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social empowerment partnership

MONITORING & EVALUATION HANDBOOK

A SELF-LEARNING HANDBOOK
TO SUPPORT DATA-LED DECISION
MAKING IN THE CIVIL SOCIETY SECTOR

Deutsche Bank

Disclaimer

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Foreword

About Engage

Engage is a social enterprise contributing to social development and transformation in Southern Africa. Our role is to empower civil society organisations, funders, grant managers development practitioners and government departments to achieve their development objectives. Engage delivers support across five focus areas:

Social Transformation – Providing strategic insight and support for funders and implementers to guide effective interventions

Social Resilience – Promoting organisational sustainability and consistent service delivery

Social Intelligence – Support for monitoring and evaluation, independent assessment and creating a culture of data-led decision making within the sector

Social Enterprise – Supporting innovative funding models and implementation models to drive social benefit and commercial value

Social Tech – Providing technology solutions for the sector to improve efficiency and effectiveness

Jason is a development specialist and social entrepreneur with over 20 years' experience consulting in the development and business sectors. He has a diversity of knowledge spanning ICT, logistics, programme design, social enterprise and monitoring and evaluation.

Jason has worked across multiple sectors including healthcare, child services, youth development, sustainable livelihoods, food security, micro-finance, renewable energies, and ICT for development. These projects have included deployments in multiple countries including South Africa, Zambia, Zimbabwe, Rwanda, Tanzania, Ghana, Namibia and Guatemala.

He is a founding member and director of Engage, Capacitate, MediBucks, and Microserve BCD. Jason also sits on the Board of Directors for HIVSA.

Jason has a passion for innovation and aims to leverage his collective experiences to contribute to enabling sustainable social impact.

Jason Bygate

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Overview

Context

The social, political and economic environment in which we find ourselves today can only be described as challenging. This is especially true of the landscape for Civil Society Organisations (CSOs), where the level of uncertainty is particularly acute and the challenges seem to escalate. The dramatic changes in the global and local context over the past decade has meant that the CSO sector is being placed under increasing pressure both in terms of operational demands and financial constraints. Organisations are finding themselves confronted with an ever increasing level of need and in many cases an ever shrinking pool of resources to meet the need.

Despite the relatively pessimistic outlook, there is always opportunity in adversity. These difficult conditions are, in some instances, serving as a long overdue catalyst for change and are driving greater efficiency and effectiveness. This drive has had a direct influence on the function of monitoring and evaluation within the sector, never before has there been a greater demand for effective mechanisms to verify the activities of organisations and validate the social and environmental value that they are delivering. In addition, the adverse conditions provide excellent motivation for innovation and adaptation.

It is with this perspective of opportunity that we have approached the formulation of the Monitoring and Evaluation handbook. We hope that the handbook can support a disruption of conventional thinking around the purpose of monitoring and evaluation and contribute to the development of a broader sectoral approach to data-led decision making.

Purpose

The purpose of this handbook is to guide thinking around the value of information for civil society organisations and to provide an accessible foundation of content to support the implementation of appropriate monitoring and evaluation structures.

Handbook structure

This handbook is by no means a comprehensive, all-encompassing reference for monitoring and evaluation; it was developed as a foundation self-learning guide. There is a significant amount of content available that has been produced by organisations and specialists across the globe to contribute to the collective monitoring and evaluation body of work. It is recommended that users of this handbook consider these other sources where appropriate (some of which are referenced in the handbook appendix) to build deeper understanding of particular approaches and methodologies.

This handbook was developed to serve as a self-learning guide, providing a foundation for recognising the importance of monitoring and evaluation and understanding basic concepts. The handbook content has been structured across five learning modules and includes an appendix of additional learning references, tools and templates that can be used to strengthen monitoring and evaluation activities within an organisation or programme.

- Module 1 - Introduction and key concepts
- Module 2 - Defining an M&E Framework
- Module 3 - Defining Indicators for your Organisation and programmes
- Module 4 – Developing an M&E Plan
- Module 5 – Reporting
- Module 6 – Systems and Technology to support M&E
- Module 7 – Benefits of M&E
- References - Links

Self-Assessment Tool

A self-assessment tool has been developed to support the capacity building process. This is an online assessment that can be completed by the user to determine potential areas of weakness within an organisation and opportunities to improve capacity. The assessment tool can be found at: www.engage.org.za/assessment

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MODULE 1

INTRODUCTION & KEY CONCEPTS

1. Objectives

This module aims to provide a basic introduction and overview of monitoring and evaluation and key concepts that form part of the monitoring and evaluation lexicon. There may be a number of variations of the key concepts defined within this module, where possible the handbook has used global best practice as a reference point for the inclusion of the listed definitions or explanations.

2. What is Monitoring and Evaluation

Overview

For most Civil Society Organisations (CSOs), monitoring and evaluation is something that is synonymous with programme implementation and, more often than not, delivering against onerous donor reporting requirements. Traditionally monitoring and evaluation was a function that was demanded by a donor to ensure some level of accountability and verification of implementation. This top down perspective meant that monitoring and evaluation was seen as a grudge activity that was required to satisfy the donor and delivered little value to the organisation itself. The onerous task of collecting data and compiling reports was usually conducted after the programme activity and was often unreliable and unstructured with considerable anecdotal narrative and little empirical rigor.

To some extent this consequently became an entrenched self-fulfilling prophecy, with organisations delivering data and reports to donors but leveraging little operational or strategic value for the organisation itself.

It is here that we see an opportunity to challenge and disrupt the status quo. By adopting a bottom up approach, it is hoped that monitoring and evaluation can be established as a tool for the creation of an organisational culture of data-led decision making. This shift in perspective will deliver benefit on four levels:

1. Operational visibility and insights Effective monitoring provides critical operational data to inform active oversight and improve efficiency in programmatic delivery

2. Strategic visibility and intelligence The consistent collection of appropriate data against a set of suitably defined indicator measures, tracked over time against defined baselines, provides a reliable view of performance to determine effectiveness in achieving desired results. Combined with operational data, these measures can also indicate the sustainability of the intervention and even the continued relevance.

> Monitoring and evaluation is a mechanism for generating operational and strategic insight to ensure continued relevance, efficiency, effectiveness, sustainability and desired results.

3. Collateral for the packaging of value Monitoring and evaluation provides the key information required for the packaging of the value that the organisation is delivering when going to market to secure further investment.

4. Reporting for funders and other stakeholdersThe burden of compiling the various reports required by funders and other stakeholders is lessened considerably by the consistent availability of operational and strategic information. Reporting thus becomes a process of assembly, rather than generation.

From the persptective of global best practice, the OECD (2002a) defines monitoring and evaluation as follows: Through the Through the above elements, some of the following questions may be addressed through monitoring and evaluation:

"Monitoring is a continuous function that uses the systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing development intervention with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds (p. 27)."

"Evaluation is the systematic and objective assessment of an ongoing or completed project, program, or policy, including its design, implementation, and results. The aim is to determine the relevance and fulfilment of objectives, development efficiency, effectiveness, impact, and sustainability. An evaluation should provide information that is credible and useful, enabling the incorporation of lessons learned into the decision making process of both recipients and donors (p. 21)."

- In general, monitoring and evaluation includes a number of generic, core functions:

- Definition of the context and relevance of the implementation

- Definition of desired results - outputs and anticipated outcomes of the implementation

- Definition of outcome indicators and data requirements for those indicators to monitor progress

- Formulation of a formal framework to direct monitoring and evaluation activities

- Identification of potential risks and mitigations for the implementation and M&E function

- Establishment of a baseline based on the indicator definitions of the current status quo before implementation

- Setting of specific targets to reach and timelines for reaching them

- Monitoring the implementation - regularly collect data

- Assessing data to determine whether the targets are being met

- Evaluating the results achieved and compiling appropriate reporting to inform decision making

- Revision of the implementation (where possible) and updating of the monitoring and evaluation framework

- Is the programme effective in achieving its intended results?
- Is there a clear path of attribution - Can the results of the programme be explained by some alternative process besides this programme?
- What change and how much change occurred at the programme or beneficiary level that is attributable to the programme?
- What is return on investment of the implementation - the cost per unit of output achieved, are resources being used efficiently to achieve the results?

In summary, monitoring provides the data to tell us where a particular activity is at any given point (and over time) in relation to specific targets or desired results. It is largely a descriptive function. Evaluation, in contrast, aims to provide an understanding of causality, the reasons why particular targets or results are or are not being achieved.

3. Key Concepts and Definitions

There are generally a number of different definitions that can be applied to key terms within the monitoring and evaluation context. For the purposes of this handbook, the definitions provided by the OECD have been used for consistency and to align with global best practice. The mission of the Organisation for Economic Co-operation and Development (OECD) is to promote policies that will improve the economic and social well-being of people around the world.

• Activity
Actions taken or work performed through which inputs, such as funds, technical assistance and other types of resources are mobilized to produce specific outputs.

• Assumptions
Hypotheses about factors or risks, which could affect the progress or success of a development intervention.
Note: Assumptions can also be understood as hypothesized conditions that bear on the validity of the evaluation itself, e.g., about the characteristics of the population when designing a sampling procedure for a survey. Assumptions are made explicit in theory based evaluations, where evaluation tracks systematically the anticipated results chain.

• Attribution
The ascription of a causal link between observed (or expected to be observed) changes and a specific intervention.
Note: Attribution refers to that which is to be credited for the observed changes or results achieved. It represents the extent to which observed development effects can be attributed to a specific intervention or to the performance of one or more partners taking account of other interventions, (anticipated or unanticipated) confounding factors, or external shocks.

• Baseline
An analysis describing the situation prior to a development intervention, against which progress can be assessed or comparisons made.

• Benchmark
Reference point or standard against which performance or achievements can be assessed.
Note: A benchmark refers to the performance that has been achieved in the recent past by other comparable organisations, or what can be reasonably inferred to have been achieved in the circumstances.

• Beneficiaries
The individuals, groups, or organisations, whether targeted or not, that benefit, directly or indirectly, from the development intervention.

• Effectiveness
The extent to which the development intervention's objectives were achieved, or are expected to be achieved, taking into account their relative importance.
Note: Also used as an aggregate measure of (or judgment about) the merit or worth of an activity, i.e. the extent to which an intervention has attained, or is expected to attain, its major relevant objectives efficiently in a sustainable fashion and with a positive institutional development impact.

• Efficiency
A measure of how economical resources/inputs (funds, expertise, time, etc.) are converted to results.

• Evaluation
The systematic and objective assessment of an on-going or completed project, programme or policy, its design, implementation and results. The aim is to deter-mine the relevance and fulfilment of objectives, development efficiency, effectiveness, impact and sustainability. An evaluation should provide information that is credible and useful, enabling the incorporation of lessons learned into the decision–making process of both recipients and donors.
Evaluation also refers to the process of determining the worth or significance of an activity, policy or programme. Furthermore, it can be described as an assessment, as systematic and objective as possible, of a planned, on-going, or completed development intervention.
Note: Evaluation in some instances involves the definition of appropriate standards, the examination of performance against those standards, an assessment of actual and expected results and the identification of relevant lessons.

• Impact
Positive and negative, primary and secondary long-term effects produced by a development intervention, directly or indirectly, intended or unintended.

• Indicator
Quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect the changes connected to an intervention, or to help assess the performance of a development actor.

• Inputs
The financial, human, and material resources used for the development intervention.

• Logical framework (LogFrame)
Management tool used to improve the design of interventions, most often at the project level. It involves identifying strategic elements (inputs, outputs, outcomes, impact) and their causal relationships, indicators, and the assumptions or risks that may influence success and failure. It thus facilitates planning, execution and evaluation of a development intervention.

• Monitoring

A continuing function that uses systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing development intervention with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds.

• Outcomes

The likely or achieved short-term and medium-term effects of an intervention's outputs.

• Outputs

The products, capital goods and services which result from a development intervention; may also include changes resulting from the intervention which are relevant to the achievement of outcomes.

• Pathway of Change

A pathway of change is a map that illustrates the relationship between actions and outcomes and also shows how outcomes are related to each other over the lifespan of the initiative.

• Performance

The degree to which a development intervention or a development partner operates according to specific criteria/ standards/guidelines or achieves results in accordance with stated goals or plans.

• Pre-conditions

Requirements that are necessary for the realisation of a particular long-term goal.

• Qualitative Data

Qualitative data is extremely varied in nature. It includes virtually any information that can be captured that is not numerical in nature.

• Quantitative Data

Quantitative data is information about quantities; that is, information that can be measured and written down with numbers.

• Relevance

The extent to which the objectives of a development intervention are consistent with beneficiaries' requirements, country needs, global priorities and partners' and donors' policies.
Note: Retrospectively, the question of relevance often becomes a question as to whether the objectives of an intervention or its design are still appropriate given changed circumstances.

• Reliability

Consistency or dependability of data and evaluation judgements, with reference to the quality of the instruments, procedures and analyses used to collect and interpret evaluation data.
Note: Evaluation information is reliable when repeated observations using similar instruments under similar conditions produce similar results.

• Results

The output, outcome or impact (intended or unintended, positive and/or negative) of a development intervention.

• Results Based Accountability

Results-Based Accountability™ (RBA), also known as Outcomes-Based Accountability™ (OBA), is a disciplined way of thinking and taking action that communities can use to improve the lives of children, youth, families, adults and the community as a whole. RBA is also used by organisations to improve the performance of their programmes or services.

• Results Chain

The causal sequence for a development intervention that stipulates the necessary sequence to achieve desired results – beginning with inputs, moving through activities and outputs, and culminating in individual outcomes and those that influence outcomes for the community, goal/impacts and feedback. It is based on a theory of change, including underlying assumptions.

• Target

Specifies a particular value that an indicator should reach by a specific date in the future.

• Stakeholders

Agencies, organisations, groups or individuals who have a direct or indirect interest in the development intervention or its evaluation.

• Systemic Intervention Mapping (SIM)

Systemic intervention mapping is a collaborative, results based methodology for defining development objectives, indicators of performance and data requirements.

• Theory of Change

Theory of Change is a monitoring and evaluation methodology that is essentially a comprehensive description and illustration of how and why a desired change is expected to happen in a particular context. It is focused in particular on mapping out or "filling in" what has been described as the "missing middle" between what a programme or change initiative does (its activities or interventions) and how these lead to desired goals being achieved. (Centre for Theory of Change)

• Sustainability

The continuation of benefits from a development intervention after major development assistance has been completed. The probability of continued long-term benefits. The resilience to risk of the net benefit flows over time.

• Validity

The extent to which the data collection strategies and instruments measure what they purport to measure.

4. Key Considerations for M&E

Monitoring and evaluation is by no means a new consideration within the development sector, the concepts listed above have been in existence for a considerable length of time and have been implemented, with varying levels of success, by organisations for years.

Given the complex nature of many projects or programmes, it is not unusual to encounter challenges in the implementation of a monitoring and evaluation function. Some of the common key considerations for successful monitoring and evaluation are:

a.   Set contextually relevant indicators

When formulating indicators it is important to consider the context of the implementation, this can help in understanding the nuances which might otherwise get lost and might indirectly influence the measurement of the performance. Cultural diversity can affect both the programme design and the mechanisms for measuring performance.

> Are your indicators culturally contextual?

b.   Engage with the community

It is important to engage the community as part of the implementation process, but also in conducting monitoring and evaluation. Without consulting with the community there may be suspicion about the data collection process and concern about the use of the data. The target community and beneficiaries should be aware of how the programme will be benefiting them and how giving the right data will only help improve their conditions. Inadequate engagement or consultation may not only result in unreliable data, but may also place fieldworkers at risk. The community may also be able to provide valuable insights into improving response rates or data reliability.

> Have beneficiary communities been consulted on the monitoring and evaluation process?

c.   Promote an agile approach

Social settings are, by their very nature, dynamic. Changes to the setting can have significant consequences for the monitoring of a programme or project. It is thus key to imbed some flexibility into the monitoring and evaluation functions to ensure that they can be adapted to changes in the setting. The probability of these changes should ideally also be mapped out at the planning stage and considered as potential risks with associated mitigations to limit the disruption. This may include a revision of the tools and reports for collection and analysis

> Is the monitoring and evaluation design able to adapt to changes in the programme or project landscape?

d.   Use relevant and appropriate methods to evaluate change

A combination of data collection techniques, or mixed-methods approach, is suggested for evaluating an intervention's results. Mixed-method designs combine both quantitative methods and qualitative methods to provide a more comprehensive view of outcomes achieved. Where Quantitative methods provide a strong empirical base for tracking delivery and progress; Qualitative methods can provide a deeper understanding of the contextual complexity and relative value of interventions and the direct change achieved for the beneficiaries.

Are you utilizing the right mix of methods to gather data? Is your data reliable from a monitoring and evaluation context?

e.   Design a credible monitoring and evaluation programme

In order to be successful, a monitoring and evaluation programme must have buy-in from all stakeholders of a given intervention, it should serve as a trusted source of insight for the stakeholders in the programme ecosystem — the beneficiaries, the funders and the programme team. Key to achieving this is ensuring reliability, validity, and timeliness of the data. Whether the monitoring and evaluation programme uses process monitoring (checking whether process milestones are on track) or beneficiary monitoring (measuring impact on the recipient), the data gathered from a monitoring and evaluation programme should not only meet funder requirements but also help the organisation to make better decisions. After all, a monitoring and evaluation programme should add value to the organisation both in terms of operations and strategy.

Is your monitoring and evaluation contributing to a culture of data-led decision making? Does it add value to your strategy and operations

f.   Leverage appropriate available technologies

Technology is an important consideration for effective monitoring and evaluation. There are a host of solutions that can greatly improve the reliability, validity, and timeliness of data. There has, in the past, been a considerable reluctance by organisations to adopt technology to strengthen their implementations. The increasing availability and accessibility of appropriate technologies for development has, fortunately, begun to overcome this reluctance. Later in the handbook we will discuss some of these technologies and look at how they can assist both in improving visibility for better monitoring and evaluation, but can also directly contribute to programmatic outcomes.

Technology can significantly contribute to programme delivery and visibility.

g.   Collective Ownership

Monitoring and Evaluation is not the sole responsibility of a designated individual or even a team of individuals. In order to derive the greatest value for all the stakeholders of a given programme or project, it is essential that these same stakeholders recognise their role in driving a culture of data-led decision making. In essence the M&E team are the custodians of the monitoring and evaluation process and data management, but the responsibility for valid, reliable data and actionable intelligence lies with the entire organisation and in some cases even the beneficiaries themselves. It is thus essential to ensure that there is a clear understanding of this responsibility and the importance of accurate information to achieve the desired impact.

Develop a culture of data-led decision making

MODULE 2

DEFINING AN M&E FRAMEWORK FOR YOUR ORGANISATION

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1) Objectives

This module aims to provide an understanding of what a monitoring and evaluation framework is and some of the different methodologies that are available for the formulation of your M&E framework.

2) What is an M&E Framework

There are a variety of definitions for a monitoring and evaluation framework and the term is often used interchangeably with monitoring and evaluation plan. Personally, I think about a monitoring and evaluation framework as an outline of the "What" – what is the context, what are we doing, what are we measuring, etc. In the case of an M&E plan, we are describing the "How". This being said, there are a diversity of perspectives about frameworks and plans, even the methodologies are open to interpretation. This can be a little confusing to say the least, what is important to remember is that we are looking for an appropriate mechanism that allows our organisation to effectively monitor and evaluate our progress.

The M&E framework serves as the guiding reference for the M&E plan, where we are describing processes, roles, responsibilities, data flow and even the tools that will be used. The M&E Framework provides an accessible single view of what we are doing and how we are measuring what we are doing.

Depending on the methodology, this framework may take different forms. In the case of a Logical Framework this may be a tabular representation, while for a Theory of Change this is generally a graphical representation. What follows below is an overview of some of the methodologies that can be applied when structuring your M&E Framework.

3) Logical Approach - Logic Models and Logical Frameworks

The logical approach incorporates both logic models and logical frameworks and while the two definitions are often used interchangeably there are a few key differences between a logic model and a logical framework. Largely the differences lie in how they are presented, with a logical model seen as a way to present and share understanding:

> "A logic model is a systematic and visual way to present and share your understanding of the relationships among the resources you have to operate your program, the activities you plan, and the changes or results you hope to achieve." (W.K. Kellogg Foundation 2004)

The Logframe has a more functional classification:

> A log frame is a tool for improving the planning, implementation, management, monitoring and evaluation of projects. The log frame is a way of structuring the main elements in a project and highlighting the logical linkages between them. (Department for International Development of the United Kingdom, Tools for Development: a handbook for those involved in development activity (2002))

While there has been some evolution of the traditional "Logical" approach, be it Logframe or logic model formats, generally, they include similar components:

- What is the project going to achieve?
- What activities will be carried out?
- What inputs are required - resources, people and equipment?
- How will you measure your performance?

These initial questions may also be supplemented with additional considerations:

- What are the potential challenges that you might encounter?
- What are the assumptions that have been made?
- Where will the data come from / What tools will be used?
- Who will be responsible for the data?
- What are the timeframes?

Both Logframes and Logic models provide a linear view of a programme or project, i.e. how various inputs are used to deliver a range of activities that lead to immediate outputs, which in turn could contribute to the achievement of broader

outcomes and impact. In some instances they might include the detailing of known assumptions or risks, and even the means of verifying the outcomes.

The most obvious difference between the two types of logical approach is found in the way that they are presented. The logic model is usually presented in the format of a flow chart:

Inputs	→	Activities	→	Output	→	Outcome	→	Impact

While the Logframe is generally presented as a matrix:

	PROJECT	INDICATORS	MEANS OF VERIFICATION	RISK/ASSUMPTIONS
GOALS				
OUTCOMES				
OUTPUT				
ACTIVITIES				

While the logic model is useful at a planning and strategic engagement level, the Logframe is generally more suited as an operational tool. Often there is a natural progression from a logic model into a logical framework.

a.   Step by step guide for setting up your logic model and logical framework

Step 1.

Planning – remember that monitoring and evaluation is a collaborative process and it is thus important to plan before starting with the definition of a logic model and Logframe, this would include ensuring that:

• there are sufficient resources available,

• the appropriate people are part of the process,

• there is sufficient understanding of the objectives of the process,

• there is a clear directive for initiating the process as part of the programme implementation,

• there is sufficient time set aside to complete the process.

Step 2.

Context and problem- Define what the problem is and the context in which the problem occurs.

Step 3.

Solution or goal - Define the potential solution or intervention to address the problem, what is the goal of the intervention.

Step 4.

Activities - Define the things that you are going to be doing to address the defined problem.

Step 5.

Inputs - What are you going to need to complete the activities? This may include financial and other resources.

Step 6.

Outputs and Outcomes – Define the expected results of your activities both immediate and long term.

Step 7.

Defining indicators - How you will measure your results is a critical component to include (this is discussed in detail in the next module)

Step 8.

Compile your logic model - Link the inputs to activities and results, the example above is one structure that could be used to populate and link the definitions in the previous steps.

Step 9.

Means of verification - How will you prove your performance, what will serve as a validation of your delivery?

Step 10.

Assumptions and risks - What are the assumptions that we are making about the intervention and what are the potential risks to its success?

Step 11.

Compile your Logframe - Combine your logical model with the indicators, means of verification, assumptions and risks into a single matrix. The example above could be used to structure your framework.

Most important once you have completed all the steps above, is that the end result is a clear, concise and easily understandable representation of what you are doing, what you want to achieve and how you will measure your success.

Input	Activities	Outputs	Outcomes	Impact
•Money •Staff •Research	•Training Curriculum •Training Sessions	•Targetted beneficiaties attending training	•Increased knowledge and understanding about subject matter	•Positive changes to behaviour
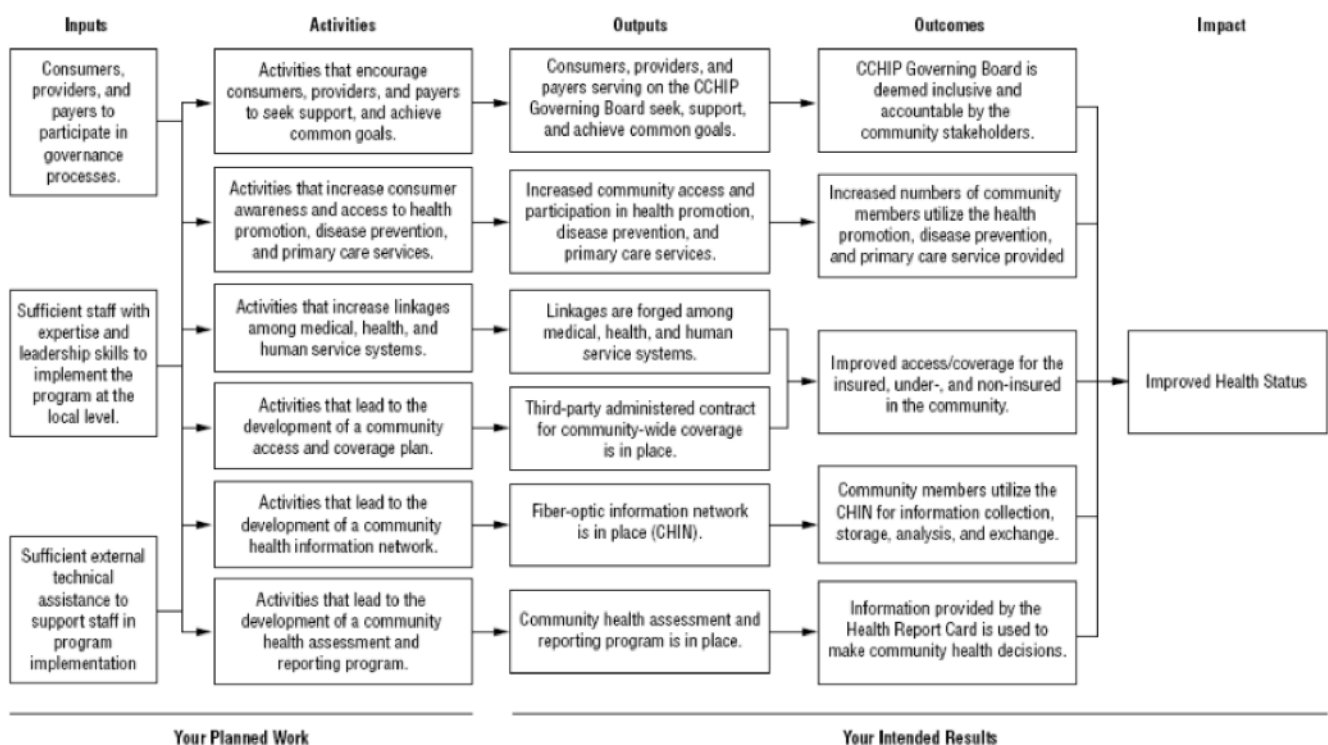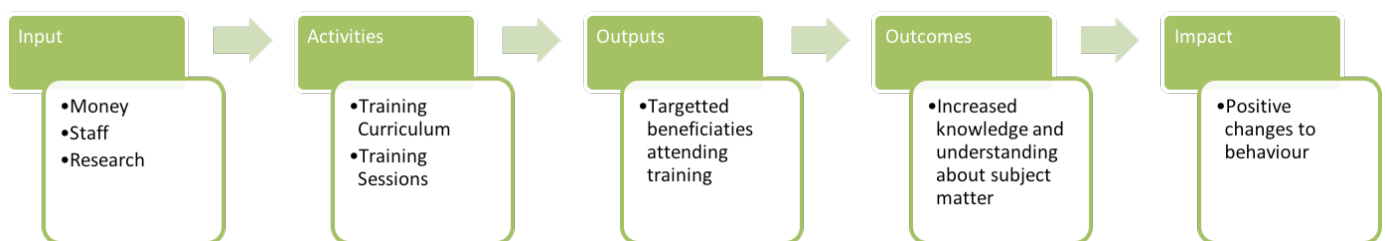
Logical Framework (Logframe) Examples

	PROJECT SUMMARY	INDICATORS	MEANS OF VERIFICATION	RISKS / ASSUMPTIONS
Goal	22% increase in the number of primary school learners continuing on to high school over a 5 year period.	% of primary school learners continuing on to high school	Comparison of primary and high school enrolment records.	School does not support the programme and activities cannot be conducted at the school.
Outcome (might also be referred to as the Objective.)	Improve reading proficiency among children in primary school by 30% within a 5 year period	Reading proficiency scores for among primary school children	Quarterly reading proficiency tests.	Improved reading proficiency contributes to school performance and likelihood of staying in school
Outputs (If you have more than one output they can be numbered sequentially.)	1) 100 primary school learners with low reading proficiency complete a reading programme	Number of learners completing the reading programme	Attendance registers at programme sessions.	Programme will have an impact on reading proficiency
	2) 100 parents of school learners with low reading proficiency attend the parent reading programme	Number of parents completing the programme	Attendance registers at programme sessions.	Parents that can read are better able to assit their children and children are interested in reading with their parents.
Activities (The number of the activity should match the number of the output that it corresponds to)	1) 10 reading workshop sessions in schools with 100 learners who have low reading proficiency.	Number of workshops run.	Attendance registers at programme sessions.	Children are able to attend the workshop sessions
	2) 10 reading workshop sessions in schools with 100 parents of learners who have low reading proficiency.	Number of workshops run.	Attendance registers at programme sessions.	Parents are willing and able to attend workshop sessions

b.   Strengths and Weaknesses of the approach

This approach has both strengths and weaknesses which should be considered when assessing possible methodologies for your organisation.

Strengths of the Logical Framework / Logic Model Approach:

• It draws together all key components to provide a convenient, accessible overview of a project.

• It sets up a framework for monitoring and evaluation, where planned and actual results can be compared.

• It defines project implementation and helps plan out activities and expectations of the results of those activities.

Weaknesses of the Logical Framework / Logic Model Approach:

• Due to its linear nature, the approach may cause rigidity in programme management and may lack flexibility to adapt to changing conditions;

• It does not provide a view of the broader context aside from high level assumptions;

• LogFrames are often developed after the activity has been designed rather than used as the basis for design;

• It can restrict innovative thinking.

The logic model and logical framework approach is a good place to start with your monitoring and evaluation. It provides a basic sequential process for breaking down the mechanics of your monitoring and evaluation requirement. Depending on the range of programmes or projects your organisation is involved with, you may need multiple frameworks for each programme or project as well as a consolidated organisational framework.

4) Theory of Change

The Theory of Change approach is, to some extent, an evolution of traditional logic model or logical framework approaches. The approach is part of the same family as logical models, but it does address some of the limitations of the logic approach to provide a more comprehensive view of a programme and the context in which it occurs and to define the possible pathways to achieve change within that context.

"'Theory of change' is an outcomes-based approach which applies critical thinking to the design, implementation and evaluation of initiatives and programmes intended to support change in their contexts." DFID (2012)

While there are a wide range of differing perspectives on the Theory of Change approach, there is general agreement on the basic elements that make up the theory of change approach. These elements would include the following:

- Context for the initiative, including social, political and environmental conditions, the current state of the problem the project is seeking to influence and other actors able to influence change

- Long-term change that the initiative seeks to support and for whose ultimate benefit

- Process/sequence of change anticipated to lead to the desired long-term outcome

- Assumptions about how these changes might happen, as a check on whether the activities and outputs are appropriate for influencing change in the desired direction in this context

- Diagram and narrative summary that captures the outcomes of the discussion

DFID - Isabel Vogel, April 2012

Setting up a Theory of Change is like making a roadmap that outlines the steps by which you plan to achieve your goal. It helps you define whether your work is contributing towards achieving the impact you envision, and if there is another way that you need to consider as well. In addition to which, creating a theory of change helps programme stakeholders to achieve a shared understanding of what they are trying to accomplish. This last point highlights the importance of driving a participatory process within your organisation, remembering that monitoring and evaluation is a collective activity that requires the collaboration of multiple stakeholders.

According to the centre for Theory of Change there are four core elements of a Theory of Change, these are:

- A pathway of change that illustrates the relationship between a variety of outcomes that are each thought of as preconditions of the long- term goal.

- Indicators that are defined to be specific enough to measure success.

- Interventions that are used to bring about each of the preconditions on the pathway, and at each step of the pathway.

- Assumptions that explain why the whole theory makes sense

a.   Why use a Theory of Change

A Theory of Change provides a more strategic perspective than the traditional Logframe, it serves as a concise view of the organisation's purpose and overall goal rather than current activities. It also provides a broader view of the context in which the organisation is working and provides an opportunity to identify factors that may influence the desired programmatic outcomes. This might include potential risks as well as opportunities for collaboration with other stakeholders within the social system. The pivotal feature of a Theory of Change, however, is the explicit articulation of the causal pathway that will lead to the desired outcomes and the measurement mechanisms that will be required to track this attribution to the outcomes. These are generally incorporated into a graphical representation through a collaborative process allowing the organisation to achieve a shared understanding of the organisational and programmatic objectives. The engagement and discussion within the organisation about the theory of change provides a basis for agreed purpose and a shared vision of success. This shared vision then also provides a consistent message for communication to external stakeholders, this may include beneficiaries, partner organisations and funders.

b.   Step by Step Guide to compiling your Theory of Change

The compilation of a Theory of Change should, even more than the logical framework approach, be a collaborative undertaking that draws on the collective inputs of internal and even external stakeholders to develop a shared understanding of the desired change and how it will be achieved.

Step 1.

Be sure that there is a shared understanding of why you are going through the process. Completing a Theory of Change can be an intensive and time consuming process, it is thus important to articulate why you are embarking on the process. This should also be communicated clearly to all participants.

Step 2.

Ensure that you have allocated enough time to the process. The larger the organisation and number of programmes that are being implemented, generally, the more time that will be required to develop a Theory of Change. In large organisation with complex interventions it may be necessary to segment the process to do justice to all programmatic components. It may not be possible to complete this process in a single sitting and often requires multiple sessions to accommodate all discussions and produce an appropriate Theory of Change.

Step 3.

Select participants with care. As mentioned above this can be an intensive process, you will want to ensure that you are involving team members that have the knowledge and experience to actively contribute to the process. Involving the right people in the process will also ensure that you have their buy-in and cooperation when it comes to implementing the Theory of Change within the organisation.

Step 4.

Start with the end in mind. The Theory of Change starts with the end objectives or goals that the organisation wishes to achieve, this serves as the focus and motivation, the reason for being, if you will, for the organisation. In some cases we may refer to this as the desired impact that we wish to achieve. For e.g. Youth that are employed and productive.

Step 5.

Map the context into which you are implementing your programme. It is important to ensure that you reflect on the broader landscape in which your programmes are going to be implemented. This will serve to reinforce the relevance of your organisational objectives, some of your base assumptions and proposed interventions. This will also provide a view of potential risks and opportunities that you may encounter during your implementation. For example – the communities in which youth unemployment is highest there are a multitude of social issues and high levels of poverty.

Step 6.

In order to make sense of the world, we all make certain assumptions based on our understanding and experience of the world. These assumptions are a critical component of the Theory of Change and this is often where the most robust discussion will occur, in particular if your organisation is still defining its interventions. It is thus important to define your assumptions about how change occurs at the outset – e.g. education improves the probability of employability for youth. Where possible, these assumptions should be validated by verifiable research or empirical justification. These assumptions provide the factual basis for a logical linkage between the activities that are undertaken, the outcomes that are achieved and the realisation of the organisational goals or objectives.

Step 7.

Having established a factual foundation through your assumptions and with the goals defined, we are now in a position to begin a backward mapping process to establish what the necessary pre-conditions for the realisation of the goals or end impact. In most cases this involves multiple levels of influence that might contribute to the end result. For example – Youth have completed a suitable skills development programme and are able to apply their new skills in finding a job.

This is where we see the overlap with the logical models as we begin to define the outputs and outcomes that are required in order for us to achieve our goals or impact. Important to note that we should also consider those factors that are not directly within the control of the organisation but could influence the end goals. Where they have a direct bearing on our programmes, these should be included as they may present both opportunity and pose risks to our interventions.

Step 8.

Now that we know what we want to achieve and what is necessary in order for this to happen, we are now ready to detail how we are going to intervene to make it happen. There is again a logical linkage required to provide the justification for our activities. For example – Our organisation is going to provide a skills development programme to make youth more employable. These linkages are often called pathways of change, linking how the change will occur as a result of your activities to establish the pre-conditions necessary to achieve your goals.

Step 9.

Define how you will measure your performance, the indicators of success. We will spend some time looking at the definition of indicators. Important to note that indicators are required at all levels within your Theory of Change for your goals or impact, outcomes as pre-conditions and the outputs delivered through your activities. Important to note that certain of these indicators may not be based on the internally generated data, for example – percentage of graduates of the skills development programme that find employment; but they may be established externally, for example – youth unemployment rates for the area.

Step 10.

Develop a visual representation of your Theory of Change; this may be a graphical or tabular view. While the visual representation is useful to communicate the conceptual analysis, it is not necessarily the only product of the Theory of Change process, but rather a consolidation of the key insights from steps four to ten above. It is recommended to capture additional comments, detailed assumptions, activity details and explanations in an accompanying document. This ensures that you are building a strong base of institutional knowledge that can be revisited as and when necessary.

• Some pointers from DFID when creating your visual representation of your Theory of Change:

• Important assumptions are often revealed when it comes to synthesising the visual, so it is a key tool in the group process

• Elements should not be standardised, it is for each programme to decide on the most appropriate representation to avoid 'tick-box' compliance

• The visual representation should stand up to scrutiny - concepts and meaning can be grasped by others, for example by giving explanations of what is 'behind the arrows', using annotations and a key to the symbols used

• That visual elements should be meaningful and not merely decorative, and are stripped back to the essential process elements

• That there is an organising hierarchy of changes at different levels, but that there are also elements to express key aspects which are non-linear, for example, cyclical processes or feedback loops, and more than one pathway

• The most important assumptions are documented

• Specialist software is not needed, standard office software is now well-equipped with visual tools sufficient for the purpose.

Step 11.

The Theory of Change should be a living reference that is regularly reviewed for on-going relevance as your programmes are implemented. The social context into which programmes are deployed is, by its very nature, a dynamic one where conditions may change dramatically from one period to another. It is thus important to review your theory of change regularly and keep testing the assumptions you have made.

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Fiver Children's Foundation - Theory of Change

Vision: Ultimately, we want for the Fiver kids what all parents want for their children, for them to grow up to be happy, fulfilled adults who achieve their full potential in life. We want them to have the courage to strive for their dreams, and if they come up short, the resilience to try again. Then, we want them to take what they have learned at Fiver, and share it with the world.

Three Pathways to Success: Program participants grow and develop along three pathways, representing the journey they take in our program. Fiver believes that all three pathways, Civic Mindedness, Healthy and Ethical Life Choices, and Education and Career Success, are necessary to a fulfilled life. Children need to develop as members of groups—as members of a student body, as residents of a community, as citizens of a world.

Building a Strong Foundation: The foundation of all three pathways involves establishing a sense of self-worth. Once children believe that they are important people and are deserving of success in life, we delve into deeper character cultivation and skill-building. Fivers are continuously encouraged to try new things and take healthy risks. Children and their parents become familiar with the language and norms that make up Fiver culture and they begin to visualize a path to success for themselves.

Civic Mindedness Pathway: Fiver works to build positive concepts of civic-mindedness and citizenship to contradict the messages that tempt young people to become egocentric. Programs are aimed at teaching children to work in teams, to demonstrate tolerance and empathy, to develop leadership skills and to become positive agents of change. Fivers graduate with an understanding that they have a responsibility to share what they have learned with others.	**Healthy and Ethical Life Choices Pathway:** Equally important, Fiver seeks to bring out and reinforce children's inherent resilience and adaptability, supporting them in making rational, ethical, and healthy choices all along the way; counteracting pervasive messages tempting children to engage in risky behavior. Fivers develop mentoring relationships that offer support and constructive criticism. They negotiate conflict among their peers and develop an understanding that their decisions have consequences. During the high school years, Fivers debate social issues and learn a framework for ethical decision-making.	**Education and Career Pathway:** To the first two pathways we add an education and career pathway, which is critical to success and fulfillment in today's society. Programs focus on preparing Fivers for the critical transitions into middle school, into high school, into college and into careers. The foundational building block of this pathway involves understanding the importance of education to future success in life. Without the developmental outcomes in the health-ethics and civic-social pathways, we believe children could not attain the education and career outcomes.

Long-Term Outcomes: The pathways culminate in three long-term outcomes: Fivers possess 21st century skills to succeed in school and careers; Fivers are engaged citizens; and Fivers make ethical and healthy life choices. If these long-term outcomes are achieved, Fiver will have made an important contribution to achieving our ultimate vision and ending the cycle of poverty in Fiver families. Fiver's 10-year commitment and holistic approach outlined on the next page is designed to prepare our Fivers to succeed.

empowering children to make positive life choices

FIVER CHILDREN'S FOUNDATION
THEORY OF CHANGE

Fivers share what they have learned with the world

ULTIMATE OUTCOME

Fivers are happy and fulfilled in work, family and life and make positive contributions to society.

TEN YEAR COMMITMENT

Fivers have relevant, market-driven, 21st century skills to succeed in school and careers.

Fivers are engaged citizens.

Fivers make ethical and healthy life choices.

SUMMER INTERNSHIPS

INTENSIVE COLLEGE WORKSHOPS & VISTS

ADVENTURE CHALLENGE TRIPS

ETHICAL DECISION-MAKING & DEBATE CURRICULUM

Fivers understand the connection between education and future success.

Fivers demonstrate leadership and advocacy skills.

Fivers understand the influences that impact decision-making.

ONE-ON-ONE ADVISING ON EDUCATIONAL OPTIONS

ROLE MODELS FROM DIVERSE BACKGROUNDS

Fivers demonstrate curiosity and stay engaged in school.

Fivers demonstrate tolerance and empathy.

Fivers have mentoring relationships with caring adults.

TWO WEEKS AT OUR AWARD-WINNING RESIDENTIAL SUMMER LEARNING PROGRAM, CAMP FIVER

Fivers understand their unique strengths, build social capital, set basic goals and begin a 10 year character-building journey

EDUCATION & CAREERS PATHWAY

CIVIC MINDEDNESS PATHWAY

HEALTH & ETHICS PATHWAY

In addition to coming from economically disadvantaged circumstances, Fivers face other daunting and complex challenges of poverty. More than half are being raised by single parents and many have had to learn English as a second language and acclimate to a new culture. Most of our kids come from groups under-represented in higher education and professional careers, have few examples of academic persistence and are hoping to be the first in their family to attend college.

The Hunger Project

Global Theory of Change

4/7/11

Sustainable, vibrant, healthy rural communities free from hunger & poverty

Government implementing community-driven anti-poverty strategies

Human rights supported and protected

Decentralized political power

CYCLE OF SUSTAINABLE CHANGE (left)

CYCLE OF SUSTAINABLE CHANGE (right)

Increased resources

Capitalizing on efforts

Replication of the THP model

Formation of Country-Led Strategies

- Gender-based, rights-based country strategies
- Strengthened multilateral collaborations
- Public policies reflect THP values/approach (national, international level)
- Electoral reform, decentralization in Bangladesh and India
- Strengthened partnerships with civil society
- Replication and support of THP's approach to development
- Strengthened partnerships with government

Effective donor/ investor cultivation

Community Impact

Gender Equity, Human Rights
- Movement toward gender equality
- Violence against women reduced
- Women participate in decision making processes at all levels

Good Governance
- Wide access to/ use of social goods: health, education, water, etc.
- Government accountability ~ Less corruption

Health and Nutrition
- People, especially children, are healthy
- Good health care incl. HIV/AIDS
- Good nutrition

Water, Environment, and Sanitation
- Sustainable environment: water, sanitation, woodlots

Food Security
- People in partner communities have enough to eat

Income Generation
- Wealth in village through investments in better homes, livestock, etc.
- Many small businesses
- End extreme hunger and poverty

Education
- Literacy & numeracy
- More children in school

Shifts in Community Capacity and Conditions

Literacy & Education
- Increased adult literacy & increased access to skills training
- Increased access to quality education for all children

Gender Equity & Human Rights
- Increased awareness of political, social, economic rights (especially women's rights)
- Increased gender equity within the family & community
- Increased support & protection of indigenous cultures

Health and Nutrition
- Increased access to/use of health services
- Improvements in maternal and child health
- Improvements in HIV/AIDS prevention and treatments

Income Generation
- Women have continued access to financial services
- Families are better equipped to meet household needs

Water, Environment, and Sanitation
- Increased access to clean water & sanitation
- Increased awareness about environmental sustainability
- Improved legal protection and access to land

Good Governance
- Local government is responsive to community needs
- Increased transparency and accountability of local government

Food Security
- Increased access to nutritious food at household & community levels
- Improved agricultural systems
- Movement toward food sovereignty

Advocacy & Alliances
- Strengthened multilateral collaborations
- Strengthened partnerships with civil society
- Strengthened partnerships with government
- Replication and support of THP's approach to development

Community Mobilization

- More effective community leadership (specifically by women)
- Increased agency: Mind shift from "I cannot" to "I can"
- Stronger collaborations/ alliances within and among communities

Effective donor/ investor cultivation

M & E: Future / Up to now

THP Outputs

- Education & Leadership training
- Form partnerships with local NGOs/CBOs
- Deploy animators, participatory action researchers
- Local community development (health, education, agriculture)
- Vision Commitment Action workshops
- Establish local governance structures
- Gender equity work
- Microfinance (Africa)
- Advocate for government accountability
- Government builds & equips schools, health facilities, latrines, & other infrastructure

MOBILIZING COMMUNITY

EMPOWERING WOMEN, CREATING AGENCY

PARTNERING WITH LOCAL GOVERNMENT

c.   Strengths and Weaknesses of the approach

As with the Logical framework methodology, this approach has both strengths and weaknesses which should be considered when assessing possible methodologies for your organisation.

Strengths of the Theory of Change Approach:

- It draws together all key components to provide a convenient, accessible overview of a project.

- It helps a diverse range of stakeholders reach a realistic consensus on what is to be achieved, how, using what r esources and under what constraints.

- It sets up a framework for monitoring and evaluation where planned and actual results can be compared.

- It defines project implementation and helps plan out activities and expectations of the results of those activities

- It is a common sense approach.

- It provides information about how, why and whether an intervention works.

- It embeds the intervention in the real world and allows you to design your monitoring and evaluation in a way that can be implemented in real world social systems.

- It facilitates timely and informative information about the progress of the project which can be understood by a diverse range of audiences.

- It provides a greater awareness of the context.

- A Theory of Change provides a more flexible alternative to working with log-frames for complex programmes and contexts.

- This approach can serve to improve relationships with partners and stakeholders by identifying opportunities for dialogue and collaboration.

- Most importantly, a Theory of Change provides "a unifying framework for strategic decision-making, communicating and reporting."

Weaknesses of the Theory of Change approach :

- The Theory of Change approach can be time consuming and may take an extended period to complete

- Due to its collaborative nature, it requires input from multiple participants in the process who may not be available at all times that they are required to participate.

- The Theory of Change should be accompanied by a narrative document that provides additional detail and explanation. Where this is omitted the approach may be diluted and open to challenge.

- There is a strong reliance on subjective assumptions and contextualisation which, without empirical support could skew the mapped interventions.

- Defining causal links, pathways for change and attribution can be a tenuous process given the complex nature of social settings and the wide range of variable that can influence a particular outcome that may lead to the realisation of the goals or defined impact.

As was highlighted earlier, the Theory of Change should be revisited regularly; in fact the methodology can be applied at various stages in the programme cycle. This might include:

"…the pre-planning stages of scoping and strategic analysis, design and planning, and throughout implementation. It can be used to support different project cycle activities, such as implementation decision-making and adaptation; to clarify the drivers, internal and external, around an existing initiative; monitor progress and assess impact." DFID, Isabel Vogel, April 2012.

5) Results Based monitoring and evaluation/ Results Based Management approach

Results based Monitoring and Evaluation aims to extend the traditional implementation-focused M&E systems which were largely designed to address compliance—the "did you do what you said you would" question. In many ways the results based approach incorporates the logical framework methodology and builds on the key core concepts to address the "so what" question, providing feedback on the actual outcomes and goals of an organisations actions. This section was adapted from the Results Based Management Handbook, UNDG 2011.

This approach attempts to mainstream the foundation provided by logical frameworks and Theories of Change and establish a mechanism for entrenching a culture of data-led decision making. The approach has largely targeted government institutions in an attempt to achieve greater accountability and a focus on results rather than the output of any given intervention.

Results based M&E also extends the traditional M&E approaches to include a definition of what is done with the insights that are produced by a the M&E process. This is why the approach is often referred to as results based management as it integrates data insights into management decisions

"RBM is a management strategy by which all actors, contributing directly or indirectly to achieving a set of results, ensure that their processes, products and services contribute to the achievement of desired results (outputs, outcomes and higher level goals or impact). The actors in turn use information and evidence on actual results to inform decision making on the design, resourcing and delivery of programmes and activities as well as for accountability and reporting." Results Based Management Handbook, UNDG 2011

Results Based Management takes a life-cycle approach, incorporating planning, monitoring and evaluation into a cyclical process.

The approach centres around stakeholder participation and collaboration through all stages of the life-cycle. It is also important to note that RBM incorporates both development outcomes or impact and an organisations internal performance.

Source: UNDP, Handbook on Planning, Monitoring & Evaluating for Development Results, 2009.

a)   Step by Step Guide to a Results Based approach

Step 1: Setting the vision

Setting the vision involves a number of integrated components:

- Desired results – define the goals and outcomes that the organisation wishes to achieve

- Context – review the landscape and ensure that there is a clear understanding of the context into which the programme is going to be implemented

- Stakeholder analysis – it is important to identify and classify all stakeholders that are touched by the programme

This process provides the basis for detailed planning and measurement.

Step 2: Defining the Results Chain and Matrix

The results chain and matrix are very much like the logic model and Logframe we discussed earlier. This includes the following components:

- Inputs or resources - Indicative resources reflect an estimate of the resources required – financial, human, technical assistance and knowledge – for a given programme or project. It is critical that budgeting and allocation of resources is done on the basis of requirements for achieving agreed results.

- Activities – Activities are often not included as a listing within the results chain where the focus is on the results. I feel that these are an important inclusion to complete the chain

- Outcomes and outputs - These make up the collective results and incorporate the operational delivery component and the longer term consequences of that delivery.

- Indicators, baselines and targets – These are defined in the first module, key to note that within RBM there is the inclusion of both quantitative and qualitative indicators. Indicators will also be discussed in more detail in later modules.

- Means of verification - The sources of information are the persons, beneficiaries or organisations from whom information will be gathered to inform initial baselines and measure results.

- Risks and assumptions - Assumptions are the variables or factors that need to be in place for results to be achieved. Assumptions can be internal or external to the particular programme or organisation. Risk corresponds to a potential future event, fully or partially beyond the control of the organisation that may (negatively) affect the achievement of results.

- Role of partners – This is a useful inclusion to where the responsibilities of the different partners for the achievement of a given output and outcome, should be indicated in the results matrix. In some cases, this is not required where the programme does not include any contribution from 3rd parties.

Step 3: Planning for Monitoring and Evaluation

Once the results chain and matrix have been defined to provide an answer to the why and what questions, the next step is to answer the how question. This incorporates how monitoring and evaluation will happen, what are the specific roles and

responsibilities of stakeholders involved as well as timelines. The planning function will be discussed in more detail in the later planning module.

Step 4: Implementing and Using Monitoring

Once there is consensus on the desired results that are to be achieved through a particular programme, implementation can begin and monitoring becomes an essential task to ensure results are being achieved. Monitoring is an important task in the life of a programme or project. It involves regular and systematic assessment based on participation, reflection, feedback, data collection, analysis of actual performance (using indicators) and regular reporting. Monitoring makes it possible to gauge where programmes stand in terms of international norms and standards. It helps the organisation to understand where programmes are in relationship to results planned, to track progress (on the basis of intended results and agreed indicators), and to identify issues and analyse relevant information and reports that become available as implementation occurs. Monitoring is required to fulfil accountability requirements; communicate, review and report results to stakeholders; adjust approaches to implementation if necessary; and inform decision-making. Monitoring feeds into evaluation and real-time learning.

Step 5: Managing and using Evaluation

Evaluation is an essential step in the RBM life cycle:

"An evaluation is an assessment, as systematic and impartial as possible, of an activity, project, programme, strategy, policy, topic, theme, sector, operational area, institutional performance, etc. It focuses on expected and achieved accomplishments, examining the results chain, processes, contextual

The goal of evaluation is to determine the relevance, effectiveness, effectiveness and sustainability of the interventions and contributions to social impact. An evaluation should provide evidence-based information that is credible, reliable and useful, enabling the timely incorporation of findings, recommendations and lessons into the decision making processes of the organisation." Adapted from UNEG Norms for Evaluation in the UN System, 2005.

Within the context of RBM, evaluation fulfils three key functions:

*   Providing a mechanism for determining programme performance and driving improvement through data-led decision making
*   Serving as a basis for continuous organisational learning
*   Providing the insights for accountability and effective reporting

In essence the evaluation outcomes should provide a base of insight that directs both the operational management and the strategic direction of the organisation or programme.

Step 6: Reporting

"Results-based reporting is one of the key challenges of RBM. All too often reports do not adequately tell the story of the effects that interventions are having. Results-based reporting seeks to shift attention away from activities to communicating important results that the programme has achieved" Results Based Management Handbook, UNDG 2011.

An effective results-based report presents the effectiveness of a given intervention, communicating the evaluation outcomes in terms of the results that were achieved.   Reporting is discussed in more detail in a later module.

Step 7: Review and Repeat

RBM like any monitoring and evaluation approach should be a living process, one in which the steps above are revisited on a regular basis to review and adjust where necessary. This review and repeat of the process ensures that the organisation and its programmes remain relevant and that the continuous learnings are applied.

## b)   Results based Accountability™ (RBA)- a results based management approach

"Results-Based Accountability™ (RBA), also known as Outcomes-Based Accountability™ (OBA), is a disciplined way of thinking and taking action that communities can use to improve the lives of children, youth, families, adults and the community as a whole. RBA is also used by organisations to improve the performance of their programs or services."

www.ResultsAccountability.com

This approach was developed by Mark Friedman and described in his book Trying Hard is Not Good Enough, and is being used in countries around the world. It uses a data-driven, decision-making process to help organisations get beyond talking about problems, to taking action to solve problems. It is a simple, common sense framework that everyone can understand. Similar to the Theory of Change, RBA starts with 'ends' and works backward, towards 'means'. The "end" or difference you are trying to make looks slightly different if you are working on a broad community level or are focusing on your specific programme or organisation.

RBA provides a framework for tracking delivery at two levels:

1.   Population Accountability – the well-being of whole populations (communities, cities, countries)
2.   Performance Accountability – the well-being of beneficiary (or customer) populations for programmes, agencies or service systems

Community Impact vs. Performance Accountability

https://clearimpact.com/results-based-accountability/
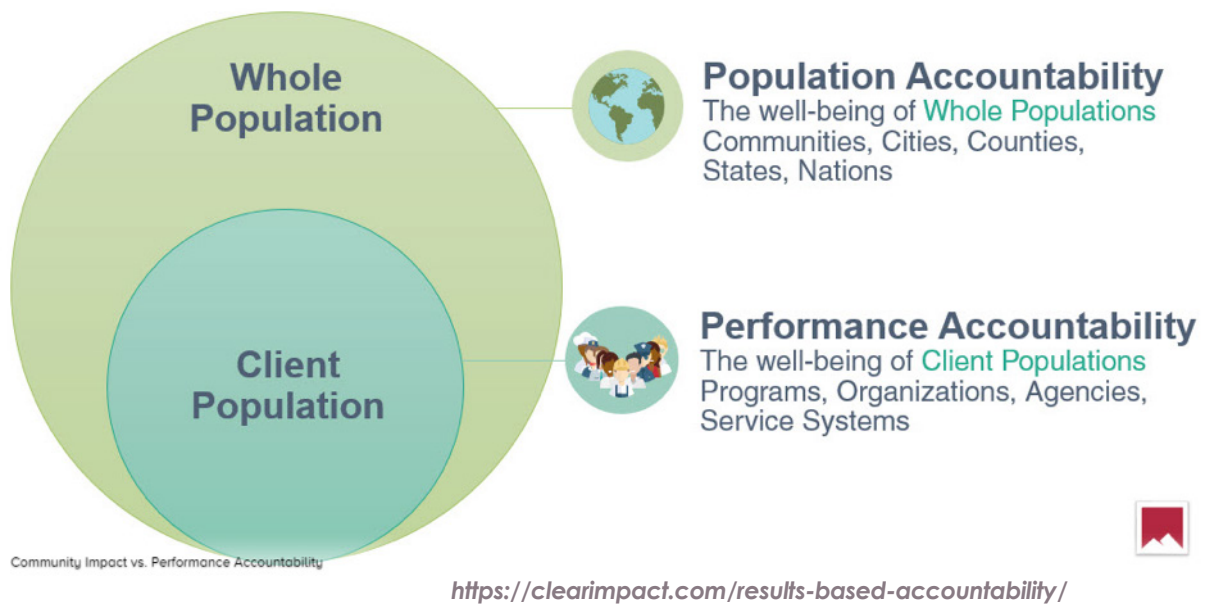
The framework is simple, and yet accounts for everything from the highest level view of whole populations to the smallest program and everything in between. It can function at the community, city, county, state or national level. And it can be applied to both public and private sector roles and responsibilities. It is, in fact, a fractal, using the same basic thinking process at every level of "magnification."" Results based Accountability implementation Guide (http://raguide.org)

A central component of the RBA approach is a "turn-the-curve" process where we would establish what the current trend is either in terms of a population measure or a performance measure. This establishes a reference point or baseline from which we can then track progress. The objective being to achieve a "turning of the curve" towards a more desired state.

RBA/OBA intellectual property is free for use by government and non-profit or voluntary sector organisations.

For additional details, tools and templates please refer to the following online resources:

http://resultsaccountability.com

https://clearimpact.com/

http://raguide.org

MODULE 3

DEFINING INDICATORS FOR YOUR ORGANISATION AND PROGRAMMES

1) Objectives

This module aims to provide an understanding of how to define appropriate indicators for your monitoring and evaluation activities to be able to effectively track your progress across both operational and strategic objectives.

2) What is an Indicator

Indicators are important for any project, particularly for monitoring and evaluation purposes. At the initial phase of a project, indicators are important for the purposes of defining how the intervention will be measured. Through the indicators, managers are able to pre-determine how effectiveness will be evaluated in a precise and clear manner.

During project implementation, indicators allow programme managers to oversee the implementation and address issues or potential areas for improvement. These indicators also allow managers to track progress during implementation towards the defined results and objectives.

At the evaluation phase, indicators provide the basis for which the evaluators will assess the project results. Without the indicators, evaluation becomes a near impossible task.

In terms of the different phases above, indicators provide a mechanism for tracking progress across inputs, process, outputs, and outcomes or results.

Input indicators measure resources, both human and financial, allocated to a particular programme or intervention. For Example, number of community health workers or value of financial resources.

Process indicators measure ways in which programme is delivered, these measures reflect the efficiency of the programme. For Example, the number of staff required to deliver a programme.

Output indicators measure the quantity of delivery through the activity, efficiency of the output may also be reflected in these indicators. For Example, number of people registered, number of people trained and then number of people trained vs registered.

Outcome or result indicators can be either quantitative or qualitative variables that provide a reliable means of tracking or verifying the results or changes that were produced by a given intervention. As a view of performance, indicators should be referenced against planned targets and initial baseline measures to show progress over time. This will allow stakeholders to verify changes produced by a development intervention relative to what was planned as well as inform operational and strategic alignment.

As the name implies, quantitative indicators are represented by a number, generally in the form of a percentage or ratio. For example, 'the percentage reduction in rates of HIV infection' or 'the ratio of new infections relative to the total population'.

Qualitative indicators on the other hand, aim to measure quality and often are based on a subjective opinion or perspective. For example, 'the level to which children felt safer in their community'. Often these qualitative measures can be quantified through rating scales, like the Likert scale, to provide a more reliable and consistent measure.

Within the context of social interventions, indicators are traditionally applied to development outcomes, these may be referred to as product indicators. With the progression toward a more integrated approach to monitoring and evaluation, through the likes of RBM, indicators are extending across both operational and strategic imperatives. Hence we see the use of process indicators to track the efficiency of delivery and even the sustainability of the organisation. For example, 'the ratio of number of rands spent per beneficiary reached' or 'the conversion ratio for funding proposals submitted'.

3) Essential Qualities of Indicators

When defining indicators for your organisation, it is important to ensure that they can be tested against the following essential criteria:

- **Validity –** does the indicator measure what it is intended to measure?
- **Reliability –** does the indicator accurately measure the real change, consistently over time?
- **Sensitivity –** can the indicator measure small change or progress and can it reflect differences in key aspects such as gender, age, location, etc.?
- **Simplicity –** is the indicator easy to understand by all stakeholders?
- **Practicality – can the data required for the indicator be accessed at a reasonable cost?**
- **Usefulness –** does the indicator add value to the planning, learning or decision making process?

There are a number of additional criteria that are often applied to the definition of indicators, the most widely used is the **S.M.A.R.T.** approach where it is suggested that indicators should be:

- **S**pecific

- **M**easurable

- **A**ttainable

- **R**elevant

- **T**ime-bound

The CREAM principles are another approach used to select good performance indicators (Schiavo-Campo 1999):

- **C**lear: indicators should be precise

- **R**elevant: appropriate to the subject and evaluation

- **E**conomic: can be obtained at a reasonable cost

- **A**dequate: able to provide sufficient information on performance

- **M**onitorable: easily monitored

The checklist below, developed by the UNDG, is an easy reference to help with the selection of indicators. For each output or outcome results statement, there should be a maximum of two/three quantitative and qualitative indicators. It is important not to exceed this number of indicators per result or the collection of data becomes cumbersome and expensive. Two to three indicators per result will ensure that the findings are corroborated by different indicators and/or sources of information and that the findings are solid and credible.

4) Establishing Baselines and Targets

Baselines and targets are inextricably linked to indicators, they respectively provide a reference point and goal for performance. This being said, they are often neglected in the monitoring and evaluation process in the haste to get to implementation.
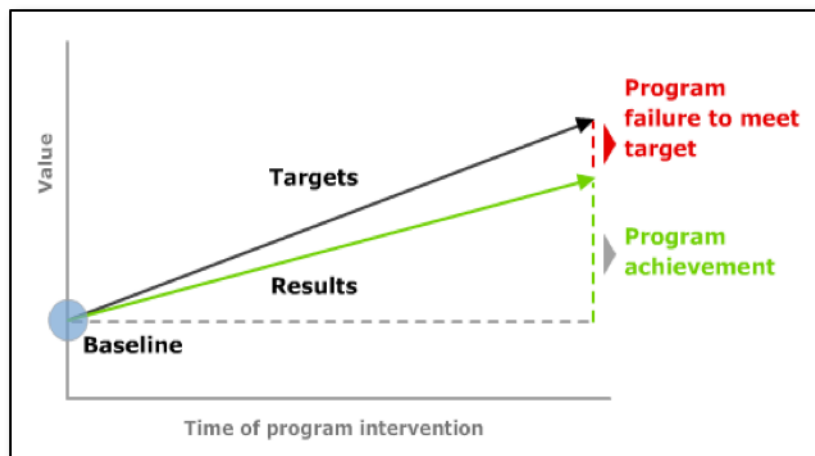
Baseline is the status of the indicator at the beginning of a programme or project that acts as a reference point against which progress or achievements can be assessed. For Example, a school nutrition programme may want to know what percentage of children at the school suffer from malnutrition, before implementing a breakfast feeding programme. The indicator would then be 'change in the percentage of children suffering from malnutrition' and could only be determined with a baseline measure at the beginning of the programme. It is extremely common for no baselines to exist prior to the implementation of a programme, often organisations may only begin implementing a monitoring and evaluation process after the initiation of the programme. In this case, the organisation may have to rely on anecdotal evidence or more qualitative perspectives and the best alternative is to establish a reference point as soon as possible to track subsequent progress.

Targets are what one hopes to achieve, they form the measurement basis for realising objectives. The target in the case of a primary education project might be reaching 100 percent enrolment for school-aged children.

MODULE 4

DEVELOPING A MONITORING AND EVALUATION PLAN

1) Objectives

This module aims to provide an understanding of how to develop a suitable monitoring and evaluation plan to implement the framework that you have defined.

2) What is a Monitoring and Evaluation Plan

Your monitoring and evaluation plan is the guiding document that brings together the "why" and "what" that you have defined in your monitoring and evaluation framework, with the "how", "who" and "when" to put it into practice.

While the monitoring and evaluation plan is often developed sequentially following the definition of an appropriate framework with desired results, indicators and targets; this may be combined into a single document or as part of a single, but modular process. The key consideration is to ensure that you have defined why and what you are tracking before you begin to consider the "how" as there may be dependencies or categorical imperatives that will establish operational constraints in terms of the data that is collected or managed. This is also a core motivation for a collaborative approach to the development of the plan; contributions by various stakeholders could highlight a range of considerations that should be incorporated in the planning process, for example, geographical limitations in accessing sources of data; operational constraints for the collection of data or even cultural barriers to the assimilation of community insights. It is thus recommended to get input from multiple stakeholders to ensure that the plan developed is practical, feasible and will provide reliable data while also providing data outputs that deliver appropriate value.

3) Compiling your Monitoring and Evaluation Plan

Compiling your monitoring and evaluation plan can be a daunting prospect, as it requires thorough consideration and detail. In order to ease this process, we have provided an accessible template that was adapted from a USAID monitoring and evaluation template. Given that the compliance requirements for a major funder such as USAID are particularly comprehensive, we believe that this provides an ideal reference. What follows below is a breakdown of how to populate your monitoring and evaluation plan based on the suggested template structure.

An electronic version is available for download at http://www.engage.org.za/mande/plan.doc

TITLE PAGE

Your title page should include your organisation details, logo and contact details as well as the name of the document, publication or release date and the version of the document. This will ensure that there is consistency when the document is edited and updated, remember that these documents should be reviewed and updated regularly to ensure continued relevance.

ACRONYMS

Be sure to list any acronyms that are used in the document to prevent misunderstanding or confusion. There are a number of acronyms that are used regularly in the sector and are widely understood, but readers of your plan may not be familiar with them.

TABLE OF CONTENTS

The Table of contents should be created or at least updated last to ensure that all the page references are correct.

CONTENTS

a.   Overview of the project or organisation

Your monitoring and evaluation plan may be for your entire organisation or perhaps just for a single programme within the organisation. If the later is the case, it is important to ensure that the results at the programme level roll up and align with the results framework and broader M&E plan for the organisation.

PURPOSE

The purpose should provide clear and precise descriptions of the guiding principle for this M&E plan, e.g. intent/purpose, oversight, participation, transparency, etc.

RESULTS OR LOGICAL FRAMEWORK

It is important to include your framework in the M&E Plan as it provides a vital reference to the "why" and "What" components. The Framework should show the causal and logical relationships between different levels of results and their associated indicators.

For Example:

The graphic presentation of the results or logical framework should show a clear relationship among the levels of the objectives. Indicators should be developed to measure progress toward the achievement of all objectives.

This is also an opportunity to review the framework for consistency and to ensure that each of the levels aligns with the activities required to deliver the necessary data and indicators. These should also be tested for practicality in terms of the activities to collect the data. If the framework does not "make sense" then the corresponding indicators will not be useful or clear in regard to strategy and objective achievement.

ACTIVITIES AND CONTEXT

Provide clear and precise descriptions on the context, development hypothesis, project goal, purposes, objectives, geographic focus, as well as where or how this activity contributes to the larger programme's expected results. This section will also include the relevant sections of the Project's Result or Logical Framework, with indications of components that are directly addressed by this Activity.

ACTIVITY DESCRIPTION

Include basic information about the programme start date/end date, cost or funding amount, sub-contractors, etc.

ACTIVITY LOCATION AND INSTITUTIONAL CONTEXT

Include information about location, institutional context – local partners, relationship to government departments, municipalities, etc. Include a map if feasible.

ACTIVITY DEVELOPMENT HYPOTHESIS OR THEORY OF CHANGE

Guidance: Provide clear and precise description on the activity's theory of change, including how the activities are expected to contribute to the project's higher-level purpose or goal. This description should outline the rationale of the project, i.e., explain its main development hypotheses.

ACTIVITY CRITICAL ASSUMPTIONS

Guidance: Explain relevant critical assumptions and "game changing" scenarios and assess risks associated with successful achievement of the Activity. A risk factor or critical assumption is something that lies beyond the implementing partner's control.

DATA USE

Guidance: Provide clear and precise descriptions of how data will be used to assess progress, document achievements and provide critical information for management decisions.

b.   Relationship to organisation vision and mission

The plan should align with the specific project objectives, but also the broader objectives of the organisation. This need not be a detailed narrative, but should show the link to the vision and mission of the organisation or the specific objectives of the programme.

CONTRIBUTION TO ORGANISATION VISION AND MISSION

This section should include a brief description of how results contribute to the organisation's strategy, and should indicate how the M&E plan contributes to programme delivery. If possible include a simple table that aligns project reporting indicators to organisation indicators.

The activity and its intended results should be easily understood within the larger organisational strategy. Thus the activity (project) should be analyzed in the context of the relevant organisational Development Objective (DO) and desired results.

c.   The [activity] performance indicators

Indicators are required for each of the project's objectives/activities. There should ideally be no more than three indicators per activity – but the number of indicators should be sufficient to determine the achievement of the indicator. The specific indicator language is critical to ensure that the indicators – as currently worded – actually measure the results with which they are associated.

Each indicator should directly link to its result. An indicator should not measure multiple things (school buildings AND students), measure direction of change ("Increase" is a Result, "Number of" is an indicator), and must have a number ("good test results" or "better economic context" is not an indicator). Where qualitative indicators are used, these should be attached to a rating or measurement scale (e.g. Likert scale) to provide a numerical rating that can provide for consistent measurement. Indicators should also be worded as specifically as possible using unambiguous terms ("achieved" is better than "addressed").

Result		Performance Indicators	Definition and Unit of measure	Data Source	Method or Tool	Frequency of Collection/ Reporting	Use of Information
2.1 Beneficiary behaviour change	Number of beneficiaries trained	count	Training Sessions	Attendance Register	Monthly	for communication and decision-making	

Summarize the indicators for the activity's work at each level. Indicators should be written in indicator language that is measurable and unambiguous and that follows criteria for Validity, Integrity, Precision, Reliability, and Timeliness.

INDICATOR BASELINES AND TARGETS
The plan should present Baselines and Targets for all indicators or, where these are still to be determined, the process for setting these and the timeline. Many will/ might still be "to be determined" (TBD) in the first version of the plan, but there should be none that are "blank" indicating that there is not yet a plan. It should be recognized that anything that the activity itself produces (trainings, meetings, etc.) will, by definition, be zero at the start. Note also that the process for setting the baseline for some indicators, particularly those that may be producing data needed for eventual impact evaluation, may involve surveys or intensive operations that may last for weeks or months and may involve procuring outside assassistance.

Results	Performance Indicators	Baseline	Target Year 1	Target Q1	Target Q2	Target Q3	Target Q4	Target Justification
2.1 Beneficiary behaviour change	Number of beneficiaries trained	0	10	1	2	3	4	Reflects training schedule

d. Management of the performance monitoring

ROLES AND RESPONSIBILITIES
Provide clear and precise descriptions on the Activity's M&E structures, functions, and capabilities, i.e. which staff/position(s) has what type/level of responsibilities for M&E at different implementation levels and their competencies. Ways to address issues identified should be provided, e.g. plan for staff M&E capacity strengthening, partnership with M&E organisation(s) to strengthen the M&E system, etc.

IMPLEMENTING THE M&E PLAN

At the start of the project, the M&E Specialist will be the primary person responsible for implementing the M&E plan reported here. He/she will also be responsible for building the capacity of all programme staff, reporting and supervising general monitoring and evaluation approaches, practices, and tools.

INFORMATION MANAGEMENT

The organisation aims to maintain a performance monitoring information system that holds performance indicators including data collected by this Activity M&E plan. A designated staff member will regularly provide training-related information.

REPORTING

The M&E Specialist is in charge of producing the M&E reports on time, and in a technically valid, high-quality, and relevant manner, with the purpose of providing firm grounds for management decisions. He/she is responsible for developing the policies and standard operating procedures to ensure that data is gathered in a technically sound manner, is consistent and can be compared throughout the years. He/she must make judgments with respect to whether or not data meets quality standards.

M&E OVERSIGHT

The Director will have responsibility for overseeing M&E, assuring that the work of the M&E Specialist meets overall project needs and responds to requests for information.

ADMIN SUPPORT

The programme receives technical support from the admin and M&E field staff. Their most essential services or responsibilities will be to ensure that high standards are maintained and activities are consistent with best practices in the field.

e.   Performance reporting schedule

Provide a matrix or Gantt chart that indicates the planned tasks, frequency, timeline, responsible persons, etc., for performance monitoring. If the monitoring schedule is already included in your programme work plan, relevant information may be copied and pasted here from it. Describe the various reports (with timing) that will be provided to each stakeholder and what relevant M&E type content will be included in each. Include details of how funders will receive indicator data (performance and results), evaluation outcomes, and other non-indicator type data. Discuss relevant database systems for M&E data including databases, online and mobile systems. State that the project will co-operate with non-scheduled requests for specific M&E data updates.

Task/Activity	Frequency	Timeline	Responsible persons	Report Consumer / Stakeholder	Report Type	Key indicators	Approval Sign off
Consolidate daily monitoring reports from programme A	Daily	COB daily	Programme A Field Supervisor	Programmes Manager	Efficiency	Output measures : number of beneficiaries, number of positive results	Programmes Manager
Consolidate daily monitoring reports from programme B	Daily	COB daily	Programme B Field Supervisor	Programmes Manager	Efficiency	Output measures : number of beneficiaries, number of positive results	Programmes Manager
Consolidate monitoring reports across all programmes	Weekly	Friday	Programme Manager	Programmes manager / M&E Manager	Efficiency	Output measures : number of beneficiaries, number of positive results	Programmes Manager
Consolidate weekly reports across all programmes	Monthly	31st	M&E Manager	M&E manager / Director / Programmes manager	Efficiency and Effectiveness	Output measures : number of beneficiaries, number of positive results, percentage change month on month	M&E Manager
Consolidate all reports across the organisation	Quarterly	Every 3 months	M&E Manager	M&E manager / Director / Programmes manager / Board	efficiency and Effectiveness	Outcome and Output measures : number of beneficiaries, number of positive results, percentage change month on month, reduction in rate of infection	Director
Generate Report for organisational performance	Yearly	End financial year end	CEO	M&E manager / Director / Board	Effectiveness	Outcome and Output measures : number of beneficiaries, number of positive results, percentage change month on month, reduction in rate of infection	Director

Sample text:

Activity will produce monthly and annual reports. Every third month – or quarterly – Activity will collate and update the performance data and review this with the Director. This will provide significant input to the quarterly update of the work plan schedule as activities planned for the following quarter in a general schedule are able to be scheduled more exactly.

Activity will provide quarterly Performance Summaries for each Funder. At the end of the fiscal year, the activity will submit an annual performance report including a compilation of the year's actual achievement versus targeted for each indicator as well as explanatory narrative. All reports are presented in draft to the Director before final submission.

f.   Evaluation plan

Indicate planned evaluations and proposed schedule. To the extent possible the purpose of proposed evaluations should be articulated, as well as the relationship of required data to the proposed performance monitoring indicators.

    A.   Planned Evaluations and Schedule.

    B.   Purpose of Proposed Evaluations.

    C.   Link between Evaluations and Performance Monitoring Indicators/Data Collection

g.   Annexures

Annexure A: Activity Performance Indicator Reference Sheet

DATA SOURCES

In terms of data sources, systems, procedures, tools, and collection methodology the M&E plan should describe how data quality will be assured as to:

VALIDITY

The data should clearly and adequately represent the intended result

INTEGRITY

The data should have safeguards to minimize the risk of transcription error or data manipulation
Precision: The data should have a sufficient level of detail to permit management decision-making

RELIABILITY

The data should reflect consistent collection processes and analysis methods over time

TIMELINESS

Data should be available at a useful frequency, be current, and timely enough to influence management decision-making.

Data Collection Methodology

This section describes in detail who is responsible for data collection and management (M&E manager, technical specialists, others), and in what format (database, spreadsheets, etc.) data will be managed, and who is responsible for producing which reports. Aspects of quality control at all stages should be described.   Relevant details about types of data collection issues such as sampling, tool design, use of sub-contractors and project staff for data collection, etc. would go here.

Annexure B: Data Collection Tools

Add as an annex any forms used to collect data; data vetting procedures, survey questionnaires used, sample design information.

4) Data Collection

There are a range of ways to collect the data required to measure your operational and strategic progress, each with pros and cons. It is important that you select collection method or methods that are appropriate to the needs of your monitoring and evaluation plan.

Method	Purpose	Pros	Cons
Questionnaires, surveys, checklists	When need to quickly and/or easily get lots of information from people in a non-threatening way	-Can complete anonymously -inexpensive to administer -Easy to compare and analyze -Administer to many people -Can get lots of data -Many sample questionnaires already exist	-Might not get 'careful' feedback -Wording can bias client's responses -Are impersonal -In surveys, may need sampling expert -May not get full story
Interviews	When want to fully understand someone's impressions or experiences, or learn more about their answers to questionnaires	-Get full range and depth of information -Develops relationship with client	-Can take much time -Can be hard to analyze and compare -Can be costly -Interviewer can bias client's responses
Documentation review	When want impression of how programme operates without interrupting the programme; is from review of applications, finances, memos, minutes, etc.	-Get comprehensive and historical information -Doesn't interrupt program or client's routine in programme -Information already exists -Few biases about information	-Often takes much time -Info may be incomplete -Need to be quite clear about what looking for -Not flexible means to get data; data restricted to what already exists
Observation	To gather accurate information about how a programme actually operates, particularly about processes	-View operations of a programme as they are actually occurring -Can adapt to events as they occur	

5) Data Quality

Garbage in, garbage out (GIGO) in the field of computer science or information and communications technology refers to the fact that computers, since they operate by logical processes, will unquestioningly process flawed, even nonsensical, input data ("garbage in") and produce undesired, often nonsensical, output ("garbage out"). The principle also applies more generally to all analysis and logic, in that arguments are unsound if their premises are flawed. It is thus important to ensure that you are collecting quality data through your monitoring processes.

The data quality checklist below can assist in ensuring that you have a process in place to deliver consistent, quality data.

Project/Activity Name:	
Title of Performance Indicator:	
Result this Indicator Measures (i.e., Specify the Development Objective, Intermediate Result, or Project Purpose, etc.):	
Data Source(s):	
Period for which the Data is being Reported:	
Is this Indicator a Standard or Custom Indicator?	____ *Standard Foreign Assistance Indicator*
	____ *Custom (not standard)*
Is this Indicator a required USAID Indicator?	____ *Y*
	____ *N*
Data Quality Assessment methodology:	
[Describe here or attach to this checklist the methods and procedures for assessing the quality of the indicator data. E.g. Reviewing data collection procedures and documentation, interviewing those responsible for data analysis, checking a sample of the data for errors, etc.]	
Date(s) of Assessment:	
Assessment conducted by:	

Category	Y	N	Not Applicable/ Insufficient Information	Comments
Validity				
Does the indicator reflect the intended results of the activity – i.e. is it a useful indicator for activity management?				
Do the data being collected and reported match the intent or language of the indicator?				
Are the data collection methods (interviews, observation, etc.) appropriate to produce good data?				
Are the data collection procedures and/or sources relatively free of bias?				
Are the people collecting the data qualified and/or adequately experienced?				
Are the people collecting the data properly supervised?				
Reliability				
Are the definitions and procedures for data collection, calculation and reporting clear and well understood by all relevant staff?				
Are data collection and analysis methods documented in writing?				

Is a consistent data collection process used from Year to year?				
Describe any changes/differences observed if No.				
In all activity locations/sites?				
By all activity partners/sub-contractors?				
Are there procedures in place for periodic review of data collection, maintenance, and processing that can detect data quality issues?				
Has the programme identified significant data quality limitations in the past?				
Were these communicated to management? If Yes, describe how.				
Have these data quality limitations been addressed by the M&E Team? If yes, explain how.				
Has the M&E team identified significant data quality limitations in current data? If yes, please describe.				
Are these limitations described in reporting to management? If yes, please describe.				
Timeliness				
Is the data for this indicator reported to the M&E Team by the method (ex. Quarterly Performance Data Table) and frequency required?				

Is this format and schedule appropriate for project/activity management? If no, describe how it should be changed,				
Precision				
Is there a method for detecting duplicate data? If yes, please describe.				
If there is duplication of data, is the level of duplication acceptable for this indicator? Describe why or why not.				
If there is unacceptable duplication of data, has information on duplication been shared with management? Describe how.				
Is there a method for detecting missing data? If yes, please describe.				
If there is missing data, is the level acceptable for this indicator? Describe why or why not.				
If there are unacceptable amounts of missing data, has information on missing data been shared with management? Describe how.				
Is the reported data disaggregated?				
Integrity				
Are there procedures in place to check for transcription errors at all levels of the data collection and reporting system?				
Are there proper safeguards in place to prevent unauthorized changes to the data?				
Are there procedures in place to ensure unbiased analysis of data and subsequent reporting?				
Are their safeguards in place to ensure that all relevant tools, tracking sheets and data are backed up and protected from data loss?				

IF NO DATA IS AVAILABLE FOR THE INDICATOR	COMMENTS
If no recent relevant data is available for this indicator, why not?	
What concrete actions are now being taken to collect and report these data as soon as possible or on schedule?	
When will data be reported?	

SUMMARY (where multiple items are listed by the assessor in each row, they should be numbered so that it is clear what recommendations apply to which limitations)

Based on the assessment above, what is the overall conclusion regarding the quality of the data?
What limitations, if any, were observed and what actions should be taken to address these limitations?
Final agreed upon actions and timeframe needed to address limitations:

MODULE 5

REPORTING

1) Objectives

This module aims to guide you in completing the reporting function linked to your monitoring and evaluation. The key objective is to equip you with an understanding of how to compose reports that add value to both operational and strategic goals.

2) What is a Report

While this may seem to be a relatively obvious definition, breaking the meaning down within the context of the development sector, will help us to understand the significance of reporting for your organisation.

> "A report is written for a clear purpose and to a particular audience. Specific information and evidence are presented, analysed and applied to a particular problem or issue. The information is presented in a clearly structured format so that the information is easy to locate and follow."

Report Writing, University of Leicester,2010

Ultimately, reporting is about effective communication, presenting relevant insights to stakeholders to inform their decision making. Reports are also an opportunity to present the value that your organisation is delivering to your stakeholders.

Reporting is a critical component of monitoring and evaluation, in fact, many organisations refer to their internal process as M.E.R – Monitoring, Evaluation and Reporting. Providing appropriate reporting outputs through your monitoring and evaluation is the logical next step in the M&E process, presenting your insights in a consumable, actionable format.

3) What makes a good report

If we look at the definition above, we can see that there are a number of key features of an effective report:

a.   A report is written for a clear purpose
Writing a report that does not have a clearly defined purpose is a waste of time and effort and ultimately, money. There should be a clear and specific purpose for every report that is generated as part of your monitoring and evaluation that aligns with your strategic and operational objectives.

b.   A report is written for a particular audience

Who the consumer of a particular report is, plays a significant role in determining the content, structure and presentation of the report. There are generally two categories of reports:

i. Internal Reports

These reports that are generated for internal stakeholders, and may be operational reports that are consumed by management, or they may be strategic reports that are prepared for board members. Generally these reports are less polished and more concise.

ii. External Reports

These reports might be prepared for a range of external parties that may or may not be linked to the organisation. Reports for funders are perhaps the most obvious of these and are generally where much of the reporting time is spent. External reports will also include updates distributed to beneficiaries and even the general public, as in the case of the annual report. These reports are usually packaged with more care and fulfil a dual purpose – that of communication and marketing.

c.   Specific information is presented in the report

The information that is presented in the report should be relevant and appropriate to the audience that is consuming it and should provide credible presentation of information.

d.   Information is presented in a clear, consistent and structured way

The report should be well structured and consistent, presenting information logically and clearly without unnecessary jargon.

e.   Information is presented in a way that is easy to understand and consume

Following on from the point above, the report should also have a balance of content, using graphics and media where suitable to convey key insights, without endless narrative. A balanced approach is critical when developing the report content.

f.   The information presented should be Actionable

The insights presented in the report should provide the consumer of the report with sufficient information to make a decision, either as an explicit requirement of the report or as an implicit function of the target audience, for example management.

4) Structure of a Report

a.   Title of the report

This is the first page of your report. Many people do not go for a separate sheet as the cover page, considering it as wastage of paper, but this is the first thing that the reader reads in the report. Hence it is better to add a cover page to your report including the title of your report with the appropriate picture. That helps making your report catchy and creates an interest in the reader to read the report. However you would avoid using a cover page while writing meeting minutes.

b.   Content list

You must include the table of contents with the page numbers, especially if the report is a large one.

c.   Executive Summary

An abstract is something you should write after you write the whole report but should be placed in the beginning of the report. For writing the executive summary, read the whole report and try to bring out the essence of your report and put it in words as an abstract of the report. Try to keep it short and concise.

d.   Introduction

Instead of jumping straight to the report of events or progress or the activities, it is important to set the stage. In the introduction, you should start with the background of the problem. Then write the problem statement   itself, what motivates you to solve the problem i.e. why it is important to solve the problem and how are you trying to solve it through your project. In short, introduction is nothing but a short description of your project and how the particular activity about which you are reporting relates to the objective or the goal of the project. After giving a description of the work, describe how the rest of the report organised. It gives the reader an idea of your work and he/she reads your report in the backdrop of your introduction. The length of introduction again depends on the objective of the report and intended audience as well as the length of the report itself. It is not good practice to give an introduction of one page, for a two or three page report.

e.   Main body of the report

After introduction, start the main body of your report i.e. the report on the events or activities about which you are reporting.

f.   Conclusion

It is important to conclude your report. In the conclusion, you may add the key take away points, what was the result of your work, how your work has contributed towards the desired impact. This is also the actionable component of the report, the "so what now".

SYSTEMS AND TECHNOLOGY TO SUPPORT M&E

engage
social empowerment partnership

Deutsche Bank

1) Objectives

This module aims to provide an introduction to the value that technology can deliver into the monitoring and evaluation process. By the end of this module you will have been introduced to some of the types of technologies that are available and the benefit that they can bring to your monitoring and evaluation.

2) Use of Technology for Monitoring and Evaluation

Despite the considerable progression in the range of technology solutions that are available to support and enhance monitoring and evaluation; there has been relatively slow adoption on the part of organisations within the public sector. Both government and non-governmental organisations have been reluctant to move away from traditional paper based approaches to data collection and management.

This being said, there is a gradual move towards the adoption of technology solutions. This has been driven largely by the increasing demand for more timely data, the progression towards more results based monitoring and evaluation that integrates the function of M&E more directly into operations, as well as increased visibility expectations on the part of funders.

What has emerged is a segment of ICT focussed on technology solutions for the development sector. Referred to as ICT for development or ICT4D, the technologies that have been developed here have a specific focus on delivering technology solutions that meet the needs of the development sector. These technologies aim to meet real world challenges in an accessible and affordable way.
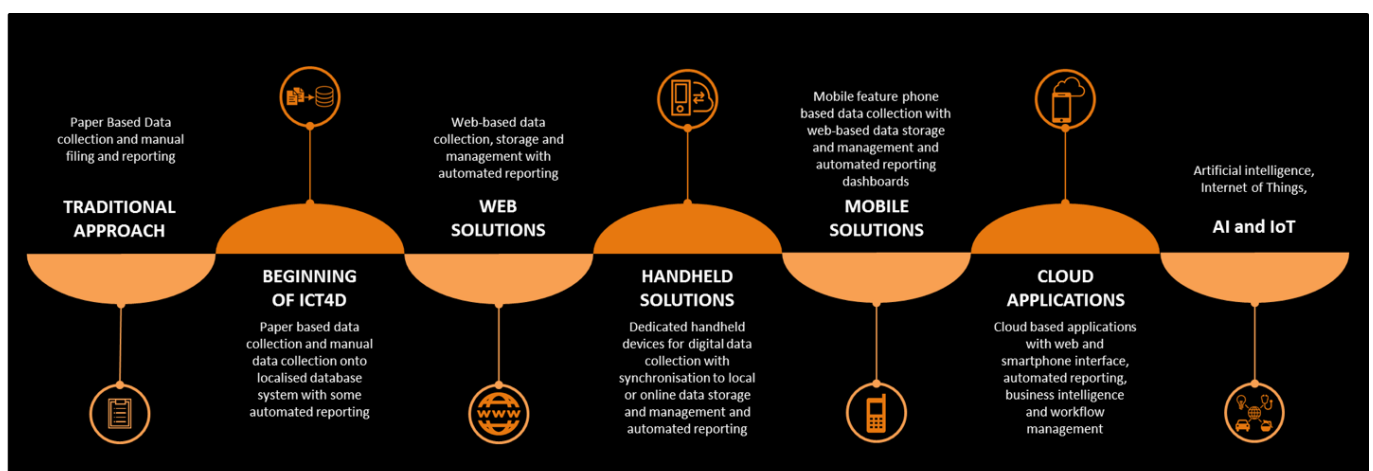
3) Benefits of Technology for Monitoring and Evaluation

The slow pace of adoption of technology for monitoring and evaluation is by no means a reflection on the relative benefits of making the transition, but rather a reflection on the cultural reluctance to change within many organisations.

The benefits of technology can be summarised as follows:

a.   Cost reduction

According to a paper published by SocialCops.com the use of ICT can bring down the M&E cost considerably. "Mobile data collection is one of the easiest technologies to adopt for M&E. Using cell phones to collect data reduces the costs of creating paper forms and data entry. The World Bank found that mobile data collection reduced costs for each survey by an average of 71%. According to USAID, mobile data collection also lowers the time taken to run a survey by a huge 70%; a decrease in time and increase in efficiency obviously means reduced costs. Collecting data electronically reduces data-entry costs and makes the information easily accessible faster. Also, since the data reflects in real time, survey administrators can react faster to their M&E exercises. Areas of concern, waste, and inefficiencies can be identified and addressed faster, making programs more dynamic and cost-effective – all in real time!"

b.   Increased Accuracy

Technologies can provide real-time data validation to reduce errors in entry, ensuring that data is valid and reliable.

c.   Increased Security

Technology solutions can provide better security for your data both in terms of backup and access. Many use encryption and secured access to ensure the integrity and fidelity of your data.

d.   Richer Data

Mobile devices in particular have expanded the range of information that can be collected and managed, multiple data formats can now be collected, from photographs to video and GPS. Most applications will also accommodate multiple languages and even audio instructions.

e.   Greater Scale

The proliferation of internet access, mobile devices and network coverage has meant that the data collection functions can be deployed with greater ease, across a wider area than ever before.

f.   Dynamic

The nature of the digital format is such that it is relatively easy to adapt and update on the fly without having to recall or reprint collection tools

g.   Improved Analysis

Many systems provide automated aggregation and even advanced business intelligence functions that simplify the analytic process and provide more immediate access to insights

h.   Better Visualisation

The data collected can be presented in a more efficient and interactive way making it more easily consumable and actionable.

4) Monitoring and Evaluation Technologies

Despite the rapid progression of technology, there remains a considerable lag in the adoption of solutions within the development sector. As such there are a range of technology solutions that you may encounter:

a.   Localised Solutions

These are solutions that generally incorporate a traditional paper-based collection mechanism but have a localised software solution for the capture and storage of data. The most common example of this would be the use of Microsoft Access or similar database management software. This still relies on the manual capture of data collected on paper forms onto the database. This is a relatively dated solution with numerous inefficiencies that is prone to data inaccuracy.

b.   Online Solutions

There has been an enormous progression in online solutions as cloud solutions have evolved. Online solutions can provide a vast array of functionality and will usually scale to mobile. They do not generally accommodate an offline capability to collect data where there is no internet connection. While this functionality can be achieved with some solutions, it is generally a capability reserved for native mobile applications.

c.   Mobile

Mobile solutions are perhaps the most interesting for us to consider. While there have been a number of solutions around for some time, this adoption has unfortunately been slow to date. The rapid and relatively recent proliferation of mobile devices and network penetration into areas that previously did not have coverage has seen a surge in mobile offerings. Generally speaking, mobile solutions incorporate a mobile application that is installed onto the handset of a fieldworker and an online management and reporting platform that is hosted as a cloud service. Because the mobile application is installed to the handset it can accommodate "offline" data collection as well as a range of additional functions such as image capture, GPS location, barcode scanning and a range of others.

5) Mobile Solutions

While there are a range of local and online solutions that your organisation could implement to meet and to improve your M&E, mobile technology undoubtedly represents the best opportunity for improving monitoring and evaluation within the development sector. There are a wide range of solutions available both locally and internationally, these include the following:

a.   Mobenzi

Mobenzi is a South African platform but has been deployed globally. The platform has the following key features:

• Works on most handsets (including low-end feature phones) but not Apple devices

• Easy to use

• Capture data without network coverage

• Supports any language

• Provides for complex logic, constraints and variables

• Capture photos and GPS-coordinates

• Organise data collection activities with folders

• Interact with native applications (bar code scanner, multimedia and other)

• Design and deploy mobile surveys from the web

• Access & manage data in real time

• Slice & dice your data, then share the results online

• Integrated mapping through the GPS capability

• Monitor & communicate with fieldworkers

• A central activity dashboard

• Personalise and pre-populate surveys

• Build your own forms-based applications
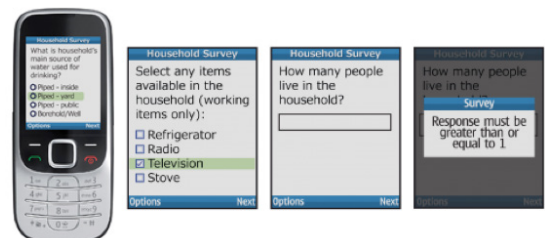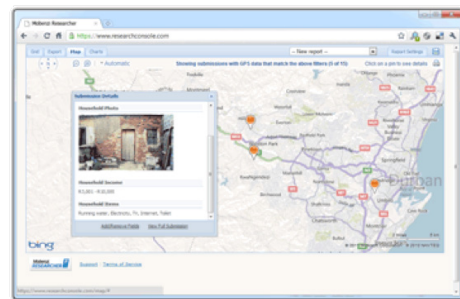
b.   Magpi

Magpi has its roots in Kenya, but has been deployed globally. The platform has the following key features:

- Any Language Any Alphabet

- Easily Connect to Other Apps Without Programming

- Instant Data Analysis

- Instant Data Sync

- Real-Time & Offline Data Capture

- Broadcast Messaging

- Multiple devices via Android and iOS apps

- Provides for complex logic, constraints and variables

- Capture photos and GPS-coorindates

- Design and deploy mobile surveys from the web

- Access & manage data in real time

- Online analytics

- Integrated mapping through the GPS capability

- Monitor & communicate with fieldworkers

- A central activity dashboard
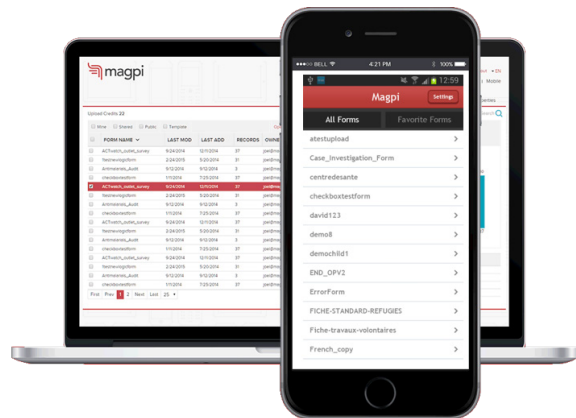
c.   Echo Mobile

Echo mobile is based in Kenya, but has been deployed regionally. The platform has the following key features:
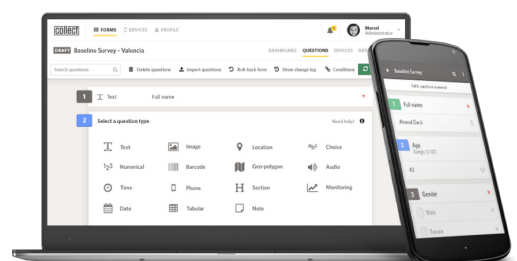
- Data collection

- Feedback & Inquiries

- Notices & Alerts

- Quizzes

- Field Reporting

- Product Registration

- Coupons

- Journals

- Access & manage data in real time

- Online analytics

- Integrated mapping through the GPS capability

- Monitor & communicate with fieldworkers

- A central activity dashboard
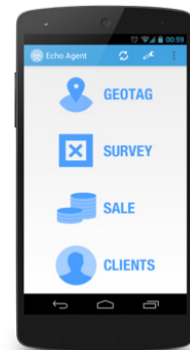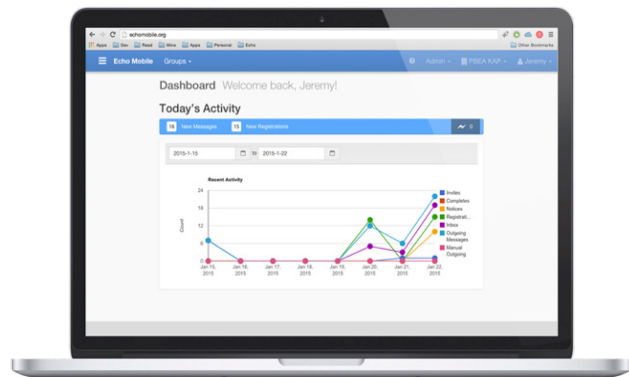
d.   SocialCops Collect

SocialCops is an offering out of India but has also deployed globally. The platform has the following key features:

- Supports multiple languages

- Online management console for design of forms

- Real-time data syncing and allows for offline collection

- Can accommodate complex skip logic

- Can perform data validation

- Multiple question types

- Remote device management

- Dashboard visualisation and analytics

- Import and export functionality

e.)   Dimagi / Commcare

CommCare is an open source mobile data collection platform that enables anyone to build mobile apps.

Active in over 60 countries, CommCare claims to be the most widely adopted, technically advanced, and evidence-based mobile platform for low-resource settings.

CommCare is used across sectors as a job aid for mobile data collection and reporting. With CommCare, you can build a data management system that is affordable, sustainable, and scalable.

- Create a custom mobile app

- Collect information offline

- Track data over-time

- Support complex workflows

- Store data on CommCare's secure cloud server

- Access real-time reports

6) A checklist for thinking through ICTS in Monitoring and Evaluation

While technology is certainly not a silver bullet to resolve all your monitoring and evaluation headaches, with careful planning, technology can add considerable value to the monitoring and evaluation functions within your organisation. The Rockerfeller Foundation has compiled a checklist that has been adapted here to provide a foundation for considering the implementation of an appropriate technology solution for your organisation.

a. **Develop a quality M&E plan**

Adding new technologies to poorly designed monitoring and evaluation plans and improperly structured frameworks will not be of much benefit. Ensure that you have defined these well in advance before considering a technology solution to support your framework and plan.

b. **Determine whether and how the technology can add value to your M&E plan**

Technology is a tool that should add value to your monitoring and evaluation plan and not dictate how it might be applied. Using technology for the sake of it will not necessarily add value to your monitoring and evaluation process.

c. **Review a range of options and select an appropriate solution**

It is unlikely that a particular solution will meet all your requirements, but there are likely to be some solutions that are more appropriate and relevant for your needs than others.

d. **Be sure to consider the total cost of ownership**

There may be hidden costs in the solution, be sure to consider training, technical support, devices and data in addition to the cost of the solution.

e. **Consider the context you are deploying into**

There may be a range of considerations that can impact on the success or failure of a technology solution for your monitoring and evaluation. Network coverage, electricity, local languages and levels of literacy are some examples of what should be considered when evaluating a potential solution.

f. **Ensure security, privacy and confidentiality**

In many programmes the data collected may be sensitive and personal in nature, it is important to ensure that there is a low risk of this data being compromised either at the point of capture or where it is ultimately stored.

g. **Consider potential unintended consequences**

The implementation of a technology solution may have positive or negative unintended consequences. Be sure to consider how the inclusion of the technology might influence your programme and beneficiaries.

h. **Build local capacity**

Where possible, ensure that your organisation is able to manage the technology as autonomously as possible. Being reliant on a service provider can reduce efficiency and lead to dependency and increasing expense.

7) Case Studies

The CommCare Evidence Base for Frontline Workers

July 2016

51 studies have been conducted exploring CommCare's impact on frontline programs and the populations they serve, mostly in low-resource settings. Collectively, these studies provide strong evidence that equipping Frontline Workers (FLWs) with a mobile solution like CommCare can strengthen FLW performance and improve client behaviors and outcomes.

Ali Flaming, Molly Canty, Gillian Javetski, Neal Lesh

Executive Summary

In low-resource settings across the world, frontline workers (FLWs) play a critical role in linking their communities to the formal health care system. Mobile tools have increasingly been designed and implemented for frontline programs to address the resource gaps and challenges they face in delivering essential services. Given the vast potential for mobile health (mHealth) technologies to support frontline programs, an increasing amount of funding and research has gone toward implementing mobile technology in low-resource settings, in an effort to improve frontline programs and client health outcomes [Agarwal, 2015].

CommCare (www.commcarehq.org) is a customizable, open source mobile platform that enables non-programmers to build mobile applications for data collection, counseling, behavior change, and a variety of other functions. To date, hundreds of organizations have used CommCare to build mobile applications that are designed to support FLWs across a variety of sectors in low-resource settings. FLWs use CommCare to track and support their clients with registration forms, checklists, SMS reminders, and multimedia—all on simple Java-enabled phones or Android smart phones and tablets. Currently, CommCare users submit over 1 million forms per month from 50+ countries around the world.

CommCare was developed to reduce gaps that frontline programs face in delivering services to populations in low-resource settings. The purpose of this literature review is to assess all available evidence to see if CommCare achieves this goal, and effectively strengthens FLW performance, improves frontline programs, and positively impacts the health outcomes and behaviors of the clients FLWs serve.

This paper synthesizes the findings from 51 studies on CommCare's impact on FLW programs in low-resource settings. These include 11 studies that assess client health behaviors, including 3 studies since 2015 that have statistically significant results. An additional 29 studies demonstrate improvement in FLW performance, quality of care, and program efficiency. The remaining 11 demonstrate the applicability and feasibility of deploying CommCare. **We summarize the findings of these studies in the five research themes highlighted below**.

●	**Theme 1: Client Health Outcomes and Behaviors**
●	**Theme 2: FLW Performance**
●	**Theme 3: Quality of Care**
●	**Theme 4: Program Efficiency**
●	**Theme 5: Challenges faced when implementing mHealth programs**

Figure 1: CommCare MCH Application

Introduction to CommCare: Mobile job aid for FLWs

CommCare is an open source mobile and web cloud product used by FLWs across a variety of sectors. It is the only platform for FLWs that is open source, supports longitudinal client tracking, is specialized for low-literate users, runs on Java and Android phones, runs offline, integrates SMS for performance improvement, and has an application builder designed for non-programmers. CommCare is actively used in over 300 projects in 50+ countries.

CommCare replaces the conventional practice of an FLW manually tracking their work via paper registers. Instead, FLWs are equipped with an inexpensive phone running open source and easy-to-navigate mobile applications that run in multiple languages. Using CommCare, FLWs can register and follow up with clients using customized mobile forms developed through programs working with low-literate FLWs in several countries. CommCare automatically submits visit data in real-time to a central cloud server. Data on the server is privacy-protected, backed up, and accessible to frontline programs' supervisors and managers worldwide.

CommCare applications have been designed and implemented for frontline programs addressing use cases across the health, agriculture, and development sectors, including maternal and child health (MCH) (Figure 1), infectious and chronic disease, agriculture, education, humanitarian response, and gender-based violence.

There are other technologies than CommCare for providing mobile applications for FLWs, including those developed by D-tree International (who have also deployed and studied CommCare), Medic Mobile, eMocha, and Mobenzi. While these systems provide many similar functions as CommCare, to our knowledge, none of these systems allows non-programmers to configure new applications.

Methodology

Literature Reviewed

This evidence base is comprised of 51 studies evaluating CommCare's impact on frontline programs. This includes all 39 of the peer-reviewed publications on CommCare we are aware of, in addition to 12 unpublished (also called "grey literature") studies. There are numerous other grey literature studies, many of which were included in past versions of the CommCare Evidence Base. In this review, we included only the ones that we judged to contribute substantially to the themes discussed below, beyond the peer-reviewed studies.[1] The peer-reviewed

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[1] Grey studies include [Borkum, 2015] [Braun, 2015] [CHS, 2013] [Dell, 2015] [Hackett, 2015] [Higgins, 2015] [IntraHealth, 2012] [Kukla, 2015] [Nascimento, 2014] [Rema, 2013] [WorldVision, 2012] [Worldvision, 2013]

studies include three on a PDA-based system that is a precursor to CommCare.[2]

The CommCare platform also supports applications for supply chain management and SMS messaging, which are beyond the scope of this review.

Figure 2 below reflects the wide spread of CommCare use cases across health and development sectors. While some studies discuss CommCare in the general context of frontline
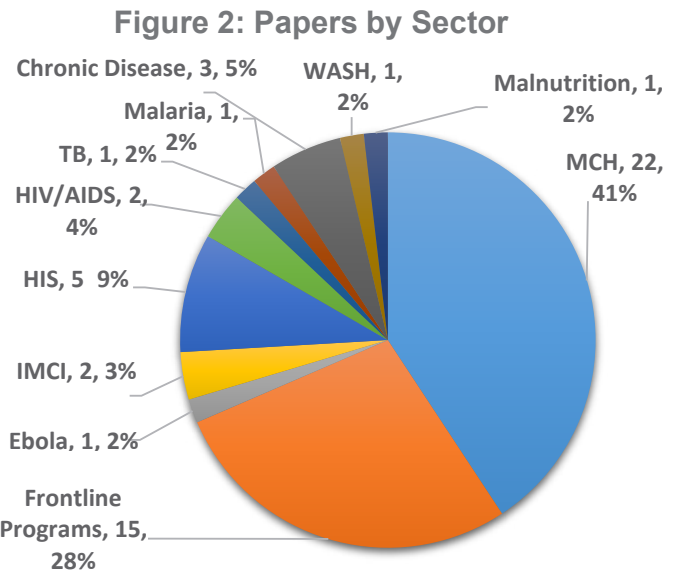
Figure 2: Papers by Sector

Figure 2 shows the distribution of CommCare studies across health sectors, with the majority of sector-specific studies in MCH (41%).

programs or health information systems (HIS), the other two-thirds of the studies included in this review evaluate CommCare within a specific programmatic area. The topics covered include infectious disease—such as tuberculosis (TB), HIV/AIDS, Ebola Virus Disease (EVD) and Malaria—chronic disease, water, sanitation, and hygiene (WASH), malnutrition, and most prominently, MCH. CommCare's strong pool of evidence in MCH is apparent throughout this review, as a large portion of the impact being evaluated is in antenatal and postnatal care (ANC and PNC), institutional delivery, and child health.

The purpose of this document is to evaluate the body of evidence assessing CommCare's impact on frontline programs and the populations FLWs serve.[3]

Of the 51 studies reviewed, 11 evaluate the feasibility and acceptability of CommCare, 29 evaluate CommCare's impact on frontline workers and programs, and 11 evaluate CommCare's impact on client health outcomes and behaviors.

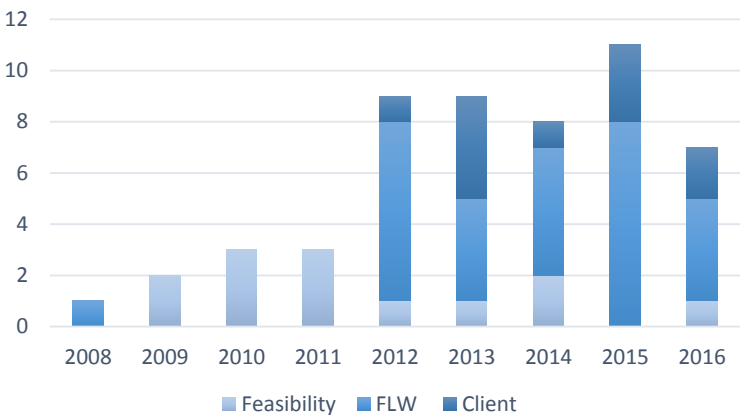## Figure 3: Growth of the Evidence Base

Figure 3 maps the growth of the CommCare Evidence Base from 2008 to 2016, most notably the growth of studies on client health outcomes and behaviors. Note that the 2016 bar only represents studies published before June.

Along with the growth in the quantity of studies that have been released, between 2012 and 2016 we also saw a proportional increase of studies that assess the impact of CommCare use on client health outcomes and behaviors. Note that for published studies, the dates refer to the date of publication rather than the date of the project. There has also been an increase in the number of statistically significant results assessing CommCare's impact. Since 2013, five randomized control trials (RCTs) and four studies with other statistically significant results have been released. Three of the studies with statistically significant results on health outcomes or behaviors are from 2015.

Based on the 51 studies we reviewed, the following findings are organized by five overarching themes identified in the literature: client health outcomes and behaviors, FLW performance, quality of care, program efficiency, and implementation challenges.

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[2] CommCare pre-cursor studies include [DeRenzi, 2008] [Mitchell, 2012] [Mitchell, 2013]
[3] A brief description of each paper can be found in Appendix A.

Theme 1: Client Health Outcomes and Behaviors

The field of mHealth is often criticized for lacking rigorous evaluations of its impact, especially in the areas of health outcomes and behaviors [Agarwal, 2015]. Several recent studies on CommCare have addressed this gap by demonstrating that mHealth can positively impact health outcomes and behaviors. This section describes details of three studies released in 2015: one is an RCT that measures key health-seeking behaviors in India, while the other evaluates maternal and infant mortality compared to a comparable control in Guatemala. Additionally, this section presents another recent RCT in Tanzania (whose details have not yet been released) as well as a series of prior studies that support similar conclusions. Note that all studies in this theme are on studies that evaluate CommCare for MCH.

Bihar: Improved Client MCH Outcomes and Behaviors

A study conducted by Mathematica Policy Research provides statistically significant evidence of substantive change in client behaviors from equipping FLWs with CommCare [Borkum, 2015]. The 82-page report is available online and provides extensive details of the study. The study was conducted in the Saharsa district in Bihar, India—a district that has had persistently low health outcomes in one of India's poorest and most populous states.

The data collected by the study includes surveys of 1,500 women on their health-seeking behaviors. The 1,500 women were sampled from 70 sub-centers in Saharsa district, half of which were randomized to be in the intervention group, with the other half in the control group. All 70 sub-centers received the benefit of extensive health system strengthening implemented by CARE International in several districts in Bihar. The services included beneficiary mapping, home visit trainings and resources for FLWs, reproductive and family health counseling tools, facility-based interventions to improve the quality of deliveries, and an Interactive Voice Response (IVR) system delivering health messages to households developed by BBC Media Action and Grameen Foundation. The only difference between the women surveyed in the control and intervention areas was that FLWs in the intervention were supported by MOTECH Suite implementation (also

led by CARE), which equipped each FLW with CommCare.

There were statistically significant impacts on FLW interactions and all health domains that were considered, except for child immunizations. All of these statistically significant impacts were positive, i.e., improved by the information and communication technology (ICT) intervention. Figure 4 below shows the improvement in the intervention group as percentage increase relative to the control group among the statistically significant primary outcomes. These results are especially notable given the strong (mostly non-ICT) efforts in the control arm. This study shows the value-add benefits of ICT in addition to extensive support for the community health system.

Figure 4 shows statistically significant improvements across ANC and delivery, child health, and family planning. Most notably, the number of women who attended at least three ANC visits was 73% higher among those being tracked by CommCare as compared to the control group. Interestingly, the study found that increases in client health outcomes were not consistently accompanied by increases in client knowledge of such behaviors, which indicates that the use of CommCare addressed other barriers to client health-seeking behaviors, such as cultural norms.

The report also suggests several areas for improvement in the implementation of CommCare and MOTECH Suite. There were a few indicators where behaviors decreased, though these were not statistically significant results. On a programmatic level, the study reported challenges with data connectivity and broken mobile phones, which sometimes resulted in poor coordination between FLWs and supervisors, and an increased workload due to the continuation of paper documentation required by the government. It also highlighted low understanding and usage of the supervisor app, resulting in no substantial increase to FLW supervision. Despite these logistical challenges and the lack of improvements in supervision, equipping FLWs with CommCare created a significant impact on client health outcomes and behaviors.

These improvements in ANC, delivery, child health, and reproductive health align with the large body of evidence discussed below, indicating that CommCare's case management system improves FLWs ability to track women throughout pregnancy and connect them to vital services.

Figure 4: Statistically Significant Impact of ICT Intervention in Bihar

*/**/*** Statistically different from zero at the .1/.05/.01 levels
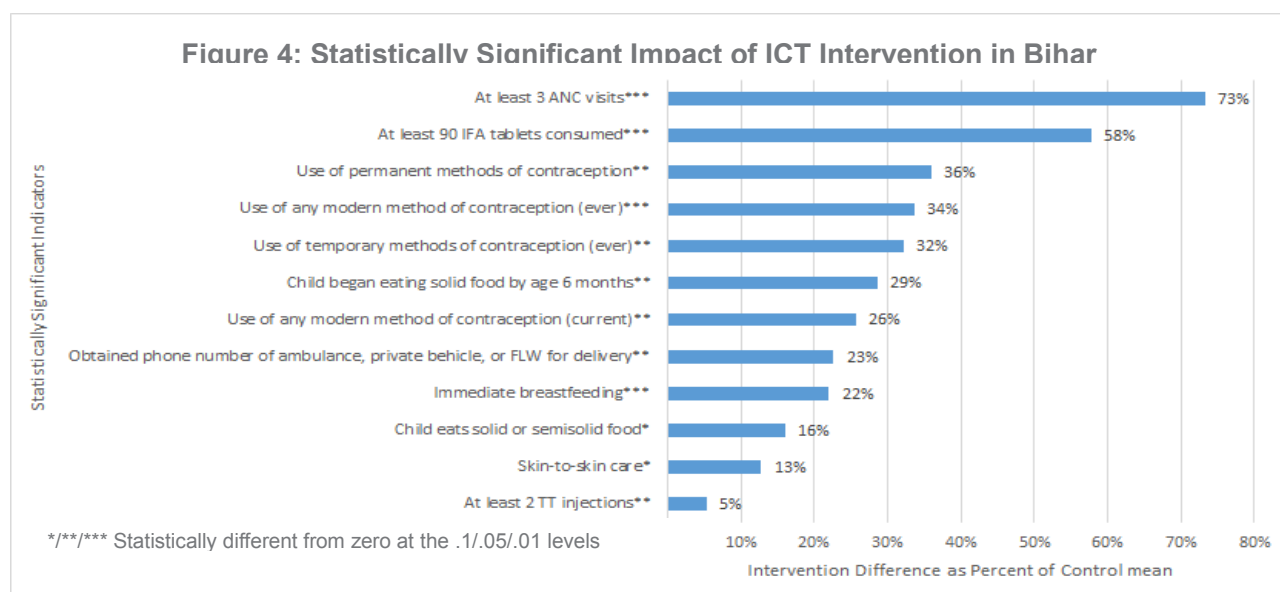
Figure 4 presents the statistically significant improvements in ANC, child health, and family planning in the CommCare intervention group. Highlights include a 73% increase in women who attended at least 3 ANC visits, 58% increase in women who consumed 90 IFA tablets, and 36% increase in women using a permanent method of contraception as compared to the control [Borkum, 2015].

Guatemala: Reduced Maternal and Infant Mortality

A study on TulaSalud's implementation of CommCare in Guatemala provides evidence of reduced maternal mortality rates (MMR) and infant mortality rates (IMR) as compared to the control areas, and the provincial average. Over the five-year intervention, MMR decreased from 309 to 254 maternal deaths per 100,000 live births, and IMR decreased from 25 to 13 infant deaths per 1,000 live births in the intervention group [Martinez-Fernandez, 2015].

The ICT intervention took place in Alta Verapaz, a predominantly rural region of northern Guatemala with high maternal and infant mortality rates (MMR and IMR). 125 FLWs in Alta Verapaz were equipped with mobile phones and the Kawok system developed by Tulasulud, which was built on CommCare, to assist with making consultations, collecting and sending epidemiological data on clients, receiving continuous training, and performing community health promotion and prevention activities. After five years of this intervention including CommCare (2008 to 2012), an observational study was conducted to compare the MMR and IMR between the districts with FLWs using CommCare, and those without it. Both the intervention and control areas had similar hospital access, racial/ethnic makeup, age, education, etc.

The study found that in intervention areas, MMR decreased from 309 to 254 maternal deaths per 100,000 live births (p<0.05), and IMR decreased from 25 to 13 infant deaths per 1,000 live births (p=0.054). Figure 5 describes the IMR rates over time in the areas with and without the ICT intervention, as well as the entire region between 2008 and 2012.
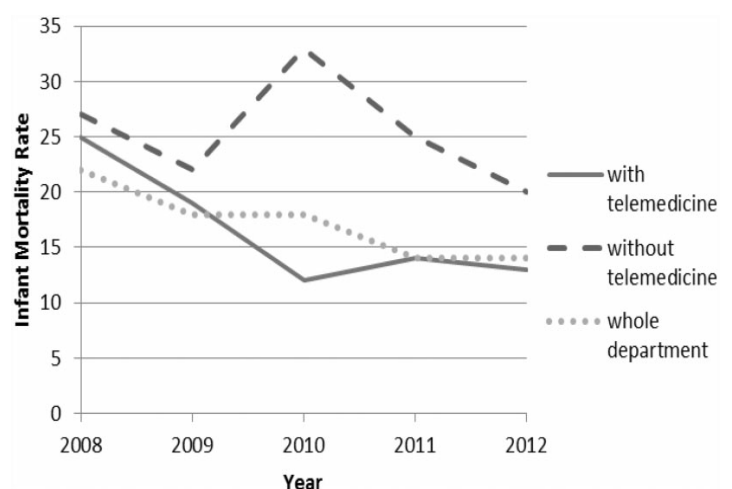
Figure 5: IMR from 2008 to 2012

Figure 5 maps the decrease in IMR rate from 25 to 13 infant deaths per 1,000 live births within the intervention as compared to the control areas and entire region over the course of the five-year CommCare intervention [Martinez-Fernandez, 2015].

Tanzania: Increased Facility-Based Delivery Rates

The results from an RCT in rural Tanzania report that mothers tracked by FLWs using CommCare had increased facility-based delivery (FBD) rates, especially among first-time mothers with low ANC uptake [Hackett, 2015]. As with the study in Bihar, both the control and intervention group received health system strengthening – in this case by World Vision. The FLWs in the intervention group were also equipped with CommCare (implemented and supported by D-tree International) to assist data collection, education, danger sign identification, and referrals.

The study included 32 villages that were cluster-randomized to control or intervention. The intervention reported that women counseled by FLWs using CommCare were twice as likely to have a FBD (OR, 1.92; p, 0.02). First-time mothers with low ANC uptake were impacted the most by the ICT intervention, with FBD rates that were 32% higher than the control group.

Other Studies on Client Health Outcomes and Behaviors

Several other studies also showed client health-seeking behavior change in the areas of ANC, institutional delivery, and PNC.

In India, Catholic Relief Services (CRS) found that the average woman attended 41% more ANC visits after CommCare was implemented, with 58% more women attending three or more ANC visits. Figure 6 below indicates that the most significant increases in average number of ANC visits attended was observed among women with a 5th grade education or lower [Ranganathan, 2015].

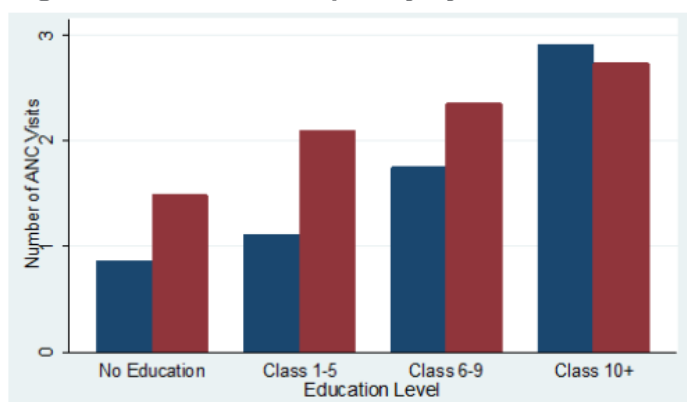**Figure 6: ANC Visit Frequency by Education Level**

Figure 6 compares the impact on number of ANC visits across education levels, highlighting the largest impact among pregnant women with a 5th grade education and lower [Ranganathan, 2015].

Five studies reported high rates of institutional delivery among clients of FLWs using CommCare [Amoah, 2016] [Battle, 2015] [Hoy, 2014] [World Vision, 2012] [World Vision, 2013]. For example, D-tree International implemented a project using CommCare in Zanzibar to increase the institutional delivery rates, especially in cases of complicated pregnancies [Hoy, 2014]. Traditional birth attendants (TBAs) were equipped with CommCare to identify danger signs, refer clients, record family members' permission to transport the women in case of emergencies, and facilitate payment to local vehicle owners to transport women to a facility. The intervention reported a 71% facility delivery rate, compared to the regional average of 32%.

These studies demonstrate that the effects of CommCare hold over a wide range of geographies and MCH programs. The results show that women of lower education levels [Ranganathan, 2015], previously lower ANC uptake [Hackett, 2015], and lower casts [Borkum, 2015] experience a higher positive impact in CommCare interventions. Taken together, there is a strong pool of evidence indicating that pregnant women who are tracked by FLWs using CommCare have improved health outcomes and behaviors in the areas of ANC, institutional deliveries, and child health.

Theme 2: FLWs Performance

There is a large body of evidence evaluating how equipping FLWs with CommCare effects performance. This section presents findings in three areas: FLW legitimacy and client interaction, FLW knowledge, and FLW activity.

FLW Legitimacy and Client Interaction

Several studies have shown that CommCare improves FLWs' personal credibility and the credibility of the health messages they deliver [Bhavsar, 2014] [Medhi, 2012] [Schwartz, 2013] [Braun, 2015]. These findings have emerged from qualitative interviews with FLWs, who have reported that CommCare enhances their credibility in their community, and clients and their families perceive recorded messages as more trustworthy. CommCare is widely viewed as an independent, objective source of information, which greatly benefits FLWs' ability to deliver sensitive messages. FLWs and clients in Tanzania reported that CommCare is a highly acceptable counseling tool, particularly for its improved sense of privacy and trust with clients [Braun, 2015]. In a study comparing CommCare to an alternative mobile data collection tool, 100% of the FLWs preferred using CommCare to

the alternative tool for its ability to work offline and user-friendly interface [Higgins, 2015].

A study of 50 FLWs in India found that home visits with pregnant women were more inclusive and interactive—the client's husband and mother-in-law were 60% and 110% more likely to participate, respectively, and the client was 33% more likely to ask questions when CommCare was used by the FLW [Mohamed, 2014]. The Mathematica study in Bihar also found that FLWs who use CommCare were 37% more likely to report a high level of confidence in their skill and ability to do their job, and 20% more likely to run regular FLW meetings by themselves [Borkum, 2015].

FLW Knowledge

FLWs who use CommCare for MCH interventions have been shown to be more knowledgeable about the health topics and services they provide. A study on CommCare in India showed improvements in FLW knowledge of at least three to five pregnancy danger signs by 22% [Intrahealth, 2012]. In Nigeria, FLWs combating Ebola Virus Disease (EVD) improved their knowledge of the disease, with statistically significant improvements (p<.05) on questions about human transmission of the virus, common symptoms, and whether Ebola fever is preventable. The study also

noted reinforcement against risky behaviors such as contact with Ebola patients, eating bush meat, and risky burial practices [Otu, 2016].

FLW Activity

FLWs whose tasks are tracked through CommCare have been found to perform more efficiently and consistently. A study in South Africa observed an increase in adverse event form submission from 5% to 27% when switching from paper forms to CommCare [Chaiyahati, 2013]. Two studies in India found that CommCare improves FLW performance during home visits, particularly in their frequency and timeliness [Ranganathan, 2015] [Borkum, 2015]. In particular, CRS found that the percentage of women ever visited by a FLW increased by 15%, the number of FLW visits per pregnant women nearly doubled, and the percentage of women receiving counseling from their FLW increased by 28% after introducing CommCare [Ranganathan, 2015]. Mathematica surveyed beneficiaries on FLW home visit consistency and found that FLWs using CommCare were more likely to conduct visits at critical times throughout pregnancy and early childhood than in the control group (Figure 7) [Borkum, 2015].
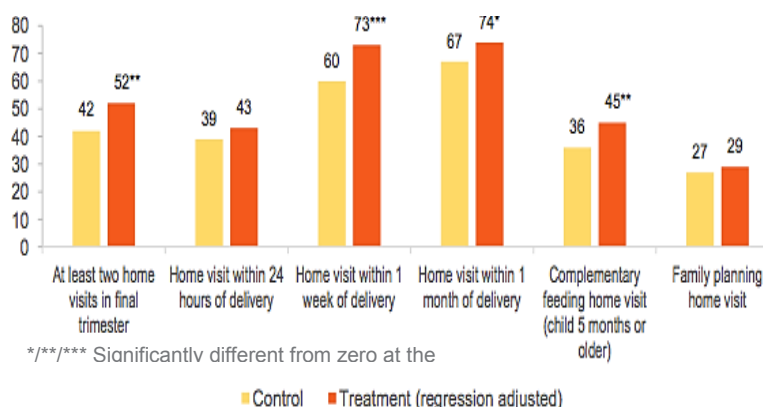
Figure 7: FLW Visit Frequency (reported by clients)

*/**/*** Significantly different from zero at the

Control Treatment (regression adjusted)

Figure 7 reports increases in FLW visit frequency, particularly in the final trimester and within one week of delivery, among women in the CommCare intervention group as compared to the control [Borkum, 2015].

Home visit consistency improved at every recorded stage of maternal and newborn care among FLWs who used CommCare in the Mathematica study. These findings reinforce the notion that CommCare's capacity to track when and how FLWs perform tasks in the field increases performance and accountability.

Performance Improvement

Two RCTs have been conducted to measure the added impact of supplemental features to the CommCare application on FLW performance. The first study uses SMS reminders while the second uses web- and voice-based performance feedback, to evaluate the added impact of the CommCare additions on FLW performance.

SMS Feedback

A RCT in Tanzania found that SMS feedback generated from data collected by CommCare increased FLW visit frequency. The approach hinges on the fact that FLWs' visits are reported in near real-time to CommCare HQ, where they are monitored by FLW supervisors. The study found that SMS reminders that were escalated to a supervisor in the case of a missed visit improved FLW visit timeliness by 86%, compared to CommCare-using FLWs who did not receive SMS reminders [DeRenzi, 2012].

Self-Tracking Tool

The RCT in India was conducted to measure the impact of phone-based motivational messages on FLW performance [DeRenzi, 2016]. The intervention was randomized into two groups, one who received

generic advice and encouragement messages irrespective of their performance, and the intervention group who was given a self-tracking tool allowing FLWs to monitor their own performance through visual graphs and audio messages.

The study found that the intervention group made 21.5% more visits than the control group within the 12-month intervention period. The study also found a correlation between FLW performance and usage of the self-tracking tool. Within the intervention group, most FLWs used both web- and voice-based feedback channels, highlighting the demand for diverse feedback mechanisms in FLW programs.

Theme 3: Quality of Care

Many under-resourced facilities are hampered by inconsistent training of health workers, high patient loads, and minimal resources to perform medical tasks. CommCare has addressed some of these pain points by guiding health workers through clinical processes to improve adherence to protocols.

ANC and Delivery

CommCare has proven effective in improving ANC and delivery. In Nigeria, Pathfinder International found that CommCare increased the ANC visit quality score from 13.3 at baseline to 17.2 (out of 25) at endline in ANC clinics. The study found that CommCare improved the quality of health counseling during ANC, and the frequency at which healthcare providers performed more technical aspects of care during ANC visits, particularly the increased provision of HIV tests from 67.5% to 82.2% [McNabb, 2015]. In India, a mobile partograph (mLabour) built on the CommCare platform was created to overcome barriers to partograph use in under-resourced health systems. mLabour provides labor unit staff with data-driven decision support, automatic graphing to replace the paper partograph, and reminders prompting clinicians to conduct patient exams [Khalid, 2015]. A preliminary study found that data collected through mLabour was more complete than the corresponding paper charts, and users reported that the application reduced patient neglect [Schweers, 2015].

Adherence to Protocols

CommCare has also been used to improve adherence to protocols by FLWs in low-resource settings. An

RCT in South Africa found that FLWs using CommCare for cardiovascular disease (CVD) screenings had no errors in calculating risk scores, compared to 3.8% error when using the paper tool [Surka, 2014]. Clinicians using a CommCare precursor for Integrated Management of Childhood Illness (IMCI) classification completed an average 20% more of the required steps [DeRenzi, 2008] and completed more accurate disease classifications (90.9% versus 82.7%) that were more consistent across clinics [Mitchell, 2013]. CommCare has also been used to improve the accuracy of disease screenings for HIV in South Africa [Mitchell, 2012], Acute Malnutrition in India [Chanani, 2014], and Rheumatic Heart Disease (RHD) in Zambia [van Dam, 2015]. Two studies have found CommCare to improve medicine dosing [Segal, 2015] [Palazuelos, 2013]. In Guatemala, CommCare was used to improved efficiency in calculating prescription dosages by 20%, and decreased consultation time [Segal, 2015]. In Mexico and Guatemala, CommCare use resulted in a higher medicine dosing accuracy compared to paper-based tools [Palazuelos, 2013].

Theme 4: Program Efficiency

As CommCare empowers FLWs and improves clinical processes, the effects of the technology in turn improve the entire program. The following studies report the effects of CommCare that are not specific to client behaviors and outcomes or FLW performance, but rather improve processes at a programmatic level.

Worker Productivity

Several studies discuss the impact of CommCare on data collection and transmission in projects across WASH, malaria, and HIV programs. A WASH study across Vietnam, Cambodia, and Mozambique found that CommCare improved the efficiency of water data quality transmission from water supply structures to upper administrative levels [Ball, 2013]. Research on the use of algorithms to evaluate data submitted by FLWs found that CommCare is able to identify false data with 80% sensitivity and 90% specificity, validating CommCare as a monitoring and evaluation and data collection tool for frontline programs [Birnbaum, 2012]. Two studies discuss the impact of CommCare's improved data collection on infectious disease control efforts. In Zimbabwe, improved transmission of malaria test data through CommCare resulted in faster and more accurate diagnoses [Dell, 2015]. A study by MEASURE Evaluation in Mozambique found CommCare to be a more efficient, effective, and cost-effective tool for monitoring HIV/AIDS patient adherence to treatment programs and appointments than paper-based systems [Nascimento, 2014]. An RCT in South Africa found that FLWs using CommCare for CVD screenings took

75% less time to be trained than FLWs using paper-based screening tools, and 41% less time to diagnose patients for CVD than those using paper-based tools [Surka, 2014].

Communication and Supervision

As a result of improved data collection and accessibility, several studies have found CommCare can impact supervision and communication within frontline programs. In one project in India, improved data completeness via CommCare resulted in a reduction in average data transmission time from FLW to supervisor from 48 days to 8 hours [Medhi, 2012]. The Mathematica study in Bihar found that FLWs who used CommCare were 31% more likely to communicate about coordinating home visits in their catchment area than FLWs who did not use CommCare (p=.018). It also highlighted challenges with supervision, such as low understanding and usage of the supervisor app, resulting in no substantial increase to FLW supervision (although none of supervision indicators were statistically significant) [Borkum, 2015]. Both studies in India saw improved communication with the use of CommCare by FLWs, although only minor improvements in direct supervision were observed.

Cost-effectiveness

A study by USAID's Health Finance and Governance Project evaluated the cost-effectiveness of a CommCare-based IMCI application implemented by D-tree International [Kukla, 2015]. The study evaluated the ratio of additional cost per FLW to the improved effectiveness per FLW of a pilot project involving 50 FLWs and concluded "compared with the existing paper-based system, the mobile tool costs an additional $10.43 per annum for an HSA to improve his/her diagnostic and treatment accuracy by 1 percent." Given the low marginal cost of increasing the number of FLWs using the tool, and assumed consistency in relative effect per FLW, the authors also estimated a cost-effectiveness of $1.07 per 5,000 FLWs, concluding that a much higher return on investment is achieved when taking mobile tools to scale.

Theme 5: Challenges faced when implementing mHealth programs

Several studies also describe challenges with implementing CommCare. Several studies cited technical challenges, such as broken phones that remained unfixed, lack of convenient power source to charge the devices, and inconsistent connectivity which limited data sharing and synchronization among FLW teams [Chaiyahati, 2013] [Rema, 2013] [Borkum, 2015].

Several studies also listed programmatic issues that limited the impact of introducing CommCare. One challenge in large-scale mHealth implementations is limited IT capacity within adopting organizations to address the technical issues listed above and maintain the technology [DeRenzi, 2012] [Chaiyahati, 2013]. Low adoption rates among users, or the decrease in usage over time—often referred to as the 'novelty effect' of new technology—has also been observed in CommCare projects [Borkum, 2015] [Chaiyahati, 2013] [DeRenzi, 2012] [DeRenzi, 2016] [Segal, 2015]. Chaiyahati attributed low adoption rates to the disconnect between the application designed by the implementing organization, and the actual value it provided FLWs in their everyday work. In this case, the FLWs reported that they did not find the primary functionality of the application useful, although using the mobile phones for SMS and phone calls did improve communication between FLWs and their clients, and coordination among FLWs [Chaiyahati, 2013].

The Mathematica study also reported that the CommCare technologies to support supervision had several challenges (though they have since been improved), and that CARE had to give a very high level of training – 16 3-hour sessions over the course of 8 weeks– to achieve this level of impact [Borkum, 2015]. Other programmatic issues highlighted in CommCare projects include delayed top-up payments to FLWs [Borkum, 2015], limited stock of medical supplies (in this case, TT injections) [McNabb, 2015], and the risk of inaccuracy in self-reported data [DeRenzi, 2012]. Finally, mHealth programs moving to scale face the challenge of integrating with government health information systems [Borkum, 2015] [WorldVision, 2013]. Borkum highlighted this as a challenge raised by FLWs whose workload increased with CommCare as the government still required paper registers [Borkum, 2015]. Aside from double-documentation, there is also the more technical, and sometimes political, challenge of integrating the data collected through CommCare into the local health information reporting system [WorldVision, 2013].

Conclusion

The collective findings from the 51 studies assessing CommCare as a tool for FLWs and programs supporting FLWs are encouraging. They demonstrate the potential for organizations to use CommCare in an effort to strengthen frontline programs through improved client health outcomes and behaviors, FLW performance, quality of care, and program efficiency.

The evidence demonstrates that CommCare can strengthen frontline programs, but it is the FLWs themselves who deliver the critical services to underserved populations. Organizations must continually train and support their frontline workers in order to leverage the vast potential of integrating mobile technology into service-delivery systems, both for health and non-health sectors.

We are encouraged by the upward trend in literature evaluating CommCare's impact on client health outcomes and behaviors. As the CommCare Evidence Base expands, we hope to see more rigorous studies of this kind, with a focus on CommCare's impact on client outcomes. As the most direct measure of public health impact, these studies continue to play a vital role in evaluating and improving CommCare as a tool for FLWs.

Appendix A: Table of Evidence

*Grey literature is marked with an asterisk (*) in the Citation column.

Mobenzi.
RESEARCHER R

The Tiger Brands Foundation (TBF)

The Tiger Brands Foundation (TBF) was established in 2009 and was born out of the second phase of BB-BEE for Tiger Brands, a JSE Listed Company.

The Foundation was established for broad based community impact, with the aim of benefiting non-paying schools and vulnerable groups in society as well promoting sustainable livelihoods in the areas in which the project operates. The TBF has identified the need for a programme that addresses the needs of the most important meal of the day for school children; breakfast.

Too many learners across the country arrive at school without having had breakfast while school feeding schemes only provide a meal at lunchtime and the children may not eat until the following school meal.

The TBF is of the belief that by funding and supporting a breakfast-feeding scheme, learners will be better nourished, resulting in improved school performance, growth and development.

THE TIGER BRANDS
FOUNDATION

basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

THE PROJECT - PHASE 1

The Tiger Brands Foundation has developed and successfully implemented a first phase breakfast feeding programme at thirteen primary schools, of which the majority are in Alexandra Township (JHB). The breakfast feeding scheme incorporated upgrading kitchen facilities, nutrition education, skills development, job creation, community development and feeding the learners a nutritious breakfast. Prior to implementation, TBF identified a number of challenges to the success of the project and identified the need for timeous access to reliable, accurate information from which reports could be drawn to provide feedback to all stakeholders and reinforce accountability throughout the value chain. Listed in order of priority, requirements included:

- In- field registration of children
- In-field recording of attendance
- Daily activities reporting
- Distribution issue reporting
- Other on-site issues
- Distributor performance
- Food handler performance
- School monitor performance

Mobenzi Researcher was embedded within the operational structure of the project in order to address these challenges.

MOBENZI DEPLOYMENT

Handsets with Mobenzi Researcher were provided to each school monitor, whose role is to collect data on a daily basis using the Mobenzi Researcher application. Three forms were created for the collection of information in-field.

1. School Monitor Report – data regarding the daily operation of the kitchen at the school.
2. Distribution report – details of deliveries made to each of the locations.
3. Incident Report – incidents are logged by both school monitors and drivers to allow the TBF project manager to respond immediately to issues as they arise.
4. Management Report – the management report allows the management team to compile reports on the progress of the project, high level issues.

Following on from a presentation to the Department of Education's Head of Nutrition regarding the value provided by Mobenzi to the project, the Foundation was asked to include an additional form to report on the DoE lunch feeding program.

Mobenzi continues to function as a cornerstone of the TBF feeding program and has provided critical data to motivate the scaling up of the project for a national rollout.

THE PROJECT - PHASE 2

Following the successful initial implementation of the project, TBF plans to extend it to additional schools, more than doubling the project size. Ultimately the vision is to extend the project to a national level and leverage the capabilities of the Mobenzi Outreach platform to further enhance the visibility and operational processes of the project.

Mobenzi.

MODULE 7

BENEFITS OF M&E

1) Objectives

This module aims to provide an understanding of the value that can be leveraged through effective monitoring and evaluation for your organisation.

2) Delivering value for your organisation

Traditionally, much of the function of monitoring and evaluation was to deliver reporting after the fact, mostly to satisfy funder demands for some measure of accountability and justification for investment. While this is still an important component, there are a number of other areas where monitoring and evaluation can add significant value:

a.   M&E for Operational Visibility

An effective monitoring function within your organisation should deliver consistent data on a daily, weekly, monthly, quarterly and annual basis. The short term data is what provides the highlights for the primary operation value of monitoring and evaluation within your organisation. This activity and output data should allow your management team to make informed, active decisions based on the data that is being collected in the short term. Done effectively, this monitoring process will allow the organisation to be responsive and dynamic, in particular when it comes to responding to issues and challenges on the ground. This will improve efficiency and reduce the level of risk that the organisation is exposed to. It is important to note the requirement for suitable indicators, baseline data and targets to ensure that monitoring data can be leveraged effectively.

b.   M&E for Strategic Insight

In order to make informed, effective strategic decisions, the board and management team require information that is produced over a longer period, generally as an aggregated view of operational data, as well as performance against desired programmatic results. These insights will provide a basis for making strategic decisions about how well the organisation is doing both in terms of operations and programme delivery. An effective monitoring and evaluation system will ensure that the board and management team have timeous, relevant information to make informed decisions about how to manage the organisation, as well as whether the programme is achieving what it is meant to achieve. Where there are shortcomings in either of the performance areas, the organisation should be able to make necessary adjustments as soon as possible to recover or address issues as they are encountered.

c.   M&E for your Marketing and Communications

While it may not be something that immediately springs to mind when thinking about marketing and communications, monitoring and evaluation should provide an essential base of information for the development of the marketing and communications material for your organisation. Having reliable, verifiable information on the performance of your organisation provides a foundation for developing the story that you are able to tell to the public and key internal and external stakeholders. Once again, indicators, baselines and targets play a key role in structuring your message.

d.   M&E for your Investment Proposition

Linked to your marketing and communications, is the development of your investment proposition – the basis for proposals and applications for funding. In order to secure investment from funders, it is critical not only to be able to show the historical performance of your organisation, but also that there are appropriate systems and processes in place that can provide visibility and accountability. In many ways, the information provided through your monitoring and evaluation, form the basis for defining your social return on investment for your investors. The more consistent and reliable this return, the more likely you are to secure and retain an investment in your organisation.

e.   M&E for Reporting and Accountability

Traditional reporting remains, of course, a key output of your monitoring and evaluation. As an ex-post or after-the-fact function, reporting should not be the primary motivation for monitoring and evaluation. The reports generated should provide a consolidated view of performance that is actionable either operationally or strategically.

f.   M&E for Learning

The learning component of monitoring and evaluation has gained more traction in recent years, in essence it refers to the role of monitoring and evaluation in enhancing understanding and providing a base for continuous improvement in development outcomes. This involves extending the use of monitoring and evaluation to create both institutional knowledge to inform design and implementation, but also to serve as a body of knowledge to inform collective understanding within the sector. In particular this relates to what does and what doesn't work, ideally forming the basis for best practice.

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