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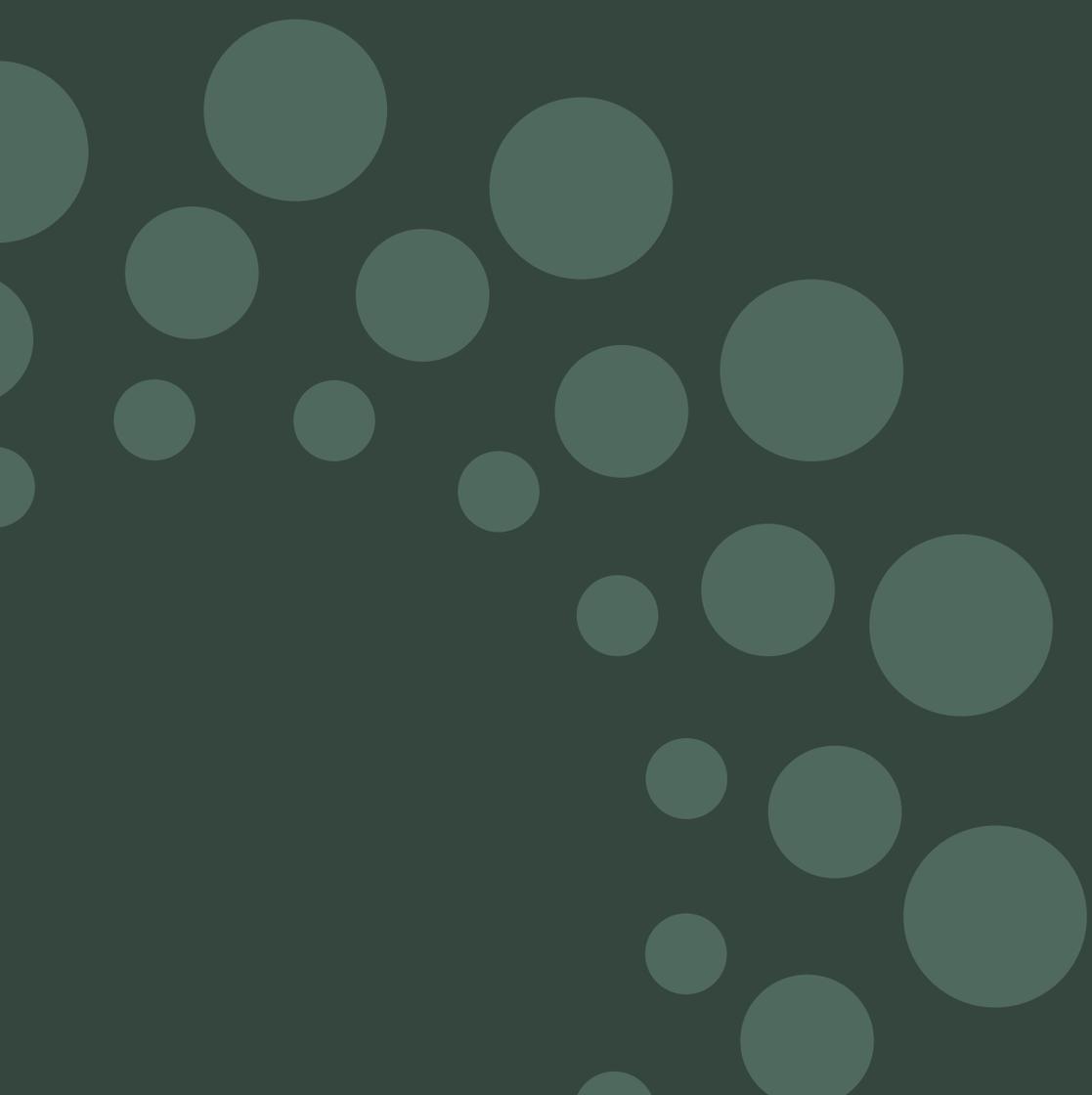
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Complex M&E Systems

Raising standards, lowering the bar



ABOUT THE AUTHOR

Nigel Simister is an international development consultant and INTRAC Associate, specialising in Monitoring and Evaluation (M&E), particularly the design, implementation and maintenance of M&E systems. In his many years as an Associate of INTRAC Nigel has supported work on M&E systems for a variety of different organisations, including the British Council, BESO, the Climate and Development Knowledge Network (CDKN), Christian Aid, Coffey, Concern Ethiopia, the Civil Society Support Programme (CSSP) Ethiopia, Danida, the Danish Institute for Party Democracy, the Danish Refugee Council, ECPAT International, the EU Trust Fund, Forum Syd, The Foundation for Civil Society (FCS) in Tanzania, Global Fokus, GOAL, The International Land Coalition, Irish Aid, KLP Sudan, Mobaderoon (Syria), Mosaiko (Angola), Norwegian Mission, Norwegian People's Aid, Oxfam Belgium, Palladium (Partnerships for Forests), PEN International, Price Waterhouse Cooper (PwC), Save the Children (Sweden), Save the Children (UK), Self Help Africa, Sightsavers, Skillshare, SOS Villages, South South North, Transparency International, Trocaire, UNIDO, VSO RAISA, WaterAid, World Vision UK, and the Westminster Foundation for Democracy. He has also designed and delivered training courses on M&E and impact assessment.

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1. INTRODUCTION

Most organisations engaged in social development or humanitarian work are expected to have monitoring and evaluation (M&E) systems. These systems enable them to define, collect, analyse and use information for a variety of different purposes. A great deal has been written about M&E over the past thirty years. However, it has not been evenly spread. In the main, it has focused on the development and use of methodologies for data collection and analysis, and the emphasis has generally been on evaluation rather than monitoring. By contrast, relatively little has been written about M&E systems, and what exists concentrates primarily on project-level M&E rather than M&E at programmatic or organisational levels.

This is partly due to an assumption that because something works well at project level then it naturally works well at programme or organisational level as well. Often this is untrue. There are many M&E methods and processes that work well within straightforward, time-bound projects but do not work in large programmes or across entire organisations, or at least work in different ways. This false assumption has created two related challenges. Firstly, it has created unrealistic expectations about what an M&E system operating at programme or organisational level can actually achieve over any given time period (Matafeni 2012). Secondly, due to the lack of support or guidance in these areas performance has often been poor, and many M&E systems have failed to live up to their full potential.



There are often unrealistic expectations about what an M&E system operating at programme or organisational level can achieve.

Purposes of the paper

This paper is largely based on my personal experience of designing, supporting and maintaining complex M&E systems for a variety of civil society organisations (CSOs) over the past twenty years. It also draws heavily on conversations and discussions with M&E practitioners from many different organisations. Some sections of this paper have appeared in different forms in previous papers, articles and blogs, although this paper goes further than previous publications in drawing together my thinking.

The purposes of the paper are as follows:

- to understand and explain how M&E systems operate in organisations and complex programmes;
- to provide a theoretical framework for understanding them in the hope that others will further develop this framework over time;
- to better understand how information and analyses can be summarised across large portfolios of work; and
- to introduce some ideas on how to use complex M&E systems to contribute to management decision-making at programme- or organisational-level.

Every organisation and programme is different, and requires a unique M&E system. M&E system design is influenced by many factors. These include (but are not limited to) the purpose(s) for which the M&E is designed; the nature of an organisation, programme or project; the type of work carried out; the resources available; and a range of external influences. This paper is not designed to provide a blueprint for developing an M&E system.¹ Rather, it is designed to provide guidance and advice to those wishing to design or refine M&E systems at organisational or programme level. Experimentation, trial and error, emulation, innovation and piloting have always been, and will remain, essential ingredients for M&E design.

The primary audience for this paper is M&E practitioners working within non-governmental organisations (NGOs) engaged in social development work. Hopefully, the paper will also prove useful to M&E staff engaged in humanitarian and relief work; M&E staff of other types of agencies (such as large multinational agencies, government agencies, private-sector companies, research institutes, or other kinds of civil society organisation); stakeholders that impose demands on NGOs' M&E systems (such as donor representatives, NGO board members or government representatives); and other NGO staff that need to interact with M&E systems in different ways. However, the paper does require some prior knowledge of the fundamental concepts of M&E, and should not be seen as an entry point for complete beginners.²

Definitions

There is no single, agreed definition of an M&E system. Within this paper a good **M&E system** is understood to mean *“a series of policies, practices and processes that enables the coherent and effective collection, analysis and use of monitoring and evaluation information”* (Simister 2009, p1). Sometimes, the word ‘system’ is replaced by ‘framework’ or ‘approach’, but it usually means the same thing.

M&E is often combined with other processes within a wider system (or framework or approach). For many years, NGOs tended to bracket M&E with planning under **PME** (planning, monitoring and evaluation) systems. The current trend is to integrate M&E with learning to indicate **MEL** (monitoring, evaluation and learning) systems, or **PMEL** (planning and MEL) systems. Wherever ‘M&E system’ is used within this paper it could equally well refer to a PME or MEL system.

¹ My 2009 paper *“Developing M&E Systems for Complex Organisations: A Methodology”* attempted to develop a methodology. That paper is available from INTRAC at <https://www.intrac.org/resources/developing-systems-complex-organisations-methodology/>.

² INTRAC has produced an M&E guide for small and diaspora organisations that is more suitable for people new to M&E. This is available at <https://www.intrac.org/resources/monitoring-evaluation-guide-small-diaspora-ngos/>

It is also important to understand what is meant within this paper by an organisation or complex programme. This is not easy to define. NGOs implement a range of types of initiative from straightforward, time-bound projects at one end of the spectrum to the work of entire International NGOs (INGOs) working through partners in multiple countries and sectors at the other (see figure 1). In the middle of this spectrum lie projects which are carried out in complex settings or are executed over multiple phases; programmes which are implemented through many partners and/or are run by consortiums, coalitions or networks; complex programmes implemented over many different phases; and organisations working in a single sector or location; as well as other possible combinations.

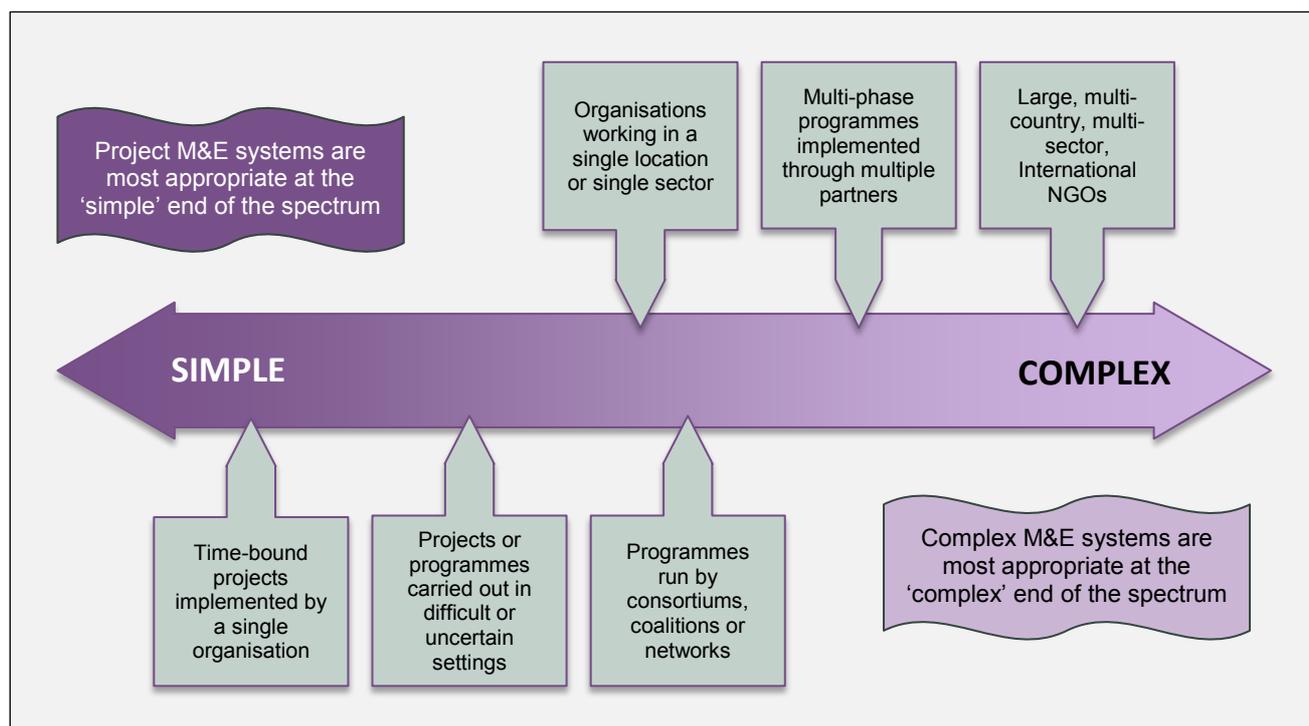


Figure 1: Spectrum of complexity within M&E

This paper describes M&E systems at the complex end of the spectrum. For the sake of convenience I will refer throughout the paper to a **complex M&E system** as one that can be used throughout the spectrum, but is most appropriate at the complex end. Equally, I will refer to a **project M&E system** as one that is most applicable to straightforward, time-bound projects. There are, of course, many occasions when characteristics of project M&E systems can be applied throughout the spectrum, and vice versa. For convenience, I will also refer to an **organisation** throughout the paper when describing complex M&E systems. However, this can be taken as shorthand for an organisation or complex programme, and may in some circumstances apply to a consortium, coalition or network rather than an individual organisation.

Section 2 of this paper provides a brief overview of how a project M&E system works. Section 3 explains some of the differences between project and complex M&E systems. From section 4 onwards the paper focuses primarily on complex M&E systems.

2. PROJECT M&E SYSTEMS

Before discussing complex M&E systems it is worth recapping the key elements of a project M&E system. If a project (or programme) is relatively straightforward there are well-established procedures for designing and implementing an M&E system. Some common elements of a project M&E system are described briefly in the box below.³ Most project M&E systems include at least some, although not necessarily all, of these elements.

Box 1: Common elements of a project M&E system

| | |
|-------------------|---|
| Context | A project M&E system should be designed to serve a specific purpose or set of purposes. This almost always includes supporting basic project management. It may also include learning, accountability to different stakeholders, and/or a range of other potential purposes. There may be a set of principles which govern how M&E will be carried out. These may include guidelines on issues such as beneficiary participation , transparency, gender awareness, and incorporation of rights-based approaches into M&E. |
| Selection | Most projects begin with a design phase in which the project is conceptualised and then planned. This might involve the development of a theory of change setting out desired changes, which may later be used as a basis for M&E. There is normally a project plan , which may be reflected or summarised in a results framework such as a logical framework, or sometimes an outcome map. A results framework typically contains a series of objectives at different levels from outputs (the deliverables of the project) through to outcomes and impact (the desired changes the project hopes to influence), and indicators that show how the objectives can be measured. It may also include risks and assumptions which need to be monitored, or a set of learning or evaluation questions to be answered. Most projects include activity plans linked to budgets , which detail the activities that will be carried out over the course of the project. Best M&E practice suggests that the plans and frameworks are designed to be adjusted and adapted as needed over the course of the project. |
| Collection | Information is collected throughout the duration of a project. This is partly to ensure that the project remains on track, and partly to assess progress towards the different objectives, as well as identify unexpected changes. Projects may use a number of different information collection tools or methodologies . These can range from simple tools such as interviews, observation and photography through to more complex methodologies of data collection and analysis such as the Most Significant Change (MSC) technique or Participatory Learning and Action (PLA) methods. Most projects also develop simple templates or forms, used to record formal and informal information on an ongoing basis. Many projects carry out a baseline at the start so that change later on can be compared with the original situation. Some projects also establish control or comparison groups so that changes in their situation can be compared with those in targeted groups. Smaller projects often capture information on all targeted beneficiaries, whilst larger projects may use quantitative or qualitative sampling methods to infer change over wider populations. |
| Analysis | Over the course of a project information is analysed on a regular basis. Much of this analysis is straightforward and is designed to highlight deviation from plans or budgets. Sometimes, more structured methods of quantitative or qualitative data analysis might be used to assess change within targeted populations, or generate useful lessons. Learning mechanisms may be developed that enable project staff and/or beneficiaries to generate, |

³ This section can be read as a standalone section for readers who are new to M&E or who wish to understand the common elements of a project M&E system. More experienced practitioners may choose to miss out this section and proceed to the next one.

share and apply lessons from within the project. Learning mechanisms can range from simple team meetings to more structured **review** and **sensemaking** sessions where different stakeholders come together to jointly make sense of existing information and take appropriate action.

Use

Information and analyses can be used for many different purposes. Most projects generate **reports**. These include internal team reports and reports to external stakeholders. Reports can range from simple activity and budget reports through to reports on project changes and lessons learned. Information may also be **communicated** to different stakeholders in a variety of different ways, depending on the audience and purpose. Different communication methods include via audio-visual materials, face-to-face contact, or social media. Ultimately, reports and other forms of communication can be used to take stock of progress, adjust activities, change plans, inform future project design, share learning more widely, or any other kind of purpose.

Evaluation

Some projects may be liable to a formal **evaluation**, either during the project, at the end, or some time afterwards. Others may rely instead on formal **reviews**, which can be facilitated internally or externally, and may include project team members, targeted populations and/or wider stakeholders. Some projects carry out an **impact assessment** outside of an evaluation, or engage in some degree of **research**. Many projects are never externally reviewed or evaluated at all.

Environment

Even simple projects and programmes need a supportive environment to ensure that the right information gets to the right people at the right time. This can include developing Information Technology (IT) systems for supporting **data storage and processing** and some aspects of **knowledge management (KM)**, including **information flows** and **feedback loops**. There is sometimes a dedicated **budget** for M&E within a project. Some projects have dedicated **M&E personnel**, whilst staff in other projects are expected to carry out M&E in addition to their normal tasks. Staff in many projects have access to **training** and **capacity building** for M&E. The organisational **culture** regarding M&E often has a large impact on how M&E is carried out within a project.

Although the M&E elements described in the box above are common to many projects it does not mean that M&E within a project is always easy. M&E may indeed be relatively straightforward, particularly if project design and planning is properly conducted at the start. But many aspects of project M&E are difficult to implement or require expertise. These include facilitating participatory M&E, developing theories of change, defining indicators in complex areas of work such as governance and empowerment, adapting tools or methodologies, applying appropriate sampling techniques, and using formal techniques for qualitative or quantitative analysis.

The point is that it is usually straightforward to figure out what needs to be done in project M&E, and to develop a strategy and work plan accordingly. There are plenty of resources available to support project M&E, and the methods typically used are well-documented. If a project team needs help on M&E it can usually access examples of how others have approached similar tasks in the past. This is not true of complex M&E systems. There is very little guidance on how to develop a complex M&E system, and the methods employed may need to vary widely from organisation to organisation or from programme to programme.

The next section describes some of the major differences between project M&E systems and complex M&E systems.

3. THE DIFFERENCES BETWEEN PROJECT AND COMPLEX M&E SYSTEMS

As stated in the introduction, there is a widespread, if false, assumption that because something works well at project level then it automatically works well at organisational level. However, many M&E methods and processes that work well within straightforward, time-bound projects do not work in large programmes or across entire organisations, or at best work differently. This section therefore explores some of the key differences between project and complex M&E systems.

The scope of an M&E system

In any organisation it is always important to establish what an M&E system covers. Some people take a narrow view of an M&E system as a series of data collection tools designed to gather information and summarise progress against a pre-defined series of objectives and indicators. Some elements of M&E, such as objectives, indicators, baselines and tools, are always covered by an M&E system. And, as highlighted earlier, processes such as planning, learning and reporting are often integrated within an M&E system.⁴

An organisation or complex programme is not just a large project. And it cannot be treated as such for M&E purposes.

However, complex M&E systems often need to interact with many other functions and processes. These include knowledge management, financial management, IT and data storage, marketing and fundraising, quality assurance, and research. Some complex M&E systems cover these areas and some merely interact with them. Sometimes, staff running a complex M&E system need to rely on processes such as IT or knowledge management which are essential to the operation of their system, but which lie under the control of other departments. Coordination across different departments then becomes essential to the effective operation of the M&E system (Preskill and Mack 2013).

In a project M&E system the issue of coordination is not so important. As a general rule, the larger the organisation, the increased likelihood that different processes are split into different departments. There may be different departments for M&E, learning, research, knowledge management and marketing. In some of the larger UN agencies there are even separate departments for planning, monitoring, evaluation, learning, reporting and verification. However, in a project M&E system, the same staff members are usually responsible for all aspects of the project – planning, M&E, learning, financial management, reporting, etc. – and there is less need for coordination across different departments. A project M&E system also tends to rely far more on personal relationships and communications than on formal systems and processes.

The purpose of an M&E system

The purpose of an M&E system influences a range of decisions, such as how plans are developed, who develops objectives and indicators and how, the type of tools used to collect and analyse information, the extent of learning and sharing of M&E findings, and even how much money and time are spent on M&E. In a project M&E system it is therefore always important to define the primary purpose of the system before deciding how to approach M&E.

⁴ Even here there may be confusion or areas that need to be tightly defined. An M&E system may be integrated with a learning system under a MEL system. Yet there are likely to be aspects of learning, such as personal or academic learning, that are not covered under the MEL system, and are within the province of other departments.

Box 2: Different purposes for M&E

- Project or programme management (making immediate decisions to manage an existing project or programme)
- Accountability to different stakeholders, whether upwards to donors, governments and supporters or downwards to partners and supported communities
- Learning, in order to contribute to improved planning and performance in current or future projects or programmes
- Resource allocation (deciding how and where resources should be allocated)
- Enabling supervision and control of staff, partners or aid recipients by ensuring that money is spent appropriately, and/or ensuring the projects and programmes are compliant with appropriate standards or legislation
- Enhancing communication within and across projects and programmes
- Enhancing the participation or empowerment of beneficiaries within projects and programmes so they can influence or control decisions that affect them
- Providing evidence that can be used for advocacy or policy influencing
- Providing information that can be used for marketing, publicity or fundraising work

The situation in a complex M&E system is more complicated. There may indeed be a primary overall purpose for the M&E system. However, people at different levels of an organisation are likely to make different and sometimes competing demands on that system. M&E can be carried out for many different purposes (see box 2) and in a complex M&E system it is likely that all, or at least most, of these purposes will need to be addressed at some stage or other.

This means that a complex M&E system needs to be flexible enough to enable different stakeholders at different levels of an organisation to adapt, implement and use M&E processes to meet a variety of needs. For example, within a large organisation, project-level M&E is almost always used for project management, and may also be used to demonstrate accountability towards

supported communities. At programme or sector level, M&E information may be used to enhance communication between different stakeholders or provide evidence to support advocacy or policy influencing work. At head office level in large NGOs, M&E is often used for fundraising and marketing, or accountability to donors and supporters.

Complex M&E systems can take much longer than project M&E systems to design, test and implement, and can remain in place over many years if not decades. This is because organisations generally last much longer than time-bound projects. Over longer timescales it is not only possible that the purposes for which M&E is carried out will change, it is likely. This may be because of changing political imperatives, evolving organisational requirements, changes in the external environment, changes in key personnel, or a host of other factors. A complex M&E system needs to be flexible enough to cope with constant change, and needs to be designed with potential shifting priorities in mind.

Of course, anyone who has significantly engaged with M&E over the past two decades is probably aware that there are many occasions when M&E is used for purposes which are at best not particularly productive and at worst downright unhelpful to project or programme staff. Staff within organisations often see M&E as a 'box-ticking' exercise, designed to keep donors, board members or head offices content. Where planning or reporting systems are inflexible, NGOs may continue to report on objectives or indicators that are obsolete, or are not useful to them. When used primarily for fundraising or marketing purposes, M&E information may be represented partially or selectively so it shows a false or misleading picture. And there are often occasions in the past when evaluations have been misused. Indeed, two decades ago Weiss (1998) provided an early warning of what she called '*evaluation as subterfuge*' – the often-hidden agendas of evaluation. They include using an evaluation to delay a decision; using it to make a decision that would otherwise attract criticism or hostility; and using it to provide legitimacy for a change where a decision has already been made but has not been made public. Whilst recognising these issues exist, and are widespread, this paper is intended to provide some positive options for improving complex M&E systems, and does not intend to dwell too much on the misuses of M&E.



Where planning or reporting systems are inflexible, staff may continue to report on objectives or indicators that are obsolete, or are not useful to them.

Different levels

A project M&E system usually only needs to consider one level. But complex M&E systems tend to operate on numerous levels. In this context, a level is defined as a place where plans are made and/or information is collected, analysed, summarised, shared or used. For example, an INGO might work in several regions. Each region may include a number of different countries. Country work might be broken down further into programmes and projects, often implemented through partner agencies. At each of these levels, plans are made, and information is collected, analysed and used. Importantly, in a complex M&E system, information collected at one level (e.g. from a range of projects) can also be analysed, summarised and used at other levels (e.g. at programme or country level).

For many organisations the situation is even more complicated. An INGO with a broad mission may work in a number of sectors such as health, education and governance. Consequently, it may be more important to summarise and analyse information by sector rather than by geography. Specifically, the INGO may wish to analyse information across different health programmes in multiple countries, instead of summarising information across different sectors within a country. In this case the 'sector' level becomes equally as important as the 'country' one.

Some organisations analyse information on mainstreaming or cross-cutting issues such as the environment, gender or disability. Others need to understand change *within* their partners as distinct from the changes achieved *by* their partners, especially if capacity development forms a major part of their vision or mission. Some organisations establish M&E procedures that evaluate their contribution within networks or coalitions. Still others may want to focus part of their M&E systems on their own added-value work or internal organisational matters.

The need to operate at many levels, and ensure that information and analyses flow between them, is arguably the biggest difference between a complex M&E system and a project M&E system. It has profound implications for how a complex M&E system operates. For example:

What looks from the outside like a complex M&E system is usually a series of overlapping and interlocking M&E systems at different levels, with information and analysis (hopefully) flowing between them.

- Learning is much more difficult to support across multiple levels. NGOs need to develop processes to ensure that institutional memory is not lost, and that lessons learned in one part of an organisation can be shared, or retrieved when required by others. Learning in one part of an NGO may also need to be adapted significantly if it is to be used in another context.
- As complexity increases, aggregation and summarisation become more important (and difficult) challenges. NGOs may need to summarise change across multiple development interventions in different sectors and locations.
- When an organisation or complex programme is implemented through multiple partners at different levels it is vital to be explicit about M&E roles and responsibilities. This may require a considerable amount of coordination and support.
- As the complexity of an M&E system increases, knowledge management becomes more of an issue. It becomes necessary to rely more on formal systems and processes for sharing data, knowledge and learning, and less on personal contacts and relationships. NGOs may find they need to develop sophisticated databases or management information systems. They may also need to put in place procedures to ensure that knowledge flows in different directions – not only from projects to head offices but also back again, and horizontally within, and sometimes across, organisations.
- It is essential that a supportive environment for a complex M&E system is created and maintained. This is hugely affected by organisational culture, and the efforts of an organisation's leadership to create a vision for M&E that promotes the serious collection, analysis and use of information as an important ingredient in managerial decision-making. No matter how curious individuals are within an NGO, it will be of little use at an organisational level if the NGO does not have a culture that is conducive to M&E and learning. But this culture does not exist automatically; it needs to be carefully developed and nurtured. A project M&E system can sometimes operate effectively in the absence of a supportive organisational environment. A complex M&E system, never.

In summary, a complex M&E system has to operate as a genuine *system* and cannot simply rely on one or two individuals to ensure that the right actions are carried out at the right time. In addition, a complex M&E system has to serve the differing needs of multiple stakeholders. This means it needs to be developed with a completely different mind-set than a project M&E system.

Decentralisation of M&E

A complex M&E system should not just be designed to meet the needs of staff at the centre of an organisation. It must also ensure that M&E works for different stakeholders at different levels. Whilst this paper is primarily concerned with what happens at central level within organisations, it is important to recognise that this is only part of what is going on. Within a complex M&E system projects, partners, programmes, sectors and countries need to be able to operate independent M&E approaches that nonetheless engage with each other to create an overall M&E system.

In a simple M&E system, staff may set objectives and indicators, carry out a baseline or conduct a review. By contrast, the job of a complex M&E system is partly to provide a framework within which different levels of an organisation can carry out these functions. This might mean, for example, setting guidelines, policies or standards to support different parts of an organisation to set their own indicators or carry out their own baselines. Complex M&E systems need to be at least partially designed to facilitate the decentralisation of M&E decision-making at multiple levels, as well as ensuring that the needs of central-level staff are met.

Consequently, a number of important balances need to be maintained. Two stand out. Firstly, a balance needs to be struck between imposing common M&E policies, practices and procedures on the one hand, and leaving flexibility for local-level decision-makers to meet their own M&E needs on the other. Too far in one direction and the M&E system becomes rigid and bureaucratic. Too far in the other direction and the M&E system loses coherence, and risks becoming a set of separate M&E systems that do not interact with each other in any meaningful way.

Secondly, a balance needs to be sought between the M&E needs of central staff within an organisation and staff working at other levels. This means trying to ensure that a complex M&E system delivers in core, central areas such as organisational learning, accountability upwards to donors, and providing information for marketing and global campaigns; as well as enabling sufficient flexibility for different levels to use M&E for project / programme management, resource allocation, verification and control, and downwards accountability to communities and beneficiaries. Seeking to balance different needs in this way may involve advancing beyond technical considerations and into the arena of power relationships within organisations. In particular, NGOs that are serious about facilitating rights-based approaches, or participatory approaches to M&E, need to develop and nurture a suitable overall framework that enables decentralised planning, monitoring, evaluation, learning and decision-making to take place.

When developing a complex M&E system, one of the biggest mistakes is to be so prescriptive about how M&E should be conducted that it leaves virtually no space for staff at different levels to find their own independent solutions in response to their own particular needs. By contrast, simple M&E systems do not have to address this issue. This is because they usually operate on one, or at the most two, levels. Their task is more to select, collect, analyse and use information for a specific intervention in order to serve a limited number of pre-defined purposes.

Measurement of Change

Another major difference between simple and complex M&E systems is that it can be much harder to define and measure change at organisational level than at project level. This is for a number of reasons. Firstly, many organisations have multiple goals and objectives. These are sometimes in conflict with each other (Cyert and March 1963). Developing one or two statements to express the purpose of an organisation is rarely straightforward. Secondly, organisations do not operate under a single timeframe. Even if the work of an organisation is carried out under a specified strategic period, actual initiatives operate according to different timescales.

Thirdly, and perhaps most importantly, different organisations have different kinds of objectives. It is much more difficult to articulate the goals and objectives of some kinds of organisation than others. This is shown

in the two diagrams in figure 2 below (which can be taken as extreme ends of a spectrum). The diagram on the left depicts an organisation with focused, measurable objectives that outline exactly what it is trying to achieve. For example, the Jubilee Debt Coalition, formed at the end of the last century, had a single focus on trying to bring about the cancellation of unsustainable developing country debt. Another example is ECPAT International, which was set up with a mandate to support the UN 'Agenda for Action' on child commercial sexual exploitation. Large organisations with a single sector focus – such as Sightsavers – might also be closer to this end of the spectrum. Their strategies may change over time, but the end goal remains the same and can be reasonably easily articulated and, perhaps, measured.

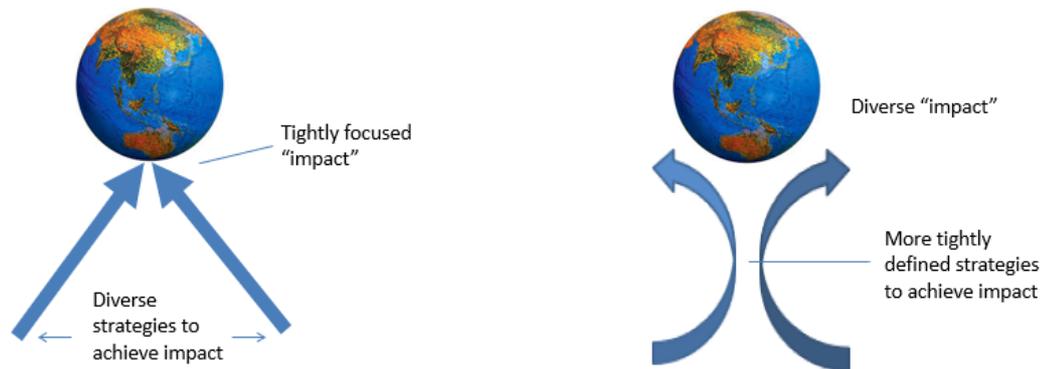


Figure 2: Different types of goals and objectives

Organisations that fall towards the right side of the diagram, on the other hand, use their available resources to maximise their impact, but this impact might be spread widely, and look very different in different places. This means the overall impact of these organisation may not be easy to articulate or measure, even if the impact of individual projects and programmes within them can be. Often the best that can be done is to list or illustrate the different impacts of the various initiatives. This does not mean these kinds of organisation are necessarily unfocused. In fact, some organisations at this end of the spectrum may have a very specific focus on a strategy or tactic they employ in order to achieve their goals. For example, Oxfam has at times presented itself as a campaigning organisation, whilst Voluntary Service Overseas (VSO) has always had a focus on supporting developing countries through the work of experienced and professional volunteers. But for such organisations the question is not always *“how can we achieve our goal?”* but rather *“how can we maximise our impact given the resources we have?”*

In practice, many organisations combine elements of both diagrams (and some are even more flexible, focusing neither on impact nor strategies, but instead simply responding to opportunities as they arise). But organisations more closely aligned with the left-hand diagram generally find it much easier to articulate, and therefore measure, their impact in terms of a small number of specific overall goals or objectives. On the other hand, organisations that work in multiple sectors, or have expertise in a particular strategy, such as campaigning or capacity building, generally find it much harder to do this.

Finally, even if the work of an entire organisation can be measured, beyond a certain level of complexity it is almost impossible to establish a reasonable counterfactual (an estimate of what the world would have been like without the organisation, or if the organisation had invested its resources differently). This means the overall work of an organisation (or complex programme) inevitably comes down to an assessment of what has been achieved compared with other hypothetical possibilities – a judgement made by weighing evidence and coming to a reasoned conclusion rather than a measurement.

Working with complexity

A related challenge is the complex nature of many organisations. Recently, there has been a large growth of interest in complexity and adaptive management. The term complex has a distinctive meaning in social development. In the Cynefin Framework (see figure 3), Snowden and Boone (2007) describe the different domains in which decision-making can take place. In the **simple** domain the relationship between cause and

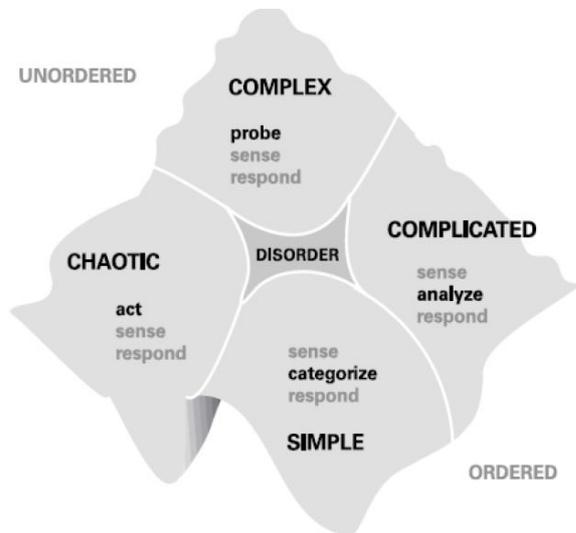


Figure 3: The Cynefin Framework

effect is well understood and is linear. For example, in an immunisation programme the procedures for immunising children are well known, and if the task is done properly then the results should be guaranteed.

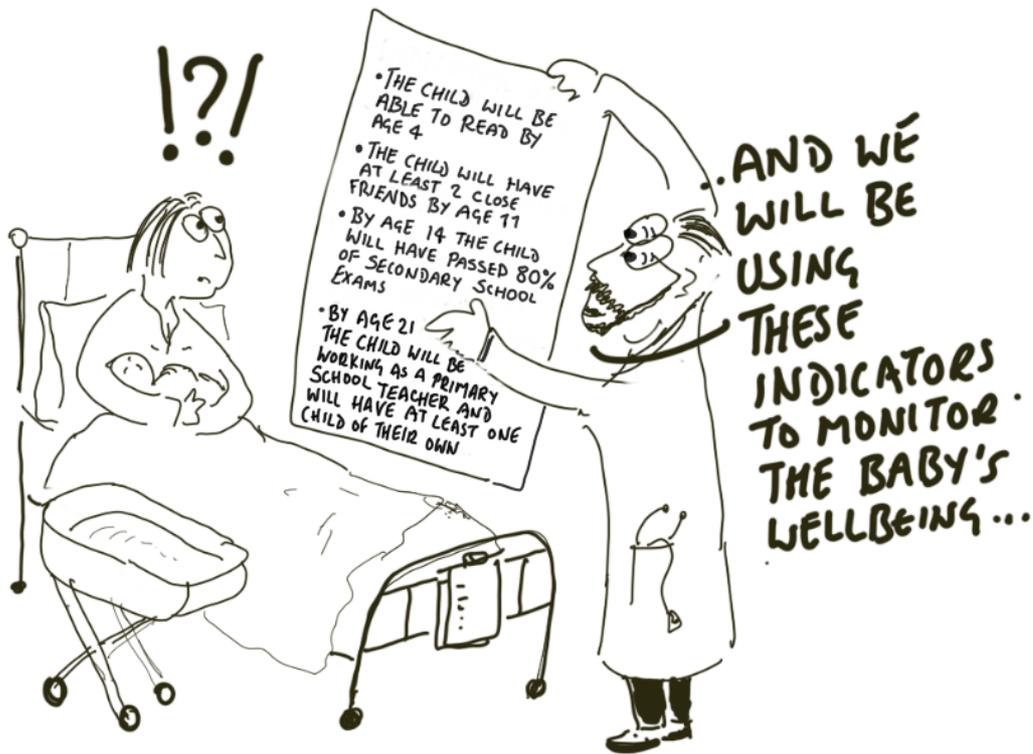
In the **complicated** domain more work may be needed to establish cause and effect. For example, planning and building a new hydro-electric dam that provides irrigation and power to surrounding areas might be a very complicated task, requiring a great deal of expertise. Nevertheless, clear, linear rules can be established, and a plan developed that, if designed well and followed properly, should lead to the desired establishment of the dam.

By contrast, in the **complex** domain cause and effect are not always possible to

establish in advance and are often more obvious in hindsight. Complex programmes are unpredictable and may be affected by many influences over their lifetime. Similar programmes operating in different environments can generate widely different results, even though the plans developed, and actions taken, were the same. For example, an NGO might implement a programme involving mobilisation work in a set of communities. The communities may vary enormously in their response to the work, and may be exposed to numerous influences outside of the programme's control. Consequently, similar interventions with different communities might lead to completely different, and unpredictable, results. This means that programmes operating in the complex domain need to constantly test, innovate, experiment and adapt rather than rigidly follow a pre-defined plan.

Of course, many organisations and programmes work in complex or uncertain environments, and many organisations operate a variety of different programmes and projects ranging from the simple to the complex. But even if an organisation works purely on 'simple' projects, it is likely to be working as a 'complex' programme overall. It will be subject to multiple influences; it will have to make decisions about how and where to invest resources based on evolving situations; it will have to continuously adapt; and it may operate in constantly changing or unpredictable environments. At worst, large NGOs working in multiple countries and sectors may have to adapt to every major change in the global political, social and economic environment.

This has an important consequence, namely that pathways to change cannot accurately be predicted beforehand. Organisations and complex programmes often are unable to say exactly how they are progressing towards their goals, even if those goals are clearly articulated and are susceptible to measurement. This matters because many M&E tools and concepts used within international development are based on an assumption, derived from project-level M&E, that change, and pathways to change, can be accurately measured.



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When working with complexity it is not possible to predict in advance exactly what will happen, and linear results frameworks may not be appropriate.

Challenges of measurement and complexity for M&E

So how do the challenges of measurement and complexity affect complex M&E systems? The first casualties are **linear results frameworks**, such as the logical framework. Organisations and complex programmes are almost always working in environments where M&E frameworks need to be flexible, and where pre-defined indicators and targets may be of less value than in simple, time-bound projects. Most complex M&E systems need to work with and through more adaptable results frameworks. Of course, many organisations are still expected to develop logical frameworks for donors, but these are more often used to illustrate some of the changes resulting from their work, or to succinctly summarise their overall programme. The logical frameworks are rarely used for managerial purposes.

Results-based management (RBM) also needs to be treated differently at organisational level. RBM (see box 3) can be described as *'systematically gathering and analysing information to understand whether institutions, policies and programmes are effectively and efficiently producing the expected results – and how improvements can be made for future performance'* (OECD 2014). Few would disagree that managers should take account of results when making decisions. But if an organisation has no accurate way of effectively measuring overall performance it becomes more difficult to apply RBM concepts. This does not mean that results should not be considered an important input to management. It just means their relative importance is lessened, and the focus of RBM needs to be more on the management side than the measurement side.

Figure 4 below illustrates this. Each diagram shows a range of processes influencing management decision-making (with the size of the circle denoting their relative importance). The processes listed are the measurement (or assessment) of predicted results, the capture of unexpected and/or negative results, the assessment of changes brought about by other organisations and institutions, the monitoring of changes in the external environment, and the questioning of what else a project or programme could be doing instead of what it is doing.

The diagram on the left represents the importance of the respective processes in a straightforward, time-bound project, such as one delivering mosquito nets in a village to limit malaria infection. Here the measurement of predicted results is a vital ingredient of management decision-making. A manager would need to know whether mosquito nets are being delivered on time, whether people know how to use them, and whether they are using them effectively. All of the other processes are there to some degree or other, but they are relatively less important under normal circumstances. For example, managers within the project are unlikely to spend too much time thinking about alternative ways to reduce malaria in a village.

The diagram on the right shows the influence of the different processes with regard to the entire work of an NGO. A great deal more time is usually spent by senior management considering potential courses of future action and monitoring the external environment, including major political or economic events, and correspondingly less is spent scrutinising predicted and observable results. This is both because it can be extremely difficult to measure change at organisational level (as explained earlier) and because the success of an NGO often depends more on agilely manoeuvring the external environment to take opportunities when they arise, and anticipate and avoid risks or threats. Another factor is the long timescales needed to observe impact in complex situations. An organisation or complex programme often cannot wait to assess long-term impact before making decisions; it needs to constantly act and react to navigate its environment.

Box 3: Different elements to RBM

There are a number of key elements to RBM. These include the following (see Bakewell and Garbutt 2005; Mango 2014).

1. The identification of clear and measurable objectives.
2. The identification of indicators to measure progress towards objectives.
3. The setting of targets associated with objectives and indicators.
4. The establishment of a monitoring system to regularly collect data and compare targets with actual results.
5. The use of evaluations to provide complementary performance information that is not available from monitoring systems.
6. The use of performance information for internal management accountability, learning and decision-making, as well as for reporting to external stakeholders and partners.

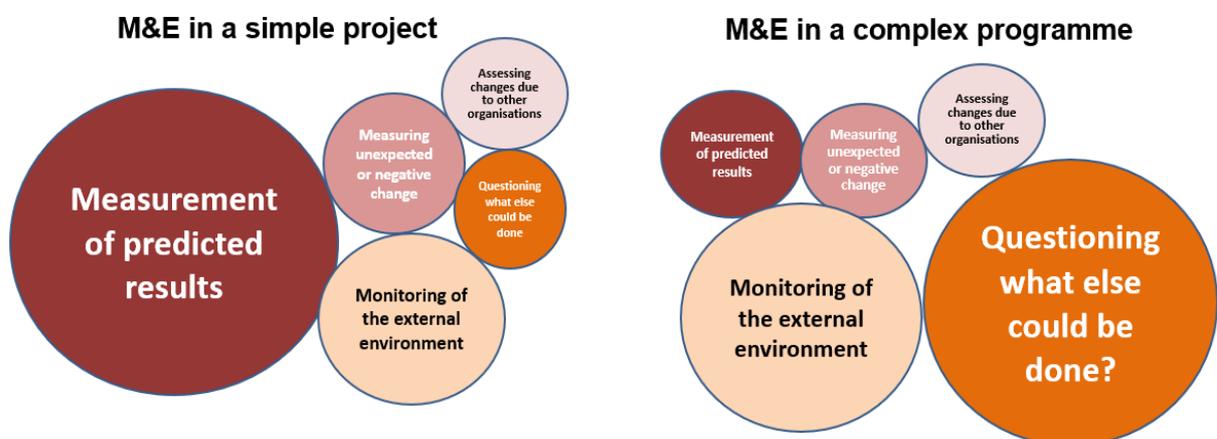


Figure 4: Results-based management in different scenarios

I am not suggesting that results-based management should not be applied within complex M&E systems. Rather, RBM needs to be applied differently than when being used within a project M&E system. In a complex M&E system the measurement of results remains an important influence, but is more likely to be used to *inform* decision-making and is less likely to *drive* decision-making. While consistent with the principles of RBM, this does not reflect how some stakeholders like it to be applied.

Another challenge within complex M&E systems is how to engage with the **value-for-money** agenda. Most organisations and complex programmes are able to report adequately against three of the four 'E's – efficiency, economy, and equity – as these do not rely on overall measurements of change. But the fourth 'E' of effectiveness can be problematic. If an organisation or complex programme cannot easily measure its overall performance then it becomes hard to assess its overall value-for-money. By implication, many of the traditional tools used by NGOs to assess value-for-money at project level, such as Cost Benefit Analysis (CBA) or Social Return on Investment (SROI), simply do not work at organisational level.

NGOs operating complex M&E systems therefore need to find different ways to engage with the value-for-money agenda. There is no doubt that many organisations and complex programmes could find better ways of doing this – and many are actively trying – but in this regard the expectations of certain stakeholders, such as donors, boards or trustees, are at times unrealistic. No institutional donor is able to accurately measure its effectiveness at portfolio level, yet they often expect supported NGOs to do so. As with RBM, therefore, the challenge for staff designing or implementing a complex M&E system is to find alternative ways to approach the problem, whereas the challenge for external actors is to recognise that a complex programme or organisation is not just a large project, and cannot be treated as such for M&E purposes.

Summary

Complex M&E systems are not the same as project M&E systems. They need to be treated and understood differently. Some things that work well at project level do not work at the level of entire organisations or within complex programmes, or work differently. Project-level M&E solutions cannot simply be exported to organisational level.

Perhaps the biggest challenge for complex M&E system practitioners is the absence of common rules, processes and guidelines. Each complex M&E system has to be developed according to the needs of the organisation concerned. Whilst the experience of other programmes and organisations may be useful, those tasked with designing complex M&E systems often have to find unique solutions. An understanding of basic M&E principles and processes is obviously necessary, but it is not sufficient on its own, and a deeper appreciation of how complex M&E systems work in practice is needed.

4. HOW COMPLEX M&E SYSTEMS WORK

There is no agreed and accepted framework for conceptualising a complex M&E system. However, most complex M&E systems appear to contain up to four distinct components, which are examined in turn:

- the systematic, continuous selection, collection, analysis and use of information across an organisation or complex programme;
- planned, periodic studies, designed to assess specific interventions in greater depth;
- periodic exercises, designed and implemented in reaction to M&E findings or changes in the external environment; and
- decentralised M&E work carried out to meet different purposes at different levels of an organisation or complex programme.

Systematic, continuous M&E

Virtually all complex M&E systems involve the systematic, continuous selection, collection, analysis and use of information. Information is regularly collected at different levels of an organisation, and is then analysed and used, both at the level it was collected and often at other levels as well. For example, information collected in multiple projects may be brought together and analysed at programme, country or sector level, as well as within the projects themselves. Ideally, this allows information and analyses to flow between the different levels of an organisation, not only upwards within a hierarchy but also back down again, and horizontally across projects, programmes, sectors, countries and regions.

Systematic, continuous M&E is usually designed to enable comprehensive coverage across a whole organisation. For example, all projects in a programme may have to report in the same way, or collect some common indicators; all programmes may have to summarise information from project reports and pass those summaries on to country level; and so on. NGOs that work in multiple sectors or regions might have particular approaches that only apply within those sectors or regions. For example an NGO might require all relevant health projects to adopt a specific, industry-standard methodology to assess change. But by and large the intention is to implement an M&E system that covers the whole organisation (or complex programme). Even if different parts of an organisation have to do different things from time to time, they are all basically covered by a single system.

In practice, this means that M&E processes need to be formally connected across an organisation. There are many ways of doing this, as box 4 shows (see Simister 2009). Some NGOs link multiple M&E elements at the same time. For example, they might require all projects and programmes to develop objectives derived from overall strategic objectives; they might expect all relevant projects and programmes to use the same indicators; they might compel all projects to use the same reporting templates; and they might insist that all projects enter data onto the same database. Other NGOs are more flexible, and only require different M&E elements to be linked in one or two ways. This is a difficult balancing act. If M&E elements are linked in too many areas an M&E system might become inflexible and bureaucratic. Too few, and the overall M&E system might be incoherent.

NGOs often choose to develop one or more key **highlights** or concepts which can be used to tie a complex M&E system together, whilst leaving more flexibility in other areas. For example, many organisations insist on consistent planning and reporting templates, whilst leaving options for monitoring and evaluation relatively open. Self Help Africa asks relevant projects to implement Household Economic Analysis (HEA) surveys. An integral part of World Vision's LEAP (Learning through Evaluation with Accountability and Planning) approach is a menu of common Transformational Development Indicators (TDIs), which all projects and programmes are encouraged to use. Save the Children UK in the 2000s operated a Global Impact Monitoring (GIM) system, designed around a set of five dimensions of change. The Civil Society Support Programme (CSSP) in Ethiopia based part of its M&E system around a set of organisational capacity scorecards. And ActionAid in the 1990s and 2000s based its ALPS (Accountability, Learning and Planning System) around a clear ethos – that of downwards accountability to communities. Each of these organisations and programmes linked their M&E processes in multiple ways, but have (or had) one or two key highlights or concepts which were central to their M&E approach.

However, the systematic, continuous collection, analysis and use of data within a complex M&E system is usually designed to achieve spread rather than depth. It is designed to make sure that the work of an entire organisation (or complex programme) is covered by M&E rather than to focus in on specific initiatives. That is more often the province of in-depth studies, sometimes known as deep-dives.

Box 4: Common ways of linking M&E elements in complex M&E systems

Many organisations develop **principles** in areas such as the participation of beneficiaries in M&E, the gender focus of M&E, or the downwards accountability of NGOs to partners and communities. All levels of an organisation are then expected to adhere to these principles, thereby helping ensure consistent M&E approaches.

Some NGOs expect different levels to establish **theories of change** that contextualise broader, organisational theories of change. Theories of change may have to be developed in a consistent manner, or using the same template.

Many organisations stipulate the need for **plans** at different levels, including strategic plans, operational plans and action plans. Often the plans are designed to feed into one another. Sometimes different levels are expected to develop their plans using the same or similar approaches, such as political economy analysis, stakeholder analysis or gender analysis. Commonly, consistent planning templates are required. This means that staff and partners at the same level of an organisation all have to produce their plans according to the same format. Planning tools, such as the logical framework, may be prescribed throughout an organisation.

NGOs often set broad strategic **objectives** and then expect lower levels of the organisation to identify their own objectives that feed into these. Common templates may be developed and objectives may need to correspond to fixed standards, such as applying SMART rules. Some NGOs adopt broad dimensions or domains of change, and then expect all levels of the organisation to set objectives specific to the local context that fit within those domains.

Indicators are often linked between different parts of an organisation. Quantitative indicators can be aggregated across different levels, and qualitative indicators can be captured and summarised using broad framing or basket indicators (see section 6). Sometimes, different parts of an organisation are required to use standard indicators, or to choose from menus of indicators. NGOs may also develop protocols for who should be involved in defining and collecting indicators and how. Many organisations require mainstreaming or cross-cutting indicators to be set in areas such as gender or disability.

Increasingly, NGOs are establishing common learning or evaluation **questions**. These questions are used in areas where change cannot easily be captured through indicators, or where it is hard to predict exactly what the change might look like. Some organisations define broad learning themes and ask different levels to develop more specific questions under those themes.

Often, different parts of an organisation are expected to use specific **tools** or **methodologies**, such as process tracing, quasi-experimental trials or knowledge attitude and practice (KAP) surveys. This allows for a higher degree of summarisation and comparison across an organisation. Toolkits can support this without being overly prescriptive. Occasionally, complex programmes use methodologies such as Outcome Mapping or MSC as the basis for their entire M&E system.

Organisations often require **baselines** to be developed at different levels, but frequently leave the details down to local decision-making. If common methodologies are used then it can be appropriate to insist on common ways to develop baseline surveys (e.g. through HEA studies). Organisations that adopt experimental or quasi-experimental trials may expect standard baselines to be implemented alongside **control or comparison groups**.

If common methodologies are applied (e.g. process tracing, randomised control trials, qualitative comparative analysis (QCA)) then quantitative or qualitative **analysis** may need to be conducted in a consistent way.

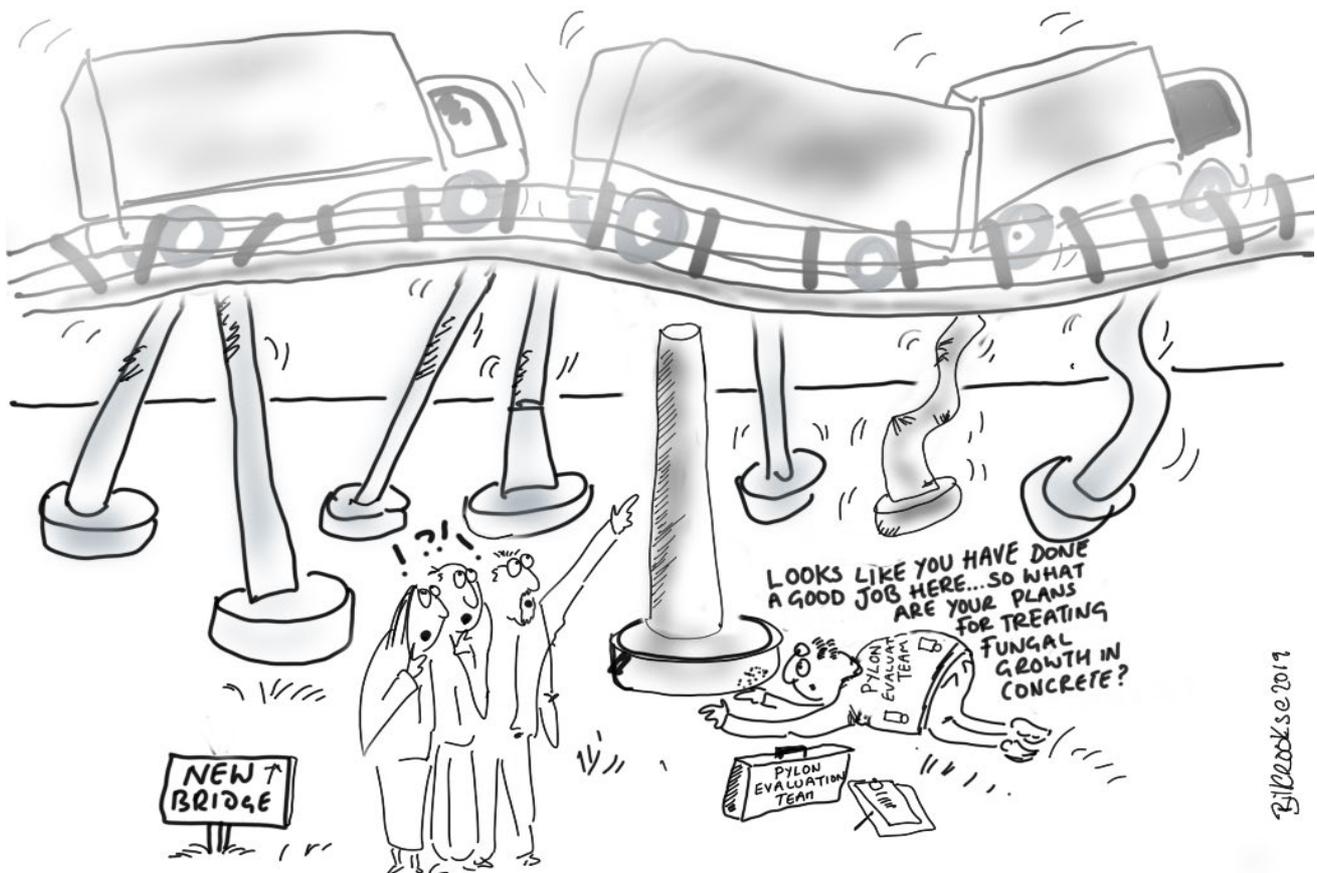
Another approach it is to use common processes to support **learning**. These include databases or IT systems that share learning horizontally across an organisation. Common learning mechanisms such as reviews, workshops, peer-review visits or webinars may be used throughout an NGO. Learning reviews are a key aspect of complex M&E systems in many NGOs. Common action logs or similar vehicles to help translate learning into decision-making can also be useful.

Many organisations develop reporting schedules that specify which **reports** need to be completed, for whom, and when. Often, these have to be completed according to prescribed templates. It is very common for reports to be transmitted throughout an organisation to enable successive levels to reduce and summarise reports from lower levels. Some NGOs that work through operational partners expect them to fill in the same reports in the same way at the same time – others show more flexibility. NGOs often have prescribed processes for feeding information back to those producing reports.

Planned, periodic M&E

Whilst continuous M&E is designed to enable comprehensive coverage, planned, periodic M&E is used to investigate specific interventions in greater depth. This is normally implemented through discrete exercises such as reviews, evaluations, impact assessments or research studies. These exercises may provide more reliable information than systematic, continuous M&E because they are carried out by dedicated teams working over relatively short time-periods, and are often well resourced, which means that more rigorous methods of data collection and analysis can be used. However, a limited number of these exercises can be carried out in any given period because of the higher costs.

In a complex M&E system it is important that these planned, periodic exercises are properly integrated with systematic, continuous M&E processes, and with each other. This in turn means that resources have to be employed strategically to ensure that an organisation reaps the maximum possible benefit from the exercises. This has not always been done well. Preskill and Mack (2013, p5) argue that in many organisations the *“meaningfulness and usability of evaluation information has been limited because of its disconnection from strategic and organisational-level decision making. Even in the most well-intentioned organisations – with leaders who believe in evaluation’s ability to support individual, group, and organisational learning – evaluative thinking and practice are loosely aligned, fragmented, and siloed.”* They further argue that: a) most evaluations focus on project or programme questions only, and are not designed to answer important strategic questions; and b) what gets evaluated often reflects the needs of particular individuals or departments rather than an organisation as a whole.



Evaluations that focus on individual projects only may not address wider strategic questions that are important to an organisation

Some of this cannot be helped. Decisions over what to evaluate are often made by the donors who fund the evaluations, and an organisation may have little control in this area. Nonetheless, there are ways to take a more strategic approach.

- Organisations can develop structures and processes to determine the timing, focus and purpose of the different exercises that are conducted with their own resources (ibid). This helps to ensure the exercises are selected and designed to answer the questions an organisation most needs to answer (and that cannot be answered through systematic, continuous M&E). Many of the UN agencies, for example, have systems whereby evaluations are strategically chosen each year to focus on different slices of their work, such as locations, sectors, approaches, cross-cutting issues, institutions, interventions or events.⁵
- Some organisations operate sampling strategies to ensure that findings from multiple exercises can be used to infer wider conclusions. This is usually done via different kinds of qualitative (purposeful) sampling methods, or by using random sampling to build up statistically significant findings over time. For example, Oxfam GB, in addition to aggregating quantitative outputs across all its projects, evaluates the impact of its work by reviewing a sample of randomly selected projects under thematic areas, using standard methodologies appropriate to those thematic areas (Oxfam u.d.).
- Many organisation develop common evaluation or learning questions (or themes) that can be explored across multiple evaluations, reviews, impact assessments or research studies. This means that an evaluation, for instance, could focus in-depth on an individual project, programme or approach, whilst still addressing generic questions, designed to contribute to organisation-wide learning.

It is not always easy to draw an arbitrary line between continuous and periodic M&E. In complex M&E systems a rule of thumb might be that systematic, continuous M&E describes work carried out in weekly, monthly, quarterly or annual cycles, whereas planned, periodic M&E is usually carried out over longer timescales. But the difference between continuous and periodic M&E work may not always be clear (see case study below).

CASE STUDY: Project Impact Reviews in CDKN

The Climate and Development Knowledge Network (CDKN) supported over six hundred projects, working at the intersection of climate change and development. To assess medium- to long-term sustainable change, CDKN developed a system of carrying out project impact reviews at a time somewhere between the end of a project and two years afterwards, depending on the type of project.

The project impact reviews were each individual exercises with a clear evaluative function (assessing medium- to long-term results and sustainability). Yet they were also carried out as part of a wider M&E system. They were mostly conducted by internal staff, but occasionally by external stakeholders where necessary. Each review could therefore be viewed as an evaluation of an individual project, but also as part of a systematic, continuous M&E process, designed to feed into regular organisational reporting and decision-making.

Reactive M&E

Whether continuous or periodic, the two components of a complex M&E system described so far within this section have one thing in common. They are both planned in advance. Thus, a complex M&E system may comprise the regular and continuous collection, analysis and use of information throughout an organisation, and also planned, in-depth assessments at different points. Sometimes, this generates findings which can

⁵ This does require a large, independent budget for M&E. Admittedly few NGOs have these kinds of resources.

immediately be used at organisational level to make strategic decisions – for example, adjusting working approaches, changing strategy or even fundamentally questioning an organisation’s vision and mission. But M&E findings arrived at through planned M&E do not always provide information that can be acted on immediately.

This is largely due to the difficulty of getting accurate and consistent information from across an organisation or complex programme. This is especially true if much of the information is qualitative, or is a mixture of qualitative and quantitative information. Within social development there is a huge body of literature on qualitative analysis. However, most of this is based on best practice qualitative research. It assumes that people are undertaking large qualitative research studies or evaluations, properly resourced, and with sufficient time for people to analyse information, regularly going back and forth between data collection and analysis at field level.

This is a world away from how many NGOs operate. Within larger NGOs, for instance, it is very common for information to be collected at different times in different places and then transmitted up a hierarchy. For example, project managers within partner organisations may write brief reports on progress, based on their knowledge of projects or ongoing project monitoring. An International NGO may take summary reports from many partners in order to produce their own country, sector or regional synthesis reports. These may later be amalgamated into an overall organisational report. At each level from project to organisation a degree of qualitative analysis takes place, although not usually to the standards applied within a fully-resourced research study or evaluation. However, as information travels up the hierarchy people conducting the analysis begin to lose sight of how information was collected, and who collected it. This effectively means the processes of data collection and data analysis become divorced. Those analysing the data further up the hierarchy were not involved in its collection, and may have had no input into decisions over when, why or how data was collected. Ruff and Olsen (2016) call these people *infomediaries*.

The result at organisational level is that M&E findings often provide an indication that something interesting is happening – for example, something good that needs to be replicated, a risk or threat that needs to be addressed, or an indication that an organisation’s theory of change may not be correct – but may not provide all the information needed for management to make a firm decision. Indeed, at organisational level and within complex programmes most systematic M&E findings come with at least some level of uncertainty. This is not a major problem if M&E is purely being used for accountability purposes. But if NGO managers wish to take firm decisions based on M&E information at organisational level they need to know what level of uncertainty is acceptable. Is it ok to make a timely decision based on information that is only *likely* to be accurate? Or should more time and resources be spent increasing the *certainty* of findings?

The answer to this challenge depends on the implications. If M&E findings suggest a change that is relatively unimportant then a decision can often be made based on imperfect or incomplete information. But if the change is likely to have profound – even life or death – consequences then it is sometimes necessary to carry out further **reactive M&E** work to confirm (or reject) earlier, tentative findings. This might involve facilitating sense-making activities with staff or partners; introducing new tools or templates into systematic, continuous M&E; carrying out a new evaluation or impact assessment; engaging in action research; or even planning and executing a large, formal research project. In essence the role of systematic M&E work within a complex M&E system, at organisational level, is often to identify emerging patterns of change (or learning) which then become the focus for further M&E and research. Ultimately, this should happen when: a) there is a clear need for the new information; b) there is a clear plan for how to use any findings; and c) when an organisation judges that the costs of carrying out the work are matched or outweighed by the potential benefits.

Sadly, however, many NGOs carry out little or no reactive M&E. Sometimes, this is because project and programme planning and implementation processes are not flexible enough to warrant reactive M&E; or because there is no conducive culture of interrogative learning within an organisation; or because the unreliability of systematic M&E is not recognised or understood. Sometimes it is because fixed budgets for

M&E need to be planned and agreed well in advance, or it may simply be that reactive M&E is not seen as an important ingredient in a complex M&E system. Whatever the case, the truth is that reactive M&E is often vastly underused within complex M&E systems. The concept of reactive M&E is explored further in section 7.

Box 5: Developmental evaluation

There is a lot of overlap between reactive M&E in a complex M&E system and developmental evaluation. Developmental evaluation is a concept first promoted by Michael Patton (2010). It involves long-term relationships between evaluators and project or programme staff. In developmental evaluation, the job of an evaluator is to facilitate discussions around evaluative questions, and encourage project or programme managers and staff to continuously collect, analyse and use information in order to support ongoing decision-making.

Because evaluation is ongoing, rather than carried out at specific points, feedback can be provided on a continuous basis. This in turn means that adjustments to projects and programmes can be made on an ongoing basis. Development evaluation is therefore an approach to evaluation that is particularly appropriate for work in complex or uncertain environments, where evidence-based decision-making is required throughout a project or programme.

Whilst in a traditional evaluation, tools, methods and approaches may be chosen to support the needs of external agencies, and may be pre-defined at the start of a project or programme, in development evaluation they are chosen according to the needs of the project or programme at the time. But this means that budgets and plans need to be flexible to allow M&E teams to rapidly plan, design and execute new M&E work where and when it is most needed.



If M&E findings point to a change that is likely to have important consequences then it is sometimes necessary to carry out further reactive M&E work to confirm (or reject) earlier, tentative findings based on imperfect or incomplete information.

Decentralised M&E

In the previous section I argued that a common mistake made when designing complex M&E systems is to be too prescriptive about how M&E should be conducted at different levels of an organisation. Whatever the requirements of central staff, M&E (and especially monitoring) are primarily management tools that are vital to ensure the appropriate implementation of projects and programmes on an ongoing basis. NGO staff or partners working at project or programme level routinely spend a vast amount of their time monitoring activities, deliverables, budgets, finances, procurements, contracts, compliance, relationships, logistics, equipment, personnel, risks and actions, as well as the external environment. They may also carry out M&E designed to assess change and generate learning, sometimes for internal needs and sometimes to report to local stakeholders, such as beneficiaries, local government agencies or local donors and supporters.

Much of this work is (and should be) under the radar of staff running a complex M&E system. It is carried out at local levels for local purposes, and there is no need for central staff to know the details. A conservative estimate is that over 80% of the M&E carried out within a large INGO is carried out for local-level purposes and is not integrated into the wider system. However, it is important that staff responsible for designing and implementing a complex M&E system are very clear about what is compulsory and what is not, and communicate this to the rest of the organisation. Staff and partners at different levels of an organisation need to know what they all have to do in the same (or a similar) way in order to meet the wider needs of the organisation, and where they are free to develop their own solutions in response to their own needs.

There is often a spectrum of choices. At one end of the spectrum, different levels of an organisation can be required to carry out certain M&E tasks in exactly the same way. At the other end of the spectrum, different levels may have complete autonomy to develop M&E policies, processes and practices in some areas of M&E in response to their own. And there are different levels of autonomy within this spectrum (see figure 5 below).

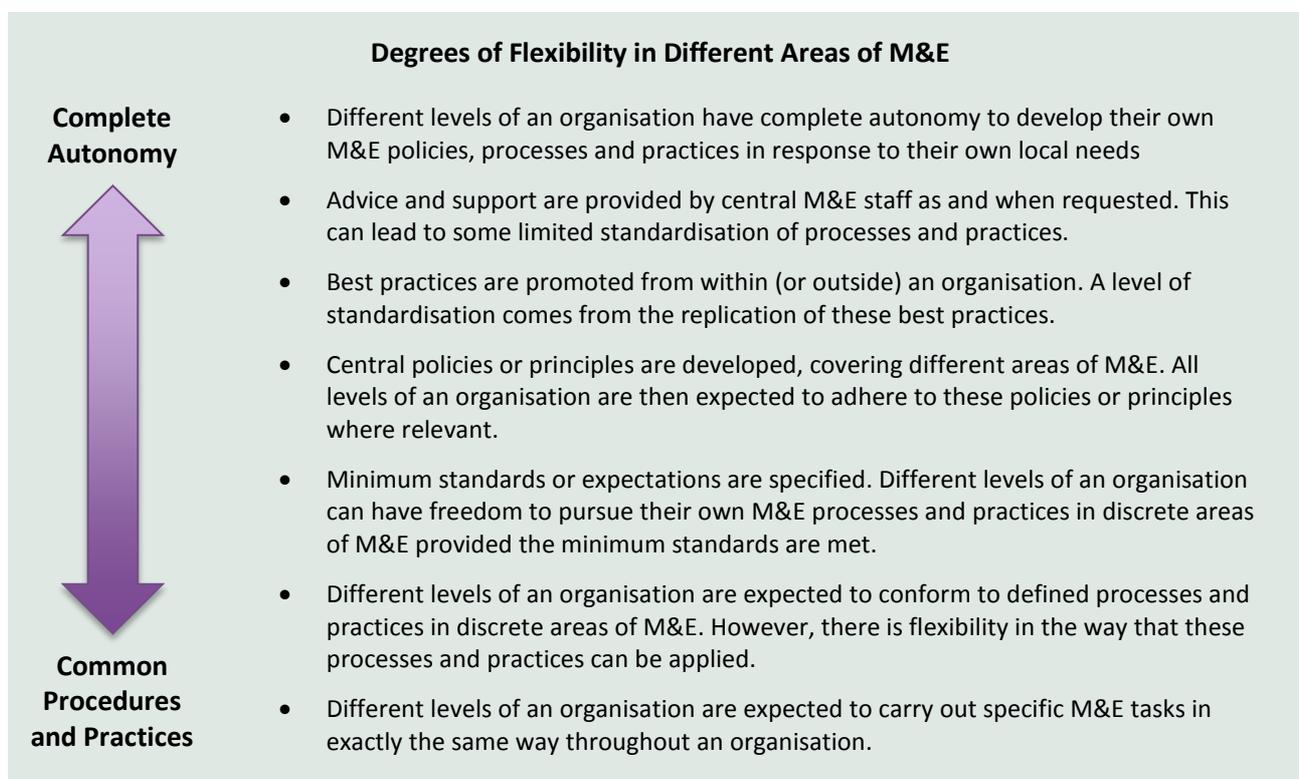


Figure 5: Degrees of flexibility in different areas of M&E within a complex M&E

Most complex M&E systems, whether explicitly or implicitly, enable different degrees of autonomy for different levels of an organisation across different areas of M&E. So, for example, all projects within an organisation may have to produce a logical framework at the start, collect a set of core indicators, and write quarterly and annual reports. But they may be free to develop wider indicators for their own use, choose their own methods of data collection and analysis, design their own review or learning processes, etc. At country level, NGOs might be required to hold annual sense-making reviews, produce annual reports, or evaluate a set number of projects annually. Health sector projects might be required to use a specific methodology to monitor health outcomes, whilst projects in the education sector might be freer to use whatever methodologies they choose. And different programmes might be free to develop their own Theories of Change if they choose to do so, but be obliged to communicate results to their partners in a locally-appropriate way. The combination of possibilities is endless.

Sometimes there are nuances within different degrees of flexibility. For example, a project might have to produce quarterly reports, but be allowed some degree of control over the format of the report, rather than having to fill in a fixed template. This is often vital when partner projects or programmes are funded through multiple donors. Or a country programme may be expected to implement regular learning mechanisms, but have the freedom to decide on the precise nature of those mechanisms according to local culture and needs. Sometimes, staff designing complex M&E systems opt to look for coherence in non-prescriptive ways, such as promoting different ideas from within an organisation, developing best practice manuals, or developing policies and principles for conducting different elements of M&E. Ultimately, a complex M&E system should comprise a very clear set of rules that govern how M&E is conducted throughout an organisation, enabling both coherence and flexibility. This will allow the organisation to maintain a crucial balance between using M&E to serve its central needs on the one hand, and serving the needs of staff at local levels on the other.

The different components combined

If a complex M&E system is to work effectively for all levels of an organisation then the four components described in this section need to work together coherently (see figure 6). Thus, systematic, continuous M&E may draw on the findings of periodic, reactive or decentralised M&E. For example, annual M&E reports produced by projects may draw on evaluation findings, special studies, or ongoing, informal data collection designed to serve the needs of project staff. Reactive M&E is often carried out in response to findings generated through continuous or periodic M&E. Planned, periodic M&E exercises, such as evaluations, impact assessments or major reviews, may draw on the findings of systematic, continuous M&E, as well as generating their own new findings and analyses. At the same time, the findings from planned, periodic M&E exercises may help to dictate the type of information that is routinely collected and analysed through systematic, continuous M&E. And findings from both planned, periodic and reactive M&E should be stored as part of the wider system so that lessons are not lost over time.

The precise balance between these components changes from organisation to organisation (or from complex programme to complex programme). This is one of the reasons why it is so hard to draw up a blueprint for a complex M&E system. Every organisation (or complex programme) is different, and so every organisation needs a different balance. Some, especially those working within a rights-based paradigm or with a heavy emphasis on beneficiary participation, need much more decentralisation than others, and are most keen to ensure M&E works for partners and beneficiaries. On the other hand, NGOs working in complex or uncertain environments may require more reactive M&E than organisations working in areas where there are tried and trusted solutions. And organisations heavily funded by institutional donors may need to carry out more planned, periodic M&E in the form of evaluations and impact assessments, whilst those with their own independent sources of money may choose to invest in building the capacity of internal staff to carry out effective systematic, continuous M&E.

My belief, based on more than twenty years of engagement with complex M&E systems, is that the best systems combine all four components effectively, and ensure that the interactions between them are

constantly balanced and adjusted over time. The next section looks at how these different components, working in combination, can help support organisational-level management, accountability and learning in order to improve.

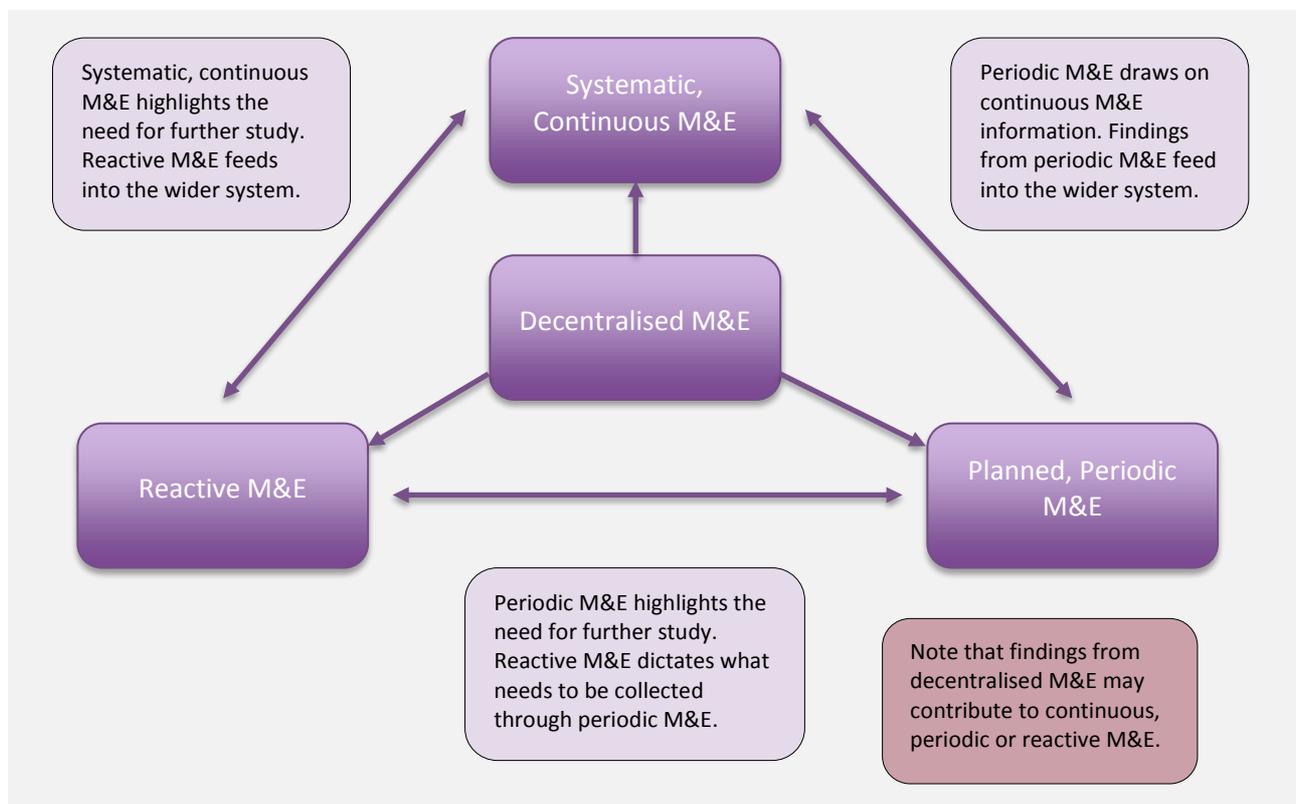


Figure 6: Combination of different components within a complex M&E

5. FUNCTIONS OF A COMPLEX M&E SYSTEM

The three most important functions (or purposes) of a project M&E system are usually project management, accountability, and learning in order to improve performance. Some project M&E systems focus on just one of these functions; others focus on two, or all three. A complex M&E system usually needs to serve the same three functions, although not in exactly the same way, and is ultimately judged on how effectively it does so. This section of the paper looks at each of the three functions in turn.⁶ It is primarily concerned with how the three functions can be addressed at overall organisation (or complex programme) level.

⁶ It is important to acknowledge that M&E systems often need to support a variety of other purposes. These include providing evidence for advocacy or policy influencing work; enabling supervision and control; supporting resource allocation; enhancing communication between different stakeholders; supporting marketing or fundraising; and enhancing the empowerment of different stakeholders. All these are routinely supported by many complex M&E systems. However, for the sake of simplicity this paper concentrates on the three core functions only.

Organisational Management

At project level, M&E is routinely carried out to support day-to-day management. This includes tracking resources, ensuring they are used properly, addressing problems as they arise, taking advantage of opportunities where they occur, and generally ensuring that a project is managed in the best possible way. As stated in the previous section, NGO staff often spend a huge amount of time monitoring activities, deliverables, budgets, finances, procurements, contracts, compliance, relationships, organisational capacity, logistics, equipment, personnel, risks, media and actions, as well as the external environment. This kind of monitoring is often ignored within academic debates on the use of M&E information, although it probably accounts for the vast majority of time spent on project-level M&E.

At organisational level, most NGOs find it relatively straightforward to develop simple, numeric indicators to provide management information in areas such as human resources, finance, marketing and administration. Sometimes these indicators can be collected directly at organisational level (e.g. 'the amount of money received from core funders') and sometimes they can be aggregated from different parts of an organisation (e.g. 'ratio of male : female staff').

Staff working in the central M&E department of an organisation may not need to become involved in this area of work at all. For example, in a large NGO a human resources department would be expected to collect and hold information on the number and percentage of jobs vacant, or the skill level and salaries of staff. An administrative department may capture information on logistics, equipment and premises. Finance departments normally hold information on budgets, expenditures, procurements and reserves. A communications department might hold information on registered supporters, media references or private donations. A fundraising team would normally capture information on donors and funds raised. An IT department may keep a database of contacts. And so on. Again, this points to a big difference between a project M&E system, where the same staff are often involved in collecting and analysing information across all these different areas of work, and a complex M&E system, where tasks are more likely to be compartmentalised.

Many NGOs develop infographics or dashboards to present organisational information to senior management, boards, trustees or donors on a regular basis. This is then used to help manage the organisation (or complex programme). Central M&E departments in NGOs are most likely to be involved when required to present information on activities, results or reach across an organisation. This usually means summarising or aggregating information from different places within an organisation. This can be a difficult and challenging task, and is covered in section 6.

Accountability

Accountability means different things in different circumstances, depending on who is accountable, to whom, and for what. Broadly, NGOs are subject to four types of accountability (see box 6, based on Hayman (2013)). Accountability covers numerous dimensions, many of which are not necessarily related to M&E. These include transparency of decision-making, financial accountability, safeguarding, due diligence, and

With all the time spent on monitoring activities, deliverables, budgets, finances, procurements, contracts, compliance, relationships, organisational capacity, logistics, equipment, personnel, risks, media and actions, it is no wonder NGO staff in the field have little time to engage in academic debates on whether learning or accountability is most important for M&E

open and honest dialogue. M&E tends to become most (but not exclusively) involved when NGOs demonstrate accountability for results – whether deliverables (outputs) or changes (outcomes or impact).

Within a complex M&E system, at organisational level, M&E is most commonly used to demonstrate accountability upwards to donors, governments or supporters. Most NGOs are expected to report regularly to these stakeholders on a range of issues, such as compliance, financial management and risk management, as well as providing information on results. Reporting results at the level of activities or outputs can be difficult, especially for organisations or complex programmes that implement many kinds of initiatives in different locations. The task is even harder when NGOs are expected to summarise or aggregate information at the level of outcomes or impact (see section 6).⁷

Box 6: Different types of accountability

1. Upwards accountability normally means the accountability of a civil society organisation (CSO) to its public or private donors. It can also include accountability to host governments or regulatory bodies.
2. Downwards accountability usually means the accountability of a CSO to its beneficiaries, to any partners it funds or supports, or to other stakeholders that might be affected by its work.
3. CSOs can also demonstrate sideways or horizontal accountability. This means being accountable to sister organisations working in coalitions, partnerships or networks.
4. CSOs may also demonstrate self accountability. For example, small CSOs that represent the needs of their memberships may be accountable to those members. Staff working in a CSO might need to be accountable to managers. And CSOs are often accountable to boards, trustees or steering committees.

Downwards accountability, particularly towards supported populations, is an aspiration for many NGOs. Sometimes, M&E staff implementing a complex M&E system can design relatively straightforward, centralised processes to support downwards accountability, such as sending satisfaction surveys to all supported partners, or regularly providing reports to partners. However, within complex M&E systems downwards accountability is not always emphasised to the same degree as upwards accountability. This is partly because donors and governments usually expect upwards accountability as a condition of funding or support. But it is also partly because of the difficulty of systematically reporting to many different communities compared to a single donor or small group of donors. An NGO working in just a few communities may find it relatively simple to report to those communities in an appropriate way. But NGOs working in multiple locations can find themselves having to report to hundreds of communities, often having to adjust the subject and means of reporting to suit different audiences, such as men, women, children, illiterate or semi-literate people, etc. This would be a daunting task if controlled centrally.

Rather than focusing only on reporting, NGOs that are committed to downwards accountability tend to engage their primary stakeholders in beneficiary feedback mechanisms or participatory planning, monitoring and evaluation (PME) systems. The stakeholders are then able to see how a project or programme is progressing, provide their own analysis and recommendations, and monitor resulting actions. This better empowers them to hold NGOs to account. This kind of downwards accountability is not usually something that staff at the centre of a complex M&E system are expected to handle directly. Instead, staff designing and implementing complex M&E systems are more likely to set the conditions under which downwards accountability can take place. For instance, they can propose principles around participation within PME, or minimum standards for reporting to supported communities. Programmes and projects would then be expected to follow these principles, but adapt them to local needs and contexts through a decentralised system. In other words, a complex M&E system sets the framework within which different parts of an organisation can promote downwards accountability in appropriate ways to different audiences.

⁷ Organisations may also have to demonstrate accountability for key processes such as learning, innovating and adapting. M&E often plays a part in this kind of accountability, although it is less common than reporting on results at present.

Many NGOs successfully manage to integrate elements of downward accountability into their complex M&E systems, alongside measures designed to demonstrate upwards accountability. But some large NGOs have gone even further, and have made downwards accountability the highlight of their planning, monitoring, evaluation and learning systems. The best-known example is the ActionAid ALPS system (see case study below). Putting downwards accountability at the heart of a complex M&E system is a serious undertaking, and not one to be taken lightly. Participatory M&E can be difficult to manage, and often requires significant shifts in power relationships between NGOs and their beneficiaries. NGOs that operate in just a few locations and/or operate close to the ground may find it relatively easy to orient M&E systems towards downwards accountability. Larger NGOs operating in multiple locations, or working through many operational partners, may have to invest significant resources to make it happen, and may find the task considerably harder.

CASE STUDY: ActionAid ALPS system

ActionAid's accountability, learning and planning system (ALPS) was partly designed to strengthen ActionAid's accountability to poor and excluded people. In order to achieve this, ActionAid committed to involving them in all processes of local programme appraisal, analysis, planning, monitoring, implementation, research and review, on the basis that poor and excluded people have a right to take part in the decisions that affect them.

This often meant translating relevant documents to local languages. However, ActionAid's ALPS system also encouraged the use of alternative forms of communication other than lengthy written reports. For example, ActionAid promoted the use of people's art, oral traditions, theatre and song as some of the ways in which people could engage their creative talents and develop insights. ALPS also encouraged open information sharing through bulletin boards and posters, which were easily accessible to communities.

ALPS further required ActionAid to work with poor and excluded people to facilitate their own analyses, critically engaging with what came out of it. This meant that the priorities and perspectives of poor people informed the decisions made at all levels of ActionAid and its partners.

Source: ActionAid International (2006)

Learning and improving

There is near universal agreement that learning should be an important aspect of an M&E system, which is why many organisations now label their systems MEL (monitoring, evaluation and learning) rather than just M&E. However, there is not always a shared understanding of what *learning* means, nor the exact role that M&E should play in supporting it. Many vehicles for learning, such as academic study, training, teaching, research, workshops, conferences, communities of practice, and digital spaces, may be conducted independently of M&E processes. Learning within projects or programmes may also be generated during design and planning phases. And there is a whole branch of individual learning that is largely informal and is not the result of any systematic process.

On the other hand, M&E is routinely carried out for other reasons that have little to do with learning. For example, as already stated, a lot of monitoring is carried out for day-to-day project or programme management, or to ensure compliance with laws and regulations. This information may not be particularly useful for learning.

Nevertheless, complex M&E systems can, and usually do, support learning at different levels within NGOs. This often relies on the development of systems and processes to enable the generation, capture and synthesis of learning, and its sharing and dissemination throughout, and sometimes outside, an organisation. Some of the more common ways in which a complex M&E system can support learning are as follows.

- M&E often involves the generation of new learning, which can then be applied to improve existing or future performance. This learning may result from the collection and analysis of new information, the analysis of existing information, or (more often) a combination of both. The learning can be used at the level at which it was generated, or it can be used by people in other projects, programmes or organisations.
- Individual and collective learning happens within organisations all the time, irrespective of how good or bad an M&E system is (or even whether one exists or not). It is often useful to capture and synthesise some of this learning by recording and storing lessons learned. In this context a lesson can be defined as *“useful knowledge distilled from experience that establishes principles for guiding action”* (Britton 2005, p55). Lessons can range from the very specific, unique to a particular time and place, to broad generalisations which may be adapted and applied in many different situations. Lessons can be used immediately, disseminated, or retrieved at a later date. A good Information Technology (IT) system for handling lessons enables people in one part of an organisation to access, adapt and use lessons generated in another part.
- Some complex M&E systems support processes designed to generate mutual learning between different stakeholders, for example through stakeholder reviews, workshops, peer reviews, exchange visits, seminars, conferences, and mechanisms supported by new forms of IT. These processes create space for stakeholder groups to review and analyse information, and openly discuss successes, failures and lessons learned in a safe environment, thereby generating new lessons or re-identifying old ones.
- Some complex M&E systems promote different forms of participatory M&E. Participatory M&E can support service users or beneficiaries to engage in mutual learning. This can help to instil ownership in a project or programme, as well as generating relevant and useful learning. Sometimes this learning can be applied immediately to improve a project or programme.
- Complex M&E systems often include organisational processes and mechanisms designed to communicate and disseminate learning. Learning can be communicated in many ways, including through written reports, presentations, photographic displays, videos, websites, intranet sites and blogs.
- Complex M&E systems can also be deliberately designed to allow space for people at different levels of an NGO to design their own learning mechanisms and approaches to support their own decentralised needs.

The examples above demonstrate that there are many simple and cost-effective ways for NGOs to support learning within and throughout an organisation or complex programme, and most NGOs do not find this difficult to do (resources permitting). This learning may be facilitated by an M&E department or sometimes via other departments. It may be organised by central staff, or by staff at other levels of an organisation.

Some of the main practical ways of promoting learning through complex M&E systems are incorporating learning objectives (or indicators) into workplans or results frameworks; developing learning questions to be addressed throughout an organisation; ensuring that formal reviews, evaluations and impact assessments have a learning focus; communicating M&E findings to different audiences using different methods; creating safe spaces for the sharing and generation of new lessons; ensuring that report templates contain questions designed to capture analysis, recommendations and conclusions as well as results; developing IT systems to ensure that lessons can be stored and retrieved when needed; encouraging staff to consider how they might engage in M&E-based learning through appropriate training and induction; and devoting a proportion of M&E budgets to ensuring that at least some of the M&E work carried out within an organisation is dedicated wholly or partly to learning, and the use of that learning to enhance performance. Most NGOs are quite good at this kind of work, and commonly implement a variety of different measures designed to support

learning at different levels. Some of this learning can be used internally, and some can be shared with other organisations to support their learning and eventually enhance their own performance.

However, perhaps the hardest challenge of all for a complex M&E system is to apply learning to make strategic adaptations at organisational level. In this context, strategic adaptation means constantly assessing whether an organisation (or complex programme) is doing the right thing and adjusting accordingly (O'Donnell 2016). Changing the strategic direction of an organisation has far more significant ramifications than making adjustments within a single project affecting a relatively small number of people. There is no doubt that M&E *should* contribute to strategic adaptation at organisational level, but unfortunately in practice it is often unable to do so. There are many reasons for this, some of which have already been described in this paper. Some of the more important reasons are as follows.

- Genuine learning often requires a project or programme to be able to accurately measure or assess its performance in relation to predicted results (Guijt 2010). Many NGOs cannot do this with any degree of accuracy at organisation level. This means that some of what is called 'learning' is more a matter of different people's opinions, with relatively little evidence to back it up.
- Making major changes to an NGO's vision or strategy requires a degree of certainty of M&E findings that can be difficult to acquire through systematic M&E.
- The measurement (or assessment) of results is not always the most important influence on managerial decision-making at organisational level within NGOs.
- Larger NGOs often have very inflexible planning systems, with negotiated plans and budgets linked between multiple levels of their organisations via formal agreements and contracts. These can provide a barrier to making rapid, strategic adaptations.

Making minor adaptations within a project can be done fairly easily, like turning round a dinghy. Making adaptations to a complex programme may be harder, like turning around a sailing boat. Making strategic adaptations to a large NGO can be like turning round an oil tanker - it can be done, but you need to be very sure you want to do it!

In Section 7 I suggest some ways in which complex M&E systems can be adapted to better contribute to strategic decision-making at organisational level.

Summary

A complex M&E system needs to serve many purposes. There are proven and effective ways in which complex M&E systems can be used to support staff at different levels of an organisation to manage projects and programmes, demonstrate accountability to different stakeholders, generate and share learning, use this learning to improve performance, and fulfil various other functions. Often, the task of a complex M&E system is to set broad frameworks and principles that allow different levels of an NGO the freedom to develop their own solutions in response to their own needs. Sometimes, staff designing and implementing a complex M&E system may develop principles, processes or guidelines that radically change the way an organisation operates – such as reorienting reporting downwards towards partners or beneficiaries, or ensuring supported communities have a greater say in decision-making through engaging them in participatory planning, monitoring and evaluation.

None of this should represent a significant technical challenge for complex M&E system designers (although the political and/or practical challenges may be huge). However, there are two key areas which may indeed

create significant technical challenges. One is the aggregation and summarisation of results across a large portfolio of work. The other is how to use M&E information to contribute to strategic decision-making and adaptation at organisational (or complex programme) level. These challenges are the focus of the next three sections.

6. SUMMARISATION AND AGGREGATION

As stated earlier, there are times when a complex M&E system needs to generate and present information on activities, or results at output, outcome or impact level, across an entire organisation or complex programme, or large parts of it. The task often involves summarising or aggregating information across many different levels. It can be a difficult and challenging task, especially for large NGOs working across multiple countries and sectors. This section examines some of the ways in which NGOs can approach the task.⁸

Reasons why an organisation might want to aggregate or summarise across its portfolio of work,⁹ or significant parts of it, include (see Levine et. al. 2016a):

- to meet donor requirements where the presentation of results at organisational or programme level is a condition of funding;
- to provide senior management within an organisation with information to help make strategic decisions;
- to respond to the perceived needs of boards, trustees or senior leaders;
- to support marketing or fundraising work, or to produce proposals;
- to respond to a perception that rating agencies and/or public supporters want information on results at an organisational level;
- to demonstrate transparency to partners and supported communities, as well as to donors, and the general public; and
- to enable staff within an organisation to better understand how different projects and programmes fit together to contribute to wider goals, particularly within international federations and confederations, or coalitions.

There is sometimes a perception that aggregation and summarisation is mainly carried out to suit the needs of external agencies, and there is no doubt this has often been the case. But there is also an argument that it can support organisational learning. This is because the accurate assessment of results is often an essential ingredient of learning (Guijt 2010). By implication, an inability to assess results at organisational level may reduce the value of an NGO's learning, and reduce the extent to which different approaches and strategies can be reliably tested. The key question is not whether aggregation or summarisation are good or bad in their own right, but in what circumstances they might be useful, and, if so, how to approach the task. The remainder of this section focuses primarily on the latter.¹⁰

Methods of summarisation

A number of different approaches to summarisation are explored below. These are not mutually exclusive, and many organisations pursue multiple different approaches at the same time. The methods have been divided into eight areas, as follows:

⁸ Unless otherwise stated, this section of the report deals with the summarisation and aggregation of results, rather than lessons learned.

⁹ Note that throughout this section, the word 'portfolio' is used to denote the entire work, or significant parts of the work, of an organisation or complex programme

¹⁰ This section of the paper is primarily a summary of a previous paper produced in 2016 called "*Summarising Portfolio Change: Results frameworks at organisational level*". This is available from INTRAC at <https://www.intrac.org/resources/paper-10-summarising-portfolio-change-results-frameworks-organisational-level>

- direct indicators;
- aggregated indicators;
- framing or basket indicators;
- clustered indicators;
- questions;
- narratives;
- mixed methods; and
- strategic assessments.

Direct indicators

It is sometimes possible to develop indicators that allow organisations to assess portfolio change directly. This happens when organisations set **direct indicators** at portfolio level, and collect them using either their own central-level resources or secondary sources. This means that the indicators do not rely on information collected at other levels of the organisation. This is likely to be achievable in three circumstances.

Firstly, if an NGO is big enough or important enough in a field of work then it may be able to directly measure change in this area, and demonstrate a contribution to that change. For example, an NGO set up primarily to encourage countries to adopt and implement a specific UN resolution might choose to record how many countries are doing so, and then attempt to identify its own particular contribution to any positive movement. This means it needs to be able to show that any movement in the change being measured is at least partly down to its own efforts.

Secondly, organisations may develop indicators to directly assess their centrally-led efforts to support a small number of partners, policies, events, or other unit of analysis. For example, an International NGO could carry out a survey with all its direct partners in order to assess the extent to which its partnership (or capacity development approach) is valued, and then develop some simple indicators derived from that survey. Or it could focus indicators on one or two key policies or events at global level it is trying to influence.

Thirdly, if an organisation is able to use secondary sources to identify changes in different sectors and countries, it can then work backwards to assess its own contribution. For example, an NGO could capture progress in one or two Sustainable Development Goals (SDGs) in different countries, and then provide a rationale for how they have influenced any changes observed. There are many different indicators and indexes that can be used for this purpose, such as the Corruption Perceptions Index, the Ibrahim Index of African Governance, the State Fragility Index, etc. (OECD 2014).

Where feasible, direct indicators are often the best kind of indicators for measuring portfolio change. Unfortunately, however, there are only a few circumstances in which they are appropriate. The alternative is to develop portfolio-level indicators, and then to link them to indicators at lower levels, such as regional, country, sector, programme and project levels. The next three approaches all do this in one way or another.

Aggregated indicators

One solution is to aggregate quantitative indicators from multiple projects and programmes to form an **aggregated indicator** at portfolio level (see figure 7). This sounds easier than it is. For such a system to work, organisations need to ensure that all projects or programmes are collecting the indicator in exactly the same way. Specifically: a) the same indicator definitions need to be used; b) all relevant projects or programmes need to collect the information; c) change needs to be assessed over similar timescales; d) the same (or similar) tools and methods need to be used to collect the information; e) the quality of information collection needs to be consistent; and f) contributions to change should be broadly similar. The risk otherwise is that different numbers are added to together to form a meaningless aggregated number. For

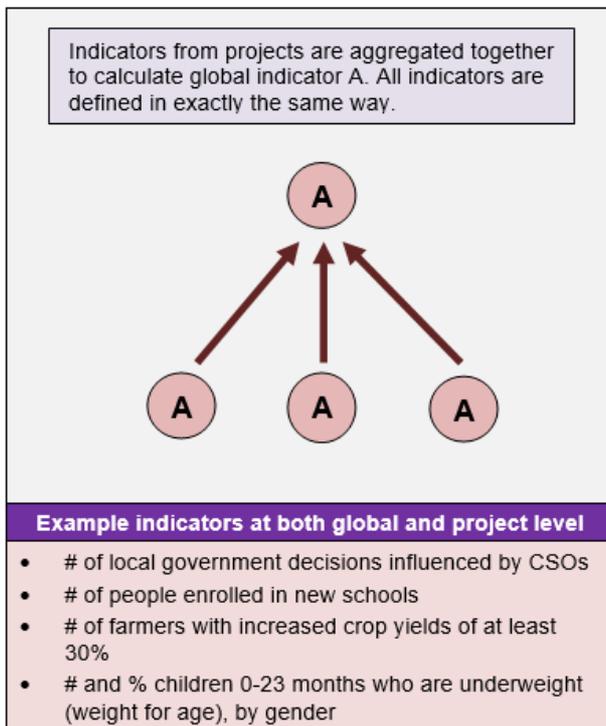


Figure 7: Aggregated indicators

instance there is no point developing an aggregated indicator such as ‘# of government decisions influenced by CSOs’ if there is no common agreement on what a government decision is, what level of influence meets the threshold, or which CSOs should be covered under the indicator.

Aggregation is more commonly used at activity or output levels – for example counting the numbers of schools built, credit groups supported, or beneficiaries reached across a portfolio. It is less commonly used at outcome level, and is used mainly in situations where there are industry standard indicators, and when the time gap between outputs and outcomes is relatively short (such as survival rates for operations or weight increase in nutrition programmes). As outcomes become more complex and intangible the difficulties in aggregation become greater. This means aggregation is rarely used in complex sectors such as governance, conflict resolution or civil society, where outcomes tend to be more context specific.

A major implication of using aggregated indicators is that all relevant programmes, projects and partners need to adopt the standardised indicators, whether or not those indicators are of any use to them in their own work. At best this can result in unnecessary administrative burdens, at worst it might mean they spend little effort ensuring the information is collected accurately, which may make it unreliable.

A common alternative is to use **core indicators**. As with aggregated indicators, these are standardised indicators, but they are usually provided as a menu for projects and partners to choose from, rather than being compulsory. They are then used to demonstrate change in multiple places so that changes can be contrasted and compared. Core indicators still need to be defined in a consistent way, and the same tools and methods for collection may need to be used. But there is less need to ensure that contribution levels are the same, or that change is collected over the same timescales.

For example, an INGO could capture information on improvements in child nutrition in 20 projects using the same indicator, but not necessarily attempting to aggregate them. This allows for summarisation across different timescales, as in figure 8. Core indicators can allow a measure of summarisation if presented appropriately. Some level of aggregation might still be possible on a sample of projects (those with common timeframes), but the information may be richer and more informative when differences can be seen as well as similarities.

| Indicator: % of boys and girls, aged 6 – 59 months, stunted | | | |
|---|----------|-----------|---------|
| Project | Baseline | Timeframe | Current |
| Project 1 | 50% | 2012- | 30% |
| Project 2 | 30% | 2015- | - |
| Project 3 | 25% | 2009-2014 | 5% |

Figure 8: Core indicators

Another way of avoiding imposing indicators on projects or partners against their will, while allowing for some level of aggregation, is to use **translated indicators**. In this approach, projects are allowed to report on different indicators, and then those indicators are translated into a common indicator later on in the process. The common indicator can then be treated as an aggregated or core indicator. This can either be done early in the process by the project staff themselves, or more commonly later on by central M&E staff.

For example, in figure 9 three different project indicators are all converted into a common global indicator before being aggregated. It should be possible to measure or estimate the number of households with access to newly installed water points (indicator B). It should also be possible to measure or estimate the number of households being served by wells treated for contamination (indicator C). It might be much harder to estimate the number of households with increased access to an improved water source as a result of increased awareness of hygiene around water sources (indicator D), but it would still be possible.

After translation, the three numbers could then be aggregated under the common portfolio indicator ‘# of households with access to an improved water source’ (A).

There are many examples of these kinds of indicators being used within planning and M&E work. For example: in cost-benefit analysis, different kinds of social benefits are routinely translated into monetary values to enable comparison of costs and benefits; health programmes often convert different indicators collected within projects into DALYs (disability-adjusted life years) – understood as the number of years of healthy life; and an indicator such as ‘# of additional jobs created’ can be developed to capture project indicators on employment where some businesses are increasing jobs, others are saving jobs, and others are shedding jobs in order to save further losses in employment.

Another way of enabling translation is to use rating or scalar tools to translate qualitative concepts into **rating indicators** that can be handled via quantitative methods. Many tools and methodologies of data collection and analysis result in ratings being produced. Rating tools are widely used within areas of work such as policy influencing, capacity development, partnership and community mobilisation, where results are often contested or intangible (see figure 10, based on CAFOD 2011). Rating indicators are a form of translated indicator, but are more likely to be coded at an earlier stage in the process. For instance a supported partner may rate its own capacity over time, rather than passing data upwards to be rated at a higher level.

Ratings such as RAG (red, amber, green) are commonly used when assessing internal organisational performance. For example, projects may be asked to rate themselves according to how well they are progressing, how far they are successfully engaging beneficiaries in M&E, or any other conceivable criteria. A clear benefit of using rating indicators is that they allow aggregation of change across a portfolio, even though the changes are different and inherently qualitative.

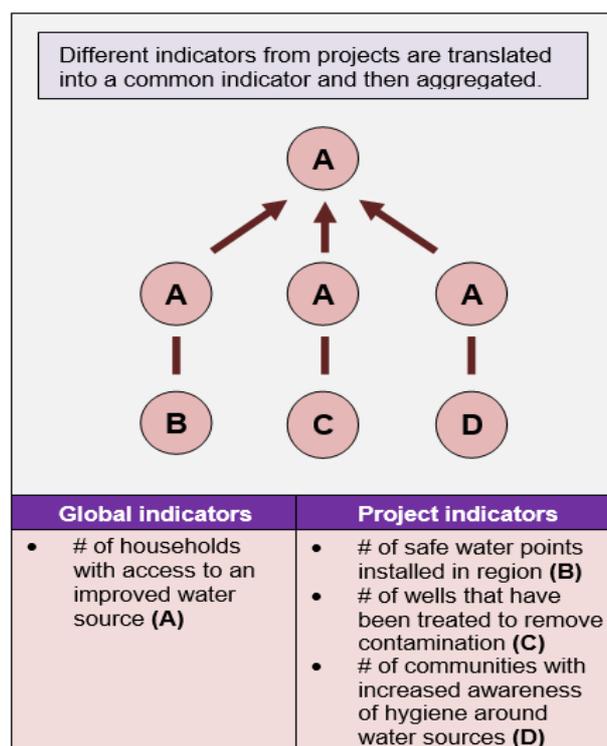


Figure 9: Translated indicators

Framing or basket indicators

Broad **framing indicators**, sometimes known as basket indicators, are not specific, and cannot be collected directly. Instead they are used to identify broad areas or domains of change at portfolio level, such as *'changes in the way that CSOs influence government'*, *'improvements in policy and practice regarding bullying in schools'*, or *'improvements in relationships between different communities'*. More specific indicators at programme or project level are then captured and summarised under the framing indicators. Framing indicators are often cascaded downwards; they are very broad at global level, and become successively narrower and more focused at country, programme and project levels. The information collected at lower levels can then be collected together and summarised at higher levels. This type of indicator is essentially a mechanism for collecting together and summarising a number of specific changes under a common theme.

For example, in figure 11, the global indicator *'CSOs influence government practices at local levels'* cannot be collected directly. Instead it relies on tangible information being collected at lower levels. These three tangible pieces of information can be collected under the one indicator at portfolio level to illustrate ways in which civil society is influencing local government across different regions, countries, programmes and projects.

In the example provided, the project indicators may be quantitative or qualitative, or a mixture of both. Indeed, they need not necessarily be indicators at all, and

information on unexpected or negative changes can be mapped onto the global indicator as well. One big advantage of this type of indicator is that programmes and projects can collect indicators and produce reports which are useful to them and reflect their own needs without referring to the global indicator. Indeed there is no technical reason why a project should know about the global indicator at all.

A variant of this type of indicator is a **mixed indicator**. Mixed indicators are usually expressed as *'# and description of cases where ...'* followed by whatever change an organisation wishes to capture. They are used for two main reasons. One is to add a sense of scale to qualitative indicators. For example, if an NGO wishes to capture examples of how its pilot studies have been replicated it might set a framing indicator such as *'extent to which pilot studies have been replicated'*. But if the NGO needs to place this indicator within a logical framework for accountability purposes it will find it hard to set milestones or targets. Developing a mixed indicator (such as *'# and description of cases where pilot studies have been replicated'*)

CAFOD Voice and Accountability Tool

CAFOD's Voice and Accountability Tool uses ratings to assess the ability of supported CSOs to carry out advocacy work. CSOs score themselves in four key areas: involvement in government processes, advocacy strategy development, community and constituency building, and involvement in structures. A rating scheme with different, pre-defined levels is used to help CSOs assess their level in each area. An abridged version of the ratings scale for involvement in government processes is shown below.

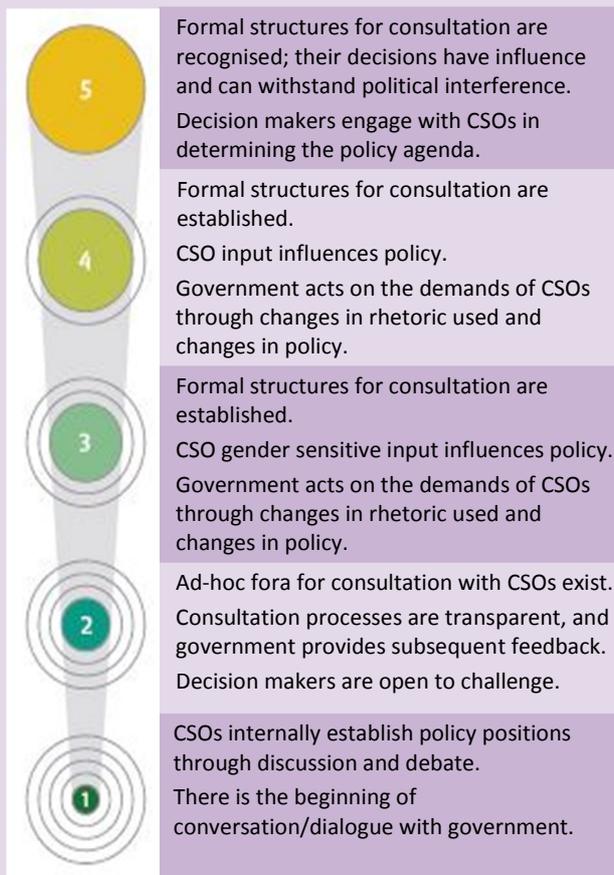


Figure 10: Rating indicators

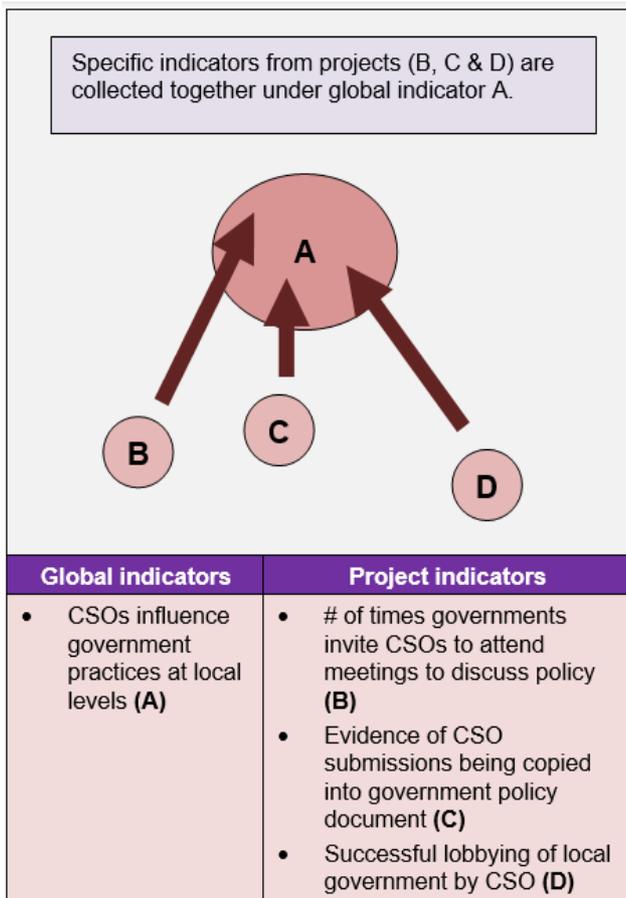


Figure 11: Framing indicators

allows milestones and targets to be defined in quantitative terms whilst still providing qualitative reporting. It also provides some sense of the ambition or scale of change.

The second reason is to ensure there is a qualitative element to quantitative indicators. Indicators such as *'lowered maternal mortality rates'* or *'increased education enrolment'* may be clearly understood if used in isolation. But other kinds of numeric indicators need to be supplemented by qualitative information if they are to make any sense. For example, indicators such as *'number of policy changes'*, *'uptake of pilot studies'*, or *'number of organisations with increased capacity'*, make no sense on their own. They may give some idea of scale, but deeper information is required. There is a big difference between being invited to add to the wording of a policy that is about to be implemented by a sympathetic government, and generating genuine support for a policy that has never been on a government's agenda. Mixed indicators are a way of enabling a degree of quantification of change around a common theme, whilst recognising that there may be significant differences between those changes. As with framing and translated indicators, they do not rely on standardised indicators being specified at project level.

Clustered indicators

In many organisations there is a limit to how far results can be summarised. Eventually there comes a point when further reduction, summarisation or aggregation serves no useful purpose. This occurs, for example, when an organisation is doing two completely different things in two different places, or working in completely different sectors. In these situations NGOs sometimes employ **cluster indicators**. Indicators from regional, country or sector levels are brought up to portfolio level, and are listed individually. There is no attempt to pretend they represent anything more than disparate results from different programmes or projects. However, this enables a limited degree of summarisation. Cluster indicators are most commonly used where change at portfolio level can only really be viewed as the sum of the individual parts.

It is possible to do this when an NGO works in just a few countries or sectors. But for NGOs that work in many different countries or sectors the number of indicators needed rapidly becomes unmanageable in a single results framework. For example, if an INGO works in fifteen countries and brings up just one outcome indicator from each it would end up with fifteen outcome indicators in its organisational results framework.

Questions

Questions are viable alternatives (or supplements) to indicators. They are routinely developed and used in evaluations and research studies, but are less commonly used within systematic, continuous M&E processes. Two types of questions can be developed at portfolio level: questions focusing on change, used to

summarise results; and learning questions, used to synthesise and summarise lessons across a portfolio. Questions are often used rather than indicators in situations where change cannot easily be predicted beforehand, or where an organisation is interested not just in whether something has happened, but how and why it happened. For example, a question such as *'what are the best ways of changing teaching practice within schools?'* could not easily be turned into a qualitative indicator.

Questions can be quite general in nature, but they can also be formed as testable hypotheses. A hypothesis is a statement which often includes a prediction, such as *'supporting communities through capacity development will empower them to engage more with local governments'* or *'providing clean water to villagers will result in improved hygiene around water sources'*. These statements (or questions) can then be examined to test their validity by collecting and analysing evidence that reinforces or rejects the hypotheses.

There are many possible methods for using portfolio-level questions within a complex M&E system. They can be included in forms and templates used within systematic, continuous M&E processes; included in the Terms of Reference for evaluations or other kinds of periodic or reactive study; or addressed during workshops, reviews or other forms of learning mechanism; and there are many other options available. One obvious method is to include questions within results frameworks at different levels of an organisation. This has not always been common practice because the logical framework approach, with its focus on specific objectives and indicators, has dominated donor thinking, and it does not leave room for wider evaluation questions or specific learning questions. However, more and more NGOs are introducing evaluation and/or learning questions into their results frameworks, and this kind of approach may soon become mainstream.

Narratives

Narratives (e.g. stories of change, case studies, testimonials) are valid ways of reporting activities, changes and learning. Most larger NGOs invest heavily in narratives. However, they have not always been used well within NGOs, and some donors mistrust them because they are perceived to be anecdotal, or designed primarily for marketing and fundraising purposes. Yet narratives are also one of the most powerful ways to communicate change and learning within a complex M&E system.

Two major issues need to be addressed when using narratives for summarisation purposes. Firstly, the narratives need to be properly developed, validated and communicated. Secondly, if a range of narratives is used for summarisation purposes NGOs need to be candid about what each one represents (i.e. why it has been selected rather than other potential narratives) and how it has been developed. If the rationale and method of production of narratives is transparent and systematic, this reduces the risk of them being dismissed as anecdotal or misleading.

A credible process for summarising multiple narratives can be developed in two major ways. The first is to use an appropriate and approved qualitative sampling strategy, as would be done in a formal research study. The second is to use an approved M&E methodology for handling multiple cases, such as the Most Significant Change technique (MSC), Qualitative Comparative Analysis (QCA) or some forms of longitudinal (tracer) studies.

Mixed methods

Summarisation and aggregation may be expressed through numbers and narratives. But there are also endless opportunities for using more creative ways to visualise change. Advancements in Information Technology should allow much more scope in the future for developing innovative and interactive ways of summarising change across broad portfolios of work. The more advanced expressions of this are beyond the scope of this paper, but many organisations have already shown the potential for using a combination of narratives (stories) and either numeric indicators or ratings to show a range of changes. Some simple examples are shown in figures 12-14.

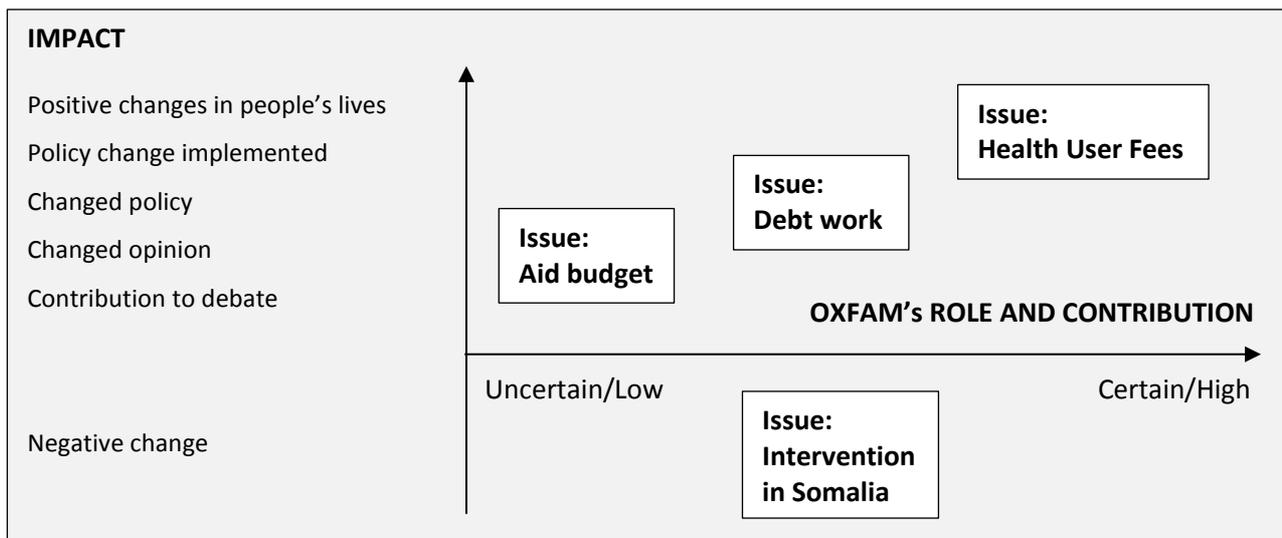


Figure 12: Oxfam advocacy projects

In the 1990s, as part of an exercise to assess multiple advocacy interventions, Oxfam charted projects on a grid using a range of advocacy outcomes on the y-axis and the degree of Oxfam’s contribution on the x-axis (Roche 1997). The grid (see figure 12) is capable of showing a range of advocacy outcomes, without necessarily having to add different numbers together to achieve a meaningless total. Nowadays it would be quite simple to develop a software tool that would allow users to scan the different projects and highlight the stories behind the projects, thereby providing both the detail and summary of change at the same time.

Another example comes from Girl Hub (2014) in Rwanda (see figure 13). Girl Hub used SenseMaker® software to generate girl-centred evidence. Girls were asked to share a true story about an experience in their lives, and were asked to rate the story against different dimensions: the extent to which they were obedient, independent or vulnerable; the extent to which they were conforming or confronting tradition; and the extent to which they wanted/didn’t want to do something, and then did/didn’t do it.

Software was then used to produce graphs and diagrams to help make sense of all the multiple stories. Figure 13 shows how the stories in Rwanda were distributed in terms of the obedience, independence and vulnerability of the girls. The diagram shows one particular story being highlighted from the range of potential stories. Again, the method provides the ability to summarise by locating a narrative within a broader context. Although used as a research tool in this case, it is easy to see how the method could be adapted to summarise change within a programme.

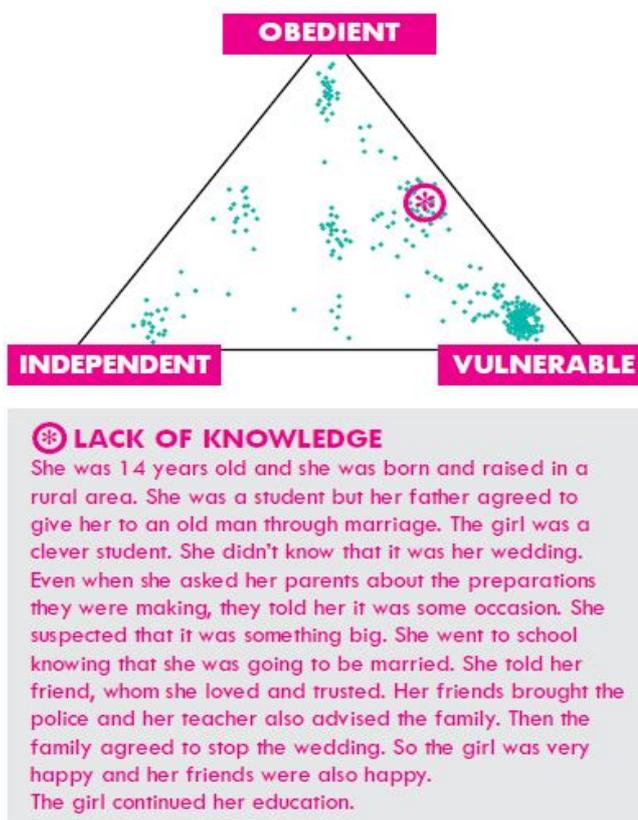


Figure 13: Girl Hub SenseMaker® tool

As with the Oxfam example shown in figure 12, the Girl Hub approach used ratings to locate stories within an overall map or grid. But it is also possible to do this by combining narratives and quantitative indicators (see figure 14). This example comes from the Climate and Development Knowledge Network (CDKN 2015), and depicts the leverage of finance for climate change and development work. In this example the x-axis shows the quality of evidence and the y-axis shows the degree of contribution. Both are rating indicators. The amount of leverage is represented by the size of the bubble – a quantitative indicator – and the different colours represent different kinds of leverage. Each example of leverage is a different narrative, but placing them on a chart like this allows overall summarisation without having to aggregate meaningless numbers.

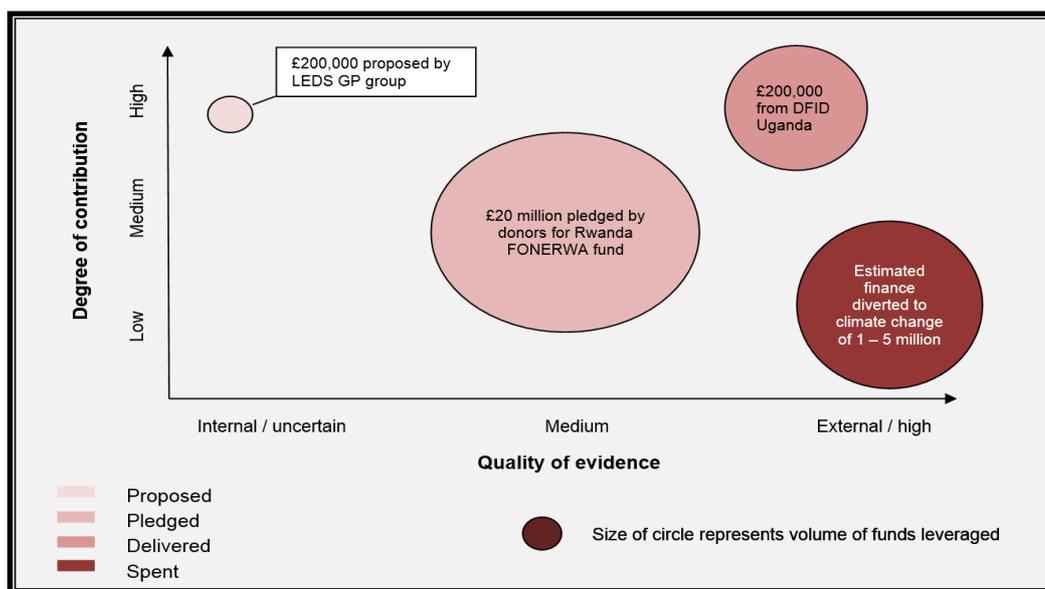


Figure 14: Resource mobilisation in CDKN

Strategic assessments

Many NGOs are expected to aggregate results on the erroneous assumption that overall effectiveness is always the sum of work carried out at different levels. When engaged in service delivery, capacity development or partnership work this may to some extent be true. But there are areas of some NGOs' work that should not be summarised through a broad assessment of a portfolio, but more through in-depth assessment of change at strategic points. This might include:

- pilot projects that are mainstreamed or scaled-up by other agencies;
- transformational changes that alter the way other agencies do business;
- key lessons learned and disseminated that are then used by other agencies to bring about change; or
- innovative projects that diverge from business-as-usual approaches, with rigorous assessments of strengths and weaknesses.

All these examples could lead to impacts that go far beyond those that would traditionally be captured in a results framework. Reporting strategically in this way recognises the fact that – for some NGOs at least – the bulk of their impact comes through a small percentage of their work. For strategic assessments, systematic, continuous M&E might be used to identify the cases, while periodic or reactive M&E would be used to validate and investigate them in greater depth.



For some NGOs the bulk of their impact comes through a small percentage of their work. In these situations, summarisation should focus on in-depth assessments of the most interesting or important cases, rather than on average or aggregate results.

The challenges of summarisation

The approaches described above, used in combination, provide plenty of options for summarising performance across a portfolio of work. But whilst all are theoretically manageable, they are not without cost. There are many considerations that make such work practically or politically difficult.

To start with, there are physical costs. NGOs need to decide how much they are prepared to invest in summarisation. Some of the approaches involve collecting and validating information from multiple points within an organisation. Even when these costs are borne at partner or project level there may still be cost implications associated with validating or interrogating particular cases, or carrying out quality assurance checks. One way of reducing costs when handling numeric information is to use random or stratified sampling to ensure that results from a limited number of units can be extrapolated across wider populations rather than to go for complete coverage.

Another challenge is the time taken required to design, introduce and implement a system for aggregation and summarisation. A recent study completed by Levine et al. (2016b, p2) suggests that “almost without exception, NGOs underestimate the time and resources required to develop and deliver a well-functioning ALM [agency-level management] system. A comprehensive ALM system with a custom-designed data management platform may take close to two years to develop and another three years to produce quality

data. Executives must either accept this timeframe, allocate adequate resources, and communicate widely to the organisation, or choose to start simple and small and build toward an ALM system by piloting, iterating, and adapting.”

The same report also raises the issue of capacity. For effective summarisation, staff in different places throughout an organisation need to have the capacity to collect information to a reliable standard. This is a particular challenge if staff are being asked to collect information that is of little or no use in their own work. Organisations also require the central capacity to analyse, synthesise and present different reports and visualisations that make the data useful.

A more political problem is negotiating and agreeing a summarisation system within a decentralised organisation such as a confederation or INGO that has devolved significant power to country offices (ibid). Reaching agreement on the purpose of a summarisation or aggregation system, potentially requiring standardised definitions and processes, may not be easy. One solution is to use late rather than early coding. Early coding occurs when organisations develop categorisations and definitions for indicators centrally, and then ask lower levels to collect the information accordingly. This has to be done for aggregated and core indicators. Early coding makes it easier for an organisation to process data at a central level.

Late coding, on the other hand, means information is presented from project (or partner) level in many different ways, and is then sorted, categorised and translated at a later stage. While this enables projects or partners to define, collect and present information that is useful to them in their own work, it requires greater capacity for data management at a central level. Late coding is normally a better approach for organisations that are concerned about the effect their information requirements may have on their partners or staff at lower levels.

Summary

Not all NGOs have to summarise or aggregate information across their portfolios. But some do, and it is one of the hardest things to do within a complex M&E system. Many methods can be used for summarisation and aggregation, but all come with associated costs. It is up to each NGO to decide whether or not it is worth it. Summarisation and aggregation approaches can help central departments within NGOs to manage, be accountable to different stakeholders, and perform other functions such as marketing and fundraising. When done well, they can also enhance learning at organisation level by providing a means to genuinely test how effectively an organisation is performing against its strategy. But not all organisations can do this. Some NGOs are simply not set up to measure or assess change at portfolio level.

Pursuing efforts to summarise performance across a portfolio within a complex M&E system involves trade-offs. There are trade-offs between the resources required to carry out M&E work and the value this brings to an organisation or complex programme. There are trade-offs between getting field offices or partners to present information in a way that allows for easy aggregation or summarisation, and allowing them more freedom to collect and present information that serves their own purposes. And there are trade-offs between pursuing M&E processes that suit the internal purposes of an NGO and meeting the needs of external stakeholders such as donors. These trade-offs need to be constantly managed and reassessed.

The next two sections will elaborate on how summarisation and aggregation methods, alongside other approaches, can be used within a complex M&E system to facilitate learning and adaptation at organisational (or complex programme) level.

7. OPTIONS FOR LEARNING AND ADAPTATION

There is a widespread assumption that complex M&E systems should enable learning and strategic adaptation. My own experience is that beyond a certain level of complexity this is rare. If it happens at all, it tends to happen in pockets. This is not to say that organisations and complex programmes do not learn and adapt – of course they do. But the role of M&E is sometimes marginal at best. Consequently, there are few case studies that demonstrate how complex M&E systems contribute to real-time learning and decision-making at organisational level. This section lays out a potential approach to support M&E staff designing and implementing complex systems in these endeavours. However, there are many alternative routes, and this is only one way of approaching the task.

Most practitioners agree that good strategic and operational planning is a pre-condition for good M&E. Arguably, good planning is even more important in a complex M&E system than a project M&E system. I start from the assumption, therefore, that there is a theoretical framework setting out what an organisation or complex programme is trying to achieve.¹¹ In a nutshell, evidence is then collected against this framework so that an organisation or complex programme can find out whether desired changes are happening, detect other changes that are happening, identify its own contribution to these changes, learn about what works and what doesn't, test assumptions, clarify linkages between different levels of change, and use findings to make strategic decisions.

Theoretical frameworks

There are many kinds of theoretical frameworks that describe how activities, outputs, outcomes and goals are related to each other. Some of the more common ones are described below.

Theory of Change: A Theory of Change (ToC) approach to planning and evaluation is now considered an essential practice for almost all large organisations and complex programmes. Most ToCs include a description of how change happens in a particular context, a description of the role an organisation and its partners could play in contributing to that change (sometimes known as a Theory of Action), and critical assumptions. Most also include some kind of conceptual diagram showing desired changes and the interactions between them. ToCs are commonly used both to support programme design and act as a framework for evaluation and impact assessment.

Impact pathways: Theories of Change are commonly translated into impact pathways. Similar to objectives trees, these diagrams depict a series of changes at different levels, linked by arrows which show the logical sequencing of the changes. Impact pathways may also show activities, resources, working approaches and outputs as well as changes. They may be linear, but may also be very complex diagrams with arrows going in all directions.

Logical frameworks: A logical framework (or logframe) is both a description of the logic of a project or programme and a framework for capturing results. Logical frameworks may or may not be derived from Theories of Change. Although originally designed for time-bound projects, logical frameworks are also sometimes used as frameworks for complex programmes or the work of entire organisations. Organisational logframes may cover all of an organisation's work, or specific elements only. The logical sequencing of objectives from activities through to goals within a logical framework is sometimes described as a linear Theory of Change. A more recent adaptation is the searchframe (see Andrews 2018), which has a greater focus on the initial steps that will be taken over a short period in pursuit of longer-term change, and is designed for adaptive programmes.

¹¹ It is, of course, possible to carry out M&E work in the absence of such a framework. Methods such as Most Significant Change or outcome harvesting can be used without pre-defined indicators or objectives. But it would not be possible to follow the methodology in this paper without some theoretical framework.

Wider results frameworks: Some results frameworks go beyond the logical framework approach. They can be used at organisational level as well as within complex programmes, and can contain any number of levels of objectives, with multiple linkages between them. Wider results frameworks are frequently derived from Theories of Change or impact pathways, and have more flexibility to reflect their structures, compared to a logical framework which often has to comply with more rigid rules. However, wider results frameworks can also be developed on their own in the absence of a Theory of Change.

Dimensions of change: These are areas or domains of change to which different levels of an organisation are expected to contribute. The dimensions normally embody the areas of change an organisation believes it should and could be influencing. The dimensions are often very broad and generic, as they are designed to be applied in very different contexts and at different levels. By contrast, country, programme and project objectives are expected to reflect the relevant dimensions, but be specific to the local context. Figure 15 shows a set of dimensions of change used by Save the Children in the 2000s (Save the Children UK 2004). Many Theory of Change conceptual diagrams contain a set of dimensions or domains of change.

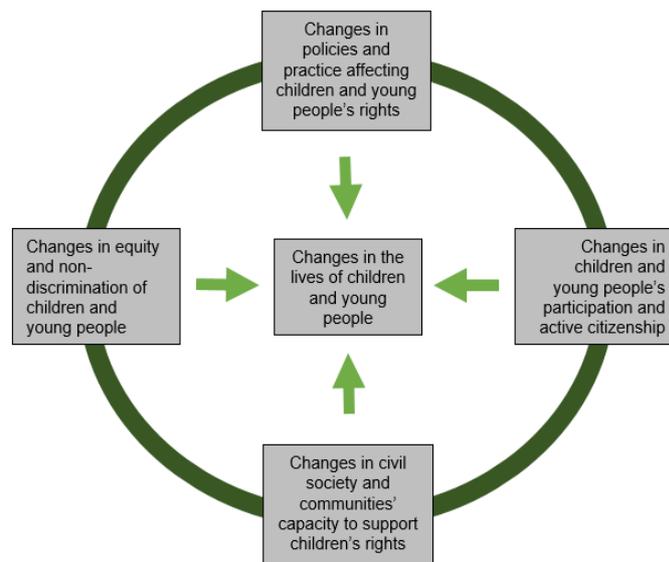


Figure 15: Save the Children Dimensions of Change

Outcome maps: Outcome maps derived from Outcome Mapping may also be used as a theoretical framework. An outcome map usually depicts a series of ‘expect to see’, ‘like to see’ or ‘love to see’ progress markers. A portfolio outcome map can be formed in different ways, for example by placing a series of outcome maps side by side, or having a limited number of outcome maps that apply across a range of organisations or situations. Outcome maps are sometimes viewed as actor-focused Theories of Change (see Jones 2010).

Strategic objectives: Finally, an organisation may just have a set of strategic objectives, perhaps accompanied by some high-level indicators.¹² These too can be used alongside the approach described in this section, although there are downsides to linking an M&E system to a set of strategic objectives. The most important of these is that it often takes longer to design and test a complex M&E system than the average effective shelf-life of a strategic plan. Strategic periods often range from 3-5 years, and after the midway point organisations begin to think about the next strategic period rather than the previous one.

Any of the theoretical frameworks listed above can be used as a basis for the approach described in this section. Obviously, it is easier to work with frameworks that are clear, logical and detailed. However, the only mandatory requirement is to have a set of statements depicting the changes sought by an organisation or complex programme, with some idea, however vague, of the linkages between them. In principle it might be possible to work with multiple frameworks (e.g. both a Theory of Change and logical framework and/or

¹² Personally I am not a supporter of relying on strategic objectives and indicators as the basis for an organisational M&E system, although it can be done. This is partly because the time taken to develop and test an organisational M&E system is often greater than the effective time span of a typical strategic plan. But it is mainly because strategic indicators are often very broad – more like sub-objectives. Frequently, they are developed in committee, and too little thought is given to how to capture the indicators at different levels. The priority is more to get the strategic plan through several layers of approval.

outcome map at the same time). In practice, and for the purposes of this paper, I will assume that a single theoretical framework is being used as a basis for the complex M&E system.

Measurement, assessment and illustration

The theoretical frameworks described above are all partly designed to enable organisations to identify planned changes and then find out whether or not, or how far, they have been accomplished. But these investigations can take different forms. There needs to be at least some recognition of the difference between measurement, assessment and illustration.

Within M&E, some things can be measured objectively, and change can be established beyond any reasonable doubt. For example, the amount of money spent on a project or programme can be recorded; outputs such as trainings conducted or schools built can be counted; and some outcomes – such as people attending a hospital, increases in crop yields or changes in height : weight ratios of children – can be accurately measured. These things are a matter of fact, and do not depend on interpretation or the examination of conflicting evidence. Where feasible, direct ***measurement*** of change is usually the best method of data collection.

Where change cannot be measured directly, NGOs often need to rely on ***assessments*** of change instead. An assessment involves collecting evidence regarding a change, balancing the arguments around whether, or how far, the change has happened, and then arriving at a conclusion. Sometimes this means balancing different viewpoints not only about whether a change has happened or not, but also about whether it is a positive or negative change, or what it means. Assessment is considered a weaker term than measurement, but is often more realistic in the context of change at organisation level, where objectives may be quite broadly defined.

Just because a change can easily be established does not necessarily mean that contribution is also easy to determine. Some methodologies enable organisations to measure both change and their contribution to that change at the same time. For example, experimental or quasi-experimental studies such as randomised control trials (RCTs) attempt to measure change in selected, pre-defined indicators through the use of large baseline surveys and/or control or comparison groups. This enables an organisation to identify a change with some degree of accuracy, and to pinpoint its own particular contribution. However, these kinds of studies are only effective in a narrow range of circumstances. Many objectives within social development work, such as changes in laws or policies, are easy to establish. But it is often difficult to identify the contribution of an organisation. In such cases, NGOs may be able to accurately ***measure*** a change, but only make an ***assessment*** of their contribution to that change.

Sometimes it is not possible (or practical) to measure change, nor to make a reasonable overall assessment. In these cases, NGOs may attempt to ***illustrate*** change instead. When working at portfolio level it is common to present examples or illustrations of changes that have occurred. For instance, NGOs may collect and present a number of stories or case studies around a common theme in order to illustrate some of the wider changes to which they have contributed. This approach does not involve an attempt to show overall whether the situation is getting better or worse at portfolio level, but only seeks to present some examples of where change has happened.

Whilst there are exceptions, a good rule of thumb is that the higher one goes up a hierarchy from project through programme to organisational level, the more that organisations need to rely on assessment and illustration, and the less they are able to measure change. For example, the case study on the following page shows how some changes can be reasonably accurately measured or assessed at project level, but only reported as illustrations at portfolio level. In sum, not everything can be measured, or even assessed, with any degree of accuracy. And when it can, it frequently comes with a cost. Therefore, NGOs often need to rely on illustrations to draw together similar cases at portfolio level.

CASE STUDY: FCS in Tanzania

The Foundation for Civil Society (FCS) is an independent Tanzanian non-profit organization that provides grants and capacity building services to CSOs in Tanzania in order to enhance their effectiveness in enabling engagement of citizens in development processes. One of the things FCS does is to support communities to engage better with local government. In some cases FCS and supported CSOs are able to measure this kind of change at community level. More often they make assessments of change based on different forms of evidence.

However, across Tanzania there are thousands of communities. It would be prohibitively expensive for FCS to undertake a giant study to show whether there is an overall recognisable change across Tanzania, or to isolate its own contribution from that of other organisations working in the same field or changes in the external socio-economic and political environment. Instead, FCS develops properly researched and validated case studies providing assessments of change (and FCS's own contribution to those changes) at local level, and then brings these up to organisational level to illustrate the kind of changes it is supporting.

Different lenses for assessing change

Once an organisation has chosen which theoretical framework to use, it then needs to consider the potential for measuring, assessing or illustrating change, or identifying lessons, in each part of the framework. The remainder of this section uses an impact pathway as an example. However, any theoretical framework can be used provided that there are clear statements of change and some degree of logical linkages between them. At this point the objective is not to decide what to do, but instead to identify what *might* be done. This can be done by looking at a theoretical framework through a series of lenses. The ones described in this section are:

- indicators;
- questions;
- tools and methodologies;
- case studies and stories of change; and
- other options.

Indicators

The usual choice is to set indicators against the desired changes in an impact pathway (see figure 16). Theoretically it is possible to set indicators against assumptions as well, although this is less common. Any of the different types of indicators referenced in section 6 can be used, and it is frequently possible to develop more than one kind of indicator for any one change statement. However, it is important at this stage to consider in detail how the indicators might be collected. Can they be collected at the central level of an organisation, or do they instead need to rely on information collected at lower levels? If the latter, it is important to understand how this will be done, and what might be the political and resource implications. It is also important to figure out how the indicators would be processed and analysed, and whether this would need to be done centrally or at different levels of the organisation.

Most indicators are pre-defined, and are likely to be gathered through systematic M&E – either continuous or planned, periodic. However, on some occasions indicators might be developed that could be captured through reactive M&E. Remember at this stage that these are only options to be considered. The indicators are examples of information that *could* be collected, not information that *will* be collected.

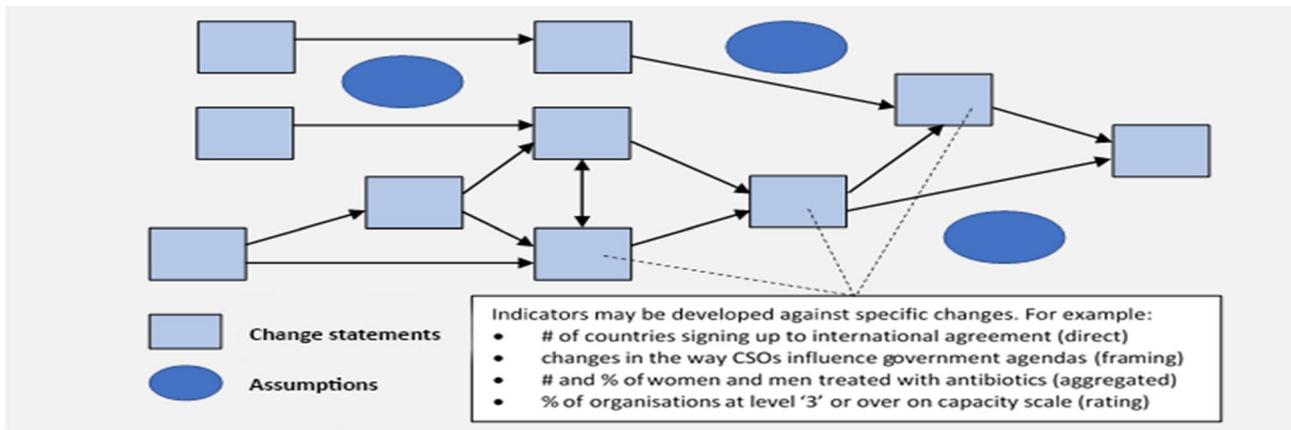


Figure 16: Setting indicators against changes on an impact pathway

Questions

Sometimes it is more appropriate to develop questions than indicators, especially if it is uncertain what change might look like. Questions can be set against change statements in an impact pathway, groups of change statements, assumptions, or a combination (see figure 17). A simple question linked to one change statement might be *'to what extent are CSOs attempting to engage with decision-makers?'* A question linked to an assumption might be *'is there evidence that local government officials are interested in taking forward issues around disabilities?'* And a question linked to more than one change area could be *'what are the best ways of ensuring that capacity building efforts result in sustainable changes in organisational capacity for supported CSOs?'* Clearly, questions provide much more flexibility than indicators.

Questions can be framed as evaluation questions, which tend to focus on what has been done and what has changed as a result. Or they can be framed as learning questions, which often focus on how or why changes have happened, but may also deal with much wider issues. Questions can be focused on external change, or they can be more inward-looking, e.g. *'how are our organisational structures and processes helping or hindering our partners' work with supported communities?'* While it is possible to develop questions for any conceivable part of a framework, it is probably best at this stage to restrict the choices to key questions which are important to an NGO, but where it is not immediately obvious how specific, pre-defined indicators could be used.

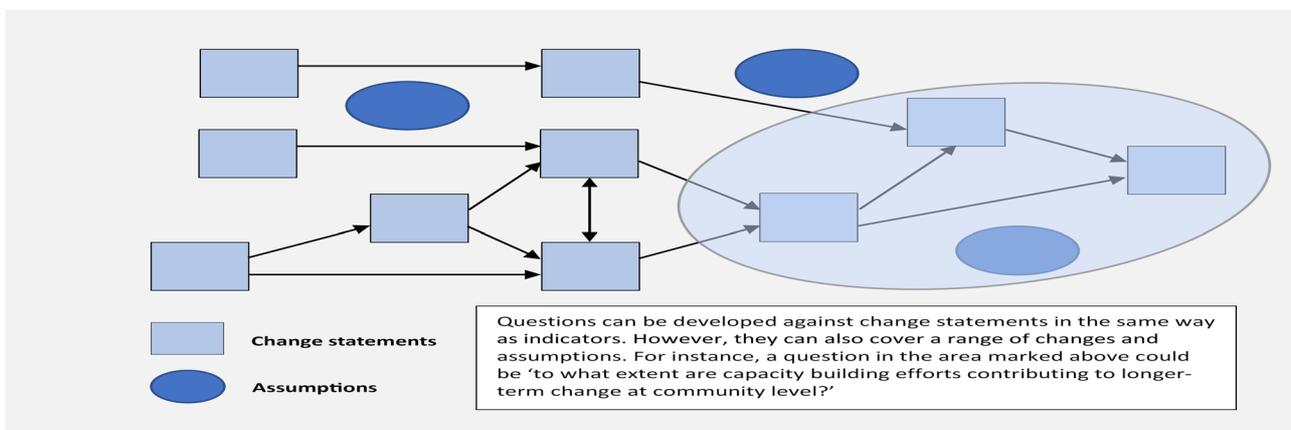


Figure 17: Setting questions on an impact pathway

The next task is to decide how the questions might be answered. There are many different ways in which an NGO could do this. Some of the most common are as follows.

- Questions may be operationalised within systematic, continuous M&E, for instance inserted into results frameworks or incorporated into regular reporting templates. This would help ensure that all different levels of an organisation actively engage with the questions.
- Questions could be operationalised within planned, periodic M&E. For example, they could be included as evaluation questions during all relevant formal reviews or evaluations over a specified period, such as a year. This would help ensure that organisational resources were devoted to answering the questions.
- Questions could be addressed in sensemaking events such as regular meetings, workshops, feedback sessions, conferences, communities of practice, or away days (see case study below). These kinds of sensemaking sessions are not about collecting new information, but instead are designed to encourage stakeholders to come together to make sense of existing information. They are also very useful for including information collected informally on an ongoing basis by individuals as they go about their work; talking to different people, seeing what is happening around them, and listening to different viewpoints. Sensemaking events sometimes draw on information generated by other individuals and organisations working in similar areas or sectors.
- Some questions cannot easily be answered without dedicated resources. Sometimes the solution may be to commission research. This is frequently addressed through reactive M&E, as needs may often be identified after an organisational strategic period has started, or during an ongoing programme. Research can take many forms, ranging from very short, focused, action-oriented research through to longer-term, formal research studies carried out over many years. Obviously, an NGO would like to answer questions as soon as possible. However, long-term research could be considered when there are important or wide-ranging decisions that cannot be made until issues are better understood, even if it means waiting for a long time. Research might focus on any kind of questions, but is particularly useful when examining the assumptions that lie behind a results framework or Theory of Change.

CASE STUDY: Strategy Testing in the Asia Foundation

Strategy Testing (ST) is a system developed by the Asia Foundation for use in complex programmes. Because of the complex nature of the problems being addressed by the Asia Foundation, solutions are not always obvious or predictable when programmes are designed. ST is therefore designed to emphasise analysis, experimentation and adaptation through short feedback loops that link learning and action.

At the heart of ST is a series of periodic, structured breaks from day-to-day programme implementation, where stakeholders can collectively reflect on what they have learned, and ask whether the assumptions underpinning their programme strategies, as outlined in their Theories of Change, are still valid in the light of new information, insights, and shifts in local context. Based on this reflection, programmes are adjusted as needed.

ST was initially conceived as a monitoring tool. However, programme staff see it as a programme development exercise rather than a monitoring exercise because it allows them to adapt programmes in the light of evidence and experience. This creates a very close link between monitoring and programming, in contrast to more traditional monitoring approaches, which programme staff sometimes see as an 'add-on' for external audiences that has little relevance for their own work.

Source: Ladner (2015).

Tools and methodologies

In project M&E systems there is a tendency to first develop indicators and then consider how to collect them. This is consistent with the logical framework approach to planning. In complex M&E systems it can be the other way around. Organisations sometimes need to decide what tool, template, methodology or approach is best suited to the task of assessing and analysing change *before* they can work out what the indicators or questions should be. There are three main reasons for this.

Firstly, if the desire is to aggregate or compare numeric indicators then organisations need to ensure that the methods used to collect them are similar, if not identical. Whilst some indicators can be collected through many different tools or methodologies of information collection and analysis (e.g. framing indicators or mixed indicators), aggregated indicators, core indicators and ranking/rating indicators normally require a common tool or methodology.

Secondly, some tools and methodologies are particularly relevant when assessing certain kinds of change. For example, changes in livelihoods may best be captured through Household Economic Analysis (HEA) surveys; work on HIV&AIDS through Knowledge, Attitude and Practice (KAP) surveys; or work on empowering communities through Participatory Learning and Action (PLA) methods. In these cases it might be best to choose the methodology first and then consider how to turn the information into indicators or questions. In some circumstances a single tool or methodology could be used to generate information across a large part of an impact pathway. This is more cost effective than setting indicators or questions at each point and then having to think up different methodologies to collect different types of indicators (see figure 18).

Thirdly, and more generally, it is often pointless defining an indicator without knowing what tool will be used to collect it. For example, if an INGO administers a survey asking supported organisations to rate their partnership with the INGO as *'equal'*, *'uneven'* or *'highly uneven'* it might make sense to develop an indicator such as *"# and % of partners that regard the partnership as 'uneven' or 'highly uneven'"*. But without the tool the indicator would be meaningless. Where NGOs adopt common tools they generally find it much easier to develop indicators (or questions) that are capable of showing change across a broad portfolio.

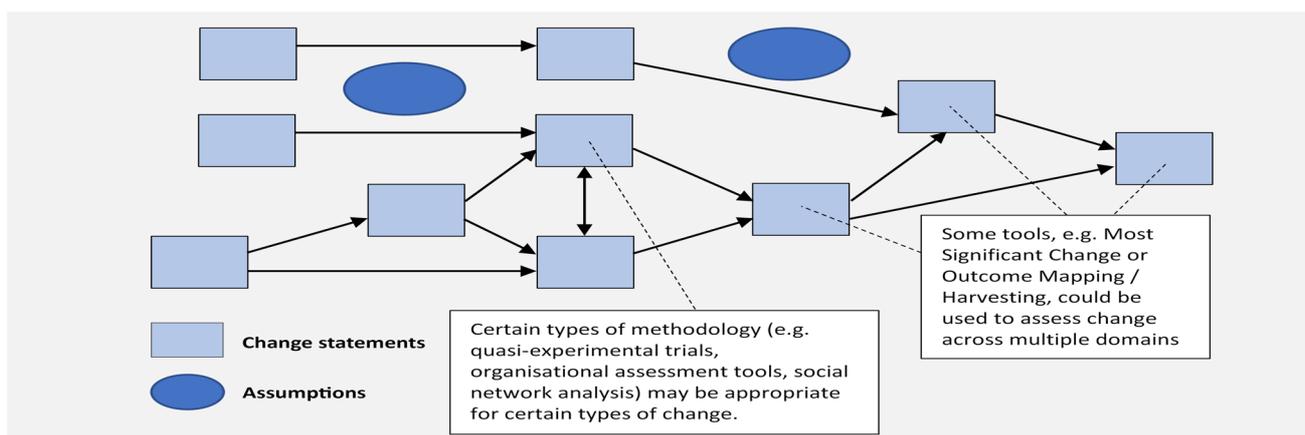


Figure 18: Identifying tools for different kinds of change

Of course, identifying a tool or methodology before an indicator or question is not necessarily an alternative to setting an indicator or a question first. Indeed, in certain circumstances the same result can be achieved by taking either path – first developing an indicator then working out what method is appropriate to collect it, or looking first for the method and then developing the indicator. Sometimes it is an iterative process where both are considered at the same time. However, starting by thinking first about the tool or methodology is a different way of approaching the problem, or, as suggested earlier, a different lens through

which to examine the impact pathway. And if a single tool or methodology is used to assess change at more than one level of an impact pathway, it always makes sense to consider the tool or methodology first.

Case studies and stories of change

I have included case studies as a section in its own right because there is so much untapped potential for using case studies or stories of change within complex M&E systems. On the one hand, case studies are an essential ingredient – perhaps the bedrock – of a large proportion of the serious and rigorous research carried out around the world. They are also particularly appropriate when evaluating complex interventions where it is often very hard to find simple indicators that can provide evidence for desired changes, and the focus is often on unexpected and/or negative change (Stern et al. 2012). Consequently, the generation of case studies is a very suitable approach for a complex M&E system. On the other hand, many NGOs have so abused case studies and stories of change in the past that frequently donors and governments (indeed NGOs themselves) do not see them as serious vehicles for assessing change and learning, but rather as devices for enabling public relations, marketing or fundraising.

A lot depends on how they are used. If they are based on evidence that is not reliable or credible then they will not help an organisation or complex programme learn and adapt. Equally, if multiple case studies are used without a proper sampling methodology then any findings generated are likely to be misleading or incorrect. However, when used as part of a proper, systematic process, case studies can be an extremely effective vehicle for answering evaluation or learning questions, or contributing to framing or mixed indicators.



Case studies used out of context are not helpful for either learning or accountability, and can give a misleading impression.

There are three main ways of associating case studies with impact pathways. Firstly, as stated above, certain **methodologies** generate numerous case studies (or stories of change) that can relate to multiple domains of change. For example, MSC can be used to identify and analyse purposefully selected stories of change; outcome harvesting relies on mapping and clustering multiple stories of change; and qualitative comparative analysis (QCA) can be used to analyse change across multiple case studies, employing computer software to help identify different sets of conditions that bring about change in different circumstances.

Secondly, **in-case analysis** can be used to examine particularly interesting or important changes or lessons. For example, an impact pathway might contain a set of potential high-level changes which, if they do happen at all, are likely to be extremely rare. Nonetheless, if they are observed or suspected they ought to be investigated thoroughly, perhaps using a method designed for in-case analysis such as process tracing or contribution analysis. In-case analysis could also be used where the bulk of the impact of an organisation or complex programme comes through a small number of key successes, such as pilot projects replicated by government or major policies changed. Alternatively, findings from systematic, continuous M&E might identify a change or lessons which would seem to cast doubt upon an organisation's Theory of Change. In these situations it might be worth spending a significant amount of time and money investigating the case in considerable depth.

Thirdly, **cross-case analysis** can be used to assess change or draw lessons across multiple cases. Cross-case analysis is usually based around purposeful sampling, where cases are strategically selected based on one or more pre-determined characteristics. The cases can then be compared, contrasted and synthesised. This is usually done by generating a number of case studies or stories of change with the same, or similar, headings or questions.

Again, generating and analysing case studies to investigate change or learn lessons is not an alternative to developing an indicator, forming a question, deciding on a qualitative methodology, or deciding how or when to engage in research. It is simply a different lens with which to examine an impact pathway.

Other options

Other options exist that could be considered at different points in a theoretical framework. One option is to use **inference**. Some changes are too intangible, too difficult or too expensive to warrant measurement. If so, this needs to be acknowledged, and time should not be wasted attempting to do what cannot be done, or what is prohibitively expensive. However, if the relevant change lies on an important part of an impact pathway then it may be inferred through investigating changes at other levels. In the pathway in figure 19 an 'enhanced capacity to raise funds from alternative sources' may be inferred if training has been conducted appropriately, and if an organisation then goes on to improve its funding base. Although there is always a possibility that the improved funding base resulted from a different route or pathway, the best option may be to assume that capacity has been enhanced, until and unless other evidence comes to light.

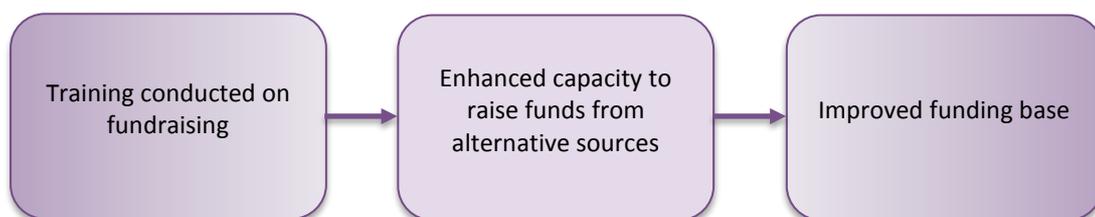


Figure 19: Use of inference on an impact pathway

Another option is to do nothing until it becomes obvious that a change has (or has not) happened. This may be useful when an objective is to achieve some kind of **critical mass** – a tipping point of some kind. As with nuclear technology, unless one is clear what the critical mass is, it is often impossible to accurately assess progress towards it, and therefore not worth trying. But the change, when it comes, will not be missed. So the task at a particular point in the impact pathway is merely to assume the critical mass change has not yet happened until it becomes obvious that it has.

A third possibility is to use a **literature review**. Traditionally, this is often only considered at the beginning of a programme (or strategic period) during the planning stage. But once work has begun, questions may arise that have already been answered elsewhere by other people or organisations. For example, as work on an agricultural extension programme unfolds an organisation may begin to suspect that farmers are unwilling to implement new farming techniques because of cultural or historical reasons. In response, an organisation might design a research process to see whether this is the case. However, it ought first to consider whether other agencies have come to the same or similar conclusions, and have already answered the question. Nowadays it is possible to do this very quickly and cheaply using open source information on the internet.

Another option is to consider **working backwards** from an identified change. Rather than capturing change at each and every level of an impact pathway, an organisation could produce evidence of a significant change, and then work backwards to assess whether, and how, different initiatives have contributed to those changes. The contributory causes may be covered already in the impact pathway, or there may be new ones that have not been considered previously.

The final, and nuclear, option is to do **absolutely nothing** if a change is too long-term, too difficult, too abstract or too expensive to measure, assess or illustrate. This may be a decision made for a particular period only. But an organisation might also decide that it will never be possible to make a realistic assessment of the change.

Worked example: the Active Citizens programme

The diagram and table on the following two pages provide an indication of how the processes described in this section might work in practice. Figure 20 shows a draft Theory of Change produced by the British Council Active Citizens Programme (see case study below) in 2018, and box 7 contains some initial thoughts on how change within or across parts of it could be measured, assessed or illustrated. Note that the Theory of Change as displayed does not contain assumptions.

Staff responsible for designing and implementing the Active Citizens programme M&E system considered for each part of the Theory of Change what the *potential* sources of evidence were, and how they could be realistically collected and analysed (as shown in box 7). Later on, different stakeholders discussed these potential sources of evidence with a view to narrowing down the long list of possible actions to a short-list of manageable ones.

CASE STUDY: The Active Citizens Programme

The British Council (2018) works with partner organisations around the world to deliver and develop the Active Citizens programme. Delivery partners identify facilitators, and the British Council trains them in the skills they need to deliver the Active Citizens (ACs) training to others. Following their training, the facilitators use the Active Citizens toolkit to design and deliver training programmes to ACs in their local communities around the world. ACs then receive the tools and support they need to set up social action projects (SAPs) to tackle social issues within their communities. Communities are connected globally through international opportunities to share learning and ideas as well as through the website and social media.

The Active Citizens Draft Theory of Change

This diagram is a draft version of the Active Citizens Theory of Change (ToC). The letters 'A' – 'L' have been inserted for the purpose of this paper, to illustrate some of the thinking around how to monitor and evaluate the ToC. Explanations for each letter can be found in box 7 on the following page.

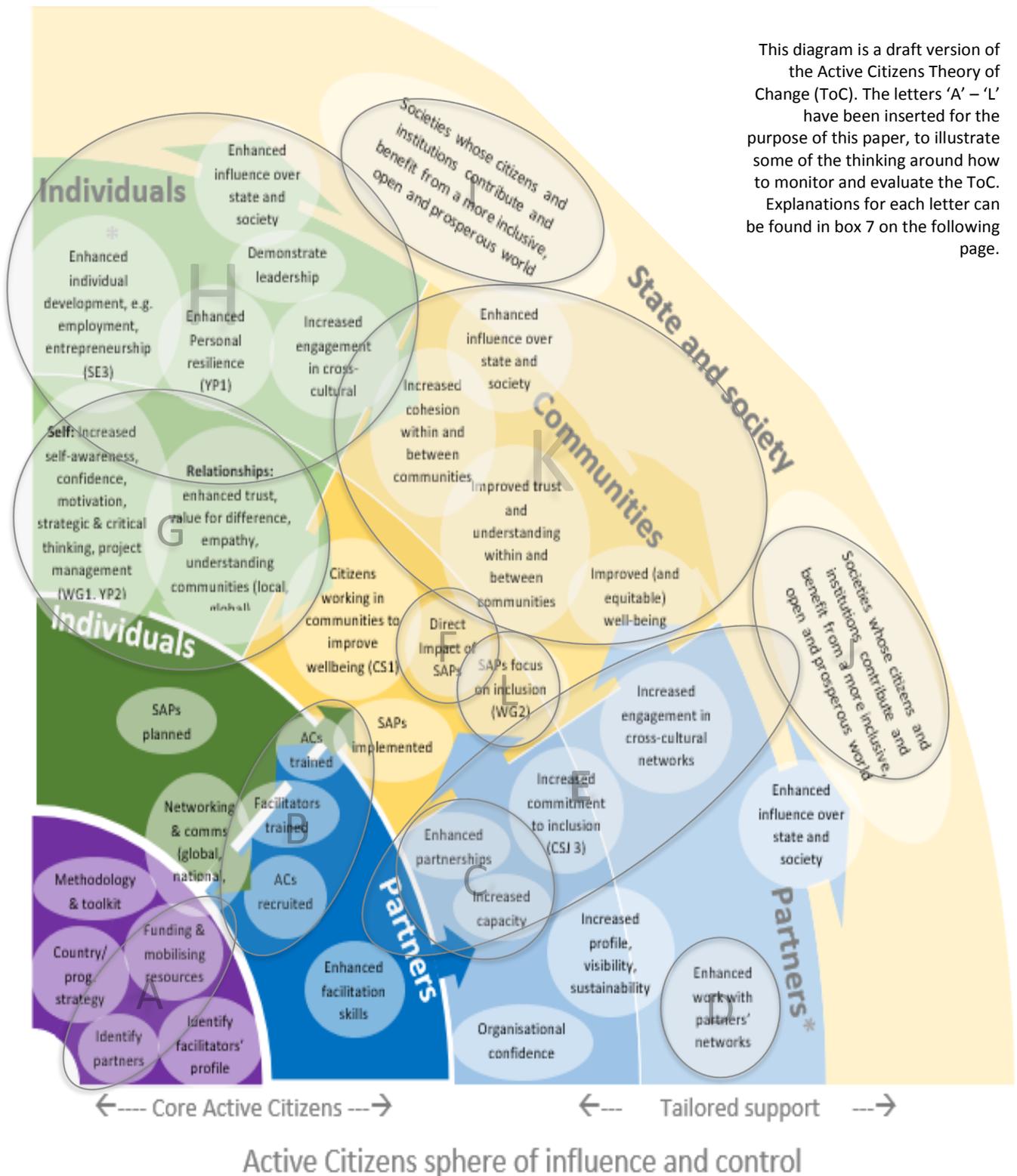


Figure 20: The Active Citizens Theory of Change

Box 7: Potential ways of monitoring and evaluating different parts of the ToC

| | |
|------------------|---|
| A | The programme could easily set direct indicators around these outputs, such as <i>'# and type of partners identified'</i> or <i>'amount of funding received'</i> . These indicators could then be captured by central staff within the programme. |
| B | Aggregated indicators could be set in each of these areas. Different country programmes would be asked to collect indicators such as <i>'# of Active Citizens (ACs) recruited'</i> , <i>'# of facilitators trained'</i> or <i>'# of ACs trained'</i> . These numbers would then be passed up to central level for aggregation. |
| C | <i>'Increased capacity'</i> and <i>'enhanced partnerships'</i> suggest the possibility of adopting organisation capacity assessment tools (OCATs) or Outcome Mapping. Both are resource intensive. A cheaper alternative might be an annual partner survey which seeks to find out what partners think about the support they have received. This could also be useful as a downwards accountability mechanism. If it could be shown that partners have increased confidence or commitment to inclusion, then enhanced capacity could be perhaps be inferred. Note that these two areas could also be assessed in association with other areas (see under 'E' below). |
| D | The word <i>'networks'</i> immediately suggests the possible use of social network analysis tools. However, that would be a large investment, and this is probably not an important enough part of the ToC to warrant much attention at the moment. |
| E | Sensemaking exercises with supported partners, possibly as part of evaluations or major reviews, could investigate to what extent capacity building work has led to increased commitment to inclusion or increased engagement in cross-cultural networks. Learning questions could be developed, such as <i>"what are the main enablers and barriers that encourage or discourage partners from increasing their commitment to inclusion?"</i> These could be addressed during sensemaking exercises and/or inserted into 6-monthly partner reporting templates. |
| F | Framing or mixed indicators could be used to capture case studies focused on the impact of Social Action Projects (SAPs). Alternatively, evaluations covering different countries, sometimes funded by different donors, could all be asked to identify and investigate multiple cases, based on purposeful sampling. |
| G | Rating indicators derived from post-training questionnaires are probably the best and easiest method to assess these kind of immediate changes. MSC or outcome harvesting might also be applied through evaluations or reviews, or the Active Citizens programme could seek to introduce a system of MSC throughout its programme on an ongoing basis, covering both individual and community-level changes. This would require a significant investment in time and resources. |
| H | This area of long-term change at individual level is a key part of the ToC, and is core to the AC methodology. A robust, statistically significant (and probably expensive) retrospective study could be done on a random sample of ACs over the past ten years to establish what changes the programme has made. Another option would be to set up a similar longitudinal study going forward. A cheaper alternative might be to produce a number of 'best case' studies, based on known examples. |
| I & J | These changes are probably too high and long-term to assess or even illustrate at the moment. It is probably best to do nothing for now, and leave them as long-term visions. |
| K | Many pathways in the ToC could lead to these changes, but significant examples are likely to be very rare. The best option might be to wait and see if examples come to light, and then to thoroughly investigate any claims of impact via in-case analysis, using an approved methodology such as contribution analysis or process tracing. |
| L | It's hard to see how <i>'SAPs focus on inclusion'</i> could be measured using an indicator. A key question could be set: <i>"to what extent do SAPs represent a genuine cross-section of the community?"</i> This could be investigated via many potential methods. One option would be to commission some research in a country, or a limited number of countries, to properly investigate the issue using multiple methodologies such as interviews, focus group discussions, surveys or even participatory video. The AC programme would need to be sure that the rewards for this research matched the expense. |

Summary

Within this section I have suggested that learning and adaptation at strategic level could sometimes be enhanced by examining a theoretical framework from a number of different angles, or through a series of lenses. This (hopefully) results in a series of different possible options, designed to indicate in each part of the theoretical framework (or across different parts):

- what can realistically be measured, assessed or illustrated;
- how much effort it will take and how much it might cost; and
- what the degree of certainty of the findings might be.

In each part of the theoretical framework there may be one or more options for assessing change or learning lessons. Some of these will be designed to measure or assess change, others merely to illustrate changes. It should be possible to do the whole exercise very quickly. Indeed, the easy part is deciding what can *potentially* be done – the next, and harder, part will be to decide what will *actually* be done.

8. STRATEGIC M&E

The approach described in section 7 will provide an NGO with many options for measuring, assessing or illustrating change across different parts of a theoretical framework. Nevertheless, there will usually be far more possibilities than can actually be realised. The next task is therefore to focus on what an NGO can realistically do over a time period. This section looks at how to do this. It starts by investigating criteria that can be used to narrow down the range of options. It then examines some questions designed to assess which options are most likely to influence strategic decision-making. Finally, it examines some of the challenges involved in applying learning at strategic level within a complex M&E system.

Criteria used to prioritise options

In any kind of complex situation priorities inevitably change over time. It is not enough to examine options once only. Instead, options should be assessed on a regular basis. One way to do this is to hold reviews every six-months or annually, where possibilities can be examined and priorities decided for the next period. Unless right at the start of a complex programme, decisions made during these reviews should be informed by an analysis of what has changed or been learned over the previous period.

Some decisions on what to prioritise can be made easily, and can lead to the immediate inclusion or elimination of large parts of a theoretical framework. To start with, an NGO may be obliged to collect data in some areas, such as outputs delivered or changes in short-term outcomes, to comply with basic accountability requirements, either for internal or external stakeholders. This information needs to be routinely collected, whether or not it is of much relevance for adaptation or decision-making. This is often done through systematic, continuous M&E.

Secondly, an NGO needs to consider how far along an impact pathway it is reasonable to look for progress. This is likely to be different in an organisation than a complex programme. Some organisations include impact pathways that are designed to cover work carried out in many regions and countries, and much of this work may be carried out over different timescales. Consequently, the whole of the impact pathway might need to be considered. On the other hand, in complex programmes with defined beginning and end points there may be no point in looking for longer-term change early on in the programme, especially unless or until short- or medium-term changes have been observed. Of course, if the later measurement of change

depends on producing a baseline and/or defining control or comparison groups then the methodologies used to detect longer-term change may need to be considered right from the start.

Thirdly, there may be parts of a theoretical framework that are not considered a priority at the current point in time, but that might become a priority later on. It may be possible to leave these aside for the time being, although the comments above concerning baselines might still apply.

Finally, many theoretical frameworks contain assumptions as well as statements of change. Sometimes these assumptions can be ignored unless it becomes obvious that change at one level of a framework is failing to contribute to sufficient change at another level. Once it becomes clear that this is happening an NGO needs to consider what to do about it. One of the first things is to test whether the assumption is wrong, or whether there is some other factor that needs to be addressed. This is usually a priority. Identifying such bottlenecks is normally easier in an impact pathway with clear, logical links between changes at different levels than one with looser logical links, or no explicit links.

After these initial decisions have been made, the task is then to decide which of the remaining options should be taken forward over a given period. Once the bottom line of M&E necessary to comply with internal or external accountability is accepted as a given, decisions over what else to do will ultimately depend on two key criteria: a) what information will be most useful to the organisation or complex programme; and b) the resources required to carry out this work.

This may mean choosing a mixture of options that fit within an available budget. Or it might mean seeking additional resources for clearly-defined pieces of work. Some options may have very few resource implications. For example, there may be little cost implication in adding a new question into a set of existing organisational templates, or ensuring that the Terms of Reference (ToR) of a pre-planned evaluation covers an important issue. This is because budgets for systematic, continuous M&E and planned, periodic M&E tend to be agreed well in advance. However, there may be significant resource implications for reactive M&E. For example, bringing together people from different parts of an organisation to a sensemaking conference, or carrying out a new research study, can be very costly. Ultimately, those in charge of a complex M&E system will need to justify the greater expenditure, or staff time, in terms of the potential rewards.

The selected options should be designed to provide the answers to the questions that are currently most critical or most important to an organisation or complex programme. Here, it might be useful for an NGO to develop some simple questions as a checklist to guide decision-making (see box 8, based on Britten and Thakali u.d.; Vogel 2012, quoted in Dyer 2016). Many of these decisions will be (or should be) designed to support organisational decision-making. However, there may be times when other purposes need to be

Box 8: Questions to guide decision-making

1. What M&E is needed to comply with our internal or external accountability requirements?
2. Are there known challenges or problems that require solutions?
3. Which parts of the theoretical framework most need testing (i.e. where is our knowledge base the weakest)?
4. Are there key creative or innovative parts of our work that need further inquiry?
5. What questions, if answered, could usefully contribute to a wider evidence base?
6. Where is existing evidence insufficient to answer an important question?
7. What assumptions do we know least about, and how critical are they for our long-term success?
8. What are the highest risks to our organisation, and what do we need to find out in order to mitigate them?
9. What further evidence do we need to change our tactics or approaches?
10. What further evidence do we need in order to assess whether we need to make changes to our strategies?
11. What is critical to know now, and cannot be left until later?
12. Which questions can be answered relatively cheaply and cost-effectively and with minimum costs to staff?
13. Are there opportunities to generate information cheaply or quickly that might not be available later on?

considered, such as demonstrating that an organisation or programme is effective in order to maintain or increase funding, or generating learning that can be used by other organisations working in the same sector or location.

At this point in the process there should be a provisional list of preferred options for collecting and analysing information over the next time period. Some of these will involve systematic, continuous M&E; and some might be generated through planned, periodic M&E. But some options might have to rely on one-off, specifically designed reactive studies, with clear plans for how to use any findings generated.

Linking M&E findings to future planning

However interesting it might be to generate M&E findings that answer an NGO's key questions, it is ultimately worthless unless it actually contributes to organisational objectives, such as improved accountability, improved fundraising, better organisational management, improved planning, or enhanced performance. In some cases – such as providing evidence for fundraising or accountability purposes – the submission of M&E findings to relevant departments may be enough. However, if the objective is to contribute to better decision-making then generating appropriate M&E findings is only half the job done – the other half is persuading people to act on them. M&E staff cannot assume that just because compelling evidence is generated then it will automatically be acted upon.



Generating appropriate M&E findings is only half the job done – the other half is persuading people to act on them.

Some findings may just be disseminated to different levels of an organisation, in order to allow staff and partners to incorporate them into their decision-making if they so choose, alongside the information they develop and generate for their own purposes. Thus, different countries, programmes or projects within an organisation (or complex programme) might take account of the findings when making their own, decentralised adaptations. There may be ways for staff responsible for a complex M&E system to support localised decision-making, perhaps by offering guidance, or presenting information through means which are most appropriate to the level and context. However, where changes are required at organisational level, or across whole regions or sectors, the onus is often on M&E staff to try and maximise the possibility of M&E findings being incorporated into management decision-making. This can be looked at as a three-stage process.

Firstly an M&E team in charge of a complex M&E system needs to satisfy its own internal requirements. It needs to reach a stage where it is confident that M&E findings are sufficiently robust that they could and should be considered as part of managerial decision-making. If there is uncertainty in the findings then this needs to be properly appreciated and communicated. Sometimes an M&E team may feel it needs to go back and do further work (resources permitting) to make M&E findings more certain. At other times it may feel that the extra time and effort required are not worth it, and that the current levels of uncertainty are acceptable.

From a technical point of view, M&E findings are more likely to be considered as inputs into the decision-making process when: a) findings are credible; b) the degree of uncertainty is known; and c) the methodology used to generate the findings is appropriate and transparent. Even then, a lot depends on the scope of the findings, which need to be matched against the consequences of decision-making. The greater the implications of the changes at organisational level, the greater the certainty and credibility of any findings need to be.

*“Estimating the uncertainty of a result is often as important as the result itself. It is only when we are aware of our ignorance that we can judge best how to use knowledge.”
(Cox and Forshaw, 2016)*

This is partly why it is important to be as clear as possible within a theoretical framework about the changes an organisation hopes to influence, and how. Demonstrating conclusively that clearly-defined changes at one level are not filtering through to clearly-defined changes at another level, and explaining why, should provide a key impetus for decision-making. Generating illustrations of change across different domains of change and conducting cross-case analysis to identify interesting learning may be worthwhile, but is less likely to provide impetus for strategic decision-making.

Secondly, once internal demands have been satisfied, an M&E team usually needs to work with the wider organisation to try and bring about change. This depends a lot on who the relevant decision-makers are, and how they have been involved with developing any M&E findings. They may be senior management who are closely connected with the M&E team, in which case it might be relatively easy to persuade them of the need for change. Indeed, sometimes representatives of M&E teams are part of senior management teams or organisational leadership, and can directly contribute to decision-making. Often, however, they are not. In such cases central M&E staff may need to be innovative and persistent in seeking suitable ways to use M&E findings to influence organisational plans, policies and practices.

Thirdly, accessing internal decision-makers may not be enough, and M&E staff may need to engage with wider decision-makers, such as representatives of boards or trustees, donor staff, or government ministers. In these situations it might be much more difficult to incorporate M&E findings into decision-making. In practice, M&E findings need to compete with other elements of decision-making such as managing risks, taking advantages of new opportunities, scanning the external environment, considering what others are doing and what else might be done, assessing evidence from other organisations, and generally responding and reacting to more urgent (if not more important) stimuli such as shocks, crises or unexpected events.

Building relationships with key decision-makers both inside and outside the organisation is therefore critical, and it is often useful to involve strategic decision-makers in decisions over how and when to conduct M&E as well. Indeed, the role of M&E staff in influencing planning and policy across organisations or within complex programmes may sometimes be more akin to an advocacy role than a technical one.

In conclusion, it is not enough for an M&E team in charge of a complex M&E system to generate findings that could conceivably contribute to change at organisational (or complex programme) level. They need to actively consider how such change might happen, and then take steps to ensure that, as far as possible, they

Box 9: Further questions to guide decision-making

1. Which M&E findings could potentially be useful to support different parts of the organisation or complex programme to engage in decentralised decision-making?
2. What is likely to be the level of uncertainty of any M&E findings produced, and how might this be decreased?
3. What is the potential for using the findings to influence internal and external decision-makers?
4. What are the particular types of findings (e.g. quantitative or qualitative analyses) that are likely to influence decision-makers the most?
5. How should M&E findings best be communicated to decision-makers to maximise the potential for influencing them?
6. What is the potential for involving decision-makers in planning and shaping reactive or periodic M&E work so they are engaged throughout the process?
7. How should M&E findings complement other influences on strategic decision-making, such as the management of risks, etc.?
8. What available events or opportunities exist for feeding M&E findings into decision-making?

provide the right type of information at the right time in the right place to the right stakeholders to provide the maximum possible leverage to influence decisions.¹³ Wherever possible, these considerations should form part of the annual or six-monthly theoretical framework reviews mentioned earlier. So a key criteria for selecting the priorities for M&E action over a period should also be the realistic prospects for influencing decision-making. This goes beyond the credibility (or otherwise) of any findings. Consequently, in addition to the questions contained in box 8, NGO staff should also consider a separate set of questions to assess how useful different forms of evidence might be (see box 9).

In some organisations and complex programmes there may be few genuine opportunities to contribute to organisational-level decision-making. This is why it is so important to engage in reactive, targeted M&E that can enhance the credibility, reliability,

validity and general persuasiveness of findings. It may be more useful, and more possible, to affect decision-making in just one or two areas over a time period than to produce multiple M&E findings, none of which individually meet the necessary threshold for significantly influencing decisions.

Once an NGO has decided what to do over the next period it can then make plans for M&E accordingly. At this stage a new or amended results framework should be produced in order to reflect the decisions that have been made. This might involve introducing new, or amending existing, indicators, questions, sources of evidence, tools and methods, assumptions, baselines, targets, principles, or any other part of a results framework. It might also be necessary to adjust or amend whichever theoretical framework is being used. The new results framework might contain a mixture of: a) ongoing M&E work that is likely to be carried out across different time periods; b) work especially designed to be carried out in the next time period; c) work that is scheduled to be carried out at a later date; and d) optional work that has been considered, and might be carried out in a later time period if considered relevant. In this way, M&E can become more strategic and

¹³ This often means taking advantage of known points where decisions are likely to be made. For example, there is not much point in supplying potentially influential M&E findings just after a major review has been conducted – the time to feed this information in is before or during the review.

more dynamic – genuinely designed to help organisations improve their performance by focusing time, effort and money on the most critical questions at that particular time.

The challenge of integrating M&E findings into decision-making

Most people agree that complex M&E systems should contribute to strategic decision-making, but unfortunately in practice they have often been unable to do so. Information is either focused on the wrong thing, or is too unreliable, too confused, too little or too late. A complex M&E system can contribute to decision-making, even at organisational (or complex programme) level, but there are many challenges that first need to be recognised if they are to be overcome.¹⁴

- As stated in section 4, it is often hard to get accurate information through systematic, continuous M&E. But many accountability systems require this. Sometimes there is a gulf between the type of information organisations collect and analyse for accountability purposes and the type of information needed for strategic decision-making. There is an unfortunate tendency for organisations to believe the information presented through systematic, continuous M&E without fully appreciating its limitations or inconsistencies. This frequently means that genuine M&E findings with associated levels of uncertainty are treated with mistrust or dismissed out of hand.
- As argued in section 3, large NGOs, by definition, are often working in complex environments. Evidence in complex situations is often incomplete, contradictory or contested. Linear planning tools such as the logical framework and approaches such as RBM have encouraged a ‘black and white’ assessment of change to ensure reporting against milestones and targets. But at outcome and impact level many, if not most, M&E findings come with some level of uncertainty. If managers wish to take decisions based on M&E information they need to know what level of uncertainty is acceptable. Physical scientists argue that “estimating the uncertainty on a result is often as important as the result itself. It is only when we are aware of our ignorance that we can judge best how to use knowledge. In engineering or medical science, a deep understanding of uncertainty can be a matter of life or death. In politics, over-confidence is often the norm; uncertainty is seen as weakness when really it is a vital part of decision-making” (Cox and Forshaw 2016). What Cox and Forshaw say about politics is equally true of evaluation. If M&E findings result in real strategic changes affecting real lives it is important both to ensure that findings are as precise as possible and to recognise the inherent uncertainties, with the associated implications for decision-making.
- Some changes can take a very long time to materialise, and often it is simply not possible to wait until all the facts are in before making decisions. Therefore, a balance needs to be sought between rigorous evidence and timely evidence (Valters and Whitty 2017). Taking major strategic decisions at organisational level often means taking decisions based on the best possible available evidence – either using existing evidence or engaging in rapid data collection and analysis – rather than waiting longer to produce findings that are more robust or more reliable.
- Some M&E findings can potentially be acted on straight away. Others may reveal a weakness in current thinking, or a need to revisit basic assumptions, but may not provide immediate clarity on what needs to change. In these cases it might be necessary to seek new evidence in order to re-

All organisations use propaganda to some extent, and this is ok. The real problems come when an organisation starts believing its own propaganda

¹⁴ This section is heavily based on a blog series on M&E and adaptive management, published in 2018. This is available at <https://www.intrac.org/adaptive-management-challenging-monitoring-evaluation-complex-programmes/>



There is an unfortunate tendency for organisations to accept the information presented through systematic, continuous M&E without fully appreciating its limitations or inconsistencies. It is even worse when organisations start believing their own misinformation.

develop plans. Design and planning therefore become ongoing processes, constantly reacting to emerging results and learning, as well as external changes and events. Regular adaptation means ongoing planning should be integrated with ongoing M&E and learning, rather than separate exercises carried out at the start of a programme or strategic period. This is inevitably easier in organisations or programmes designed to be flexible. By contrast, organisations or federations that rely on huge negotiated networks of plans may find it much harder to change course in the light of new evidence. Again, the sheer weight of the findings will often be a critical point – is the evidence acquired through a complex M&E system sufficient to overcome the inherent inertia in the system? If the inertia becomes too great, the impetus to overcome it may become unobtainable.

- This paper argues for the importance of reactive M&E within a complex M&E system. This means NGOs will have to think differently about how to allocate resources to monitoring, evaluation, learning and research, bringing in more flexibility and more fluidity. This does not necessarily mean spending more money overall (although that would be nice), but spending it differently, responding to needs at the time rather than being planned in advance. However, this will create further challenges. If there is a sudden and urgent need to investigate an issue in more depth then the money must come from somewhere. If an organisation has to wait for a new annual round of funding it may delay important decisions, or even mean that any information is obsolete by the time it is acquired. Equally, if plans

are not sufficiently flexible it may prove difficult to change strategic direction even if M&E findings highlight the need to do so. This highlights the importance of ensuring that plans and budgets are sufficiently flexible within complex M&E systems.

- Within complex M&E systems there is also a need to ensure that the different information disciplines of design, planning, monitoring, evaluation, impact assessment, research and learning are all fully integrated. Indeed, once a certain level of complexity has been reached the terms tend to lose their meaning. For example, M&E findings might reveal that some groups of stakeholders are failing to benefit from organisational interventions. An M&E team in charge of a complex M&E system might decide as a result to develop some purposefully sampled case studies, and then conduct cross-case analysis to find out why they are not benefiting. To do this it will need to decide on issues such as whether to use internal or external staff, how much money and time to spend, what questions to address, what tools to use, and how to feed the findings into decision-making. Whether this exercise is called impact monitoring, evaluation, review, research or simply '*a study*' becomes almost irrelevant. Each exercise is different, and each will need to be designed accordingly.
- Complex M&E requires different kinds of personalities and competencies than project-based M&E. Currently, many M&E staff are trained to work in a style that emphasises reporting against pre-defined, quantitative indicators, using linear tools such as the logical framework. But in complex M&E systems, the abilities to think strategically, identify emerging patterns, build relationships with stakeholders, communicate with different groups, and persuade others are likely to be more important than knowledge and experience of traditional M&E methods. Many years' experience working on project M&E systems may in fact be a hindrance rather than a help.
- Finally there are many practical challenges. These include cultivating the analytical skills of programme staff; enhancing procedures for collecting, storing and using information to bring ongoing M&E more in line with existing ethical standards for evaluation and research; and the pursuit of information and communication technologies (ICTs) that can shorten the time loops between information collection, analysis and use. Further analysis of the kinds of changes required to support staff working in complex M&E systems can be found in a blog by Bowman (2016).

Complex M&E and adaptive management

In one sense, a great deal of what is in this paper is not particularly new. What *is* new, however, is the recent growth of attention on adaptive management (or adaptive programming) over the past few years (see box 10). There are significant parallels between the kind of thinking required for adaptive programming and the kind of thinking that has been done (but not very well documented) by staff working in complex M&E systems within NGOs over many decades.

Box 10: Adaptive management

Adaptive management – sometimes known as adaptive development or adaptive programming – is a broad approach designed to support programmes in complex or uncertain environments. It can be applied in both development and humanitarian work. It involves regular processes for the collection and analysis of information. This is then used to make changes to a programme throughout its lifetime, which means that the programme does not have to be designed in its entirety at the start. Adaptive management is not a single method or a set of tools. Instead, it is an approach which can include many different processes and initiatives that are commonly used within development interventions. These include participatory approaches to planning and design, organisational learning, research, beneficiary feedback mechanisms, and a variety of monitoring and evaluation (M&E) methodologies designed to deal with complexity. The key feature of adaptive management is not that programmes may change throughout their lifetime – all programmes do this to some degree – but that a flexible and exploratory approach to programming is used because it is accepted that solutions are not known beforehand (O'Donnell 2016).

Staff working in complex M&E systems have always had to deal with the same issues as staff working on adaptive programmes, implicitly if not explicitly. But the new debates will hopefully provide more technical and political support for the concepts outlined in this paper. And just perhaps an increased realisation and appreciation of how difficult it is to genuinely influence decision-making through a complex M&E system.

Summary

This section has described a method for prioritising options for measuring, assessing or illustrating change across different parts of a theoretical framework. This needs to be done on a regular basis as priorities change over time. It is important for an M&E team in charge of a complex M&E system to assess what information would be most useful to decision-makers responsible for strategic adaptation. But it is not enough to identify what evidence could conceivably contribute to change. It is also important to consider what type of information needs to be delivered to which stakeholders, and when, in order to maximise the potential for M&E findings to contribute to enhanced performance over time. This is one of the hardest things to do in a complex M&E system, and there are many challenges that need to be overcome.

The next section provides some preliminary thoughts on how to begin designing and implementing a complex M&E system.

.... YES I'M SURE YOU WOULD LIKE
TO TEST THE DEPTH OF THE WATER
BEFORE WE CONTINUE OUR JOURNEY
BUT I CAN'T ALLOCATE RESOURCES FOR
THAT UNTIL NEXT MONTH, SO
WE'RE JUST GOING TO HAVE TO
CARRY ON...



In complex M&E systems, M&E budgets need to be sufficiently flexible to allow for rapid assessments in cases where there is a sudden and urgent need to investigate an issue in more depth..

9. DESIGNING AND IMPLEMENTING A COMPLEX M&E SYSTEM

This section introduces some ideas on how to design and implement a complex M&E system. However, it is important to emphasise that every organisation and complex programme is different, and therefore every complex M&E system also needs to be different. People often approach design according to their own preferred working methods. The nature of an organisation, as well as the type of work it carries out, also influences the design and implementation processes. The ideas presented in this section are therefore suggestions only, and should not be seen as an attempt to dictate best practice.

The design process

A 9-step process for designing a complex M&E system is described below and in figure 21.¹⁵ The steps are not linear, and may be carried out in a different order or at different times according to the circumstances. There may be a large degree of iteration as well, with aspects of the system constantly being tested and piloted, and results fed back into the design process.

A crucial issue, however, is the starting point for design. In some complex programmes a designer starts with a blank sheet of paper. If nothing has gone before then all options are on the table. In other complex programmes, and almost always when dealing with organisational systems, some M&E policies, practices and processes will already be in place. In these cases a complex M&E system needs to build on what already exists. *'Intelligent design'* of complex M&E systems may be the ideal, but in reality they tend to evolve over time.

If a complex M&E system already exists it may be effective and coherent, with clearly defined purposes. But it may not. And it may have redundant features that were introduced to serve a set of defined purposes, but are no longer relevant. This will have a major impact on the early steps of the design process.

For the remainder of this section I will assume that there is already a complex M&E system in place, and that the need is to develop and re-design the system, not introduce a completely new one.

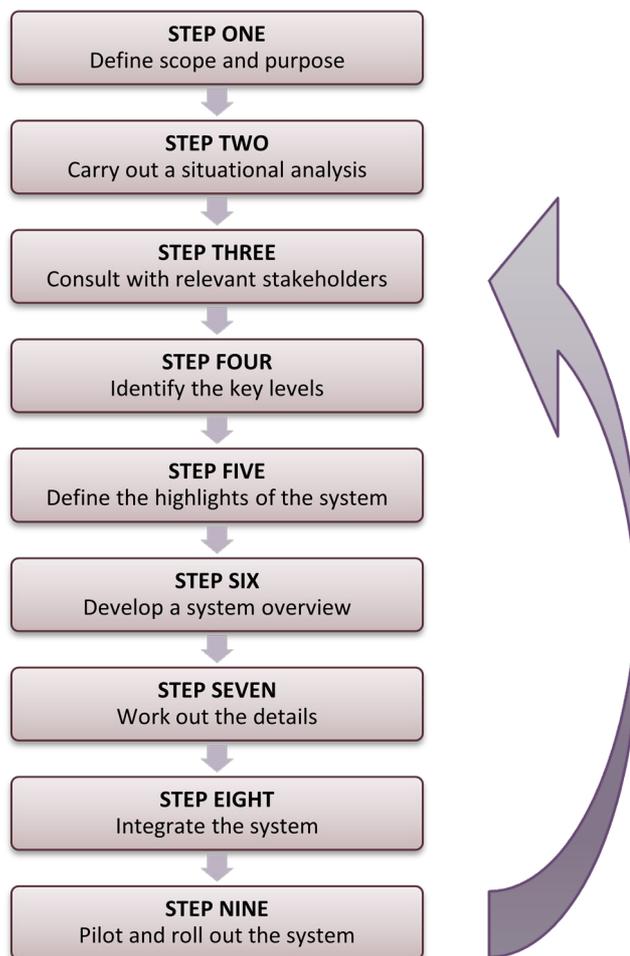


Figure 21: Steps taken in designing a complex M&E system

¹⁵ This section is heavily based on an earlier paper written in 2009, called "Developing M&E Systems for Complex Organisations: A Methodology". That paper is available from INTRAC at <https://www.intrac.org/resources/developing-systems-complex-organisations-methodology/>.



Define scope and purpose: The first task should be to clarify the scope and purpose of the complex M&E system. This reflects the discussions in section 3 on the differences between simple and complex M&E systems. In some complex M&E systems M&E sits on its own. In others it is formally integrated with planning systems (PME) or with learning systems (MEL). It may or may not cover areas such as knowledge management or

research. So the first design task is to thoroughly understand what a complex M&E system does (or should) cover and what it does not.

Equally, understanding the primary purposes(s) of a complex M&E system is always important. Most complex M&E system design is done either because: a) nothing at all is in place (mainly in the case of new complex programmes); or b) what is currently in place is deemed insufficient. If the latter, a key question to ask is 'why not?' It may be because the current M&E system does not deliver in areas such as organisational management or accountability to key donors. It may be that senior management feel it does not contribute enough to decision-making. Or there may be other reasons. The answer to this question will obviously have a big impact on the design process. This is because a new or amended complex M&E system is likely to be judged in the short-term according to how well it performs against the stated, primary purposes. It is also important to know at this stage whether there are any parts of the existing M&E system that need to remain fixed or cannot easily be altered because they serve the needs of external agencies, such as governments or donors. This could restrict the range of design options available.



Perform a situational analysis: The next step is to clearly understand what (if anything) is already in place, and how staff at different levels of the organisation (or complex programme) use the existing M&E system. Whether the intention is to design a new system, or amend an existing one, it is important to fully

understand the consequences. In many cases a high-level overview will not be sufficient, and designers may need to burrow down into the details of plans, budgets, tools, indicators, templates, reports and databases at multiple levels of the organisation. It might also be necessary to investigate associated areas such as financial, administrative or human resource systems, especially if they are likely to be influenced by any changes to the M&E system.

Common methods used to perform a situational analysis include literature reviews covering existing policies and processes; individual interviews with key internal and external stakeholders; group interviews with stakeholders

at different levels of an organisation (including partners and/or beneficiaries if appropriate); site visits to see how M&E works in practice; surveys or questionnaires administered to groups of stakeholders; and workshops where stakeholders can properly discuss the current system and future needs. During this step, the intention should be to acquire as much knowledge as possible about the current M&E system in order to provide a sense of what changes are feasible and desirable, and the potential consequences of amending or removing any existing elements.

There is seldom a template, report form, process, policy, procedure or practice - however badly thought through or designed - that is not considered indispensable by at least one individual or department. Any fool can add a new element into a complex M&E system; it can take a genius to get rid of something that is already there.



Consult with relevant stakeholders: Consultation is important for buy-in. If people have not been consulted on changes to an M&E system they are less likely to approve the changes or work to make them effective. Consultation focusing on people's needs at different levels of an organisation can take place alongside the situational analysis described in step two, or afterwards. Consultations may have three main purposes: a) to

enable people to input into the decisions that will affect them; b) to ensure buy-in to the new system; and c) to enhance the quality of the change process by ensuring that it is based on a solid understanding of the needs of different stakeholders. Consultation will also help ensure that the complex M&E system does not focus too much on the needs of central staff and departments to the exclusion of staff and partners at lower levels of an organisation. Many groups could potentially be consulted, depending on the type of organisation or complex programme, such as:

- staff at different levels who will be expected to maintain or use the new M&E system;
- key partner organisations, especially those responsible for implementing projects and programmes;
- senior managers whose support will be required;
- board members or trustees;
- sister organisations carrying out similar work in similar environments;
- representatives of major donors; and
- beneficiaries or representatives of communities, if feasible.

Support and buy-in from senior management is possibly the single most important consideration that will influence the success or failure of a complex M&E system. Wherever possible, senior managers should be consulted and kept informed throughout the whole process of developing the system.



Identify the key levels: As outlined in section 3, a complex M&E system usually involves plans being made and/or information collected, analysed, summarised and used at multiple levels, with information and analysis flowing between those levels. A large INGO, for example, will typically work at global, regional, country, sector, programme and project levels. Some organisations also include a *'partner'* level to denote changes in partner capacity resulting from capacity development work. Others include levels reflecting cross-cutting or mainstreaming work, internal organisational work, or added-value work. A complex programme operating in just one country may have fewer levels – perhaps just the programme, project and partner levels – but it is still important to define them.

It is critical that staff designing a complex M&E system ensure that the system is focused on the areas of work that are most important to an organisation (or complex programme) and the levels where they hope to contribute the greatest change. This might seem obvious, but it does not always happen. For example, some INGOs who are proud of their added-value work make little or no attempt to assess the impact of this work. And many NGOs claim to prioritise capacity development work, but have few, if any, systems for assessing their efficacy in this area.



Define the highlights of the system: Rather than trying to design a complex M&E system in its entirety all at once, it is often worth first identifying a few key highlights or features. This is analogous to the design of a building. An architect does not usually design a large building from left to right, or from top to bottom, but instead decides on some key features – a particular kind of porch, a tower, an ornate staircase, etc. – and then designs the rest of the building around these key features. Likewise, it is often useful when designing a complex M&E system to decide on one or more highlights. As described in section 4, these can then be used to tie a complex M&E system together, whilst leaving more flexibility in other areas. A key highlight or feature may be a particular approach to planning, a core set of indicators, a particular tool or methodology, a specific learning mechanism, an IT system, or a set of principles governing the ethos of the M&E system. Many NGOs identify more than one key highlight.

At this stage of the design process there is less need to involve multiple stakeholders, and the design task can be delegated to an individual or small group. This is because a complex M&E system needs to act as a coordinated system, and the involvement of too many people can result in it becoming somewhat chaotic. There are always going to be tensions that need to be managed. On the one hand it is essential to know how people use existing M&E systems, to thoroughly understand their needs and requirements, and to ensure

there is buy-in to a new or updated system. On the other hand, an organisational M&E system ultimately needs to be designed as an integrated system. Otherwise it runs the risk of losing coherence in trying to be all things to all people.

6

Develop a system overview: Once the main highlights or features have been decided, an overview of the complex M&E system can be developed (or adapted). Different people have different ways of doing this. My own preference has always been to map out the entire system on a grid, and then to consider which parts are satisfactory, which are not, and where changes are required. Once these changes have been identified the grid can then be updated accordingly.

An example of a draft completed grid, produced by Self-Help Africa, is shown in figure 23. On the left-hand side of the grid are some of the common elements of a project M&E system.¹⁶ On the top row are the key levels of the organisation. The different cells of the table contain the policies, processes or practices that are considered essential at that particular level and in that particular area of M&E (note that the blank spaces denote levels and areas of M&E where processes are completely decentralised). A fuller explanation of the M&E grid system, and more complete instructions on how to use it, can be found in Simister (2009).

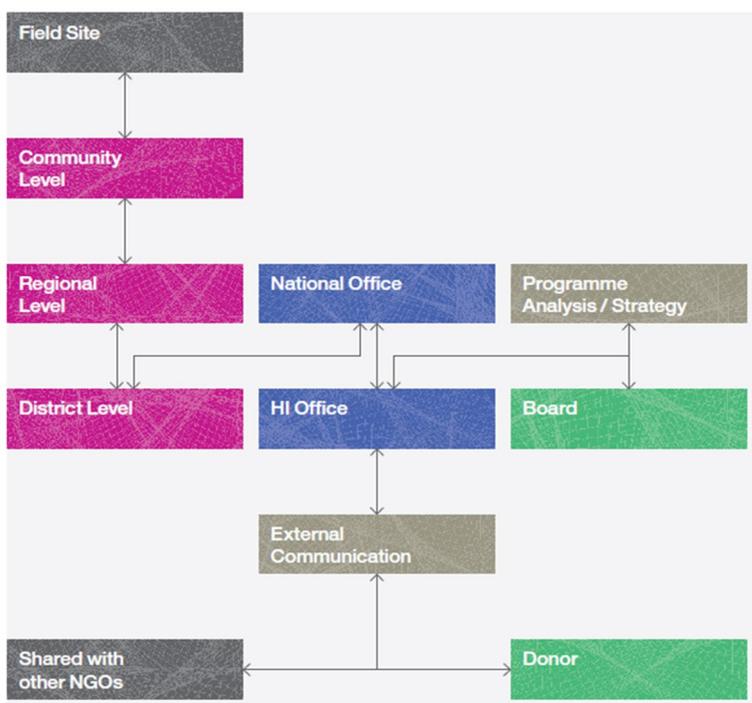


Figure 22: Homeless International data flows

A grid is only one of many ways to conceptualise a complex M&E system. For example, many organisations choose to use diagrams to show how information flows between interested parts of an organisation. An example from Homeless International is shown in figure 22 (see ITAD 2014). These diagrams are better for showing how data flows between different levels of an organisation, but do not show how information is generated, or how objectives or indicators are linked between different levels.

In the end, the choice of method for conceptualising a complex M&E system is down to

individual preference. What is important at this stage is for a designer to have a complete overview of how the complex M&E system will work, the key highlights, and how information should be connected across and between the different levels of the organisation.

¹⁶ Any of the elements contained in box 1 in section 2 of this paper can be chosen. However, it is important to ensure that main elements, such as objectives, indicators, reports etc. are included.

Summary Self-Help Africa (SHA) Monitoring System¹⁷

| | Global | Country | Programme | Project | Cross-cutting (Gender / HIV / environment) | Partners / capacity building |
|--------------------|---|---|--|--|---|--|
| Planning Systems | A global strategic plan is developed every 4-5 years, based on a theory of change | Country strategic plans have to be developed according to standard guidelines | Programme logframes are required. An advocacy strategy has to be drafted | All project plans must be summarised according to a fixed template Project logframes are required | | |
| Setting objectives | Global aims and strategic objectives are developed during the global strategic plan | Country objectives are expected to contribute to global objectives | Programme objectives are expected to contribute to country and global objectives | Project objectives are expected to contribute to country/ programme objectives | Objectives for added-value cross-cutting work are specified in country/project plans | Objectives for partnership / capacity building work are specified in country programme plans |
| Indicators | A core set of impact / outcome indicators are linked to the global theory of change | A core set of impact / outcome indicators are linked to the global theory of change | Programme indicators are mapped onto SHA's global indicators | Project indicators are mapped onto country/programme indicators | All projects are expected to record gender disaggregated information on beneficiary numbers | |
| Baseline Info | | | | Household surveys Community needs assessment Secondary data | There are sections in the baseline report on cross-cutting issues | Summary of partner capacity and track record |
| Tools | | Reporting against logframes | Reporting against logframes | Reporting against logframes Production records Case studies Participatory impact assessment HEA/IHM....modelling¹⁸ | | Partner workshops Keystone partner survey |

¹⁷ Note that this grid has been adapted slightly for the purposes of this paper. The original was developed by Self-Help Africa (2011).

¹⁸ This is a key highlight of the Self-Help Africa M&E system

| | | | | | | |
|---|--|---|---------------------------------|--|--|---|
| Participation | Major donors are involved in planning at global level | Country staff and partner staff (in some cases) are involved in planning and M&E | | Project staff and partners. SHA principles suggest that we should engage un- or under-served people in PME processes wherever possible. | Project staff and partners. SHA principles suggest that we should engage un- or under-served people in PME processes wherever possible. | Project staff and partners. |
| Evaluations, Impact Assessment and Research | | Country Programme Evaluations are expected | Thematic research is undertaken | End of Project evaluations; ex-post evaluations | | |
| Use and Analysis of Data | | Basic analysis for reviews and reporting | | Basic analysis for reviews and reporting | Some use of gender audits | |
| Reports | An annual report is produced A quarterly summary performance report is produced for SMT and the Board | Annual and quarterly reports are produced, with simple assessments of the likelihood of projects achieving objectives | | Annual and quarterly reports | Projects are expected to report on progress against crosscutting objectives within each report | Projects/Countries are expected to report on progress against partnership objectives within each report |
| Learning Mechanisms | Mid-term review | Country office meetings/workshops Cross-visits | Communities of practice | Annual/quarterly project planning and review workshops Cross-visits | Annual/quarterly project planning and review workshops | Partner workshops |
| Data Storage | | Salesforce | Salesforce | Salesforce EfD database | | |
| Supporting processes | <p>There is a technical team that includes a PM&E specialist</p> <p>Partnership with EfD – building core team</p> <p>SHA expects that all country and programme PME systems should be effective: Staff should be properly trained and inducted; Systems should ensure that information is analysed at all levels, and never just passed upwards to be analysed at higher levels; People submitting information to higher levels are entitled to receive comments and feedback; and efforts should be made to ensure that all stakeholders are aware of how M&E information will be used.</p> | | | | | |
| Practical Issues | | Important current issues include staff turnover; improving data analysis and management; and use of technology | | Important current issues include staff turnover; improving data analysis and management; and use of technology | | |

Figure 23: Self-Help Africa M&E grid



Work out the details: Once the overall design has been finalised, the next task is to work out the details, especially around the key highlights of the system, or areas where M&E processes are linked between different levels of an organisation. This might involve developing planning templates, designing or adapting information collection and analysis tools, developing organisational indicators, creating protocols or methodologies for beneficiary participation, designing report templates, developing protocols for when and how evaluations and impact assessments are carried out, developing learning mechanisms or designing databases.

This can be the most difficult and time-consuming part of the design process. Sometimes the work can be done by a central M&E department on its own. Sometimes other departments may need to be involved. The detailed design work may have to be started from scratch, but there may be examples of best practice within an organisation that could be replicated more widely. Often, some pilot testing will be needed to ensure that newly developed processes, procedures, tools, templates or protocols are fit for purpose.



Integrate the system: A complex M&E system usually needs to be integrated horizontally (with other organisational systems and processes) and vertically (with the systems and processes of other agencies). This may not be a discrete step in itself, and may occur in parallel with other steps. However, it is sometimes better for designers to concentrate on an organisation's own M&E systems first and then engage with different internal or external requirements as necessary, rather than seeking to build a system according to the rapidly changing and sometimes conflicting demands of different stakeholders.

Integration horizontally ensures that the M&E system is properly aligned with other organisational systems such as financial, administrative, logistical, fundraising or human resources systems. This might be a trivial process, or it might be quite complicated. Particular care needs to be taken when adapting planning, reporting or data storage systems, as these are used by a variety of functions or departments within an organisation. Vertical integration might also be a trivial process, but can sometimes present difficulties. For example, if an organisation has one major donor requiring an annual report then it makes sense to ensure that internal reporting schedules are designed to feed into that report. But if there is more than one donor then a variety of needs will have to be considered. There is also an increasing tendency for international NGOs and networks to work within broad alliances or federations, in which case the M&E systems of other alliance or confederation members will need to be factored in.

As stated in earlier sections, the ultimate aim is not to develop a complex M&E system that will supply all of an organisation's needs, as these needs will in any case be constantly shifting and evolving. Instead it is to develop a system that will ensure consistency within M&E work across the organisation. Different parts of an organisation can then carry out additional, decentralised M&E work designed to respond to their own individual needs, and also those of the other stakeholders with whom they interact.



Piloting and roll-out: The final step is to roll-out the new or revised complex M&E system. It is not necessary for staff at all levels of an organisation to have a detailed knowledge of how the M&E system works. However, organisational and partner staff should at least have a minimal understanding of three things. Firstly, people should be aware of the main overall purpose(s) of the M&E system. Secondly, they should have a broad overview of the M&E system, and what the key requirements are. Specifically, they need to know in which areas they are free to develop their own solutions and in which areas they have to comply with mandatory organisational requirements. And thirdly, they require detailed information, support and guidance in the areas of the system where everyone is expected to do the same thing, or carry out M&E work consistently.

Implementation

The steps described above can be used to design or adapt a complex M&E system. However, although in project contexts it may be possible to design an M&E system that effectively runs itself, complex M&E systems need to change and evolve over time. Therefore, even once implementation has started there still needs to be a degree of ongoing design and adaptation, as well as routine support and administration.

Complex M&E systems differ so greatly in their scope and nature that it is not possible to provide more than a few basic pointers highlighting some of the tasks that need to be considered during implementation. For the purposes of this paper I have divided these into five broad areas:

- review and adjustment of the overall system;
- adjustments between the different components of the system;
- capacity development for different stakeholders;
- routine maintenance and administration of the system; and
- the organisation or facilitation of special studies.

Review and adjustment of the overall system

Once a new or adapted complex M&E system has been designed it is useful to build in regular reviews to make sure it remains fit-for-purpose. As stated earlier in the paper, many complex M&E systems are developed partly through experimentation, trial and error, innovations and piloting. Consequently, at any one time there are likely to be parts of the system that are stable, and other parts that are being tested. The results of these tests then need to be fed back into the design process.

Even when all parts of a complex M&E system are relatively stable, it is still likely that changes in the working environment may require some level of re-design. For example, it is common for the designated purposes of an organisational M&E system to change over time, which may require revisions to different parts of the system. This is partly why it is important for a complex M&E system to be flexible enough to cope with constant change, and designed with potential shifting priorities in mind.

Reviews could concentrate on a few basic questions. Is the system still working for stakeholders at different levels of the organisation? If not, why not, and what can be done about it? Is the balance between coherence and flexibility across the system still being maintained? Is there still an appropriate balance between the needs of Head Office staff and staff or partners at other levels? Is the system still serving core organisational needs, such as enabling accountability to major donors, or enabling marketing and fundraising efforts? If considered important, is the system providing sufficient opportunities to learn and improve strategically? And is the M&E system still integrated properly with the work of other departments such as finance, administration, fundraising or human resources.

Where changes are needed, care needs to be taken to ensure that adaptation and flexibility (widely considered as positive things) do not turn into tinkering. There is a fine line between the two. For example, changing the questions asked through a report template may be a useful way of teasing out different responses from field staff or partners. But constantly changing the timing and nature of reporting requirements will quickly lead to irritation and frustration. As already stated, staff and partners engaged in M&E at different levels of an organisation need stability – they need to know what they are expected to do, when and how; and do not want to spend too much time constantly learning new processes and procedures.

Adjustments between different components of the system

This paper has argued that if a complex M&E system is to work effectively for all levels of an organisation then the four different components – systematic, continuous M&E; planned, periodic M&E; decentralised

M&E; and reactive M&E need to work together coherently. This means M&E staff need to work to identify and enact a constant readjustment of the different components, based on their interactions. For example:

- ➔ The findings from planned, periodic M&E, or reactive M&E exercises may be used to adjust the information that is routinely collected and analysed through systematic, continuous M&E. For example, an evaluation, impact assessment or research study may highlight the need to focus on a particular issue, or raise questions that can best be answered through regular reporting or via ongoing learning reviews.
- ➔ If consistent findings arise out of systematic, continuous M&E processes, an organisation may need to adjust or re-define its planned, periodic M&E processes. This might mean adopting new, common evaluation questions, or adapting existing ones. In some circumstances it might also mean altering the timing and/or focus of planned evaluations or impact assessments.
- ➔ Findings from either systematic, continuous M&E or planned, periodic M&E often highlight the need for further investigation. Sections 7 and 8 outlined a process that can be used to identify and prioritise reactive M&E studies at regular intervals.

Sometimes, the required adjustments might be relatively minor affairs. At other times they might mean radically changing theories of change, results frameworks or M&E plans at organisational (or complex programme) level. However, I would hazard a guess that if the balance between the different components of a complex M&E system is not changing over time, then the system is not really doing its job, at least not as far as adaptive management is concerned. In complex situations it should always be possible to explain how an M&E approach is adjusting to changing circumstances.

Capacity development for different stakeholders

Throughout implementation it is important to ensure that stakeholders using a complex M&E system have sufficient capacity to carry out required tasks. Capacity development with field and partner staff can be accomplished through mechanisms, such as training, mentoring, help-desk support, or peer-to-peer support. In addition, M&E staff in charge of complex M&E systems commonly spend a large amount of time producing and refining different guidelines and toolkits, although not all stakeholders learn best through written materials.¹⁹

Capacity development can also be provided through hands-on, real-time support. This has the advantage of supporting learning whilst at the same time ensuring that necessary tasks are completed. For example, different parts of an organisation can be supported to develop proposals and plans that are conducive for M&E, to develop results frameworks and M&E plans, to develop baselines, and to collect and analyse information on an ongoing basis.

Capacity development should not only be directed towards staff and partners at lower levels. At times, it may also be important to work with senior management, boards, trustees or representatives of donor agencies. This frequently involves helping them to understand the potentials and limitations of a complex M&E system, and supporting them with their immediate practical needs. This is especially important in helping to create a culture within an NGO that is conducive to high-quality M&E and learning.

Routine maintenance and administration of the system

The extent of work needed in this area is highly dependent on the type of complex M&E system. In some systems, most of the work is delegated down to different levels, and central staff have relatively little

¹⁹ I have long had a suspicion that one of the basic challenges of implementing complex M&E systems is that those in charge are often drawn to the work because they are highly logical thinkers, and are theorists by nature. However, they are often slow to realise that other people learn in entirely different ways, and may think about issues completely differently.

routine work to do, except to compile information centrally and to supervise reports at regular intervals. This is more often the case where staff and partners are expected to present information in a form that is suitable for immediate processing at central level. In other systems, more freedom is provided to staff and partners to report in a way that suits them best, and correspondingly more of the onus for compiling and sorting information sits with central M&E staff.

Central M&E staff may also spend a lot of their time engaged in basic record-keeping, and ensuring that databases are properly populated with required information. And a reasonable amount of administrative work is often required to ensure that different levels of an organisation are carrying out required tasks in the right way, at the right time, and to suitable standards. Most of this work relates to systematic ongoing M&E, or to planned, periodic M&E. As stated earlier, there is usually no need for central M&E staff to monitor or supervise decentralised M&E work carried out for local decision-makers' own benefit.

In some complex M&E systems, central M&E staff are merely responsible for supervising the production and compilation of M&E information at organisational or complex programme level, and then making sure it is sent to different parts of an organisation to be used appropriately. But in some organisations, central M&E staff play a more active role in supporting management decision-making. This might involve attending regular management meetings, providing policy or learning briefs, contributing bespoke summary reports, liaising with donor or government agencies, or providing specific information to boards or trustees. The regularity with which central M&E staff are engaged in these processes, and the extent to which they influence management decisions, are often good proxy indicators for how much an organisation values its M&E function.

The organisation or facilitation of special studies

Sections 7 & 8 described a methodology for enabling M&E systems to support strategic adaptation at organisational or complex programme level. I argued that, frequently, M&E information arising out of systematic, continuous M&E or planned, periodic M&E highlights the need to look further into an issue, but does not necessarily provide all the information needed to take management decisions. In such cases, reactive M&E is required to provide more robust information. This often takes place through special studies, such as one-off evaluations, research studies, impact assessments, major reviews or sense-making events.

There may also be times when an organisation wants to carry out a study that is not dictated by evolving findings. For example, an organisation might decide to launch a major, cross-programme impact assessment because it believes enough time has elapsed for the impact to be assessed. Or there might be existential challenges to an organisation that require deeper or more robust evidence of change to be produced.

In either event, central M&E staff usually have a major role to play in facilitating these studies. It is arguably the most interesting aspect of work within a complex M&E system. This is because the studies have the potential to provide real insight into what an organisation is, or is not, achieving (and, crucially, what to do about it). Sometimes, central M&E staff can help design and plan a study, but commission others to do the actual work. At other times they may lead on the work themselves. Or they might even leave the entire design, planning and implementation to others. Either way there must be clear plans for how study findings will be used, and to ensure that any necessary adjustments to the complex M&E system are followed through afterwards.

Summary

A complex M&E system cannot just be designed and subsequently left to run itself. There will usually be an initial design stage that may or may not be based on existing systems, processes and practices. After this initial design stage has been conducted, constant work is required both to maintain and support the system, and to review and adjust it to ensure it remains fit-for-purpose.

10. CONCLUSIONS

This paper has argued that complex M&E systems are not the same as project M&E systems. Just because something works well at project level does not automatically mean it works well at organisational or complex programme level as well. However, in the past this has not always been understood or appreciated. This has led to many complex M&E systems being judged against the standards of best-practice in project M&E systems. In turn, this has created unrealistic expectations about what a complex M&E system is able to achieve.

User-friendly M&E

Over the years I have heard many colleagues say that M&E should be an easy task, particularly if planning is done well. Perhaps. But even some projects can be difficult to monitor and evaluate, and knowledge and experience is often required to use different M&E tools and methodologies. When it comes to complex systems I think M&E is rarely easy. I hope this paper has managed to convey some of the complexities.

Rather than saying M&E should be easy, I prefer to say that it should be user-friendly, particularly in the field and at project or partner level, and where systematic, continuous M&E is concerned. Staff at different levels of an organisation or complex programme, or within partner organisations, are not necessarily experts in M&E (although some are). They have other areas of expertise, and many are doing M&E as an additional task on top of an already crowded workload. If these staff are to work effectively they need stability – they need to know what they are expected to do, when and how, and should not have to spend too much time having to constantly re-learn new processes and procedures. As far as planned, periodic or reactive M&E is concerned, there is less need to ensure it is user-friendly, because it is normally carried out by dedicated teams with more expertise and greater resources. But even here there needs to be clarity around what those teams are expected to do, how and why.

Ultimately, complex M&E challenges require complex solutions. The more that this complexity can be handled by M&E teams at the centre, the easier M&E becomes at other levels of an organisation. So the challenge for a complex M&E system is not how to make M&E easy overall, but instead to recognise the complexities, and to ensure that the burden does not fall on the shoulders of those who are least equipped to handle it.

Costs and benefits of complex M&E systems

Sections 6-8 of this paper covered some of the features of a complex M&E system that I believe are most difficult technically. The question I always ask myself nowadays when working on a complex M&E system is *'is it worth investing in these features?'* Sometimes the answer is 'yes' and sometimes 'no'. A lot can be done in a complex M&E system simply and effectively without going into the areas of aggregation and summarisation, or strategic adaptation. If an organisation (or complex programme) does want to invest in these areas then it needs to honestly ask itself whether it is fully prepared to devote the resources needed to make it worthwhile, in terms of staff time and capacity, and money.

It is always important to look at the costs of a complex M&E system and weigh this up against the benefits. If findings generated through a complex M&E system can show that certain kinds of work are particularly effective or ineffective, and therefore lead to very real change, then clearly the expense is worth it, because it is at least matched by the benefits. But if a complex M&E system continually fails to come up with findings that influence decision-making within an organisation, then it may be time to reassess whether it might not be prudent to lower the ambition of the system, and spend any resulting savings on other things.

This cost-benefit assessment can be hard to do. Costs are often easy to assess. But the benefits may be much harder to assess, and difficult to express in monetary terms. If funding for a project or programme is dependent on certain M&E processes being carried out then of course the situation is easier. But where M&E is carried out for reasons such as learning, improving and enhancing awareness the benefits may be difficult to quantify. Nonetheless, an implicit assessment of the costs and benefits of different M&E approaches should lie at the heart of almost every piece of work involving complex M&E system design. Key questions to ask are: do the ultimate benefits of M&E work outweigh the costs; and, how do the benefits compare to the potential benefits of spending time and resources elsewhere?

Ensuring balance

In the end, a large part of the design and implementation of a complex M&E system comes down to balancing the needs of different stakeholders, and the different parts of the system. These balances and trade-offs need to be managed and re-assessed on a continuous basis in order to ensure the system works as a coherent entity, and serves the needs of different stakeholders at different levels, both within and outside an organisation or complex programme. This involves:

- finding the balance between the imposition of common M&E policies, practices and procedures on the one hand, and leaving flexibility for local-level decision-makers to develop solutions that meet their own needs on the other;
- finding the balance between the needs of central staff within an organisation and those of staff working at other levels;
- finding the balance between requiring field offices or partners to present information in a way that allows for easy aggregation or summarisation, and allowing them more freedom to collect and present information that serves their own purposes, with the corresponding need to devote more resources to processing data at central level;
- finding the balance between the different components of a complex M&E system – systematic, continuous M&E; planned periodic M&E; reactive M&E and decentralised M&E;
- finding the balance between stability and continuity within a complex M&E system and ongoing evolution in the light of changing circumstances; and
- finding the balance between pursuing M&E processes that suit the internal purposes of an NGO and meeting the requirements of external stakeholders such as donors.

These balances need to be assessed individually within each complex M&E system, and it is simply not possible to come up with generic or standardised solutions that can be applied *'off the shelf'*. This is partly what makes the development of a complex M&E system so challenging. But the flipside is that getting it right can make the task an extremely rewarding one.

And finally ...

I believe there is a lot of potential for complex M&E systems to contribute to better development outcomes in a way that has not happened to date. Some organisations and complex programmes are already doing this. But others will need to change their habits. Key changes required may involve paying greater attention to M&E processes that are capable of handling complexity; encouraging much more sensemaking and informal analysis at different levels of organisations; thinking differently about how to integrate planning, monitoring, evaluation, review, impact assessment, sensemaking and research, rather than relying on old and outworn models; and enabling more flexibility in the way that M&E – particularly reactive M&E – is funded within a complex M&E system.

This requires new ways of assessing capacity. Handling complex M&E systems requires different personalities and competencies than are required for traditional M&E. Currently, many M&E staff are trained to work in a style that emphasises reporting against pre-defined indicators, using linear tools such as



Handling complex M&E systems requires different personalities and competencies than are required for more traditional M&E approaches.

the logical framework. But when dealing with complexity the abilities to think strategically, identify emerging patterns, build relationships, communicate with different groups, and influence decision-makers are far more important than knowledge and experience of project M&E systems. Perhaps the most important technical requirement for those implementing complex M&E systems is a broad knowledge of the type of M&E methods and approaches that are available, along with their potential strengths and weaknesses in diverse situations.

Finally, there is no doubt that much can be improved. But I do not think we will ever reach the point where findings at organisational level generated through complex M&E systems match the level of certainty that can be achieved within simple projects dealing with measurable change. It is important to raise standards, but it is equally important to lower the bar. We will never truly recognise improvements whilst we still have unrealistic expectations of systems that cannot be fulfilled. Perhaps the critical issue for the immediate future, therefore, is to educate people about what is and what is not possible – demonstrating clearly what is possible, but also explaining what is not, and why.

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