

Iterative Beneficiary Monitoring (IBM) as a Cost-effective Tool for Improving Project Effectiveness

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Poverty and Equity - Iterative Beneficiary Monitoring

List of Acronyms & Abbreviations

AMRAD	Action Research for Development Association of Mali (<i>Association Malienne de Recherche-Action pour le Développement</i>)
CMU	Country Management Unit
CPF	Country Partnership Framework
DPO	Development Policy Operation
F2F	Face-to-Face
FCV	Fragility, Conflict, and Violence
GBV	Gender-Based Violence
GISSE	Economic Statisticians Scientific Interest Group (<i>Groupement d'Intérêt Scientifique des Statisticiens Économistes</i>)
GRM	Grievance Redress Mechanism
IBM	Iterative Beneficiary Monitoring
M&E	Monitoring and Evaluation
NGO	Non-Governmental Organization
PAC	Community Action Project
PETS	Public Expenditure Tracking Survey
PFM	Public Financial Management
PIU	Project Implementation Unit
PPAAO	West Africa Agricultural Productivity Program (<i>Programme de Productivité Agricole en Afrique de l'Ouest</i>)
PRAPS	Regional Project for Support to the Pastoralism in the Sahel (<i>Project Régional d'Appui au Pastoralisme au Sahel</i>)
PRRE	Economic Reconstruction and Recovery Project (<i>Projet de Reconstruction et de Relance Économique</i>)
RAMED	Healthcare Assistance Program (<i>Régime d'Assistance Médicale</i>)
SDI	Service Delivery Indicator
TTL	Task Team Leader

Abstract

Iterative Beneficiary Monitoring (IBM) is an approach to project monitoring designed as a light, low-cost, independent, rapid, and iterative feedback loop that collects information directly from beneficiaries and produces short reports on challenges that can be addressed by project teams. This approach improves project efficiency and increases beneficiary engagement and satisfaction by creating positive, self-reinforcing cycles of improvement. IBM was first developed in Mali to deal with limited access to project activities due to insecurity, but its low-cost, high-frequency, and rapid nature also makes it attractive and applicable in secure settings. IBM was used to identify shortcomings in a school meals project in Mali and helped reduce time needed to transfer funds to schools and increase the number of schools that offered meals five days a week. It also supported an e-voucher scheme in Mali, which ensured that farmers receive fertilizer of good quality, at the appropriate time, and in the promised quantity. As part of a rural mobility and connectivity project in Mali, IBM engaged early and checked whether the population heard sensitization messages from rural radio stations, they were affected by the work undertaken, and whether they were satisfied. IBM implementation convinced the managers of a health insurance project for the extremely poor in Mali to find a way to enhance distribution of health cards along with cash transfers. Results from monitoring these initial projects were shared with the project managers in the country with a view to solving issues identified while the projects were still underway. The World Bank is currently scaling up the IBM methodology, with various Global Practices applying it to projects in Mali, Chad, Guinea, Niger, Benin, the Central African Republic, and Nigeria.

1. Introduction

Successful project implementation is often hampered by lack of insufficient information from beneficiaries. Even in a secure environment, access to events on the ground changes according to the season and depends on the existence and quality of roads, the cost of data collection, and the capacities of project teams. Particularly in fragility, conflict, and violence (FCV) contexts, physical access can be limited by insecurity and limits to field visits, a combination that obscures information on specific dynamics and the opinions of beneficiaries in those areas. Subsequently, these information gaps effectively inhibit operational engagement, especially in places where development interventions are most critically needed. Moreover, these information gaps cannot always be adequately closed by project monitoring and evaluation (M&E) systems as they use cumbersome approaches, while local capacities and available resources may be inadequate to carrying out large-scale surveys. These systems are expected to track progress and flag potential shortcomings or problems. In practice, most M&E systems do not provide frequent or independent reports but focus instead on producing progress indicators for the midterm and final reviews of the project. Even this reduced role for M&E systems is not always effectively executed and reports often come too late to help projects improve. Moreover, because of their high cost, M&E surveys cannot be repeated frequently, with data collection usually taking place three times or less over a five-year project. Supervision missions offer another source of information on project performance, but the information such missions can obtain is limited because they are less frequent, planned for short periods (usually no more than two weeks), and are often put on hold by project teams in case of security-related events.

Objective information about the effectiveness of projects may come from evaluations by non-project staff. Typically, these take the form of randomized controlled trials or large-scale surveys, such as Service Delivery Indicator (SDI) surveys, which measure the quality of service delivery in health and education, or Public Expenditure Tracking Surveys (PETS), which track the flow of resources from central to decentralized level. Though they are reliable, these data-intensive approaches are expensive and difficult to conduct in a fragile and insecure environment and cannot therefore be repeated frequently. Moreover, they are time-consuming and rarely deliver quick results, which sometimes becoming available only after project closure.

This information gap can be filled to improve project results by designing a distinct approach for frequently gathering information from beneficiaries and other stakeholders. To support project managers in achieving their objectives, a feedback loop system that is iterative and provides unbiased information is needed. This will allow the project team to learn from any difficulties facing project implementation and therefore improve performance. Once action has been taken, the team must assess whether any deficiencies identified have been resolved. To allow for regular feedback, data collection should be affordable and agile so as to yield quick results. Reliable, regular, and inexpensive data are the ideal. This system helps improve project effectiveness and increases beneficiary satisfaction and engagement. To meet these requirements, a beneficiary feedback system has been designed that is simple and inexpensive, focuses on a select set of issues, and is implemented by an independent entity with no stake in the outcome of the project. This approach is known as Iterative Beneficiary Monitoring (IBM).

IBM complements supervision missions and project M&E by offering an agile, problem-oriented feedback loop for project management. It provides feedback to project teams through multiple rounds of small-scale data collection that allows project teams to identify implementation issues early and to take

corrective actions. It collects data from beneficiaries using fewer questions and smaller samples while remaining informative. This approach focuses on flexibility of design, reduces cost, facilitates timely data analysis, and increases speed of report preparation while focusing on feedback relevant to implementation.

In addition to improving project effectiveness, IBM aims at increasing beneficiary satisfaction and engagement. These objectives can be met by ensuring that beneficiaries are reached wherever they are located and receive in timely fashion goods and services that are useful to them. Compliance with the Procedural Manual and identification of any hindrances to the project during the implementation phase leads to improvement in the project. To increase beneficiary satisfaction, the IBM approach enables beneficiaries to provide feedback on the project and to verify whether a remedy is to their satisfaction, thereby increasing their interest and engagement.

Applied in Mali since 2015, IBM has improved the effectiveness of projects in the agriculture, education, transportation, and healthcare sectors. It led to increased requests that it be expanded in the rest of the countries in the Mali Country Management Unit (CMU), which is composed of fragile countries such as Chad and Mali itself as well as countries at risk of fragility such as Guinea and Niger. Implementation of projects in these countries faces a number of constraints that limit the achievement of their objectives. While projects experience long delays at several levels during implementation, it has been difficult to identify and quantify those hindrances. In addition, insecurity and drivers of fragility such as economic and regional disparities, uneven development, and poor governance limit access to beneficiaries in order to elicit their opinions about project implementation. Hence, IBM plays an important role in collecting information from beneficiaries and thus enhancing project impact.

2. Methodology

The idea behind an iterative feedback loop is to allow the project team to learn from any hurdles in project implementation and thus improve performance while the project is still ongoing. Once action has been taken, the team must assess whether any identified deficiencies have been resolved. IBM follows a process that moves away from large and infrequent surveys followed by long reports to agile and frequent surveys accompanied by short reports.

IBM design follows five steps (see Figure 1), beginning by becoming intimately acquainted with a project and appreciating any challenges project teams are facing. The first step is time-consuming but indispensable to understanding details of project design and to determining what would constitute high-quality monitoring information. Core project documents need to be read, starting with the Project Appraisal Document and the Implementation Manual. These are invaluable in identifying sources of information or standards that can be used to assess the project. Supervision reports, memorandums, and mission reports will also help identify issues of potential concern.

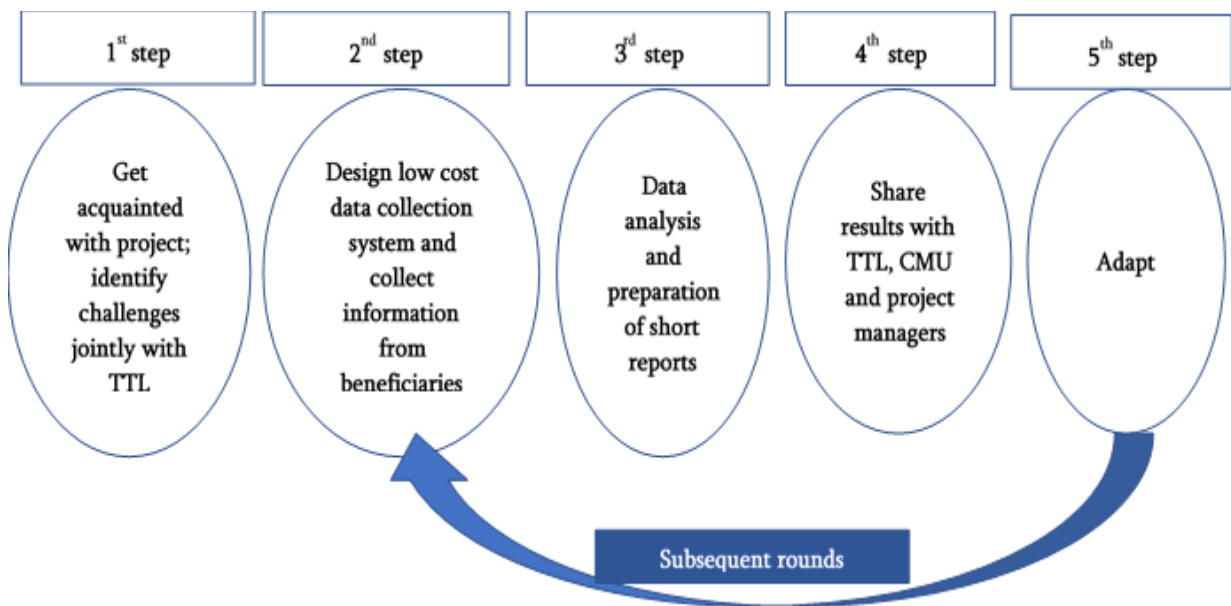
Collecting information from beneficiaries and other stakeholders on the front line of service provision (such as teams working in schools, clinics, or farmers' organizations) is at the heart of the iterative feedback approach and constitutes the second step, when questionnaires and sampling methods are designed. The experience of all stakeholders with the project is what ultimately matters. IBM thus focuses on obtaining direct feedback from these beneficiaries. Identifying what information to obtain and from whom is an important step in the design of a feedback system. For instance, in a project offering school meals, the perspective of parents and guardians is critical because they can ascertain whether their

children have eaten. Students can give their views on the quantity and quality of the food and how often they receive it. Head teachers can confirm whether the money to buy the food arrives on time, parent teacher associations can explain whether procedures are being followed, and those who prepare the food are well-placed to report on whether the money they receive is sufficient.

It is thus critical that the iterative system be developed in close collaboration with project managers. Managers need to provide access to project files (including beneficiary databases needed for sampling) and to validate the methodology and instruments chosen for data collection. If this is not done with care, project managers may eventually contest the validity of the results, and little follow-up can be expected. Apart from collaborating closely with project managers, the monitoring team will also need to ensure that the identity of respondents and the locations where data are collected are kept confidential.

It is important to keep the data collection process simple and to resist the temptation to collect more information than is strictly necessary. A project manager’s capacity is often constrained, and a project team can only handle so many issues at a time. Given that the approach is iterative, new issues can be addressed in subsequent rounds of data collection as not all issues need to be investigated in the first iteration. This gives the project team the option to prioritize what is most critical or most easily addressed. As the data collection process is kept to a minimum, the design of data collection instruments is relatively straightforward. Nonetheless, validation of the data collection instruments by project managers remains an essential step. This includes pretesting in a real-life setting and discussing the instruments with key project staff to ensure that the right issues are captured in an appropriate way.

Figure 1: The five steps of the IBM approach



Small samples are not a problem in themselves. When project-related issues are widespread or when standards or deadlines must be met (as set out in the Implementation Manual), a small number of observations may pinpoint a problem. Irrespective of sample size, sample design is critical to ensuring that results are representative. This implies identifying a reliable database from which the sample can be drawn. This is usually not a problem as most projects maintain a database of beneficiaries or can build one quickly. However, additional decisions may need to be made with project teams regarding cost-saving

methods. For instance, the team may propose to sample from one small geographic area only, which may be acceptable if the area reflects an upper bound, where the effects of any of the project's shortcomings are likely to be worse than in other areas. However, it may constitute an unacceptable measure when the involvement of area managers, such as the highest-ranking district official, is critical to ensuring project outcomes. For example, suppose that money transfers to schools close to the capital are delayed; then it is plausible to assume that the situation is worse in more remote areas.

Technology can be used to enhance efficiency and reduce sampling costs. If projects collect beneficiaries' phone numbers, information can be elicited rapidly and cost-effectively through phone surveys, even when sample size increases. This is particularly important in an insecure context or when the population may be hostile to the authorities and their activities. Mobile phone-based data collection is also a solution when beneficiaries are themselves mobile, as is the case for displaced populations or nomads.

Because collecting data over the phone is inexpensive, collecting phone numbers simplifies the creation of an iterative feedback loop. However, in the absence of a database of beneficiaries with phone numbers, data can be collected using face-to-face (F2F) interviews, though these tend to be expensive due to high transportation and accommodation costs and are sometimes risky for enumerators. Therefore, F2F samples need to be kept to a minimum. While the risk for enumerators in insecure areas is mitigated by introducing them to local authorities to avoid confusion with other agents, in all cases, respondents are also protected by all information likely to identify them being kept confidential.

In comparison, data collection itself is relatively inexpensive. The principle behind IBM is that each round of data collection should cost less than US\$5,000. Given this cost structure, the iterative feedback loop differs fundamentally from typical surveys, where data collection is the costliest part of the process. Keeping data collection costs low is important for the success of IBM because since frequent data collection would not be otherwise possible, its iterative character may be lost.

Once collected, data are analyzed and offered as feedback to project managers in the Government and to World Bank team leaders at Steps 4 and 5 of the system. Given that the number of questions is kept small in each iteration, data analysis is rapid. IBM reports are specific, factual, and short: typically, less than 10 pages. As reports are likely to reveal the project's shortcomings, care needs to be taken to ensure the highest standards of accuracy. Often, results are discussed with those responsible for the project in the client government. These authorities may therefore request that the project team take the required steps to address any issues, but this is rarely needed as project teams tend to be highly responsive to IBM findings and promptly work to address the issues identified and to overcome any shortcomings in order to complete Step 5 of the system.

Another round of data collection then follows (generally after a few months) with the aim of measuring improvement and sometimes to identify new issues that might have arisen since the previous round. The reporting process is the same as for the previous round. This cycle is then repeated on a regular basis until the end of the project.

To date, IBM reports have been produced for internal use by project teams in client governments and the World Bank). This is because wider public disclosure could lead to unintended consequences. Media and NGO experience with water price monitoring in Tanzania is illustrative in this regard. In this case, light monitoring principles were applied, but instead of working to address the issue with the regulator, those in charge of the monitoring process sought media attention. While public pressure and parliamentary

questions did lead to corrective action, these were somewhat ad hoc and symbolic in nature. Moreover, some outcomes proved perverse as some water kiosks were closed because they had been overcharging, leaving those dependent on these kiosks with even fewer options than they had previously. Moreover, following initial media interest, there was no systematic follow-up of the issue, and overcharging continued unabated.

3. IBM in AFCW3 countries

The IBM approach started in Mali in 2015, first as part of an education project (school meals), then with an agriculture project (e-vouchers) in Mali and Niger, followed in Mali by a cash transfer project, a rural mobility project in the transportation sector, and more recently government projects such as health insurance for the extremely poor and land commissions, both of which constitute a trigger for the Development Policy Operation (DPO) program.

3.1 IBM applied to education projects

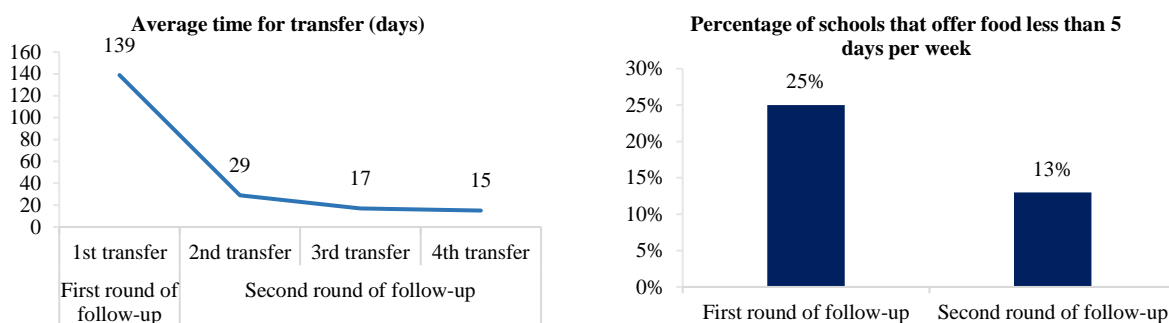
In the case of the school meals project in Mali, the project team leader expressed a concern to the IBM team that only part of the money allocated to the project component was being used. The two teams decided to look further into the issue and agreed on a clear division of tasks. The IBM team would take charge of all issues related to data collection and reporting, while the project team would facilitate all interactions with the Ministry of Education and the Project Implementation Unit (PIU). To understand the challenges involved in implementation, the National Center for School Cafeterias in the Ministry of Education shared the database of schools benefiting from the school meals program. This database was used to draw a sample of beneficiary schools. To ensure ownership and accuracy, officials from the Ministry and the Center actively participated in the preparation and validation of the survey methodology and tools but were not provided the list of schools included in the sample.

The first round collected data in 20 randomly selected schools.¹ Two enumerators were trained and traveled to each school to carry out F2F interviews with head teachers, school cafeteria managers, and a subsample of parents. It cost less than US\$5,000 to complete the data collection process, and the report took little time to prepare as information was collected only on a limited set of issues. Officials from the National Center for School Cafeterias and the project team leader were informed of the main results. Results were also shared with the Country Director and the Minister of Education.

Results showed that it took more than four months to transfer money from the Ministry of Education to schools. Consequently, much of the money for school meals arrived after the school year had started, thus jeopardizing one of the objectives of the program, which is to increase enrollment rates. Moreover, the amount of money sent to schools was insufficient to feed all students during the envisaged period, and some schools were forced to offer meals less than five days a week, thus reducing the incentive for students to remain in school.

¹ In general, the size of the sample in an IBM design is guided by three factors: time needed for data collection (usually less than two weeks), the budget, and the length of the questionnaire. A pilot test yields the estimated time needed to complete an interview as well as the number of beneficiaries likely to be interviewed within two weeks. This is adjusted if necessary to comply with budget constraints.

Figure 2: Regular follow-up improved school meals performance



Source: Authors' calculations based on IBM data

While transfers were expected to be made every quarter, their actual frequency was much lower. Moreover, the Procedural Manual was not followed. Whereas the amounts transferred were supposed to reflect enrollment rates, they were often much higher or much lower than the expected amount.

The monitoring report was discussed with the project team leader, project staff, and the Minister of Education, who responded by sending letters to project officials to make them aware of the issue. Additional supervision missions were requested, and the Minister requested accurate information on school enrollment to rectify problems with the transfer amounts.

Six months later and one year before closure of the project, a second round of data collection was conducted in 30 schools randomly drawn from the updated list provided by the National Center for School Cafeterias, excluding those interviewed in the first round. Results showed that it now took much less time to transfer money to schools. Most schools received close to the exact amount they expected, and all the money disbursed by the Ministry reached the schools. Despite this, some schools were still offering meals less than five days a week, particularly those that had not received the money required to feed all students. The second report showed significant improvements in project implementation, although certain issues persisted (see Table 1). Both positive and negative findings were shared with the project team leader, project managers in the Government, and the Minister of Education.

Table Error! No text of specified style in document.: Results of two rounds of iterative feedback on a school meals project in Mali

First round		Actions taken	Second round: Six months later
Sample	20 schools		Report discussed with Minister of Education
Duration and method for data collection	10 days of F2F interviews	10 days of F2F interviews	
Cost of data collection	< US\$5,000	< US\$5,000	
Preparation and analysis	5 staff weeks	2 staff weeks	
Source of financing	Poverty monitoring task	Poverty monitoring task	

First round		Actions taken	Second round: Six months later
Issues	Findings		Findings
1. Time to transfer money to schools	More than 3 months	Sending of awareness letters by Minister to project managers	Reduced by two-thirds
2. Does the total amount sent by the central government reach schools?	Yes		Yes
3. Does money arrive on time?	No, money arrives long after classes have resumed		Transfer delays reduced considerably
4. Number of transfers per year	1 out of 4 planned		3 out of 4 planned
5. Number of days covered by amounts sent to schools	50% of schools cover less than 40 days, as requested	Setting-up of supervision missions by Minister	Reduced to 40%
6. Number of days per week meals are offered to students	25% of schools offer meals less than 5 days a week		Reduced to 13%
7. Do transferred amounts reflect enrollment rates?	Transfers do not account for school size, as required.		Improved, but a gap persists between school size and figures used in the Ministry.

3.2 IBM applied to agriculture projects

The success of IBM in the school meals project in the education sector increased interest from other project managers. Hence, the approach was expanded to an agriculture project that distributed subsidies in the insecure north of the country using electronic vouchers (e-vouchers). Under the e-voucher system, beneficiaries were counted, and their phone numbers and core characteristics captured in a database. This information was used to send them e-vouchers by text message. Upon receipt of their vouchers, beneficiaries could go to a store to collect their products, typically fertilizer or livestock products.

Project management expressed concern about the limited uptake of the subsidies. A supervision mission reported that during the first wave of input distribution, only 41 percent of beneficiaries who had been sent an e-voucher collected their products, even though these were free of charge. This suggested that there were problems with the input distribution system or lack of interest among beneficiaries in the products on offer. Identifying the exact nature of the problems was clearly important for the success of the project. The key aim of implementing IBM was then to confirm the percentage of farmers who did collect their products and to check why others did not.

Because the project relied on e-vouchers, there existed a database of beneficiaries' phone numbers, and as the areas of intervention remained insecure, the team opted to use phone interviews for data collection. Project managers shared the database of beneficiaries with the analysts and participated in

working sessions designed to validate the methodology and survey instruments and to select a representative sample of 100 beneficiaries who were interviewed by phone. Analysis of the shared database revealed the presence of many duplicate phone numbers allocated to different people in different villages. While the Procedural Manual permits different beneficiaries to use the same phone number since not everyone owns a phone, they would all be expected to live in the same village. However, the duplicates identified in the database were not living in the same location. After survey instruments were validated, two enumerators were trained to collect data over the phone. After four attempts to call each respondent, only 40 percent were reached, raising questions about network coverage in villages where beneficiaries live, the accuracy of the phone numbers in the database, or the location of beneficiaries as some may have left their initial location due to insecurity.

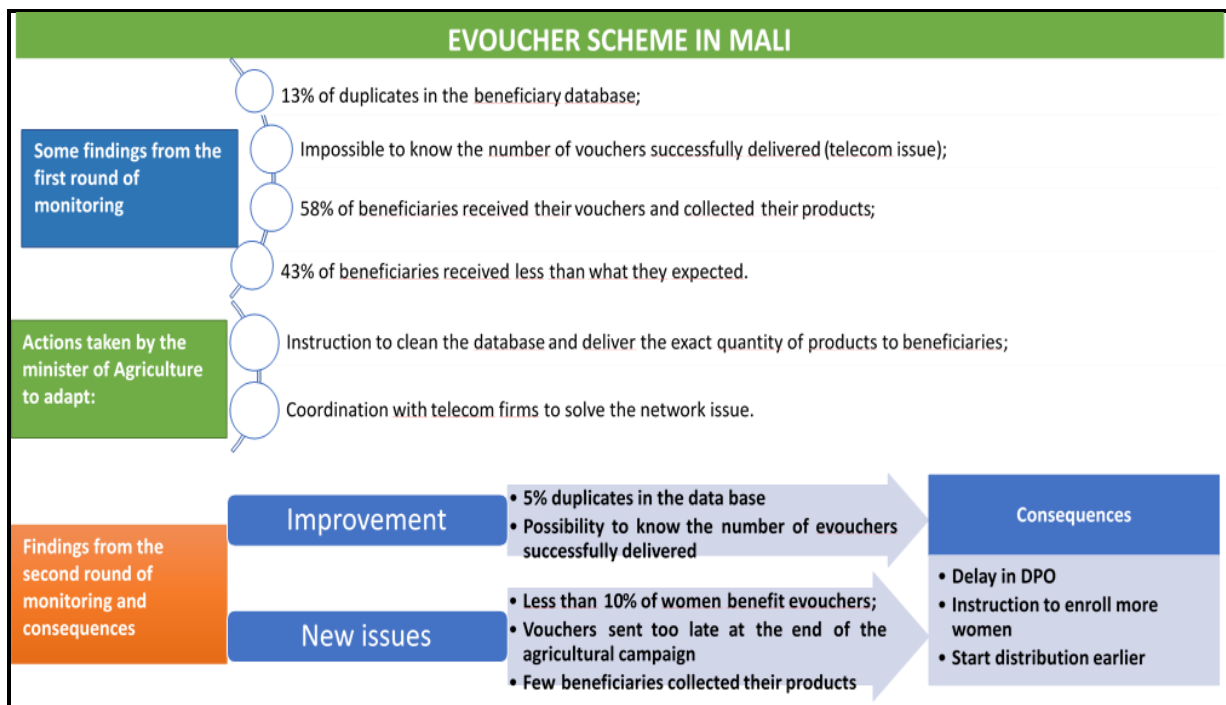
The initial results showed that all the beneficiaries who had received e-vouchers had collected their products, suggesting that low uptake of products was not due to lack of interest. As a significant proportion of beneficiaries could not be reached by phone, it was not possible to know whether all the e-vouchers had been successfully delivered. It seemed plausible that, as with the failed phone interviews, many e-vouchers had failed to reach their intended beneficiaries, suggesting a communication problem between the e-voucher platform and beneficiaries. Finally, many beneficiaries indicated not having received the full quantity of (free) products indicated on their vouchers, nor were they compensated for any items not received. Following these results, the project team and telecom providers were contacted to discuss the findings and to address certain issues, including the number of duplicate phone numbers in the database, the inability to send a high number of text messages per second, and the absence of a “text message received” message. The report was shared with the Ministry of Agriculture and the project team, which took action to clean up the database, asked controllers to ensure that farmers received the full quantity of the products due to them, and reported on their findings.

A second round of data collection was carried out five months later with a larger sample. At this stage, there was a need to assess how well the approach has worked since successful implementation of the e-voucher scheme was a precondition for budget support to the Government of Mali. More information was needed than a simple understanding of whether the approach was working, and evidence had to be collected about the percentage of beneficiaries in each district as well as the application of targeting criteria. The second round showed that the management of the system had improved. The database was cleaner, more respondents could be reached, more messages could be sent per second, and sent messages were now received. However, the results also showed that the rollout of the scheme still left much to be desired. Not all the agreed zones were covered, and e-vouchers were sent late, typically three months after the start of the agricultural season. Moreover, e-vouchers were distributed for fertilizer that could not be used for the current growing season. Finally, fertilizer suppliers turned out to have been selected using a noncompetitive method. These findings led to high-level discussions between Work Bank managers and the Malian authorities. The results of the two rounds of beneficiary monitoring are presented in Table 2 and the summary in Box 1.

Table 1: Results of two rounds of iterative feedback on fertilizer distribution using e-vouchers

First round		Second round: 5 months later	
Sample size	100 beneficiaries		850 beneficiaries
Duration and method for data collection	5 days by phone		10 days by phone
Cost for data collection	< \$5000		< \$ 5,000
Preparation and analysis	3 staff weeks		1 staff week
Source of financing	Agricultural project		Budget support operation
Issues	Actions taken	Issues	Actions taken
1- Are beneficiary localities covered by telephone network?	One telecom firm provides information on its network coverage in localities of the project.	1. E-vouchers distributed two months after the start of the planting season	DPO delayed till issues of coverage and timeliness of the e-voucher system are addressed
2- Are vouchers successfully delivered	Meetings organized with telecommunication firms who improved the number of text messages that can be send per second and agreed to send text-receipts. In second round 64% could be reached	2. Only 15% of beneficiaries collected their fertilizer as vouchers had been sent late	
3- Only 40% of beneficiaries can be reached by phone for interview		3. Only 8% of beneficiaries in data base are women	Approach to identifying beneficiaries changed
4- 13% of beneficiaries have duplicates in databases	Database cleaned, duplicates reduced to less than 5%	4. Large price difference between official price of fertilizer and market price (of up to \$ 9 per bag)	Fertilizer now procured using a competitive international procedure
5- 43% of beneficiaries receive less fertilizer than expected	Measures taken to improve oversight at the delivery of inputs; 30% report receiving less than the expected quantities		

Box 1: IBM on e-voucher scheme: Summary



In Niger, IBM was implemented as part of the e-voucher scheme for the West Africa Agricultural Productivity Program (PPAAO) and the Community Action Project (PAC 3). The e-voucher scheme in Niger operates in a similar manner to the one in Mali, as described above. PAC 3 aims to: (a) strengthen beneficiaries' capacities as part of planning and monitoring of local development; and (b) improve vulnerable populations' access to social and economic services. The project supports micro-projects implemented by community associations in line with the development plans of client governments. Beneficiaries are members of associations who are experiencing difficulties related to substantial shortfalls in cereal production, severe levels of food insecurity, high household indebtedness, major livestock losses, and so on.

IBM was implemented on a sample of 455 beneficiaries, including 202 livestock breeders for herd rebuilding and fattening, 220 for sustainable land and water management, and 33 for market gardening. IBM results show that 52 percent of project beneficiaries were women. However, about 10 percent of women did not receive training for improving their activities while only 1 percent of men missed out. In practice, the Management Committee supposed to follow up on the activities of beneficiaries paid more attention to men's activities compared to women's (with 94 percent of men receiving follow-up activities against only 56 percent of women). One of the main weaknesses of project implementation highlighted by IBM was delays in providing support to beneficiaries, with about 50 percent of beneficiaries receiving support from the project at least three months after transmitting their financial contribution for the co-funding of their project. On average, men experience a delay of 2.5 months while women waited 3.6 months before receiving support from the project. A grievance mechanism is in place for project implementation to allow beneficiaries to report constraints and problems they face. However, 39 percent of beneficiaries were not aware of this mechanism. Results of the monitoring were shared with the project teams in the World Bank and the Government. The report has just been completed, and the next round of IBM will assess any actions taken as well as their impact.

3.3 IBM applied to healthcare projects

IBM is being applied to support for the Government's healthcare assistance program (RAMED), which aims to provide free healthcare to the extremely poor in Mali. It aims at helping the extremely poor in Mali receive free healthcare when they get sick. To achieve this aim, the extremely poor are identified and provided with health insurance cards to present at the hospital. Discussion with the project team raised a concern about the distribution of health insurance cards and their acceptance in clinics. Hence, the entry point for the implementation of IBM in this long-term project was to assess the extent to which insurance cards were distributed and whether clinics readily accept those cards. Two rounds of IBM on 700 beneficiaries each were designed for the project to last until December 2018. Having validated the survey materials with the Government's project team, the IBM team obtained the list of potential beneficiaries along with their phone numbers. This provided the option to collect data by phone as many phone numbers were functional. Each person selected in the sample and not accessible had to be called four times before confirmation that they were not reachable over the phone.

The first round of IBM exhibited several issues hampering the operation of the project. Contrary to the project manager's views about large-scale distribution of insurance cards, the first round of IBM revealed that only 39 percent of beneficiaries received their cards. In fact, although cards were printed in Bamako and sent out to mayors in beneficiary municipalities, mayors were given no means of distributing the cards. In addition, even among those who received their cards, some had to pay for consultation and

medication at the hospital despite showing their health cards. Talking to hospital doctors revealed that awareness campaigns do affect beneficiaries' use of cards. However, hospitals were not confident that they would be reimbursed if they provided free consultation and medication to patients holding health certificates. Finally, some beneficiaries had not been made aware of the importance of the cards and did not know why they have been granted those cards.

Dissemination of the report led to two main initiatives related to the project: (a) sending the information mission to clinics to reassure them of payment and explain the method for claiming reimbursement when offering free healthcare to patients showing a health card and to inform beneficiaries regarding the use of the cards; and (b) promoting the distribution of cards. The project combined card distribution with payments of cash transfers since RAMED beneficiaries are also beneficiaries of cash transfers. This increased card distribution from 39 percent to 52 percent as measured during the second round of IBM, which took place three months after the first round. However, clinics still refuse to provide free healthcare to beneficiaries, and half of those who went to hospitals with a card paid for services. One suggestion was to set up a helpline beneficiary who faced resistance at the hospital could call so that a project manager could explain the mechanism and convince the hospital.

Figure 3: Percentage of patients who paid for medication and consultation

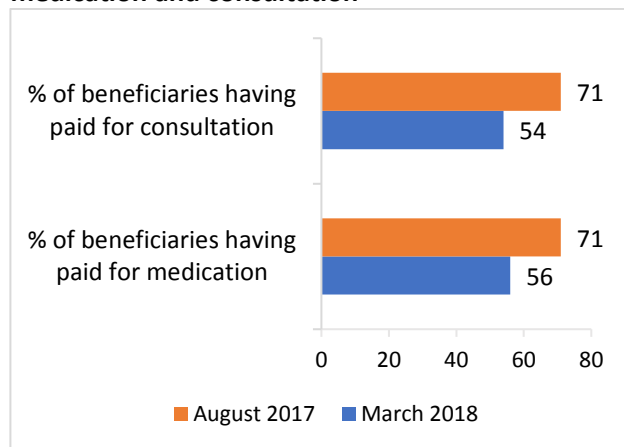
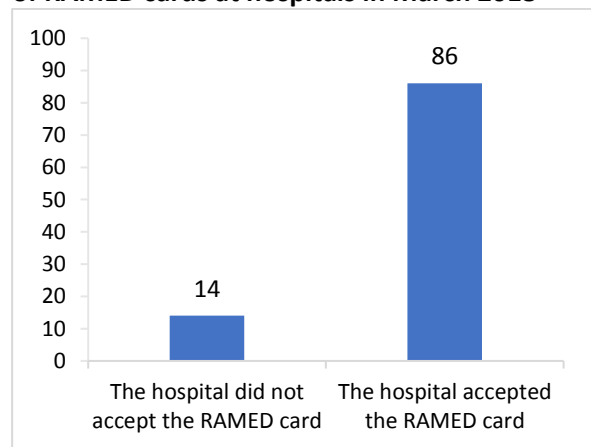
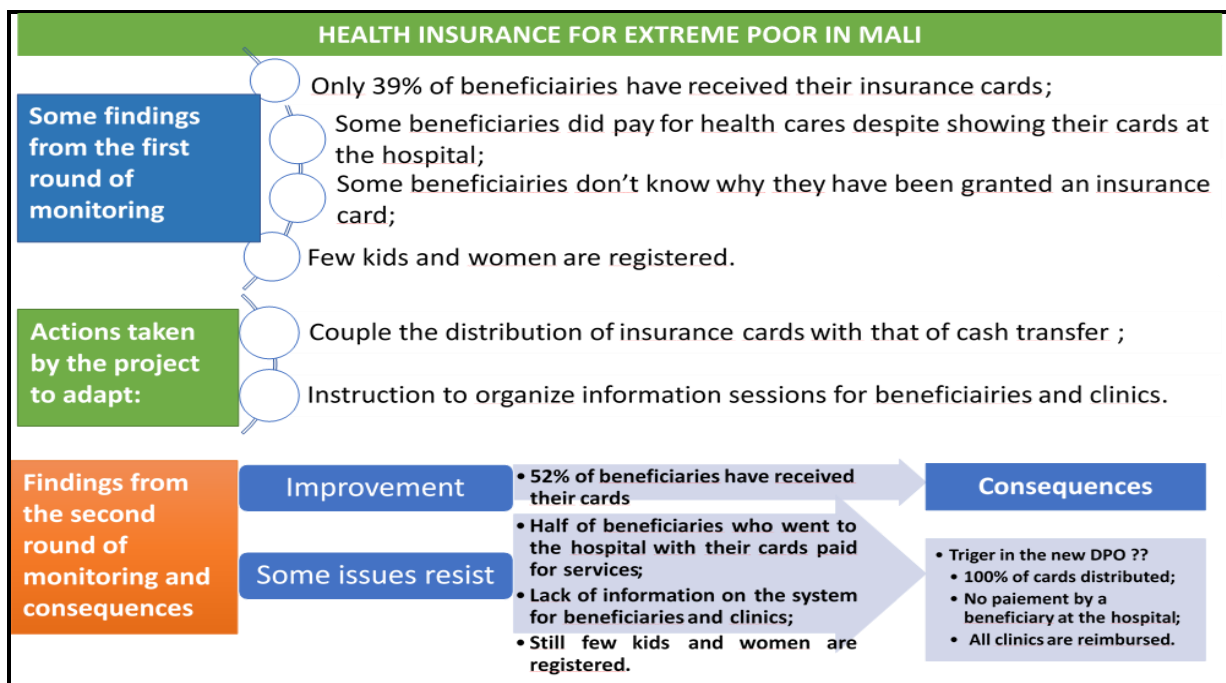


Figure 4: Percentage of patients by acceptance of RAMED cards at hospitals in March 2018



Box 2: IBM on health insurance project: Summary



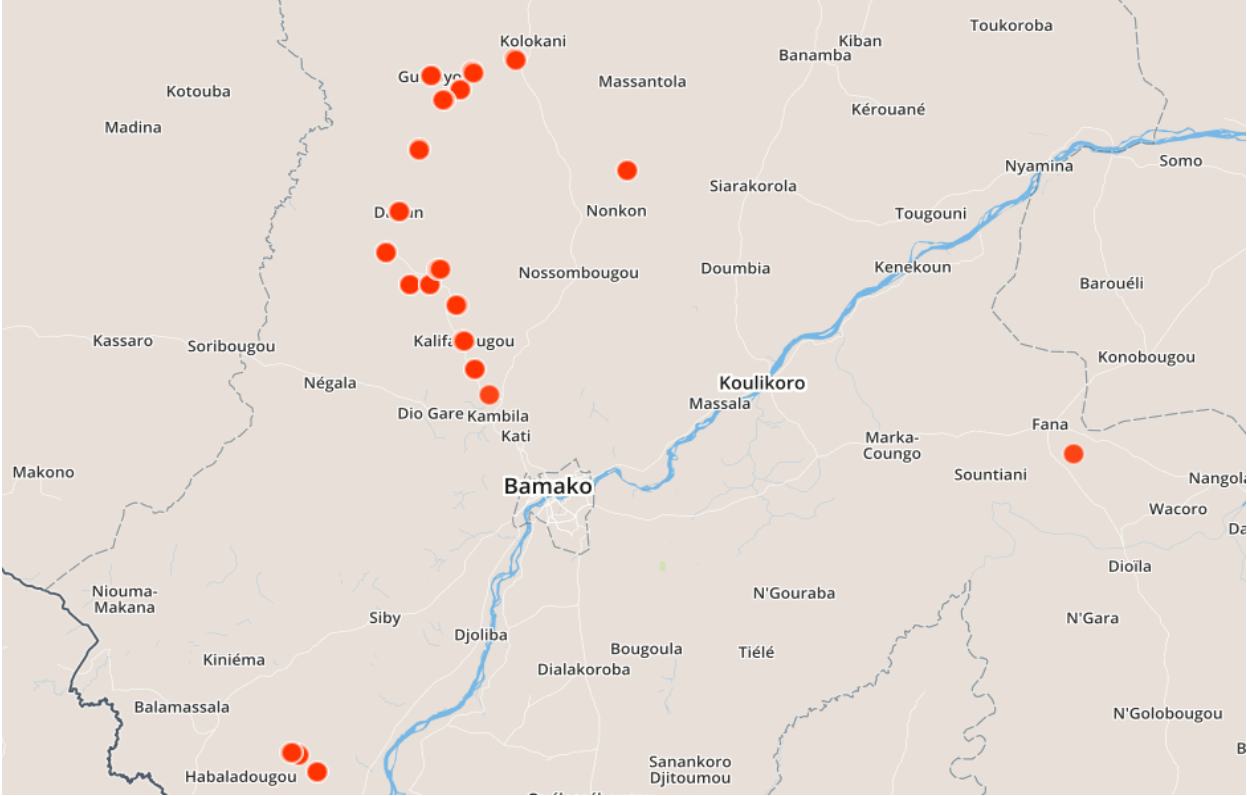
3.4 IBM applied to transportation projects

The Rural Mobility and Connectivity Project and its Citizen Engagement component in Mali also use IBM. The project aims at rehabilitating rural roads and bridges in rural municipalities in two regions of Mali: Koulikoro, and Sikasso. While works were still under way, the project leader and the project coordinator in the Government paid attention to several issues, including: (a) whether awareness messages through rural radio stations were heard by the population; (b) high-quality bypasses were constructed; (c) the grievance redress mechanism (GRM) was in place and the population knew how it operated; (d) the completed infrastructure was of good quality or instead became flooded and blocked during the rainy season; and (e) the population was satisfied with the infrastructure. Those concerns constituted challenges to be addressed at the onset of IBM implementation. People living around the roads and bridges under construction or rehabilitation were expected to provide answers to these questions. Two enumerators were trained and sent to the two regions to collect data.

IBM design thus went through an F2F survey for data collection and targeted populations living around road sections and bridges eligible for the project. In the absence of lists of such people, the enumerators were asked to randomly choose households following the “random walk” method. Starting from a well-known point in the village (school, clinic, pharmacy, bakery, and so on), the first household is chosen. The enumerator then moves forward, skips five households, and selects a second household. The process continues to cover the entire village until the enumerator reaches the number of households identified in the village. Overall, 90 households were chosen, and their heads were interviewed for the survey. Because of enumerators traveling to the project areas and visiting households, it was possible to map the position of households and to confirm that they lived close to relevant infrastructure.

During this first phase of data collection in the field, the enumerators collected the phone numbers of household heads, which will be used for subsequent rounds of IBM. The phone survey could also be used to collect data on issues such as gender-based violence (GBV), as requested by the project leader. On this last point, the idea is to conduct a phone survey that guarantees the confidentiality of responses and asks respondents whether they noticed any signs of GBV between a member of their household and a worker on the project. A questionnaire for this type of IBM will be designed by gender specialists.

Position of villages visited as part of IBM



Despite delays, awareness messages were sent to beneficiary villages using rural radio stations. Overall, 90 percent of households heard a message related to the project before or during the project. In addition, more than half of household heads participated in a sensitization meeting on the project. For the project leader, the Government project coordinator, and those responsible for the citizen engagement component, this result indicates the potential of sensitizing the population through rural radio stations since they aim to ensure that the degree of information does not decrease in future given that the project is based on a sequential approach, with each sequence benefitting from sensitization activities. Future IBM reports will assess these activities, compare results, and send findings to stakeholders.

The IBM report confirmed the operation of the GRM. More than 80 percent of households were aware that they can file a grievance if they were negatively affected by the project. In addition, 90 percent of those households knew where to file such a grievance. Furthermore, all those who said that they were affected by the project filed a grievance with the GRM office. However, more than half of those who did so received no answer within 40 days, as stipulated by the Procedural Manual. Subsequent rounds of IBM will ensure that people affected by the project continue to file grievances and that these are answered on time.

Works started in all villages but made varying progress in different villages. The photos below show a bridge and a portion of a road rehabilitated by the project. These roads are almost finished or are the most advanced. In some municipalities, households estimated that less than half of the work was completed, while in others, households claimed that not much has been done. Monitoring the progress of works by municipalities is another focus of IBM. As the phone numbers of households surrounding less advanced infrastructures have been collected, IBM will be designed to remotely follow the progress of these works.

Bridge and road under rehabilitation in Koulikoro



When rehabilitating a bridge or a portion of a road, firms are requested to first construct a bypass to serve the population during the period of works. While they are still working, it should be checked whether bypasses have been constructed and are useable. Otherwise, firms should be required to build bypasses to facilitate movement by the population. The photo below shows a bridge under construction along with a bypass. More than 90 percent of households stated that firms built bypasses when they rehabilitated a bridge or a road, though opinions diverged about quality. In some municipalities, more than 90 percent of households confirmed that bypasses were of good quality, though this figure falls to 85 percent in some municipalities and as low as 34 percent in others.

Bridge under rehabilitation, with bypass



IBM also assessed beneficiary satisfaction about the quality of rehabilitated infrastructures. More than 90 percent of households were satisfied with the project outcomes, which they thought were of good quality. However, almost 20 percent of households stated that rehabilitated bridges and roads were flooded during the rainy season and interrupted population movement. This last result calls into question the population’s qualifications for judging the quality of the built infrastructure. It also points to the limits of the information that can be collected by IBM from beneficiaries. For example, beneficiaries’ views about the quality of infrastructure such as roads, bridges, classrooms, buildings, and so on should not be mistaken as approval of the technical specifications.

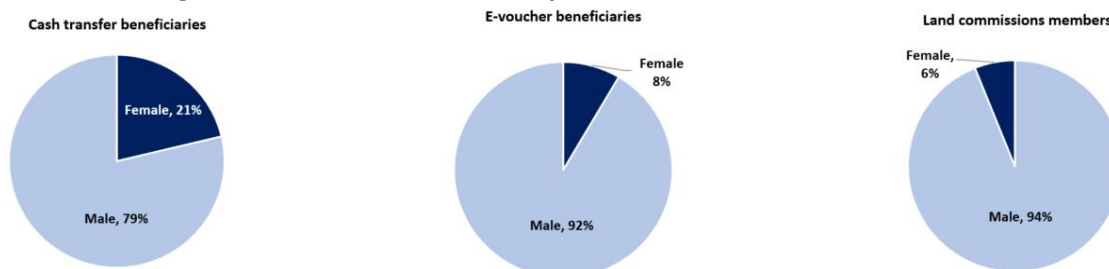
3.5 Mainstreaming IBM in AFCW3 countries: What next?

The general approach is to support projects representing the various pillars of the Country Partnership Frameworks (CPF) and to provide opportunities for benchmarking across the CMU for similar operations. Extending IBM in AFCW3 countries will mean introducing it in other sectors and projects in Guinea and Chad in addition to Mali and Niger. Projects common to all or some of these countries will be targeted and monitored using the same questionnaires. For instance, the Rural Mobility and Connectivity Project is being implemented in Mali, Niger, and Guinea and managed by the same team from the World Bank. Lessons learned from IBM on that project in Mali will be used to design projects in the other countries using the same questionnaire, adapted as necessary. Regional projects in these countries are also targeted. This is the case of the Regional Project for Support to Pastoralism in the Sahel (PRAPS) in the agriculture sector. This project aims at improving access to essential productive assets, services, and markets for pastoralists and agro-pastoralists in selected cross-border areas and along transhumance axes across six Sahel countries, including Chad, Mali, and Niger. The project started its activities in these countries two years ago. Using the same questionnaire, IBM will be applied in order to identify shortcomings that hinder its effectiveness and benchmarking across countries.

4. IBM and gender sensitivity

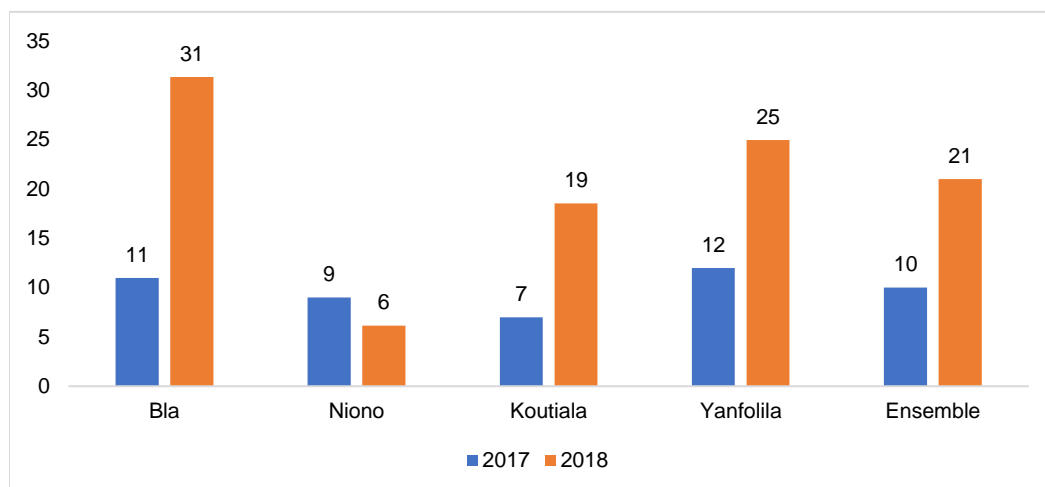
Because it collects evidence directly from beneficiaries, IBM has been highly effective at monitoring gender-related outcomes of projects. Generally, projects define the percentage of women to be targeted among beneficiaries, even though in many cases this percentage is not achieved. In several instances, alarming gender biases were uncovered by IBM reports. Beneficiaries of a cash transfer program turned out to be mostly men, as were the beneficiaries of the e-voucher program. In the former, the project transferred money to household heads. However, in Mali, 90 percent of household heads are men. This link between the criteria for selecting beneficiaries and local custom was disclosed by IBM. In the case of the e-voucher program, it chose to register land owners as beneficiaries of fertilizer instead of farmers who actually work the land. This criterion excluded women who work family land without being owners. In addition, agriculture products eligible for fertilizer were cereals, which are mostly produced by men. Vegetables and gardening products grown by women were not eligible. This choice excluded women as beneficiaries of the program. In another government project aiming at creating land commissions in each municipality to deal with land issues locally, it turned out that land commissions had almost no female members when in fact women are mostly affected by land issues. To be a member of a land commission, one should be a leader of a local association. However, in each municipality, there are hardly any women's associations, while there are men's associations aplenty. Therefore, few women were elected as members of land commissions.

Figure 5: Selected gender outcomes uncovered by different IBM activities



The adverse gender-related results uncovered by IBM were not the consequence of bad intentions. Projects were often designed with gender in mind and, in some instances, even employed gender specialists. Invariably, World Bank staff responded positively to the findings. Yet, a positive attitude alone is insufficient to ensure that gender biases are not perpetuated through project design and implementation. In some instances, the lack of gender sensitivity was a genuine oversight, and in the case of the e-voucher system, the approach to beneficiary registration was changed, and women were registered as potential beneficiaries along with household heads. As a result, the percentage of women beneficiaries increased even if it did not reach the agreed 40 percent. In 2019, IBM will assess whether this figure has changed.

Figure 6: Percentage of women among beneficiaries of fertilizer in Mali



Upon further reflection with managers of cash transfer projects, it was agreed that the issue could be addressed by reframing cash transfers as support to women as opposed to households, and additional financing for the social protection program under preparation will take this approach. Managers are also committed to making gender an agenda item during project implementation for each concept note and decision review for new projects and will continue to encourage the IBM team to collect information on gender outcomes from ongoing projects.

5. Other uses of IBM

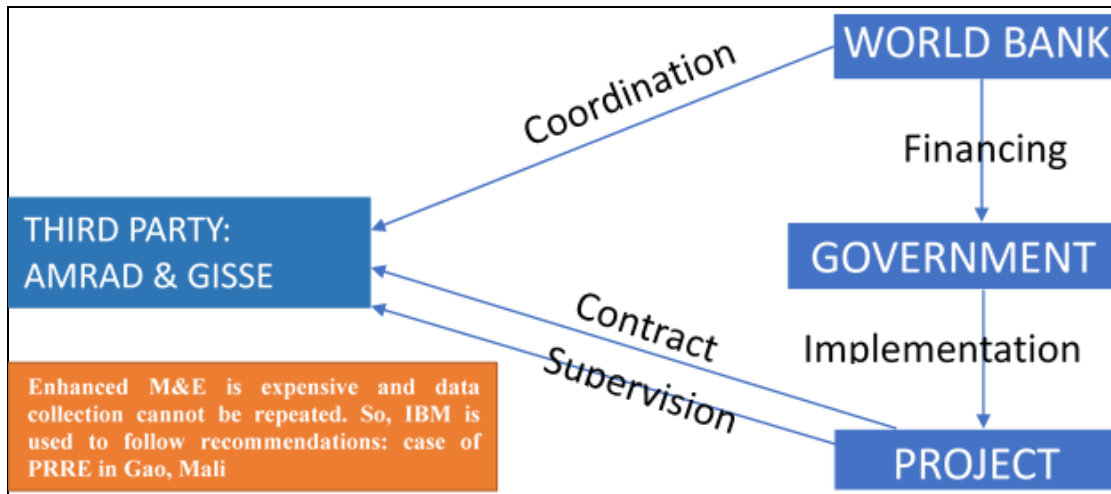
5.1 IBM to take over Enhanced M&E

IBM can be used to pursue supervision activities undertaken through the Enhanced M&E (formally Third-Party Monitoring) mechanism, which is costly and difficult to repeat. This approach is being piloted in Gao region (Mali) on the Reconstruction and Economic Recovery Project (PRRE). This was introduced in a context where supervision of operations supported by the World Bank in Mali was constrained by protracted insecurity, particularly in areas directly affected by the 2012 conflict. In this context, the regular project supervision mechanism so far applied by the World Bank revealed limitations in terms of allowing the Bank's teams to support the country in timely and effective fashion and to ensure that operations yielded expected outcomes on the ground. Hence, the Mali CMU engaged over time in discussions with specific Global Practices to initiate alternative approaches in support of more effective project supervision of operations by World Bank teams. One of those initiatives is Enhanced Monitoring and Evaluation (Enhanced M&E).

A pilot phase of Enhanced M&E is being conducted in Gao for the country's Reconstruction and Economic Recovery Project (PRRE). The proposed Enhanced M&E arrangement is articulated around the combination of two complementary instruments: one involving noncomplex activities targeting infrastructure projects that have already been completed, the other requiring relatively complex activities for the monitoring of ongoing or planned infrastructure investments. The first instrument relies on the Economic Statisticians Scientific Interest Group (GISSE), a firm that conducted a single field mission to collect data from all targeted sites where infrastructure works have already been completed in Gao. The second instrument is built around a non-governmental organization (NGO), the Action Research for

Development Association of Mali (AMRAD), which conducts periodic missions to targeted sites as infrastructure works evolve to collect required data and information on both technical and social dynamics. The World Bank provides funding for the project and coordinates Enhanced M&E activities. The Project Implementation Unit (PIU) set up by the Government implements the project, signs contracts for third parties, and supervises them.

Figure 7: Diagrammatic Representation of Enhanced M&E in Mali



However, Enhanced M&E is expensive (see Table 3 for examples) due to the costs associated with insecurity risks and therefore cannot be repeated. It is funded through project resources that would otherwise be allocated to other activities. Thus, projects cannot afford repetition of the Enhanced M&E approach, and Enhanced M&E is usually a one-time activity that provides a snapshot of the project but cannot follow up on recommendations.

To maintain permanent oversight of projects covered by third parties, these are requested to keep a record of the phone numbers of beneficiaries and all stakeholders and to take photos of infrastructure. Later, IBM is implemented to follow up on the recommendations from the Enhanced M&E and to assess changes using the beneficiary database constituted during Enhanced M&E visits on the ground. Beneficiaries are asked to send new photos of the infrastructure, which are then compared to earlier ones to confirm that requirements were met. For instance, during the Enhanced M&E of the PRRE project in Gao, the NGO and the private firms contracted provided photos of student desks in bad shape, and the procurement specialist required that those desks be replaced before acceptance of delivery and payment to the providers. By the time the desks were replaced, the Enhanced M&E activities had been completed, and the desk replacement was verified by IBM, which requested that school principals confirm the same with photos.

Table 3: Cost of Enhanced M&E on World Bank projects

Pays	Project	Cost (US\$ millions)	Cost of Enhanced M&E (US\$ thousands)
Cameroon	Transportation Project	100	1,300
Mali	Reconstruction and Economic Recovery Project	100	639
Somalia	Reconstruction and Sustainable Development Project	250	12,000
South Sudan	Migration Project	260	2,000
Afghanistan	Reconstruction Project	3,300	30,500
Pakistan	Crisis Recovery	200	1,600
Iraq	Emergency Project on Education, Development, and Transport	955	1,800

5.2 IBM in support of Development Policy Operations

IBM has been used in Mali to consolidate evidence provided by the Government as part of the budget support program. A series of Development Policy Operations (DPO) has been implemented in the Mali CMU since 2016, focusing on poverty reduction and inclusive growth while providing support to the budget. While the old DPO series focused on strengthening public financial management (PFM) systems and governance, the ongoing series orients structural reforms toward specific sectors as well as inclusion. This series aims at unleashing the potential of key economic sectors such as agriculture, health, power, telecommunications, and roads. In so doing, it also aims at supporting the Government’s efforts to ensure inclusive and resilient growth through increased transfers to the poorest and most vulnerable population and the extension of social protection coverage.

In Mali, IBM has been used as a tool to validate evidence of prior DPO actions completed by the Government. It was applied to assess the evidence for the e-voucher scheme, the land commissions, and the health insurance program for the extremely poor. In Guinea and Chad, IBM will support the DPO series based on indicators related to social projects in the agriculture and education sectors. As regards the e-voucher scheme in Mali, IBM confirmed the claim by the Government that the protocol for the distribution of fertilizer was followed. Sensitization messages needed to be sent at a specific moment before the onset of distribution. IBM used its call center in Mali to confirm with farmers that they received those messages as claimed by the Government. In addition, it was possible to assess the role of those messages’ usefulness in the success of the e-voucher scheme. Following the sensitization message, the DPO trigger requested that e-vouchers be sent at a specific moment to all farmers. As the lawyers argued that a simple letter from the Government was not enough, IBM was introduced in order to phone a sample of farmers to find out when they received their e-vouchers. Results of that enquiry, including the percentage of farmers who confirmed receipt of e-vouchers and the date at which they were received, were sent as evidence to the lawyers who validated the information.

Regarding the health insurance program for the extremely poor, IBM confirmed that insurance certificates were distributed and further compared the percentage of beneficiaries who received them to the target

in the DPO matrix as well as the claim by the Government. The rapid system confirmed whether beneficiaries received free healthcare when they got sick and went to the hospital as well as whether clinic managers were reimbursed by the project. A repetitive system was implemented to ensure there were no shortcomings at any stage in the project that could undermine its efficiency. Regarding land commissions, the lawyers wanted evidence that they had been created and were functional. After gathering this information, IBM was used to assess whether the land commissions organized meetings to address land issues in their municipalities by phoning a representative sample of members in each commission. Results were accepted as evidence by the lawyers. Since the operations of these commissions should be permanent, this frequent and rapid survey of commission members has become regular.

6. Conclusion

IBM proved to be an effective tool that can enhance project impact. It was implemented in different sectors to help projects achieve their objectives effectively. However, IBM implementation faces a number of risks and challenges. The main risks are related to obtaining lists of project beneficiaries with their contact information, delays in addressing issues identified during the first round of IBM, network-related issues, and insecurity. Since these risks might undermine the implementation of the system, the success of IBM relies on the collaboration and engagement of those project managers who should make available the lists of beneficiaries. Given the positive effects of IBM in Mali and Niger, the high interest expressed by project leaders, and the involvement of project coordinators, the risk of non-collaboration is low. To mitigate the risk of delays in addressing issues identified and triggering subsequent IBM rounds, the IBM team can join the project team in finding solutions after dissemination and ensuring follow-up. To mitigate the impact of network-related issues, phone and field surveys can be combined. In the absence of beneficiaries' phone numbers, enumerators are sent to the project area for data collection despite exposure to insecurity. In that case, data collection is kept to a minimum, and enumerators are introduced to local authorities to avoid confusion with other agents. During their first visit to the project area, enumerators collect phone numbers of beneficiaries and stakeholders for subsequent rounds of data collection.

Challenges come from different sources. IBM's iterative feedback approach is relatively straightforward, but applying it successfully requires care. Building a good rapport with a project team is critical because no one likes to receive negative feedback, although this is precisely what an iterative feedback system is meant to do. Confidentiality, good relations with project staff and the Government, and agreement on the shared objectives of the monitoring process are essential. Once the objectives of the monitoring process are clarified and aligned with those of those responsible for project implementation, reticence typically disappears.

Starting IBM early in the project's life increases positive impact. Hence, integrating an iterative monitoring approach into the project design has the benefit of identifying options for beneficiary monitoring early on. Small changes in the project design or in the procedural manual can greatly facilitate iterative monitoring. For instance, it makes a difference when the procedural manual stipulates that phone numbers and core characteristics of beneficiaries need to be captured in an electronic database that can be accessed for sampling and (anonymized) monitoring. In addition, when the procedural manual stipulates that certain benefits need to be distributed by a certain date, it offers a clear point in time at which progress toward project objectives can be measured.

Even if an iterative monitoring approach is only designed during the project implementation phase, ways can be found to make follow-up monitoring easier. Registering the phone numbers of respondents during F2F interviews allows for easy follow-up. During each round of the IBM process on school meals, the phone numbers of respondents (cafeteria managers, head teachers, and household heads) were collected for future follow-up. Sometimes, feedback is offered voluntarily, with beneficiaries providing information to the project team, often by text message, about instances when the money for school feeding was exhausted before the expected date, whether the money arrived on time, or any other issues affecting the operations of the cafeteria. When such information is received and deemed relevant, the project team can use the phone numbers of other beneficiaries to verify whether what was reported is a unique case or a more generalized problem.

Another issue for consideration is who should conduct the monitoring. In Mali and Niger, staff from the Poverty and Equity Global Practice are responsible for data collection, while sector staff facilitate dialogue with the project teams. Working with Poverty and Equity Global Practice staff has major advantages since they have ample experience with sampling, designing instruments for data collection, training enumerators, and executing primary data collection activities as well as with data analysis and reporting. Moreover, its staff is familiar with the World Bank and its operations.

Local presence is another important element for success. Presence facilitates building trust with the project teams and an understanding of how the project operates and makes it much easier to have discussions about results and corrective actions. Presence close to the location of project implementation also increases responsiveness, which is important when issues need to be identified and addressed quickly since lost days cannot be made up, missed meals cannot be replaced, and agricultural inputs distributed late are of little use to farmers.

Familiarity with project procedures and staff facilitates the design of an iterative feedback loop, and outsourcing the approach in the same way as financial audits are outsourced is likely to be a challenge. However, an intermediate approach could work. An IBM specialist could be hired within projects and operate independently similar to procurement and financial specialists. Designing instruments and reporting could be left to staff familiar with household survey design and analysis, and dialogue with the client could be left to those responsible for the project, while data collection could be outsourced. This setup is feasible within the World Bank's project architecture as staff time can be funded out of supervision budgets while data collection can be funded out of the M&E budget of each project. This institutional setup underscores the respective responsibilities of both the recipient government and the World Bank for project implementation and supervision while guaranteeing sufficient separation of functions to avoid reporting bias.

Annex

1. Sampling method²

The sampling for IBM surveys varies from one project to another. There is no single methodology that can fit all monitored projects. In general, sample size depends on the budget and time constraints. Budget allocated for data collection should not exceed \$5,000, which mostly pays for enumerators and credit for phone surveys. To maintain rapidity and ensure high data quality, IBM deploys enumerators in the field or uses phone calls for no more than two weeks. When the number of beneficiaries is less than 1,000, all of them can be sampled if time and budget allow it. This option was used in Niger on the e-voucher project, which had less than 500 beneficiaries. When project size exceeds 1,000 beneficiaries, IBM applies a formal sampling methodology. For instance, applying IBM to school meals, e-vouchers, and healthcare in Mali followed a probabilistic approach to sampling.

To identify shortcomings hampering a project, it is not necessary to always target all beneficiaries or all regions where beneficiaries live. Everything depends on the challenges. At the first attempt, the team may consider a region close to the capital in order to assess the time taken for providing services or goods or for transferring money to beneficiaries. If this time is found to be excessive, it can be inferred that the situation is even more serious for remote areas. If not, subsequent rounds of IBM can go further in selecting the sample. From one round of IBM to another, it is advisable that the project team draw new samples, which may help reduce selection bias (if any) during sampling.

As regards the school meals project in Mali, the first round of IBM focused on Koulikoro region, the nearest to Bamako. We expected that proximity to the capital would facilitate supervision and limit money transfer times. A total of 68 schools in that region benefited from the project. Given the number of questionnaires (school principals, school meals managers, and parents), the budget, and the time constraint, we arrived at a size of 20 schools to be interviewed in F2F mode. After numbering the schools, the sample of 20 was randomly selected using the systematic sampling approach. In each selected school, all principals and school meals managers were interviewed. In each class, five students were randomly selected, and their parents also participated in the survey. Based on the results, which showed serious problems in that region, the second round of IBM applied on 30 schools in addition to the first 20 still focused on in the same region. With positive results noted in the second round, the third round expanded to Gao and Mopti, which are far from the capital as well as affected by insecurity.

For the e-voucher program as well as the health insurance program for the extremely poor in Mali, the lists of beneficiaries was available with their phone numbers. Accounting for the time and budget constraints, we determined sample sizes (100 for the first round and 800 for the second round for the e-

² The universe populations for IBMs in Mali were as follows: School meals (first and second rounds: 68 schools); E-vouchers (first round: 252,995 farmers; second round: 97,476 farmers; third round: 92,792 farmers and 106 suppliers); Healthcare insurance (first and second rounds: 4,035 beneficiaries). In Niger, the universe populations were: 300 for the PPAO, 12000 for the Safety net project, and 455 for PAC3.

voucher program, and 700 for the health insurance program), with the samples selected using the systematic sampling method and covering all regions where the projects were implemented.

About the rural mobility and connectivity project, the request from the project team was to measure the impact on populations living close to infrastructures being rehabilitated. In the absence of a list of those households, the sample (90 households) was selected in the field using the random walk method. Starting from a well-known point in the village (school, clinic, pharmacy, bakery, etc.), the first household is chosen. Then the enumerator moves forward, skips some households, and selects the second one. The process continues to cover the entire village until the enumerator reaches the number of households as defined in the village. The second round of IBM under preparation, which targets users of rehabilitated roads and bridges, plans to use the quota method.

2. Questionnaire

IBM questionnaires are specific to each project, they depend on challenges met under monitoring, and are adaptable from one round to another within the same project. There exists no standard questionnaire usable for IBM on all projects. However, IBM questionnaires focus on a maximum of five main challenges, and questions are phrased to monitor these. Questionnaire design is also based on the type of beneficiaries of the project (individuals, communities, NGOs, etc.). When respondents are individuals, the first questions capture the socio-demographic characteristics after information on geographic localization for spatial analysis. When the respondents are NGOs, municipalities, or other entities, questionnaires start with geographic localization. Following those questions, which might be transferred from one project to another, the remainder of the questionnaire contains questions specific to the project and the challenges under consideration. Questionnaires used so far for IBM may be shared upon request.