USING A THEORY OF CHANGE FOR COLLABORATION, LEARNING AND ADAPTATION: GUIDANCE AND METHODOLOGY

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USING A THEORY OF CHANGE FOR COLLABORATION, LEARNING AND ADAPTATION: GUIDANCE AND METHODOLOGY

Written and edited by Jennifer Himmelstein, Jacob Gray, Mandana Nikhai and Daniel Sumner

ACKNOWLEDGEMENTS

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INTRODUCTION

Document Intention, Design, and Use

WHAT IS THIS DOCUMENT?
This document presents guidance, tools and other resources to help an organization implement a ToC based project including:
1) Reviewing and Refining a Project ToC
2) Prioritizing Outcomes for Monitoring, Measuring, and Learning
3) Iterative Monitoring, Analysis, Reflection and Learning
4) Knowledge Generation and Dissemination
5) Adaptive Actions

WHY TOC?
Theory of Change (ToC) is a powerful tool for the design, implementation, monitoring, evaluation, and learning of projects effecting change in complex environments. Over the past few decades, the development community has become more aware that the challenges people, communities, cities, and countries face are embedded within multiple inter-dependent, dynamical environmental, social, organizational, and political systems. Effecting change in these complex environments requires a systems approach – one which looks at the interrelationships between parts of a system, as much as the parts themselves.

WHY THIS DOCUMENT? WHY NOW?
ToC has become a central project design framework for many bi- and multi-lateral institutions and foundations, including but not limited to USAID, DFID, the Gates Foundation, Annie E Casey Foundation, and others. As ToC based project design has become more mainstream across the development community, there is a growing need for learning and sharing of best practices in ToC based project management, including Monitoring and Evaluation (M&E), to enhance outcome monitoring, measurement, learning, and adaptive actions in a ToC based project.

WHO IS THIS DOCUMENT FOR?
We developed this guidance document for all persons and development practitioners working on a ToC based project. However, it may be most useful for project staff responsible for leading the design, implementation, monitoring, analysis, evaluation, learning, and adaptive actions on a ToC based project. These staff persons are typically project managers, M&E managers and specialists or learning managers and specialists.

HOW SHOULD I USE THIS DOCUMENT?
This guidance document is NOT intended to be a comprehensive, all-inclusive manual for designing a ToC. Instead, it is intended to provide users with a foundational understanding of how to utilize the ToC as a life of project approach. ToC are often developed by a project at the proposal stage or at the beginning of project implementation. Additionally, ToC’s are frequently only revisited at the end of a
Using a Theory of Change for Collaboration, Learning and Adaptation: Guidance and Methodology

project, which devalues their purpose. The methodologies, tools, resources, and illustrative case studies\(^1\) found in this document are intended to empower project teams in conducting ToC review, revision, monitoring, analysis, and learning as a regular process of good project management.

**DOCUMENT ROADMAP**

Following the documents’ Introduction and Overview of ToC and a ToC Based Project sections, the Guidance for M&E Teams in a Toc Based Project section is outlined in three “phases”. Each phase includes foundational theory, implementation and management considerations for using a ToC approach for learning, and recommended processes, tools, and resources. Described activities and methods provide a basic framework; they can and should be tailored, through a collaborative process, to meet the needs of individual projects.

**Phase 1: ToC Review and Refinement** presents guidance and tools for leading a participatory, multi-stakeholder process to review and refine ToC pathways and outcomes and to identify critical ToC assumptions.

**Phase 2: Iterative Monitoring, Analysis, Reflection and Learning** presents a strategy for prioritizing ToC outcomes for monitoring, evaluation and learning and then subsequently developing a ToC Monitoring Framework and learning agenda. We also provide an overview of a number of qualitative and quantitative data collection and analysis methods, well suited for monitoring and measuring a ToC based project.

**Phase 3: Knowledge Generation, Dissemination, and Adaptive Actions** presents processes and guidance to help a project generate knowledge and promote project adaptation.

\(^1\) Illustrative purple case study boxes are of a fictional project called the **Food Security in Jalapa (FSJ)** project. The ToC for the FSJ project (Figure 3) is derived from the **TOPS Theory of Change Facilitators Guide** (Starr & Fornoff, 2016).
OVERVIEW

ToC and a ToC Based Project

THEORY OF CHANGE IN A DEVELOPMENT PROJECT

BACKGROUND – WHAT IS A THEORY OF CHANGE?

As development practitioners, we are generally pretty good at identifying what changes we believe need to happen, why we should implement certain projects and activities, and how different projects, project components, or project activities fit together. When working in complex environments with multiple interacting systems, it is equally important to identify and substantiate the rationale and assumptions which underlie the what, why, and how of our work. These rationale and assumptions ultimately determine how effective our project will be.

A ToC is just that: a complete, comprehensive, evidence-based articulation of our best understanding of how we believe change may happen to bring about a given set of results.

A project ToC is often depicted as a diagram in a project proposal, visualizing the relationships between numerous desired outcomes of a project and the long-term outcome or end goal. The typical components of any ToC, depicted in Figure 1 to the right, include:

- **Long Term Outcome** – the ultimate desired goal of the project or intervention.
- **Preconditions / Intermediate outcomes** – the intermediary changes that are necessary to achieve the project’s high-level goal.
- **Change / Causal pathway** – a single cause and effect pathway amidst all of the cause and effect pathways in the ToC.
- **Rationale** – the logic / evidence which explains why one precondition leads to another.
- **Assumptions** – a factor which is accepted as true or certain

Resources on Theory of Change

- Theory of Change: Facilitators Guide - TOPS
- Review of the use of ‘Theory of Change’ in international development by Isabel Vogel
- Theory of Change – UNICEF Methodological Brief by Patricia Rogers
- Theory of Change Review – Comic Relief
- The Community Builder’s Approach to Theory of Change

Figure 2. Elements of a ToC. Adapted from the Community Builders Approach to ToC (Anderson, 2009)
(with varying degrees of evidence) believed to be critical to achieve the anticipated precondition.

Most ToC’s we are familiar with are more complicated than the example above, and look something like Figure 3 below.

**Figure 3. Theory of Change for the Food Security in Jalapa project, derived from the TOPS Theory of Change Facilitators Guide (Starr & Fornoff, 2016)**

**HOW ARE A TOC BASED PROJECT AND LOGFRAME/RESULTS FRAMEWORK BASED PROJECT DIFFERENT?**

Managing a ToC based project is different than one that is designed around a logframe or results framework. As described, a ToC is our best understanding of how change may happen. Emphasizing the words “best” and “may” indicates awareness that the ToC is based upon multiple hypotheses and systems and is complex and ever changing. Our understanding of how change happens in a system at the beginning of a project will change over time as we attain more experience, collect more information and as the environment and systems change. In this way, a ToC is a “living” framework – requiring frequent testing, revision and adaptation based on evidence. A logframe, on the other hand, depicts change as a more linear process.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Theory of Change</th>
<th>LogFrame</th>
<th>Results Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>Articulation of Anticipated Outcomes</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Relationships Between Outcomes Under a Single Objective</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Relationships Between Results Under Different Objectives</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assumptions Associated with Different Objectives</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Outcome Monitoring and Measurement Indicators, Approaches</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MANAGING A THEORY OF CHANGE BASED PROJECT

The dynamic nature of a ToC demands a project management, monitoring, and evaluation approach which supports continual reflection, learning, and adaptation. This requires regular monitoring and analysis. M&E play a crucial role on a project team – leveraging knowledge of data gathering and analysis to help the team better understand how the project design, approaches and activities are effecting the change laid out in the project ToC.

“TOC – A complete, comprehensive, evidence-based articulation of our best understanding of how change may happen in a system to achieve a desired change.”

FIVE PRINCIPLES TO SUCCESSFULLY MANAGING A TOC BASED PROJECT

Principle 1: A Culture of Curiosity and Exploration
Recognition that at any given point in time we only have a “best” understanding of how our project design, approaches, and activities are effecting change is foundational to implementing a ToC based project. This understanding will change as we gain experience and collect new information. Promoting a culture of curiosity, exploration, and analysis will help ensure that your team is continually looking to enhance their understanding of the change their work is effecting.

Principle 2: Intentional Collaboration
Every development intervention takes place in its own unique environmental, social, economic, cultural and political context. Each has multiple stakeholders, potential champions, and critical collaborators who can augment, support, or expand your project’s impact. In a ToC-based project it is important to engage both internal and external staff and partners to share knowledge, reduce duplication of effort, and magnify project influence. Identifying and engaging stakeholders in the design, revision, monitoring, measurement and analysis of the project ToC promotes lean data management, collaboration, learning, and adaptation within your own and other projects.

Principle 3: Iterative Monitoring, Measurement, and Analysis
To effectively implement a ToC based project in a complex, ever-changing environment, a project team needs to continually monitor, measure, and analyze the ToC outcomes, causal pathways, and assumptions. ToC based project M&E focuses as much, if not more, on monitoring and measuring outcomes and the “why” or “how” change is, or is not happening. This requires the use of additional quantitative and qualitative monitoring methods such as focus groups, in-depth interviews, social network analysis, and outcome harvesting.
Principle 4: Utilization Focused Reflection and Learning
Iterative monitoring, measurement, and analysis is only as good as the reflection and learning which comes out of it. Utilization-focused reflection and learning promotes the active involvement of the primary intended users of the monitoring, measurement and analysis in reflection and learning activities. Facilitating reflection and learning in open, collaborative forums within the project team, and with external stakeholders, will increase the leveraging and impact of knowledge and learning.

Principle 5: Adaptive Management
Open curiosity and continuous monitoring, evaluation, and learning does not do us much good without an adaptive management approach. The ToC and its’ associated project strategy need to adapt as learning takes place. A management system that enables the ToC approach includes the following features:
1. Regular, ongoing internal staff dialogue
2. Regular “pause points” to bring staff together to reflect
3. A clear Learning Agenda
4. A creative, nimble team that is willing to take some risks
5. Dynamic managers who can effectively communicate with and convince staff members, partners, project participants, and donors to test what’s working and potentially change course.

Tools and Cases on Collaboration, Learning, and Adaptation.
- USAID Learning Lab Site
- CLA Framework and Maturity Matrix Overview
- Case Studies on CLA: USAID’s Case Study Competition Entries and Winners

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2 Adapted from Utilization Focused Evaluation (Patton, 2008)
GUIDANCE

Implementing Theory of Change Validation in Development Projects

PHASE 1: TOC REVIEW, REFINEMENT AND OUTCOME PRIORITIZATION

Phase 1 is comprised of the following steps:

- Step 1: Build a Shared Understanding of, and Commitment to the ToC Based Project Management Approach
- Step 2: Review and Refine ToC with Field Staff and Stakeholders, Using a Collaborative Process
- Step 3: Finalize ToC Revisions, Identify Critical Assumptions, Develop Plans to Monitor and Mitigate Risks

STEP 1: BUILD A SHARED UNDERSTANDING OF, AND COMMITMENT TO THE PROJECT TOC AND TOC MONITORING, MEASUREMENT, AND LEARNING, AND ADAPTATION PROCESSES

Building a shared understanding of, and commitment to the ToC based project management approach is critical. Continuous project monitoring, measurement, learning and adaptation requires buy-in from all staff – from finance and procurement, to technical leadership and M&E.

Action 1: Leading an ‘Overview of the ToC Based Project Management Approach’ Meeting.

Before diving into the specific project ToC, M&E staff should work with project leadership to plan and convene a meeting with the project technical, finance, and other teams to discuss the unique nature of managing a ToC based project. The main objectives of this meeting are to: 1) Gauge staffs’ level of familiarity and experience with ToC; 2) Provide an overview of the major elements of the ToC and how managing a ToC based project is different than managing other types of projects. It may be helpful to use a powerpoint, handouts, or other instructional aides during this discussion.

Special Discussion Topic – ToC Based Project Management & M&E Resource Needs.

Managing a ToC based project can require more planning, time, human, and financial resources than other projects. Specifically, the project management team will need to dedicate additional resources for: 1) monitoring and measuring specific ToC outcomes and assumptions; 2) outcome / causal pathway analysis, reflection and learning; 3) carrying out additional learning activities to understand “why” changes are or are not being effected; 4) generating knowledge and knowledge sharing activities; 5) implementing project adaptation activities

Resources for Facilitating a Shared Understanding of the ToC Approach

- Theory of Change: Facilitators Guide – TOPS
- Creating Your Theory of Change – NPC’s Practical Guide
Special Discussion Topic - Organizational Culture and ToC Based Project. A project management, monitoring, and evaluation approach which supports continual reflection, learning, and adaptation must also generate an organizational culture which promotes openness, critical analysis, creativity & exploration, honesty, and respect.

Continual reflection, learning, and adaptation requires a team which is able to openly, honestly, and respectfully work together to identify changes which will improve project success. This will require staff to let go of previous designs and change course, which can be difficult for staff who have invested much time and energy into a project design or activity.

Project leadership has a critical role in creating an environment where this can happen. Through 1) demonstrating openness, curiosity, willingness to try new things and respect for diverse viewpoints, and 2) creating incentives and rewards for the adoption of these behaviors, a project leadership team will help to build a culture which supports continual reflection, learning, and adaptation.

M&E Staff can also help to build this trust by modeling good communication, openness to new ideas, and demonstrating judgment-free questioning. Team-building activities can help you and your team build trust, help staff get to know one another and break down cultural, socio-economic, and other barriers which can often get in the way of good teamwork.

Special Discussion Topic – Importance of the PMELP in monitoring and measuring outcomes and assumptions, validating causal pathways, and integrating learning into project design. During the overview meeting, it is also important for the M&E Team to help staff understand the different elements of the project monitoring, evaluation and monitoring plan (PMELP) and these elements help the project learn and adapt.

ILLUSTRATIVE CASE STUDY
Phase 1, Step 1: Building a Learning Culture and Understanding of the ToC Approach
The FSJ project leadership knew that it was going to be extremely important to build a team and project culture which would embrace continual reflection, learning, and adaptation. From the very beginning, project leadership designed activities which would encourage staff to be openly honest, respectful, and collaborative. FSJ leadership planned a 3-day workshop to review the ToC. During this workshop, they created activities which broke the project team into smaller groups to review, discuss, identify questions, and make recommendations for how to effectively implement a ToC based project. The small-group activities increased opportunity for staff to engage in dialog, think critically, and build relationships. In one of the activities, the project leadership asked the different teams to identify ways in which project management could support openness, honesty, creativity, reflection, learning and adaptation in the project. Project management rewarded creative ideas with small prizes – from a new stapler or poster of a favorite musician, to a dinner with the COP. Through this activity, project leadership demonstrated that they were open to and wanted project teams to be creative, open and honest with project leadership, and encouraged staff to work together to identify and ‘own’ different actions and behaviors which would promote continual reflection, learning, and adaptation.
STEP 2 - REVIEW AND REFINE TOC WITH INTERNAL FIELD STAFF

After an award has been made, the project implementation team should work together to review the project ToC. ToC’s are often first developed by staff located at an organization’s headquarters, six months to a year prior to project award and inception. Thus, these ToC’s may not always be the most accurate, or up-to-date reflection of reality on the ground. In addition, project staff need to develop a shared understanding of, and commitment to 1) the intervention areas; 2) anticipated outcomes, and 3) project activities. A strong, shared understanding will help your different project teams leading different activities appropriately sequence, complement, or supplement each other.

**Action 1 – Leading an Internal ToC Review Workshop.**

The M&E team should work with project leadership, and if desired, an external or headquarters facilitator or other field staff member who is knowledgeable about the methodology, to design a 1-3 day all-staff workshop to review the ToC. This review is best led by the project COP or Manager. The TOPS ToC Facilitation Guide is perhaps the most well regarded resource and guidance document for facilitating the development of a ToC. It includes a number of activities that can be used to help you and your team review and refine your ToC.

Ultimately, your team should perform two related review and refine activities:

- **Activity 1: Relevance** – Reviewing relevance of objectives and outcomes
- **Activity 2: Rationale** – Reviewing rationale of objectives, outcomes, and causal pathways

1) **Relevance.** The first activity is to review the relevance of the ToC objectives and outcomes. It is not only possible, but likely that current reality on the ground is different than when the ToC was first designed.

   Beginning with the highest level outcomes, ask the question:

   Q **Is this outcome still relevant?**

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**Role of an M&E Officer in Reviewing the ToC**

- Create, and promote a judgment-free space for analytical thinking and questioning
- Ask hard, challenging questions which test staff’s claims, opinions, and perspectives
- Assist with gathering evidence to support ToC assumptions
- Become familiar with ToC supporting evidence, and be ready to explain it to others
- Understand how the projects’ ToC aligns with the donor and host governments development models
An outcome is still relevant when:

1. Assistance is still needed
2. No other organization is doing it
3. It is within your consortium’s capability (including both technical, operational, financial capability)
4. It is critical to achieving a higher objective / goal

The result should be a ToC in which some, but not all outcomes will be addressed by your project, such as those outcomes highlighted in red in the figure above.

2) Rationale: Necessary and Sufficient Outcomes, Critical Assumptions, and Evidence.

Starting with a ToC’s higher-level outcomes and working your way down, ask the following questions:

- Are the identified preconditions sufficient?
- Are the identified preconditions necessary?
- What assumptions are we making?
- What evidence is there to support the rationale / assumptions?

Special Consideration -- Evidence Supported Review and Refinement.

We bring with us our own theories of how change happens. This is particularly true for our technical subject-matter experts and staff. In fact, this is why we hire them – for their passion, creativity and experience!

However, we need to check our own biases with every new project. Knowledge or experience gained from one experience, in one place, might not necessarily be true to the new project. Our best weapon against biases is evidence. In reviewing the outcomes and rationales in a project ToC, your team must ask themselves: 1) what is the evidence to support the

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**Resources for Finding Project Evaluations and other Forms of Evidence**

- USAID Development Experience Clearinghouse
- Evidence for Policy Design at the Harvard Kennedy School
- International Initiative for Impact Evaluation (3ie)
- ALNAP Humanitarian Evaluation and Learning Portal
- Abdul Latif Jameel Poverty Action Lab (J-PAL)
- Resources for Finding and Using Evidence Reviews and Evaluations - Innovations for Poverty Action
outcome/rationale; 2) Is it sufficient.

Project teams should consider both “hard” and “soft” evidence to support their ToC analysis. While hard-evidence is important, soft, or “anecdotal” evidence can be just as helpful for a team in exploring the validity of their ToC.

<table>
<thead>
<tr>
<th>Hard Evidence – Statistical</th>
<th>Soft Evidence - Anecdotal</th>
</tr>
</thead>
<tbody>
<tr>
<td>A recent study published by project x in country x surveyed 150 different households and found that children in households with a mother-in-law trained in maternal and child health are 5% more likely to meet WHO growth standards then households in which mothers-in-law did not participate in training.</td>
<td>Under project x, in country x, during years 1 and 2, only women were targeted, and we saw limited gains. In year 3, we expanded training to include mother in laws, at which point in time, we began to hear about, and see an increase in pre-natal visits to the local health facility.</td>
</tr>
</tbody>
</table>

When a team identifies outcomes which they do not have substantiating evidence, they have two options:

Option 1: carry out additional formative research, or integrate additional data collection activities into the baseline data collection process.

Option 2: consider the gap a possibility for a learning question as part of the learning agenda.

**Necessary and Sufficient**

For each outcome, assess whether the preconditions leading up to that outcome is necessary and sufficient. In the example below, the FSJ team felt that while improved access to extension services is necessary to increase adoption of animal husbandry practices, it was not sufficient. Social support and pressure is also needed. They cited anecdotal evidence - the annual report from a previous project indicated that communities with strong peer-peer farmer networks had greater adoption rates.

Thus, in reviewing and revising their ToC, they would add a new outcome – “Increased Social Support and Pressure”

**Rationale and Assumptions.** Rationale is the reasoning behind why we think one outcome will lead to another. This reasoning is often based on one or more assumptions - factors which are accepted as true or certain (with varying degrees of evidence) and upon which the achievement of outcomes are dependent.

For example, in the FSJ ToC example above, there is an assumption that farmers will use extension services if they have access to them. There is also an assumption that if farmers have improved access to drugs, they will use them.
These are both “internal logic” assumptions – assumptions inherent within the logic of the causal relationship. There are 3 main types of assumptions which are important to identify when implementing a project-based ToC.

<table>
<thead>
<tr>
<th>Assumption Type</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Logic</td>
<td>Assumptions Inherent Within the Logic of the Causal Relationship</td>
<td>Increasing Respect for Women Decreases Abuse</td>
</tr>
<tr>
<td>Implementation Logic</td>
<td>Assumptions related to methodology designed to deliver the results</td>
<td>Facilitated assistance is more effective than direct assistance</td>
</tr>
<tr>
<td>External Local Development Implementers</td>
<td>Assumptions about the external environment which the project must prepare for</td>
<td>Droughts, Hurricanes, Conflict, etc.</td>
</tr>
</tbody>
</table>

3 IMPORTANT. For this guidance, we adopted an expanded definition on the FFP definition of assumptions presented in the FFP Guidance document. We did this, as assumption identification serves a different purpose in the design, versus implementation phases of a ToC based project.

In the **Design Phase**, an organization should work to identify all types of assumptions – internal logic, implementation, and external. However, for those assumptions where an organization can effect the likelihood of that assumption holding true through activity / design adaptations, the project team should incorporate those adaptations into the activity and project design, transforming the assumption into a program action. At the end of the design phase, the project should ONLY present those conditions (assumptions) which your project will not influence or effect.

In the **Implementation Phase**, an organization should again review the ToC and identify all types of assumptions – internal logic, implementation, and external which may have been missed or overlooked in the design phase. Again, where adaptations can be made to minimize the risk of the assumption not holding true, the project team should make adaptations. However, for those assumptions which, 1) the project does not have an ability to minimize the risk of the assumption not holding true, whether they are internal logic, implementation, or external assumptions; or which, even WITH adaptations to the activity, the project still lacks evidence which supports the

**FFP Definition of an Assumption for A FFP Proposal**: “Assumptions are conditions that are beyond the control of the program, but will likely affect the success of reaching various levels of preconditions, and could affect the overall success of the theory of change. Assumptions are conditions that are already in place that you do not expect to change during the life of the program.” (TOPS ToC Facilitator Guide, Star and Fornoff, 2016)
Identifying the assumptions within the project ToC before implementing activities is one of the most important steps for a project team. If we don’t understand the risks implicit in our project design, we will not be able to:

1) know what to monitor to test the rationale behind our ToC;
2) adapt the activity design and mitigation strategies to minimize risk.

Identifying assumptions within a ToC can be a challenging process. Some ToCs are very complicated, and have hundreds of outcomes and causal linkages to examine. For this reason, we recommend that a project team only analyze the outcomes and causal streams for assumptions that the project will directly influence.

There is no right or wrong way to identify assumptions. However, using a systematic process can help keep your team on track and minimize frustration. We have outlined one such process below.

Step 1: Give each ToC outcome a number
Step 2: For each ToC Outcome, consider the preconditions and activities linked to that outcome, and explore the following questions:

**Internal Logic**

- Is there strong foundational evidence that the activities for the lower-level, linked outcome will result in a measurable change in the higher-level ToC outcome?
- Is there strong foundational evidence that the lower-level outcome will measurably influence the high-level, linked outcome?

**Implementation Logic**

- Is there strong foundational evidence that the planned project activities (and/or activities for directly linked outcome(s)) are sufficient to result in a measurable change in the ToC outcome?
- Is there strong foundational evidence that the activities for the lower-level, linked outcome will result in a measurable change in the higher-level ToC outcome?

**External Environment**

- Are there any potential external environment risks/assumptions that could significantly negatively influence this outcome/linkage, which the projects’ activities are not currently addressing? Note-if the answer is no to this question then no explanation need be provided in the ToC narrative.
- If there are risk mitigation activities, is there enough evidence to support that they will effectively mitigate the risk?

Step 3) For each outcome analyzed, you should document the rationale, assumptions, evidence, risks, and risk mitigation strategies in the ToC Outcome Analysis Table. We recommend a project team include...
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A ToC Outcome Analysis Table in the ToC narrative, as it is an effective accompaniment to a ToC Diagram and covers much of what a ToC narrative should describe, but in a more streamlined and structured manner.

Table 1. ToC Outcome Analysis Table

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Rationale / Hypothesis (What is the rationale/hypothesis associated with this outcome?)</th>
<th>Assumptions (External, Internal Logic, Implementation)</th>
<th>Evidence (Supporting Evidence for assumption OR how the project will test it)</th>
<th>Risks (major risks and impact if the assumption does not hold true)</th>
<th>Risk Mitigation Strategies (adaptations, extra steps, activities to minimize risk)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome X</td>
<td>If ____, and ____and ____, then __________.</td>
<td>This assumes _______, and _______, and _______.</td>
<td>Evidence which supports this rationale and its Assumptions is __________.</td>
<td>The major risks associated with this is that if assumption x, y, or z do not hold true, then __________will happen.</td>
<td>To minimize the likelihood of this risk, we have designed activities which will _______, and _______, and _______, increasing the likelihood that outcome X will be achieved.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Rationale</th>
<th>Assumptions</th>
<th>Evidence</th>
<th>Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved Animal Health</td>
<td>Improved access to drugs and animal health services, and increased adoption of improved animal husbandry practices will lead to improved Animal</td>
<td>Farmers will use their income to purchase drugs</td>
<td>Previous projects report that indeed, farmers do not like to use their personal income to purchase inputs, but they are willing to use finance from VSLAs or banks.</td>
<td>Rural households will not purchase additional drugs or services, which will decrease the likelihood of improved animal health.</td>
</tr>
<tr>
<td>Increased Adoption of Animal husbandry Practices</td>
<td>Increased demand for drugs and animal health services will result in increased supply of those services</td>
<td>Input suppliers 1) Are willing; and 2) have the ability to procure and deliver drugs and other inputs which are more expensive</td>
<td>Study #14 – Market Analysis for Veterinary Input Supply - 80% of input suppliers say they have access to, and would carry other drugs if there was demand</td>
<td>Input suppliers will not carry the recommended drugs and other inputs</td>
</tr>
</tbody>
</table>

Assumptions are conditions that are beyond the control of the program, but will likely affect the success of reaching various levels of preconditions, and could affect the overall success of the theory of change.
Assumptions are conditions that are already in place that you do not expect to change during the life of the program.

1) Outcomes Influenced by Other Projects. It is important to identify and discuss outcomes within your TOC other organizations may influence through other projects or activities. At a minimum, you should ensure these organizations participate in the multistakeholder ToC review so that you gain their insight and identify opportunities for coordination, or collaboration. In some instances, you may need to work with these organizations to re-design specific activities, or even entire approaches to better take advantage of, complement, or supplement other efforts.

STEP 2 – MULTI-STAKEHOLDER REVIEW WORKSHOP

Special Consideration - Multi-stakeholder Collaboration in the ToC Review. For every project, there are multiple stakeholders whose input and buy-in will influence, and in some cases, determine project outcomes. Seeking insight and feedback, incorporating their priorities, opinions, and viewpoints in the project design, and sharing findings and learning will not only ensure you have a “coalition of the willing” to help you achieve your goals, but will also magnify the scale, and degree of influence that your project will have through leveraging their social networks for mutual benefit.

The ToC Review and Refinement step is a great place to initiate multi-stakeholder engagement and build open collaborative relationships. Table 1 below outlines actors a project should consider engaging and collaborating with, potentially for project/activity design, updates, learning events, or workplanning.

Table 2. Collaborating with External Entities through the ToC Approach

<table>
<thead>
<tr>
<th>Who to Collaborate With</th>
<th>Why Collaborate</th>
</tr>
</thead>
</table>
| **Beneficiaries**       | • Information about the efficacy or quality of project interventions  
                          • Reveal why change is, or is not happening  
                          • Feedback on how the strategy might need to be altered. |
| **Donors and Local Governments and Institutions** | • Builds trust, transparency and support for the project  
                          • Promotes sharing of lessons learned with the larger development community, within and outside the country. |
| **External Local Development Implementers** | • Cut down on project data collection, learning, adaptation costs  
                          • Minimize burden on project participants |
Phase 1, Step 2 & 3: Gathering Evidence to Support ToC

The FSJ team convened a ToC review meeting, involving many of their implementing partners and donor. They worked through each outcome and causal stream, revised some of the project logic, identified some missing outcomes, and completed the ToC Outcome Analysis Table. This discussion revealed some concerns about specific outcomes, the rationale, and assumptions.

For example, they examined the outcome the ToC describes as ‘improvement of animal health’, which is dependent on ‘improved access to drugs and animal health services’, and ‘increased adoption of improved animal husbandry practices’. The assumptions they identified for this outcome were that farmers will 1) have the resources to purchase the drugs; and 2) increased farmer demand for animal drugs would be a strong enough incentive for rural suppliers to source more expensive drugs and veterinary products.

Although the team could immediately identify robust evidence for many of the components of the ToC, as well as evidence for supporting critical assumptions (and had done some preliminary research, prior to the meeting), they still saw some knowledge gaps. The M&E director and CoP assigned team members to do further research and evidence gathering for the identified outcomes and assumptions. Through interviews with staff from similar projects, desk research, including an evaluation of a livestock project in another country and market analyses, the team found some encouraging supporting evidence. Data on patterns of expansion among rural veterinary suppliers from the market study indicated an appetite by input suppliers to cover more areas around Jalapa, even near poor villages. Review of other projects indicated that rural households are often unwilling to use personal income to pay for drugs and services, but are willing to use finance from VSLAs or loans from a bank to procure such goods. In response, the team revised the ToC, and added an additional outcome – ‘increased access to finance’, as a critical pre-condition. They also decided to adjust their project strategy to include more activities that would contribute to this ‘increased access to finance outcome’. Although robust evidence was found for these two assumptions this was not the case for all of the identified assumptions.

Phase 2: Iterative Monitoring, Analysis, Reflection and Learning

Phase 1 of the guidance document described the process for reviewing, refining, and planning for implementation of a ToC based project.

In Phase 2, we will discuss the role and processes by which an M&E team can plan for, and carry out regular monitoring activities for a ToC Based Project. Phase 2 includes the following steps:

- Step 1: Prioritizing ToC Critical Assumptions & Outcomes for Learning
- Step 2: Developing a ToC Based Project MELP
- Step 2.A: Developing a ToC Monitoring Framework
  - i. Identify metrics
  - ii. Select a data collection mechanism
  - iii. Determine a sampling design
Using a Theory of Change for Collaboration, Learning and Adaptation: Guidance and Methodology

iv. Determine the timing of your data collection mechanism
v. Select a data analysis methodology

Step 2.B: Developing a CLA Plan
i. Describe the project's CLA approach
ii. Develop a learning agenda

STEP 1: PRIORITIZING TOC CRITICAL ASSUMPTIONS & OUTCOMES FOR LEARNING

In an ideal world, a project team would have the time and resources necessary to monitor and obtain additional learning about all outcomes across a project ToC. However, with constrained resources and time, a project team will need to prioritize. Ultimately, the importance of monitoring outcomes in your ToC is to learn about whether and how project activities are influencing change. Typically, the outcomes which are most indicative of how a project is influencing change are the outcomes which should be prioritized.

Below are 3 suggested actions for prioritizing those ToC outcomes you will choose to monitor. These 3 actions should result in the identification of ~5-10 outcomes the project feels are ‘tipping points’ within the system—those outcomes that have little evidence, high risk, large impact, and are most critical in terms of learning and tracking the ‘how’, ‘what’ and ‘why’ of change to ensure the project is on the right path. This is just a suggested range, and not applicable to all projects as this is very much dependent upon the scale of the project and the availability of time and resources.

**Recommended Actions – Prioritizing Outcomes for Monitoring**

**Action 1 – Identify outcomes that …**
- the project will directly influence (has developed activities for, and is not counting on an external organization for impact)
- have the least amount of evidence to support them
- have associated assumptions that have the greatest risks
- are most important to understand, for adaptation and refinement of activities

**Action 2 – Identify outcomes feasible for measurement and learning.** Some outcomes may not be well suited for monitoring or measurement given your organization resources, timeline, or scope or will not be appropriate for nimble project monitoring, learning, and adaptation. For example, some outcomes may take longer to achieve than the length of your project, or won’t be significantly influenced until the end of the project, such as decreasing stunting rates, and so are not appropriate for the ToC adaptation and validation approach.

Some outcomes are associated with metrics that are too high level for the project to consider using its resources to measure, unless it is required by the donor. For example, the Women’s Empowerment in Agriculture Index (WEAI) is usually contracted directly by a donor organization and done independently by an external evaluation consulting firm, instead of the development project itself, as the scope of such an assessment is very large and can affect project implementation.

**Action 3 – Identify outcomes to monitor which will be most useful to helping you increase the potential for project success.** Along with feasibility, it is important to identify outcome monitoring that would provide you with the most useful, actionable information to increase the likelihood of your project’s success. In reviewing these outcomes, some useful questions include:
Using a Theory of Change for Collaboration, Learning and Adaptation: Guidance and Methodology

- **Impact**: Which outcomes / assumptions have the potential to most significantly affect the success of the project (achievement of the goal)?
- **Evidence**: Which outcomes / assumptions do you need to know more about in order to improve the design of your project activities?
- **Learning**: What gaps exist in your technical understanding that are important for influencing project implementation?

After Action 1 and 2 are used to identify those outcomes that are of lower priority the Outcome Analysis Table recommended under Phase 1 can be a useful tool for further prioritizing outcomes based on the Action 3 dimensions, above (impact, evidence, and learning) (Table 3). This can be done through small group and plenary discussions, followed by group scoring. The suggested scoring method can be weighted, depending upon project priorities, or additional dimensions can be added. The final result of this action should be the ~5-10 outcomes the project has identified as ‘tipping points’ for change and prioritized for project learning.

**Example: Table 3. Outcome Analysis Table Scoring**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Rationale</th>
<th>Assumptions</th>
<th>Impact</th>
<th>Evidence</th>
<th>Learning</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved Animal Health</td>
<td>Improved access to drugs and animal health services, and increased adoption of improved animal husbandry practices will lead to improved Animal</td>
<td>Farmers will use their income to purchase drugs</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Increased Adoption of Animal husbandry Practices</td>
<td>Increased demand for drugs and animal health services will result in increased supply of those services</td>
<td>Input suppliers 1) Are willing; and 2) have the ability to procure and deliver drugs and other inputs which are more expensive</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>6</td>
</tr>
</tbody>
</table>

**ILLUSTRATIVE CASE STUDY**

**Phase 2, Step 1: Choosing Outcomes for ToC Testing**

The FSJ field staff had already gone through the exercise of identifying assumptions, evidence and risks for their ToC outcomes, by collectively filling out the ToC Critical Assumption table. The team used this table to consider which outcomes had the least amount of evidence and the highest potential for impact and learning; these outcomes received the highest ratings. Together, they gave each outcome a rating and found that 5 of their outcomes stood out in terms of high scoring. For example, they were particularly concerned that the ‘increased access of farm inputs’ outcome would not actually be a consequence of improved access to credit, savings and insurance, as they were unsure the agrodealers in the region would be able to meet subsequent demand due to capacity and geographic density. Additionally, there was not much evidence in the region to support this will, in fact, happen. Therefore, this outcome was one of the 5 that received a high rating and would be tracked for ToC validation, allowing for more in-depth inquiry during the project implementation. Through this planned inquiry (MEL), they hoped they would learn more, generally, about if/how agrodealers are meeting increased demand for inputs and what other activities might be needed to ensure this outcome is successful.
STEP 2: DEVELOPING A TOC BASED PROJECT MELP

Elements of a ToC Based Project MELP

A project Monitoring, Evaluation and Learning Plan (MELP) is a project document which outlines how the project team will monitor, evaluate, learn, and share learning with relevant stakeholders throughout the life of the project. Most donors require a MELP to be submitted within the first 90 days of the project inception, and some even require a draft MELP to be submitted with the proposal. However, even if your donor does not require a MELP, we strongly recommend that all project teams work together to develop the project MELP, as this is a unifying document that can be used to drive project learning. There is no globally accepted way to develop an MELP but there are many resources available online to help you and your teams develop a project MELP.

However, for a ToC based project, we recommend:

1. Develop the MELP through an inclusive, multi-stakeholder, and multi-departmental workshop to design the project MELP, particularly, the project Learning Agenda
2. Include the following major sections in your MELP Design:
   i. Overview of the Project Team’s Approach to Monitoring, Evaluating and Learning
   ii. Description of the Project ToC and ToC graphic
   iii. ToC Outcome Analysis Table**
   iv. ToC Monitoring Framework**
   v. Collaborating, Learning and Adaption (CLA) Plan*
      a. Overview of how the project will institutionalize and promote CLA*
      b. Project Learning Agenda*
   vi. IPTT
   vii. Mechanisms for ensuring data quality
   viii. Performance Indicator Reference Sheets (PIRs)

The sections with a ** are specific to the ToC based approach. As noted earlier, CLA is needed to effectively implement a ToC based approach. Those sections with a * are those that are specific to a CLA approach. Other sections are those typically found in a MELP.

How ToC Based Project MELP Processes and Tools Fit together

As articulated above, a ToC Based MELP integrates several different monitoring and evaluation processes and tools into a single project function – Learning.
These tools and processes are not independent, but instead, inter-dependent. The Project Learning Agenda and associated learning activities are not a replacement for regular project M&E. In fact, regular project M&E is critical to inform the project learning agenda and learning activities. In turn, learning from the Learning Agenda will inform regular project monitoring and M&E. The various elements of a Theory of Change Based MELP are 1) interdependent, and 2) co-supportive of the same goal: Learning.

Learning involves both continual analysis and reflection within the project and between internal and external project stakeholders. This learning creates a feedback loop, which informs project adaptation.

For the purposes of this guide, we are going to focus on two of the key elements of the MELP which are critical for effective monitoring, evaluation, and learning for ToC adaptation and validation – 1) the development of a ToC Monitoring Framework; and 2) development of a project Learning Agenda.

A project that wants to intentionally outline its approach to CLA and desires a tool for planning data collection methodologies geared specifically towards learning, will often develop a CLA Plan, as either an internal (shared with the donor) or external (not shared with the donor) component of the MELP. A CLA Plan typically contains an overview of how the project will institutionalize and promote CLA and a Learning Agenda. The Learning Agenda is described further in section 2.B.
Figure 5. Model of a ToC Based Project

1. **ToC & Project Design**
   - ~50 Prioritized Outcomes
   - Multi-Stakeholder TOC Review
     - What needs to be adapted to local context?
     - Add Outcomes
     - Adapt Outcomes
   - ~10 Outcomes
   - + 10 Outcomes

2. **ToC Outcome Analysis**
   - Where are the most critical learning points?
     - High Risk
     - High Influence
     - High Value
   - ~10 Outcomes
   - ~60 Outcomes

3. **ToC Outcome Monitoring Framework**
   - ~10 Outcomes
   - ~1-10 Learning Qs
     - Single-Outcome Qs
     - Multi-Outcome Qs

4. **Regular Project Monitoring and Evaluation**
   - Regular M&E IPTT, Reporting
   - Learning Agenda
     - Project Implementation Qs
       - Relevance, Effectiveness, Efficiency, Impact
     - Broader Dev. Community / Donor Learning Agenda Qs
   - Learning Products
     - White Papers
     - Reports
     - Case Studies

5. **Continual Analysis, Reflection and Learning**
   - Knowledge Exchange and Learning
   - Adaptation

6. **Adaptation**
STEP 2.A. DEVELOPING A TOC MONITORING FRAMEWORK

Table 4. ToC Monitoring Framework

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Metrics / Measures</th>
<th>Data Collection Mechanism</th>
<th>Sampling Design</th>
<th>Timing</th>
<th>Analytical Strategy</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

STEP 2.A.I – IDENTIFY TOC OUTCOME METRICS/MEASURES

After identifying and prioritizing those 5-10 ToC outcomes that are most indicative of how a project is influencing change and are therefore critical for monitoring, and evaluation and learning (as described in Phase 1), you will need to plan HOW to carry out the monitoring. The ToC Monitoring Framework above (Table 4) is a helpful tool for designing your ToC monitoring activities for these prioritized outcomes. A ToC Monitoring Framework should be housed in a projects MELP.

A variety of different data metrics might be used for monitoring a prioritized ToC Outcome. Data collection metrics chosen for prioritized ToC outcomes would be specific measures that will assist with monitoring whether you are achieving the outcomes or whether identified assumptions are holding true. Identifying these measures is the second component of the ToC Monitoring Framework (Table 4).

These metrics could be donor-required and reported indicators, or they might be internal metrics the project decides it needs specifically for the purpose of learning and evidence-based management.

Although some donors require projects to have an indicator for each of their ToC outcomes, this is often not the case. It is possible that the prioritized ToC Outcomes already have indicators linked to it, but the indicator alone might not provide enough information for ToC adaptation and validation. For example, the indicator might not track the outcomes assumptions, which might be what is of primary interest. The project might require alternative measurements, to get a clearer picture of outcome achievement or they might desire measurements that show project success along more incremental milestones or desire proxy measurements of the outcome, if it is difficult to measure directly.

STEP 2.A.II – SELECT TOC MONITORING DATA COLLECTION MECHANISMS

ToC Monitoring Framework

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Metrics / Measures</th>
<th>Data Collection Mechanism</th>
<th>Sampling Design</th>
<th>Timing</th>
<th>Analytical Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What is a Data Collection Mechanism?
The third component in the ToC Monitoring Framework, a data collection mechanism, is the method the project plans to use to collect the data needed for the identified metrics/measures. It’s important to determine your data collection mechanisms at the same time as when the metrics are chosen, to make sure these data collection activities are purposefully scheduled into the staff work plan and integrated into the projects’ budget.

**Choosing a Data Collection Mechanism**

There are a number of different data collection mechanisms a project might choose to use for obtaining metrics.

The most basic data collection mechanisms are desk research (using existing records/secondary data), key-informant interviews, focus group discussions and surveys of target groups/populations. These basic mechanisms are also utilized to implement more complex data collection and analysis strategies, which require data be collected and analyzed in specific ways—such as social network analysis or spatial analysis. Annex II provides more detail on different types of data collection mechanisms.

These metrics and data collection activities are geared towards increasing learning to promote informed project adaptation, and are not meant for donor-reporting or for academic research or publication. This means that focus groups or key informants can be used to collect quantitative data that is of interest (i.e. typical costs for specific farmer inputs), as long as there is confidence that their answers would be representative of the desired metrics. The project team can discuss which data collection mechanisms will most effectively answer ToC component linked metrics and then include these elements in their ToC Monitoring Framework.

**Special Consideration – timing should help determine the data collection mechanism**

For smaller feedback loops, in which data gathering, analysis and ToC validation need to happen on a faster timescale, it may be possible to leverage routine data collection activities, conduct small-scale key-informant interviews or rapid on-site focus-group questioning (i.e. after a farmer field school training, while all participants are still in the room, or of customers at targeted agro-businesses).

Larger-scale data collection mechanisms are most appropriate for higher-level outcomes in the ToC diagram, which are often associated with impact-level indicators. Usually, a project will not explore their effects in these areas until mid-way through the project or, as mentioned earlier in this document, will use more easily measured milestones to gauge their progress in the shorter-term. Consider what data collection mechanisms are most appropriate for the anticipated time-scale for change.

**Special Considerations – Think about how you want to analyze your data.** Often, the data collection mechanism and the data analysis method are intrinsically linked. Data collected in a certain way can only be analyzed in a certain way and data that needs to be analyzed in a certain way must be collected in a specific manner. These elements of the ToC Monitoring Framework

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**Case Studies on Using Evaluation Methods for ToC Learning**

*Root Capital* used a regression discontinuity design to validate its ToC.

*Give Directly* worked with Innovations for Poverty Action to validate its ToC. While the findings from the evaluation indicated strongly that the ToC was working well, GiveDirectly still had a number of questions about its model that it committed to a new learning agenda.

*Asia Foundation* assessed some of the programmatic and institutional challenges of using impact evaluation.
should be determined together, instead of waiting until after the data has been collected. Step 2.A.v goes into further detail on data analysis methodologies.

**Special Considerations – Resource Availability/Requirements for data collection.** Different data mechanisms require different levels of resource commitment. Household surveys can take a lot of time and manpower. After determining your desired metrics, measures and methods, a “reality check” should be done to assess the required versus available resources.

**Special Considerations – Leverage those data collection mechanisms you already** have scheduled for donor-reporting of indicators and other deliverables-such as the baseline, mid-term, endline or annual indicator surveys-to see if you can also collect additional ToC metrics during these required data collection mechanisms. This can be done by adding the metrics to quantitative farmer survey exercises or putting in additional questions for focus group exercises. See the resource box below to discover other means of maximizing available resources for ToC validation.

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### Strategies for Using a Lean Data Approach for ToC Validation

- **Conduct targeted sub-sampling of beneficiary populations** instead of the entire beneficiary population. A robust, randomized sub-sampling methodology can save major time and resources. You might just do a few smaller focus group sessions with relevant beneficiary populations or technical experts to get metrics that are representative of the population.

- **Take advantage of built-in data collection mechanisms**, being as efficient as possible so that multiple data points can be collected during one survey/sampling initiative. If you have hired enumerators, in addition to your field staff, or are using a subcontractor for this major data collection initiative then it would be cost-effective to include additional ToC approach related qualitative and quantitative learning assessments into this scope of work.

- **Use secondary/external sources instead of conducting your own assessment**, when applicable—there is no need to replicate others’ work. You can also use secondary/external sources to back up findings when sample sizes are small. Be cautious of data that is old, missing/incomplete, or seems unreliable.

- **Measure changes in intermediate outcome results.** Certain types of outcomes that take time to show measurable change or require a lot of resources to measure may be tracked through intermediate milestones that can give an idea of progress in that major outcome.

---

For example, for the FSJ project increased animal health status is a major outcome, with associated metrics (i.e. milk somatic cell count, mortality in small ruminants, body condition score, etc.) that can be time consuming and resource-intensive to measure. It also might be a few years before any significant improvements in animal health is expected to be seen. Instead, you might annually track more metrics that take less time and resources to measure such as nominal observations from community veterinary agents, or closely monitor the number of animals that receive immunizations and are receiving quality feed-serving as milestone measures of animal health. This will allow the project to learn whether it is influencing this major outcome and can be more confident that they will see the results that they want when they do directly.
ILLUSTRATIVE CASE STUDY
Phase 2, Step 2.B: Choosing Data Collection Mechanisms

The FSJ field team had to specify how they would go about gathering the measurements that would connect with the learning questions they selected for their prioritized outcomes. They knew that their organization conducted an annual household survey, so many of the quantitative metrics about topics such as livestock production quantities, and supply of rural veterinary care, could be included in this mechanism. But they also needed additional data collection mechanisms, to collect metrics that could not be covered by this annual household survey. For example, they decided to do a small-scale survey of veterinary agents to obtain data on changes in key areas of animal health. They also decided to administer a test after business development trainings to gauge improvements in knowledge. All of the data collection mechanisms they decided to use went into their annual workplan and budget.

Tracking larger-scale outcomes
For the FSJ project ‘increased animal health status’ is a major outcome, with associated metrics (i.e. milk somatic cell count, mortality in small ruminants, body condition score, etc.) that can be time consuming and resource-intensive to measure. It also might be a few years into the project before any significant improvements in animal health is expected to be seen. Therefore, they choose to only annually track metrics that would less time and resources to measure than doing an annual health status survey. They decided they would annually collect nominal observations from community veterinary agents on animal health status, closely monitor the number of animals that receive immunizations and are receiving quality feed, and after two years of implementation gather information on animal mortality rates. These metrics served as milestone measures of animal health status. This allowed the FSJ project to learn whether it is influencing this major outcome and if it could be more confident that they will see the results that they want when they measure animal health status itself, at the end of the project. If they do not see any achievements in these intermediate metrics, then this could indicate a need to change project strategy/activities.
The fourth component of your ToC Monitoring Framework, each data collection mechanism requires a sampling design. For the purpose of this document, we are equating the sampling design to a protocol for data collection—a detailed pre-defined description of how the data will be collected. This might include:

- the units of analysis (the ‘who’ or the ‘what’ that you are analyzing for your study),
- if there will be a control group and what/who the control group will be, or if it is a block design (to minimize error)
- how the units of analysis will be randomly selected from the population and if there will be stratification of these groups,
- sample size,
- geographic locations, and
- who is responsible for gathering the data (a subcontractor, partner organization, specific field staff, etc.).

For the purpose of the ToC based approach the sampling design for obtaining a metric needn’t require a large sample size for demonstrating statistical significance, or a form of a control group. However, some sort of protocol must be laid out that specifies how the team will collect this data.

We do not expect a project to include a full description of the sampling design in the ToC Monitoring Framework. Instead, we recommend specifying what annex/where the full protocol for the data collection mechanism can be found.

**STEP 2. A.IV DETERMINE THE TIMING OF YOUR DATA COLLECTION MECHANISM**

ToC Monitoring Framework

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Metrics / Measures</th>
<th>Data Collection Mechanism</th>
<th>Sampling Design</th>
<th>Timing</th>
<th>Analytical Strategy</th>
</tr>
</thead>
</table>

The ToC Monitoring Framework should feed into an annual workplan and budget. Specifying what the timing of the data collection mechanism will be (when and the frequency) is crucial for ToC Validation approach implementation.

**Special Considerations – Timeline in which change occurs.** Different types of changes happen along different time horizons—agricultural yields, for example, may take a year to change whereas it might take a few years to observe changes in poverty rates or changes in household income. Data collection timelines should therefore reflect when it makes sense to expect, and therefore, monitor, changes.
Special Considerations – Efficiency/Recall. It is also important to make sure you align the timing of your ToC component measurements so that you are using your resources efficiently (as discussed in Step 2.C) and are allowing for accurate recall/reporting. For example, farmers most accurately recall the inputs they use at the beginning of a crops growing season while there will not know their yields or sales until the end of a crops growing season.

Special Considerations – Baseline/pre-post-test. The sampling strategy and analytical strategy should also inform the data collection timing. If a measure requires a baseline number, or some sort of pre-post-test, then the timing for the baseline data collection should be specified.

STEP 2.A.V SELECT A DATA ANALYSIS METHODOLOGY
ToC Monitoring Framework

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Metrics / Measures</th>
<th>Data Collection Mechanism</th>
<th>Sampling Design</th>
<th>Timing</th>
<th>Analytical Strategy</th>
</tr>
</thead>
</table>

The last component of the ToC Monitoring Framework is the data analysis methodology. There are numerous ways to analyze data. The data analysis method needs to be determined prior to data collection, because it should be aligned with the chosen data collection mechanism and sampling strategy. There should be some thought about what variables need to be measured (i.e. dependent and independent variables, the outcome variables, predictor variables, etc.). One data collection mechanism might require a variety of different types of analysis. Below is a brief description of the basics of analyzing qualitative and quantitative data.

Qualitative data can be used to obtain specific quantitative metrics, if necessary. However, qualitative data collection is more useful for getting to the ‘how’ or the ‘why’ of project outcomes, as opposed to the ‘what’. This means that qualitative data collection and analysis is more frequently needed for answering learning agenda questions (which are more about the ‘how’ and ‘why’ of ToC outcomes and assumptions). Learning agenda questions are discussed further in section 2.B.

Analyze Qualitative Data
When you undertake qualitative data collection, the results are, by definition, in word form. Your data will consist of phrases, quotes, single words or observations. Whereas with quantitative data you can use computer projects like Excel to sort and process your data into trends, there are fewer quick-fix ways of arranging qualitative data so that you can identify any patterns, trends or important outliers. The path you choose to take to analyze qualitative data is highly flexible and should meet the particular needs of the question you seek to answer.

This is where coding comes in. “Codes serve as a way to label, compile and organize your data. They also allow you to summarize and synthesize what is happening in your data. In linking data collection and interpreting the data, coding becomes the basis for developing the analysis.” By developing codes, or categories, based on the context and what you want to know, and applying them to your raw data, you are using a systematic method for identifying patterns and themes, as well as sorting out what might not be meaningful in your data. “Coded content can then be quantitatively analyzed for trends, patterns,
relationships, similarities, differences etc., from which researchers can get insights and make inferences about the messages within the texts, the writer(s) and the context.iii

By coding and analyzing your qualitative data, you can answer such questions as:

- What themes/codes keep coming up across the responses I got?
- What issues came up repeatedly that surprised me? What issues didn’t come up, which I expected to come up?
- Were there any responses that were extremely different from the typical response?
- Was there a typical response and if so, what did it look like?
- Were certain types of responses associated with a particular geographic region, group, etc.?

**Analyze Quantitative Data**

Once quantitative data has been cleaned, with errors or missing fields removed, it can be sorted and compared using widely-available computer projects like PSPP/SPSS, Excel or STATA.

You may want to begin by first identifying some measures of central tendency, such as the median, mean and mode, which attempt to “describe a whole set of data with a single value that represents the middle or centre of its distribution.”iv You will also want to assess the dispersion in the data, to get a sense of how big of a range of values you have in your dataset, and analyze frequency of values to determine how many values are repeated in the data set.

Examples of the most common quantitative statistical analyses methods are independent t-tests, paired t-tests, ANOVA, correlational analysis, Chi-Square test, simple regression, and multiple regression. Each of these analyses yields different types of information and requires pre-mediated decisions regarding the sampling strategy.

**STEP 2.B. DEVELOP TOC OUTCOME LEARNING QUESTIONS**

An integral part of a ToC based MELP is a Learning Agenda. As mentioned earlier, a Learning Agenda is typically part of a Collaboration, Learning and Adaptation Plan and is a set of learning questions, aligning with a projects’ focal themes. The learning questions should ask the ‘why’ and ‘how’ about the ToC prioritized outcomes.

Below we describe what is typically included in a Learning Agenda (also housed in a MELP) and best practices for designing learning questions.
What is in a learning agenda?

1. Project Learning Agenda Approach: The project approach for implementing a learning agenda
2. Learning Agenda Themes: The specific themes around which the project will focus its learning
3. Learning Questions should ask about relevance, effectiveness, efficiency, impact and sustainability
4. Action Plan - a plan for carrying out the learning agenda, including specific activities, dates, outputs, and responsible persons

Each ToC outcome should have only one to a few choice learning questions associated with it, as too many can overburden project MEL activities. Learning agenda questions complement the metrics found in a ToC Monitoring Framework. Answering learning questions often requires a mixed-methods approach (the use of both qualitative and quantitative data) and might involve the collection of multiple metrics, to fully answer a question.

Example Project Learning Agenda Plan Format (see Annex I for a complete Example and Worksheet)

Learning Agenda Themes for a food security project, for example, might include learning questions around the themes of Household Nutrition, Agricultural Markets, Community Governance.

Learning agenda questions are often questions which:

- The project needs to answer to inform which activities, and how activities should be implemented to achieve desired outcomes;

**OR**

- Are identified by the donor, or stakeholders as important questions which could be answered by the project which would advance the body of knowledge around a specific topic area

**OR**

- Support a larger learning agenda set by the donor, multi-project stakeholder steering committees, coordination bodies, or learning groups.

For the purpose of a projects ToC-based approach, we are focusing on the first type of learning question, listed above. Such learning questions assist with improved outcome achievement.

Example: Learning Themes and Questions

<table>
<thead>
<tr>
<th>Theme</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved Household</td>
<td>• How effective are the community health groups in influencing project-targeted</td>
</tr>
<tr>
<td>Nutrition</td>
<td>hygienic behavior’s?</td>
</tr>
<tr>
<td></td>
<td>• What household garden crops most frequently consumed by the household,</td>
</tr>
<tr>
<td></td>
<td>and which are most frequently sold?</td>
</tr>
<tr>
<td></td>
<td>• Is household access to nutritious foods changing? If yes, why and in what</td>
</tr>
<tr>
<td></td>
<td>way(s)?</td>
</tr>
</tbody>
</table>
**Improved Production of Nutritious Foods**

- What are the greatest barriers to improving production of Nutritious Foods?
- What incentives drive farmers to increase production of nutritious foods over income-generating crops?

---

**Special Consideration - Developing Learning Agenda Questions**

Learning questions are typically developed around 4 dimensions: 1) **relevance**, 2) **effectiveness**, 3) **efficiency**, 4) **impact**, or 5) **sustainability** of the projects.

- Relevance learning questions are designed to find out about the quality, or relevance of activities.
- Effectiveness learning questions are designed to learn more about the why certain activities, combination of activities, or approaches are either achieving or not achieving the predicted outcomes.
- Efficiency learning questions are developed to learn about the rate, or degree of investment necessary to achieve outcomes.
- Impact learning questions are developed to learn about project impact that is not captured by indicator data.
- Sustainability questions are developed to learn about the sustainability of project activities or outcomes.

**Relevance** - What are the potential financial returns for farmers if they store their product(s) in cold storage instead of selling directly after harvest? Do the financial returns indicate if this activity is relevant to the communities we work in?

**Effectiveness**: What market requirements are farmers having difficulty complying with? Why?

**Efficiency**: Are home gardening behaviors the most efficient means of promoting household nutrition or is facilitating income generating activities that have a higher return more efficient?

**Impact**: To what extent have farmers increased the amount of produce they are storing for the winter months? Note-related to project facilitated post-harvest training and the building of storage facilities.

**Sustainability**: (sustainability) Are growers planning on continuing to grow project provided seeding in future seasons? why, or why not?

Learning questions should be written as open-ended questions (they cannot be answered with a yes or a no). This might require the addition of “how” or “why” to the end of a learning question.

“How has farmers’ access to inputs changed? What influence this change? How did it influence this change?”

---

**Prioritizing Learning Agenda Questions**
A project team may generate a large number of learning questions, which is good—it indicates your project team are critical thinkers! However, too many learning questions, with limited resources, can result in staff feeling overwhelmed, and learning being lost.

The following guiding questions may be useful to help you in developing learning questions:

Q Does the question state clearly what you want to learn (is it clear and focused)? If a question is unfocused or unclear it will be difficult to answer and measurement methods might not provide the information that was actually desired.

Q Is the question likely to stimulate fresh or innovative thinking (will it result in useful learning)? If you are just asking the question from an intellectual point of view, and not to improve project implementation or obtain useful learning about measures of successes of achieved to illuminate whether the projects’ strategy is working, then the learning question should be eliminated or changed.

Q Is the question feasible to answer given available time and resources? A learning question shouldn’t be too broad or general, You also must be sure that there is some way to answer the learning question, using the methods listed above (i.e. is it measurable).

STEP 2.C. DEVELOP LEARNING QUESTION ACTION PLANS
Each set of learning questions should have an associated Action Plan. A template for a Learning Question Action Plan can be found in Annex I. An Action Plan is similar to a ToC Monitoring Framework, where the methods for gathering and analyzing the data, that will be used to answer the question, is described, with a timeline for data collection and responsible parties identified.

The Learning Agenda Action Plan has some differing elements though, such as an area for describing how the learning will be used for project adaptation (i.e. what is the purpose, how will it inform project activities and decision making going forward). The Action Plan also asks for narrative on how and with whom the learning will be shared. Learning might need to be shared internally, with specific task leaders, externally, with targeted project partners or beneficiary organizations, individuals, or the donor. Within Phase 2 of the ToC-based approach, sharing of learning is important for facilitating discussion around information, and therefore promoting further learning and discovery. This sharing component is also an integral part of Phase 3 of the ToC-based approach, in which reflection and adaptation occurs.
ILLUSTRATIVE CASE STUDY
Phase 2, Step 2.A & 2.B: Choosing Learning Questions and Metrics

Choosing Learning Questions
As the FSJ team was filling out their ToC Outcome Monitoring Table, they were also generating learning questions that would give them more contextual information around the outcomes and their associated assumptions. They chose one or two learning question for each of their prioritized outcomes. The learning questions were about either relevance, effectiveness, efficiency, impact or the sustainability of the project strategy. The FSJ team filled out a learning agenda action plan for each of the learning questions. These action plans described how they would gather the data needed to satisfactorily answer the learning question.

Answering the Learning Questions
One of the learning questions the FSJ team developed was “Which project promoted livestock technologies are most effective in increasing farmer income and why?” The action plan for this learning question states that, when the data for the donor-required indicator “Number of farmers applying new or improved technologies” is collected, the beneficiary survey will also inquire as to what were the specific types of technologies that were applied. Additionally, that same survey will provide measurements in milk production, animal health, and the costs of these technologies, or other inputs. Together, this data would be used to determine which technologies resulted in the highest level of monetary returns. The project felt that this quantitative data needed to be supplemented by qualitative data, so they also included farmer focus groups in their action plan, which would focus on which technologies the farmers thought or felt were most effective, most easily accessible, and most easily applied, as well as other preferences or observations about the technologies.

Sharing the Learning
In the learning question action plan, for the question described above, the team also committed to sharing this data at their annual internal workplanning meeting, as well as with the donor. They also planned to incorporate this learning into future technology trainings with other beneficiaries, to demonstrate the effectiveness of the various tools they were transferring and the feedback the project had received from their peers, during the focus groups. Additionally, they intended to include a graph and a short narrative describing these findings in their annual report to the donor.

Special Data Collection Mechanisms
Below you will find more in-depth information on two of the more complex data collection mechanisms mentioned previously, network analysis and spatial analysis. We feel that there needs to be further explanation of how these data collection mechanisms can contribute to ToC validation.

Network Analysis
What is Network Analysis
Network analysis is a quantitative data analysis methodology used to analyze and monitor change across the different elements of a system. Network analysis can be used to map relationships or flows of resources between different types of actors across a system, such as people, groups, communities, organizations, computers, URLs, and other actors in a system.²


Network Analysis Resources
- International Network for Social Network Analysis
- Introduction to Social Network Analysis Methods
- Strategy Development: Social Network Analysis - ODI Toolkit
**Network Analysis Products.** The products of a network analysis include network Graphic Maps – a graphical representation of the different actors and linkages within the system you are analyzing, and network metrics, which are mathematical statistics unique to analyzing individual actors, parts, or the complete system.

**Network Analysis Data.** The data used for network analysis can be collected through primary research such as interviews, surveys, or focus groups, or through secondary research, such as data from relational databases. For example, you might create a network analysis map of members reached by extension services in 2017, (you would be mapping and analyzing the flow of extension services between different extension agents and communities), or the number of clients provided with services over the past 6 months (you would be mapping which clients received which services over the past 6 months).

In network analysis language, an entity is called a “node”, and a relationship is called a “link”, or an edge (see figure X for an image of a network). Data analysis for network analysis data usually examines the attributes and frequencies of nodes and links of the system.

**Network Analysis Applications in a ToC Based Project**
Network analysis is valuable data collection mechanism in a ToC based project as it can be used to 1) Inform activity design; 2) Monitor project progress; and 3) Understand why change happened.

*Informing Outcome Selection, Activity Design and Adaptation.*
Network analysis can be used as a tool to inform activity design during the inception period. Through primary or secondary data analysis, an M&E team could use network analysis to:
- Identify influential stakeholders in a community, district, region, market system, etc., and who they have relationships with, or resources they have access to.
- Identifying underlying causes, or bottlenecks in networks/systems, such as limited access to livestock extension services, limited access to information on improved health behaviors, or lack of knowledge about new government policies, rules, regulations and guidance.

*Monitoring Project Progress (i.e. outcome achievement)*
Network analysis can also be used to measure change over the course of a project.

For example, for a project with the outcome “increased access to livestock extension services”, an M&E team might carry out a pre-activity network analysis of individuals accessing livestock extension services in a community, or district, and then, in implementation, conduct activities to help expand the number of livestock extension officers, to increase that network. Merely integrating a few survey questions into your annual survey(s) about extension accessibility would allow you to measure the change (pre-post intervention/implementation) in the service delivery network, and access to services over the year.
Understanding How, or Why Change has happened - When linked with other quantitative or qualitative data, network analysis can help identify trends between outcomes in a ToC, or between activities and outcomes.

For example, research has shown that improved social bonding and bridging capital is important to the ability of households and communities to plan for, mitigate, and respond to a shock or a stress. Network analysis that observes differences in the impacts of shocks or stresses between household/community networks that the project assisted in building/reinforcing and those household/community networks that did not receive such assistance could potentially assist with examining the characteristics of the networks were most valuable in achieving better resilience outcomes and why.

**Example: Network Analysis Data Collection for ToC Monitoring**

<table>
<thead>
<tr>
<th>ToC Outcome</th>
<th>How you would collect</th>
<th>What you would Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased Access to Livestock Extension Services</td>
<td><strong>Primary Data</strong>: Survey with a sample of herders in district X</td>
<td>• Herders</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Extension Service Providers</td>
</tr>
<tr>
<td>Increased Reach of Imported Improved Seed Distribution</td>
<td><strong>Secondary Data</strong>: Database from private sector, gov’t, or other importers of their seed distributions or sales</td>
<td>• Seed Importers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Retail Stores, Cooperatives, Other Seed Recipients (Distributors)</td>
</tr>
</tbody>
</table>
**Spatial Thinking and Geospatial Analysis: An Introduction**

Spatial thinking coupled with geospatial technologies and analysis is transforming the way development organizations are designing, implementing, and evaluating approaches to address complex development challenges.

**What is Spatial Thinking?** – “Identifying, analyzing and understanding the location, scale, patterns and trends of the geographic and temporal relationships among data, phenomena and issues” (Joseph Kerski, ESRI)

Generally, geospatial analysis is an analytical method for combining, examining, and visualizing multiple types of geographic data (data referenced to a specific geographic location) to turn that data into informed decision-making and planning. By examining spatial relationships, you can gain new insights, not only asking questions linked to *where?* but probe deeper and ask *why?*

Increasingly, geospatial analysis and methods are being utilized to drive decision-making throughout the project cycle, resulting in leading practitioners and donors critically examining the intersections between *Where are we working?* and *Where are the priority development needs concentrated?*

**The intersection between Geospatial Analysis and ToC Monitoring**

Geospatial analysis complements the reflective and adaptive focus of a Theory of Change approach. As with network analysis, geospatial technologies and methods can assist with:

- Informing outcome selection and activity design and adaptation (i.e. priority areas for activities, where resources, infrastructure, and people are located and differences in their attributes, and how these have changed, spatially, in the past)
- Monitoring Outcome achievement (spatial extent of actual change)
- Understanding how or why change has happened (patterns and variables associated with spatial change and the implications of change for particular landscapes, contexts, and scales.)

M&E professionals are moving beyond basic geospatial analysis (such as mapping the location of agricultural input dealers) to using more advanced approaches to ask if and why project interventions may be more effective in one location than another. However, knowing which methods and techniques to use is challenging. The USAID-funded MEASURE evaluation project developed a guide to provide an overview of how to select and apply appropriate geospatial methodologies for MEL in development—[Geospatial Analysis in Global Health M&E](#).
Special considerations - Geospatial Impact Evaluation (GIE) is another innovative approach used to evaluate the impact of development projects. GIE is a quasi-experimental approach that combines spatial data on project activities with high-resolution geo-referenced outcomes (i.e. geo-referenced household/beneficiary surveys) to statistically match and construct “Control” and “Treatment” locations to estimate projectmatic impact across time and space. AidData, through work with USAID’s Global Development Lab has been at the forefront of GIE research.

ILLUSTRATIVE CASE STUDY
Using Geospatial & Social Network Analysis to monitor your ToC

In the case of the Food Security in Jalapa (FSJ) project, network analysis could be used in a range of different ways to inform design, as well as evaluate change.

INFORMING PROJECT DESIGN
Across the three chain domains, there are many different opportunities for using network analysis as an outcome data collection mechanism, to inform the projects design. Network analysis could be used to map community, or household access to drugs, animal, health benefits, access to extension services, access to farm inputs, access to credit, savings & insurance, access to health care services, and other services and products which support a household and community’s ability to strengthen food security. Integrating network analysis into a value chain analysis would help to identify bottlenecks, gaps in access to services and products (1), which, accompanied by qualitative research around barriers to access or delivery of services and products, would inform project strategy and intervention design and development.

Network analysis of other indicators which measure specific food security improvement outcomes – increased livestock and crop production, increased household income, improved animal health (2) – would help a project better understand how systems’ structural changes have, or have not contributed to improved food security outcomes.

More on GIE & Its Applications
Geospatial Impact Evaluation Group – Repository of GIE and development articles and resources
AidData Geospatial Impact Evaluation – An illustrated guide to AidData’s GIE initiatives
USAID Learning Lab Going Geospatial with Impact Evaluations – Webinar Recording
Similarly, geospatial analysis can be used to map community and household access to animal health services, access to extension services, and access to markets. This can be accomplished by including spatial variables in household surveys (Distance to nearest market; Distance to paved road) and collecting geo-referenced information for surveyed households. Geospatial analysis and Social Network analysis can often intersect, and, if the geographic data is available (i.e. coordinates or administrative locations), networks can be visually georeferenced (structured so that they are visualized relative to spatial measures or administrative boundaries).

**PHASE 3: REFLECTION AND ADAPTATION**

While ‘Reflection and Adaptation’ is discussed as a distinct “phase” in this guidance document, we would like to note that reflection and adaptation should happen continuously, as learning occurs. By reflection, we mean setting aside ‘pause points’ to give thought and consideration to incoming information in a collaborative manner. Reflection is critical to CLA and the ToC approach because it is “the driving force that leads to organizational learning.”

A large part of reflection is communicating the learning that has been obtained from data analysis and discussing it with project stakeholders.

**Planning Spaces and Mechanisms for Reflection**

There are many ways to translate this attitude of action-oriented learning into concrete plans. Reflection of learning will rarely occur if the who, when, where and how of reflection is not pre-planned, and laid out in a structured manner. If space is set aside for reflection the project team can ask themselves about the validity of critical assumptions and their progress in terms of the achieving ToC outcome results and whether ToC adaptation is needed. Often, a well-thought out workplan which outlines these elements of reflection and a budget that ensures resources are set aside for bringing these actors together, will enable these reflective activities.

**Special Considerations – Who Should Participate in Reflection.** Reflection on learning requires engagement with actors outside the project because no intervention takes place in a vacuum. Typical stakeholders who should participate in learning activities, dialogue, feedback sessions, etc. include project and partner staff, participants in project activities, local government, donors, and external development organizations. Different types of learning should be shared with different stakeholders.

**Role of an M&E Officer in Reflection & Adaptation**

- Participate in the development of knowledge management materials and tools that integrate learning and transparency of data
- Provide data visualizations that promote learning, reflection and adaptation
- Participate in planned spaces/pause points for reflection and adaptation
- Be prompt and responsive to requests from team members, stakeholders and donors for data and information

![Figure 3. The 3 Phases of a ToC Based Approach](image)
Special Considerations - When and Where Should Reflection Take Place. Reflection on data and analysis (learning) can take place in both larger (slower time frame, more steps involved) and smaller (faster time frame, fewer steps) feedback loops, depending on the project teams’ needs. A feedback loop can be thought of as a full cycle of gathering, assessing, using and communicating about data.

Rather than waiting for the midline or endline of a project to reflect on ToC validity you can plan for more frequent but smaller spaces, or ‘pause points’, for reflection, such as monthly or quarterly team meetings where current data is presented and discussed, to give you bite-sized, actionable pieces of information about specific links or smaller-scale outcomes of the ToC. Other examples are After-Action Reviews (AAR’s), peer assists, communities of practice, or learning networks.

Larger feedback loops might involve spaces for reflection that take place semi-annually or annually, and which involve multiple stakeholders. This could be learning events where various development organizations working in the same area share information about their activities and learning, conferences or donor meetings.

Having skilled facilitators on staff can greatly improve the quality of activities for pausing, reflecting, and adapting.

Special Considerations – How Should Reflection Take Place.

Knowledge management is the practice of making sure the “right people, processes, and technology are in place to support knowledge exchange.” The key to good knowledge management is effective communication of learning for action and adaption.

M&E staff are well-positioned to take a lead role in coordinating the transfer of knowledge throughout the organization, to make sure it reaches those who need it. For data to be useful and to contribute to learning, it needs to be easily understood. A block of quotes or a STATA printout often isn’t very helpful for understanding the main trends or important takeaways from the data you’ve taken time to collect and analyze. Data visualization is the presentation of data in a graphical form and it “enables decision makers to see analytics presented visually, so they can grasp difficult concepts or identify new patterns.”

There’s no need for fancy software; with Excel you can easily export your data to a chart or a graph. This is also why spatial analysis (maps) and social network analysis graphics can be so useful. They communicate learning for reflection, in a visual form that can often be more easily understood.

Agile internal methods for learning communication, such as ‘live’ dashboards (i.e. table and graphs that are linked directly to a project database) can also empower technical leads and managers to regularly learn and reflect on the efficacy of their own individual activities. This type of data transparency and

Resources on Knowledge Management
- Knowledge for Health and Development Toolkit
- Swiss Agency for Development and Cooperation Knowledge Management Toolkit
- IFAD Knowledge Management Strategy Case Study

Resources on Data Visualization
- Elsevier – A Five Step Guide to Data Visualization
- The Data Visualization Catalogue
- Tableau – The Beginner’s Guide to Data Visualization
- Duke University - Introduction to Data Visualization
- Venngage
- Piktochart
management is a crucial role of the M&E team. Ensuring data is stored in one place and is easily accessible for reflection and adaptation is a major contributing factor to the success of a ToC based project.

Communication and M&E staff should work together to make sure knowledge is in user-friendly formats for decision makers, making them more likely to be read and internalized (i.e. two-page briefs, short reports, infographics, or videos).

Use your data for reflection & adaptation - Ask yourself if:

- If you find support for most of these statements
  - This is a great indication of the validity of your ToC!
- If you didn't find support for most of these statements
  - Make an action plan to find out what might be going on
  - Consider adapting, at least partially, your approach and project strategy
  - Consider doing further research on areas where you didn’t find support

HOW DO WE ADAPT BASED ON OUR LEARNING AND REFLECTION?

To complete the learning cycle, project activities and processes should be adapted per findings of learning and reflection. Adaptive management inherently requires 1) a mix of champions on various levels of an organization and 2) donor understanding and buy-in of implementing an adaptive management approach.

Special Considerations – Leadership in Adaptation

Project adaptation can also be a challenge because it

Case Studies on Adaptive Management

- Mercy Corps -Adapting Aid: Lessons from Six Case Studies
- Soil and Water Conservation Society -The Sciences and Art of Adaptive Management: Innovating for Sustainable Agriculture and Natural Resource Management
- The Asia Foundation -Strategy Testing: An Innovative Approach to Monitoring Highly Flexible Aid Projects
- Donor Committee for Enterprise Development Standards for adaptive results measurement case studies
inserts uncertainty into the implementation process. “The challenge is to find a balance between structure and space to adapt.” A strong project leader, that supports the CLA culture and recognizes the value of adjusting project strategy to take advantage of opportunities and learning is central to ToC efficacy. **A project manager/direct and Chief of Party need to be the primary facilitators of the ToC approach, with the M&E team supporting their vision of implementation.** A chief of party (COP) should:

- Implement adaptive decision-making processes that are transparent and clear to staff and external stakeholders. Inform and update staff and external stakeholders about decisions taken and the rationale for those decisions.
- Assign authority at the appropriate levels to enable greater adaptability
- Encourage a culture of sharing and reflection and enable reflective spaces and activities

**Special Considerations – Getting the Donor On-board**

Adaptation in the development context typically requires a strong donor-implementer relationship – one in which donors encourage projects to adapt strategy based on learning, as opposed to staying course on pre-planned routes that have proven to be ineffective. From the project outset make sure your donor understands and is on-board with your ToC based approach. Adjust the wording in the contract so that adaptation based on learning is part of the agreement. Adapting is much easier when flexibility is built into a projects’ design.

A range of challenges to learning-driven adaptation and potential solutions can be found in the “Learning-Driven Adaptation in Practice” resource box below.

<table>
<thead>
<tr>
<th>Learning-Driven Adaptation in Practice*</th>
<th>Challenges to Learning-Driven Adaptation</th>
<th>Potential Solutions</th>
</tr>
</thead>
</table>

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40
- Resistance to or discomfort with challenging assumptions
- M&E teams are isolated from implementation and design teams
- Data quality is inconsistent
- Data gathered for reporting or accountability purposes only
- Inadequate time and budgetary resources for reflection and learning
- Learning questions don’t provide information useful to decision-making
- Efficiency suffers when adaptive management style introduces too much unpredictability

- HQ and field leaders encourage sharing lessons learned
- M&E staff are leaders of the learning process and help field staff with technical data collection & analysis challenges
- Plans for the who, when, where and what of learning and reflection from data are discussed during annual workplanning
- Adaptive principles built into project design or added to project by donors
- People who design and collect learning questions are the ones leading implementation activities
- Procedures should be decided during design to help determine how adaptive decisions are made during the project

*These challenges and solutions are adapted from ODI’s resource document “Putting learning at the centre.”

**ILLUSTRATIVE CASE STUDY**  
*Phase 3: Reflection & Adaptation*

At this point, the FSJ project is well underway. Enough time had passed that some initial monitoring data has come in from field activities. The project had set aside ‘pause points’ to encourage reflection and adaptation. The M&E staff have set up a knowledge management space on their internal project website for the project manager and technical advisors to regularly look at the data that comes in. One of the scheduled times for reflection, a quarterly staff meeting, is coming up. The M&E team work with the different thematic technical leads to create a presentation on the projects’ progress in various areas. This includes the data they had chosen to collect and analyze through their ToC Monitoring Framework and Learning Agenda. During the quarterly meeting the field staff discuss the learning they have just been presented with and how this should inform their activities going forward. They decide they should change the focus of some of the training material, that they need to reach out to more informal financial institutions to increase access to finance, and are enthusiastic to see that veterinary agents are already perceiving changes in animal health. They decide that some of their learning questions have been satisfactorily answered already, so they are removed from the learning agenda, and they chose to add one or two additional learning questions and metrics to their ToC Monitoring Framework.

**CONCLUSION/KEY RECOMMENDATIONS**

Although we have separated this document into three phases, ToC testing is not a linear process but rather cyclical. As learning and adaptation occurs (Phase 3), ToC structure should be adjusted and refined (Phase 1) and ToC Monitoring Framework elements adjusted for relevancy to the adaptations in the ToC structure and project strategy (Phase 2), leading to more learning and adaptation (Phase 3).
We hope that this guidance document serves as a foundation for implementing high-quality development projects. The corporate world realizes the need to use data as a means of business intelligence-to adjust practices as new or more information comes to light and as systems change. Development projects need to take a similar mindset as the systems we work in are also complex and ever changing.

This document will itself change and adapt as new examples of using a ToC based project approach come to light and feedback from implementers is given. We wish you luck in achieving all your intended outcomes and higher-level goals.

ANNEX I. PROJECT LEARNING AGENDA PLAN WORKSHEET

<table>
<thead>
<tr>
<th>Learning Question(s)</th>
<th>Action</th>
<th>Timeline</th>
<th>Responsible Person(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Action Plans**

<table>
<thead>
<tr>
<th>Learning Plan</th>
<th>Action</th>
<th>Timeline</th>
<th>Responsible Person(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How will we answer this learning questions?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adaptation Plan</th>
<th>Action</th>
<th>Timeline</th>
<th>Responsible Person(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How will we reflect on and adapt our project design?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dissemination/ Sharing Plan</th>
<th>Action</th>
<th>Timeline</th>
<th>Responsible Person(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How and with whom will we share our lessons with our stakeholders?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Measurement Strategy</td>
<td>Description</td>
<td>Benefits of Using this Strategy</td>
<td>Challenges or Drawbacks to Using this Strategy</td>
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<td><strong>Existing records</strong></td>
<td>• Big data, official statistics, and other forms of existing data can be used without having to do additional data collection procedures.</td>
<td>• Efficient use of time and resources</td>
<td>• It’s difficult to quality control the data that goes into existing records. Little may be known about collection procedures or about accuracy. The data may not be entirely relevant to the population in question.</td>
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<td><strong>Key-informant Interviews</strong></td>
<td>• One-to-one collection of qualitative or quantitative information from select key informants.</td>
<td>• In-depth interviews allow the researcher to gain nuanced insights into the experiences, perspectives and opinions of a particular individual.</td>
<td>• Conducting in-depth interviews is a time-consuming way of getting information from large groups. • Drawing conclusions about a larger population from one or several in-depth interviews is not possible.</td>
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<td><strong>Focus Group Discussions (FGD)</strong></td>
<td>• FGD are interviews with a whole group of people, led by a facilitator – participants are encouraged to agree and disagree with one another.</td>
<td>• FGDs allow the researcher to gain nuanced insights into the experiences, perspectives and opinions of a group of people.</td>
<td>• Drawing conclusions about a larger population from one or several FGDs is not possible. FGDs give you information about the type of group that participates.</td>
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<td><strong>Surveys</strong></td>
<td>• Most surveys include quantitative questions, that ask participants in a certain population (i.e. beneficiary households, farmers, agribusiness owners, etc.) either to give numerical information (such as their income), or to rank experiences, phenomena, opinions, etc. Quantitative surveys also ask questions such as to what extent? How much? How often?</td>
<td>• Surveys allow the researcher to gain information from a large group of people relatively easily. When surveys are administered to a correctly drawn sample, the results can be extrapolated to a larger population than that of the survey participants.</td>
<td>• Surveys require time, skill and staff resources to design, test and implement. They also can take significant time for participants. • Determining a sample size and group for surveying requires technical training, if the survey is to be considered “representative,” or if the findings are to be extrapolated to any population beyond the participants.</td>
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| **Outcome Mapping**   | • Outcome mapping (OM) defines outcomes as changes in behavior  
  • In outcome mapping, the project is assessed based on its *contribution* to influencing behavior change rather than on how it has delivered specific services or interventions  
  • This method should be used when a team wants to understand more about which actors to target, the changes in behavior they need to undertake and what strategies are best. | • This method has tools that can be used independently or brought in later in the project if OM isn’t used from the beginning.  
  • By focusing on the project’s intended and unintended influences, this method can be useful for learning holistically about how well a project ToC has brought about desired changes. | • Outcome mapping requires skilled facilitation as well as additional staff resources and time, and therefore greater budgets.  
  • This method works best when it is used from the beginning of project implementation through monitoring and evaluating the entire project (though it is highly flexible – don’t be deterred from using some of its methods if you can’t use it throughout the whole project).  
  • This method requires extra training for all staff involved. |
| **Outcome Harvesting** | • Outcome harvesting works backwards, uses a variety of sources to show how an intervention contributed to outcomes, which could be positive or negative, and intended or unintended.  
  • Descriptions of the outcomes identified in the relevant intervention community are compared with other forms of documentation to assess how they have contributed to achieving a particular project objective. | • This method is useful in contexts that are highly complex, where little is known about cause and effect, because it works with what has actually happened, rather than how implementation fared against project plans.  
  • It is also useful when outputs and outcomes are difficult to measure. | • Outcome harvesting requires training and commitment on the part of staff to execute well.  
  • Only detectable outcomes are measured and assessed in this method. |
<p>| <strong>Most Significant Change (MSC) Technique</strong> | This method works not to determine how a project has advanced toward completing its | • This method works best when the project is highly complex and involves | • As with most participatory methods, good facilitation skills and knowledge of the method are required. |</p>
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|                       | objectives, but rather tries to uncover whether and how a project has contributed to changes by collecting “significant change” stories. These ask “What happened? Who did it (or contributed to it)? How do we know this? Is there corroborating evidence? Why is this important? What do we do with what we found out?” | multiple different stakeholders and when relationships of cause and effect are dynamic.  
• MSC is ideal for projects that want to use more participatory methods of data collection/analysis | • This option is one of the more time consuming, as deciding which stories to collect, collecting them and analyzing them takes thought and intentionality.  
• Collecting stories is a highly subjective process, so a rigorous approach is needed to ensure bias doesn’t affect the interpretation of your results. |
| Social Network Analysis | Is a quantitative data analysis methodology used to analyze and monitor change across the different elements of a system. Network analysis can be used to map relationships or flows of resources between different types of actors across a system, such as people, groups, communities, organizations, computers, URLs, and other actors in a system | • This method works best when a project wants to measure changes in network linkages—the quantity, quality, or other patterns. This can be done through quantitative target-population based surveys or qualitative interviews. | • Often requires interviewing all the actors within a large system, or within a smaller, defined system (sub-sampled communities). You can only track changes within these initially samples systems.  
• Implementers need to understand different methods for analyzing changes in the networks |
| Spatial Analysis | Spatial analysis is a method that combines, examines, and visualizes multiple types of geographic data (data referenced to a specific geographic location) to turn that data into informed decision-making and planning. By examining spatial relationships, you can gain new insights, not only asking questions | • This method is useful for visualizing differences between variables of interests in different areas and the changes in these areas, allowing for more informed planning and decision-making. | • Spatial analysis might necessitate the use of GPS units for gathering data from the field-level. However, a large amount of spatial data is already available on the internet.  
• Users need a lever of familiarity with mapping platforms, many of which are open access, in order to map variables for analysis and learning. |
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| Collaborative Outcomes Reporting | This method is similar to MSC. It requires mapping multiple types of data against the ToC to produce a story about how a project contributed to outcomes. A panel of stakeholders are then convened to assess the extent to which the evidence provided tells an accurate story about the contribution of the project. | • This approach is participatory and flexible, easily combined with other methods.  
• This method can be applied across multiple levels of inquiry – from large questions to smaller ones. | • Again, the challenge with this method is that it requires some training and a slight shift of mindset to implement well.  
• Additionally, it is a more subjective process and therefore requires a sense of humility and caution when coming up with the “stories.” |
REFERENCES


