



DIGITAL DATA COLLECTION IN PLAN: A REVIEW OF CURRENT PRACTICE AND LESSONS LEARNED

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EXECUTIVE SUMMARY

This research aimed to explore the current uses of digital data collection tools in Plan, to tease out the lessons learned from adoption and implementation, and document the benefits and challenges of transition from paper-based to digital data collection processes.

It is intended to represent experiences in different areas of work, and to distill some key learning points in order to inform future adoption of digital tools in Plan. Based on the experiences and insights of Plan staff, we hope that this report will provide useful inputs and guidance for those considering adopting new tools in their work, whether in the field or for global information systems.

Plan has been using a tool called Poimapper (PM) since 2012. As PM is the most widespread and widely used digital data collection tool within the organisation, its users were an entry point to this research. This report relies heavily on their experiences to generate findings, learning and conclusions. Some of these apply to digital data collection as a whole, while others are specific to the use of Poimapper.

Methodology

This research was conducted between June and August 2015, by two independent consultants with experience in evaluation and guidance in the field of information communication technologies for development (ICT4D). It included an online survey to Poimapper users in Plan country offices; the selection of five countries for more in-depth research or case studies; a country visit to Plan Burkina Faso where a workshop was convened; and telephone interviews with other stakeholders.

This report

The report includes examples of how digital data collection tools have been used in Plan, and analysis of the types of benefits and challenges that have been noted at the level of programme or country office. It then documents the authors' analysis of the potential of tools like Poimapper to increase the quality and efficiency of data collection in Plan. The authors provide recommendations based on the research. In the annexes, full versions of the case studies can be found.

Findings

Poimapper has been used in varied contexts, countries and programme environments within Plan to collect data to monitor project activities and impact; map needs and services, including in emergency settings; monitor services and support government decision-making and inform and monitor Plan's work.

There has been a range of outcomes of the change to digital data collection. Benefits include access to more timely data for programme staff; greater accuracy and reliability; cost and time efficiencies; a reported increase in skills and capacities for Plan staff; and an increased ability to present and share data.

Lessons learned and recommendations

The authors are confident to recommend to Plan that, where possible, the collection of primary data should be conducted using digital tools. Further recommendations relate to:

1. Strengthening capacity and support for existing and potential users of digital data collection tools in Plan, creating a community of practice which can also develop evidence and guidelines for effective collection and use of digital data in Plan.

Recommendation 1: Establish, support and encourage a Community of Practice for those using digital data collection tools and approaches

2. Building relationships in order to effectively and appropriately support and advocate for effective data use at all levels in Plan.

Recommendation 2: Position digital data collection within a broader context of effective use of data, and forge connections with Plan processes to improve the effective use of data for programming

3. Strengthen understanding of the necessary skills and mechanisms, and potential tensions, in scaling up data use /collecting and consolidating comparable data beyond project level, through support to a small number of country office pilots. This could feed into further recommendations and guidance for good practice in integrated centralised digital data management.

Recommendation 3: Support a small number of country offices to explore the implications of scaling up data integration and management

4. Build further evidence of the costs, benefits and choices relating to effective use and improved impact of digital data collection tools, through the community of practice. Including;

Recommendation 4: Build further evidence of the cost and value for money of digital data collection tools at different scales.

Recommendation 4a: Undertake further research to understand the economic implications of shifting to DDCT.

Recommendation 4b: Undertake further reflection and research into factors and criteria affecting the choice of tools, and comparative advantages of different tools available.

5. Clarify the relationships between Plan Poimapper users and developers, and expectations in terms of support, training and responsiveness to need.

1. INTRODUCTION

Smartphones and tablets offer an increasing array of applications and services that can be useful in our daily lives and work. Data collection, an important part of Plan's work across the world, is no exception. There are several apps available now which allow an organisation to send out a digital questionnaire to the phone or tablet of their field staff, who can then collect responses and upload them to a central server. As with many digital services, this promises gains in efficiency and speed, and even accuracy and quality of the data collected.

This research, commissioned by Plan Finland and conducted by independent consultants Erica Packington and Hannah Beardon, aimed to explore the current uses of digital data collection tools in Plan, to tease out the lessons learned from adoption and implementation, and the benefits and challenges of transition from paper-based to digital data collection processes.

This is an opportunity to take stock of experiences in different areas of work, and to distil some key learning points in order to inform future adoption of digital tools in Plan: whether by individual managers at country level; or at the level of larger regional or global data collection and management systems. Based on the experiences and insights of Plan staff, we hope that this report will provide useful inputs and guidance for those considering adopting new tools in their work, whether in the field or in global information systems.

Exploring digital data collection with the users of Poimapper

Working initially with Plan Kenya and Thailand and in partnership with Pajat, a private developer, since 2009 Plan Finland have supported the design, development, testing and piloting of a digital data collection tool to meet the stated needs of Plan country staff and managers¹. The resulting tool, called Poimapper, has since been piloted and adopted by staff in several country offices and different areas, with the support of Plan Finland and Pajat.

As there is no other visible network of users of digital data collection tools in Plan, nor any large centralised initiative for transition to digital tools, the users of Poimapper were used as an entry point to this research. This means that this report relies heavily on the experiences of using Poimapper to generate some findings, learning and conclusions that apply more widely to digital data collection as a whole. However, there are some findings specific to Poimapper, and some experiences of using other tools, which are also included.

While the use of Poimapper has been the central focus and entry point, the researchers have remained neutral and independent, assessing based on our own primary and secondary research the comparative advantages of Poimapper. However, it should also be noted that the relative scarcity of direct experiences using other digital tools in Plan has meant that these comparisons (of cost, functionality etc.) have not been able to be comprehensive. As such, we recommend that a community of practice be formed to collect and share wider experiences of digital data collection, and begin the process of critically assessing the pros and cons of Poimapper in relation to other tools.

Methodology

This research was conducted between June and August 2015, by two independent consultants with experience in evaluation and guidance in ICT4D. Plan Finland provided a list of contact points from country offices that had been involved in piloting and using Poimapper.

1 For more information on the history of the partnership and development of Poimapper see Annex 1

These people were contacted by email to provide key resource persons who could share experiences and lessons learned. In the main these respondents were from the IT and M&E functions. The consultants engaged the respondents in the research in three ways (see acknowledgements for full list of interviewees and survey respondents):

1. All respondents from Plan country programmes were invited to complete an online survey to share basic information on how they had used Poimapper and other digital data collection tools, the main benefits and challenges and lessons learned. They also provided any relevant existing documentation. The main points from each country (surveys and documentation) were written into a short summary and shared with the contributors to validate.
2. Based on this initial information, and in discussion with Plan Finland, five countries were selected for more in-depth research or case studies.
 - a. The most in-depth case study was developed through a visit to Plan Burkina Faso by Erica Packington in July. This included a workshop for Plan staff, face-to-face interviews and accompaniment to a process of digital data collection for WaSH monitoring.
 - b. Two brief case studies (Philippines and Bangladesh) were collected through telephone interviews with project managers, IT and M&E staff, and a member of the country management team in each country, as well as review of existing documentation.
 - c. In addition, telephone interviews were held with staff from Plan Bolivia/ Americas and Plan Cameroon to capture some of their experiences using Poimapper and other tools for digital data collection.
3. Telephone interviews were held with the developers of Poimapper (Pajat) and the team leading its development and promotion in Plan (Plan Finland). Interviews were also held with key international staff from sponsorship, accountability and M&E areas, to understand the potential of digital data collection from a global perspective.

This report

The first part of this report includes examples of how digital data collection tools have been used in Plan, and analysis of the types of benefits and challenges that have been noted at the level of programme or country office. When asked, most respondents and users of Poimapper said that this was the type of information/ experience sharing that they hoped to get out of this research. The authors also consider that this could be a useful basis for further discussions and experience sharing in any future community of practice around digital data collection in Plan.

The second half of the report provides the authors' analysis of the potential of tools like Poimapper to increase the quality and efficiency of data collection in Plan, and provides some lessons learned and concrete recommendations as to possible next steps to build on the knowledge and skills and meet the needs of the organisation.

Finally, the annexes include full versions of the case studies developed during this research, on the experience of using Poimapper for monitoring and evaluation in Burkina Faso, for sponsorship in Bangladesh and for emergencies in the Philippines.

We hope that staff across Plan find the examples interesting and the conclusions useful for your own work and decision-making.

2. DIGITAL DATA COLLECTION IN PLAN: METHODS, TOOLS AND USES

Like all international NGOs, Plan International need to collect and share information on its own work, on the contexts in which it works and the communities it serves, to inform decision-making, communicate with stakeholders and strengthen accountability. Plan staff and partners regularly collect information which strengthens their programming, advocacy and communication, for example data on their project implementation and impact; on the needs and interests of sponsored children and their communities; on the immediate needs and priorities after an emergency; on the capacity and needs of partners; or on the quality and reach of public services.

Probably the largest data collection exercise within Plan is for sponsorship management, with teams in every country office collecting data on over 70 questions from each sponsored child and family. This information is fed into the ChildData database, managed by a team from Plan International, and used by teams in National Offices to build relationships with new and existing supporters. Other common data collection processes include baseline studies, situation analyses and project or programme monitoring, evaluation and review.



In some cases data are collected from a specific group (sponsored children, members of a micro-credit group, participants in a training course for example), while in others it is sought from a broader cross-section or random sample of the population. Some data are quantifiable, showing the number of people reached or benefiting from an intervention for example, while others are more qualitative, allowing for nuance and reflecting personal experience, expectation and perspectives. Different types of questions or interview processes can be designed to elicit different types of data and facilitate different types of analysis, and different media (such as video, audio, text etc.) also suit different types of information and interviewing. In recent times, there has been a growth in new tools and technologies both to broaden the reach of data collection exercises (e.g. using SMS or online forms) and to apply a wider range of tools and media both to collection and analysis of the data.

How is data collected

In the past, most data was collected from the field using paper forms, using staff or volunteers to interview and fill out forms, which were later returned to the head office to be transcribed and digitalised for storage, analysis and sharing. This is still probably the most common method of data collection in Plan, though this research has found that the use of

paper forms is prone to error, and can be cumbersome in terms of logistics and related transaction costs of printing and transportation².

In recent years, tools and technologies have become available to enable digital collection of data using on-screen forms and surveys, using smartphones and tablets with 'apps' or programmes which can be free or licensed. Now text, photos, audio and video material and location and time data can all be collected using the same device, and sent or uploaded to a central platform via Internet and data connections.

The growing use of digital data collection tools

As these digital tools become more widely available, and the benefits more obvious, Plan staff is increasingly using them to support and enhance their data collection work. This research finds that, overall, Plan staff have found digital tools to be an effective and efficient way to collect data, although it is not clear to what extent they are being used. There are several reasons that the transition to digital might be slow and patchy, and in some cases there is still a preference for paper:

- In some cases, such as sponsorship, paper-based systems are still used because the transition to digital will require a centralised and coordinated approach, with the selection and rollout of a single technology integrated with the existing database system, which has not yet been designed or approved. For example, Plan Burkina Faso has a policy to use digital tools in all programme data collection, but still use paper-based systems for child protection and sponsorship.
- In other cases, the use of new tools depends on local staff capacity and awareness to update existing processes and innovate. In Plan Bolivia the interest and skills of individual staff members enabled them to explore different options for digital data collection depending on the requirements of the process, including some free and open source options (see Annex 2 for some comparison of features and benefits)
- Digital tools are sometimes not considered reliable or appropriate enough to meet requirements of all types of data collection. For example, for processes which require interviewers to be out in rural areas for several days without power or Internet, or those that are primarily group-based or qualitative in nature. However, increasingly there are affordable ways around this problem, such as spare batteries or solar chargers. A bigger issue is the difficulty in collecting less-structured qualitative data. For example, Plan Burkina Faso found that: “We just can’t collect large amounts of qualitative data with Poimapper. There are fields to enter text but focus groups, in depth interviews we still use paper for... If we can find a way to collect qualitative data, it will be very, very helpful.” However, many digital tools already have features and ways of working which can overcome these perceived obstacles, and this will increasingly be the case. Pajat, the developer of Poimapper, explained that “it is now



² There is no comprehensive tracking of means and methods for data collection, so this perception is based only on the interviews and surveys done for this research.

possible to include video/audio clips to the data point the same as images”, suggesting that these could either be added directly, or saved for later transcription to text.

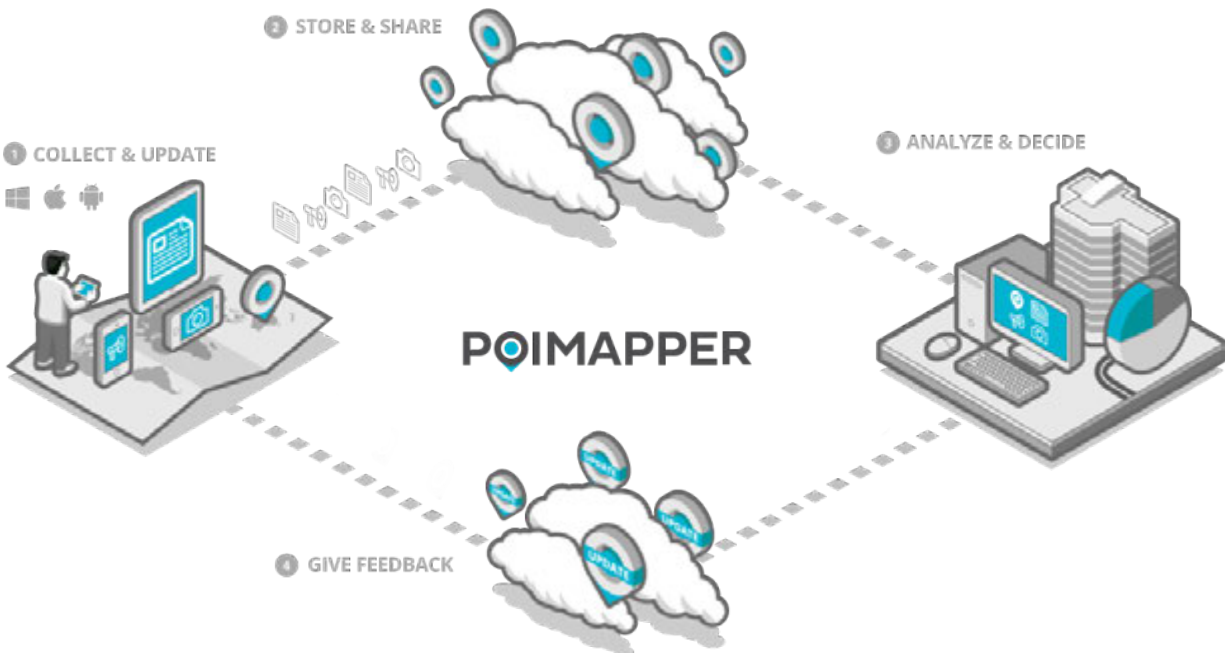
There has been one coordinated effort to explore the potential uses and benefits of digital data collection tools in Plan country offices, led by Plan Finland, which resulted in the development, piloting and wider deployment of Poimapper. Other uses of digital data collection tools have grown out of individual initiatives and are not recorded or collected in any comprehensive way.

Partly because of the ease of identification of uses and coordination, this evaluation has focused largely on the use of Poimapper in Plan, following up cases of use in different countries and areas of work. This has led the authors to learn of some uses of other tools, and to draw some conclusions and lessons about the usefulness and limitations or challenges of applying digital data collection tools more generally. As such, we have tried to present both insights and findings relating to the digitalisation of the data collection process, and the specific features, benefits and limitations of Poimapper as one such tool. Some comparison between the features and benefits of Poimapper and other tools used by Plan staff is presented in Annex 2 of this report.

What is Poimapper?

Poimapper is digital data collection software, which can be used on a GPS and internet-enabled handheld device (smartphone or tablet) to collect data through text and/or pictures into a form. Each separate form entry is automatically tagged with location coordinates. The completed forms can then be uploaded to a central server or platform using the Internet, from where it can be accessed, processed and analysed. The consolidated data can be presented on a map, as well as with graphs and tables.

Poimapper was originally conceived in response to a clearly expressed need to collect data on points of interest (POIs), allowing them to be presented on a map for easier analysis of the reach and coverage of crucial infrastructure, services or assets. The tool was developed collaboratively between a private developer (Pajat) and Plan Finland, based on consultations with, and testing by, staff and managers from Plan country programmes. Since the original development, testing and pilot with Plan Kenya in 2009, the range of countries and functions using Poimapper has grown rapidly, in some cases through formal pilots, and in others through peer support and local adoption. A fuller history of the development of Poimapper can be found in Annex 1 of this report.



3. HOW HAS POIMAPPER BEEN USED IN PLAN?

Plan Finland, in partnership with Pajat, have supported several country programme teams to adopt and adapt Poimapper to their needs. For example, they have supported some country offices with the cost of licenses and provided training. In these cases, the users (country offices) have built strong relationships with the developer (Pajat), receiving tailored training and support, and getting responses to their feedback and requests for new features.

However, as more people and offices have started using the tool, the uses have spread beyond the original supported pilots to other projects, processes and teams, and even to neighbouring countries. For example, the head of evaluation, monitoring and research of Plan Burkina Faso explained that, “Now we use Poimapper in 5-7 evaluations per year. But we are also adding in other studies with the phone. We are averaging about 10 uses per year, across evaluations, internal processes and studies.” And yet Plan Burkina Faso has never received direct support from Plan Finland.

In this section, the authors share some examples which show the range of uses to which Poimapper is being applied across Plan country programmes. Further information on the ways in which Poimapper is being used, including more examples from country programmes, is available in Annex 3.

The range of uses in Plan:

The information in this table, and the annex, has been generated through surveys and interviews with the Poimapper users known to (though not necessarily supported by) Plan Finland. There may be other users in Plan who have not had a chance to contribute, but this still shows a wide range of processes and areas of work where Poimapper is being used.

Collecting data for:	Examples from:	Summary
Project monitoring and evaluation	Livelihoods and WaSH projects	Poimapper is often used to collect project baseline and monitoring data to support project management and reporting. As the M&E Coordinator of Plan Zambia noted, Poimapper “can be used both for snapshot and longitudinal data collection, creating a rich data set which is immediately visible and available to analyse. This enables more efficient planning and prioritisation, and enables immediate sharing of data with donors and other partners.”
Mapping local needs and services	ECCD, health and girls' safety	As a tool to collect geotagged data, Poimapper has been used in different contexts to map needs, provision and gaps in services, and help visualise trends, concentrations or priorities.
Monitoring public services and policies	Education and child protection systems	Collecting data on the provision and access to public services is useful to build evidence for advocacy and decision-making. The M&E Manager of Plan Zambia noted that: “Data gathered can be used for evidence-based advocacy work such as influencing teacher distribution, resource allocation and birth registration, improved documentation and archiving and easing communications with a wider audience of policymakers and media.”
Informing Plan decision-making	APPR process, emergency needs assessments and regional child welfare indicators	In some cases APPR data is collected using Poimapper. In others, data is gathered on strategic indicators to inform programming at a wider level.

In focus: getting reliable data from the field – fast - in emergencies

When a disaster strikes, the Plan country office need to collect as much information as possible within the first 72 hours, using a standard UN OCHA form. This data helps Plan managers make informed decisions about the scale, nature and focus of the response and allocation of resources.

In **The Philippines**, Plan has been using Poimapper for this rapid needs assessment and monitoring of emergency distributions since Typhoon Bopha in 2013, and in three subsequent typhoons and earthquakes. Plan staff and partners in the field collect demographic data and photographs to gauge the impact of the disaster, and map distribution points, shelters and other facilities, which they send back to the country office over the Internet. One of the team explained *“I use it to be able to do data collection easier, faster, and better”*

Poimapper is then used to monitor distributions of emergency aid, vouchers or cash for work, and to collect feedback from beneficiaries. Staff on the ground use their mobile phones to capture basic data on what is distributed where, when and to whom, and record any learning on the process. Interviews with community members at distribution points provide feedback on the content and process of distribution, priorities, inclusion and other issues. In the recent **Nepal** earthquake response, 220 feedback surveys were conducted via Poimapper resulting in action to scale up the use of information points and SMS systems.

This information helps to inform decision-making, and report to donors and other interested parties. The information collected and stored in the Poimapper portal is also used to provide the “3W” (who, what, where) reports required by UN OCHA to ensure coordination of emergency responses on the ground. The Plan Philippines IT Manager noted that *“OCHA appreciate the real time data that we submit.”* Furthermore, the systematic collection of such data across different programme units enables comparison and identification of strengths and weaknesses. One of the M&E team noted; *“It has made it faster for me to do consolidation and reports, thus faster actions from teams and management.”*

Over time, Plan Philippines has started to use Poimapper in pre-and post-disaster contexts, for vulnerability mapping and to collect data on the outputs and outcomes of their emergency interventions. As the IT Manager noted, *“If Poimapper can be used at all stages of an emergency, this creates efficiencies as data can be used and developed throughout the stages.”*

Plan **Burkina Faso** is also using Poimapper to collect data on refugee camp infrastructure and facilities in their response to the Malian refugee crisis. Staff routinely map education provision, child protection and the number and type of sanitation points to provide information on needs and priorities, and monitor improvements.

4. WHAT HAVE BEEN THE OUTCOMES OF THE CHANGE TO DIGITAL?

"I DON'T WANT PEOPLE TO THINK IT IS JUST FASHION. IT IS NOT A FASHION. IT IS SOMETHING THAT CAN CONTRIBUTE TO OUR PERFORMANCE, TO HELP US MAKE THE WORK BETTER."

PLAN BURKINA FASO PROGRAMME MANAGER

This research has focused largely on the cases where Poimapper has been used, either to replace existing paper processes (such as sponsorship data collection) or for entirely new processes of data collection. These experiences unanimously show that there are gains to be made from the transition to digital data collection, primarily in terms of quality, timeliness and resources, explored more in this section below.

However, these experiences also show that much about the overall data collection process does not change with the transition to digital. As the IT Manager from Plan Philippines noted, "The real changes from paper-based are in the data collection and transfer process, there is less work in consolidating and entering the data." The design of the data collection forms might change somewhat with the opportunity to build in logic and skip questions automatically, but requires the same clear analysis of what types of data are required and how to design good and sensitive questions. The skills to interview or deliver surveys, especially when dealing with sensitive issues, are the same whether recording on paper or a mobile phone. And while the analysis of data can be improved or speeded up with the use of digital tools, the ability to make sense of the data, and use it well, depends more on individual capacity and the culture and systems of the organisation itself.

In essence, digital data collection tools can improve the quality and efficiency of the process from getting the forms to the enumerators, to getting the data back to the office. What happens either side of that depends more on capacity than tools.

THE REPORTED BENEFITS OF USING DIGITAL TOOLS

In summary, there were benefits reported in terms of timeliness, accuracy, efficiency savings, and capacity of Plan staff, partners and communities. These benefits were seen across the data collection process, for example:

FORM DESIGN

- Can ensure that questions cannot be skipped, use question logic to make complex forms simple to deliver
- Capacity gains as form design brought in-house
- Can ensure that questions cannot be skipped, use question logic to make complex forms simple to deliver

TRANSFERRING DATA

- Data arrives more quickly meaning more timely
- Cost savings in transportation, staff time/ no need to hire data entry capacity etc.
- Less transcription of hand-written forms, meaning more accurate data.

DATA ANALYSIS

- Time saved in transferring and transcribing data allows more time for analysis.
- Built internal capacity to analyse data

COLLECTION OF DATA

- Cannot skip questions or save incomplete forms
- Less room for human error (e.g. in identification of respondents or photos, duplication)
- Reduces opportunity for fraud by collectors
- Cost savings as less need to hire external consultants for data collection
- Greater capacity for/ awareness of ICT in communities/ incentive for community volunteers
- Enumerators have everything they need on one device
- Respondents get to see photographs/ visual data

REPORTING/ USE OF DATA

- Savings – no need to hire map-producing experts.
- Data more useable - easier to access, more timely
- Use of maps makes data more useful

Timely data

One of the greatest benefits of digital over paper processes was considered to be the timeliness of data, with over half of the survey respondents finding the change very positive, and the rest positive. And as the DRM manager of Plan Burkina Faso explained, timeliness is essential: "I need to have data quickly to take decisions. Quick availability of data is very important in this area."

Plan Bangladesh has introduced Poimapper to collect sponsorship data. Under the old system, staff would collect the data on paper forms, accompanied by a photographer, and at the end of the process send the batch of completed forms back to the country office by road - a trip of up to 12 hours. Now not only does the data arrive quicker, uploaded in seconds when an internet connection is available, but it is sent as it is collected, meaning that there is more time available to validate and upload the data onto ChildData. Staff from Plan Cameroon found the same, noting that "We don't wait one month for all the data to get to the office when the staff comes in. With Poimapper as the data is collected, it appears on my desk. We can generate the enrolment report and present it to the regional delegation when useful ... it now gets to them at the end of the month that school returns."

Timely data is not only useful for planning and decision making, but also for reporting to communities, donors and other stakeholders. The Plan Burkina Faso planning and monitoring coordinator noted that "Sometimes before, we would wait for weeks or months before getting the results. When we collect using Poimapper, we get the data, do the analysis, we can show results within a few days."



Greater accuracy and reliability

Again, all of the survey respondents for this research stated that Poimapper makes a positive or very positive difference to the accuracy of the data collected. For example, staff in Plan Bangladesh explained that "The manual system allowed for duplication and corruption of data. Much of the data was unusable. Now we can fully use the data, it is validated and human error is reduced." There are several differences from the previous paper-based system which enhance quality control.

- Firstly, the nature of the digital questionnaire means that enumerators cannot skip questions, and can be limited in their choice of answer. As Plan Burkina Faso staff explained: "we can make questions compulsory – they cannot save the form without completing the required data. We get more complete data sets." Plan Philippines staff found that the possibility of fixing and limiting choices for data entry in a digital form reduces the opportunity for error.
- Secondly, as data is captured and transferred digitally, the chance of human error when transcribing paper forms has been reduced. Staff from Plan Bolivia noted that the reduction in the number of steps in the process from data collection to analysis means that there is less room for error. According to Plan Philippines staff, this means that: "Consolidation is faster and more accurate, there are fewer errors

compared to typing the responses.” Although in Bangladesh the data still needs to be transcribed from the Poimapper platform to the ChildData database, the source data is cleaner, clearer and the risk of errors due to legibility of handwriting is eliminated.

- Finally, since the digital forms automatically generate a unique reference number for each child there is no longer the opportunity to mix up children with the same name. And as photographs are taken with the written data, this also eliminates the possibility of allocating photographs to the wrong children. Under the previous system, it was not unheard of for a child's data to be matched with a photograph of a child of the opposite sex.

As well as the accuracy of the data transcribed or entered into the system, the use of Poimapper was considered to improve the reliability of the data, allowing data users and managers to ensure that the data was secure and trusted. An evaluation of the Poimapper pilot in Kenya noted that “data accuracy was more dependent on the integrity of the data collectors than the application being used.” In several cases, Plan staff mentioned an advantage of Poimapper to monitor and control this aspect of integrity. On the one hand, staff was assured of the security of the data transfer and storage system provided and managed by Poimapper developers, Pajat. Plan Zambia explained “Poimapper provides data security; passwords, encrypted data and transmission, removal of uploaded data from the device, log trace and location trace, for security and reliability.”

On the other, the use of geo-tagging means that Plan can be sure that the data has been collected in the time and place stated by the collectors, keeping track of the data remotely. Staff from Plan Bangladesh remarked that this enabled them to ensure that the enumerators were actually going to the field and interviewing the children and families, eliminating the possibility of fraud which existed with the paper system. In Zambia, Plan staff appreciated the ability to record “the time, place, editor and duration of data collection”, which enabled “transparency and efficiency, ensuring that information is reliable and traceable.” In Burkina Faso Plan staff have also been able to use the geo-tagging feature of the digital data collection to keep track of the data, and also of their partners, volunteers and subcontractors. “We can see the data that is collected, check it’s right, accurate, collected in the right place and time.” the ICT4D Coordinator explained, “With paper we cannot check, there is no way of knowing if the data is reliable. We found a couple of instances who said they collected data from one place, but the time and location stamp showed otherwise.”

One clear example of this greater transparency came from a WaSH project in Burkina Faso. By combining GPS, photographic evidence and written data through Poimapper, programme staff was able to uncover inconsistencies in reports from a latrine construction partner. The Planning and Monitoring Coordinator recalled: “The data showed that the partner was not providing accurate information. They were building fewer latrines than they were contracted to do, and paying builders less. We were able to use the data collection to show that the information was not correct, so the programme could respond. It was very useful. Auditors get quickly the data and shared it with the management, and it meant a decision could be made quickly.”

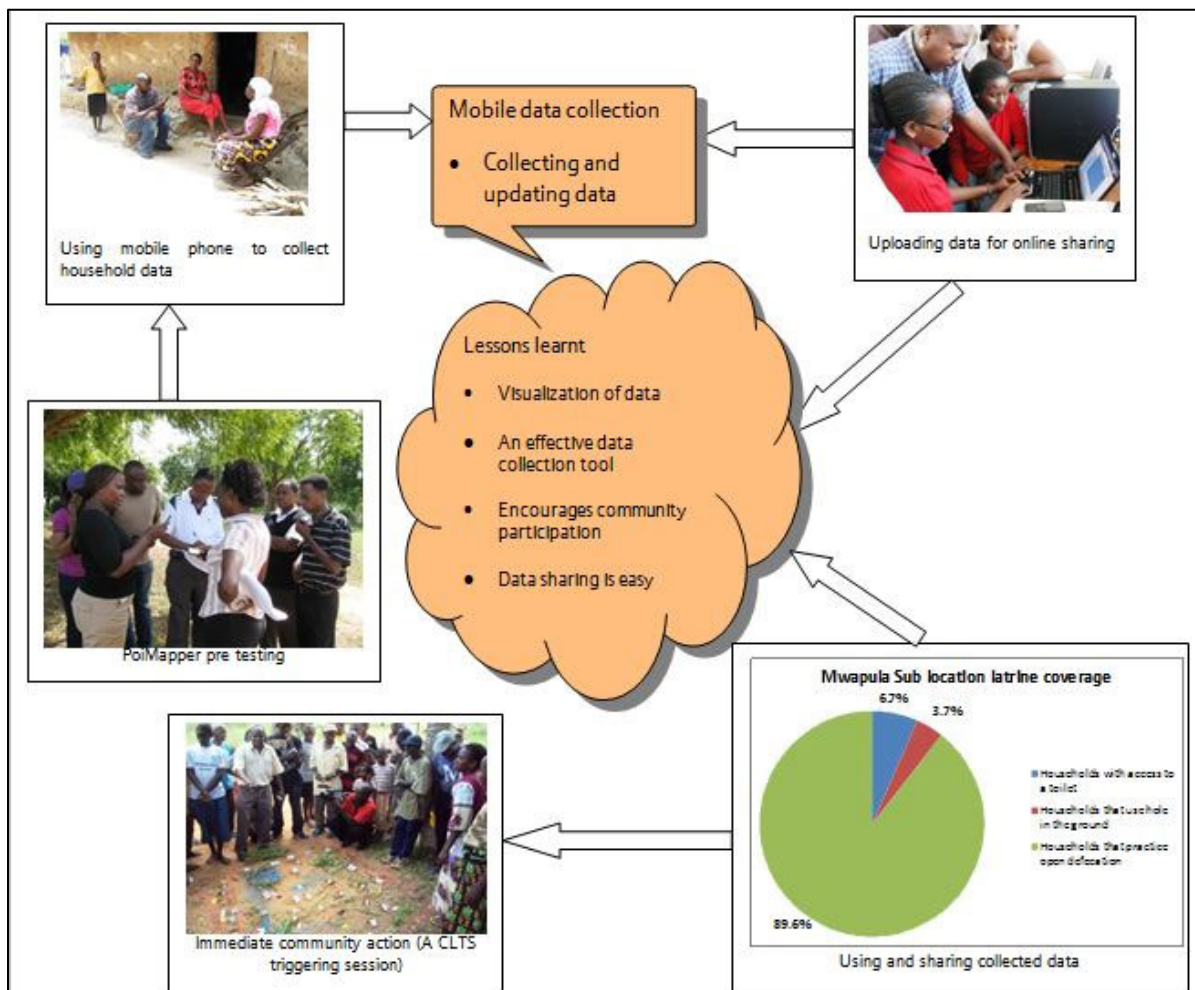
Cost and time efficiencies

The transition to Poimapper has associated costs (initial and on-going) in terms of licenses, hardware, training and support. However, all but one of the survey respondents ranked Poimapper's cost impact as positive or very positive, and in all cases the overall assessment was that Poimapper saved money and time compared to paper-based processes. These savings related to:

- Printing and transportation costs. Staff from Plan Cameroon noted “Our paper consumption is significantly reduced – the teachers complete one small register with

the data, the enumerators upload the data on the phone and then we use the data to generate figures and tables etc." In most cases, paper questionnaires need to be printed and distributed to the enumerators, and once completed transported back to the Plan office by road. Compare this with the cost of sending the form to the enumerator's device, and the completed data being sent back to the office over an Internet connection.

- The digital costs vary depending on the infrastructure of the country/ region, and the set-up of the project. For example, in some places Plan staff in Programme Units has smartphones with Poimapper licenses and can be sent new forms directly, in others the devices are stored centrally and need to be distributed for each new data collection exercise. In some contexts fast Internet connections are easy and cheap to access, in others Plan has invested in 3G SIM cards to enable transfer, or in emergency situations satellite technology needs to be deployed.
- Saving time and labour: Many respondents mentioned the important savings in staff time, and in the cost of hiring additional capacity for data entry or management. The removal of the step of data entry was considered a great saving across the board, whether in the cost of hiring extra data entry capacity, or the time of the people who were doing it previously. The evaluator of Plan Burkina Faso's WaSH programme explained: "Now I don't have to work with the paper, on data entry, I can spend my time working with the data itself."



Collection and utilization of data. Illustration by Plan International Kenya.

Plan Bangladesh have found great savings as they no longer need to hire separate photographers, Burkina Faso no longer need to hire people to design the data forms, and Plan Bolivia have found that since introducing digital data collection tools they have reduced the need for external researchers, data entry people and map producing experts. The former ICT4D Coordinator explained: "Previously we would hire consultants for baseline studies, who might subcontract researchers in the field to collect data on paper forms. The main cost for this type of work was transport and data entry staff. Now this field data collection can be done by Plan staff and partners who are already in the field." For example, in preparation for the new CSP in Bolivia, staff were trained to use their work phones to collect data, and some devices were lent to partners to collect control group data in areas where Plan is not directly working. These staff and partners, already skilled in fieldwork, were able to do the work that would previously have been given to a consultant.

Focus on: Estimating the savings

In most cases, the claims about savings are not substantiated or quantified. More research would be required to track the cost differences between manual, paper-based and digital systems using tools with different licensing and support costs. However, overwhelmingly, both programme staff and managers were convinced of the cost benefits of the transition to digital, and in some cases estimations have been made as to the scale of this saving.

- In **Burkina Faso**, a routine costing exercise comparing the projected costs of a digital and paper-based data collection exercise estimated a 25% saving with PoinMapper. However, it is not known whether the cost of licensing and hardware is considered within that estimation, or allocated to organisational overheads.
- Sponsorship staff of **Plan Bangladesh** calculated that the organisation would save 20,000 USD per year on the costs of printing and transporting forms, and hiring photographers.
- Plan **Thailand** staff estimate that the transition to digital data collection using PoinMapper has created savings in staff time equivalent to 3 days per month for the Migrant Health Volunteers and 2 days per month for the Field Officers. This translates as a saving for Plan Thailand of around 100,000 Baht (nearly 3000 USD) per year in staff costs.

Building skills and capacity

Apart from saving time or costs of hiring specialist staff, the examples above of Plan staff and partners taking over data collection and analysis tasks has signified an increase in internal capacity and skills, and a move towards bringing some of this important knowledge and learning work inside the organisation. In Bolivia, the use of digital tools has "enabled internal capacity to be built, to apply the forms, collect and analyse the data, and to use it." As the in-house capacity for digital data collection and mapping has increased, staff has been able to adopt and adapt a variety of tools to design more innovative processes and support programme learning and development. At the same time, the use of community volunteers to collect the data has resulted in increased skills and access to ICTs in communities, important given that "the right to information and access to ICTs is a direct objective of Plan's work in Bolivia".

Staff from Plan Burkina Faso had similar experiences, as the research, evaluation and knowledge manager explained: "We don't have to give money to the data manager, who would come and analyse the data, so we built our capacity and we learned some things - we learned a lot. And we use this to make it better." Whereas previously they would hire a consultant to develop and manage data collection tools, now staff are designing their own data collection forms or questionnaires, holding a workshop for project staff, M&E and ICT4D people to work together to design the form. In Uganda too the project coordinator for the BIAAG urban campaign has taken on the task of survey design, previously given to consultants. "Designing forms online became my role and yet, in paper-based, it is the consultant's role."

There is no reason why digital survey design should be easier to move in-house than paper-based, but it seems with the introduction of Poimapper, and the training received, this shift has been made in several country offices. This may be due to the fact that the extra training required to introduce new tools such as Poimapper, and devices, provides the opportunity for additional training on survey design, delivery and analysis as well. As the IT Manager of Plan Philippines pointed out, this shift of capacity and ownership can result in improved form design, as: "the real data need is with programmes, they are the ones that know what they need and what for, so they can design the forms well." This they learned through experience when IT staff attempted to design the first Poimapper form for training purposes. Programme staff commented that the form was 'too technical and didn't capture the essence' of the existing paper-based rapid needs assessment form. "The IT staff didn't understand the purpose of the form, so we weren't able to design it properly, to capture the essence", he explained. This suggests that moving survey design capacity in-house, into the hands of the programme and M&E staff, would improve the quality of the data collected.

Presenting and sharing the data

Several respondents remarked that digitally collected data is easier for staff to access and manage, and more useful given that it is up-to-date and presented in a user-friendly format. The availability of location data was considered very useful by the majority of respondents, facilitating different types of analysis, as well as the possibility of adding audio-visual data.

People also found that digital data was essentially easier to share, and easier to consolidate or compare across data sets, locations or initiatives. Staff of Plan Uganda argued that "Digitally collected data has more benefits. It gives some one room to manipulate the kind of data he or she requires. It is also easy to use for comparison purpose." In the Philippines, data on the nature and progress of emergency response is collected using Poimapper and is exported from the Poimapper platform and shared with the UN coordinating body, OCHA. However, it is the fact that NGOs use a standardised form and system that enables them to share data and join forces on the ground.

This is an area of interest to many of the users and respondents, who felt that the tools and the capacity to collect and use good data should be shared and ultimately owned by duty-bearers. In Dominican Republic and Kenya, digital data collection tools are being used to support and complement official child protection and abuse reporting systems, with the view to strengthening local government capacity. In Burkina Faso too this is the ultimate objective for some of the work with Poimapper. The WaSH programme advisor commented: “We are not alone working in this field. If we find a way to share the data well, it will be easier for us to better manage our projects. We can train people, help people in the communes to use the tool and transfer knowledge and data with other partners – and they can share with us.”

In particular with Poimapper, the ability to present data in maps was considered very useful, enabling stronger communications and decision-making. Staff of Plan Kenya found that the “visualisation of data in maps makes it more meaningful and is very supportive to programme decision making.” Maps can be used to show concentrations of incidences (for example of school absenteeism in Cameroon, or TB patients in Thailand), the spread of services (for example of ECCD services in Bolivia), or to showcase and report on Plan's activities. Plan Kenya also found that the mapping process itself could trigger analysis and action in communities, for example when gaps in birth registration start to become evident.

There was also a broad sense that maps could be better and more used in Plan. For example, staff from Plan India felt “confident that this would be a great tool to showcase Plan's work to the larger community and track such as huge number of target groups.” A senior manager from Plan Bangladesh considered that maps showing the locations of available services could be very useful to staff in their call-centres advising adolescents on their rights and services.

It was also felt that the possibilities for analysing and presenting the data on the Poimapper portal were limited, and that there was both more capacity in Plan and greater development in Poimapper for the data collection than the reporting and analysis. Most of the current Poimapper users in Plan export the data to maps or excel sheets, which they share or use for further analysis. There is not currently an option to present the data in an interactive ‘dashboard’ or chart type interface, where managers or analysts could track different metrics or indicators in real time from their own computers. For example, the livelihoods advisor from Plan Burkina Faso found that: “Poimapper is very good if we can manage the information collected, if we can see if and share it. If we can select and slice the data, select the indicators we want to show and then share that information we have selected”.

The developer, Pajat, explained that they are looking into integrating a third party dashboard application, but that so far this “has proven to be expensive to use and not very user friendly”. They have already included new features for generating reports, and are planning to integrate their own dashboard feature in the near future. The options for better use of data, and digital data analysis tools, are discussed further in section 5 below.

Changes in the field

The transition to digital is felt most tangibly by enumerators in the field, who have moved from writing answers down on a paper form, to entering them into a phone or tablet. In most cases, people have found Poimapper easy to use, and staff from the Philippines and Bolivia remarked that new users do not need a lot of technical training, as most already are familiar with the functions of smartphones. One Kenyan user explained: “The application is easy to use because it integrates common features of a mobile phone.” Furthermore, staff from the Philippines noted that the use of Poimapper for conducting surveys meant that enumerators have everything they need on one device, from the form and the camera, to the internet connection and GPS, and even a torch for working after dark.

In Bangladesh, staff has also noticed a positive change, as "enumerators are happy as they need to carry less, and families are happy as they get to see the photograph." Staff from Burkina Faso also remarked positively on the availability of visual information to share with children and communities. In Bolivia, the transition to digital data collection methods was considered "a key incentive for community volunteers and other community leaders, which might contribute to reducing attrition rates among them."

5. CHOOSING DIGITAL DATA COLLECTION TOOLS

As explained above, Poimapper is one of several tools that allow users to collect data using smartphones and tablets. Many of the benefits and lessons learned highlighted in this report apply equally to Poimapper as to other similar tools. The focus on Poimapper emerged from a practical issue: as the tool that has been supported and developed with Plan Finland, there is access to a group of users in Plan. What's more, many of the Plan staff who has engaged with Poimapper may not have engaged with other digital data collection tools and for them, Poimapper is digital data collection.

However, given the investment made by Plan into this tool, and the availability of a range of tools including some that are free and open source, the authors were asked to identify any specific learning or insights into the comparative advantages and differences between Poimapper and other tools. It was hoped that in this way, lessons could be drawn about when it is appropriate to use Poimapper or other tools, and the types of criteria and factors to consider when making the choice of tool.

During the research, Plan staff provided feedback on the features and functionality of Poimapper that they most value, or they felt could be developed or improved. In very few cases respondents had experience of using other tools, and were able to share insights into how they compare and how they make the choice. The authors also looked at information on the web comparing digital data collection tools, although Poimapper was not generally included in these. Finally, the users and developers of a comparable tool, iFormBuilder (IFB), used widely by INGO Catholic Relief Services, were interviewed.

These conversations have provided a starting point for understanding the factors which come into play when choosing the right tool for each data collection process, team or organisation. However, much more research and reflection is necessary to be able to develop strong criteria or guidance for Plan staff to select an appropriate digital data collection tool. This is something that any future community of practice might usefully coordinate, bringing their own experience to bear, researching different options, and reflecting on the different needs and contexts that might affect choices.

Choosing the right tool for the job

From this research, it has not been possible to reach definitive conclusions about the factors and criteria for choosing digital data collection tools. This is because the respondents do not generally have experience of using a variety of tools, or of selecting tools freely. One exception is the team from Bolivia, and the wider Americas region, where different tools have been selected for different processes, depending on budget, data needs and capacity. They believe the starting point has to be an assessment of ICT infrastructure availability, capacity and gaps, followed by an exploration of available tools (particularly free software) including the feasibility of tailor-made software.

Plan Bangladesh recommends considering the size of a project when choosing the tool, and to “Use Poimapper if you have a need for integration with global systems” while for smaller projects and processes, it was seen as potentially advantageous to go with a free tool as the usability factors are similar. Another consideration is support and flexibility. In the Philippines, Poimapper was chosen for use over OpenData Kit (ODK), which had been used by other offices in the region, because of the availability of lessons learned and support from other users within the organisation, especially Thailand, and the partnership and support available from Plan Finland and Pajat.

The most appreciated features of Poimapper

Respondents identified several features of Poimapper that they considered particularly useful or valuable. In most cases this feedback was not in relation or comparison to any other tool, and therefore this list does not represent comparative advantages of Poimapper. Highly appreciated features of Poimapper included:

- **Geotagging:** This was an original feature, responding to the need to map ‘points of interest’, but has remained an important aspect even when used to collect questionnaire data, as it enables staff to analyse data according to locations at different levels. It was also mentioned as a tool for transparency and accountability, showing that the data was actually collected where stated. However, one respondent noted that there can be technical complications in getting coordinates to download, and *“it is important to know when or whether the geographical tagging is important for each form.”*
- **Integrating multimedia data:** One user explained that the use of audio, photo and video *“... is great for giving direct information about the status of an activity, giving an idea of needs, or showing what we are doing”*. However, other users were not aware of/ using these features, and were requesting the option to use audio clips or drawings for example.
- **Support and customer service.** Where the relationship with the developer was strong, Plan staff found the technical support to be very good, and appreciated that their needs and recommendations were heard and responded to. One respondent from the **Philippines** stated that he *“would recommend using Poimapper even at full market price, chiefly because of the support and openness to adapt to meet our needs.”*

Choosing a tool: features, cost and support

This research has found that the basic features of digital data collection tools are fairly common across the board, and that differences are found in the advanced features, more specific to different uses or contexts. However, apart from the features of the tool, it is also important to consider the costs and the support available. These appear to be closely related, with the free tools relying more on user capacity to self-tutor and manage, while the proprietary tools coming with a higher level of support for training and trouble-shooting.

Plan’s Poimapper users were generally very happy with the level of technical support provided, for example a respondent from Plan Thailand who considers Poimapper as “better for Plan than free software because of the support available, and openness to make improvements and innovations in response to the experiences and needs of users.” Staff of Plan Bolivia have used free software called EpiInfo to collect monitoring data on one project,

and found that it required more skill to use, for example the forms were more complex to design and launch. Users rely on free manuals for training, although a helpdesk is available for troubleshooting, meaning that they need a level of skill and capacity to direct their own training.

A quick analysis of the experience of CRS with iFormBuilder suggests that the support that they have received from the developer, Zerion, has been key not only for the technical aspects of using the tool, but also for the users and the wider organisation to establish good data management practices in line with the aims and objectives of the wider organisation. This type of M&E or knowledge management support has not been part of Plan's experience with Pajat and Poimapper, which has so far focused more on the technical issues and features of the tool. As the users have become more experienced they are starting to look more at the data analysis and management capacity of Poimapper, and this relationship is starting to shift. For example, Pajat are now looking at integrating dashboard capacity into the Poimapper platform, and enabling more analysis on the platform rather than the current practice of exporting to a report before analysis. Given the lessons learned and comments made in section 6 below, about the need to move beyond data collection into data use, this type of support may be crucial for enhancing the effectiveness and impact of the data collected.

One tool or free choice?

Another question which has arisen from this research, and comparing the experience of CRS with IFB, is whether there are significant advantages for Plan to select and promote one single digital data collection tool for the organisation. In some areas, such as sponsorship, there has been a clear message that a centrally led and supported transition to a single digital data collection tool would be necessary. For project monitoring, for example, it is not so clear that there needs to be a single tool, and at global level there is currently no appetite for making a technology-led transition to digital.

This research suggests some advantages and economies that could result from the selection of one tool. In Plan there has already been a build-up of knowledge and capacity around the use of Poimapper, which has not only enabled innovation within country offices, but also peer-to-peer exchange and learning across them. There may be other advantages too, in terms of reduced licensing costs or unlimited licenses, and the possibility of creating centralised capacity for training and support, possibly reducing costs further. What's more the use of a single tool to collect data, should make it easier to compare, consolidate and integrate digital data across projects or processes on a single platform.

In CRS, the decision to use one tool (IFB) has gone hand in hand with a focus and investment in the organisational structures and capacity to collect and use data, and the developers are supporting this process alongside the technical issues in using the tool. In Plan, there does not appear to be a clear owner or driver for such a global process or transition to using a single tool within global systems for data collection and use. As such, it may be more appropriate for country offices to invest in systems that allow for the integration of digital data from various sources, and allow each project to decide which tool to use based on the specific needs of the task. In this case, Plan would still benefit from building in-house capacity to assess and use different tools, and to train and support staff, which would enable them to make more use of free and open source tools such as EpiInfo.

These insights raise more questions than answers, about Plan's readiness for a more centralised data management system, and about the technical and M&E capacity for using different tools. As such, the authors recommend that any future community of practice bringing together users of digital data collection tools in Plan conduct their own research to compare the features and suitability of different tools, and explore the issues underlying the decision to use a common tool.

iFormBuilder

Outside of Plan, Catholic Relief Services is mostly using a tool called iFormBuilder (IFB) for data collection across the INGO's operations. Currently IFB is used in 290 projects across 56 countries, and the organisation has 7000 licenses. Although it is not compulsory to use IFB, the organisation centrally funds and provides training and support, and unlimited licenses, for IFB to users across the organisation. The introduction of digital tools has gone hand in hand with improvements to processes and capacity, as one CRS interviewee explained: "Because this is not only about capacity building using technology, it's about how people define the processes, how they choose the data they need, how to collect it, analyse it, make the right choices... It is also about the organisational practice of how we use the data ... The whole organisation needs to be set for getting the most out of the data."¹

6. THE POTENTIAL OF DIGITAL DATA COLLECTION FOR PLAN: LESSONS LEARNED AND RECOMMENDATIONS

Based on the findings outlined in this report, the authors are able to make recommendations for next steps to support Plan's effective use of digital data collection tools. The recommendations are targeted to Plan Finland, based on an analysis of what they can support and achieve within the wider organisation given their size, capacity and position. This is in part because Plan Finland commissioned this research, but also because they have been the main supporters of the development, piloting and use of digital data collection tools in Plan so far.

However, the recommendations also apply to, or include, the champions and users of digital data collection tools across Plan, particularly in country offices. In our analysis, this constituency is Plan's greatest asset to drive capacity and growth in this area. However, the authors have not found a clear niche or space for a transition to digital data collection to be led from the centre, and as such the recommendations do not seek to directly engage organisational policy or practice at a central level.

Core recommendation: digitalisation of data collection processes

The core recommendation, to adopt digital data collection methods wherever possible and appropriate, is followed by four recommendations that relate to strengthening and expanding the impact of this transition on Plan's capacity to collect and use data effectively. We reiterate, the recommendations relate to what Plan Finland and the community of users and champions can do, not to what Plan's directors should mandate.

Core recommendation: Adopt, where possible and appropriate, digital tools for data collection.

This research has found near universal agreement of respondents, and clear evidence, that the use of digital data collection tools such as Poimapper increases efficiency in the data collection process, and brings other benefits over paper-based systems such as greater accuracy and timeliness, as set out in section 4 above. Respondents from across participating country programmes, including M&E, IT, project/ programme managers and directors, are convinced of the efficiency savings and quality improvements in the data collection process¹. Though unable to quantify increases in efficiency, accuracy or cost savings during transition stage or over the longer term, there is a strong sense that the benefits outweigh the costs.

The authors are confident to recommend to Plan that, where possible, the collection of primary data should be conducted using digital tools.

The evidence from this research does not show clear indications as to whether Poimapper, or indeed any single tool, should be promoted for use in Plan, or whether each process and user should be able to choose freely depending on budget, context and skills etc. Either would have implications for cost and organisational support.

The example from CRS shows that investment in one tool allows for the organisation to provide centralised support and nurtures peer-to-peer support and learning. However, the benefits of IFB in the case of CRS are no different to those found by users of Poimapper in

Plan. On the other hand, considering the finding that the benefits of paid licenses is the technical support, it may be that investment in central in-house technical support for digital data collection would be offset by savings in use of free and open source tools. These are questions which need to be further explored within Plan (see recommendation 1).

Summary of recommendations: strengthen capacity, support and evidence to increase the scope and impact of digital data

While digital tools clearly make the data collection process itself more efficient, there is less evidence on the value and impact in relation to the effective use of data. The 'further recommendations' relate to lessons learned around the relationships between efficient data collection and effective data use.

In summary, these recommendations relate to:

1. Strengthening capacity and support for existing and potential users of digital data collection tools in Plan, creating a community of practice which can also develop evidence and guidelines for effective collection and use of digital data in Plan.

Recommendation 1: Establish, support and encourage a Community of Practice for those using digital data collection tools and approaches

2. Build relationships in order to effectively and appropriately support and advocate for effective data use at all levels in Plan.

Recommendation 2: Position digital data collection within a broader context of effective use of data, and forge connections with Plan processes to improving the effective use of data for programming

3. Strengthen understanding of the necessary skills and mechanisms, and potential tensions, in scaling up data use /collecting and consolidating comparable data beyond project level, through support to a small number of country office pilots.

Recommendation 3: Support a small number of country offices to explore the implications of scaling up data integration and management

4. Build further evidence of the costs, benefits and choices relating to effective use and improved impact of digital data collection tools, through the community of practice. Including;

Recommendation 4a: Undertake further research to understand the economic implications of shifting to DDCT.

Recommendation 4b: Undertake further reflection and research into factors and criteria affecting the choice of tools, and comparative advantages of different tools available.

5. Clarify the relationships between Plan Poimapper users and developers, and expectations in terms of support, training and responsiveness to need.

Lessons learned and recommendations:

1. From separate groups to a self-supporting community:

Throughout the research period, the consultants engaged with a series of people within Plan who were using Poimapper (and to a lesser extent other digital data collection tools). Plan

now has a nascent community of people who have had experience of mobile and digital data collection for projects, programmes and internal initiatives. They have learned through doing, made mistakes and corrections, and developed knowledge of the tool and how to apply it to Plan's work in different areas. This research found some evidence of exchange of that grassroots experience but it was ad hoc and incidental, or coordinated relatively informally at the country or regional level.

There appears to be significant appetite for sharing lessons, learning from other experiences within Plan and supporting one another in understanding how Poimapper can support Plan's work, learning and objectives. When asked what this would look like, there was much less clarity. Some people thought increased training would help, others, more opportunity to connect and hear about other experiences.

Recommendation 1: Establish, support and encourage a Community of Practice for those using DDCT and approaches

Convening and supporting a Community of Practice for those people working with DDCT (people in IT, ICT4D, project and programme staff, monitoring, evaluation and learning functions) within Plan need not be highly resource intensive. With some core investment it could generate significant learning opportunities as well as a means for peer-to-peer support by sharing experiences, information, advice and materials.

A strong, effective community of practice (CoP) depends on the ownership and enthusiasm of its members, and should as far as possible be self-organised and led. However, it will require facilitation and some investment, as well as management support to ensure that the time and resource commitments of members are recognised. As such, we recommend that Plan Finland should support the creation of the community, including provision of a platform and opportunities for meetings (online or physical). Sections of this report could form the basis of early discussion pages, groups or documents.

In addition, a CoP facilitator can foster engagement and participation by providing themes and questions around which discussions can generate and coalesce. This also serves as an organisational learning opportunity – allowing people with experience to put their heads together on specific questions and problems and to develop evidence for organisational policy and practice. A few questions to start with, emerging from this research, might be:

- What are the actual cost savings of using Poimapper/ DDCT? (as outlined in Recommendation 3)
- What are the comparative advantages of different DDC tools? This could include some piloting and testing of different tools on the ground by members.
- What are the factors and criteria that influence the choice of DDC tools, and experiences of using different tools? This could generate tailored advice to programme staff on “how to choose the right DDC tool for your process”
- The types of software tools and practices used to analyse and share data collected using Poimapper: how are people doing it now, and how can we do it more effectively?
- What types of support and training are needed and available for Poimapper users at all stages, from form design to collection to analysis and reporting. What is available from the developer, from Plan Finland and from peers in the CoP, and what further support is needed? What can be offered to new users in different countries and regions?

2. From efficient data collection to effective data use:

“IT’S NOT INTERESTING TO COLLECT THE DATA AND PUT IT IN THE DRAWERS. WE MUST TAKE THE RESULTS TO BE USED IN IMPLEMENT BETTER PROGRAMMES – WE MUST USE THIS TO HELP US ALL TAKE GOOD DECISIONS.”

PLAN BURKINA FASO RESPONDENT

Despite the clear evidence of the value of digital data collection at field level, the authors found little evidence that these efficiencies and savings spread much beyond the data collection process itself, or had significant impact on inefficiencies and missed opportunities in the sharing or use of data. However, it does seem that the increased use of digital tools for the collection and storage of data, though not in itself a driver of change, can strengthen and support efforts to implement stronger data management practices.

Overall, it was found that while data in digital form is easier to transfer, manipulate, analyse and consolidate, in fact this type of activity depends greatly on the systems, culture and capacity of the organisation or team. When systems are in place to make data available, and there is a culture of actively seeking, using and consolidating this information for decision-making and reporting, then the fact that the data has been collected in digital format is of little relevance. At this stage, data collected on paper would have been transcribed into digital format to be entered in a database or platform. This might have an impact on the accuracy or timeliness of the data, as noted above, but not on how it can be used.

Through this research the authors have identified several aspects that can affect the impact of (digital) data on decision-making and learning at different levels. Here we summarise these, and try to explore the potential or role of digital data collection within each.

Make sure you have the right data in the first place

The availability of strong, useful data at country, regional or global level, depends on good design and collection processes on the ground. Good project data not only informs project management, reporting and accountability, but also feeds into annual and strategic review and reporting processes at country level. The diagram of Plan's forthcoming Programme Quality Procedures, to be rolled out globally in 2016, illustrates these connections, which amplify the importance of collecting quality data at project level.

This points to the need for strong capacity for data collection processes at project level, and across the board. One country director stated that: “Plan staff and management need to learn how to use data, build the practice to identify what data we need and what for, what is sufficient and important. As long as we are not there, it doesn’t matter what tool we have, it is just a collection of information.” A respondent from Plan International echoed this, saying: “It is important that people are clear about their data needs first, then design the form. The technology shouldn’t come first.”

This view was confirmed by experience of the Philippines, where a first version of the Poimapper form for rapid needs assessment (RNA) was designed by the IT team who were launching the tool, only to find that: “it was too technical and didn’t capture the essence of the [paper] RNA form.” This was because “The IT staff didn’t know the purpose of the form to be able to design it properly.”

In other words, digital tools may be an efficient way to collect data from the field, but it is most important to know what types of data you need (and what for) first.

More timely data does not automatically translate into more timely use of data.

Several respondents pointed out that current practice has much inefficiency in the use of data. At project level, data is routinely collected but often not shared until produced in quarterly reports or final evaluations, leaving missed opportunities for timely responses to what the data might be showing. A senior manager from Plan Bangladesh suggested, the introduction of digital data tools could help to overcome this issue: “The potential is huge, every project needs data from the field and are using manual systems at the moment, creating delays in project decisions. Yet, to manage a project you need your data in your hand very quickly.”

The authors found no evidence from this research that the application of digital data collection tools has in fact increased the timely access to, and use of, data for project management. Many recognised the potential for this to happen, suggesting the introduction of better tools for presenting data, or a focus on the capacity of project managers to actively access and use the data.

... Dashboards could help to make data more accessible and promote more active engagement

Tools such as Poimapper collect data from the field and transfer it to a central platform where it can be accessed and consolidated at different levels, and from where reports can be generated. In most cases in Plan, the facilities for analysis and reporting are not well used, and the data storage, analysis and reporting aspect of Poimapper is considered to be the least developed of both the functionality and in turn, the impact and benefit that accrues from engaging with the tool.

At the moment people report exporting data to other packages or maps, for subsequent analysis or use. An interviewee from the Philippines is typical, saying: “The Poimapper server is not the end point, but it is a good parking lot. You can see data trends building on the portal, but the full situational report is better created from another format.”

Some respondents suggested that investment in tools that enable key stakeholders to access relevant data easily and in a timely manner, would have an impact on the effective use of data in project management. A respondent from Plan Finland asked: “Can we move towards visualising relevant data on dashboards to show what is happening? To analyse data on important indicators while implementing, to be more agile and react more quickly? Poimapper users in Plan have started to look into this possibility, and asked the developer Pajat for solutions, which are currently under development.

This research has found that developments in reporting options, including dashboards, could increase the effectiveness of digital data collection tools such as Poimapper, especially for project management. Staff from Plan Burkina Faso pointed to an example of a dashboard type interface used by a partner for presenting information on microcredit groups. They found it a very useful tool to enable them to interact with the data according to their interest, and hoped to be able to do something similar with their own data collected through Poimapper. They explained: “Poimapper is very good if we can manage the information collected, if we can see it and share it. If we can select and slice the data, select the indicators we want to show and then share that information we have selected”. Interestingly, the dashboard managed by their partners is fed with data collected on paper.

Dashboards and display processes for data can be very useful, but they need to be demand driven. This is not a requirement that is unique to Poimapper – there is significant appetite for more integrated management and analysis of project level data incorporated into the CSPs of several countries. If there are processes, platforms and capacity development initiatives

already underway to develop these, Poimapper needs to integrate in with, or complement them. We do not currently see PM as being the driving force for this – it is not in use to such an extent that it would immediately be the dominant platform choice for all programme data, for example.

... but project managers also need the skills and capacity to access and use the data for timely decision-making.

Depending on the existing context of each country programme, the introduction of better tools for data analysis may need to be accompanied by shifts in project management culture and capacity, to promote the active and timely seeking and use of available data by project managers. For example, a respondent from Plan Bangladesh explained that “At the moment the M&E people keep the data and give it to managers to make decisions, only some managers are able to get and analyse the data themselves.” As such, effective use of tools such as dashboards would require “some capacity building and training in the analysis and use of data”, although this could build on common skills developed through the use of spreadsheets and the like.

Recommendation 2: Position digital data collection within a broader context of effective use of data, and forge connections with Plan processes to improve the effective use of data for programming

This research has uncovered several examples of country strategic plans, which provide for more effective use of data, and reporting to country level indicators. Offices and teams who are moving in this direction will be looking to increase their capacity and facilitate changes in programme management practices.

Plan Finland and the community of practice should identify relevant processes in their fields of influence or engagement, and where possible forge links in order to:

1. Share information on the benefits of digital data collection and the support and advice available within Plan, with people who are looking to improve their practice.
Plan Finland is not in a position to ensure that the core recommendation of this report, that digital data collection tools should be adopted where possible in Plan, be implemented across the organisation. Neither does there appear to be a clear home for this recommendation at central level, or any existing central process for it to fit into. Therefore, changes will happen organically and incrementally, through sharing good practice and word of mouth. In addition, the community of practice can engage strategically in ‘internal advocacy’, building and sharing clear evidence of the benefits and savings that can be achieved through transition to digital tools.
2. Better understand the needs and requirements of potential users for any development of a dashboard or visualisation and sharing tool.
Before action is taken to develop a bespoke dashboard or system for managing data, we recommend that there be a process of engaging with key users to understand what is actually needed in terms of data visualisation and display. What do they want to use “better presented” data for? What capacity do they currently have for using this information? What plans may be underway for other ways of supporting better sharing, visualisation and use of data within their contexts?

It may be that the processes underway to develop data management and analysis at the country level create a more compelling case for using Poimapper as the core

platform. However, without some key requirements analysis, building or expanding the dashboard functionality without checking these assumptions may be costly and may not result in the uptake that would be required for a decent return on investment.

3. Enhance benefits by combining and comparing data across projects.

There was a strong sense from several sources that efficiencies and benefits relating to the use of data would be increased with systems that enable data to be compared or consolidated across projects and programmes. For example, a respondent from Pajat, the Poimapper developer, considered that: “The main benefit to the organisation is that they use the same tool in many places, and can consolidate data in a systematic way, across countries and programmes.”

Several Plan respondents made similar points. A senior manager from Plan Bangladesh considered that: “At the outcome level, it would be good to be able to do a quick validation of data collected from different projects and programmes.” Similarly, in Burkina Faso, Plan staff would like to consolidate data at country level, to: “help us see the big picture of what has been done in the area, and then ... we can effectively plan what new projects are necessary, where and why.” Plan Uganda respondents mentioned the need to show “how our current programs have contributed to the national development plans of the country.”, while respondents from Plan Kenya considered that data on specific indicators or questions needs to be regularly collected over longer periods than projects allow, in order to be able to show trends.

Some Plan country programmes are already moving in this direction. For example, in Bangladesh “The new CSP sets out strong M&E and a big-data warehouse so that managers can play with data and use it better.”, while in Bolivia, Plan expect to create “a common platform for all data from baselines and other studies to be in one place, for people to access and consolidate.” In the Philippines, Plan is in negotiations to produce a multi-agency “Disaster Response Platform” mobile application, to keep all the forms for emergency response (including needs assessment, distribution monitoring, feedback etc.) on one platform, enabling better collaboration between organisations and consistency in the types of data collected.

... BUT THIS IS ABOUT MORE THAN TOOLS:

“DONOR TYPES ALWAYS SEEM A BIT SURPRISED WHEN MERGING EXISTING DATA SETS FROM DIFFERENT STUDIES IS DIFFICULT OR DOWNRIGHT IMPOSSIBLE, AND IMPLEMENTERS SEEM TO DESIRE A BETTER ABILITY TO STANDARDIZE THEIR OWN DATA, BUT THE COORDINATION IS LACKING.”

TECHNOLOGY SALON, SEPTEMBER 2012³

There is a sense that the use of digital data collection tools can provide a strong basis for the development of systems for aggregation and consolidation. From Plan Bangladesh: “At the moment, data collected is not comparable it is collected and stored on different platforms. With more use of digital data we could combine data from different sources to create bigger data sets. This is a huge change, but it is expected.”

However, there is also recognition that for data to be aggregated and compared requires more than a common platform, but also common practices and questions across projects.

3 http://technologysalon.org/best_mobile_data_collection/

A respondent from Bolivia noted that, “Ideally the country office would define a single tool for data collection, such as Poimapper if it met all the needs. But most important is to have common fields.” This kind of coordination does not easily happen organically, but needs to be defined, agreed and managed. So, although the tools are very important enablers, they are not likely to be drivers of this type of change.

Where strong, coordinated systems like this do exist, such as in sponsorship, the means of collecting the data are only relevant in as much as they assure the quality and accuracy of data entered into the system. A respondent from the team who manage this global database pointed out that, however the data is collected in the field, it is in digital format by the time it enters the system, and given the stringent quality controls in place, this means that: “digital data collection tools bring efficiencies to the country offices, but do not solve any problems in the system itself.”

What's more, this type of data management and aggregation requires strong capacity and skills that may be different from what has built up with a focus on project level data. Respondents from Plan Zambia argued that robust M&E frameworks and capacity are essential to: “delineate required data needs”; create indicators with “clear operational definitions” that enable common interpretation across teams; standardise monitoring tools and data collection forms; and “review and validate data at community, programme unit and country levels.” Without the skills, resources and budget for this type of capacity, the relevant data is not gathered in ways that enable aggregation and consolidation and support review and decision-making beyond project level.

Consolidated, comparable data sets do not grow organically, although that can be a good start.

This research has found that the use of Poimapper has spread across the organisation, way beyond the piloting process supported by Plan Finland and Pajat. In some cases, teams who have used the tool in a supported pilot have gone on to apply it subsequent processes. For example, Plan Philippines initially used Poimapper in early 2013 for rapid needs assessment and distribution monitoring in their response to Typhoon Bopha. Since then they have used it for an increasing number of data needs - including feedback monitoring and reporting to UNOCHA '3W' reporting – in a series of emergency situations in Philippines and recently in the Nepal earthquake. Poimapper has also been used to follow up on the response to Haiyan, and to map vulnerability to climate change, expanding even further the uses in relation to the planning, implementation and sustainability of emergency responses. In Kenya, the original pilot using Poimapper has closed, and the Programme Unit where it was used have worked with partners to develop a local adaptation of the tool: VuruguMapper, to support a child protection project with local government.

In other cases, Plan staff report that they have shared their knowledge and experience of using Poimapper informally, even training each other without recall to the support of Plan Finland and Pajat. Plan Burkina Faso, the team visited for this research on the basis of their wide and innovative use of the tool, were not supported by Plan Finland, but adopted the tool based on their own research. They now have a country office policy to eliminate paper-based data collection in all areas except for sponsorship and child protection. They have trained colleagues in other countries in the region, and helped to initiate the use of Poimapper to collect data on child welfare indicators across the West Africa region.

This kind of organic growth of use of the tool has put countries like Burkina Faso in a position where they have a variety of digital data sets on a common platform. This asset, along with the capacity and political will of the country office, would form a strong basis for a pilot to explore opportunities for consolidated and aggregated data sets at country level, for reporting to and reviewing the CSP.

...but at a certain level, data management systems need to be centrally controlled and coordinated

At the global level, the effective analysis and use of aggregated data is much more complex and requires even more coordination and direction, something that may not always be in the interests of effective and appropriate programming on the ground. Interviews with respondents from Plan International, working with data at global level, highlighted two quite different approaches.

In the case of sponsorship, the global data system which ensures the flow of information from the field to the national offices and sponsors is complex, and needs to be secure, controlled and carefully managed. In Plan Bangladesh a pilot using Poimapper to collect sponsorship data has been considered successful and is being rolled out across the country. Plan Honduras is using a different digital tool to collect sponsorship data, motivated by the efficiencies gained. However, from a global perspective any transition to digital collection of sponsorship data needs to be managed centrally, to ensure that the quality of data is maintained, and to help each country programme to fund and manage the rollout. Allowing each country office to select and adopt digital data collection tools independently compromises the whole system, and creates missed opportunities for support and capacity building.

In contrast, for data to assess or understand programme quality and effectiveness, Plan does not currently have centralised global systems to report to common quality or outcome indicators. Rather the focus is on supporting strong systems and capacity at the local and country level, to ensure that the data coming from the ground is of good quality and appropriate and supports both quality and accountability. This will provide a strong basis for any later efforts to facilitate aggregation and analysis at regional or global levels.

Support is aimed at strengthening the capacity and methods to collect good feedback and accountability data, with less concern about the means or technologies used. As one respondent from Plan International explained: *“Plan is not in a position to establish a standard approach to data collection. It is good for country offices to use technology where available and appropriate, and good that the organisation is using it, but it is not a magic bullet and there won’t be global standards on digital data collection.”*

Recommendation 3: Plan Finland should consider shifting the form of support provided to country offices: supporting a small number of country offices to explore the implications of scaling up data integration and management.

The expanding use of DDCT within Plan has been supported by Plan Finland in several ways: through requirements analysis; tool development; partnership with Pajat for targeted development work; as well as supporting projects, programmes and country and regional offices to undertake pilots and rollouts. This has variously included arranging for licenses to be paid centrally, regionally or at the country level, depending on context. Through all of this work and support, Plan has been able to develop the range of experiences, learning and achievements outlined in this report, and has access to a tool tailored to (some of) its data collection needs and specifications.

That said, the authors feel that this is a good point for a change in strategy for Plan Finland’s support to strengthening the impact or benefits of digital data collection in Plan. It is not reasonable or realistic to expect that a small team such as that in Plan Finland can support

the rollout of Poimapper, or any other DDCT, across the whole organisation. These have been pilots and the commissioning of this report marks a point for stopping, reflecting and looking at what has been achieved and learned. Country offices such as Burkina Faso have accessed and adopted Poimapper without any support from Plan Finland, and gone on to train and support others in the region, showing that this type of support, though appreciated, is no longer necessary. What's more, critical questions around how DDCT can be funded cannot be properly addressed and answered while there is still a subsidisation mechanism in use.

Given the assumptions and questions about the value of consolidated, aggregated data and reporting to CSP-level outcomes and objectives, we suggest that: Plan Finland's support, if it can continue, would be more strategically directed at a small number of country offices to explore the questions and issues emerging from this type of scale up. This would be most effective over a period of at least 3 years, or ideally a whole CSP cycle.

We recommend that Plan Finland focus on 3 or 4 country offices with experience of using DDCT, strong local capacity to engage with questions of process and research, and political will among the senior management team. Plan Finland would then provide learning and research support for these country programmes to trial consolidating and aggregating data from across projects:

- to explore the types of systems, common practices and fields that are needed to support aggregated data;
- to assess how useful this type of aggregated data is for country level decision making, review and reporting;
- to identify the challenges, requirements and new needs that arise in different areas of the organisation when these practices change;
- to explore the most effective financial /charging model for highest economic and process benefits

This type of exploratory process, which allows country programmes to make investments in systems and capacity while being open and reflective to the value and limitations of the changes it brings, will provide very strong and effective learning for Plan on an issue which is of emerging or increasing urgency for country offices. It would also be valuable to feed into organisational processes such as the programme quality procedures, being rolled out in 2016 and in constant development.

4. Think about where the money comes from:

Some digital data collection tools are free, although in many cases these are not free at the scale required by Plan offices, or require levels of capacity and internal support that most Plan country offices don't have. In most of the cases found in this research, the tools have incurred some licensing costs, which usually includes support for the users. In the case of Plan Finland supported pilots, the country programmes have received support for these costs. In other cases, the costs have been met from the project or programme M&E budget, or budget usually allocated to the data collection costs. As section 4 above shows, in almost all cases the overall costs of the data collection processes were considered lower using digital tools than paper.

However, it is worth noting that the scale and scope of the use of the data may be limited by choices about how the tools, devices and licenses are paid for. Including the costs within project budgets, to be covered by donors, can be effective (depending on the donor), but limits the use to a single project. For the aggregation of data across a country programme, the investments need to be made as an organisation, not a project.

Recommendation 4: Build further evidence of the cost and value for money of digital data collection tools at different scales.

As outlined in this research, people are reporting that shifting from paper to digital data collection provides both financial and non-economic benefits. Very little evidence exists on what money is saved, where, when, by whom and exactly how resources are either saved or allocated differently as a result. The additional benefits in terms of time, accuracy of data and improved capacity are additionally assumed to result in more effective working and use of resources, but this has been difficult to quantify without a clear methodology.

While users of Poimapper were very clear about the value for money, some were not sure that they would be able to convince their country management team to make the investment. A member of the Philippines team stated that “Personally, I would recommend using Poimapper even at the full market price, chiefly because of the support and openness to adapt to meet our needs. However, it is hard to justify long term investment into the use of the tool directly from Plan.” However, when this was put to the Country Director, she responded: “We need to make use of the technology available, and invest now for long-term efficiency savings.” Although many working at global level are cautious to sponsor, recommend or impose technologies from above, the authors consider it important for Plan to have a conversation about the value of funding digital data collection tools from organisational funds, to enable wider use and broader data sets.

A process by which country offices could assess their potential/actual savings would enable Plan to better understand the implications of working with DDCT, and consider the possibility of central support, roll-out or investment, for example, if this were found to be more cost-efficient and effective. This could be developed with the support of an economist to develop a robust enough methodology to provide consistency across contexts, and the research could be carried out/lead by users themselves as part of the CoP activities.

In close relation to recommendation 1, building a community of practice, and the suggested questions for discussion, we recommend that the community work together to build strong evidence on the following questions:

Recommendation 4a: Undertake further research to quantify and understand the cost implications of shifting to DDCT: including scenarios of project-based, country, regional and central-level investment in devices, tools and capacity for DDCT.

Recommendation 4b: Undertake further reflection and research into factors and criteria affecting the choice of tools, and comparative advantages of different tools available: including an assessment of cost implications of providing central support for the use of free/ open source tools, or buying licenses for tools with strong technical support.

5. Be clear about the support available:

In some cases, where the relationship with the developer was close, Poimapper users were able to feed back issues and request new features, and were very happy with the way that Pajat responded. This, along with the tailored training, meant that these users were able to get the best out of the product. In other cases users had no formal contact with the developer, and in some cases were unaware of existing features which could have been useful to them. It is therefore important that levels of service are clearly set out, and training or information on the features and uses of Poimapper easily accessible to all users, even those trained by colleagues.

Recommendation 5: Clarify the relationships between Plan Poimapper users and the developer, and expectations in terms of support, training and responsiveness.

Currently some users are able to get more functionality and innovation from Poimapper due to their close relationship with the developers, while others are limited by what they know or can work out themselves. It is not clear whether this is because there are relationships of a different nature (some closer who have worked more closely and collaboratively on pilot applications with the developer) or because of lack of awareness of the services offered. In some cases, it may be that users of Poimapper abandon the tool thinking it cannot meet their needs, when in fact the issue is the user's lack of knowledge of the tool. As such, it would be beneficial both to Pajat and to Plan for the nature of the relationship and reasonable expectations of licensed users to be set out clearly. This would ensure that all users are accessing the support they need to make the most of the tool to meet the specific needs of their process.

Annex 1: The history of Poimapper

The idea for a digital data collection tool for Plan came about during a series of conversations between Mika Välitälo and Stephanie Conrad (then Deputy Director of Programmes for Plan WARO) in 2009. Stephanie was interested in the possibilities of using ICT in programme work – particularly something that would enable effective mapping of water points and schools.

At the same time, Pertti Lounamaa was looking for a new project. Pertti had been working within Nokia for the past 20 years, latterly working on research into mobile technology in emerging markets. Pertti was interested in the possibility of using mobile to make international development work more effective.

Around the same time, Plan was investing in the development of a comprehensive database to manage information about sponsored children, called ChildData. Nokia was involved in advising the Head of Sponsorship at Plan International Headquarters on the potential for a mobile application to support ChildData. As part of the inquiry into how this might work, a team from Plan spent time in the field to look at the data collection process, and provide Nokia with recommendations for how mobile might interact with the database tool. In the end, this project didn't develop further, but it did help to illuminate additional needs for digital data collection within Plan that would be helpful beyond geotagging – that of something that would be able to handle image data, and automate the questionnaire data collection process.

As a result of a restructure within Nokia and a shift in priorities, Pertti left the company and was on the hunt for a new project. At the same time, his colleague Riitta Weiste left to take up a post as head of Plan Finland. Pertti approached Plan and was interested in some form of collaboration or work together in the area of mobile and Plan's work. After leaving Nokia, Pertti founded Pajat, a private software development company, and together, Plan and Pajat began to develop Poimapper, with the initial needs analysis being strongly rooted in Plan's use cases and projected instances of requirements in the field. Plan didn't directly pay for the development of the tool, but would receive preferential licensing agreements for its subsequent use, and Pajat would promote the resulting tool commercially.

The first pilot was with Plan Kenya, in collaboration with the University of Nairobi, which mapped water points, households, hospitals and schools. The second use, with Plan Thailand, was to map and track tuberculosis (TB) cases, which won the Plan Global Award in 2012 for Innovation. Since then, a series of pilot implementations have been used across all instances of Plan's programming, and within many of Plan's Global office presence.

Annex 2: Case studies

2.1 Plan Burkina Faso Poimapper research trip

Country Visit overview 13th – 16th July, 2015

Plan Finland has commissioned Hannah Beardon and myself to conduct a piece of research into how Plan is using Poimapper across different countries, programmes and contexts.

As part of this research, we conducted an online survey, asking people across Plan to share their examples of use with us. As a result of your survey responses, outlining the different ways you have used Poimapper for since 2012, we decided to select Plan Burkina Faso to host a more in depth research trip. We felt your range of experiences would give us a good opportunity to understand the benefits and challenges that might arise from using Poimapper to conduct digital data collection in different situations and for different purposes.

I visited Plan Burkina Faso from 13th - 16th July, 2015. During my time with you, I reviewed project and programme documentation, interviewed 15 Plan staff members, including staff based at the country office in Ouagadougou, as well as those based in the Kaya field office. I facilitated a workshop on 14th July, which 26 people attended from across Plan's programmes and PUs.

On the 15th July, I travelled out to the Kaya PU, accompanied by Amédeé Congo, Péhoiendé Ouedraogo and Edouard Compaore, where we met Mme Tapara, a Plan enumerator. Mme Tapara took us to a data collection visit to a family smallholding and farm near Pissila. There, she carried out a Poimapper based data collection, checking the condition and usage of a Plan supported family latrine, constructed as part of Plan BFA's WASH programming.

The following brief report is based on my interpretation and collation of that research activity. It will form a contribution to the wider Poimapper research, but will hopefully also serve as a useful summary of your experiences to help you develop your use of Poimapper, and the data you collect.

Plan BFA

Plan BFA has been in Burkina Faso since 1976. It is the largest INGO in the country, and runs programming across Health, Water Sanitation and Hygiene (WaSH), Emergencies and Disaster Risk Management (DRM), Child Protection, Household Economic Security (HES) and Education. The country presence is arranged into a central country office based in Ouagadougou and 5 Programme Units (PUs). Programmes are funded through a mix of donor funding from a variety of development actors, and central funding from Plan International.

Uses of Poimapper (and digital data collection tools) within Plan BFA

Digital data collection in Plan BFA

Plan BFA uses Poimapper to engage in digital data collection activities for evaluations, research and to inform internal processes such as the APPR.

"Now in Plan BFA we use PM to do 5-7 evaluations per year, roughly. But we are also adding in other studies with the phone. We are averaging about 10 uses per year, across evaluations, internal processes, studies."

Head of evaluation, monitoring and research

Plan BFA uses (or has used) Poimapper as the primary data collection process for quantitative survey data for projects and programmes in 3 of the 5 key areas of operation.

“While there is a policy that Plan BFA stopped using paper for programme data collection, this is not across all units – we are still using paper for child protection and sponsorship.”

Plan BFA ICT4D co-ordinator

Paper processes are also still used when qualitative data, such as from interviews, focus groups or workshops, are collected. These tend to be managed by external consultants, contracted to provide collected, collected and analysed data to the programme staff. Where both qualitative and quantitative data are required, Plan BFA have managed the quantitative or form-based data collection using Poimapper in collaboration with consultants, holding responsibility for training external data collectors to use Poimapper, engaging with the form responses and then providing analysed data back to the consultant to combine with the qualitative data and formulate a considered response.

Practicalities

Plan BFA has 40 mobile phones for use by Plan staff in data collection. They are kept centrally at the Plan BFA country office, in Ouagadougou, and sent out to data collection locations as needed. Once the data collection is finished, the phones are returned. The phones are equipped with Wi-Fi connectivity and GPRS only, and do not have SIM cards for phone calling or data transfer. Data is transferred from the phones at the 5 PUs, using the Plan PU network for transmitting the data.

Enumerators are given training on using the device, on using Poimapper, on data collection techniques and principles and are required to sign a usage and device protection policy.

Plan BFA Poimapper use examples

WaSH: Plan BFA operates significant programming in each PU in the country in the WaSH sector. Work focuses on capacity building, particularly local governance, but Plan also builds hardware and undertakes behaviour change work with communities using CLTS, which is now the BFA official government strategy for WaSH community engagement, adopted in 2013.

Plan BFA currently runs 3 programmes funded by the EU across a variety of projects. Some projects (mainly those concerned with engaging local government) are focussed on water provision, others are particular to water and sanitation in schools.

Plan BFA WaSH started to use PM for mobile data collection in 2012, but has been collecting location data on WaSH using handheld GPS devices since 2005. Previously, this data was entered onto paper forms, but was not systematically combined with other data collection as a matter of course.

The programme is currently undertaking a large collection process to review, quality control and ensure project oversight for family latrines, and follows a recent project collecting data on boreholes and school latrines. Enumerators are working through a list of people who have had VIP family latrines installed with support from Plan. Enumerators visit the home, collect GPS/location data, take a picture of the family or family member by the latrine and complete a form with additional information about the family use of water and the sanitation provision.

Emergency response: The number of projects Plan is involved with in Emergency and Disaster response depends on the nature of the emergency – in 2012 there were 8-10 projects. At the moment, the Malian refugee response is the main focus, which started in 2012. In 2013, DRM programme staff was trained in the use of mobile phones to collect data. In 2014, Plan partnered with the German Federal Foreign Office (GFFO) to mount an emergency response, again for the Malian crisis. Poimapper was included as a way to collect baseline and follow-up data for refugee camp infrastructure and facilities mapping; education provision; child protection and WaSH, specifically the number and type of sanitation

provision. This project was supported by Plan Finland as an ICT4E initiative, and the programme was able to fund the purchase of 3 mobile phones for use in data collection in the Silla region.

WYSE: Women and Youth Saving for Empowerment: Household Economic Security (HES) is one of the Plan responses to poverty programming, and the programme runs in all PUs. The HES programme uses the Village Savings and Loans (VSL) approach which supports people (mainly women) to participate in savings groups, and offers capacity building around budgeting and financial management and income generation. Plan BFA runs 8 projects, 6 of which have been running for between 3 and 4 years. Data is collected about the performance of the savings groups in ledgers, and then entered into an online data portal for the VSL programme called SAVIX (www.savingsgroups.com) which co-ordinates data about the worldwide activity of the VSL approach, as implemented by various international NGOs and other development actors.

Plan USA co-ordinates the [WYSE project](#), (Women and Youth Savings for Empowerment) which was launched in 2013, and is financed by individual US based donors. WYSE is implemented in 3 countries in WARO: Benin, Togo and Burkina Faso. In Plan BFA, WYSE is run in 2 PUs. WYSE focuses on women and youth (to 25 years), and adds in additional activities to the standard VSL approach – offering additional support, such as entrepreneur capacity building, to people as well as the standard VSL approach of financial capacity building.

Plan BFA is using Poimapper to collect baseline data for individuals joining the WYSE savings groups, looking primarily at wellbeing. Currently, the project has data from 1700 individuals, representing about 10% of the total number of WYSE members, and the programme is continuing to collect data, with the aim of having baseline (or close to baseline) data from each person in the WYSE programme. This data supplements the savings groups data that is collected across the VSL programme. At the end of the project, follow-up data will be collected to assess impact from a representative sample of this total.

WACI: West Africa Child Welfare Indicators: Poimapper was used to conduct community data collection for this integration and harmonisation initiative across several West Africa region Plan country offices. The WACI project looked to consolidate information about WARO country office performance against a series of consolidated indicators for child welfare. There was an identified issue of country offices following a complex system of non-harmonised indicators, as well as the data from indicators not informing programming decisions.

The WACI project looked to increase visibility of the work done at individual country offices in the context of the wider regional picture to inform action planning and resource mobilisation. Plan BFA used Poimapper to collect community contribution data against a range of indicators, which was then combined with other project information, such as PPM, evaluations and reviews, as well as interviews and other research activity, to report against the new consolidated indicator suite.

APPR: For the past 3 years, Plan BFA has used Poimapper to conduct data collection with communities to contribute towards understanding the progress that has been made along the Country Strategic Plan (CSP) as part of the APPR process.

Each year, Plan BFA conducts sampled surveys in each PU, choosing representative communities and engaging 1000 families. M&E staff, trained in the use of Poimapper and the devices, travel to the PUs and engages enumerators, who are members of the community associations that work with Plan. These enumerators then go into the schools, community centres, health centres and homes to ask people within the districts about their experiences engaging with Plan programmes. The data collected is rooted in the M&E framework and the indicators that are important in the APPR process, but integrates all the programming that takes place within the PU.

This data is then combined with management information from PPM, document reviews and project or programme evaluations, to generate a picture of Plan BFA's activities for the year.

Following Plan BFA's successful use of Poimapper to collect community contributions to the APPR process, Plan BFA supplied training and support to other countries in the WARO region to enable them to replicate this successful approach to the required participatory project review.

Benefits

Everyone who contributed to the research was near unanimous in their assessments of the benefits of using Poimapper for digital data collection. These were: cost and time saving compared to paper processes, including speed that data now reached programme staff; an improvement in the quality of the data collected; increased transparency of the data itself, as well as of the collection process – improved oversight of the practice of the data collectors themselves. In addition, in some instances, the shift to in-house capability to manage Poimapper has resulted in tool design no longer being contracted out to external consultants, improving internal capacity and sustainability.

Cost: Time and money

"We have a form when we design a project, where we estimate the amount of money in each process. We did a comparison between an example project with paper data collection and using PM. For the projects using PM we estimated a 25% cost saving."

Former ICT4D co-ordinator, Plan BFA

The primary savings identified during the inquiry were in the use of Poimapper to directly replace paper data collection processes. While the cost of materials was highlighted (removing the need to buy, print, transport and process paper forms), the primary saving was seen to be in eliminating need for to pay for people's time to develop the data collection tools and to process collected data.

Developing the questionnaires

By developing Poimapper capacity in house, the process of designing data collection tools appears to have changed. While previously, Plan BFA would engage an external consultant to develop and manage the data collection tools and process, now forms are collaboratively designed in house, at a workshop attended by project staff, M&E and ICT4D/IT. While this is not necessarily a practice that is rooted in technology choice (you could host a workshop to design a tool that would be implemented using paper) it does appear to have been prompted by the use of Poimapper. So, while this has been represented as a cost saving when people shared their thinking on Poimapper, it can also be seen as a shift in the ownership of the data design and collection process towards one that focuses on internal capacity and capability.

Processing data

At the other end of the data collection process, the other cost saving that was identified was in data entry, cleaning and processing. The move towards a data collection process that delivered data directly to a spreadsheet rather than one that required someone to translate data from paper to the computer represents a significant time and resource shift.

We don't have to give the money to the data manager, who would come and analyse the data, so we built our capacity and we learned some things - learned a lot. And we use this to make it better.

Research, Evaluation and Knowledge manager

As in the above example, sometimes this data entry/processing was outsourced – therefore the shift to Poimapper saved expenditure - but in other cases, programme staff would be inputting data themselves before they would be able to use it.

So, while this is presented as a cost saving, it also has implications for internal capacity and capability – freeing up programme staff's time to work with the implications of the data instead of doing data entry.

Now I don't have to work with the paper, on data entry, I can spend my time working with the data itself.

WaSH Evaluator

Quality of the data

There was consistent recognition that the quality of data collected on Poimapper is better than that collected through previous paper processes. Key reasons for the improvement in quality were cited as improved accuracy, transparency and oversight.

"We have better data using mobile – we have greater control over it on the mobile phone. Both because we can see the data that is collected, check it's right, accurate, collected in the right place and time but also we can make questions compulsory – they cannot save the form without completing the required data. We get more complete data sets."

Research, Evaluation and Knowledge manager

One key feature, mentioned by all but one of the interviewees who had a role associated with M&E was in being able to be more confident in the data delivered from the enumerators.

"With paper we cannot check, no way of knowing if the data is reliable. Found a couple of instances who said they collected data from one place, but GPS and timestamp showed different. This is more transparent."

ICT4D Coordinator

Another example was shared by a couple of interviewees demonstrates the value of this oversight. The shift to using Poimapper enabled an improved practice of combining GPS, photographic evidence and form completion in one process allowed the programme staff to uncover an instance of a latrine construction partner in South West PU who had reported one thing and done another.

"The data showed some of the information sharing by the field was not exact – the contractor/partner was not providing accurate information. They were building fewer latrines than they were contracted to do, and paying builders less. We were able to use the data collection to show that the information was not correct, so the programme could respond. It was very useful. Auditors get quickly the data and shared with the management, and it meant a decision could be made quickly."

Planning and Monitoring Co-ordinator

Speed of data reaching programme staff

The speed at which data is made available to programme staff was recognised as a key benefit.

I need to have data quickly to take decisions. If it takes too long to analyse and give report – it can mean a delay in the response. Quick availability of data is very important in this area.

Disaster Risk Management Advisor

The big benefit of using this tool is that it saves time. Sometimes before, we would wait for 3-4 weeks, 1-2 months before getting the results. When we collect using PM, we get results in a few days. Get the data, do the analysis, we can show results within a few days.

Planning and Monitoring Co-ordinator

However, as outlined in Challenges: How Plan uses data however it's gathered below, this was a qualified benefit – presented as a bit more complicated than other benefits outlined above. The speed at which programme staff received data wasn't seen as necessarily translating into an improved ability to use that data to change programming or project decisions.

Challenges

As with benefits, there was strong consistency in the challenges raised by people with different experiences of using Poimapper, particularly amongst participants at the workshop. The issues raised ranged from challenges with the phone itself, such as battery life or device fragility; challenges with network connectivity or transmission of data; with Poimapper functionality or operations; training opportunities for users; and with how data is used to inform programming decisions within Plan (however it was collected)

Challenges with the phone itself

From a country office perspective, the greatest challenges raised around the hardware were costs associated with building up the library of devices, and management of this.

"The smartphone is very expensive. We don't have a lot of money to pay for everyone, for field staff. So we send phones back and forth. It's not easy to manage, and we have to plan collection in advance and it takes co-ordination"

ICT4D coordinator

When the phones are out in the field, there is the risk of loss of the phone, or corruption of the memory – and fears around the relative fragility of the tool.

"You can't really ride around on the bike with them and expect them to last that long - the conditions here are harsh on the hardware"

Programme Support Manager for Strategy

Primarily, most of the concerns from a hardware perspective related to battery life and the impact of a short battery life on the practice and cost of enumerator time.

"If you don't use it to make calls, then it is ok, but if you use it a lot, then the battery doesn't last. The enumerators can sometimes charge where they are – if they have current then they charge the battery there, but sometimes not. We have seen some people charge their phone on their moto. But if they have to come back to the PU too often because the phone doesn't have enough charge, then it means the volunteers spend money to come back to office, costs them money".

Plan BFA ICT4D co-ordinator

Challenges with Connectivity/Network

Burkina has weak mobile internet coverage, and is mainly GPRS, which is not as accurate as other networks. Sometimes GPS coverage is not complete and this can provide challenges for using the GPS auto data for data collection. In addition, the phones used for Poimapper are not equipped with SIM cards, so data can only be transferred over Wi-Fi from the PU of CO.

An alternative view from the field: For both the enumerator and the PU supervisor, the primary concerns were about the logistics of the data collection itself. Both appeared to be far less focused on challenges around use of the device to collect the data, or the process to transmit data to the CO once it had been collected.

“The village distances are the problem. One enumerator might collect data about 2000 latrines, across 30-40 villages. The furthest away from the Kaya PU is 75 km. People travel by moto and rain makes the roads impassable. Now it is the rainy season, and it is impossible to access the villages.”

PU Enumerator Supervisor

The other logistical challenge mentioned was timing, and that when they arrive at homes and farms to collect the data on the latrines, sometime people are not there, or sometimes they refuse to answer questions.

Neither the enumerator, nor her supervisor raised the issue of battery life or transmission from the field being key issues to address. They both outlined the workaround process that has developed, which is that enumerators visit the PU at the end of the week on a Thursday or Friday. The supervisor then uses the PU Wi-Fi to transmit the data to the CO. The enumerators leave the phones in the PU over the weekend to charge, and pick them up again the next week.

The only danger associated with this approach that was raised was that all the data for the week’s work is in the phone, so if it gets damaged, they have to do it all again.

It is worth noting that, if the enumerator and supervisor are in an established process that works for them – and also provides the opportunity for regular “checking in” - they might not see additional benefit in changing that process through the provision of improved battery life or the ability to transmit data from the field. Both the enumerator and supervisor expressed a strong view that the current process worked well.

Challenges with volunteer knowledge level

It was recognised that training opportunities around Poimapper could be improved. Especially in discussion relating to expanding the use of Poimapper into areas that are currently not using it, the organisation would need to take into account the fact that some volunteers had low levels of technical literacy.

“We train people – train volunteers and consultants before the collection – it’s only 1-2 days, sometimes not enough. If there are some users who have used this many times before, they are good.”

This was raised as a significant caution, especially when discussing the opportunity of expanding the use of Poimapper into Plan BFA’s Sponsorship activity. Currently, Plan BFA engages @630 volunteers collecting data on over 40,000 children.

Challenges with Poimapper functionality

“We just can’t collect large amounts of qualitative data with PM. There are fields to enter text but focus groups, in depth interviews we still use paper for... so for me, the main challenge is

PM used to collect quantitative data only. If we can find a way to collect qualitative data, it will be very, very helpful.”

Plan BFA Head of evaluation, monitoring and research

Even with collecting form data, there was caution expressed around the practice of designing forms. Form complexity could make like very difficult for enumerators in the field – more so than for paper forms where enumerators would be able to “skip” questions that were problematic.

“If the form is very complex – if they have 1000 points to monitor - then it is very difficult for collectors. This can be managed in-house. We need to simplify forms, be very clear about what we ask and why. And ask in the field, check if it works and let that inform the design.”

Plan BFA ICT4D co-ordinator

The practice of holding a workshop with the programme staff and M&E to collaboratively design the research tools, which was brought in alongside the use of Poimapper, is seen as an opportunity for influencing the design of forms to promote maximum utility.

Costs

While costs savings were near universally identified as one of the key benefits of using Poimapper over paper tools, there were also cost challenges raised associated with digital data collection/Poimapper.

These were costs of the devices/infrastructure; costs of licensing and securing funding from donors for use of digital data collection.

“We need to plan in money for that at the proposal stage. We need to renew the stock of phones gradually. Hardware costs are a big problem and can be difficult to justify in the programme/project cost.”

Plan BFA ICT4D co-ordinator

Costs for data collection typically come from project M&E budgets, where Plan is moving towards using a 100% cost recovery model for M&E for projects under \$500,000. Several interviewees raised the challenge of building up additional resource, or upgrading the hardware when the costs may not be recoverable from other sources.

“It is difficult for donors to approve separately – the only thing you can do is include it as part of the M&E activities. If not, then it difficult for them to see the benefit or approve it apart from that. Maybe they don’t see the added value for communities. The main objective of these donors is to do something for the communities, and then they question what this brings to the communities or project activities.”

Grants and business manager

While this was not particularly seen as a problem for on-going data collection with existing projects, or even for new projects where M&E was costed into programming, it was raised as a potential issue for expanding the use of Poimapper to other areas of operation, such as Sponsorship, where, as outlined above, Plan BFA engages @630 volunteers collecting data on over 40,000 children. These volunteers currently have and use digital cameras, secured at a cost of CFA 170,000 and, if there were to be a move towards digital data collection in this area, then it was recognised that, when the cameras were damaged, they could be

replaced by phones to build up a stock of hardware for sponsorship to use. The typical attrition rate was put at about 20/30 cameras a year lost to damage, theft or loss.

The process of consolidating technology choices is already underway, with input from the ICT4D co-ordinator.

“We have done a lot of advocacy – we have been successful to inform and change some behaviour here, like if a project needs a camera for pictures, or we need to buy another GPS for co-ordinate collections, then we instruct them to buy a smart phone. We avoid buying multiple devices to do the same job, buy a smartphone - we actually don’t need to separate the function of the device”

Plan BFA ICT4D co-ordinator

How Plan uses data, however it’s gathered

“When data shows there is a problem, and it is not quickly integrated into the project or programme, it doesn’t really matter how the data is collected”

Plan BFA Head of evaluation, monitoring and research

This issue, of how data is used by programmes or the CO once it’s collected, was recognised as key by many. This was particularly acute when people worked in M&E and many identified this issue at the workshop. It formed one of the key consistent messages for recommendations, as outlined below.

Recommendations from inquiry participants

The following recommendations are drawn from interviews and workshop materials and are presented here as a representation of what you told me. Particularly strong were those that arose from the workshop – each working group offered very similar sets of recommendations, as outlined below.

The recommendations you made were that Plan BFA: look to upgrade the technology you use; improve and widen access to training in PM; improve the dashboard, or data display and interaction; work to share data more effectively with partners and communities; and use data more effectively to influence programming both in design and implementation activity.

1. Upgrade technology

Plan’s stock of phones is aging, and there are some challenges with the operating system used and how it interacts with Poimapper. The recognition that, sometime relatively soon, Plan BFA will have to think seriously about upgrading the stock of devices if looking to increase/expand the use of Poimapper in digital data collection.

2. Improve and widen access to training

The benefits of engaging people in training for Poimapper were not seen to be confined to having a larger group of people who were technically able to work with PM. The greater benefit was seen in sharing information about the potential for PM to improve the way the organisation worked.

“I don’t want people to think it is just fashion. It is not a fashion. It is something that can contribute to our performance, to help us make the work better.”

Programme and Project Modules managers

3. Improve Poimapper’s dashboard or data display and interaction

In discussion with the HES Advisor, we looked at SAVIX (www.savingsgroups.com) an online dashboard allowing users to engage with data collected on the Village Savings and Loans

(VSL) approach. While this data is collected in paper ledgers, it is uploaded to an online space which is set up to allow people to interact with the data according to their interest.

“PM is very good tool for us, as the data collection is on the mobile and goes to the spreadsheet. But PM is more difficult for everyone to see the data. PM is very good if we can manage the information collected, if we can see if and share it. If we can select and slice the data, select the indicators we want to show and then share that information we have selected”.

HES Advisor

When discussing the potential for data display or interaction, it was mainly in the context of having data available and visible to inform planning or implementation decisions for programming staff. The value of well collated and displayed data was seen to be in allowing people to get an overall “sense” of the data so that they could then think more creatively or effectively about what to do as a result. Therefore, the type and form of any dashboard would need to be considered in this light. People don’t want to see data for data’s sake – they want to be able to use it well.

4. Share data to work with others more effectively

The desire to use data well is not confined to within Plan’s own functioning. There was also a shared recognition that sharing data with others – partners, people in the communities, children, community and government authorities for example - would be of benefit, and “the right thing to do”.

“The other thing I want to do is share the data with others – with people in the PU, commune, community, the mayor who is responsible for WASH in the district. We are not alone working in this field. If we find a way to share the data well, it will be easier for us to better manage our projects. We can train people, help people in the communes to use the tool and transfer knowledge and data with other partners – and they can share with us.”

WASH Programme advisor

5. Make the transition from using data to demonstrate accountability and transparency to using data to take programming decisions both now and in the future

“It’s not interesting to collect the data and put it in the drawers. We must take the results to be used in implement better programmes – we must use this to help us all take good decisions.”

Programme and Project Modules managers

There was strong recommendation that Plan should use data more effectively when making programming decisions. This was more strongly expressed in Plan BFA by people in management positions, rather than programming implementation positions. Those in programming positions saw their use of data as instrumental – that they could be more responsive to events when they had good data – whereas the challenges identified by management were more strategic – about the broader practice of how data informs programming at the country level.

“First step is showing that it [the project] is done – the next step is “if it is not done, what do we do?” We use the tool because it is there. But we have the chance to make it more integrated. Use the data to make implementation decisions”

Programme Support Manager for Operations

While recognising that Poimapper has delivered better data on on-going projects, there was seen to be an opportunity to use the data to inform the development of new projects, particularly in being able to combine datasets, and understand them well in the round to be able to plan future interventions more effectively.

“Help us see the big picture of what has already been done in the area, and then based on the data, we can effectively plan what new projects are necessary, where, why. It has implications for the whole PCM cycle.”

However, the broader challenge of how Plan utilises data, of any collection method or display mechanism, to inform activity was seen as a wider cultural issue.

“The gap is the knowledge management activity in Plan. Even when we have data, good data that inform good recommendations, it’s still very difficult. I don’t think M&E is well used in Plan Globally. It’s not a Plan BFA issue, I think it’s global. We don’t use enough from our experience. We have lessons learned, good practice lots of material but we don’t used enough.”

Plan BFA Head of evaluation, monitoring and research

Initial additional recommendations

I also wanted to offer a couple of initial recommendations, based on this visit, and before it is collated and integrated with the additional research work. Obviously, the broader research recommendations may include some that are specific to your context, but I felt it might be useful at this point to share some initial thoughts with you that arose from my visit.

I would encourage you as an office to continue your engagement with others in the region and global offices to share what you are up to and get examples of other people’s practice. There may well be wider, more formal opportunities to engage with others who are working with digital data in Plan, and hopefully our final report will help you understand how it is being used elsewhere.

I would also recommend that you look at the broader use of data within Plan BFA, and how you use it to inform practice – you are clearly thinking along these lines already. Your examples of using Poimapper provide you with a strong basis for understanding the benefits and challenges of digital data collection, as well as the limitations of what this can achieve for you. Obviously, this is a broader issue than this inquiry focused on, but it could form some impetus for working together in a different way.

2.2 Plan Philippines

Using Poimapper for timely information in emergencies in the Philippines

Plan Philippines has been using Poimapper to support data collection in emergencies since Typhoon Bopha in early 2013. This first experience applied Poimapper to collect data for rapid needs assessment, and to monitor assistance and aid distribution. Since that time, Plan has used Poimapper for several emergency responses, including typhoons Nari and Haiyan and the Bohol earthquake. Most recently, Plan Philippines staff has supported colleagues in Nepal to use Poimapper in planning and monitoring their response to the 2015 earthquake.

Data need:

In an emergency situation there is an immediate need for information on the scale and nature of damage and needs, in order to plan a fast and appropriate response. A 'Rapid Needs Assessment' is conducted in the first 72 hours after a disaster strikes, as field staff and partners collect information on points of interest using a standardised UN form, and send the data to the country office where it is consolidated into a country level report. Plan managers use the data to create accurate situation reports and make informed decisions on intervention design and allocation of resources.

Another obvious need is for real-time data to monitor the distribution of aid and support, both for monitoring and accountability and for planning purposes. Forms were developed on to capture basic data on what is distributed where, when, and to whom, and to record any learning from the team on the distribution process. This allows for timely updating of reports for management oversight and supports donor reporting. For example, for a joint WFP/Plan Cash/Food-for-Work project, paper-based monitoring forms were translated to Poimapper to monitor the progress of work, site completion, and food and cash distribution.

In several cases, Poimapper is used to collect feedback from beneficiaries and communities on the relevance and efficiency of Plan's support. Feedback is captured through interviews with community members at distribution points on the content and process of distribution, the most immediate priorities, exclusion and safety issues. This can inform Plan field teams and management to identify possible areas for improvement/strengthening. For example, recipients of Plan's typhoon Haiyan support were asked a 10-question survey at distribution points, helping to identify their priority needs and the quality of Plan's response. In Nepal, 220 feedback surveys were completed using Poimapper, resulting in scale-up of community engagement mechanisms and information points at distribution sites, and the improvement of SMS-based feedback systems.



The data collected for both planning and monitoring is also used to create the '3W' weekly reports to the UN OCHA coordinating body, which describes the 'What, Where and Who' of emergency response work on the ground. This reporting strengthens informed decision making and coordination of the humanitarian response. Poimapper is being considered as the platform for this cross-agency data collection, analysis and mapping in emergencies.

However, over time the tool has been applied to pre- and post- disaster contexts, to build data for planning and monitoring at all stages of an emergency. This includes vulnerability mapping in relation to climate change, to identify those most at risk of future emergencies, as

well as continued monitoring of the outcomes and outputs of Plan's contributions years after the disaster response is over.

Deploying Poimapper:

In the first and every subsequent deployment of Poimapper field workers have received training on the technical aspects of using Poimapper for collecting data and reporting, as well as techniques for collecting feedback and data. During training participants have the opportunity to practice entering data into the device and uploading it to the server, alongside techniques for interviewing community members.

Jonathan Dayrit, Plan Philippines' IT Manager, has coordinated much of the deployment and training, which he explains “is focused less on the technical aspects, as everyone is now familiar with smartphones, and more to understand the whole process, what the data will be used for, what happens to it and why it is important. This motivates and informs people to do a good job.”

Support is now ongoing to users of Poimapper, throughout the response. For the Haiyan response, focal points were identified to support effective feedback mechanisms and helpdesks were set up during distributions, to ensure that feedback was correctly recorded, categorized and reported, and that data were uploaded on a regular basis. Poimapper point persons consistently updated the country office of distributions recorded and issues encountered in using the devices and the application. A Poimapper user manual is now being developed to provide basic user guidance and define responsibilities of PM enumerators, PU focal points, and CO support staff.

In many cases the forms created for Poimapper are based on existing templates developed by Plan or UN OCHA. However, Dayrit pointed out that form design should be led by programme staff with knowledge of what types of data are needed and for what uses. In the first instance, IT staff created a Poimapper version of the paper RNA form, and the training participants commented that it didn't work well, it was too technical and didn't capture the essence of the original form. Without understanding the purpose of the form, the IT staff had not been able to design it intuitively.

Why Poimapper?

Plan Philippines have enjoyed support from Plan Finland and Pajat to adopt and adapt Poimapper to their needs. This has included some support to cover the costs of licenses, as well as technical support for trouble-shooting and ensuring that the tool meets the organisation's needs. For example, some licenses were given in exchange for participation in a Plan/Pajat joint study with the European Space Agency.

Other Plan offices in the region have used OpenData Kit (ODK), but after small trials Plan Philippines decided to use Poimapper, having seen how successfully it had been used in Thailand, and the availability of lessons learned and advice from colleagues in the region. The main deciding factor was the support available from Pajat and Plan Finland, who are “always open to suggestions for new features or to solve arising issues.” For this reason, the Plan Philippines IT Manager would “recommend to use Poimapper, even at full market price”, although he recognises that it may be hard to justify long-term, central investment directly from Plan. That said, the Country Director herself commented “Poimapper is better for Plan than free software because of the support available, and openness to make improvements and innovations in response to the experiences and needs of users.”

In particular, the team value Poimapper for the ability to collect and organise location information, as well as the use of photo, video and audio to give direct information on the status of an activity or need. That said, there have been some issues in using Poimapper, which the IT Manager considered is “not really designed for emergency situations where there is unlikely to be working Internet connection.” Another issue on the ground has been the need to keep the list of locations updated and available to all enumerators in the field, so

that they can easily enter the location from where they are working. If they need to add the name of a village (and there are 27,000 in the Philippines so it is unlikely that all will be already logged), this requires updating the form from the field, and will mean that not all enumerators are working from the same version.

Finally, the reporting features of Poimapper are not well used, and despite the appreciation of the value of producing maps, the Poimapper server is considered “a good parking lot” where one can see data and trends building, but not a platform for creating a full situational report and analysis.

Benefits of using Poimapper:

“Most of the time I have used [Poimapper] in emergencies, it is to be able to do data collection easier, faster, and better.”

“Poimapper has relatively made it faster for me to do consolidation and reports, thus faster actions from teams and management.”

The team from the Philippines, including M&E and IT staff, have identified several benefits of the transition to digital data collection through Poimapper, including:

- Timely and well-presented information for decision-making and distribution of aid at control centre.
- More accurate data entered into the system, which saves time on data cleaning and improves quality control. “Consolidation is faster and more accurate, fewer errors compared to typing the responses.” In part this is due to the fact that limited choices for entries means that there are fewer mistakes.
- Saving time and money, especially by eliminating the extra step of data entry.
- It also means that field workers have everything they need on one device, from data collection to communications and even a clock and a torch. Previously, collecting data after dark could be a challenge where there was no electricity.

Learning and recommendations:

After several rounds of using Poimapper in emergency situations, and some reflection and research (the finalisation of an internal report on the use of ICTs in emergencies in Plan Philippines has coincided with this research), the team have some lessons and recommendations on the use of DDCT and Poimapper in particular.

Firstly, they have found that it is important for the use of DDC tools to be the domain of programme staff, not IT. It needs to be firmly rooted in the broader M&E framework and organisational learning and decision-making structures. Effective use of Poimapper, and the data it collects, depends on careful thinking and assessment of data needs and reporting processes. IT can support with technical skills and advice, and ensure that the adequate infrastructure is in place. Resources are needed to train and support users and follow up on issues of data accuracy and quality. In this way, the tools can be applied properly to the real data needs and uses of the organisation, not sidelined as an IT function.

Standardised forms and reporting templates allow for consolidation of data across locations and distributions. Standard management reports include a summary of last week’s distributions, number of feedback forms completed, key points arising. There is an appetite to scale-up the use of Poimapper to enable collection of data on key performance indicators, or enable coordination and sharing of data across agencies working on the ground. Dayrit noted, “If Poimapper were used by more country offices we could benefit by sharing forms and so on.”

With work on the platform features and usability, the Plan team hopes that Poimapper might eventually become the common tool for data collection across agencies working in the

country, to enable better coordination and sharing of data. However, the cost may be prohibitive for this, and the Country Director recognises that proactive, routine collection of data by staff using mobile phones would require 'a paradigm shift'.

2.3 Collecting sponsorship data in Bangladesh

Data need:

Sponsorship makes up roughly half of Plan's income (354 of 722 million Euros according to the 2014 annual report), and provides a vital link between supporters and beneficiaries of Plan's work. Sponsors are provided with information about the child they support, and their wider community, with regular updates from the child and concerning the work of Plan in the area.

Teams of Plan staff are working across the globe to keep this information flowing, and ensure that it is accurate, starting with the 'enumerators', or paid local volunteers on the ground, who visit the children and their families to collect and update the information on a regular basis. When children are brought into the sponsorship system, these enumerators travel house to house armed with questionnaires over 70 questions long, collecting photographs and information for the sponsors to learn about the child and its life –their family, their housing, their education, the opportunities available to them and their needs. The forms and photographs are sent to the local Plan office and then on to the sponsorship department of the country office in a Plan vehicle. The forms are checked manually and photos and information uploaded onto the global database, ChildData, from where it can be accessed by the national Offices who are dealing with the potential sponsors. That database holds information on 1.2 million sponsored children, from 50 countries, to sponsorship departments in 20 countries. According to staff in Plan Bangladesh, they are "building stronger relationships with sponsors through timely, quality information."

Piloting Poimapper:

In 2013, Plan Bangladesh started a pilot to provide their enumerators with hand-held devices equipped with Poimapper software and the sponsorship form, enabling them to collect this data and the photographs digitally, and upload it directly to the country office server. From here, the data is downloaded onto an Excel sheet and uploaded by hand onto the ChildData database. Although the system is not yet fully automated, the office have seen some clear benefits in terms of efficiency, accuracy and quality of the data, and are now taking the system live across the country. Plan Bangladesh IT Manager stated "After a 10 month pilot the results are amazing, and we decided to go live with the tool from last month."

What has changed?

The most obvious benefit of this new tool is the speed and efficiency with which the data reaches the country office. As soon as an interview is concluded, the information can be uploaded to the Poimapper server and accessed by staff in the country office. A process that used to take up to 5 days now takes as little as 5 minutes. What's more, whereas paper forms were delivered in batches to a deadline, digital versions arrive as soon as they are completed, allowing country office staff more time to review and upload them into the ChildData database. There have also been significant cost savings, eliminating the need for printing, photography and transportation, and reducing staff time costs. Plan Bangladesh staff estimate that 20,000 USD can be saved every year.

The tool makes the whole process of field data collection more efficient, which is important for country offices who dedicate staff and resources to keeping sponsorship information flowing. It also increases the quality and accuracy of the information, an important aspect for the recipients, users and managers of this data. With the paper forms there were cases where entries were illegible, or children with the same names were mixed up, photographs allocated to the wrong child or questions skipped, meaning that some questionnaires were invalid and could not be uploaded. The digital forms reduce these errors, as questions cannot be skipped, and each child is given a unique reference number. Staff explained: "Now we can fully use the data, it is validated and human error reduced. " What's more, the use of geotagging, whereby the location coordinates are automatically attached to each filled

questionnaire, means that there is greater accountability and less room for fraud: there is proof that the enumerator has been to the field, to the house of the child, to collect the data.

Finally, the staff of Plan Bangladesh notes that the end users are happier with the new system. While the enumerators are happy to be carrying less around with them, now they only need to bring the tablet, families are happy as they get to see the picture of the child directly as it's taken.

What next?

Because of the efficiency savings, Plan Bangladesh is now rolling out Poimapper in more areas of the country, and hope to be able to use it to collect updates on sponsored children, letters and audio-visual material, as well as the initial sign up data. They also hope to introduce the tool into other programmes of work. One staff member stated, "Poimapper has opened our eyes as to how to collect and move and present field data."

"The potential is huge," a senior staff member remarked, "every project needs data from the field and they are all using manual systems at the moment. This creates a time delay when making project decisions, as information comes in at the end of each quarter. But to manage a project you need data in your hand very quickly"

The geotagging feature enables data to be presented on maps, which is considered to be of great potential value. Sponsorship data could be used to show locations of sponsored children across the country, and any other data collected using Poimapper could be presented this way. One idea is to provide staff with maps showing available services for children, to help them with their direct support and advice work.

And as more project data is collected and stored digitally, there would be the opportunity to look across data sets and draw richer information on specific outcome indicators, such as school enrolment. Though this represents a huge change, a senior manager explained that this change is expected. The new CSP sets out stronger M&E, with a data warehouse and MIS platform, which would enable data collected digitally to be directly uploaded. With some training, project managers, who are currently used to getting reports from the M&E staff, would be able to draw and analyse data directly from the server to help with their decision-making. As an IT staff member commented: "If Plan Bangladesh had a big data facility integrated with digital data collection this would be greatly admired. "

Key considerations:

All Plan Bangladesh staff interviewed were positive about the benefits of using Poimapper for data collection. "I would advise other countries to do this!" stated one member of the sponsorship team, "There are lots of benefits. I would be happy to train others." However, some important considerations emerged before other sponsorship teams decide to replicate this pilot.

One important consideration is cost. Poimapper is not free, although it has been provided to Plan as a partnership with the developer allowing some cost reductions and additional support. There are free and open source tools available, which are not only cheaper, but also more accessible to other NGOs and therefore better for partnership and collaboration.

Another consideration is infrastructure. Poimapper requires high-speed Internet connections in order for data to be up and downloaded from the field. In Bangladesh the SIM card could not provide a good enough connection, and therefore data was transferred from the local Plan office. The costs of 3G data SIMs would be higher, but allow for immediate uploads.

Technical glitches and hiccups were encountered along the pilot, particularly in the reporting and analysis stage. Though one staff member considered that "Poimapper is good for collecting data, but not so good for reporting." He was also confident that Poimapper can deliver at a large scale, given the appropriate level of support and service, The team conclude that IT support should be available at all times, and trained Poimapper specialists

would ideally be available in each of the local Plan offices. However, overall it was found that the support provided by the developer was good, and features have been amended or added where needed.

The biggest consideration, from the point of view of both Plan Bangladesh and Plan international sponsorship staff, is the logistics of integration between the data collection tool (Poimapper) and the global database (ChildData). From the perspective of Plan Bangladesh, Poimapper has brought great efficiencies in the collection of data from the field. Without an electronic data interchange, the data is downloaded from Poimapper server and manually entered into the database, reducing efficiencies and increasing the risk of human error. What's more, the case numbers automatically generated by Poimapper are different from those generated by ChildData, requiring new numbers to be entered by hand into the Poimapper server. Plan Bangladesh have been 'pushing hard for this from the demand side', and the results of the pilot were shared with the owners of the database.

From the perspective of Plan International, the owners of the database and those accountable for the quality and delivery of data to the sponsorship departments of national Offices, the widespread rollout of digital data collection tools looks fairly inevitable, but is a very big undertaking. The efficiency savings are mostly seen at the country level, where data is collected and uploaded, but within the wider system 'there is not a problem that this will solve'. As things stand, the data is quality assured, and available when and where it is needed. The current system is 'relatively low-cost, highly organised', and delivers what NOs want and need. While it is not appropriate for each country to adopt digital tools independently (they are accountable to Plan International to provide quality, timely data), Plan International would need to support the transition to digital collection in each CO, and funding would need to be found to cover the costs of a global rollout. Some research is being done at the moment into the overall system, and the implications and opportunities for conversion to digital data collection and entry, but this is in the early stages.

2.4 Catholic Relief Services

Catholic Relief Services (CRS) is the international humanitarian agency of the Catholic community in the United States. Founded in 1943 by the United States Council of Catholic Bishops, the agency provides assistance to 130 million people in more than 90 countries and territories worldwide.

CRS have been using digital data collection since 2010/2011. CRS came to iFormBuilder (IFB) through a pilot at the East Africa regional office and after a period of further piloting, testing and comparison to other tools at the regional and enterprise level, decided to adopt the tool centrally in 2012. The organisation currently has central capacity to support the use of digital data collection, with 7 full time staff members dedicated to the full range of support and roll out. Currently, iFormBuilder is in use by 290 projects, across 56 countries in CRS. The organisation currently has 7000 live licenses.

“We estimate that 30% of all of our projects are using digital data collection in some way. 85% of those are using IFB. But it’s not only about IFB. It’s the organisational strategy and culture for ICT4D. It takes effort and resources to do it properly.”

Chief Strategist, Zerion (Previously Senior MEAL Advisor, CRS)

Why iFormBuilder?

For CRS, there were a series of considerations as to why they chose iFormBuilder:

- Technical considerations. CRS conducted a trade-off analysis comparing iFB to other tools on the market, including Poimapper, ODK and Kobo. iFB impressed on security certifications and encryption levels at the device and server level.
- From a platform perspective a key consideration was scalability and a tool that would flex to satisfy different needs.
- Costs were deemed to be comparable with other products
- CRS greatly valued the type of relationship they had with Zerion (the developer). One aspect was the relatively large and diverse client base of between 60-70 organisations using iFB. For CRS, this provided a level of reassurance. “It’s not just for NGOs - they have a diverse client base including big companies like Rio Tinto, and the US Navy. For me that’s a high point. They have money from those clients to continuously improve the product; they are not scraping around for money to improve. They can invest into R&D that we then benefit from.
- In addition, the willingness and flexibility of the developer to work in collaboration with CRS was valued. “As a company, Zerion is very much open to working with us to improve their product. Some of the mods/enhancements are made for us without cost. They basically became a partner, and are interested in improving their product with us. We didn’t see that type of willingness to improve from other suppliers.”

Type of data collected and links to other CRS systems

As per most other digital data collection tools, iFB can collect form data, audio, pictures, video etc. CRS mainly uses iFB for collecting project data that can be gathered using a form

combining mostly quantitative data, with limited qualitative elements. The tool is not set up to process or collect large amounts of qualitative data. This type of data doesn't appear to feature heavily within CRS MEAL approach.

"We have not yet had projects get into the reporting of qualitative data. The main type of information collected is through IFB and it is survey, choices, ranking/rating data. Our focus is on collecting good quality data at the point of service."

Chief Solutions Architect, Zerion
(Previously, Chief Solutions Architect, CRS)

CRS uses SharePoint as a central repository that acts as a management system for other forms of project data. While IFB contributes information to this, it does not integrate, nor does IFB pull data from SharePoint into the IFM platform.

Users within CRS are not mandated to use IFB, but there is organisational support provided for IFB in the form of training and support and an unlimited number of licenses are available, centrally funded by the IT department.

"We don't mandate, we inspire through use and stories of users. We don't have to go tell them stories of users, it spreads from people who use it. We hope that, through witnessing the benefits, it grows from that."

Chief Strategist, Zerion
(Previously Senior MEAL Advisor, CRS)

Benefits

Accountability arising from data collection shift from paper:

"Before when the projects were using paper, we had no visibility into what is happening. No accountability to validate numbers, test that what we were getting was based on good data."

Cost savings arising from data collection shift from paper:

CRS has realised some cost savings on straight paper to digital switches. They estimate, on average, a 1-3 % saving with digital, although the methodology they used for this analysis was not available.

Data quality improvements arising from data collection shift from paper:

"In terms of data quality – we found an average 56% error rate with paper completely eliminated by using digital. A lot of that was due to paper data collection having no validation – the forms don't require completeness, and then you have transcription etc."

Data access/timeliness improvements:

"It boils down to access to the data. We were collecting a lot of data and digitising it, and that can mean 10 – 90 days to get access to that. Now, it's immediate"

However, the greatest benefit has been in the wider opportunities for improving the broader monitoring, evaluation, accountability and learning practice within the organisation.

Accountability arising from a coordinated, organisation-wide approach to data collection:

“Where have capacity to make things quicker, less error prone, that’s great. But for me, the main thing so far is that it is highlighted where were lacking, where we needed to improve. We got recognition from the highest and mid to high level leadership that there are issues in MEAL and if we don’t address those, no matter what tech we use, it will be a fad, a band aid.”

For CRS, the development of digital data collection activity is strongly linked to an organisational capacity development initiative called [e-Valuate](#), geared towards the improvement of monitoring, evaluation, accountability and learning (MEAL). e-Valuate represents a significant investment in capacity building with a budget of \$3.5 million, spent as \$700,000/5 years. It is currently in the 3rd year of operation.

“Because this is not only about capacity building using technology, it’s about how people define the processes etc., how they choose the data they need, how to collect it, analyse it, make the right choices. It goes across all of MEAL.

It is also about the organisational practice of how we use the data – if have nice graphs, stats, but the organisation can’t use it, then it’s not working. The whole organisation needs to be set for getting the most out of the data.”

Chief Solutions Architect, Zerion (Previously, Chief Solutions Architect, CRS)

Annex 3: Examples of uses of Poimapper in Plan

As a starting point for this research, the authors were given a list of the users and uses of Poimapper supported by or known to Plan Finland. Here we summarise the types of uses shared through this research, which include:

- Project monitoring and evaluation in the areas of livelihoods and WaSH;
- Mapping needs and services in the areas of ECCD, health and campaigns;
- Monitoring public services and policies in the areas of education and child protection; and
- Informing Plan's decision-making through annual review processes and aggregated monitoring of common indicators. Collecting data to monitor project activities and impact

As Poimapper is primarily a tool to collect data from the field, it is often used to collect baseline and monitoring data to support project management and reporting. As the M&E Coordinator of Plan Zambia noted, Poimapper “can be used both for snapshot and longitudinal data collection, creating a rich data set which is immediately visible and available to analyse. This enables more efficient planning and prioritisation, and enables immediate sharing of data with donors and other partners.”

Project Monitoring and evaluation:

There are many examples of Poimapper being used to collect data from the field to support project monitoring, reporting and decision-making. For example in the areas of:

Livelihoods: Tracking changes in well-being of savings group members

In Burkina Faso, Plan runs the WYSE programme, to engage women and youth in savings and loans groups, as well as financial and provide entrepreneurship training. Plan staff are using Poimapper to collect and aggregate data on the members of WYSE savings groups, with a focus on wellbeing indicators. The aim is to have baseline data on all group members, which can then be compared with follow-up data at the end of the project.

In Zambia, under the Banking on Change programme, Plan and partners have been working with community volunteers and youth village agents to strengthen the financial inclusion of young people. Poimapper was used to collect data for action research through anonymous surveys to assess the role and effectiveness of community volunteers, and the impact of their engagement on their lives and livelihoods. Plan Zambia's M&E Coordinator explained that Poimapper “...allows easy, accurate and faster project progress reporting”.

WaSH: Mapping and monitoring latrine use

As part of its work on water, sanitation and health (WaSH), Plan Burkina Faso has supported families and schools to install latrines and boreholes. Since 2005, they have been using GPS-enabled devices to collect data on the locations of these, and since 2012 Poimapper has been used to collect this geographical data, and combine it with other data to enable project oversight and quality control. Enumerators visit homes where Plan has supported the installation of family latrines, to collect location data, pictures of the latrine and additional information about the family. This helps Plan ensure that the latrines are properly built and

functioning, and track the impact on families and communities, as well as providing an overview of WaSH provision in an area.

Collecting data to map needs and services

As a tool to collect geo-tagged data, Poimapper has been used in various contexts to map needs, the provision and gaps in services, and help visualise trends, concentrations or priorities.

ECED: mapping the situation and services for young children

Plan Bolivia used digital tools, including Poimapper, to collect information on the state of early childhood provision in the country. Working with the government, they collected information on the social and economic conditions for young children, and the availability of early childhood centres and other services in different communities across the country. This information was presented on maps, which were made available online. Plan Bolivia staff commented that this type of information is “useful for decision making and relationship building, resource mobilisation, allocation and negotiations with partners, providing more opportunities to invest in those communities.” This data also provided a baseline from which to monitor and evaluate Plan’s work on early childhood care and development.

Health: tracking the health and treatment of tuberculosis patients

When the then Director of Plan Thailand first heard about Poimapper in 2013, she knew immediately that this would be a valuable tool for real-time project monitoring. “I was tired of making decisions based on information months out of date”, she explained. They put it to use to monitor their TB programme, collecting data on the location and characteristics of the patients, and mapping the services available, so that concentrations and trends can be easily visible and analysed. Using a standard form on their mobile device, Plan staff and volunteers can ask patients questions about their symptoms, nutrition and treatment. The information is sent to the country office in real time, thanks to the reliable Internet connection throughout the country, and programme managers and M&E staff can use it for project decisions and mapping. There, staff uses the information to estimate prevalence in different areas, or get a whole picture of the TB situation in an area, and prioritise activities accordingly. They can also use the information from Poimapper to report to donors, given that the form is designed based on the donor reporting template, so the information can be directly copied, avoiding duplication of efforts.

Campaigns: Collecting baseline information on the context for girls’ safety in Kampala

As part of the Because I Am A Girl urban campaign, staff in Plan Uganda used Poimapper to collect data for a baseline survey on girls’ safety and access to public space and transport, and on girls’ participation in city governance. In 2015, as part of a study on perceptions of girls’ safety on public transport, Plan volunteers used Poimapper to survey over 1000 male users of public transport in Kampala. This information fed into the campaign at national level, and was also shared on a common platform with the other cities participating in the global programme. Plan Uganda found Poimapper a good tool for conducting surveys on the street, providing location data for each response and allowing staff and volunteers to use it with little training.

Collecting data to monitor services and support government decision-making

This type of data from mapping services and needs is also useful to build evidence for advocacy and campaigning, and to support government decision maker in identifying priorities. The M&E Manager of Plan Zambia pointed to the opportunity for Poimapper to contribute to campaigns and advocacy, noting that: “Data gathered can be used for evidence-based advocacy work such as influencing teacher distribution, resource allocation

and birth registration, improved documentation and archiving and easing communications with a wider audience of policymakers and media.”

Education: addressing inequalities with timely data

Plan Cameroon’s Baka Rights and Dignity project works to support the rights of the minority Baka people, with a focus on birth registration and educational enrolment, attendance and performance of Baka children. The education component is focussed on children’s enrolment, attendance and performance at school. Within this project, Poimapper is used to collect information on student attendance and performance, and on the activity of government inspectors.

Teachers collect information on student enrolment every year, on attendance every month, and on test results every quarter, and record it in a logbook. This information is disaggregated for children from different tribes. The project coordinator explained that this “gives us a layer of understanding when we come to target the Baka children.”

Once a month a Plan enumerator uses Poimapper to upload this data to the server in the country office, where it can be analysed and accessed by programme staff, and aid decision making for the project, as the project coordinator explained: “If we spot a problem with attendance data, we can then take action – we can organise a community meeting, and explain that there are a number of children not attending school, and find out the reason so we can do something about it.”

As a result, there have been increases in the number of children attending school (especially at critical periods such as harvest time) and the number of hours children are attending school. What’s more, Plan is building a rich dataset on children in the schools and the relative performance of minority children, to support decision-making and advocacy.

The enumerators also collect and upload information on the performance of school inspectors, who visit to review the school’s teaching quality and progress results on a monthly basis. By verifying and uploading data on the attendance of the inspectors, Plan is able to spot problems and bring them to the attention of the regional educational authority for action.

The project also collects and monitors data on birth registration, a vital process for children to access their right to education and other rights. Plan enumerators monitor the number of registrations delivered to each community each quarter, to ensure that the local authorities budget and spend sufficiently to enable all children to be officially registered. Plan staff analyse the data to show performance and trends and send alerts and letters to the inspectorate so that they can take action where necessary.

Plan staff are using Poimapper data to monitor and hold duty-bearers to account, but are aware that, ideally, it is the decision makers who should be collecting, analysing and using the data on teaching quality and school performance, so that they can act where problems arise. For that reason, Plan hopes to provide the inspectorate, with the necessary hardware, licenses, training and support for at least 2 years. However, for this to be sustainable, the government will need to find a way to pay for the equipment and licenses in the long-term.

Child protection: reporting and tracking child abuse cases

In Kenya, Dominican Republic and India, Plan projects supporting vulnerable young people suffering abuse to access help and services are using Poimapper in the reporting and follow-up of cases. Plan Kenya’s Kilifi PU, in partnership with the Government of Kenya, has developed (and is currently testing) a mobile application for child abuse reporting and tracking (VuruguMapper), which is adapted from Poimapper. In Dominican Republic, Plan is developing a community child welfare reporting and monitoring system, to complement the existing local authority system and make data and analysis on certain indicators more visible

and accessible to decision makers. Community monitoring committees will use tablets with Poimapper forms to register cases, monitor the response from authorities and follow up issues arising, such as lack of access to adequate services. Committee members are being trained on using the tool and the forms, and also on how to sensitively collect this type of data.

Collecting data to inform and monitor Plan's work

Much of the data collected from Plan projects can feed into wider annual and strategic review processes, saving time in collecting separate and retrospective data. In other cases, gathering data on strategic indicators can inform programming at a wider level.

Supporting national review processes:

For the past 3 years, Plan Burkina Faso has used Poimapper in their community engagement to contribute towards understanding the progress that has been made along the Country Strategic Plan (CSP). Each year, Plan conducts sampled surveys in each programme unit, choosing representative communities and engaging 1000 families. Plan staff train enumerators from community partners to use Poimapper to collect data on people's experiences of working with Plan through interviews in schools, community centres, health centres and homes. This data is then combined with management information from reports, reviews and evaluations to generate a picture of Plan's activities for the year. Now staff from Burkina Faso has trained colleagues in the WARO region to replicate this approach to collecting community contributions to the APPR process.

In Bolivia, household surveys were administered using Poimapper to assess the progress of seven of the CSP programmes, during the final evaluation of the last CSP. Plan partners were loaned devices from Plan, and trained to collect data using mobile devices. They then managed a group of youth volunteers to conduct the data collection process. This type of process would previously have been undertaken by a consultant, using field researchers. By using partners and community volunteers Plan not only saved money, but also was able to build internal capacity to collect, analyse and use data. A member of the ICT4D team in ROA explained "This is better than giving the work to external people, who might pass on the fieldwork to others who may not receive specific training in collecting the data we need, especially on sensitive issues." It also develops skills in the use of ICTs in communities, which "as the right to information and access to ICTs is a direct objective of Plan's work in Bolivia."

Monitoring indicators across projects and countries:

There are some examples of Poimapper being used to collect data on indicators to feed into national or regional level data sets. Plan's West Africa Child Welfare Indicator (WACI) initiative consolidates data on Plan's performance against a series of established child welfare indicators. Plan Burkina Faso uses Poimapper to collect data on these indicators from community members, which is then combined with data from other research, reports and evaluations and fed into the regional indicator suite. In Bolivia, digital tools are being used to conduct household surveys to collect data to measure progress towards the key performance indicators set out in the new CSP monitoring, evaluation and research framework.



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