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# GUIDELINES FOR MONITORING, EVALUATION AND LEARNING IN MARKET SYSTEMS DEVELOPMENT

LEO
Leveraging Economic Opportunities

**LEO REPORT # 51**

**OCTOBER 2016**

This publication was produced for review by the United States Agency for International Development. It was prepared by Elizabeth G. Dunn of Impact LLC, Tatiana Pulido of USAID, and Ben Fowler of MarketShare Associates for ACDI/VOCA with funding from USAID's Leveraging Economic Opportunities (LEO) project.

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**DISCLAIMER**

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

# CONTENTS

**List of Tables:**



**List of Figures:**

# ACKNOWLEDGEMENTS

The authors wish to thank Kristin O'Planick, Travis Mayo, Tjip Walker and David Jacobstein of USAID, and Jim Tanburn of the DCED Secretariat, for valuable suggestions, corrections and review comments. Additional USAID staff and other workshop participants reviewed an earlier version of these guidelines and provided helpful commentary on the content and presentation style. The authors gratefully acknowledge contributions from LEO colleagues, especially Anna Garloch, LEO Project Manager for ACDI/VOCA. Lucy Creevey provided initial research inputs, while Jeanne Downing, an independent consultant, and Ruth Campbell of ACDI/VOCA provided early ideas and encouragement for the development of these guidelines.

# EXECUTIVE SUMMARY

This paper describes a set of guidelines for improving monitoring, evaluation and learning (MEL) within the context of market systems development (MSD). These guidelines support the capacity of donors and their implementing partners to identify and address key MEL parameters and methodological issues for MSD interventions. As listed below and discussed in Section II, there are 16 recommendations. Together, these address the practical realities of MEL in MSD, in which a facilitation approach typically reaches target beneficiaries through other system actors, generating slower paced and less predictable outcomes. Additional MEL challenges are related to these three common characteristics of MSD:

1. **Multidimensional**: MSD projects support a spectrum of related activities, with multifaceted interventions occurring at different levels of the market system. Relevant units of analysis include individuals, households, firms, value chains, nations and enabling environments.
2. **Dynamic**: MSD interventions are unevenly distributed over space and time. Intervention strategies shift over time, in response to new opportunities and the appearance of frequent external shocks that can originate from multiple sources, including macroeconomic, natural, political and conflict events. Also, related interventions may differ in their geographic coverage.
3. **Complex**: MSD intervenes in complex situations. Complexity means that system responses to MSD interventions are not always predictable.

This document describes 16 recommendations that can help to address these MEL challenges. The recommendations can be approached in any order, depending on the reader's background and current needs. Theme 2 is recommended for most readers because it describes the classifications of results and beneficiaries that are used throughout the guidelines. The concept of multidimensional results offers a framework for positioning systemic change relative to other measures of system performance.

The order and relevance of the recommendations will differ according to the specific MEL task at hand. The recommendations can be applied to one or more of four MEL scenarios: learning for adaptive management, performance monitoring, performance evaluation and impact evaluation. Text boxes are included throughout to draw out practical examples and resource boxes provide titles and links for further exploration of key topics.

Monitoring, evaluation and learning within MSD is a rapidly-evolving and dynamic space that, as it develops, promises to help address a need that is recognized by both donors and implementers for resources and tools to enable more responsive and effective programming. These recommendations aim to add to this growing body of guidance. With theory and practice in formative stages, appropriate guidelines for improving MEL in MSD will continue to evolve. Even so, the seven themes taken together provide a general checklist of critical areas for improving MEL in market systems development.

# I. INTRODUCTION

## INCLUSIVE MARKET SYSTEMS DEVELOPMENT

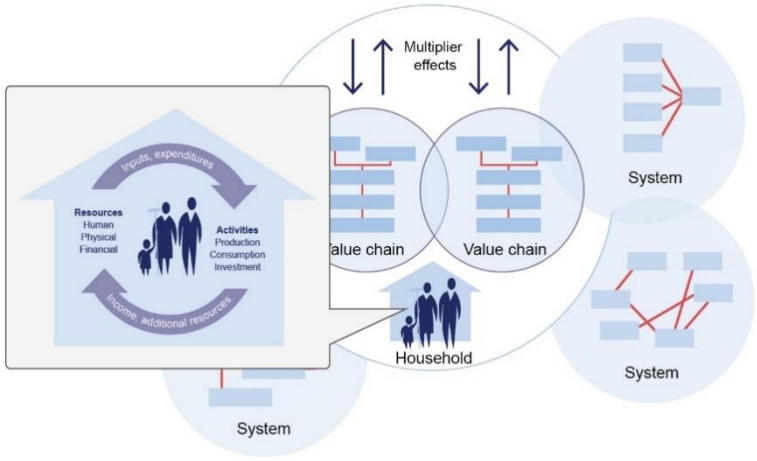
Inclusive market systems development represents an evolving approach to private sector development that builds on earlier value chain and Making Markets Work for the Poor (M4P) approaches. Market systems development (MSD) seeks to catalyze a transformation process leading to a market system that is competitive, inclusive and resilient (Campbell 2014). Compared to the value chain approach, the ***MSD approach*** is characterized by a broader definition of systems, including multiple value chains and interconnected systems, along with a greater recognition of complexity and the resulting need for piloting and observation. Market systems development is an approach toward private sector development that has been increasingly used by USAID, DFID, SDC and other donors. As the breadth and depth of MSD interventions have spread, donors and their implementing partners have become increasingly aware of a critical need for updated monitoring, evaluation and learning approaches that are better matched to the features of this programming approach.

## FACILITATING CHANGE IN MARKET SYSTEMS

Market systems development is grounded in the practice of ***facilitation***, a private sector development approach for catalyzing systemic changes that contribute to desired development outcomes (USAID 2015b). A major perceived advantage of facilitating systemic change is that it promotes development outcomes that are more sustainable over time. By encouraging local actors to adopt changes in their relationships and behaviors, facilitation leads to results that are more likely to continue after the intervention has ended. Another perceived advantage of facilitation is that it is capable of achieving outcomes at a larger scale of outreach. By stimulating changes that are replicated by local actors throughout the system, facilitation leads to results that extend to more beneficiaries than could be reached through direct intervention.

In 2014, USAID, through its Leveraging Economic Opportunities (LEO) project, published a framework for inclusive market systems development. In it, a market system is conceptualized as a set of interconnected systems (Campbell 2014); as shown in the adjoining figure 1. At the heart of the market system are one or more value chains. These value chains connect to other systems, including other markets and economies from local to global levels. Markets are also connected to political, social, cultural, health, education, physical, agro-ecological and other systems. Firms and households are nested systems within the larger market system.

Figure 1: LEO Market Systems Framework




A market system can be understood as being composed of **actors** and the **relationships** between them. The market system actors, sometimes called agents, are the firms, households, individuals, groups and other decision makers in the system, while the relationships are the connections between actors. Relationships can be described in terms of both the structure of connections between actors and the nature and characteristics

of those connections. Systemic change will be reflected in changes in the structure and/or characteristics of relationships.

With its strategy of facilitating change in market systems, MSD helps to support USAID's emphasis on working with local systems to achieve sustainable development outcomes (USAID 2014; Campbell 2016). In this case, the local system is the market system, which can provide an example of the "5Rs Framework" developed by USAID and summarized in the text box below.

### USAID'S 5RS FRAMEWORK

The 5Rs Framework highlights five key dimensions of systems:

- **Results**: Development efforts are usually organized around achieving specific results.
- **Roles**: Actors take on specific functions or roles within a system.
- **Relationships**: The interactions between actors define their relationships.
- **Rules**: Rules include formal laws and regulations, less formal norms, and incentives.
- **Resources**: Inputs are transformed to produce results.

The **results** of MSD include development outcomes, outreach, inclusiveness, sustainability and systemic change. These multidimensional results are discussed in more detail below (see theme 2). Functional **roles** played by market system actors include producers, wholesalers, exporters, lenders, business service providers, regulators, and so on. Actors' **relationships** include vertical and horizontal market linkages, as defined by actors' functional roles. The **rules** are the formal laws and customary norms that shape and set the accepted boundaries for market system relationships and behaviors. The value chains at the heart of the market system transform productive **resources**—such as land, labor, agricultural inputs, physical and financial capital—into products and services.

### Resources on USAID's Local Systems Framework

**Author:** USAID 2014

**Title:** "Local Systems: A Framework for Supporting Sustained Development"

**Access**: https://www.usaid.gov/policy/local-systems-framework

**Author:** Campbell 2016

**Title:** "Local Systems and Market Systems"

**Access**: https://www.microlinks.org/library/local-systems-and-market-systems

**Author:** USAID 2016

**Title:** "The 5Rs Framework in the Program Cycle"

**Access**: https://usaidlearninglab.org/library/5rs-framework-program-cycle

## COMMON MEL CHALLENGES

Interventions that facilitate inclusive market systems development tend to present some typical challenges to traditional monitoring, evaluation and learning approaches. Some of these were first identified with evaluation of value chain and M4P approaches (Creevey et al. 2010; Ruffer and Wach 2013). These challenges, originating in the nature of facilitation and three characteristics of the MSD approach, continue to affect the ability to design valid, comprehensive MEL approaches.

Facilitation itself is associated with outcomes that are less predictable and slower paced, which is due to the fact that facilitation activities do not work with targeted beneficiaries directly (e.g., smallholder farmers). Instead, interventions reach targeted beneficiaries indirectly, through beneficiaries' vertical and horizontal relationships with other market system actors. Because of this indirect relationship to target beneficiaries, early outputs and outcomes of the facilitation approach are dependent on decisions made by other private sector actors. This contributes to unpredictability in the details of program rollout and generally slows the pace of achieving initial outcomes. In other words, when compared to direct delivery approaches, facilitation may be slower to reach large numbers of intended beneficiaries. This places additional pressure on implementing partners to identify alternative signs of early progress, placing greater emphasis on identifying early indications of systemic change.

In addition to the unpredictability and slower pace of interventions based on facilitation, three inherent characteristics of market system development contribute to MEL challenges:

1. **Multidimensional**: MSD activities are multifaceted, with multiple interventions at different levels of the market system. Relevant units of analysis include individuals, households, firms, value chains and enabling environments. Typically, an MSD project supports a spectrum of intervention approaches.
2. **Dynamic**: MSD interventions are unevenly distributed over space and time. Intervention strategies shift over time, in response to new opportunities and the appearance of frequent external shocks that can originate from multiple sources, including macroeconomic, natural, political and conflict events. In addition, not all project activities cover the entire geographic focus, resulting in differing degrees of area coverage for any given intervention.
3. **Complex**: MSD intervenes in complex situations. Complexity means that system responses to MSD interventions are not always predictable.

These characteristics combine in different ways to create specific MEL challenges. Multidimensionality and dynamism complicate identification of beneficiaries and create a "treatment" (i.e., "dosage") that varies significantly across beneficiaries. Dynamism and complexity imply that effective interventions must repeatedly adapt to external shocks and unpredictable system responses. These guidelines help to address these MEL challenges.

## USING THE RECOMMENDATIONS

The recommendations can be approached in any order, depending on the reader's background and current needs. For example, readers already familiar with using theories of change and results chains may want to skip the first theme. Theme 2 is recommended for most readers because it describes the classifications of results and beneficiaries that are used throughout the guidelines. The concept of multidimensional results offers a way to position systemic change relative to other measures of system performance.

Readers who are interested in understanding and measuring systemic change (theme 5), but have relatively less experience applying systems thinking to MSD, might benefit from reviewing the background provided in theme 4. Concepts of systemic change, along with methods for measuring systemic change in MSD, are evolving rapidly as this report is being published. Similarly, there are gaps and disagreements about the MEL implications of intervening in complex adaptive systems. With theory and practice in these formative stages, the guidelines for improving MEL in MSD will continue to evolve.

The order and relevance of the recommendations will differ according to the MEL scenario. Some recommendations may not apply to all four of the MEL scenarios shown in figure 2. Performance monitoring, performance evaluation and impact evaluation are all well-defined concepts within USAID

(USAID 2015c; USAID 2011), while there is some consensus developing around the use of learning for adaptive management (USAID, IDS, and MSTAR 2015; Allana and Sparkman 2014; Britt 2013).

Figure 2: MEL Scenarios

| | |
|---|---|
| **Adaptive Management** | Real-time sensing of the market environment and system changes to manage facilitation-based interventions in a complex environment |
| **Performance Monitoring** | Detecting and communicating early progress for accountability and aggregating outcomes across projects and activities |
| **Performance Evaluation** | Assessing project fidelity and achievement of intended activity-level outcomes |
| **Impact Evaluation** | Measuring the achievement of intervention-level outcomes and estimating the extent to which these outcomes can be attributed to a program |

To the extent possible, this document uses the USAID definition of **project:** "A set of executed interventions, over an established timeline and budget, intended to achieve a discrete development result by resolving an associated problem." **Activities** are project sub-components that generally are associated with implementing mechanisms.

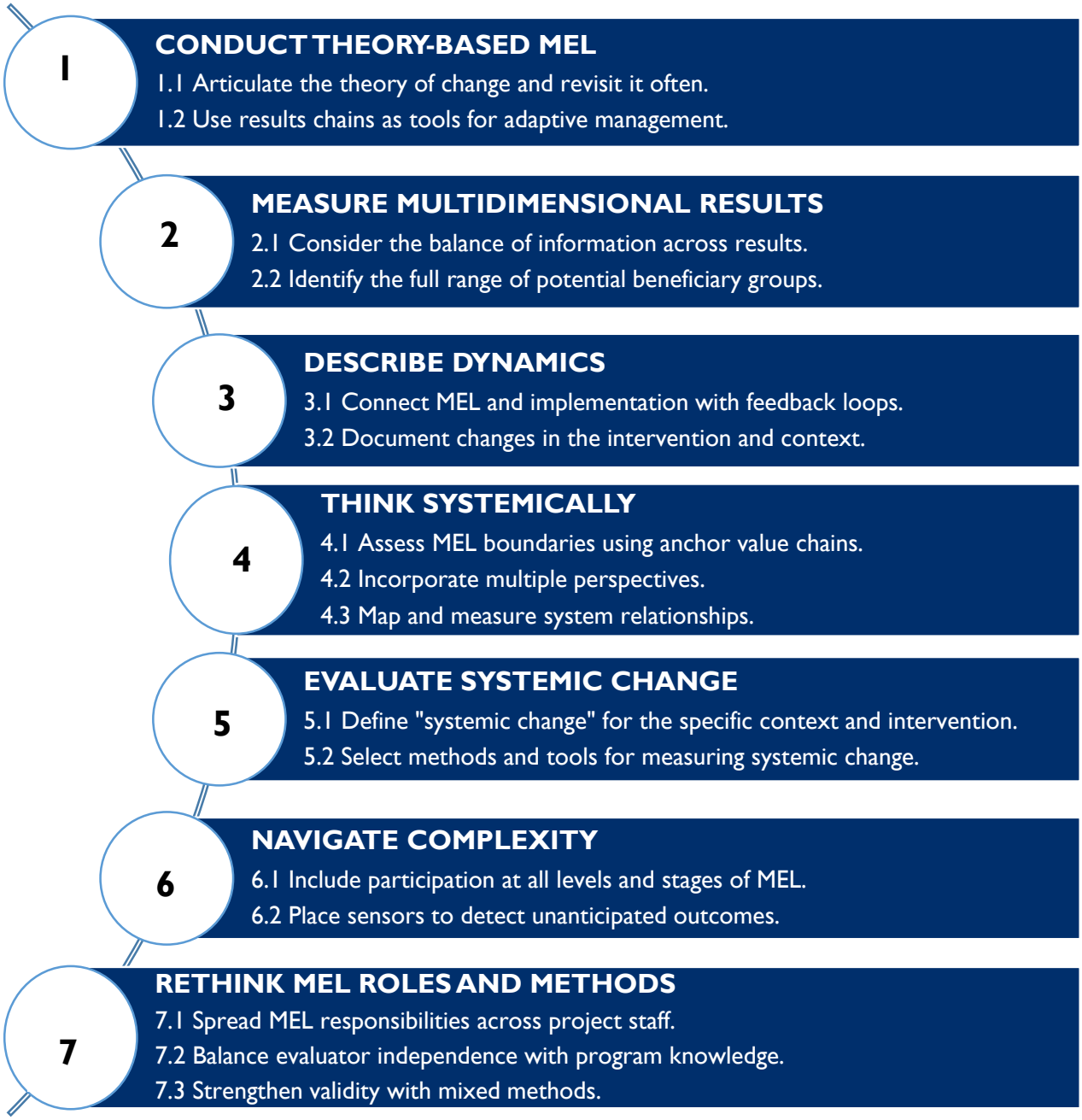
Some of the recommendations in these guidelines may be relevant for facilitation-based interventions in program areas outside of private sector development, such as health, education, democracy and governance. These broader program areas, and private sector programming approaches that are not based on facilitation, are outside the scope of the guidelines.

# II. THEMES AND RECOMMENDATIONS

This section describes the recommendations for improving monitoring, evaluation and learning within the context of market systems development. For convenience, the recommendations are organized into themes, as listed in figure 3 below. The themes are used to group related recommendations. While the relevance of each recommendation depends on the specific MEL task at hand, the group of themes represent seven critical areas that should be addressed in order to improve MEL practice for market systems development.

The recommendations can be approached in any order, depending on the MEL scenario and stage. For example, taking a theory-based approach, determining the boundaries of the system, and considering the range of beneficiaries constitute an interlinked planning approach, while describing dynamics and changes, measuring for significant systemic change and navigating complexity go beyond planning into ongoing learning and adaptive management.

Figure 3: Themes and Recommendations



# THEME 1. CONDUCT THEORY-BASED MEL

A theory of change (TOC) connects the intervention to desired outcomes or impacts, filling in the assumptions, risks, and logic that link the activity to a desired goal. It serves as an essential framework to guide all types of monitoring and evaluation situations (White 2009; O'Sullivan 2016). It is also an important tool for learning and adapting (Valters 2015). While USAID policy requires a clear theory of change at the project level of programming, all programming—from Country Development Cooperation Strategies to individual activities—are based on underlying assumptions and perceived relationships within a context. Identifying the theory of change at all levels of programming, whether or not required, is a good practice that provides a roadmap to guide MEL practice.

Rigidity and lack of flexibility are the greatest risks with a TOC approach. While the logical framework (log-frame) approach has been criticized as too inflexible for market systems development (Vogel 2012), a recent change in USAID policy has given implementing partners the flexibility to select more appropriate ways to describe or depict the TOC underlying the implementation approach. No matter how the TOC is represented, it must be periodically updated or it will lose its relevance and usefulness.

**This section includes two key recommendations:**

- **1.1: Articulate the theory of change and revisit it often.**
- **1.2: Use results chains as tools for adaptive management**.

## RECOMMENDATION 1.1: ARTICULATE THE THEORY OF CHANGE AND REVISIT IT OFTEN

The theory of change underlying an intervention, including the assumptions and relevant evidence, should be clearly articulated at the beginning of an activity and revisited periodically to incorporate learning and any adaptive changes that might have occurred. This recommendation is aimed specifically at performance monitoring, performance evaluation and impact evaluation, while recommendation 1.2 (below) more specifically addresses learning for adaptive management.

Key stages for revisiting the TOC include the following:

- RFP and proposal phases,
- project/activity inception and design phases,
- impact evaluation design (as part of an evaluability assessment), and
- prior to midline and program performance evaluations.

In the absence of these MEL milestones, it is recommended that the theory of change be reviewed annually. This can be done in advance of the annual work planning. USAID policy provides significant latitude on the style or format used to depict a theory of change. The guidance requires a mid-cycle CDCS stock taking exercise, which provides an ideal opportunity for revising the theory of change. In the case of experimental pilot initiatives, review of the TOC may be needed more than once a year.

### Resources on Theory of Change Approaches

**Author:** Better Evaluation

**Title:** "Theory of Change - Guidance on Developing, Representing, and Using"

**Access**: http://betterevaluation.org/toc_goodpractice

**Author:** Valters 2015

**Title:** "Theories of Change: Time for a Radical Approach to Learning in Development"

**Access**: https://www.odi.org/publications/9883-theories-change-time-radical-approach-learning-development

**Author:** The Center for Theory of Change

**Description:** Site provides guidance, tools, and software, for creating and implementing a theory of change

**Access**: http://www.theoryofchange.org/

**Author:** USAID Learning Lab

**Title:** "CLA in Action: A Revised Theory of Change for Uganda's Agricultural Inputs Activity"

**Access**: https://usaidlearninglab.org/lab-notes/feed-future-agricultural-inputs-activity-cla-action-brown-bag-event-0

## RECOMMENDATION 1.2: USE RESULTS CHAINS AS TOOLS FOR ADAPTIVE MANAGEMENT

This recommendation is aimed specifically at real-time learning for adaptive management. A results chain provides a detailed theory of action that can be used to guide the strategic management of an intervention. Results chains should be reviewed quarterly, with a streamlined documentation process. For example, periodic changes might be subject to "feedback and comment" from the donor's technical representative (COR) rather than a formal approval process. Flexibility for frequent revision of the results chain is critically important. If formal contractual approval is required each time results chains are revised, then results chains would in all likelihood lose some of their usefulness as a management tool.

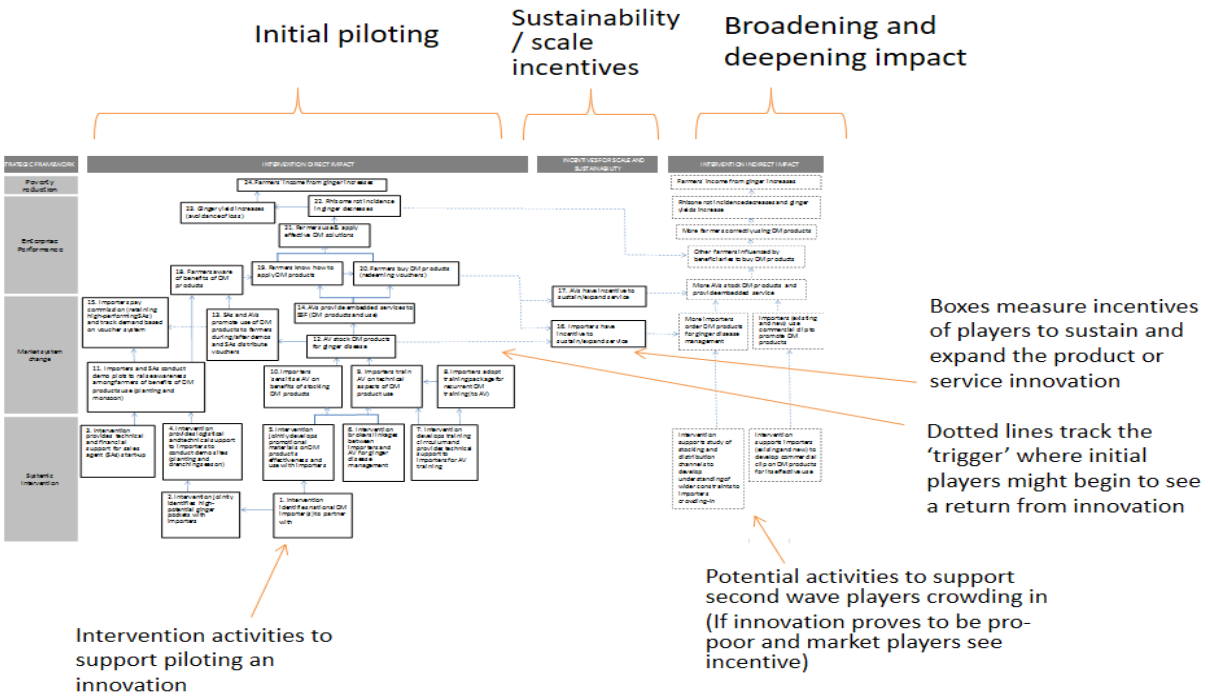
### USING RESULTS CHAINS IN ADAPTIVE MANAGEMENT

The Growth, Health and Governance (GHG) Program in northern Uganda used results chains as part of an adaptive culture for developing viable interventions in an area characterized by drought, food insecurity and chronic poverty. Given the complexity of the context, it was not immediately clear what levers would work, and the team needed to be explicit about its expected change pathways. GHG used results chains to articulate its key hypotheses around how it would facilitate systemic change (Dunn, Gomes, and Pulido 2014). The GHG team would seek feedback from other staff during the results chain development process to test their assumptions and improve their clarity of thinking. Importantly, GHG found that results chains – and other tools – could support adaptive management but that they needed to be supported by other elements, including the critical element of a supportive culture (Allana and Sparkman 2014).

This guidance echoes the DCED Standard, which specifies eight elements for a successful monitoring system for MSD. Over 100 projects in more than 50 countries are currently implementing the DCED Standard, in sectors ranging from value chain development, to challenge funds, to business environment reform. Since 2007, the DCED Standard has encouraged implementers to develop results chains for each intervention as a fundamental component of their results measurement system. This helps implementers to clearly articulate their theory of action and to systematically set and monitor indicators which show whether events are occurring as expected. This empowers programs managers to learn and adapt based on the monitoring data

that they collect. The DCED Standard recommends that results chains be reviewed and revised frequently, so as to feed into learning and adaptation. Figure 4 shows a results chain from the DCED-audited Samarath project in Nepal. This particular results chain extends beyond the direct beneficiaries in the pilot intervention to show how these relate to incentives for copying and crowding in, which lead to broader systemic change.

Figure 4: Samarath Nepal Project Results Chain




### Resources on Using Results Chains

**Author:** Kessler and Sen 2015

**Title: "**Guidelines to the DCED Standard for Results Measurement: Articulating the Results Chain"

**Access**: http://www.enterprise-development.org/measuring-results-the-dced-standard/implementing-the-dced-standard/#1_Articulating_the_Results_Chain

**Author:** Stern and Flores 2016

**Title**: "Biodiversity How-To Guide 2: Using Results Chains to Depict Theories of Change in USAID Biodiversity Programming"

**Access**: http://pdf.usaid.gov/pdf_docs/PA00M8MW.pdf

## THEME 2. MEASURE MULTIDIMENSIONAL RESULTS

There are several types of results that can be used to describe the performance of a market system and the response of the system to facilitation activities. Problems can emerge when some of these dimensions are overemphasized while others are ignored. For example, it is not enough to focus only on measuring the scale of outreach, since overemphasis on scale can create perverse incentives that work against achieving systemic change (Fowler, Field, and Sparkman 2016). It is critical to know whether beneficial outcomes are

occurring—and it is important to consider the nature and magnitude of the benefits, who receives the benefits, and whether benefits are being generated from within the market system and will last beyond the life of the donor program. Each of these dimensions provides relevant information for evaluating the results of a program (Creevey, Dunn, and Farmer 2011; Dunn 2014b).

The recommendation to evaluate development programs on multiple dimensions is not unique to MSD. For example, the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) recommends that development efforts be evaluated on the following five dimensions: relevance, effectiveness, efficiency, impact and sustainability (OECD 1991).

**This section includes two key recommendations:**

- **2.1 Consider the balance of information across results.**
- **2.2 Identify the full range of potential beneficiary groups.**

## RECCOMENDATION 2.1: CONSIDER THE BALANCE OF INFORMATION ACROSS RESULTS

The results of an MSD intervention can be measured in terms of five distinct dimensions:

1. **Outcomes** are usually measured in terms of the beneficial changes the intervention seeks to facilitate. These are the intermediate changes and final impacts experienced by beneficiaries. Examples of intermediate outcomes might include changes in technology adoption, agricultural productivity and farm profits. Final outcomes, also known as **development outcomes**, relate to the end goals of an activity such as reducing poverty, unemployment or childhood stunting.
2. **Outreach** is a measure of the number of people, households or firms receiving benefits from an intervention. Outreach indicators typically are linked to the "outputs" of an intervention, such as the number of farmers that are trained or the number of field demonstration sites that are maintained through donor funds. However, outreach also might be measured in terms of early behavior changes, such as the number of farmers using improved production technologies or the number of hectares planted with improved techniques.
3. **Inclusiveness** is measured in terms of the characteristics of beneficiaries (e.g., gender, poverty level). It reflects how the benefits of the intervention are distributed and the contribution of the intervention to inclusive growth and expanding market-based opportunities for previously marginalized groups, such as low-income households, smallholder farmers, women, youth or ethnic minorities.
4. **Sustainability** refers to having beneficial outcomes continue at a comparable magnitude and at a comparable level of outreach over time. Sustainability can be understood as the persistence of outreach, outcomes and inclusiveness beyond the life of the program. An argument in favor of facilitation is that it generates more sustainable results than traditional direct delivery programs.
5. **Systemic change** refers to changes in the structure or dynamics of interconnected systems, with significant implications for market system performance. It represents the diversion of the market system down a new evolutionary path. The attention to systemic change is growing due to its potential role in achieving development outcomes by enhancing outreach, inclusion and sustainability. A detailed discussion of systemic change is included under theme 5.

### EX-POST SUSTAINABILITY ASSESSMENT

Based on its reported impact, the Micro, Small, and Medium Enterprises (MSME) project in Cambodia (2005-2012) was one of USAID's more successful projects that used a facilitation approach. An ex-post assessment was conducted in 2015/2016 to examine the legacy of MSME interventions in the swine subsector. By visiting and assessing former project areas several years after activities had ended, it was readily apparent which outcomes had proven durable and which had not. The ex-post assessment also yielded insights on the factors that support and constrain performance in the input supply system. The assessment required 50 days of an external expert's time and 113 days from a local team for data collection and preliminary analysis. Data collection for the assessment took approximately 1.5 months.

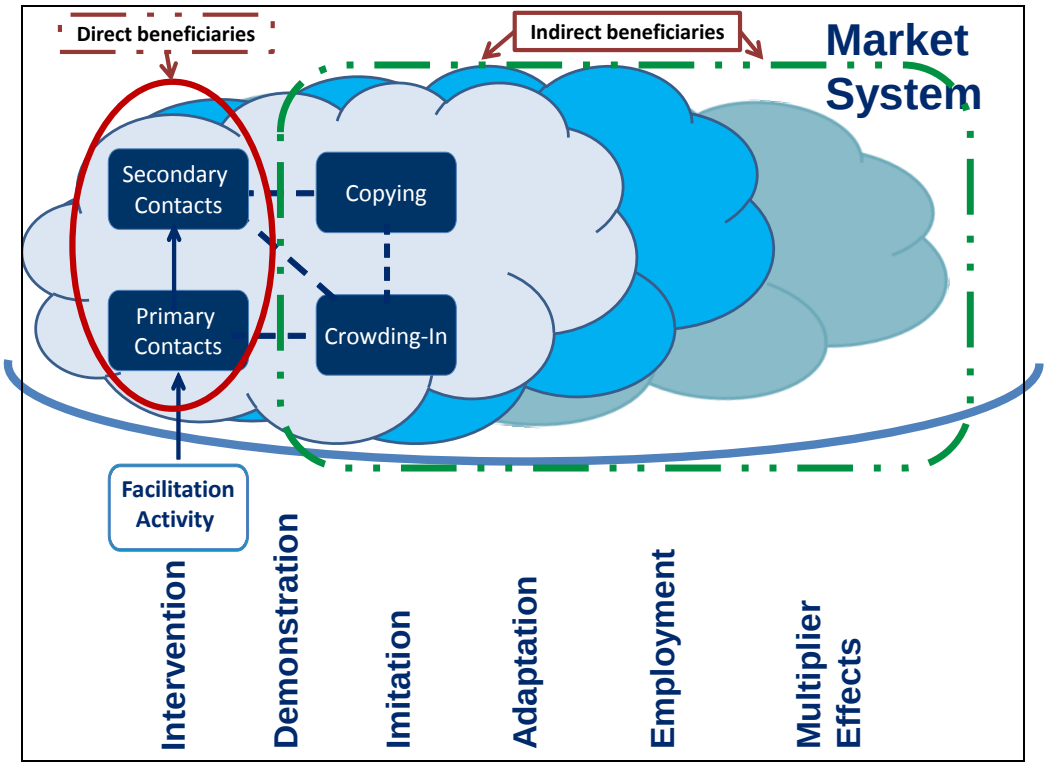
## RECOMMENDATION 2.2: IDENTIFY THE FULL RANGE OF POTENTIAL BENEFICIARY GROUPS

The MSD approach generates an uneven spread of program benefits across several different types of program beneficiaries. A complete accounting of the benefits of MSD interventions requires identification of the full range of those who benefit over space and time, including direct and indirect beneficiaries. The DCED Standard encourages implementers to consider the full extent of their impact within market systems. Based on an awareness of the full extent of outreach, appropriate categories of beneficiaries can then be selected for inclusion in each MEL scenario.

The first step is to consider the full range of potential beneficiaries from an MSD activity. Figure 5 identifies several distinct categories of potential beneficiaries (Dunn 2014a). The facilitation activity is shown on the left side, occupying a relatively small part of the market system. Primary contacts are firms that interact or come in contact with the set of interventions (goods and services) provided by the activity. Secondary contacts often include target beneficiaries, such as smallholder farmers, who are connected to primary contact firms through value chain linkages. For example, smallholder farmers may be reached through commercial relationships to input suppliers, anchor (hub) farmers, breeders, veterinarians, lenders, testing labs, wholesalers, processors, exporters, retailers and other primary contact firms. When target beneficiaries are reached as secondary contacts through a deliberate value chain facilitation strategy, both primary and secondary contacts can be identified as "direct beneficiaries" under Feed the Future indicator guidelines(USAID 2015a). These direct beneficiaries are indicated by the solid (red) oval in the figure.

The indirect beneficiaries of MSD fall into several categories. Amplifying demonstration effects that highlight the benefits of new business models and production technologies can elicit imitation from two groups of firms: 1) crowding-in firms imitate the new, more inclusive business models that have been demonstrated by primary contacts; 2) copying firms imitate the new products and production technologies of secondary contacts at the target beneficiary level. Indirect beneficiaries in the adaptation space include firms that innovate and adapt the original promoted practices, and other types of firms that enter in response to new economic opportunities created. Workers, an often overlooked category of indirect beneficiaries, receive income from jobs created by firms/farms in the five previous groups (Mueller and Chan 2015). Multiplier effects, on the far right of figure 2, generate firm profits and individual incomes through the circulation of additional money in the local economy (Snodgrass 2014). This "new" money originates in the additional profits and income spent by all six of the previous groups. Multiplier effects benefit firms and individuals in businesses unrelated to the anchor value chain(s), such as restaurants, hair salons, mobile phone dealers, clothing stores, grocery markets, repair shops, and so on.

Figure 5: Direct and Indirect Beneficiaries in Market Systems Development




An important second step is to map beneficiaries and benefits over space and time. When updated periodically, a beneficiary mapping provides information about the variability in both treatment effects and inclusiveness across the beneficiary population. The emphasis should be on development of a process to create, analyze, and update a dynamic map of beneficiaries and benefits. This creates standardized data on key variables, permitting analysis over a period of time. The products of mapping may be useful during review of the theory of change (recommendation 1.1) and when analyzing systemic change over time (recommendation 5.2). Beneficiary mapping can be incorporated as a component of a process evaluation (recommendation 3.2).

### USING POPULATION-BASED SURVEYS

Several USAID operating units and donor organizations rely on periodic population-based surveys to gather descriptive data on a country, region, county or other geographic intervention area. Operating units can leverage these surveys to measure MSD results by adding questions on technology adoption, practices, or perceptions. These data, coupled with data from direct beneficiaries in the same geographical area, can yield insight into the depth and breadth of outreach, outcomes and inclusiveness of project and activity interventions. Insight into sustainability can be captured based on repeated observations over time.

### Resources on Identifying Beneficiary Groups in MSD

**Author**: Dunn 2014a

**Title**: "Facilitation Contact Groups" (LEO Brief)

**Access**: https://www.microlinks.org/sites/default/files/resource/files/Facilitation_Contact_Groups_Brief.pdf

**Author**: Snodgrass 2014

**Title**: "Agricultural Transformation in Sub-Saharan Africa and the Role of the Multiplier" (LEO Report)

**Access**: https://www.microlinks.org/library/agricultural-transformation-sub-saharan-africa-and-role-multiplier

**Author**: Mueller and Chan 2015

**Title**: "Wage Labor, Agriculture-Based Economies, and Pathways Out of Poverty" (LEO Report)

**Access**: https://www.microlinks.org/library/wage-labor-agriculture-based-economies-and-pathways-out-poverty-taking-stock-evidence

## THEME 3. DESCRIBE DYNAMICS

Market systems are dynamic, not only because of the tendency of markets to evolve and mature over time, but also because of new patterns and incentives that emerge as system actors interact. There are frequent—often unpredictable—changes in the external environmental context within which they operate. Dynamic markets and changes in external contexts give rise, in turn, to the need for implementers to adapt program interventions. The shifting triad of dynamism—within market systems, from external influences and due to the adaptive management of interventions—creates the need for monitoring, evaluation and learning approaches that can remain relevant and valid in the face of change by reliably documenting the changes that occur and incorporating strong feedback mechanisms that allow the learning agenda to follow an appropriate adaptive path.

**This section includes two key recommendations:**

- **3.1 Connect MEL and implementation with feedback loops.**
- **3.2 Document changes in the intervention and context.**

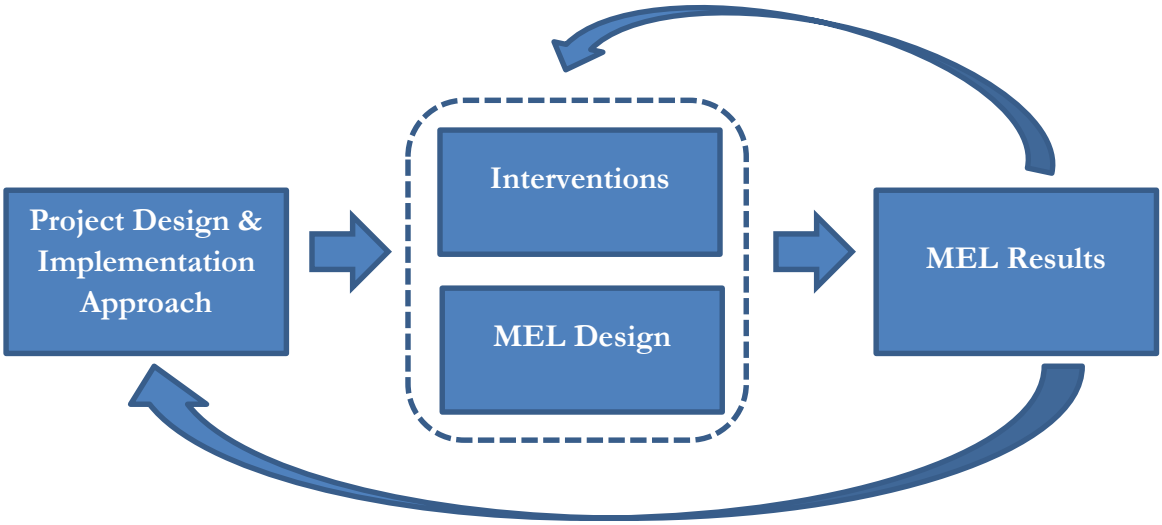
### RECOMMENDATION 3.1: CONNECT MEL AND IMPLEMENTATION WITH FEEDBACK LOOPS

The inherently dynamic nature of MSD accentuates the need for strong linkages between learning and implementation. In order to be effective, the learning agenda should be linked to implementation through feedback loops, as illustrated in figure 6. Initial project design and implementation approach shape the selection of interventions and the initial MEL design. In the case of learning for adaptive management and performance monitoring, these early results feed back into the selection of interventions, as shown in the top loop of figure 6. The MEL design is updated to reflect these changes in the interventions plus new learning. Results from performance and impact evaluations can have implications for overall activity/project/program design, shown in the lower loop of figure 6.

The speed and mechanism of the feedback process will depend on the MEL scenario, with shorter feedback loops needed for more rapidly evolving conditions and decision contexts. When the purpose is real-time learning for adaptive management, then results should be reviewed more frequently to inform the implementation approach (theory of action). For adaptive management, feedback on a quarterly basis might be appropriate, although even monthly reviews might be warranted in a highly dynamic and complex context

and/or for an activity that is experimental and untested. The DCED Standard encourages a "clear system for using information from the results measurement system in management and decision-making." This includes checking that projects have a system for using the information, and also that the results management system is being updated regularly based on new information and learning.

Figure 6: Connecting MEL and Implementation




In the case of performance evaluation, the evaluation results should feed into decisions about mid-course adjustments in the implementation approach. For example, a performance evaluation may reveal that some of the assumptions underlying the program theory of change are no longer true, creating the need for some changes. Such mid-course implementation adjustments should be documented, as described in recommendation 3.2 below. Results from impact evaluations, typically only available in the post-project period, can provide feedback into the design of new projects and into larger, agency-level programs.

### CONNECTING EXTERNAL EVALUATION AND IMPLEMENTATION

The Market Development (MADE) project in northern Ghana provides several examples of connecting evaluation and implementation. An external evaluator was contracted by DFID shortly after project launch and is scheduled to continue through the end of the project. The evaluator and implementer worked together to develop the project's theory of change and assess the evaluability of the project. The implementer provides inputs on key data collection efforts, including for baseline and follow-up surveys. The evaluator assesses the quality of the routine data generated by the implementer. The evaluator also provides periodic feedback to the implementer's management team, allowing evaluation findings and results to become useful input into adapting MADE's implementation strategy.

### ADJUSTING IMPLEMENTATION STRATEGY BASED ON MEL RESULTS

An example of evaluation results leading to mid-course adjustments in implementation is provided by the Ag Inputs Activity in the Feed the Future Agriculture Value Chain project in Uganda. A strategic assessment midway through implementation demonstrated that the intervention strategy was not creating the desired systemic changes. The assessment found that "the incentives to cheat were stronger than the incentives to adopt positive business model changes that benefited farmers and retailers alike." This directly challenged the activity's focus on demonstrating customer-oriented business strategies for other businesses to imitate, prompting the implementer to make a fundamental change in its strategy. Interventions were modified to focus on changing the "rules of the game" that were creating so much pressure for businesses to adopt short-term business strategies that harmed their customers, such as selling counterfeit inputs.

## RECOMMENDATION 3.2: DOCUMENT CHANGES IN THE INTERVENTION AND CONTEXT

Documenting changes in the intervention and context can be beneficial in several ways. As part of an ongoing process of adaptive management, the implementer can maintain a pivot log to record changes in the implementation strategy, when they occurred, the conditions that precipitated the changes and the reasons they were made. When pivot logs are standard practice, it helps to reinforce the expectation for implementers to learn and change direction, reducing pressures appear to "get it right" in the initial design.

This historic record provided in a pivot log can be useful to inform future implementation strategies, especially useful when there is turnover of personnel. In addition, a pivot log can help to provide the rationale behind adjustments that are needed in order to keep the performance monitoring requirements aligned with the new implementation path. It can also be used to inform a performance evaluation by bridging the gap between the original implementation plans and the current situation on the ground. Copies of past results chains can be included as part of an adaptation record. The pivot logs from multiple interventions could be compared at the program and/or sector levels to facilitate learning about patterns that might be expected in future programming.

A process evaluation documents changes over time in the implementation strategy and its context. Process evaluations can be useful references for performance evaluations and impact evaluations (Saunders, Evans, and Joshi 2005; Moore et al. 2015). The output of a process evaluation provides a factual timeline tracing each of the components of the activity being evaluated. For each component, the process evaluation records when interventions began (and ended) in each location, with whom (i.e., collaborators and beneficiaries) and on what scale and geographic coverage. By recording the exact nature of the intervention, a process evaluation provides a detailed description of the subject of the evaluation (evaluand). It indicates the timing and locations of influential external events, such as the arrival of new market actors, drastic price changes, new regulations or natural disasters. The accuracy and specificity of a process evaluation relies on periodic updating over the life of the activity, particularly prior to significant evaluation events, such as prior to midterm performance evaluation and prior to each round of data collection for a longitudinal impact evaluation.

There can be important links between pivot logs, process evaluations and performance and impact evaluations. While a pivot log has more of a strategic orientation, the entries in a pivot log can feed into a process evaluation and identify dates when significant changes in implementation coverage may have

occurred. This can provide important information for designing and interpreting the results of performance and impact evaluations.

## THEME 4. THINK SYSTEMICALLY

Thinking systemically is an iterative process that can be loosely organized around repeatedly paying attention to boundaries, perspectives and relationships (Williams and Hummelbrunner 2011; Reynolds 2015; Hargreaves 2010). The recommendations in this section interpret the implications of boundaries, perspectives and relationships as they are related to thinking systemically about MEL in MSD.

**This section includes three key recommendations:**

- **4.1 Assess MEL boundaries using anchor value chains.**
- **4.2 Incorporate multiple perspectives.**
- **4.3 Map and measure system relationships**.

### RECOMMENDATION 4.1: ASSESS MEL BOUNDARIES USING ANCHOR VALUE CHAINS

While MSD interventions generally focus on facilitating change within specific markets and value chains, the application of systems thinking reveals that these targeted markets and value chains are interconnected with many other market and non-market systems. When designing a monitoring, evaluation or learning approach, it is important to consider how key factors in these interrelated systems might play an influential role in explaining and interpreting findings. Many, but possibly not all, of these influential factors will already have been included in the theory of change underlying the design of the activity and the theory of action underlying its implementation. Deliberate attention to the MEL boundaries helps to ensure that these factors are identified.

For the many market systems interventions that are defined in terms of one or more value chains, these target value chains provide a useful starting point for assessing MEL boundaries. While a single intervention might target a single value chain, a project that consists of a set of related activities is likely to target a number of value chains. These targeted value chains provide the anchor (or base) systems for identifying related systems and incorporating key features from these related systems into the MEL design. Features selected for inclusion in the system boundaries should represent potentially significant constraints or preconditions related to accomplishing the intended outcomes of the intervention.

Boundaries can be expanded in two directions. One direction is to "zoom out" in order to identify potentially relevant constraints, shocks and mediating variables that come from the larger context. The process of zooming out should include attention to economic and market systems at the local, national, and global levels. The business enabling environment, which is normally considered in MSD conceptual models, includes political, legal, and regulatory systems. Other interlinked systems likely to affect outcomes include supporting markets, such as financial systems, input markets and labor markets. Zooming out might also identify critical dependencies on, for example, educational and environmental systems.

The second direction for boundary expansion is to "zoom in" to identify dynamics that help to explain the behavior of key system actors. The actors associated with the market system fall into several different roles, each with characteristic incentives and motivations that influence their behavior. One obvious way to categorize actors is in terms of their functional roles in the value chain, such as producer, wholesaler, or exporter. Another way to categorize actors is in terms of sociocultural characteristics, such as kinship, religion

and ethnicity, which can play a significant role in shaping behavior and moderating responses to market incentives. It might be useful to zoom in at an intrahousehold level to consider dynamics internal to smallholder and microenterprise households that affect market responses and the allocation of resources across the range of possible production, consumption and investment activities (Chen and Dunn 1996).

In the case of MSD interventions that are not organized around a target value chain, a geographic approach provides an alternative way to assess MEL boundaries. Knowing the geographic area within which intended outcomes are expected to occur provides important information for evaluating demonstration effects, systemic change and multiplier effects (Snodgrass 2014). A geographic approach might be used either to expand or limit the MEL boundaries. On the other hand, a geographic approach can create challenges when market actors' networks cover an extensive geographic area.

### RECOMMENDATION 4.2: INCORPORATE MULTIPLE PERSPECTIVES

Thinking systemically includes recognizing that there is no "right" way to think about the functions and performance of the system. Instead, there are multiple perspectives that can be used to understand and evaluate the system. For a trade minister, a market system might be evaluated in terms of the export value it generates, while an environmentalist might evaluate the ability of the system to protect and conserve natural resources. Perspectives may differ even within a single group. For example, some farmers might value the ability of the system to generate a small but reliable source of supplemental income, while other farmers want a market system that makes it possible to expand profits and productivity in the household's primary source of income. These perspectives are all valid, but they generate different criteria for evaluating system results. Different viewpoints create a more complex, dynamic, and realistic picture of the actors, challenges, and relationships in a system. These concepts inform theories of change while building project design and evaluation concepts and understanding of the bigger picture among stakeholders.

Incorporating multiple perspectives leads to MEL results that do a better job of reflecting the entire system. Even within a donor agency, there can be multiple perspectives on how to evaluate system performance. Similarly, individuals within an implementing organization may have different perspectives on what constitutes ideal system performance. To be sustainable, changes must address a critical need, which is best identified by the community or individuals most affected by that need. One way to incorporate multiple perspectives during pre-design stages is through the use of Broad Agency Announcements (see box below). It can also be expected that perspectives will change over time as new learning occurs. Collaborating, Learning and Adapting (CLA) is a conceptual framework with operational principles for promoting effective learning through the integration of multiple perspectives. More information about CLA, along with examples and applications is available through the USAID Learning Lab (usaidlearninglab.org).

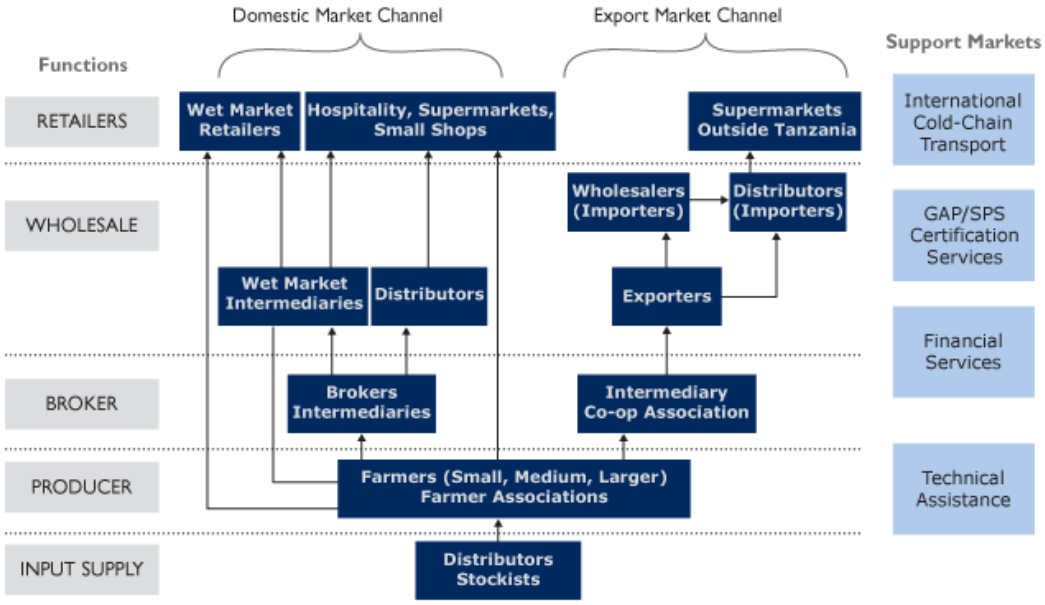
#### MULTIPLE PERSPECTIVES AND BAAS

Broad Agency Announcements (BAAs) are a new mechanism for USAID, designed to solve research and development issues by early and full "co-creation" with external partners. BAAs are a flexible and collaborative way to identify market system challenges, incorporating the perspectives of various stakeholders, including development partners, technical experts, local government staff and organizations. Operating units could design and procure activities following the conclusion of the BAA without any conflict of interest for BAA participants. For further information on BAAs, see https://www.usaid.gov/partnership-opportunities/respond-solicitation/broad-agency-announcements

## RECOMMENDATION 4.3: MAP AND MEASURE SYSTEM RELATIONSHIPS

Relationships are an integral part of systems thinking. At the same time, facilitating changes in market (and other types of) relationships is usually a central strategy for market systems development. By focusing only on the characteristics and behaviors of individual actors and groups of actors, while ignoring the relationships between actors, traditional MEL approaches ignore a crucial piece of the puzzle. Thinking systemically in MEL requires attention to relationships. System relationships can be represented structurally, such as in figure 7, which shows who is connected to whom. System relationships can also be represented in terms of the nature of the connections (linkages) between actors. The structure and nature of market system relationships are or the behaviors (actions and transactions) that define the nature of relationships (or both). Once relationships are mapped, repeated rounds of data collection would measure changes in the structure and/or conduct of these relationships.

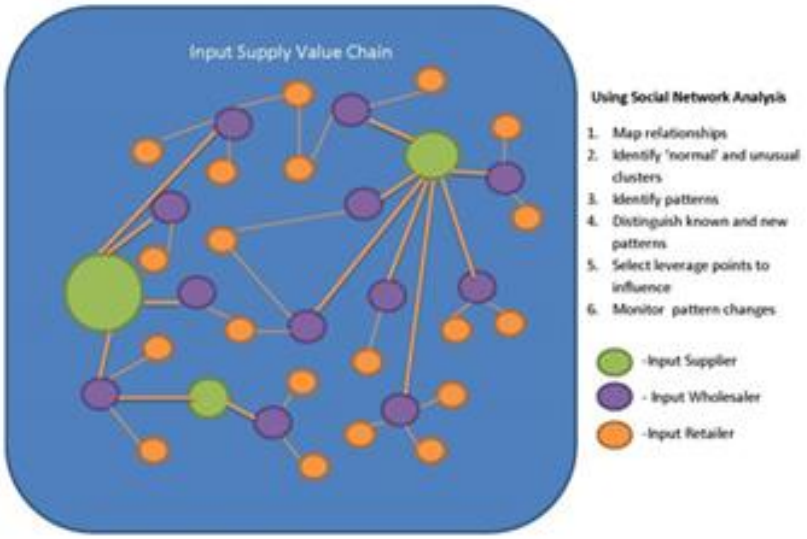
Figure 7: Example Value Chain Map




It is already a well-established practice to depict a value chain in terms of market actors in different functional roles and the linkages between them (see figure 7). This practice is often initiated at the design stage of an intervention, either at a project or activity level, and as a logic model for the intervention is outlined. Value chain mapping is an important tool for identifying key categories of market actors, how they are connected to each other, and the flow of products from input supply and production to final consumers in each market channel. Additional structural details might come from following the previous recommendation of expanding the boundaries of the system (zooming out) to include key actors who are not part of the vertically linked supply chain. For example, in many situations certain types of firms in supporting markets would be considered key actors within the boundaries of the system. As the boundaries of the system are redefined over time, the structure of the system—the number of actors and connections between actors—will also change.

Market system relationships can be mapped and measured in ways that range from very simple and intuitive to relatively sophisticated and data intensive. Whether simple or sophisticated, any map of market system relationships will describe the structure of the system using two basic types of variables: 1) actors (nodes) and 2) relationships (linkages). In a simple map, actors are grouped into broad categories according to their roles. The value chain map in the previous example lists actors' roles (functions) in the first column on the far left. The second example (figure 8) provides a more detailed map of individual firms operating in an input supply system. When the structure of the system is represented at this level of detail, the system characteristics can be measured and tracked over time using concepts and techniques from social network analysis. A description of social network analysis can be found in table 2.

Figure 8: Map of Input Supply Network




The relationships between market systems actors can be measured in terms of both transactional and informational variables. Some examples of transactional measures of market system relationships include product flows (volume), payments (currency), repeat transactions (count), proximity (distance), credit (currency) and measures of the flow of embedded services, such as the provision of agricultural inputs or supplies. Examples of informational measures include levels trust, perceived willingness to honor contracts, homogeneity (or heterogeneity) in characteristics, such as ethnicity or social class, or history of sharing technical and market information.

It is important to note that there is no "complete" market system map. In fact, comprehensive mapping can be counterproductive, absorbing excessive resources to capture details that may change in only a few months. Instead, the purpose of mapping a system is to identify critical pieces of the learning agenda, as perceived by stakeholders. System mapping is a dynamic process that should capture the perceptions, key actors, and relationships important to the project or activity. As systems are evaluated, it is expected that new actors or subsystems critical to the function of the market system will be identified and other components drop off in perceived importance as part of project learning and adaptive management.

Depending on the complexity of the market system, a smaller map may be useful for zooming in on subsystem relationships and describe in more detail the nature of relationships between specific actors. In smaller snapshots, key linkages and actors may be more easily identified and evaluated.

### SOCIAL NETWORK ANALSYSIS IN MARKET SYSTEMS DEVELOPMENT

LEO assisted the Sierra Leone Opportunities for Business Action (SOBA) project in using social network analysis (SNA) to inform program targeting, partner selection, performance monitoring, indicator design and impact measurements over time (MarketShare Associates 2016b). SOBA used the results to understand the nature of the relationships between actors in the input supply system, with a focus on product and information flows. The SNA required approximately 10.5 months of LOE, with the field work conducted part-time over five months. In another example, network mapping approaches were used in the USAID Uganda Ag Inputs Activity to evaluate transactional relationships between suppliers, wholesalers and rural retailers of agricultural inputs (Rasmussen, Derks, and Osorio 2015).

#### Resources on Mapping System Relationships

**Author:** Microlinks Value Chain Development Wiki

**Title:** "Value Chain Mapping Process"

**Access:** https://www.microlinks.org/good-practice-center/value-chain-wiki/value-chain-mapping-process

**Author:** Gopal and Clarke 2015 (for FSG)

**Title:** "System Mapping: A Guide to Developing Actor Maps"

**Access**: http://fsg.org/tools-and-resources/system-mapping

**Author**: MarketShare Associates 2016

**Title**: "Testing Tools for Assessing Systemic Change: Network Analysis"

**Access**: https://www.microlinks.org/library/testing-tools-assessing-systemic-change-synthesis-and-tool-trial-reports

## THEME 5. EVALUATE SYSTEMIC CHANGE

As described earlier (under theme 2), systemic change is one of the multidimensional results of market systems development. This section focuses specifically on evaluating systemic change, which is emerging as an important result of MSD. Systemic change is considered a means to an end, in that it supports the achievement of intended development outcomes through positive influences on outreach, sustainably and inclusion. While systemic change is increasingly viewed as an important MSD result, it does not replace the need to measure development outcomes, outreach, sustainability and inclusion. Since systemic change precedes achievement of these other results, the initial appearance of systemic change is a useful indication that the intervention is on the right track.

**This section includes two key recommendations:**

- **5.1 Define "systemic change" for the specific context and intervention.**
- **5.2 Select methods and tools for measuring systemic change.**

### RECOMMENDATION 5.1: DEFINE "SYSTEMIC CHANGE" FOR THE SPECIFIC CONTEXT AND INTERVENTION

When systemic change is believed to play an essential role in the success of an intervention, an important task in designing the MEL agenda is to clarify the meaning of systemic change for the specific context and activity. The DCED Standard advocates that implementers outline their anticipated systemic change pathways, using

whatever tool or method is most appropriate. This provides the foundation for a measurement plan for how to capture those changes, with timelines and responsibilities assigned.

In market systems development, systemic change can be generally defined as:

> *Changes in the structure or dynamics of interconnected systems, with significant implications for market system performance. These can include changes in rules, relationships, flows, behavior, connections and/or feedback loops.*

Underlying this definition are specific assumptions about the nature of systemic change:

1. Systemic change can have positive or negative results, defined as performance relative to development outcomes, outreach, inclusiveness and/or sustainability.
2. Systems are constantly changing, due to the interaction of system actors (emergence), external influences (shocks) and cyclical patterns.
3. Systemic change can occur both in the presence or absence of an intervention. Development interventions can serve to hasten, stall, redirect, or reverse a pre-existing evolutionary path.

Systemic change implies fundamental, qualitative shifts in one or more of these underlying system characteristics: structure, rules, relationships and/or behavior. From an MSD perspective, the significance of systemic change depends on its depth and strength (MarketShare Associates 2016a). It is favorable if markets become more inclusive and benefit greater numbers of the target population in ways that are more sustainable. Table 1 provides several general definitions of systemic change within the context of MSD.

### Table 1. Definitions of Systemic Change in Market Systems Development

| Source | Definition of Systemic Change |
|---|---|
| LEO Project<br><br>(MarketShare Associates 2016a, p.1) | [T]he diversion of a system down a new evolutionary path…[in which] positive systemic changes result in more sustainable, inclusive benefits to agents in the system. |
| DCED<br><br>(Kessler 2014, p. 3) | [C]hange in underlying causes of market system performance that can bring about a better-functioning market system. |
| DFID and SDC<br><br>(The Springfield Centre 2014b, p. 3) | Market system change is a change in the way supporting functions and rules perform that ultimately improves the poor's terms of participation within the market system. |
| SEEP Network<br><br>(Osorio-Cortes and Jenal 2013, p. 7) | [T]ransformations in the structure or dynamics of a system that lead to impacts on large numbers of people, either in their material conditions or in their behavior. |

While these general definitions are helpful, a more concrete understanding of systemic change that is specific to the intervention and its context provides a practical foundation for selecting indicators and/or tools to evaluate whether systemic change has occurred. The systemic change framework known as the Adapt-Adopt-Expand-Respond (AAER) model provides a useful structure for bridging the gap between general and specific definitions of systemic change (The Springfield Centre 2014a). The LEO framework for understanding systemic change provides guidance for selecting indicators of systemic change both at the level of individual actors and at the level of collective interactions (MarketShare Associates 2016a). An earlier LEO

report focused only on individual behavior change, identifying two categories of systemic change indicators: 1) buy-in indicators, measuring the degree to which market actors are willing to invest their own resources in perpetuating the changes introduced by the intervention, and 2) imitation indicators, measuring the extent to which behavior changes are spreading within a system through crowding-in and copying (Fowler and Dunn 2014, p. 18).

### SYSTEMIC CHANGE DEFINED AT SECTOR LEVEL

The Market Development Facility (MDF) is a market systems development project operating in Asia to improve market benefits for poor entrepreneurs and employees. It defines systemic changes as the gradual institutionalization of sustainable behavior changes among market players that cause a sector to operate in more efficient, pro-poor and inclusive ways. Recognizing that these changes will be very specific to the sectors in which it operates, MDF defines its target systemic changes at the sector level. For example, a targeted systemic change in Fiji's horticultural sector is that "agro-input providers expand their reach and/or diversify their products to better serve the interests of small farmers in Fiji in a commercial manner".

### SYSTEMIC CHANGE AS WOMEN'S ECONOMIC EMPOWERMENT

The Arab Women's Enterprise Fund (AWEF) project, operating in Jordan, Egypt and the Palestinian territories, has a guiding objective of facilitating women's economic empowerment within a market systems development approach. Therefore, systemic change is defined from the perspective of women's empowerment. AWEF has identified changes in social norms as a critical systemic change necessary to enable women's sustainable engagement in markets as entrepreneurs and employees.

## RECOMMENDATION 5.2: SELECT METHODS AND TOOLS FOR MEASURING SYSTEMIC CHANGE

There are two general approaches for measuring systemic change. One approach is to select indicators that measure the characteristics of systemic change, where these indicators are defined in the intervention-specific context. In general, an indicator-based approach can be implemented using standard data collection techniques, such as surveys, in-depth interviews and focus groups. An alternative to the indicator approach is to use specialized methods and tools for measuring systemic change. The alternatives to an indicator approach fall into two main categories: narrative and visualization approaches (SPACES MERL 2016). The 5Rs Framework recommends a portfolio approach to measuring systems change, including traditional indicator methods, as well as narrative approaches such as outcome harvesting and visualization techniques such as social network analysis (USAID 2016).

### LEO FRAMEWORK FOR SYSTEMIC CHANGE

Another framework, developed under the LEO project focuses specifically on market systems development (MarketShare Associates 2016a). This framework outlines a pathway for systemic change placed within the context of ongoing evolution in market systems, with domains of indicator categories that signal systemic changes. The significance of observed systemic changes is understood in terms of their depth (particularly in norms and networks) and their influence (with respect to their scale, buy-in and relevance). Lastly, it expands the range of indicators providing information about systemic changes, partly by looking at the collective interactions of agents in systems, in addition to the agents themselves.

Depending on what is to be measured, indicators of systemic change might be direct or proxy (indirect) indicators. While most direct and proxy indicators are designed to measure some level or degree of systemic change, a sentinel indictor is a type of proxy indicator that serves as a bellwether to signal that systemic change has begun to occur. In the Feed the Future Bangladesh Agricultural Value Chain (AVC) project, sentinel indicators were used to signal systemic changes in the health of the market system based on financial and informational flows, churn through commercial relationships and innovation in business models (Sparkman, Field, and Derks 2016). For an intervention to increase smallholder farmers' use of improved inputs, one way to detect spreading demand for improved inputs would be to periodically collect observations from input retailers located outside the project area. Sentinel indicators are especially useful for detecting the presence of systemic change under conditions that are unpredictable or complex.

The second approach for measuring systemic change is to use one or more specialized tools that are specifically adapted to this purpose. These specialized tools may use standard data collection techniques, but they often incorporate more novel methods of data collection and data analysis. Many of these methods use participatory approaches for collecting and interpreting narrative or mapping data. Some of the specialized tools that can be used for measuring systemic change are listed and described in table 2. For each of the tools listed in the table, there are links to descriptions of the tools on USAID's Learning Lab.

### *Table 2. Methods and Tools for Measuring Systemic Change*

| Method/Tool | Description |
|---|---|
| Most significant change | A participatory method based on stakeholder narratives. Stakeholders identify what they consider to be the most significant change resulting from the intervention. The process generates hundreds of stories. The stories are sorted into categories (domains of change) and the most representative stories are selected. Stories may be collected on a monthly, quarterly or annual basis. |
| Social network analysis | A number of techniques used to visualize and analyze actors in a system and the relationships between them. It can be applied to many types of formal and informal networks, including firms linked in a market system, households linked through kinship or social ties, and collaborating groups or associations. A network map can show the number of actors, how closely or distantly they are connected, and identify actors who are centrally located. A variety of flows between actors can be measured, including products, payments, business services, credit, information, and technology diffusion. |
| Outcome harvesting | The evaluator (harvester) works with the evaluation user to define questions related outcomes in behavior, relationships, practices or policies. For each outcome, the harvester uses a variety of data sources to determine the degree to which outcomes have occurred and the contribution of the intervention to that outcome. The approach is retrospective in that it first describes outcomes and then seeks plausible explanations of how the outcomes occurred. |
| Participatory systemic inquiry (PSI) | An approach for mapping partners and relationships by engaging multiple groups of stakeholders within the system. Results from different subsystems are triangulated and shared with stakeholders to clarify how the system is operating. |

| | |
|---|---|
| SenseMaker | The proprietary SenseMaker software program captures a large number of brief narratives that are interpreted by the people telling the story, using dimensions defined by the implementer. The software identifies emerging patterns of perceptions and attitudes, providing insights the implementer can use to adjust the intervention in order to, for example, amplify or dampen emerging patterns. |

### Resources on Measuring Systemic Change

**Author:** Britt 2013

**Title:** "Complexity-Aware Monitoring: Discussion Note"

**Access**: https://usaidlearninglab.org/sites/default/files/resource/files/Complexity Aware Monitoring 2013-12-11 FINAL.pdf

**Author:** USAID SPACES MERL 2016

**Title:** "Systems and Complexity White Paper"

**Access**: http://pdf.usaid.gov/pdf_docs/pa00m7qz.pdf

**Author:** MarketShare Associates 2016a

**Title**: "Disrupting System Dynamics: A Complex Systems Framework for Categorizing Systems Changes"

**Access**: https://www.microlinks.org/library/disrupting-system-dynamics-framework-understanding-systemic-changes

# THEME 6. NAVIGATE COMPLEXITY

Development problems often include complex situations with high levels of uncertainty (Burns and Worsley 2015; Ramalingam 2013; Ramalingam et al. 2008). Areas of complexity within market systems can generate unanticipated outcomes and amplify the need for an adaptive management approach (Allana and Sparkman 2014). Monitoring in the face of complexity can require specialized monitoring tools (Britt 2013; Reynolds et al. 2012) and developmental evaluation approaches (Patton 2011; Preskill et al. 2014).

**This section includes two key recommendations:**

- **6.1 Include participation at all levels and stages of MEL.**
- **6.2 Place sensors to detect unanticipated outcomes.**

## RECOMMENDATION 6.1: INCLUDE PARTICIPATION AT ALL LEVELS AND STAGES OF MEL

A characteristic feature of complexity is that there is significant uncertainty about how the system operates and how it will respond to an intervention. Participatory evaluation methods help to ensure a more comprehensive outlook on system response and better identification of critical relationships, boundaries and dynamics. Participatory evaluation methods also can help with incorporating multiple perspectives.

Depending on the MEL scenario, there are several important opportunities for incorporating participation:

1. *MEL design*: Awareness of multiple perspectives can shape the evaluation criteria, the questions to be answered and the boundary setting process. All of these have implications for MEL design.
2. *Review of interim results*: The interpretation of monitoring data and midterm progress results will depend on the perspectives of the people doing the interpretation. Incorporating multiple

perspectives at this stage will increase the likelihood of discovering emerging trends and unanticipated results.

3. *Interpretation of findings*: Too often this stage involves only the evaluators or, at most, a single representative of the donor agency. This leads to a very narrow (and sometimes uninformed) interpretation of results. A broader and more accurate interpretation is possible if initial findings are shared and discussed with a variety of stakeholders.

### PARTICIPATORY IMPACT ASSESSMENT AND LEARNING APPROACH

The Participatory Impact Assessment and Learning Approach (PIALA) was used to evaluate the Root and Tuber Improvement and Marketing Programme (RTIMP) in Ghana (Van Hemelrijck and Kyei-Mensah 2015). PIALA used "participatory sensemaking" to incorporate the perspectives of relevant stakeholders (beneficiaries, service providers and decision-makers). These stakeholders provided insights on the accuracy and meaning of evaluation findings and assigned causal inference for observed results. In sensemaking workshops organized at both local and national levels, workshop participants reviewed the evidence to assess the extent to which the evidence supported the theory of change. This approach helped to strengthen the assessment of project contribution to observed results and created buy-in among stakeholders to use the evaluation findings. The participatory sensemaking activities cost $64,000 out of a total evaluation budget of $233,000.

## RECOMMENDATION 6.2: PLACE SENSORS TO DETECT UNANTICIPATED OUTCOMES

Unanticipated outcomes represent a perennial blind spot for theory-based evaluation, so placing sensors to detect unanticipated outcomes is an important supplement to a theory-of-change approach. The more complex the situation, the more likely it is that an intervention will have unanticipated outcomes. When spotted early, information on unanticipated outcomes can provide useful information for adaptive management. As part of a performance or impact evaluation, information on unanticipated outcomes can provide crucial context for interpreting results. The DCED Standard recognizes the importance of understanding unintended impacts and includes this as an audit control point.

Developmental evaluation can be a useful approach for interventions that are innovating in complex environments, where the ideal path is not known in advance (Patton 2011). The developmental evaluation approach uses on-going assessment to understand how the situation is evolving and supports real-time adaptation of an innovation in a dynamic environment. Evaluation becomes an internal team function that informs intervention strategies. Since a developmental evaluation evolves along with the intervention, it is more likely to detect unanticipated outcomes as they occur.

### REVEALING UNANTICIPATED CONSEQUENCES WITH OUTCOME HARVESTING

Outcome Harvesting (OH) is an evaluation approach that can reveal unintended consequences from an intervention. The LEO Project tested OH in collaboration with the Alliance Lesser Caucasus Programme (ALCP), a project operating in Georgia from 2014 to 2017. ALCP already had a robust results measurement system collecting data on expected outputs, outcomes and impacts. However, ALCP was eager to understand what types of unanticipated consequences may have emerged from its interventions. The application of OH yielded information on a number of unintended outcomes. Among the most critical were that 1) increased incomes had contributed to significant increases in housing prices in the region, 2) increased dairy income had facilitated a significant increase in debt levels among dairy producers, and 3) the success of a program-facilitated cheese trader had substantially reduced competition among grocery stores in that area (MarketShare Associates 2016c). The OH field application took two months and required approximately 85 days of LOE.

### Resources on Participatory Approaches

**Author:** Van Hemelrijck and Kyei-Mensah 2015

**Title: "**Final Report on the Participatory Impact Evaluation of the Root & Tuber Improvement & Marketing Program (RTIMP)"

**Access**:
https://www.ifad.org/documents/10180/7b74a2e6-e4bc-4514-a99e-44e0ee9adb7f

**Author:** Better Evaluation

**Title**: "Participatory Evaluation" (website)

**Access**:
http://betterevaluation.org/plan/approach/participatory_evaluation

## THEME 7. RETHINK MEL ROLES AND METHODS

**This section includes three key recommendations:**

- **7.1 Spread MEL responsibilities across project staff.**
- **7.2 Balance evaluator independence with program knowledge.**
- **7.3 Strengthen validity with mixed methods**.

### RECOMMENDATION 7.1: SPREAD MEL RESPONSIBILITIES ACROSS PROJECT STAFF

In most team structures, there is an identified monitoring and evaluation specialist who coordinates the overall monitoring and evaluation of the program/project/activity. These specialists design and operationalize monitoring and evaluation frameworks, managing information flows, maintain data validity, ensure compliance of monitoring and evaluation activities and report out to stakeholders. Oftentimes, evaluation specialists are also answering performance monitoring requirements in contracts or grants that are separate from MSD evaluation needs. Due to the dynamic nature of MSD approaches, evaluations of these MSD interventions require significant support. Monitoring and evaluation specialists' ability to respond to MSD evaluation needs, which are often above and beyond standard monitoring needs, may be limited.

When it comes to adaptive management and performance monitoring, responsibilities for collecting and interpreting data should be spread as widely as possible across the implementing organization's local staff. Effective MSD interventions are flexible to changes in context and require real-time data collection and modification of critical assumptions to identify and execute timely implementation pivots. Leveraging technical experts' field experience adds to the overall quality of an MSD evaluation. While there is still a need for MEL specialists, their role should be redefined so that they serve more as MEL facilitators, methodological advisors, communicators and discussion leaders.

Making sense out of complex interventions cannot be the sole responsibility of an individual or isolated team. For MSD approaches, it is important to include MEL responsibilities in job descriptions for most implementing staff. Successful facilitation of MSD depends on creating a learning culture, and incorporating learning into routine processes. Technical teams have strong roles in defining and prioritizing the learning agenda and bring valuable experience to the MEL process—from identifying the theory of action during MEL design, to creating feedback loops that allow MEL results to shape implementation, to interpreting results given the particular context—making implementation staff a critical resource for applying CLA practices.

This recommendation aligns with the DCED Standard, which advocates that responsibility for results measurement needs to be dispersed throughout an implementing organization. One of its compliance criteria is whether "(e)vidence exists of the results measurement system having been institutionalized, for example in the form of inclusion in programme management documents, job descriptions, staff performance reviews, regular meetings etc." Learning for adaptive management requires a developmental evaluation approach, based on real-time data collection and analysis with robust feedback loops. On the other hand, methods must fit the capacity and resource constraints of implementing staff.

### RECOMMENDATION 7.2: BALANCE EVALUATOR INDEPENDENCE WITH PROGRAM KNOWLEDGE

Independent evaluation is considered an important mechanism for ensuring objectivity and lack of bias in the performance and impact evaluation findings. It also allows greater flexibility in evaluation design, allowing for ex-post evaluations or other designs that are not bound by the parameters of the project or activity. However, much less emphasis has been placed on the value of an evaluator's general expertise in MSD and detailed knowledge of the specific activity to be evaluated. This includes knowledge of adaptive management and how it has been applied. Evaluators are essential partners in operationalizing the MSD approach, due to the explicit need for adaptation under conditions of complexity and, consequently, the need to establish a close link between MEL and implementation.

In other words, the bias-reducing benefits of external (independent) evaluation may be outweighed by benefits of evaluator expertise in MSD programming (in general) and familiarity with the MSD activity being evaluated (specifically). Such familiarity comes from engaging the evaluation team at every stage, beginning with implementation design. The challenges of evaluating MSD activities, described in section I above, accentuate the need for evaluators to become involved early, periodically and collaboratively. Activity contracts or agreements need to include language on collaboration with third party monitoring and evaluation efforts and evaluators need to become familiar with interventions at the beginning or as close as possible.

### ENGAGING EXTERNAL EVALUATORS

DFID has issued a number of multiyear contracts to engage external evaluation teams for their MSD projects and portfolios. The external evaluation contract for DFID's private sector development portfolio in Malawi runs from 2015 to 2023, ending two years after the end of the last scheduled project. The external evaluation team visits each of the projects annually to verify the data they are collecting and provide recommendations. This helps the external evaluators understand each project's context and its adaptation path, including how and why the interventions are evolving over time. The evaluation team includes a team leader with systemic change expertise, a value for money specialist and a local context specialist.

Generating an integrated learning approach between implementing staff and a third party evaluator can have significant resource implications. In addition to the costs of awarding a separate evaluation contract, there are also staff time considerations. Integrated and collaborative approaches to learning require significant initial investment by donors, implementing staff and evaluators to identify areas of collaboration and create information exchange and learning relationships and processes. External evaluators and implementing staff can work together to identify system boundaries, the theory of change and monitoring indicators. Quarterly pause and reflect moments would allow implementing staff, donors, and evaluators learn about challenges to the theory of change, key intervention changes and information gaps that need to be addressed.

## RECOMMENDATION 7.3: STRENGTHEN VALIDITY WITH MIXED METHODS

Mixed methods build a structure for comprehensive and valid evaluation through triangulation of results. Mixed methods are especially important for evaluating MSD, because interventions are always at multiple levels with multiple units of analysis (i.e., evaluands) and different methods are appropriate for different levels of analysis. A combination of methods can be used to strengthen the different dimensions of validity and permit the triangulation of results (E. Stern et al. 2012; OECD 1991).

Methodological validity is a multifaceted standard that cannot be satisfied by a single data analysis method that is best in all circumstances (Creevey et al. 2010). The most rigorous approach is one in which the strengths and weaknesses of the approach are clearly understood by the end users. The DCED Standard encourages the use of more than one method to strengthen the causal link between donor interventions and measured outcomes. A common approach is to pair tracing results outlined in a results chain with another relevant method, based on what is being measured (e.g., stakeholder opinion, quasi-experimental designs).

For impact evaluation, the suggestion that evaluation methods can be ranked on a hierarchical scale of rigor has led to the prioritization of randomized control trials (RCTs) as the optimal impact evaluation method. Despite the strength of randomized control trials in establishing internal validity, they tend to be weak when it comes to external validity (Kleinfeld 2015). As an approach for evaluating changes in agricultural productivity, the validity of RCTs suffers from the inability to perform double-blind experiments (Bulte et al. 2014). Even within evidence-based medicine, the practical implications and generalizability of effectiveness studies based on RCTs have been questioned for their superficial treatment of underlying complexity (Tannahill and Kelly 2013).

In conclusion, given the need for selecting and synthesizing mixed method approaches, the rigor of the process can be improved through transparency. Transparency means both understanding and communicating the relative strengths and weaknesses of the approaches that were used. It requires that full documentation be provided. Any reporting of MEL results should include transparent consideration of the limitations of the evaluation methods that were used.

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