

Monitoring & Evaluation

The Advantages of Digital Monitoring and Evaluation Solutions



THE ADVANTAGES OF DIGITAL MONITORING AND EVALUATION SOLUTIONS

Monitoring and evaluation (M&E) of development programmes enables accountability, learning and evidence building. It also supports decision-making processes, dialogue with programme stakeholders and branding and fundraising efforts.

The benefits of conducting thorough M&E are commonly recognised among all the actors of the development field. However, the many challenges of the design and implementation of M&E activities and the production and application of M&E outcomes prevent many organisations from conducting successful M&E activities and achieving their objectives. Traditional monitoring and evaluation is often characterised as:

- Expensive
- Time-consuming
- Prone to error
- Difficult to conduct on a large scale
- Requiring complex management and advanced analytical skills to analyse and derive business intelligence from the collected data
- Carrying a high implementation burden – for example in terms of logistics with printing surveys, transportation and transcribing results from paper to digital form, or with offline data cleansing and validation

Moreover, dissemination of M&E results to programme stakeholders, especially to project leaders and communities, is often difficult and time-consuming.

ICT-enabled M&E – opportunities and challenges

ICT-enabled M&E allows us to address many of these challenges. Integration of ICT solutions in the monitoring and evaluation processes can engage programme actors in M&E activities, increasing the scale of the evaluations and the variety of data collected and easing many of the implementation burdens. This allows us to reduce costs and time, improve data validity and build ownership and participation.

ICT solutions for M&E is a broad field with a wide range of possible tools and applications. It may include diverse types of infrastructure, hardware and software solutions applicable for a variety of M&E activities, from outreach to data collection and validation to data storage, analysis, visualisation, dissemination and more. For example, infrastructure solutions might include communication channels like broadband and mobile networks or alternatives for power supply. Hardware might include diverse options for servers to store M&E data and outcomes, or diverse tools like feature phones, smartphones,

tablets, mini laptops or GPS tools for data collection. Software might, for example, include diverse sets of solutions for data collection and information dissemination, from online surveys, to smartphone survey applications to SMS-enabled questionnaires to radio or interactive voice services technology. Because there is a growing number of technology providers and solutions to collect and push data, it is difficult to make a choice.

To benefit from the application of ICT solutions for M&E and maximise positive outcomes, it is necessary to:

- consciously select relevant solutions
- tailor them to internal (e.g. staff capacities, budget limitations, scale of programme) and external (e.g. available infrastructure, programme objectives and target groups, local languages) M&E needs and conditions
- and build capacities and support for a programme's M&E actors to use them

IICD'S APPROACH TO ICT-ENABLED MONITORING AND EVALUATION

IICD has developed and implemented a specialised **participatory system** for **ICT-enabled** monitoring and evaluation of development programmes, which allows us to identify what the ICT needs are in M&E, assess what the most suitable ICT solutions are and enable a participatory, sustainable design and implementation of desired ICT-enabled M&E.

IICD's approach is based on the **Social Innovation Process**, IICD's unique methodology developed based on 16 years of experience in ICT4D work. It facilitates a process in which stakeholders co-create, implement and sustain their own ICT-solutions. The Social Innovation Process is dynamic and flexible. If certain activities are not needed or their timing needs to change, that is what we do. Our focus is on results. We seek to learn how we can best assist our partners in using ICTs in their organisation and sector and sustain that use into the future.

IICD's participatory ICT-enabled M&E approach employs the Social Innovation Process to facilitate a trajectory, which results in the

assessment, selection and implementation of an appropriate ICT-enabled M&E system. The approach focuses on the following key phases:

1. **Thorough identification and assessment of the M&E needs,**
2. **Project formulation (system and implementation plan design),**
3. **Implementation of the designed M&E approach,** including required ICT and M&E tool training and capacity building. Optionally, IICD may also support and/or manage the actual development of the M&E tools, as per requirements resulting from the needs assessment and project formulation phases.

ICT-enabled M&E can be useful to:

- Citizen Sector Organisations, development programme implementers
- Donors (governments, foundations, development agencies, corporate organisations and others), financial and supporting partners
- Programme managers, field staff and field researchers



M&E Needs Identification and Assessment	Inventory and mapping of stakeholders and of the required data	Inventory and mapping of the stakeholders involved in the programme and of the required data provides initial input for further design and formulation processes.
	Roundtable Workshop	Roundtable Workshop is conducted to raise awareness of the potential and role of ICTs in M&E of programme and identification of the key areas in which ICTs can have an effective contribution to the programme's M&E.
	Awareness Raising Sessions in the field	Outcomes of Roundtable Workshop are validated in the field through Awareness Raising Sessions, where key programme actors and target group members further communicate their needs through a facilitated meeting. Meeting aims to validate assumptions of Roundtable Workshop and demonstrate similar examples of ICT-enabled M&E system.
	Solution Design Workshop	Solution Design Workshop is conducted to analyse the gaps in information flow and communication structures related to M&E processes and assess how these gaps can be reduced/solved through an ICT-enabled M&E system.
	Validation Sessions in the field	Outcomes of Solution Design Workshop are validated in the field through Validation Sessions, where key programme actors and target group members provide further feedback through a facilitated meeting.
Project Formulation	Selection of the ICT-enabled M&E system	Identification and final selection of the ICT-enabled M&E systems, guided by IICD, with participation of all the relevant stakeholders.
	Implementation plan and training plan preparation	The plan for the development and implementation of the selected M&E systems, as well as approach to the training of all parties involved in the implemented ICTs.
Implementation and M&E Tools Installation and Development	Capacity Building	A training programme delivered to build required (ICT) capacity of all the involved stakeholders. Examples of the training might include: Basic ICT Trainings, Formal M&E Tool Training, ICT Officers Training (Tool Maintenance), Field Workers Training (peer-to-peer education and training).
	Support for ICT solutions implementation	From the preliminary stakeholders mapping, IICD understands that different subsystems for M&E activities will most likely need to be developed, together with one aggregation system. Details of the general user requirements of these tools will result from the M&E Needs Identification and Assessment and Formulation phases. IICD may optionally, for example, manage the software development process, or advise on the most effective allocation of resources for the M&E system implementation.



STRENGTHS AND BENEFITS OF IICD'S PARTICIPATORY ICT-ENABLED M&E APPROACH

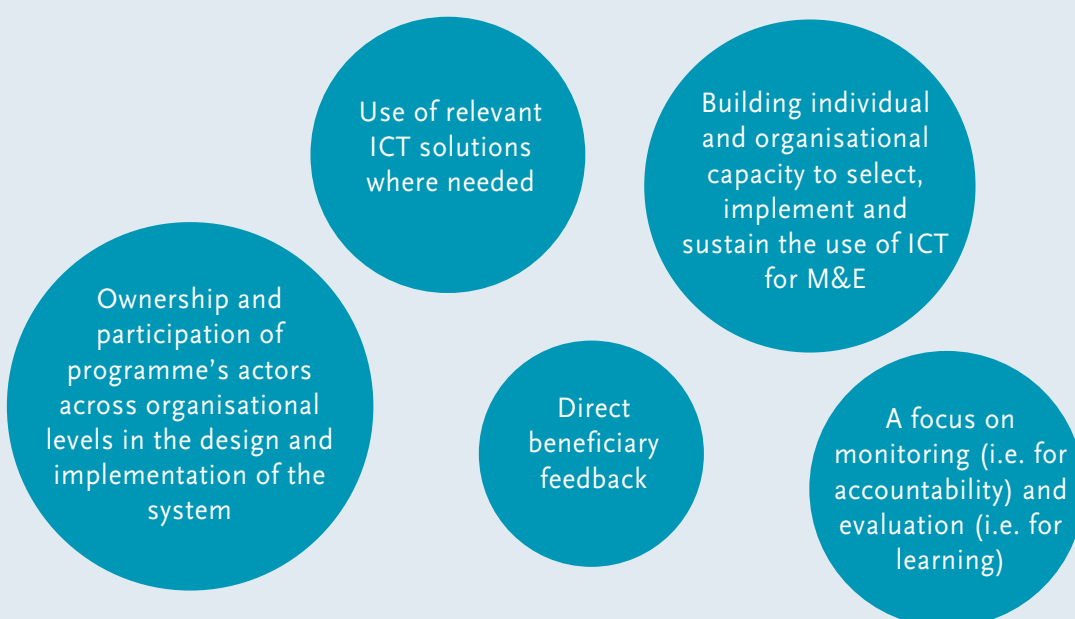
The strength of IICD's approach to ICT-enabled M&E lies in **strengthening individual and organisational technical capacities** of programme actors to easily and cost-effectively monitor and evaluate the activities they are implementing using relevant technology.

The M&E system designed based on IICD's approach stimulates **participation and local ownership**: to enable local partners (implementing partners, field managers, country teams) to work with M&E data and learn from their experiences as they are the ones responsible for activities on the ground. The approach expands data analysis and learning processes from only M&E staff at headquarters to also include those that are working in direct relationship with partners and beneficiaries.

IICD's ICT-enabled participatory M&E system has the following benefits:

- **Programme performance can be rapidly improved** due to shorter, faster feedback loops as ICT enables programme staff to translate data quickly into actions.
- **Fewer resources are required** (i.e., time, human, money) to collect, aggregate and analyse data.
- **The scope can be broadened** as general feedback from a wider public can be solicited through ICT tools such as SMS or web platforms.
- **Ownership, transparency and engagement are improved** as programme objectives can be monitored and evaluated by both programme staff and beneficiaries.
- **Participatory ICT-enabled M&E systems** gain more **trust** and **honest feedback**, allowing **accurate data** to be analysed and made available for **comprehensive learning by programme stakeholders and donors**.
- **Real-time feedback** allows management to **quickly adapt and make efficient decisions over the allocation of resources**. In addition, better communication with staff in the field enables programmes to be improved rapidly.

Key elements of IICD's approach to ICT-enabled Monitoring and Evaluation:



Examples of IICD's work on ICT-enabled participatory M&E include:

- ICT-led M&E studies for education programmes in Zambia: IICD used a mix of quantitative and qualitative methods to gain better understanding of how the introduction of ICT improved learning, teaching and school enrolment rates.
- ICT-enabled data collection and advocacy activities in Ghana: IICD designed and continues to support a programme aimed at influencing policies for pro-poor national health insurance schemes. Data is collected using mobile phones and a mix of SMS-based and smartphone surveys and the outcomes are used for advocacy purposes.
- ICT4Agriculture project 'TotoAgriculture Dashboard' for the Bill and Melinda Gates Foundation (2012): IICD designed and implemented an assessment to gauge the potential of the 'Toto Agriculture Dashboard', a product developed by the ICON Group and funded by the BMG foundation. IICD provided recommendations for future development and support of the Dashboard. It spanned activities in 6 countries (Bangladesh, Ethiopia, Ghana, Kenya, Malawi and Uganda), included all key projects' stakeholders and used different research methodologies like face-to-face interviews, user ICT questionnaires, focus groups, feedback from experts and Dashboard's materials review.
- Monitoring of health performance indicators in Zimbabwe (2011-2013): In this World Bank-financed programme, IICD built and implemented an ICT solution to gather and monitor monthly and quarterly performance indicators from health facilities at the district and province level. The data is used to assess each facility's score as part of a Results Based Financing programme and for planning and monitoring purposes, which are the key elements of Zimbabwe's national policy to strengthen healthcare system. Based on the Zimbabwe outcomes, we are currently replicating the model and implementing it in Congo-Brazzaville.
- Annual evaluation of Global Teenager Project (GTP) 2005-2010: The Global Teenager Project has 100,000 primary and secondary school students from 42 countries interact with each other. IICD implemented its ICT-enabled M&E system for this project from 2005 to 2010. This entailed data collection in all GTP countries, data analysis and roll out of Focus Group methodology with GTP partners in different countries. GTP coordinators were involved in the development of indicators and questionnaires and the evaluation used online questionnaires in all countries.
- Evaluation of ICT4D programme for the European Space Agency (ESA, 2013-2014): For this evaluation, IICD supported ESA in setting up development indicators for financial, social and technical sustainability. IICD programme cases were used to set up a sustainability model for ESA's future plans on ICT4Health in Africa.



IICD's vision is a world in which people are fully able to use information and technology to better their own future and that of their society.

IICD's mission is to enable 15 million low-income people in developing countries to access and use ICTs to address the challenges that they face, understanding that ICT offers opportunities for increased well-being and sustainable economic development in all sectors.



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