

INTRODUCING INFORMATION COMMUNICATION TECHNOLOGIES INTO HUMANITARIAN PROGRAMMING

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Oxfam Discussion Papers

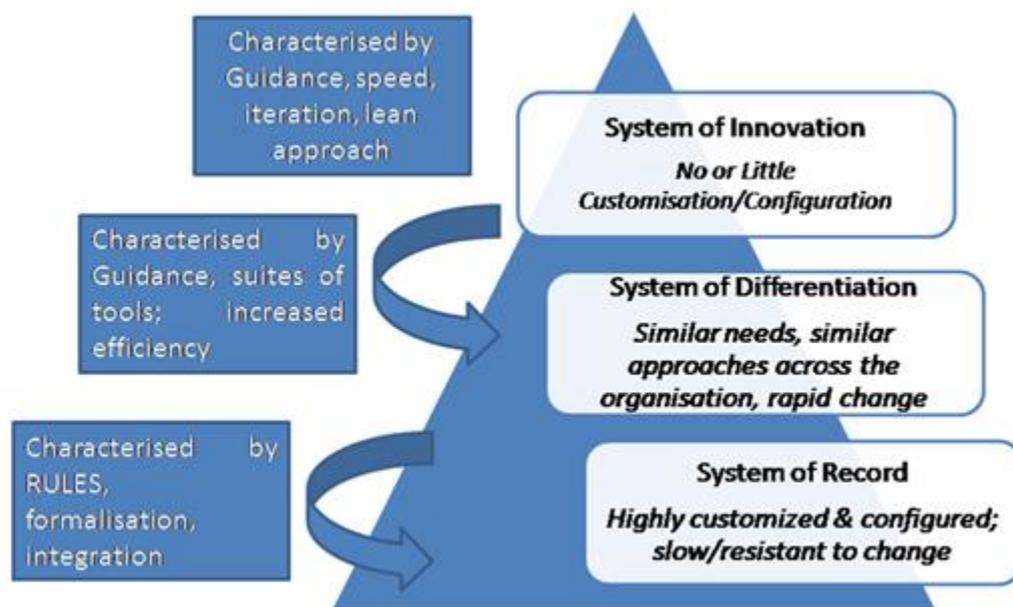
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The rapidly evolving digital landscape is radically transforming the ways in which aid agencies, and the communities with whom they work, can interact. Oxfam believes that information communication technologies (ICTs) offer a huge cross-cutting opportunity to amplify and improve the effectiveness of the organization’s work. From monitoring water points to delivering electronic vouchers through mobile phones, and digitalizing protection surveys, Oxfam has been harnessing the use of ICTs to enhance the quality, accessibility and efficiency of our programming. Yet, the path from experimentation to widespread adoption and organizational support for new tools and technologies can be a challenging one to navigate, often opening up a myriad of interlinked considerations, concerns and opportunities. Taking the example of beneficiary¹ information management and the introduction of World Vision’s Last Mile Mobile Solutions (LMMS) digital registration and distribution management platform, we will explore the application of Oxfam’s ‘innovation pyramid’ based on a model developed by Gartner Inc. that takes the introduction of new tools through from ‘systems of innovation’ to ‘systems of differentiation’ and subsequently ‘systems of record.’

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Figure 1: Oxfam’s innovation pyramid



INNOVATION PYRAMID' APPROACH INSPIRED BY GARTNER

INTRODUCTION

Recognizing the enabling role of ICTs² in improving the quality and effectiveness of Oxfam's work, the organization has invested in a dedicated ICT in Programme team to support the use of new technologies in programme activities. This team acts as a bridge between the Information Systems (IS) department and International Programme and Humanitarian teams, fulfilling a 'business analyst' function that supports opportunities for innovation and creativity that build on best practice and the roll-out of proven approaches. Making space to pilot new approaches, the team works to hand over proven methodologies or systems to IS for mainstreaming as appropriate.

Grounded in the belief that ICTs can only ever act as an *enabler*, and also recognizing that solutions will only work when responding to concrete programme needs, Oxfam's approach focuses on a number of key principles relating to the successful use of ICTs in programme activities.³ These include:

- 1. ICTs are not an end in themselves, but need to be integrated into existing programmes:** The use of ICTs in a specific programme will not determine its humanitarian or development outcomes; these will be directly linked to the set of activities and services provided by the programme and not to its delivery channel. In advising whether to apply ICTs to a specific programme, Oxfam focuses on effective design, systems thinking and the explicit value-added of using ICTs, which could include increasing its outreach, reducing its running costs, increasing efficiencies, promoting accountability of stakeholders, or improving its monitoring and evaluation activities.
- 2. Build on existing ICT infrastructure and services where possible:** We will avoid bespoke solutions, but utilize common, existing tried and tested solutions. Aligned with Oxfam's Information Systems Enterprise Architecture Strategy, this principle can greatly help reduce implementation and support costs, and also ensure that we avoid proliferation of technology for technology's sake.
- 3. Keep the technology simple:** Low-tech or 'appropriate' solutions tend to reduce costs, improve reliability, and are easier to source and frequently easier to use.
- 4. Plan for the sustainability and scalability:** Planning for sustainability (financial, ecological and social) and scalability will be integrated in the initial design of the solutions; we design for the future, not the now.
- 5. Listen to the end-users to understand their needs, habits and risk factor and to maximize ownership and control over services:** Through all initiatives we commit to significant, continued stakeholder engagement, to understand needs, habits and risk factors, and to maximize control and ownership over ICT solutions.
- 6. Handle data responsibly:** Not currently formally included in the ICT in Programme team principles, but consistent with Oxfam's Responsible Programme Data Policy (Oxfam, 2015a). All ICT-related activities must be designed in accordance with Oxfam's Responsible Programme Data Policy, and will respect relevant privacy and data protection principles and ethics. This includes placing significant focus on communities' dignity and rights as well as on data security.

Oxfam's approach to scoping, trialling, supporting and mainstreaming the use of ICTs in programme activities has gone through an evolution over the past five years. With a current portfolio of tools relating to areas ranging from mobile data collection, digital registrations, data analysis, mapping and case management through to electronic cash and vouchers, initiatives have come about through a variety of means. In some cases, these have been initiated by the ICT in Programme team who have identified a common challenge being faced at field levels; in other instances they have been driven by specific field activities, funding calls or opportunistic moments relating to collaboration with other actors.

Oxfam's early experience introducing the use of ICTs into programme activities focused, for example, on the use of mobile survey tools to support existing paper-based data collection exercises such as assessments and monitoring activities. With the relative freedom of senior endorsement to test and pilot, yet without a formally defined process to follow, this was crucial in developing and refining a more structured approach to innovating, scaling and mainstreaming ICT-enabled tools. As formal pilots and field-based initiatives grew, demonstrating clear added value in terms of speed and accuracy of data collection, so did demand. The ICT in Programme team played a key coordination role in liaison with country teams, providing support and capturing learnings about both their needs and experiences with mobile survey tools and guiding activities through to what we now think of as a 'Systems of Differentiation' phase. Crucially, working closely with the Protection team on a number of mobile survey initiatives (Oxfam, 2015b) helped lay the foundation for much of Oxfam's subsequent work on responsible data (Oxfam, 2017a).

As momentum grew, guidance developed on different tools and best practice usage was refined with two tools identified to be mainstreamed as 'Systems of Record', rooted in an acknowledgement that no one single tool could address all of Oxfam's diverse programme needs (Oxfam, 2016). This approach also sought to empower programme teams to identify the best software for their needs and thereby engender greater buy-in at the local level and increase the likelihood of long-term sustainability. Working closely with the IS department to narrow down tools and bring them into the internal service catalogue of supported tools prompted the team to adopt the 'innovation pyramid' model as a framing tool for the introduction of ICTs. While engagement with mobile surveys first prompted this framing, subsequent and parallel exploration of the use of ICTs to support improved capture and management of beneficiary data proved key in further refining this approach.

INNOVATION

As with many humanitarian agencies, Oxfam had long been faced with the 'last mile problem' – the ability to measure reach, accountability and impact at the critical stage of humanitarian aid delivery where essential goods and services reach people affected by disasters – at the agency level and as a sector. Traditional reliance on paper-based processes to register individuals and manage the distribution of aid was seen to contribute to a number of challenges related to transparency, wasted time, human error, fraud and dignity. In a context of increasing use of digital technologies, a number of tools started to emerge with the aim of helping agencies answer the following questions:

- Did we target the right people with the right aid?
- Did the aid reach the intended beneficiaries? If so...
- Was the aid effective and did it make a difference?

This movement to digitalize beneficiary registration and distribution management activities positioned itself not only as a way to save time and increase the efficiency and effectiveness of the overall process, but also to cut down on fraud, to improve the beneficiary experience, have faster and better disaggregated reporting with fewer input errors, and to increase accountability to all stakeholders. Investment in such tools formed a strong alignment with Oxfam's organizational objectives and its ICT in Programme principles, addressing a clear existing need with the potential to integrate with programme activities to add value. Crucially this area offered the ability to increase accountability and improve the quality of aid provision at the last mile of humanitarian activities.

In January 2013 a member of Oxfam's Emergency Food Security and Vulnerable Livelihoods (EFSVL) team was approached by World Vision (WV) to discuss whether Oxfam would be interested in piloting their Last Mile Mobile Solutions (LMMS) digital beneficiary registration

and distribution management software as part of a WV proposal to the Canadian International Development Agency (CIDA) (now known as the Department of Foreign Affairs, Trade and Development (DFATD)), which sought to scale usage to multiple agencies. World Vision's proposal was budgeted to cover all costs relating to equipment, training and the bulk of technical support, and made provision for a coordination fund to be used by Oxfam to support participation in the collaboration. Given the longstanding reliance on predominantly paper-based processes at the 'last mile', which can create manifold challenges, this formed an opportunistic platform from which to pilot the use of a new technology that sought to increase accountability and *impact*, at low cost and risk to Oxfam.

Box 1: Last Mile Mobile Solutions

Last Mile Mobile Solutions is a stand-alone technology solution that registers beneficiaries digitally and issues barcodes that can be scanned at distributions points to bring up detailed records, linking to a live updating database of stock levels and projects. The system is designed to eliminate reliance on paper-based systems for distributions, to automatically calculate accurate cash, food and non-food rations, and deliver faster computer-generated reports to stakeholders. As such LMMS supports aid delivery to beneficiaries and strengthens control over inventory during distributions in the field. This includes improved procedures on delivery of aid through photo verification of households or proxies authorized to receive assistance.

Collaborating with World Vision to trial their LMMS technology had clear alignment with Oxfam's strategic aims. Significantly, such an opportunity also aligned with the organization's key principles relating to 'buy not build', collaboration with wider sector actors, and prioritizing synergies with existing processes. Following internal consultation, it was agreed that taking part in the CIDA-funded grant to trial LMMS would provide Oxfam with an opportunity for significant learning from programmatic, logistics, accountability and ICT perspectives at minimal cost to the organization. Given the complex nature of the collaboration involving multiple countries, time zones and stakeholders, this project offered the opportunity to trial what was seen as a new, flexible model of working in which overall coordination rested with the ICT in Programme team, but with significant input and ownership sitting with key stakeholders including the global EFSVL team, Logistics, IS and country teams. In part, this structure was also agreed as it acknowledged the cross-sectoral nature of the technology and its compatibility for multi-sector distributions. Sitting firmly at the 'systems of innovation' stage of Oxfam's 'Innovation Pyramid', it was agreed that this piloting of new technology required a great deal of flexibility and autonomy in order to explore its relevance for Oxfam.

The significant anticipated benefits from participating in the project included the opportunity for the Global Humanitarian team to utilize technology that would:

- reduce reliance on paper-based processes;
- generate time savings during beneficiary registration, distribution and reporting;
- increase the accuracy and disaggregation of data;
- streamline logistics for distributions with greater accountability to beneficiaries and all project stakeholders;
- be able to track beneficiaries over time and support Oxfam's resilience programming;
- have the potential to be able to link to government social protection schemes;
- have the potential to avoid duplication of beneficiary targeting with other agencies.

In addition, this opportunity provided a number of other significant benefits:

- It provided a platform to generate valuable learning from using this technology that could be applied across multiple sectors and help inform Oxfam's wider approach to digital registration technology and beneficiary data protection. This included drawing useful comparisons with similar initiatives such as a home-grown project in Bangladesh.
- There was the potential to share learnings more widely across the Oxfam confederation; especially relevant given the *importance of collaboration with affiliates* at a country deployment level.
- There was minimal cost for Oxfam other than staff time, given provision made under the CIDA proposal to cover all costs relating to hardware, software, training and the bulk of technical support, and the creation of a coordination fund for Oxfam's exclusive use.
- Building a strong partnership with World Vision provided a practical and realistic way for Oxfam to help influence the product development roadmap.
- WV's previous work developing and testing the LMMS tool provided Oxfam with a controlled risk environment and the opportunity to learn from them about 'pain points' when looking to scale up this type of technology.

PILOT PROJECT EXPERIENCES UNDER THE CIDA GRANT

Following dialogue with country teams, the Philippines and Niger were identified as locations in which to conduct pilot projects. In the Philippines it was agreed to pilot the tool as a preparedness measure by registering households in flood-prone areas such as Pampanga where Oxfam has both responded in the past and anticipated future distributions. The newly released Android-based version of LMMS (with additional functionality) was also piloted and rolled out as part of the Typhoon Haiyan response in northern Cebu in early 2014. In Niger, LMMS was piloted as part of the European Commission's European Civil Protection and Humanitarian Aid Operations (ECHO) funded series of cash distributions from June to October 2013.

Oxfam's experience piloting LMMS proved to be very positive, with significant time savings and improved quality of service delivery. For example, in the Philippines, Oxfam's use of LMMS as part of its Typhoon Haiyan response resulted in time savings of approximately 47 per cent for registration (233 staff days for 14,000 beneficiaries). As part of the wider CIDA-funded grant, an accountability study was carried out by World Vision in Niger and the Philippines in which beneficiaries expressed a sense of relief that the system ensures distributions are not open to being tampered with, and thus ensures transparency in distributions (e.g. cannot claim with a stolen card, nor a case of first come first served). Women in Niger spoke of having such faith in the system that they would arrive on time for a distribution and not hours in advance for fear that not getting to the front of the queue would mean that they would miss out. Owning a card with a photo gave them a sense of confidence that no imposter could stand in for them, and they reported that people had stopped trying to beat the system because they couldn't.

In a similar way to the experience with mobile surveys, interest in the use of LMMS began to grow as roaming Humanitarian Support personnel took their experiences from deployment to deployment, and HQ-based advisors became more aware of the potential benefits of digitalizing these crucial processes. Alongside the CIDA-funded pilots in the Philippines and Niger, the Myanmar country team successfully included budgeting for LMMS in a funding proposal to CIDA, and other locations such as Mali and Ethiopia began to actively seek funding to engage with the tool. While the 'innovation' of digitalizing beneficiary information

management and distribution activities was clearly gaining traction and addressing an important need, the ad hoc nature of new deployments highlighted the need for Oxfam to streamline its approach and consider the options relating to further investment in LMMS and its engagement with the wider digital beneficiary management space as a whole.

Aware that a number of agencies had developed their own tools, such as the World Food Programme's (WFP) SCOPE and United Nations High Commissioner for Refugees' (UNHCR) PROGRES, there were a number of unanswered questions about investing in a single platform. For example, it was not clear whether those, such as WFP, developing proprietary solutions would require funded programmes to make use of their software, even if teams were already trained on and using a different model. As organizations looked to wider usage of their solutions, business models were still being developed, leading to a lack of clarity about the wider costs and implications of engagement. Given the increasing numbers of tools making their way on to the market and into the field, there was a push from donors to consider interoperability and to ensure that systems are able to talk to each other. While many agencies had spoken of the need to ensure some degree of theoretical compatibility between systems, this had not been knowingly tested. This prompted Oxfam to prioritize engagement in consortia grants that centred around how the different systems being developed complement each other (or not), and ways of maximizing their use to ensure effective management of information from beneficiary to delivery of assistance and back to donors for reporting.

Beyond the questions relating to how different tools 'talked' to each other and the specific functionality they offered, was also the need to consider potential inter-agency usage, and the opportunities posed by beneficiaries being registered once, by just one actor, facilitating a better experience for them, while also allowing for greater efficiencies on the part of different agencies. Bigger questions remained about data security and openness to the process change, as well as the trust required between agencies to collaborate in such ways. As with many ICT-related initiatives, what began as a relatively simple, contained set of pilots, opened up a number of wider, interlinked conversations covering data protection and security, collaboration, integration with e-transfer technologies, digital identity standards and even biometric technology for identification and authentication.

On LMMS specifically, it was agreed that before any further decisions about its wider application across Oxfam could be made, the following questions needed to be further examined:

- To what extent could key partners work with World Vision in contributing to software development to suit their own organizational needs? To what extent could there be multiple ownership of this software, balancing the need for customization against the benefits of more rigid consistency?
- Given that LMMS was originally designed for food distributions and given the amount of cash transfer programming the sector (and Oxfam) engages in, it was felt that the LMMS roadmap needed to include the ability to link to banks, mobile phone companies and other elements of the cash delivery infrastructure. How does LMMS compare to other similar software packages such as SCOPE created by WFP? And will non-government organizations (NGOs) become increasingly obliged to adopt specific software packages depending on their donor relationships?
- Wider questions also exist about the applicability of LMMS for sudden onset emergencies as well as activities in slow onset responses. Do we want to focus our attention and resources on a particular type of scenario? Where can we best make use of this technology to maximize the benefits?
- What resources would be required internally to make this work? Do we need dedicated support? Would there be changing requirements in people's job descriptions to do this?

- Going forward, given that LMMS cuts across so many functions, who should 'own' this process within Oxfam? How could we ensure a more streamlined effort to engage with LMMS and similar systems?
- Who could Oxfam identify as 'internal champions' of LMMS globally? How should we resource their ability to be deployed to other countries to support?

SCALING UP

Building on these initial pilot experiences and also the growing demand, Oxfam was at a crossroads: on the one hand, pilots had confirmed that there was a real need for this type of technology with most pilot locations keen to continue utilizing it. The tool has been deployed in the Philippines, Mali, Niger, Ethiopia, Iraq and Myanmar. Field teams would engage directly with the LMMS team at World Vision International and through word of mouth, and new country programmes were keen to come on board (the ICT in Programme team facilitated links directly with WV while maintaining oversight of a growing portfolio of activities). The marketing and outreach efforts that the ICT in Programme team had invested at the start had now reached a tipping point where managing demand for LMMS (as well as wider mobile data collection tools) with the existing team capacity became a challenge. On the other hand, and from a global perspective, it was clear that Oxfam was at risk of being stuck in a perpetual pilot mode, foregoing many of the potential benefits of streamlining its approach to beneficiary registration and distribution, and building internal capacity for end-user training and functional support.

In the summer of 2015, just under two years from when Oxfam first engaged with LMMS, a learning review was commissioned to examine what had and had not worked well from the perspective of stakeholders as diverse as programme managers and officers, headquarters-based advisors, IT and information security specialists. This process enabled Oxfam to formulate a clear roadmap for the next steps of its engagement with digital beneficiary information management processes. Key lessons from the innovation phase that would have a bearing on the design of the scale-up strategy and further tool deployments included:

- The tool added most value for programmes with a repeat distribution component (food, NFI direct cash, cash for work).
- With pre-positioning of kit and investment in training, the tool could be used from phase one of an emergency; however, it fared better in a slow onset context or in the second phase of a response.
- It did not prove cost effective for use in blanket distributions or where digital registration has significant risks for the population being registered.
- Where vulnerability criteria for programme participant targeting are complex and highly variable (for example, in protracted crisis responses such as the Syria response), the tool lacked flexibility.
- Training should ideally be immediately followed by field deployment.
- Training can be provided internally by trained Oxfam staff, reducing the cost of and reliance on WV support.
- The system can be operated by Oxfam staff and partners, and is fully localized for use in French and Spanish.
- Kit procurement is best done locally and internally.
- There should be a light-touch advisory service to help teams assess the suitability of LMMS for a specific programme context.
- Process guidance should be provided, so that roles and responsibilities during registration and distribution are understood.

- The scope of a deployment must be discussed with, and understood by, implementation teams from programme management levels through to thematic leads and IS support.

The latter two points, borne out of Oxfam's experience using LMMS in the first phase of the Nepal Earthquake Response, in particular stressed the importance of getting the 'human process' surrounding technology implementation right, and of the continuous need to manage stakeholder expectations. But more on this later...

The business case developed on the back of the review argued that the moment was right to scale the use of this technology across Oxfam's humanitarian programmes, and with reference to the Innovation Pyramid model, take it through to the System of Differentiation stage. This would allow for the implementation of the following digital processes:

- beneficiary registration (field);
- ID card printing and distribution (office, field);
- distribution planning (office);
- actual distribution (field);
- post-distribution monitoring and reporting (field and office).

Using rather conservative estimates, the business case set the goal of deploying LMMS technology in at least four countries every year for the following three years, targeting highly relevant contexts in Oxfam's humanitarian programmes, alongside deployments in rapid-onset contexts using prepositioned LMMS kits. It further argued that the investment would be consistent with the programme expenditure data, highlighting a twofold increase in spend on programmes requiring beneficiaries to be registered in order to receive assistance in the form of food, cash or other non-food items. We also had data from studies conducted during the innovation/pilot phase, clearly indicating that, by going digital in this high-risk area of operation, Oxfam could reach more vulnerable people faster and dramatically reduce commonly identified distribution risks such as double-dipping.

Benefits we could predict from the scale-up – based either on the data from the early pilots or on Oxfam's experience with rolling out Helios (Blansjaar and Fraser, 2014) were:

- financial return through efficiencies via streamlined and planned process;
- improved beneficiary experience and strengthened two-way accountability;
- improved programme quality through better targeting of community needs over time;
- structured process with a digital audit trail against which Oxfam can monitor and measure its performance;
- reduction in potential for fraud during beneficiary registration and distribution.

Importantly, the business case warned against maintaining the status quo, arguing that if Oxfam decided not to formalize its commitment to LMMS, countries would continue ad hoc investment in developing their own solutions or buying them off the shelf, and these may be either not appropriate for Oxfam or too expensive to implement. Oxfam would also remain vulnerable to issues arising from audits around compliance and value for money, with consequent reputation and financial implications.

Having recently released its responsible data policy (Oxfam, 2015a), Oxfam was also acutely aware of the increased urgency of ensuring safe handling of beneficiary data across the entire data life cycle, and the importance of facilitating the use of tools that had been thoroughly reviewed to ensure compliance.

At the time, Oxfam was in an advantageous position of being able to adopt the technology of its own choice.⁴ We were keen to continue collaborating with World Vision, with whom we were aligned in the future vision of agencies coordinating and safely sharing beneficiary

registration data for more effective and timely humanitarian responses. It was also clear, however, that for the scale-up phase to be effective, we had to tackle three key aspects:

1. Defining new terms of partnership with World Vision as the 'owner' of the tool and ultimately the service provider;
2. Working closely with Oxfam's internal IT team to transition LMMS into a fully supported service;
3. Developing a sustainable model for training and functional support.

Following the investment decision, a six-month project phase set out to address these diverse concerns. The decision to invest was not insignificant as Oxfam was a year into an organizational transformation process known internally as Oxfam2020. Thus, anticipated key users of the LMMS from the Humanitarian teams across 17 different Oxfam affiliates were in the midst of a merger into a Global Humanitarian team, with significant amounts of organizational resource and management attention dedicated to the process.

Both organizations were in uncharted territory – at the purely pragmatic level, the WV LMMS team were providing a service to Oxfam. To our colleagues in the Information Systems Service Management team this meant agreeing an unambiguous service level agreement through which Oxfam, as the customer, could monitor the provider's performance. Yet, there was also an important strategic partnership dimension. Both organizations were keen to continue collaborating for a shared common good – to be able to jointly shape the tool, share training and deployment resource, and where appropriate coordinate with other players and share registration data for more impactful responses. It is fair to say that the negotiations around the licence agreement and service terms, skilfully guided by Oxfam's Service Management experts with input from both WV's and Oxfam's legal teams have been a learning and further trust-building experience. It was a nine-month marathon, with a win-win outcome: Oxfam now had an unlimited licence for the use of LMMS across its programmes for a period of three years, moving away from a server-based model used in the pilot; WV LMMS team had secured its first external customer, increasing their internal leverage for further product development and boosting their small internal team's capacity to test and improve the tool further.

In parallel with these negotiations, internal negotiations with the Information Systems colleagues to transition LMMS into a suite of tools and services within Oxfam's support IS portfolio were just as important. The questions that in the previous pilot phase could be deferred or worked around, such as, for example, how could all subsequent LMMS installations and future upgrades be managed, or how would Oxfam ensure secure storage/transfer and disposal of the data collected, or how could support calls be filtered internally, had to be resolved. In this negotiation, the appointment of an IS project manager, who took the lead in intra-departmental navigation of the service transition process in close collaboration with the LMMS product lead with a good grasp of field realities and the tool itself, helped enormously. So did the formation of the LMMS Project Governance Board with senior representatives from Humanitarian, Internal Audit, IS and International Programmes departments.

With the benefit of hindsight, we can now acknowledge that both the internal and external negotiation phases, with their many frustrations over delays, were key steps in the change journey from the pilot mentality of the innovation phase towards scaling up into a 'System of Differentiation', where process was perhaps just as valuable (if not more so) as the negotiated outcomes.

The third question the scale-up project set out to address was, 'How can we develop a sustainable training and functional support model for LMMS?' For this we drew heavily from the organizational experience rolling out Oxfam's Programme Information and Supply Chain Management processes and systems. For example, although we had access to WV learning materials, we knew it was important to link these with Oxfam's accepted terminology and

field ways of working. We also knew, from previous deployments that some learning materials (for example, visual 'how to' guides relating to the most frequent transactions) are more valuable and easier to maintain than others. Additionally, we knew that given the endemic challenges of high staff turnover and shortages of tech-savvy staff in some of our more remote operational environments, we needed to build internal capacity for first and second line functional user support and training. To this end, a permanent beneficiary information management lead role was established and supported during the project phase by a dedicated LMMS trainer.

Eighteen months since the scale-up decision was made and twelve months after the 'project phase' of the scale-up ended, Oxfam:

- Has saved tens of thousands of dollars from the centralized service model compared to one in which each country would secure the service directly from WV.
- Is using LMMS in eight country programmes with an average number of four servers per country. Thanks to the work of the project team to develop robust process guidance and more streamlined implementation support, Nepal is up and running with the LMMS service after the initial thorny deployment in the aftermath of the 2015 earthquake.
- has been able to influence the LMMS product development roadmap with feedback loops from deployed locations. The house-to-house offline registration functionality known as LORA (so named for Laura Eldon, who was the Oxfam focal point for LMMS during the early innovation phase), and more recent changes to the reporting aspects of the tool developed with colleagues from the Oxfam Philippines programme that speed up the 'know your money' (KYC)⁵ verification process for programme participants, serve to prove the merits of collaboration and of adopting a partnership approach with World Vision.

IS IT MAINSTREAM YET?

Thinking back to the Innovation Pyramid model introduced earlier, where is Oxfam now in relation to the 'last mile problem' it set out to begin to address with the introduction of LMMS? Has the technology fulfilled its promise as an enabler of a more streamlined and planned aid delivery process? Has it strengthened two-way accountability between Oxfam and the people it works with? Have we been able to target community needs better over time with insight offered by technology? Unsurprisingly, these are hard questions to answer unambiguously.

We have some insight from a learning review of a multi-year learning and experimentation initiative, SHINE (Oxfam, 2017b) which, with the generous support from the Swedish International Development Agency (Sida), sought to explore how use of ICTs might enable better quality humanitarian responses (Oxfam, 2017c). In particular, in Ethiopia, where the LMMS-based ways of working were introduced, staff who were initially sceptical about the move away from the traditional paper-based approach soon realized that LMMS is very flexible: it can accommodate projects with different objectives and different modalities. Also, the system does not always require internet connection – this is crucial, especially in remote areas. With the new system, once beneficiaries have been registered, it takes minimum time and effort to search data and to edit and update information. Opportunities for data manipulation are minimized, and it is straightforward to generate reports for donors.

In addition to the obvious benefits for Oxfam, the new system has had a positive impact on the individuals it supports. In the context of Ethiopia, as was made clear during focus group discussions, affected communities have valued being given the ID cards. According to participants, having a card gives them a sense of security as people were previously unsure about the payment they would receive. One man said that 'The card is a confirmation that we will get our payments.' The system provides people with a secure means of receiving cash,

and gives them the dignity of choice – ensuring they can buy what they need, when they need it.

During the ongoing 2017 drought response in Ethiopia, Oxfam has incorporated LMMS into its Cash Based Intervention in the Somali region, drawing upon the benefit of ICTs speeding up and simplifying delivering humanitarian aid. As a result, ICT-enabled beneficiary registrations and distributions have been adopted and implemented as part of Oxfam's largescale response. As of the end of May 2017, all drought response zones in the Somali region were using LMMS. In order to make this happen, Oxfam provided various training sessions to key local implementing partners and their staff on the use of LMMS, and deployed an additional six LMMS servers to ensure the effectiveness of this approach. Having been introduced in Ethiopia on a pilot basis more than three years ago, the Ethiopia country team has now scaled its use to all relevant humanitarian programmes.

Has LMMS now moved down the pyramid into a System of Record? This last question is perhaps the easiest to answer. LMMS sits firmly within a suite of tools fully supported by Oxfam's internal Information Systems department; the country on-boarding process has been streamlined, and we continue to expand our internal pool of staff who are able to deliver new training and support existing sites. It thus has many characteristics of a System of Record.

Yet, as Oxfam's international programmes streamline their use of beneficiary registration and distribution technologies, new questions are emerging around responsible digital identity management for crisis-affected populations, and also how biometric and blockchain-based technologies might be used to improve response outcomes and transparency at the last mile. The ICT in Programme team is actively engaged with these questions, along with many of Oxfam's peer agencies and private sector partners. The Innovation Pyramid is back at work – with the hope of one day turning the last mile problem into a working link in the chain of humanitarian aid delivery.

NOTES

- 1 As an organization, Oxfam has endorsed the use of 'people we work with' over the term 'beneficiary' to address issues relating to imbalances of power and to highlight the active participation of many communities with whom we work. For the purposes of this chapter, we have continued to use the term 'beneficiary' for clarity about the specific process this activity sought to address.
- 2 By ICTs in this context we mean technologies that support specific elements of development and humanitarian programmes, and not enterprise-wide solutions, with a routine process standardization objective.
- 3 A full list is available at: <http://policy-practice.oxfam.org.uk/our-approach/ict-inprogramme>; see also <http://digitalprinciples.org/>
- 4 It is not uncommon in the sector for donors to insist that their implementing partners utilize particular technology solutions. While this is valid as an approach, it does come with its own set of challenges around process and technology interoperability and staff capacity.
- 5 Know your customer (KYC) is the process of a business identifying and verifying the identity of its clients. The term is also used to refer to the bank and anti-money laundering regulations that govern these activities

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