
<td></td>
<td></td>
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<tr>
<td>--------------------</td>
<td>-------------</td>
<td>----------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target: y/x * 100 ≥90</td>
<td>Pre test before every module - participants</td>
<td>Pre test - program facilitator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>x: total # of adults completing 10/13 training modules Y: # of adults completing 10/13 modules who show statistically significant improvement in subsequent assessment periods at pretest, posttest, 3 and 6 months. Comparisons will be made with pretest baseline with subsequent test. T-test will be used to assess significance at the .05 level.</td>
<td>Post test after every module - participants * ECD milestone assessment tool measuring ECD knowledge - participants</td>
<td>Post test - program facilitator</td>
<td></td>
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<tr>
<td></td>
<td>Focus group discussion - participants</td>
<td>* 3 and 6 months follow-up - WWO evaluator</td>
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<tr>
<td></td>
<td>Adult journals - participants</td>
<td>Adult focus group discussion at the end of the module, 3 and 6 month - WWO evaluator</td>
<td></td>
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</tr>
<tr>
<td>Qualitative analysis from focus group discussion</td>
<td>Data will be given to the WWO Director of Research to analyze. Findings will be shared with the Program Manager</td>
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</tr>
</tbody>
</table>
## Monitoring & Evaluation (M&E) Framework Example

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>DEFINITION</th>
<th>BASELINE</th>
<th>TARGET</th>
<th>DATA SOURCE</th>
<th>FREQUENCY</th>
<th>RESPONSIBLE</th>
<th>REPORTING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal</strong></td>
<td>Percentage of Grades 6 primary students continuing on to high school.</td>
<td>50%</td>
<td>60%</td>
<td>Primary and high school enrolment records.</td>
<td>Annual</td>
<td>Program manager</td>
<td>Annual enrolment report</td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td>Reading proficiency among children in Grade 6.</td>
<td>Average score: 47</td>
<td>Average score: 57</td>
<td>Reading proficiency tests using the national assessment tool.</td>
<td>Every 6 months</td>
<td>Teachers</td>
<td>6 monthly teacher reports</td>
</tr>
<tr>
<td><strong>Outputs</strong></td>
<td>Number of students who completed a summer reading camp.</td>
<td>0</td>
<td>500</td>
<td>Summer camp attendance records.</td>
<td>End of every camp</td>
<td>Teachers</td>
<td>Camp review report</td>
</tr>
<tr>
<td></td>
<td>Number of parents of children in Grade 6 who helped their children read at home in the last week.</td>
<td>0</td>
<td>500</td>
<td>Survey of parents.</td>
<td>End of every camp</td>
<td>Program officer</td>
<td>Survey report</td>
</tr>
</tbody>
</table>

This template by [tools4dev](https://www.tools4dev.org) is licensed under a Creative Commons Attribution-ShareAlike 3.0 Unported License.
Think about an outcome for your project and list out an indicator, target, rationale, measurement, tool, data source, and who/when
Training, data flow, and knowledge management from my project are very important factors to consider.
I need to have a functional M&E system¹

I need to have a functional M&E system\(^1\)

Data flow chart for WWO in-country and HQ, M&E staff

Deputy country directors or M&E country managers to review data validity and accuracy

IT specialist maintains data integrity and scans and stores a copies of M&E worksheets

Data clerk enter data into database and generates reports and charts

Data codebook and manual should include: Tracking tables, Data matrix, Monitoring indicators

Tables are generated automatically and by unique query

WWO Project managers review all forms and reports and pass them on to the data clerk for data entry and data manager for data storage (hard copies)

Completed monitoring forms are given to WWO project managers

Data clerk submit data files from the database to M&E TD at HQ.

The WWO HQ M&E Director reviews reports and conducts additional analyses from data on the database

WWO country director uses the reports and data worksheets to make management decisions

Feedback is provided back to the program/projects, WWO HQ staff, and the Board for decision-making and planning

Assumptions: Front line staff and program partners will be trained on data collection and verification. They also will be trained in the monitoring and evaluation framework for the program.
I need to have a functional M&E system

Review the monitoring data? Why bother? We’re going fine.

Remember M&E information is useful only if it is used!
Contact information

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(mobile) 646.267.1397

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