

# Monitoring and evaluating development as a knowledge ecology: ideas for new collective practices

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## About IKM Emergent

In April 2007, a five-year research programme was approved for funding by the Directorate General for International Cooperation (DGIS), part of the Dutch Ministry of Foreign Affairs. The programme, Emergent Issues in Information and Knowledge Management (IKM) and International Development, is known as the IKM Emergent Research Programme.

The objective of the programme is to improve development practice by promoting change in the way the development sector approaches the selection, management and use of knowledge in the formation and implementation of its policies and programmes. It aims to achieve this by:

- raising awareness of the importance of knowledge to development work and its contested nature;
- promoting investment in and use of Southern knowledge production of all types and origins;
- creating an environment for innovation, supported by research on existing and emergent practice, for people working in the development sector to raise and discuss means of addressing these issues; and
- finding, creating, testing and documenting ideas for processes and tools which will illustrate the range of issues which affect how knowledge is used in development work and stimulate thought around possible solutions.

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## Summary

The paper offers an alternative journey which conceptualises monitoring and evaluation (M&E) as a collective inquiry whose learning focus is knowledge management for development (KM4D). It does so by respecting the diversity of aspirations and susceptible behaviours of the various adventurers volunteering for the enterprise of knowledge for development and the M&E of KM4D. It considers the (conceptual) equipment necessary to be fit for the journey, to avoid getting lost in the journey that pursues, monitors and evaluates the maze-like forest of development initiatives.

A collective learning spiral is proposed which follows four stages: clarifying ideals, determining the facts, brainstorming their collective ideas and then putting them into practice. The key interested parties learn from each other at each stage, producing further knowledge which has been collectively constructed. The framework not only brings together the interests needed to effect change as knowledge cultures (individuals, communities, specialists, organisations and holistic thinkers) and functional groups.

The approach is not prescriptive. It recognises that there are choices at all stages of a knowledge initiative and at all stages of monitoring / evaluating it. Taking as broad a perspective on these choices and reflecting collectively upon them seems a much sounder approach to M&E, as even the failings of the initiative become more useful. M&E is a journey and the richness lies in that journey, not in reaching the ideal destination.

This paper is strongly linked to *IKM Working Paper* No. 12 which provides an overview of the field of M&E of KM4D and where it might be heading.

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## Introduction

### Troubles with a knowledge industry

“Not everything that can be counted counts and not everything that counts can be counted<sup>1</sup>”.

It was reasonably safe to expect that upon entering the age of the knowledge economy (Drucker 1969), evaluation by measurement would dictate or sanction knowledge processes. Even so, Bruce Cameron reminds us about the difficulty of some measurements, and the inadequacy of others.

In the paper ‘Monitoring and evaluating development as a knowledge industry’ (Hearn et al. 2011) we have seen that monitoring and evaluating (M&E) knowledge for development is a delicate matter that has been theorized from various perspectives, presented as signposts for a journey. Each signpost contains interesting pointers, yet each may fall into one or several of the main caveats mentioned in the paper by Hearn et al. (2011): lack of clear definitions, over simplistic focus on causality, attribution biases, static and non-social understanding of knowledge, difficulty to interpret – let alone measure – intangibles.

Furthermore, and crucially, whose value of knowledge is it that we are interested in? Whose learning purposes are being served? Can M&E of knowledge and knowledge management (KM) address the legitimacy and accountability of knowledge generation and use? How to deal with power issues? Where is the place for civic-driven initiatives that may carry out a process related to KM without labelling it as such and where is the space for assessing their contributions without any KM metrics or indicators of any sort?

The paper ‘Monitoring and evaluating development as a knowledge industry’ made a plea to recognize the place of multiple interests and so multiple knowledges (knowledge cultures) in order to embrace the composite nature of development work. The knowledge economy has turned the development sector into a knowledge industry (Powell 2006). For all the great thinking done and the many signpost solutions provided, this industry has stumbled over a number of challenges. Significantly, it has neglected other elements: the other knowledge cultures which also play a considerable role in development.

The objective of this paper is to look beyond the knowledge industry to recognize the place of other knowledge cultures in a collective inquiry about the M&E of knowledge for development (i.e. also going beyond the sole field of *knowledge management* to espouse the wider significance of other types of knowledge-intensive initiatives in development). The central contention of this paper is to look not only at the industry of knowledge (overwhelmingly brought forward by development aid) but also at the environment in which all knowledge cultures co-exist and jointly shape up the results of development initiatives of any kind. Arguably, this journey around what we would like to call the *knowledge ecology* will give a clearer picture of promising efforts to assess the role of knowledge for development.

### Knowledge ecology: fable, fad or fact?

As well as a knowledge industry, which brings to mind a mechanised process of inputs and outputs, development aid can be seen as one major ecosystem of a global *knowledge ecology* which encompasses other ecosystems, particularly the various knowledge ecosystems of aid recipients’ communities.

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<sup>1</sup> William Bruce Cameron

The concept of 'knowledge ecology' is not novel. In the 1990s, it referred to an approach to knowledge management insisting on the self-organizing character of individuals in a given organization to identify better solutions<sup>2</sup>.

What older metaphors and the new meaning of knowledge ecology have in common are the borrowings from complexity theories and particularly those elements related to 'complex adaptive systems'. A knowledge ecology relies on *various, interrelated* ecosystems; these ecosystems *co-evolve* as their interactions bring about new dynamics; their *self-organizing capacity* should be seen as a strength rather than an aspect of complexity to iron out. The main difference is that the older KM approach was focusing on organizational learning while the concept posed here refers to the development sector as a global, holistic system.

In spite of relatively recent interest in knowledge ecology<sup>3</sup>, the concept is not a fad, but a reality. The different knowledge cultures that will be presented in this paper do exist; they interact with one another, self-organize and evolve over time. They represent an opportunity, rather than a source of problems.

How do we attempt to understand the multi-faceted value and potential of knowledge for development in a way that respects the entire ecology rather than restricting itself to the industrial side of development, aid? This paper is not a manifesto for a knowledge ecology but it may pave the way to a more 'ecological' understanding of knowledge for development by paying explicit attention to the knowledge cultures that make up that ecology. For the benefit of better M&E of knowledge for development, this may be a promising way forward.

### **Mapping the land of many knowledges**

The concept of knowledge cultures has been presented in 'Leonardo's vision' (Brown, 2008) and will be further explained below. They encompass the interests of five cultures: individuals, communities, specialists, organizations and a fifth culture – holism – which, when shared, brings the rest together.

The basic premise of this paper is that these multiple knowledges should be engaged in any inquiry about knowledge for development since it concerns the interests of all of them. Due consideration for multiple knowledges might be a better path to avoid the biases described in the paper 'Monitoring and evaluating development as a knowledge industry'. This is particularly a better option, given the partial agenda and often top-down execution of M&E of knowledge management, the need to measure everything, and the quest for a silver bullet which does not exist, to name but a few.

At its most basic, the multiple knowledges form multiple facets of the same issue. Considering these knowledges and involving them in the process of investigating an issue supposedly brings forth a bigger picture and reveals the interlinkages that would be at play anyhow.

The contribution of knowledge for development is not a straightforward issue. Assessing it is a perilous exercise which either antagonises all the contributing interests or ignores them. Multiple knowledges could help make sense of the many facets of the knowledge ecology and find a path that borrows from the variety of interests and ideas at stake.

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<sup>2</sup> A recent discussion on KM4Dev cites these links: <http://www.co-i-l.com/coil/knowledge-garden/kd/> and <http://c2.com/cgi/wiki?KnowledgeEcologyNetwork> and

<sup>3</sup> From the blog 'The ecology of knowledge' by Ron Donaldson to the NGO *Knowledge Ecology International* and its open journal or to a recent discussion on the KM4Dev mailing list (between 8 and 16 February 2011).

The following section offers a peek at some requirements to engage in the monitoring and evaluation of knowledge for development.

## **Finding a path: a conceptual framework for M&E of Knowledge for development**

### **Guiding principles – what are good conditions to set out for the journey?**

An effective monitoring and evaluation framework for a knowledge-focused initiative – whether it be a set of individual practices, a time-bound project, an ongoing collaboration or a comprehensive organisational knowledge management strategy – which we will refer to henceforth as a *knowledge initiative* – rests upon a comprehensive inquiry process which involves:

- A recognition and appreciation of the complexity presented by the multiple actors and competing agendas that play a role in the knowledge initiative, the multiple understandings of knowledge and its role, the different modes of collecting evidence and testing for truth and different languages and terminologies used.
- A plural ontological and epistemological foundation for knowledge for development that enables the identification of reflective spaces that take into account the above point (to identify the multiple understandings of knowledge and its role).
- A participatory inquiry process taking into account the plural foundation of knowledge for development, creating reflective spaces for the multiple knowledge cultures involved to co-create the process, and proceeding to identify:
  - o The learning domains that the inquiry will look into;
  - o The constructive indicators that the initiative may wish to use;
  - o The specific M&E approaches and tools to collect the evidence sought;
  - o The scale of the M&E inquiry in a way that balances costs and benefits of M&E so that it is manageable.
- An agreement to match the M&E inquiry to ongoing knowledge practices (as opposed to idealized representations of those knowledge practices, i.e. how they *should* be) around the initiative in question.

The objective of the inquiry that the IKM-Emergent (IKM-E) programme promotes is to allow development knowledge agents (the agents working on knowledge initiatives) to balance out various learning needs. These typically fall on a spectrum between (roughly) self interest for learning and sponsored interests for accountability of the outcomes. In short, a solid M&E inquiry about Knowledge for Development (K4D) needs to provide conditions which support collective learning and to allow for M&E as a form of collective inquiry.

### **Understanding the inquiry process of M&E for K4D: what kind of journey are we setting out on?**

Monitoring or evaluating a KM initiative requires those involved to take a particular perspective on how they will inquire into the reality they are confronted with; that is, their view of how the world works. This means looking at both their methods of inquiry and their approach to knowledge and learning. Their perspective usually will depend on their *worldview*, that is their ontology (understanding of reality), epistemology (how this reality is 'known') and their ethic or moral purpose (Mowles 2008; Russell 2010).

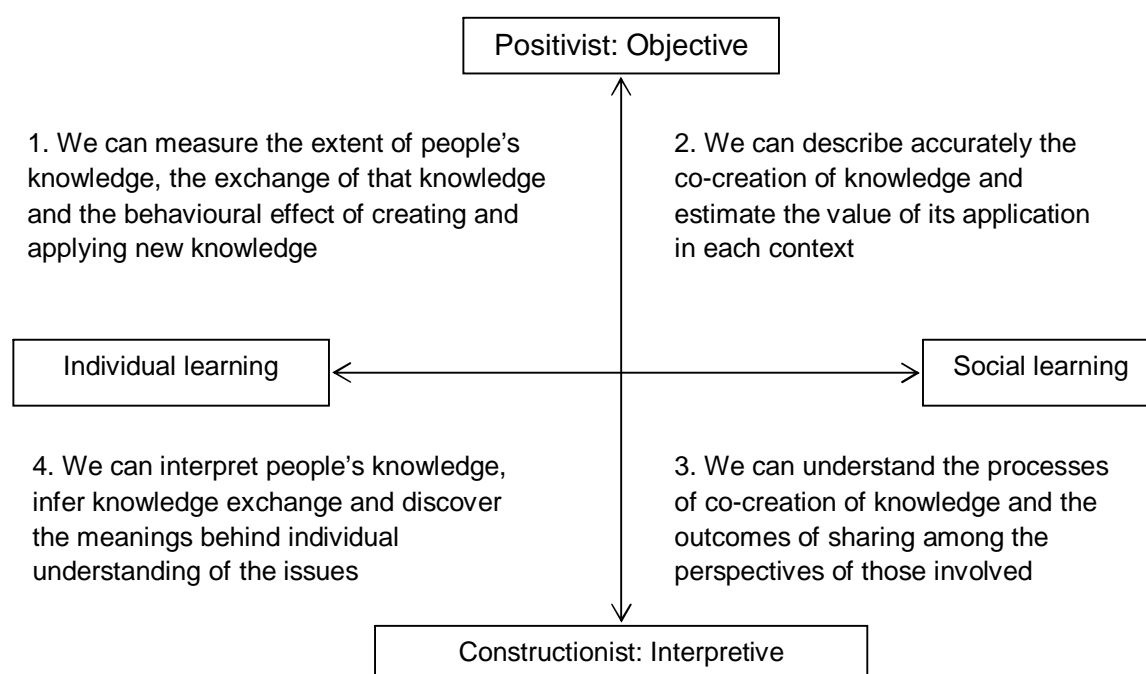
Simplistically, the evaluator identifies themselves on a spectrum with positivists at one end and constructionists at the other. Positivists are realists, they assume that 'the reality' exists and they can know and represent this reality accurately by taking measurements using natural science methods.

Constructionists, on the other hand, are interpreters, who believe that reality is relative and observers construct their own interpretation and make meaning together, and are therefore more interested in understanding perspectives of reality.

In the real world, these theoretical positions are mixed. Very few today believe that there is a fixed reality that we can ever know accurately and for certain. On the other hand, there are continuities and patterns on which we can rely as we seek to make sense of the world. So when we have the task of monitoring and evaluating an initiative most of us take up a theoretical position somewhere along this continuum (see Figure 1 below).

We can imagine a similar spectrum that describes the various approaches to knowledge and learning that the evaluator could take. At one end we have those who consider that knowledge is generated in the mind of each individual. The individual stores the knowledge in a mental schema, and their learning is slotted into that schema. This view is held within cognitive psychology. At the other end of the learning continuum we have the social learning theorists who understand each person's knowledge as shaped by the cultural givens of their society. Learning is then understood to be a social process, which can only occur when there is a significant change in enough members of the society.

Once again, most practitioners in the field are well aware of the reciprocal nature of the individual-social learning continuum and position themselves somewhere along that continuum, according to the context of the inquiry. When putting these two scales together as the axes within which an M&E project falls, as in Figure 1 below, we can identify where a particular investigation might fall, or be placed by the evaluator, depending on the context and objectives of a particular M&E inquiry.



**Figure 1. Options for Monitoring and Evaluation: Perspective of inquiry (y) related to perspective on learning (x)**

IKM-Emergent encourages an active exploration – through an open collective inquiry – of the various perspectives at play, informed by the range of knowledge cultures as well as individual and social expectations or aspirations.

## Multiple interests/knowledges and open collective inquiry: mapping the route and planning our journey

Two important concepts take account of the potential for mutual learning in both a given knowledge initiative and its M&E:

- The first approaches the multiple interest groups involved as an inter-dependent system of multiple knowledges.
- The second brings the knowledges together in a collective learning cycle which provides a basis for M&E as a collective inquiry.

### Who is taking part in the journey?

Figure 2 describes the parties involved in knowledge for development, which may play a role in the journey we are interested in. These are the **individuals** involved, the affected **communities**, the **specialist** advisors, the influential **organisations** and **holistic** thinkers.

Following the work of Kuhn (1962) on the structure of scientific revolutions, each party can be shown to have all the dimensions of a full knowledge culture (or paradigm, in Kuhn's words). Each can be shown to have its own knowledge content, mode of collecting evidence, tests for truth, and special language. Each has a habit of rejecting the other forms of knowledge. Left to themselves, each of these knowledge cultures has become sufficiently self-contained for them to act as conflicts of interest rather than search for a collective understanding (Brown 2010).

KNOWLEDGE CULTURES AND CONTENT	STRUCTURE	SOURCES OF EVIDENCE	ASSIGNMENT OF IGNORANCE
INDIVIDUAL KNOWLEDGE Lived experience, identity		Memory Learning style Five senses	Subjectivity Narrowness Vagueness
LOCAL KNOWLEDGE Shared lived experience of people and place		Stories Events Histories	Gossip Anecdote Inaccurate
SPECIALISED KNOWLEDGE Mono, multi and trans-disciplinarity, the professions		Case studies Measurements Observations	Jargon False certainty Narrowness
STRATEGIC KNOWLEDGE Administration, government, organisations, business		Agendas Alliances Networks	Deals Mates Corruption
HOLISTIC KNOWLEDGE Essence, core of a system		Synthesis Focus	Airy-fairy Impossible Ambiguous

**Figure 2. The knowledge cultures involved (adapted from Brown 2008)**

### Individual knowledge

Each individual's knowledge is unique, built out of their lived experience and shaped by their social and physical setting (Bourdieu 1998). As we build that knowledge it becomes part of our own identity. We then tend to defend our identity by rejecting material that does not match our own version of the 'truth'.

Thus Individual knowledge is represented in Figure 2 by the cloud of small dots. Polanyi (1958) distinguishes between explicit and tacit knowledge in his seminal *Personal Knowledge*. Tacit knowledge is the knowledge we all draw on all the time, without being

directly aware that we hold it. Explicit knowledge is the knowledge that we can put into language and share. In M&E, each individual's reflections on both their tacit and explicit knowledge becomes an important source of evidence.

### **Local knowledge**

Residents of towns or cities often claim that newcomers can never be a true 'local', even if they have spent many years in the area. How do communities become such exclusive clubs? Local communities are cemented by a diverse body of local knowledge that is legitimized through shared places and events and the creation of shared symbols. The variability of communities is indicated by the wavy line in Figure 2.

Communities may be structured around a place, key issues, an organization or a practice which is held together by shared skills, thereby forming a *community of practice* (Wenger, 1998, 2002). In every case, members of a community develop a body of knowledge with rules that make it legitimate in the eyes of its members. For any knowledge initiative legitimization of learning needs to come from all of the knowledge cultures. For community knowledge the legitimization of an M&E report comes from its acceptance by the community involved as valid.

### **Specialised knowledge**

The strength of specialised knowledge lies in its focus on a given field, with set rules of inquiry and accepted explanatory frameworks. Each framework, be it in law, literature, history, philosophy, geography or physics, services a distinct sub-set of practitioners and practices. Ever since the scientific Enlightenment, the subsets have been proliferating. At Oxford University in the nineteenth century, philosophy included physics. Today we have analytic, environmental and moral philosophy, with a separate discipline of physics, itself divided into astrophysics, geophysics, and more. Hence the ring of boxes in Figure 2. Even within the specialised knowledge culture, sub-specialised fields tend to erect boundaries that at times seem beyond communication reach e.g. development practitioners and development scientists failing to communicate with one another.

Critiques of the limitations of specialised methods for addressing complex problems, such as sustainable development, have led to a broader perspective within the scientific community. *Post-Normal Science* as proposed by Funtowicz and Ravetz (1993) includes uncertainty, complexity and the role of multiple knowledges. It is this approach to science that seems to offer the most robust foundation for M&E of K4D.

### **Organizational knowledge**

All forms of organizations are constructed around a social purpose, whether self-serving or outward-looking. Organizational knowledge is strategic, directional and validated by progress towards the desired outcome. This is represented in Figure 2 as directional and a closed circle, since organisations (and governments), with their membership, usually give priority to pursuing their own organisational goals.

The cycle becomes a spiral when there is a need to respond strategically to change. Prime examples of how strategic knowledge has informed decision-making across the centuries are the Chinese *Art of Strategy* by Sun-zhu, the *Analects* of Confucius, Machiavelli's *The Prince* and even the television series *Yes, Minister*. As we have discussed previously, much of the M&E of K4D that we find in development work is from this knowledge perspective.

### **Holism's creative leap**

Holistic knowledge can be interpreted in two contrasting ways: as the essence of the whole, or the whole of the whole. We use the word 'holistic' here in the first sense, as the purpose or essence of a dynamic whole. The word was coined as recently as 1931, when the South African political leader, Field Marshall Johan Smuts, coined holism as 'the tendency, as within nature, to form dynamic self-defining systems of wholes'.

Holistic knowledge is constructed through the creative leap – the Aha! moment that gives access to fresh understandings. In the Western social context, the creative leap is often regarded as the task of the arts alone, yet it is crucial to the understanding of any complex system. Other examples of holistic

knowledge are harmony in music (playing 'in the groove') and the idea of the ecosystem in the natural sciences. Holistic knowledge is represented in Figure 2 in the form of a star, the focus or essence of the knowledge initiative that needs to be captured in each M&E.

### Manufacturing ignorance

The segregation of the knowledge cultures is ensured by each knowledge rejecting the knowledge of the others. Individual knowledge is dismissed as biased and subjective. Local knowledge is disregarded as being anecdotal. Specialised knowledge, long given primacy over the others, is dismissed as jargonistic and of little practical use for the local context to which it may be applied. Organizational knowledge is scorned as self-serving. Holistic knowledge is thought of as airy-fairy and rarely considered at all.

An open collective learning framework includes the full set of knowledge cultures by giving their contributions equal respect at every learning stage and guarding against their rejection of the others. One way to represent a dynamic relationship between the knowledge cultures (or *knowledges*) is the collective knowledge mandala in Figure 3. Here, each knowledge builds on the others, not in a hierarchy but learning from the mutual contributions. It is this open collective learning about knowledge for development that IKM-Emergent is considering as a pertinent object of its M&E journey.

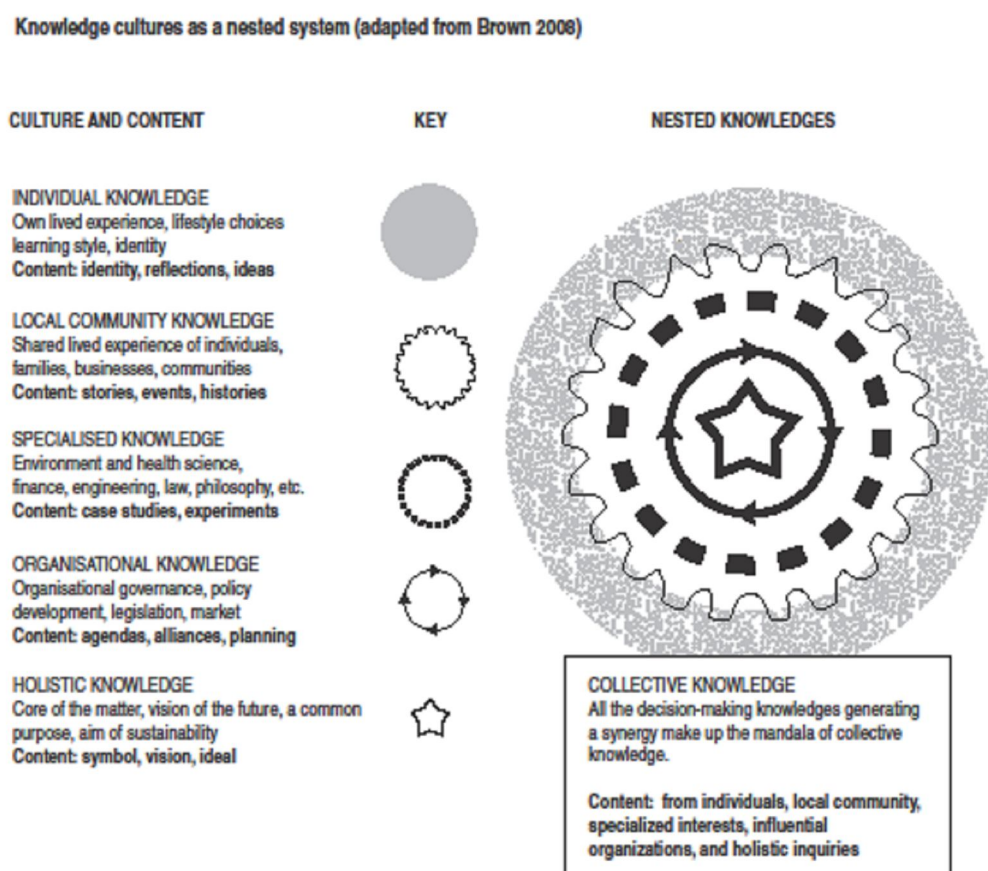


Figure 3. Knowledge cultures as a nested system (adapted from Brown 2008)

### Mapping the route – K4D as collective learning

Recognizing that knowledge for development involves a synergy generated by all knowledge domains working together, the question then becomes: **how do we achieve this synergy?** How to allow a collective decision-making process where knowledge cultures gather, remain open to fresh ideas, hear each other and act in concert? The aim is not uniformity, nor consensus, rather a synergistic harnessing of diversity. What we propose here is to model K4D as open collective learning.

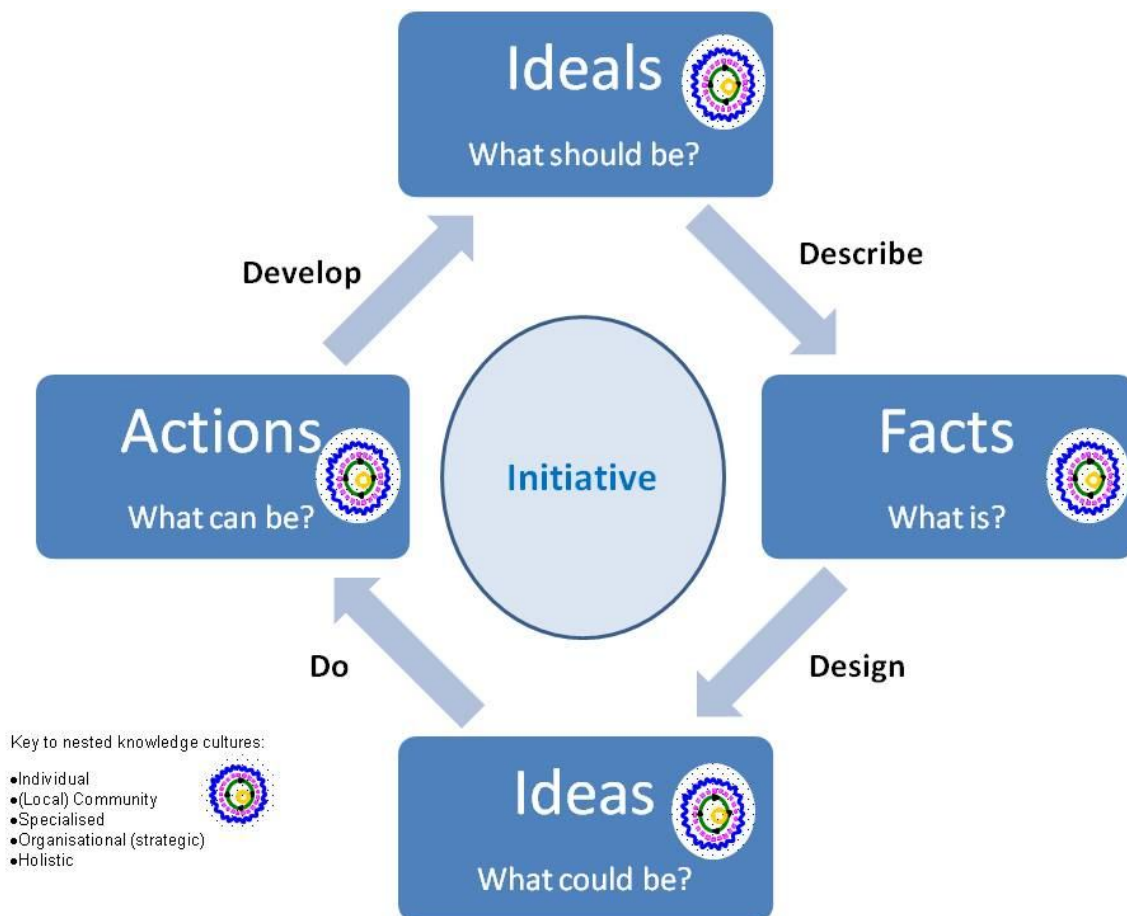
We consider that collective learning in knowledge for development can be best approached through an adapted version of the adult learning cycle developed by Kolb and his associates. This has been validated for individual learning in the areas of psychology, management, community development and education (Kolb 1974, 1984, 1986). The cycle has been adapted by Brown for public health, environmental management, change management and transdisciplinary research (Kolb 1986, Brown 2008, 2010), through expanding the learning process from individuals to groups. Using The Kolb cycle in this way offers a framework and a vehicle to bring together the multiple knowledges concerned, to learn from each other. The same collective learning cycle provides the basis for the M&E of each knowledge development initiative. This M&E design is thus consistent with taking each knowledge initiative as a collective learning programme which includes the objectives of each of the multiple knowledges and the open-ended potential of their mutual learning.

The learning cycle is neither a strait jacket nor a recipe, since each set of participants make their own contributions at each of the learning stages (Figure 4). The four stages of experiential learning link the three elements of the construction of collective knowledge (the **ideals**, the **facts** and the **ideas**) to the fourth, collaborative **action**, the final stage necessary for ongoing learning. The cycle becomes a spiral when the participants in the initiative build on their collective learning (Figure 4) in an iterative way over months or years.

The cycle follows plain commonsense. First the participants are asked to agree on a question that includes all their interests. For M&E this might be “**How can we interpret the events in this programme so all those involved can learn from the outcomes?**” Then the cycle begins:

1. The scoping of a knowledge initiative starts with participants sharing their ideal outcomes for the initiative, **what should be**. This is the stage of learning about each other’s purposes in taking part in the initiative. Answers are expressed as principles, policies or value statements, that is, as ideals. The ideals of each knowledge culture are given equal respect.
2. Then participants establish an agreed pool of facts that set out the parameters of the initiative: **what is**. At this stage, all participants contribute to describing the parameters of the change, each in relation to their own particular purpose. Answers are supplied by the evidence collected from each of the different knowledge cultures, usually labelled as facts.
3. Participants now go on to brainstorming to design a potential approach: they share their ideas of **what could be**, if they all joined their resources and skills. Answers are in the conclusions and fresh perspectives created during dialogue between members, in the generation of new ideas.
4. The fourth stage (doing in practice) develops a collaborative action plan for **what can be** in a practical programme. Answers emerge from relating the new ideas back to the ideals and to the facts which will determine which of the ideas are practical. This stage allows each individual set of contributors to a collective inquiry to move forward collaboratively (Figure 4).

The spiral continues iteratively, as developing the purpose further in the light of the new knowledge (what should be now) and around the same cycle yet again.



**Figure 4. Stages of the collective decisions-into-action change management spiral (Brown 2006, after Kolb 1984).**

The type of collective inquiry we are conducting and the learning object of that inquiry (knowledge for development) can now be combined: M&E becomes the collective inquiry aiming to learn about a particular knowledge initiative.

### **How does a collective inquiry work in practice?**

As an example, consider the scoping of a project to develop a community-based health centre in a developing country. This may seem to involve principally technical issues such as the transfer of health knowledge and the financing of the project. However, establishing a community-based clinic requires collective thinking among multiple knowledges: that of the leading proponents, the local community, health experts, the sponsoring organisation and the core vision of what the centre would be like. It is not only likely, it is to be expected that each knowledge base (or knowledge culture) will have a different focus on the purpose of the centre, bring its own set of information on how the centre will best run, and have their own potential for innovative ideas.

The need is for much more than the transfer of information. For this project to be a success it requires joint learning among the full set of knowledge cultures. That collective understanding needs to be established at each of the learning stages that make up a complete learning cycle.

The learning stages move from ideals to facts to ideas to actions, so that a different mode for managing knowledge is needed at each stage. Ideals are described by goals and values; facts by observations; ideas by imaginative plans and actions by behaviour. Starting with ideals, each of the knowledge cultures will use a different language. A community set of ideals might be *safe births, easy family access, open to local practitioners, convivial communication with staff*. A medical practitioner is likely to wish for *hygienic conditions, staff trained in Western science and modern equipment*. For the sponsoring organisation Guijt (2008) provides organizational ideals for the outcomes of a project: *financial accountability, operational improvement, strategic readjustment, capacity strengthening, and contextual understanding*. Various key individuals will have a range of ideals, which if not met, can derail the entire project. At least the initiative has a shared holistic focus: *a health centre which meets the needs of its community*.

There is no doubt that all of these ideals are part of a successful centre. If they are not considered at the start, it is likely that organizational goals dominate, with expert advice second, and the community ideals left behind. Moreover, starting with ideals leaves the way open for positive change. Starting with the facts would fix the project in the status quo, when development projects look for change.

In the second learning stage, the descriptions of the project parameters by each of the knowledge cultures will be equally varied, with different supportive and inhibiting factors from each interest group. The sum of these factors allows the project context to be realistically described. It is at the third learning stage, having heard the range of ideas and 'facts' from the group scoping process, that the project generates shared ideas that are drawing on the group's full potential.

Finally, the ideas are tempered by the practicalities of the existing ideals and project parameters in a practical plan of action. The health centre project can confidently go ahead.

### **M&E of K4D as collective inquiry: planning the journey**

Having modelled the knowledge initiative as collective learning, we are now able to describe the M&E approach. What we propose is an approach that mirrors the object of the investigation: M&E of knowledge for development thus becomes the collective inquiry aiming to learn about K4D.

But what would such an inquiry look like?

Chris Mowles and Anita Gurusurthy, the IKM-Emergent evaluation team, began their work with the start of the IKM-E programme itself, determining the ideals for the programme for all those involved, that is, *what should be*. They went on to use the reflections of the programme members as a thread throughout the evaluation. They reviewed the programme documents and budget to identify the parameters of the project, *what is*. In further rounds of interviews the evaluators asked each member for ideas that they had generated during the programme, *what could be*. Finally, their report suggested what the learning from the M&E suggested for future M&E initiatives: *what can be*. While Chris and Anita did not use the collective learning cycle in a formal sense, their evaluation covered all the steps. This is the kind of journey that we propose to follow.

We have found our conceptual path for the journey of M&E of knowledge for development and we are now ready to start that journey in practice. It will be punctuated by different learning stages.

## Starting the journey: a practical framework for M&E of K4D

### The critical stages of the journey

Having introduced the conceptual ideas around M&E of K4D, we now come to propose a framework that applies the collective learning inquiry introduced in the previous section to the design of M&E for a knowledge initiative<sup>4</sup>.

This practical framework follows the four critical learning stages of the collective inquiry spiral as described above and introduces a parallel inquiry matching M&E requirements. Figure 5 below shows that the journey we suggest follows the collective learning stages described above for the knowledge initiative being evaluated. This is the ideal picture: M&E is organized at the start of the knowledge initiative. In many cases it is not possible or it has been planned otherwise. In such circumstances this M&E learning cycle is organized ex-post, based on the results of the collective inquiry exercise.

After deciding on a focus question for the M&E, such as “**What is the most influential M&E we can design to convey the learning from the knowledge initiative?**” the stages would be as follows:

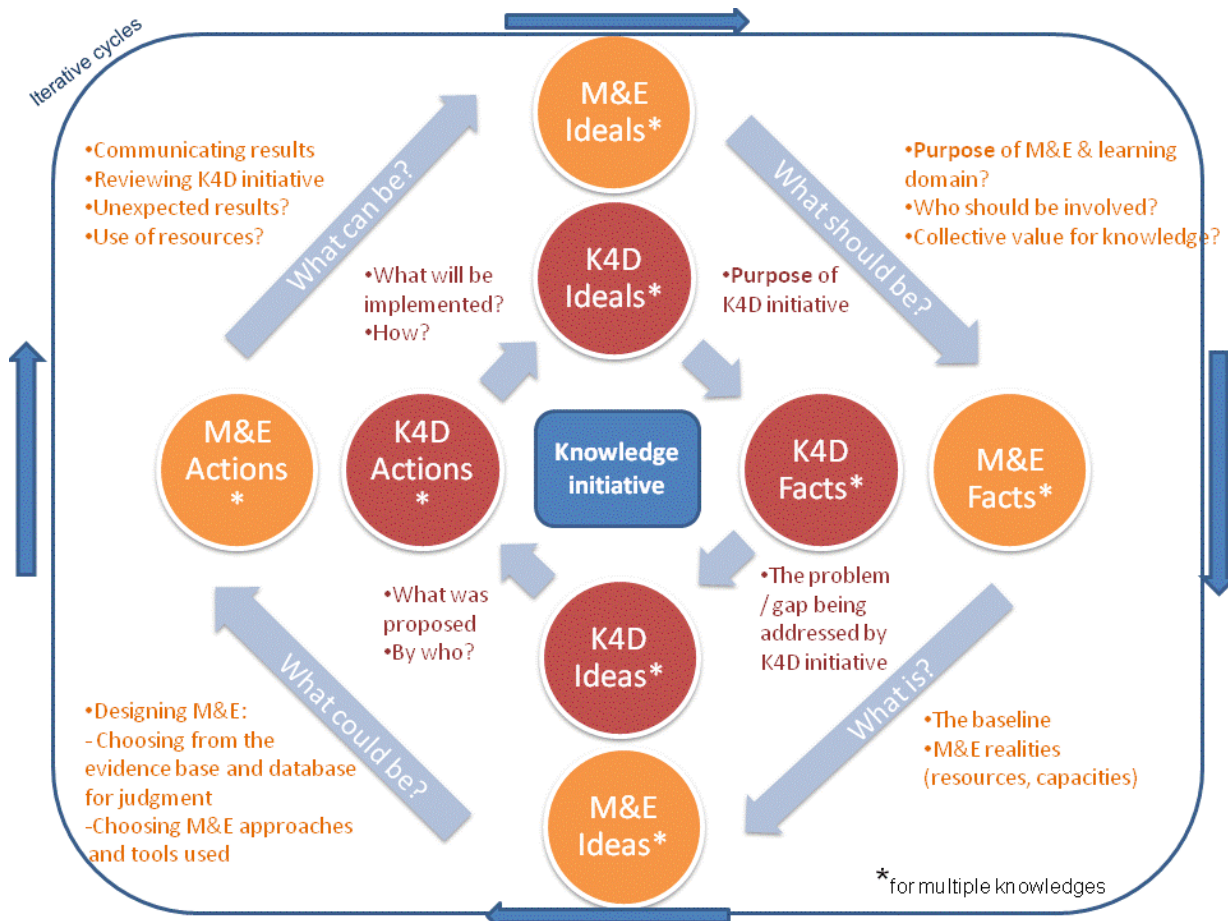
1. We start with the **M&E’s ideal answers to the focus question**: Ideally, what should be the purpose of this M&E? What were the purposes of the knowledge initiative that need to be taken into account in the M&E – not just those that formed the process but peripheral ideals that may have been ignored or de-prioritised? Who made the decisions and why? Who should be in charge of the M&E? Who should be the users of the M&E information? Who should be the stakeholders in the process? Ideally, what will the M&E be used for? What is the ideal scope of the M&E? These questions follow the K4D ideals about the purpose of the knowledge initiative.
2. **M&E facts** (matching knowledge facts): The facts that inform the M&E process are fed by the collective inquiry about the knowledge initiative itself. They can also be gleaned from documents and key interviews with the knowledge initiative being evaluated (referred to below as K4D) itself.

The factors influencing the M&E are both positive and negative. What aspects of the K4D need to be taken into account in the M&E? Which of them help and which of them hinder the M&E? What was the situation that prompted the need for the initiative, i.e. the problem or gap that existed? Specifically for M&E, what was the baseline situation?

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<sup>4</sup> The original mandate of this paper was to focus on knowledge management (KM) but we broadened it to encompass any *knowledge for development* initiative.

3. **M&E ideas:** This is where the knowledge initiative is being designed. What was proposed as a solution? By whom? Who decided / evaluated the ideas and how? What information do we need to capture? What tools do we use to do this? What spaces exist for reflection and interpretation? Who could be involved? Who needs to be consulted?
4. **M&E action:** The final stage of this cycle proposes an action plan (and matching budget and responsibilities) to implement the plan and reflect along the way. What was implemented and how? How were results communicated? What were unexpected results? How were M&E resources used?



**Figure 5. The double nesting of a knowledge initiative and its M&E**

At the end of an entire cycle, the collective learning journey starts again with a renewed iteration of the learning. In that second iteration, the M&E is reviewed but not entirely re-designed.

Each of the stages comes with a set of questions that, we think, the M&E team (or individual evaluator) could reflect upon.

### **M&E ideals: What should be?**

#### **Who should be there?**

When embarking upon the M&E of K4D, it is crucial to be explicit about, and sensitive to, the cultural backgrounds informing the ontologies, epistemologies and ethical systems that govern the expectations and aspirations of all stakeholders. It may take some time to examine these considerations, but if they are not questioned early on, they may lead to misunderstandings, mistrust

and ultimately to widening the gap between the different parties involved in the knowledge initiative. Considering the worldviews of the knowledge cultures is thus a precondition for a well-founded, efficient, effective and empowering M&E approach to knowledge for development.

The first step is to **identify who the stakeholders are**, to be sure to include anyone who is involved or affected by the knowledge initiative or its M&E. The paper 'Monitoring and evaluating development as a knowledge industry' already identified a number of functional roles that may be concerned by the M&E of a knowledge initiative – which may be cumulated by one or more people:

- **Patrons:** Who will decide what value systems and expectations will be accepted as relevant? Who finances the knowledge initiative?
- **Administrators:** Who commissions monitoring / evaluation of that initiative? Who designs M&E activities for this knowledge initiative?
- **Implementers:** Who is rolling out the knowledge activities that are being monitored?
- **Evaluators:** Who collects data for the M&E of that initiative? Who analyses data for the M&E of that initiative?
- **Decision-makers:** Who makes decisions on the basis of data collected for re-use in a new planning cycle?
- **Boundary partners and beneficiaries:** Who should be affected by the decisions made? In other words, whose livelihood (and assets), behaviour and/or activities are expected to change?

The collective inquiry about the knowledge initiative involves all knowledge cultures but its M&E may be carried out by only one evaluator or a team of evaluators. The latter will be developing every step of the M&E framework in parallel with the collective inquiry.

Once the stakeholders have been identified, the question becomes, for each of them: Do you see development as individual learning, community change, responding to expert advice, fulfilling organisational objectives or a transformative experience?

### **What should be for this (M&E of) K4D?**

Another important question here concerns the **purpose of monitoring and learning domains they refer to**. In her PhD thesis 'Seeking surprise' (2008), Irene Guijt identifies nine different monitoring purposes that lead to collective learning involving different learning domains related to the M&E criteria of all five knowledge cultures. Any combination of monitoring purposes (presented in table 2) is legitimate. For a collective inquiry the set of learning domains provide a set of ideals for M&E.

It is no wonder that this process is called **open** collective learning.

**Table 1. The nine monitoring purposes (after Guijt, 2008)**

<b>Monitoring that contributes to ...</b>	<b>Core Purpose</b>	<b>Learning Focus</b>
<i>Financial accountability</i>	Maintain financial viability or security (organizational knowledge)	Proof of implementation of agreed plans
<i>Operational improvement</i>	Adjust implementation to be more efficient, effective (organizational, specialised and community knowledges)	Quality and outputs of activity implementation
<i>Strategic readjustment</i>	Examine/question strategy (e.g. by identifying and testing underlying assumptions) (organizational and community knowledge)	Higher level goals of the organization, theory of change, assumptions about strategy (implementation and management)
<i>Capacity strengthening</i>	Improve individual performance or that of the organisation (individual knowledge)	Individual behaviour, attitude, effectiveness, doubts related to work/personal strategy
<i>Contextual understanding</i>	Keep up-to-date on the context of implementation (community knowledge)	Political, social, environmental, economic changes
<i>Deepening understanding (research)</i>	Understand key uncertainties better and to formulate new questions on which to focus (holistic knowledge)	Any topic that is unclear, experimental, innovative
<i>Self-auditing</i>	Maintain transparency and therefore trust in (collective) use of resources (individual and holistic knowledge)	Use of resources, such as forest products, money
<i>Advocacy</i>	Push for political change/in public policies/with decision makers (collective knowledge)	Topic related to the policy change being demanded
<i>Sensitisation</i>	Sensitise others to build and sustain support for concerted action (Collective knowledge)	Wider dissemination of a concern or experience; building critical mass of support for a concern/experience

And finally, under this section comes the critical question of the **collective value of knowledge** expected from the knowledge initiative. This will be built as part of the collective inquiry about the knowledge initiative itself but in practice it may relate to several ideals for the value of knowledge. Hearn et al's paper (2011) identified a number of these models which all relate to any combination of the following inputs, outputs and outcomes:

- Improved knowledge processes and initiatives (e.g. more dynamic intranet, better facilitated events, finer understanding of knowledge evaluation etc.);
- Increased intangible assets that are related to the knowledge initiative (e.g. better capacities, more trust between partners, a more open learning culture, leadership support, more expertise pooled to answer questions etc.);

- Behaviour changes (changed attitude towards e.g. more cooperation, more innovation etc.);
- Non-behavioural outcomes (e.g. a policy change, a better use of natural resources etc.);
- Improved or clarified relations between any of these areas (e.g. demonstrating the relation between the increase of intangible assets and behaviour changes achieved, a better way to assess the value of a community of practice to achieve policy change etc.).

All these questions relate to the nature of the results that the stakeholders involved hope to see the knowledge initiative achieve. Being clear about this collective expectation offers a much more solid foundation for M&E.

### **M&E facts: What is?**

Hopefully, some innovative and exciting ideas emerged in the previous stage. This new learning stage considers the reality of the knowledge initiative that is being scrutinized: **What is the baseline of the knowledge initiative against which it should improve?** The examination of this question shows the extent of the gap between what the parties involved see as the ideal situation and what is effectively happening, paving the way for a set of new ideas to monitor and evaluate the knowledge initiative in question.

This stage also considers the reality of M&E – that is the crucial question of resources available:

- What is the minimum of information you should get in order to assess progress against the baseline and with the minimum amount of resources?
- What budget do you have to conduct M&E of the knowledge initiative?
- What timeframe do you have in mind for the M&E? By when do you need to have your M&E report?
- What capacities do you have to conduct M&E, i.e. to carry out the work and to perform specific tasks involving expert knowledge (for certain M&E tools and approaches)?

### **M&E ideas: What could be?**

The gaps identified in the previous stage lead all knowledge cultures – through a creative brainstorming session – to consider what could be interesting ways to carry out the knowledge initiative (and in parallel, its M&E). At this stage, the **evidence base and database for judgment of each knowledge culture** will become more visible.

Adopting a collective inquiry framework for M&E raises the need to identify the M&E approaches and tools each of the participants will bring with them. Having already scoped the project from a collective learning perspective, the knowledge initiative and its M&E are already mirror images of one another.

Table 2 below lists the multiple knowledges that will be involved in the M&E, their possible criteria for success (the purpose of the M&E), evidence type and the evidence base which may inform their comments and decisions.

**Table 2. M&E approaches and tools for a collective inquiry**

<b>Knowledge cultures</b> (and functional roles nested under these)	<b>Monitoring and evaluation purposes</b>	<b>Evidence type</b>	<b>Evidence base for judgment</b>
<b>Individuals:</b> - Change agents - Leadership	- Ideals: moves in desired direction - Increase in collective KM	- Experiences, reflections - Interviews, diaries	- Observed changes over time - Documented changes, interviews with leader and group
<b>Client communities</b> (beneficiaries, partners)	Moves towards own ideals (and project objectives), holding service providers to account	Observations, self-report, documents, experiential feedback	Observations and measures of behavioural, socioeconomic and environmental change
<b>Experts:</b> - Knowledge managers - Monitors / evaluators	- Knowledge sharing - Refining M&E of KM	- Practitioner stories - Observations - Interviews - Experiments - Measurements - Surveys	- Reflections, self evaluation - Appreciation and use of M&E
<b>Organisations</b> (patrons administrators): - Government - NGOs - Donor agencies	- Meeting internal goals - Idem - Idem	- Monitoring reports	- External observations - Internal evaluation records
<b>Holists:</b> - Strategic planners - Visionary thinkers - Creative thinkers - Collective	- Credibility - Inspiration - Innovation - Synergy from all the contributions	- Ideas, forecasts - Imagination - Imagination - Individual, community, specialised, organizational, holistic	- Reality checks - Freshness of vision - Strength of new ideas - Dialogue among knowledge cultures

The evaluator will recognize that for any knowledge initiative there will be five sets of data consistent with the five knowledge cultures. There will be five stories which the evaluator will need to work through with the project (knowledge initiative) participants, both to validate the stories and to find the range of differences and the syntheses between them. Rather than putting together a jigsaw of pieces that reproduce a pre-existing picture, **M&E of K4D is about creating a collage**. In a collage the contributing pieces remain recognisable but considered together, they provide a fresh insight.

### **M&E actions: What can be?**

*“Not everything that can be counted counts and not everything that counts can be counted”*. Albert Einstein reminds us that important choices have to be made when developing an M&E framework for knowledge initiatives. This stage thus considers practical, operational issues for implementing M&E of a knowledge initiative. The corresponding questions that come with this learning stage are:

- In the light of the choices you have made for specific areas to monitor, what are the most useful tools to assess each area that you have identified?
- What capacities may you need to develop, acquire or subcontract in order to carry out your activities with the specific tools that you have chosen?
- With clarified ideas about all abovementioned considerations, who will effectively hold what role in the M&E cycle (collecting data – analyzing it and making recommendations – prioritizing recommendations)?
  - o Where will you record (and store) the data collected?
  - o How will you compile the information based on the data, in what format?
  - o How will the decision-making process take place in order to – if need be – prioritize certain recommendations?
  - o How will you effectively apply/use the recommendations and what measures do you need to take to make sure that everything is in place to improve K4D activities in the light of your monitoring recommendations?
- How will you communicate the results of your M&E work? To whom?
- How will you review your M&E of the knowledge initiative?

### **Starting a new cycle**

This learning cycle stops as the actual M&E activities are completed. Another cycle starts with renewed insights – starting again from the outcomes of the last M&E cycle and generating ideals for the next one. This new iteration comes with its own set of questions that are based on a review of the previous cycle.

- What missing information do you need in order to respond to the objectives (monitoring purposes) that were assigned?
- Are all parties concerned and/or involved happy with the results and the M&E process?
- What were unexpected results that should be capitalised on?
- How have you communicated results of your monitoring work?
- How have you ensured that effective results reach the intended audiences and that considerations on the monitoring process reach the parties involved in designing / carrying out monitoring activities for this knowledge initiative?
- How has each party involved performed their role? What was good, what could improve and what was unexpected about it?
- Have the resources imparted for M&E been used optimally? In general this tends to focus on getting more insights with fewer activities.

Some of these questions relate directly to the K4D ideals:

- Is your knowledge initiative complete? What is it lacking?
- Does your knowledge initiative respond to your collective expectations?

And the cycle starts again...

## Research gaps and upcoming challenges

- This study has taken as its foundation the papers previously commissioned<sup>5</sup> by IKM-Emergent as well as the knowledge and experience of the authors. While there is much empirical evidence on the outcomes of the collective learning cycle (Brown 2008) we have not had the opportunity to collect empirical data of its use in M&E of K4D. A practical demonstration of a collective inquiry on this topic would be useful to assess the potential of combining multiple knowledges to analyse K4D practices and prove or refute some of the assumptions made in this paper.
- Although this study has considered a number of theoretical models used to monitor and evaluate knowledge (or knowledge management mainly), a more thorough study of current monitoring and evaluation practices of the management of knowledge for development (K4D) among development institutions would shed the light on major areas for improvement and entry points to link with a collective inquiry as suggested in this paper. In particular, the study of M&E initiatives among multiple stakeholder processes (MSPs) would be a welcome complementary study to provide a finer understanding of ongoing practices, biases and limitations in other collective initiatives. For example, work on dialectic methods in the systems field is something that intrigues the authors but hasn't made it into this study.
- In the light of the two previous research gaps, a further investigation on *lighter* ways to carry out a collective learning inquiry could offer an intermediary approach for development actors who may wish to follow a more collective track for M&E of K4D in an incremental way. The approach we advocate in this paper could be considered challenging for development organizations with respect to the transparent decision-making that it entails. This paper hopes not to discourage development organisations from engaging in collective enquiries; rather the opposite. Follow up work could highlight more progressive ways to develop M&E into a collective learning inquiry.
- The present paper focuses particularly on monitoring and evaluation of comprehensive knowledge initiatives such as a knowledge management strategy. In the context of such wide initiatives, there is a strong rationale to engage in an open collective inquiry. However some knowledge initiatives are much more restricted in practice, i.e. zooming in on the monitoring of communities of practice or social media tool adoption. Following research could help unpack this type of assessment of practices and tools geared towards cooperation between different parties and multiple knowledges without necessarily undertaking a systematic collective inquiry.
- A subsequent study could perhaps compare the difference between agency-driven (usually exogenous) and civic-driven (i.e. endogenous) K4D initiatives. The parallel investigation of both approaches to M&E of K4D may highlight complementary solutions that support a collective learning inquiry.
- Although some approaches and tools have been mentioned in the two commissioned papers and are also mentioned in this study, it would be useful to examine existing monitoring and evaluation tools and methods (from comprehensive tools such as logical framework to specific tools such as Most Significant Change, Outcome Mapping or Balanced Score Cards) to assess more explicitly their advantages and drawbacks as well as the type of knowledge cultures, learning domains or monitoring purposes that they might serve best.

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<sup>5</sup> Hulsebosch et. al (2009) and Talisayon (2009)

- The case of M&E methods and tools that were designed with due acknowledgement to complexity thinking (e.g. SenseMaker™) would be particularly useful to investigate. They may raise awareness to the contribution of various knowledge cultures, potentially open more space for them to help shape and respond to emergent processes and ultimately to understand how the perspectives of various knowledge cultures are aggregated, validated and used.
- Finally, the paper offers a useful ground to investigate power negotiations in cooperative approaches (such as the collective learning inquiry advocated here) and how these are addressed once the contribution of multiple knowledges is recognised. In other words, upon applying the collective inquiry to M&E of K4D, we should also be in a position to say more about how knowledge cultures are effectively taken into account and how this may affect particularly North-South relationships in development work.

## Conclusions

Have we established that development can be considered as a knowledge ecology? If we have, what are the implications for M&E? We are dealing here with a social, not a biological ecology, drawing on the ideas of ecology as a way of understanding the world. The interconnectedness of all the contributing parts, continual unfolding of an existing potential and recognition of all the parts while seeking to understand the whole, are the hallmarks of the discipline of Ecology. We have approached development initiatives' design as decision-making systems, developed the potential for bringing together multiple knowledges and identified both the parts and the whole of an M&E. Thus both a development initiative and its collective learning M&E have been considered as knowledge ecology.

IKM-Emergent takes the position that knowledge for development is an intentional change process involving multiple knowledges drawn from multiple interests. K4D is thus a collective learning process which ideally expands the knowledges of all participants and puts that learning into collaborative action. A framework that provides a context for allowing the main interest in any comprehensive change process to hear and learn from each other has been developed, based on Kolb's 1984 work on the experiential learning cycle, and further developed as a collective learning spiral by Brown (2008).

A collective learning spiral follows four stages, clarifying ideals, determining the facts, brainstorming their collective ideas and then putting them into practice. The key interested parties learn from each other at each stage, producing further knowledge which has been collectively constructed. The framework not only brings together the interests needed to effect change as knowledge cultures (individuals, communities, specialists, organizations and holistic thinkers) and functional groups as listed in Hearn et al., (2011). The conditions for setting up the collective learning process take into account the challenges to M&E of K4D issued in Hearn et al.'s paper (2011) above.

Using an open collective learning spiral as the basis for M&E has the advantages of being:

1. Open: this framework is sufficiently open to address and embrace the pre-existing frameworks of knowledge initiatives, whether linear and tangible (as the Logical Framework), inter-related and intangible (as Outcome Mapping) or even systemic (such as the *Knowledge Into Action* framework).
2. Inclusive: The spiral begins with a diagnosis of all the players involved in the action for change. The current division is predetermined from a Western perspective, but can be broadened or re-conceptualised for other constructions of knowledge.

3. Collaborative: The evaluators are fellow learners in the enterprise, and so privy to project participants' ideals and ideas and the relationships that guide the activities. They can act as critical friends rather than as external judges.
4. Creative: As part of the learning cycle, the skills of the evaluator enhance the project itself, by recognizing unintended as well as intended consequences.
5. Discursive and reflexive: this framework strongly emphasizes the importance of dialogue and reflection among a group of participants – indeed through an inquiry. This ensures that the multiple knowledges involved voice themselves and build upon each other's views.
6. Future-oriented: As part of a spiral, the M&E is committed to the on-going learning in theory and in practice.

The proposed framework may sound unrealistic to some development actors, yet it relies upon the practical experiences of many attempts to monitor and evaluate knowledge initiatives. We hope that the M&E of K4D approach that we suggest will promote more meaningful monitoring of knowledge initiatives, better and more relevant knowledge practices and ultimately better overall results for development initiatives, whether they be of a personal, community-driven, organizational or societal nature.

Our approach is not prescriptive. It recognizes that there are choices at all stages of a knowledge initiative and at all stages of monitoring/evaluating it. Taking as broad a perspective on these choices and reflecting collectively upon them seems a much sounder approach to M&E of K4D, as even the failings of the initiative become more useful. M&E of K4D is a journey and the richness lies in that journey, not in reaching the ideal destination.

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