



**KACHE**  
ACF EMERGENCY TOOLKIT  
Supported by WFP

## KIT FOR AUTONOMOUS CASH TRANSFER IN HUMANITARIAN EMERGENCIES



# >>>> KACHE Project

— WFP Cooperating Partners' Innovation Fund —



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## Executive summary <<<<

The present document reports the development of the Kit for Autonomous Cash transfer in Humanitarian Emergencies (KACHE), built upon Red Rose ONE system© supported by the WFP's Cooperating Partners' Innovation Fund (CPIF). The project started on August, 2014 and ended on December, 30th, 2015. KACHE project offers standardized functionalities/features that can adapt to all types of delivery mechanisms to overcome operational challenges that ACF operations confront in Cash Based Interventions. The project went through the following four phases (i) Project Launching: ACF launched a project Steering Committee (ii) Kit development: This phase involved the development of the e-transfer kit as a beta version including all pre-defined requirements (iii) Field test: this stage comprised training and field testing the kit in a real-life scenario. It was tested in Mali, Gao during a World Food Programme and ACF e-voucher distribution to 724 families (iv) Ready to use: The last stage was to have a ready to use kit for emergency deployment, including Standard Operating Plans. This project culminated generating stand by capacities as part of the emergency preparedness component of the toolkit.

Final results showed that the 5 functional design's performance indicators – i) Ease of Use, ii) Speed, iii) Security, iv) Autonomy and v) Reliability- have been achieved to various extents. 96% of the functionalities required during the kit design were developed working together with Red Rose ©<sup>1</sup>. Crucially, the emergency response teams have now a pre-stocked reliable cash transfer kit that can be deployed rapidly where appropriate and feasible, even in absence of basic infrastructures. ACF has delineated a scaling up plan in order to ensure that KACHE's functionalities become available broadly to achieve higher level of effectiveness and accountability in every operation. During 2016, KACHE project will be available to support ACF's operations aiming at reaching more people, faster to maximize the impact of each euro delivered to assist affected population during humanitarian emergencies.

<sup>1</sup> Refer to Technical functionalities follow up (Annex 06)

## >>>> Acknowledgements

I would like to express my very great appreciation to ACF Mali 'staff which without their professionalism, humanitarian commitment and amenity the KACHE project could have never being field tested in such a challenging context. Special thanks to Amadou Traore, Head of project, Bakary Traore and Natacha Calandre FSL Coordinator (Mali) for keeping the KACHE going during the hardest circumstances. Mention to Ali Ouattara, Programme Officer/Cash Based Transfer from WFP and his team for continuously promoting a coordinated environment.

I am particularly grateful to Miguel Martin, IT KACHE focal point for his tireless and valuable contribution to this project. I would like to offer my special thanks to Julien Jacob for his constructive and creative suggestions and extend it to Helen Pasquier, FSL Advisor, Maria Estecha, Head of Procurement and Julio Tarin, Head of TIC for their constant support as well as to Carlos Valdez, internal auditor for his insights regarding data protection. I acknowledge the great contribution from Olga Maroñas during data analysis and reporting and ACF International's inputs through the Cash transfer working Group. Thanks to the Board of Directors for supporting the institutionalization of the tool within the organization. And to the Emergency Pool for adopting it as part of their emergency response framework.

I offer a special mention to Jerry Cole and Hakan Büyükbayrak from Red Rose, whom it has been great to work with in a really collaborative way.

And last but not least, I would like to express my deep gratitude to the 724 Malian families and community leaders for letting us test a new tool to improve humanitarian assistance.

Maria Jimena Peroni Galli  
*KACHE Project Coordinator  
Action Against Hunger*



# 1 >



# >>>> Introduction

The present document reports the development of the Kit for Autonomous Cash transfer in Humanitarian Emergencies (KACHE), supported by the WFP's Cooperating Partners' Innovation Fund (CPIF). The project started on August, 2014 and ended on December, 30th. It is structured as follows:

Firstly, it gives a brief description of the main features of the kit.<sup>2</sup> Secondly, it describes the process ACF went through within the innovation cycle. Thirdly, it presents the results of the kit performance during field testing in Gao, Mali. The subsequent section offers an overview of ACF plans to scale up KACHE to overcome operational challenges in operations. It ends by documenting lessons learnt and recommendations for 2016.

<sup>2</sup> For more detailed information regarding the technology used, refer to [Red Rose ONE Solution](#)

2 >



>>>> **KACHE where there is no other means to deliver**

The introduction of electronic delivery mechanisms for cash transfers (“E-payments”) has the potential to enable greater scale and speed of response, enhance specificity of resource transfers to match needs of crisis-affected populations, improve monitoring and increase accountability while reducing opportunities for corruption and diversion. Therefore, E-payments can provide more efficient and reliable delivery of cash payment than manual systems.

However, despite overall positive experiences with E-payments, these are not being adopted systematically due to an overall lack of infrastructure which limits their potential use.

To overcome this lack of infrastructure, ACF developed the Kit for Autonomous Cash transfer in Humanitarian Emergencies (**KACHE**), built upon **Red Rose ONE Solution**, and supported by the WFP’s Cooperating Partners’ Innovation Fund (CPIF). Basically, it enables ACF to make use of electronic cash transfers in emergencies where no suitable infrastructure is available.

>>>>>> > 2. KACHE where there is no other means to deliver

The final goal of the kit is to rapidly set-up an electronic payment system where there is no other means to deliver products/services than through old-fashioned procedures like paper voucher or cash in envelope. The KACHE toolkit presents the following advantages:

### 7 features about KACHE

Kit for Autonomous cash transfers in Humanitarian Emergencies.



#### FIELD TESTED

ACF built KACHE upon RED ROSE One solution technology and that tested it in more than 9 countries



#### RELIABLE

The system is reliable, meaning that it consistently performs according to its specifications. It tracks the whole delivery process and allowing monitoring.



#### READY TO USE

The system has been developed to be easily used in emergencies. It works online and offline, and can last up to 4 days without power. Batteries may also be charged externally and rotated.



#### SAFE

KACHE decreases fraud risks, as each beneficiary has their own smart card protected with a PIN code. If a card is stolen it can also be deactivated.



#### FAST

The system stands out for its high speed especially during the registration of beneficiaries, for credit top-ups, for payment reconciliation, and for monitoring.



#### EASY TO USE

The system has been developed so that it's easy to use by beneficiaries and vendors. The implementing staff will just need a previous four days training to be able to set it up. Decision makers will have access to summarised dashboards ready to use for monitoring and reporting.



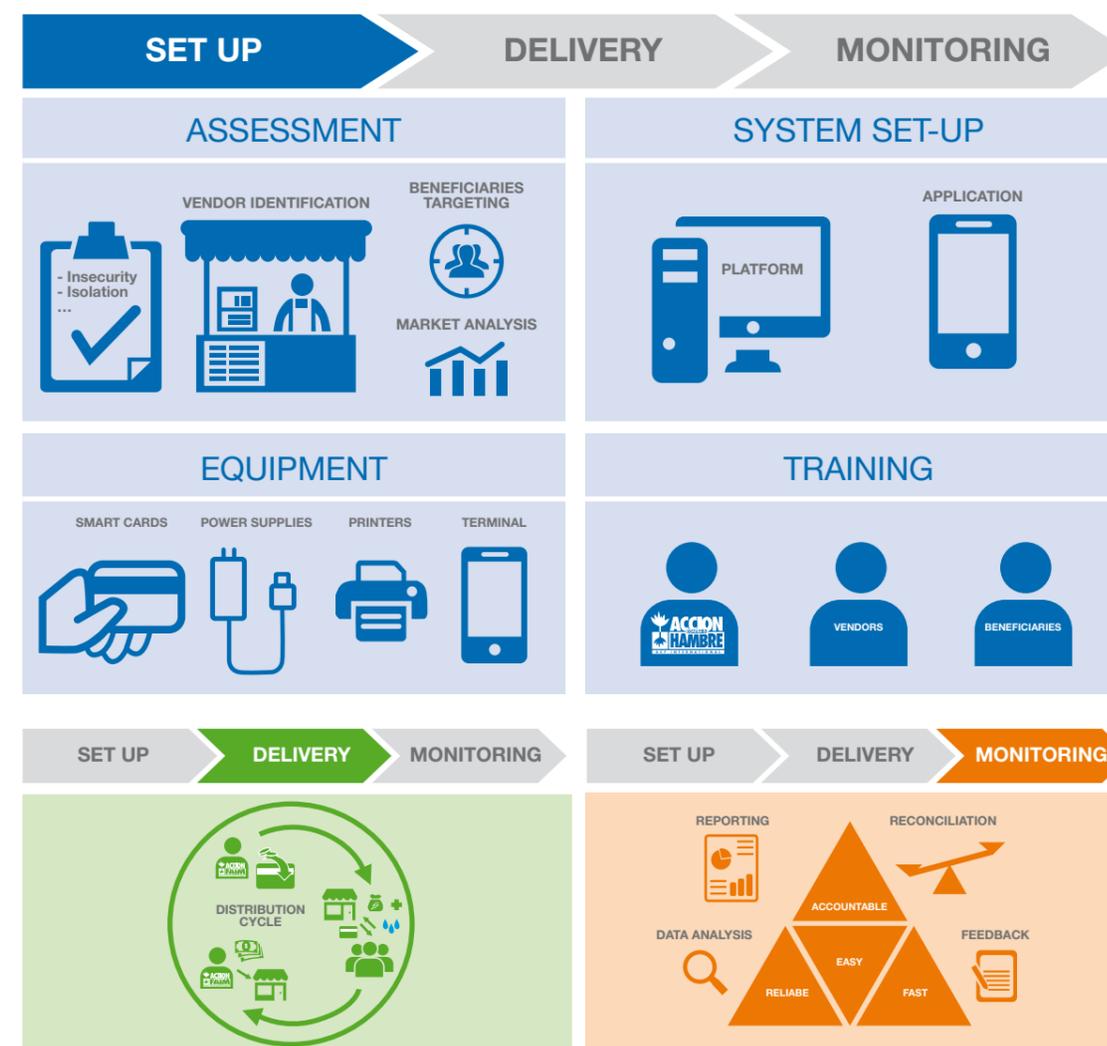
#### FLEXIBLE

The system can be used to deliver cash, voucher and services. KACHE platform can be integrated to financial money operators, etc.

- **MOBILITY:** physical and rapid deployment in any operation
- **AUTONOMY:** ability to be used “offline” in places with limited connectivity
- **SECURITY:** using “digital money” for improved security, monitoring and reduced fraud.

The kit mainly consists of a cloud-based platform ([www.kacheproject.org](http://www.kacheproject.org)), NFC<sup>3</sup> (near-field communication) smartphones with Android applications, Bluetooth printers and smart cards. The kit was designed to manage different modalities of cash transfers (e-vouchers, e-cash and paper vouchers) in contexts with no functioning local communication network.

### KACHE process



<sup>3</sup> Near field communication (NFC) is the set of protocols that enable electronic devices to establish radio communication with each other by touching the devices together, or bringing them into proximity

# 3 >



## >>>> How was the innovation process?

The present section summarizes the process ACF went through during the KACHE project.

The idea of KACHE came from a clear and defined problem identified based on the extensive experience of ACF in cash based interventions. The development of the concept note (2013) includes a clear definition of the humanitarian problem the innovation is trying to address (lack of infrastructure during most emergencies impeding a scale-up of E-payments) as well as the main characteristics the process and product need to comply. *“This definition is key to keep the innovation focused on the problem without being swamped into the varied technological options the private sector has to offer and at the same time foreseeing new opportunities working with them”.* <sup>4</sup>

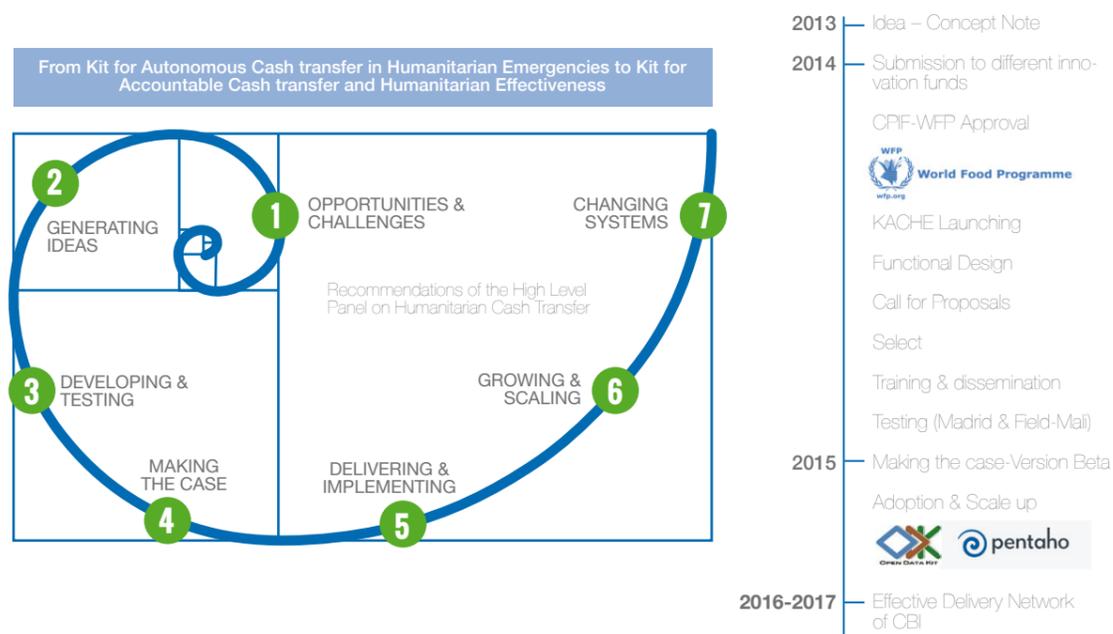
<sup>4</sup> Jimena Peroni, KACHE project coordinator

>>>>>> > 3. How was the innovation process?

The concept note (Annexed 01) was submitted to different innovation funds, and it was WFP’s cooperating innovation fund that selected KACHE over 200 proposals after an independent technical review by ODI (2013) <sup>5</sup>. The project, supported by WFP, started on August 01st, 2014 and closed on December, 31st, 2015.

### Innovation Stages

Where we are and where are heading to?



The project went through the following four phases (i) Project Launching (ii) Kit development (iii) Field test (iv) Ready to use.

<sup>5</sup> 3 proposals were selected.

### 3.1 Project Launching

1. The launch of ACF project Steering Committee, including Terms of Reference (TOR) for the technical solution, integrating the latest technical developments.

The first step was to conform and launch a Steering Committee that provided support, guidance and oversight of project management, technical development, dissemination and awareness. Please refer to the annexed TOR (Annex 02). The Committee was key to ensure the internal buy in from HQ and to keep a good performance of a team conformed by Technical and IT department.

During the first 2 months, in collaboration with ACF Information technology (IT) department, the team developed a detailed functional design which was clearly explained during the international call for proposals (Annex 03) opened in October, 2014. A complete report available under request describes the procurement process that ACF handled during 4 months to select a service provider meeting the requirements for an inclusive and self-contained KACHE kit for ACF, to be used for its emergency response programs. The selected service provider was **RED ROSE**, after a competitive and open two phase’s procurement process. The proposals were evaluated by a procurement committee comprised of ACF’s staff from Technical, Procurement and IT departments.



### 3.2 Kit development

This phase involved the development of the e-transfer kit as a beta version including all pre-defined requirements. The period February to May 2015 comprised a really productive and rich process of exchange of ideas; scenarios, development, refinement and testing between ACF and Red Rose's team which ended up field testing the available tools in Mali (refer to section 4). In addition, more than 50 Key performance indicators (KPIs) were designed, which up to date are the core of the main dashboards that KACHE can provide for progress monitoring.

### 3.3 Field test

This stage comprised training and field testing the kit in a real-life scenario. More than 40 HQ and field staff was trained during the process. After discussions with WFP HQ & OMD Regional Bureau, ACF's and WFP's Mali Office, the project was planned to be tested in Mali, based on the following criteria: (i) Good relationship between ACF-Spain and WFP CO (ii) Volume of the pilot likely to take place within ACF's cash transfer program's beneficiaries for 2015 (iii) Poor network in the country (iv) Capacity of ACF-Spain in the country (v) illiteracy of potential beneficiaries (user testing). Noting, that security challenges on North of Mali could be a future constraint for pilot testing; mitigation measures were considered.

From May to October 2015, the field test in Mali took place. However, due to a severe security incident in the area of operations, the set up was postponed one month. Overall the field test experience was considered a success, mainly as a result of the involvement of committed and skilled local staff in ACF Mali's office. Further information about field test's performance is available in the subsequent section.

From October to December 2015, the project focused on strengthening the platform's capacity to monitor key performance indicators (Annex 04) as well as its ability to provide solid data for better reporting and data visualization.

### 3.4 Ready to Use

The last stage was to have a ready to use kit for emergency deployment, including Standard Operating Plans. This project culminates generating stand by capacities as part of the emergency preparedness component of the toolkit. The training of ACF International Emergency Pools will take place in Madrid from February 8th -12th, 2016. It is a full time training tailored to Emergency Pools to build their capacity to deploy the system autonomously. During a whole week, participants will achieve the skills needed to reposition the kit and deploy it in any emergency response.

In addition, a scale up plan was designed and presented to ACF-Spain Board of Directors (September, 2015) to achieve the internal buy in of decision makers to move forward for a proper institutionalization of the tool. It was decided to allocate internal funds and to look for external ones to support the scaling up of the use of the toolkit in ACF operations and new developments expected in 2016 <sup>6</sup>.



<sup>6</sup> The training will be supported by ACF's internal training department

# 4 >

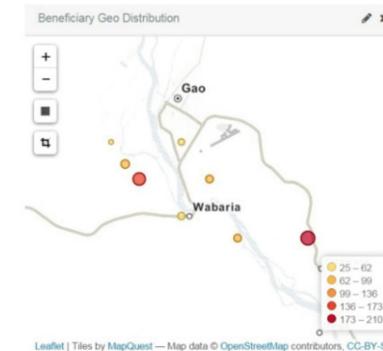


# >>>> How did the kit perform?

## 4.1 Progress monitoring

The kit was first tested in Gounzoureye commune in the Gao region of northern Mali from May to September 2015. As part of a project co-financed with WFP, 724 beneficiaries (31% women) received 39,000 CFA per month (circa 60 EUR) through the 'hunger gap' (3 rounds between July to September) in the form of e-vouchers based on KACHE's smart cards. A total of 8 vendors localized within 3 villages distributed goods for a total value of 84,707,110 CFA (circa 130,000 EUR) attending an average of 117 beneficiaries per day per vendor. 95% of the total amount transferred was redeemed by participants within 5 days of distribution each month. Monitoring data were accessible in real-time on a cloud-based platform, facilitating monitoring for ACF's staff and "the reconciliation/payment and reporting processes for WFP" <sup>7</sup>.

### Heat maps



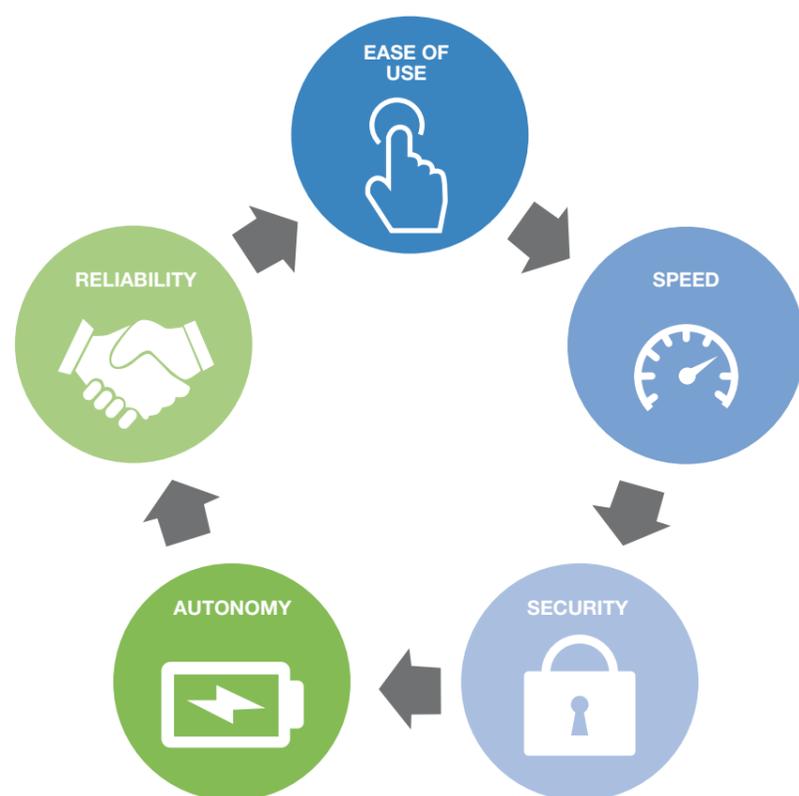
### Monitor trends in time



<sup>7</sup> Ali OUATTARA/Programme Officer/Cash Based Transfer PAM- Bamako, Mali. WFP was in charge of payments to wholesalers based on system's vendors data.

## 4.2 Evaluation Report

The performance of KACHE was evaluated in September 2015 against the functional design's performance indicators articulated around 5 pillars: i) autonomy, ii) reliability, iii) security, iv) ease of use and v) speed. In addition, the field test focused on internal and external stakeholders' capacity building and learning. The field evaluation and documentation consisted of a post distribution monitoring (PDM) survey using Open Data Kit (ODK), focus group discussions, on-line key informants interview (KII)<sup>8</sup>, a documentation workshop and an implementation issues review by the IT team. Refer to annex 05 for more details regarding the evaluation methodology and forms.



<sup>8</sup> The online survey was responded by 6 key informants out of 12 pre-selected. Key informants a selection criterion was to be a person that have had a direct role during the field test. A total of 5 respondents were from ACF and 1 from WFP. Out of 6, three were from HQ, 1 from Capital office, and 2 from the field.

## > GLOSSARY

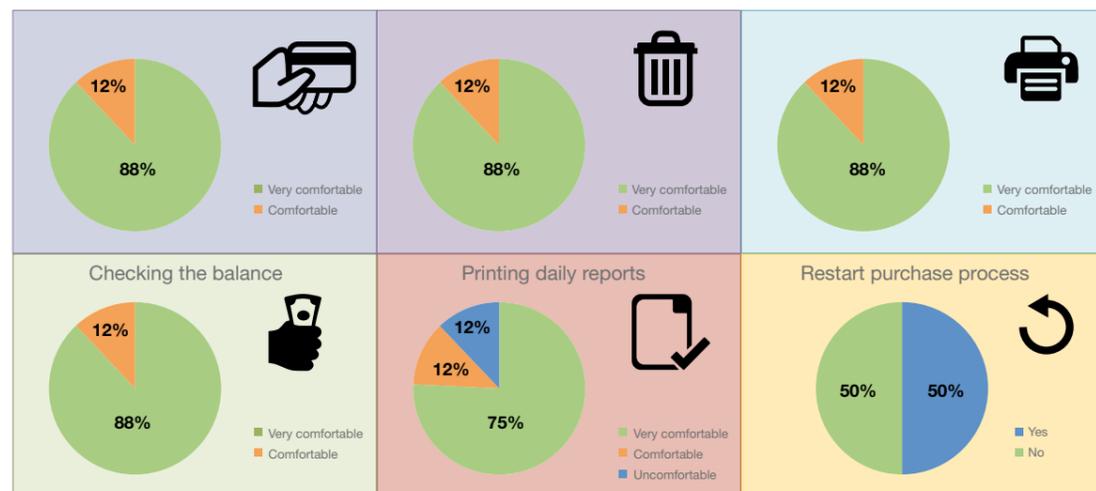
- **EASE OF USE:** KACHE is based on an intuitive, streamlined system for easy interaction and use by decision makers, implementing staff, vendors and beneficiaries.
- **RELIABILITY:** Provision of accurate and consistent information, to increase users' confidence, and to enable reliable monitoring. It consistently performs according to its specifications.
- **SPEED:** The system is deployed and operates faster comparing to old-fashioned procedures (i.e. paper voucher).
- **SECURITY:** Enhance increases physical security for staff, vendors, and beneficiaries. Minimizes security risks regarding data protection, fraud, and thefts.
- **AUTONOMY:** Ability to be used in places with limited electricity and/or connectivity. The system is quickly ready to be deployed for a wide range of possible uses and in different contexts. (ready to use)

### 4.2.1 Performance indicators

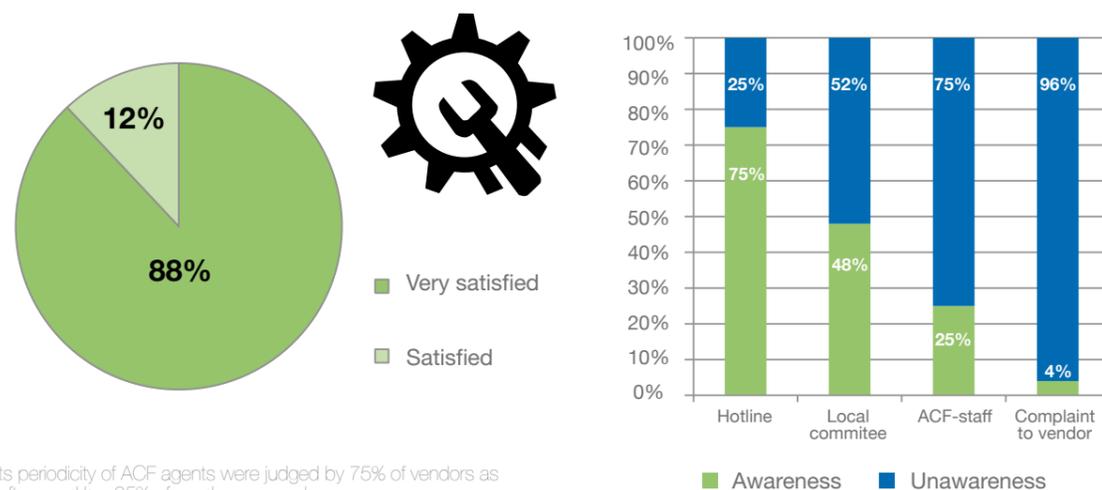
Usability ranked highly for implementing staff (average score 4 out of 5); and there was a general satisfaction on ease of use provided that proper and timely training and technical support is received- 88% of vendors felt very satisfied regarding the technical support they received. Suggestions received included improving functionalities to make it simpler for the vendor (i.e. ability to set fixed prices), and testing alternatives to a number-based pin code. Post Distribution Monitoring surveys indeed show that 4 out of 10 beneficiaries did not know how to introduce the PIN after the 3rd distribution, relying mostly on the support of market salesman (for 43% of beneficiaries). The following infographics picture ease of use indicators' results.



### Usability Test. Vendors



### Technical support



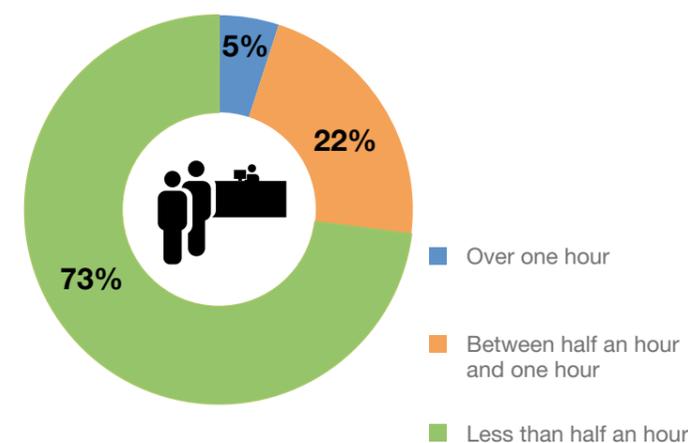
\* Visits periodicity of ACF agents were judged by 75% of vendors as very often, and by 25% of vendors as regular.



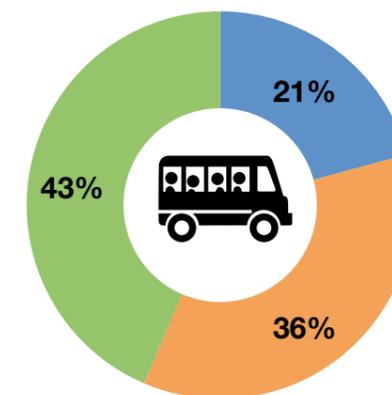
ACF has to ensure that KACHE saves time (hence, resources) not only to ACF's staff but principally to its users. Therefore the integration of new technology in an environment with a high rate of illiteracy has been a main concern during its development. A way to evaluate the speed of the system towards vendors and beneficiaries is measuring the time dedicated to each purchase <sup>9</sup>.

**Beneficiaries >** The process of accessing commodities did not prove faster than with paper vouchers according to KII interviews. The following factors slowed down the purchase process:

### Waiting time at the market



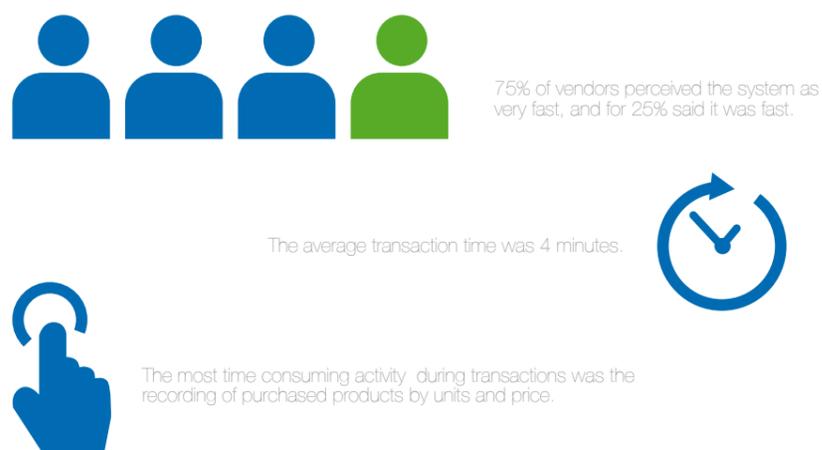
### Journey to the market



**1)** High concentration of beneficiaries for each point of sale (although an average of 117 beneficiaries per day per vendor represents a normal attendance). The main restriction of the system is that it limits the number of vendors to the number of terminals, holding back the benefits of scaling up within the market system.

<sup>9</sup> It is recommended for the future (if possible during implementation) to measure time of purchase using observation sheets instead of PDMs.

(2) The challenges faced by vendors in repeatedly introducing commodity prices into the application.



**Vendor >** An important factor to assess the efficiency of KACHE towards vendors is the transaction speed. This feature was evaluated as one of the advantages of the system by 88% of vendors. For 75% of vendors the system was perceived “very fast” and for 25% it was “fast”. The transaction time per purchase was 2 minutes for 50% of the vendors and 10 minutes for 12% of them. In focus group discussions beneficiaries argued that the transaction speed is not faster than with traditional methods of payment; however they agreed it is more credible and reliable. The vendors pointed out during group discussions that the most time consuming part of each transaction was the recording of products purchased by units and prices, causing sometimes major problems. Having to manually enter the commodities’ prices for each transaction was also a source a mistakes. Setting the prices up in advanced through the application (if prices are fixed), would fasten the transaction process and would avoid typo mistakes or possibilities of fraud by changing the prices.<sup>10</sup>

<sup>10</sup> This improvement has already been introduced by Red Rose (December, 2015).

**ACF staff >** Based on KII, the system stands out for its speed especially for the components of beneficiary registration, credit top-ups, reconciliation of payments and monitoring (93%) The set-up phase needs to be reinforced with stand-by capacities to speed up the response (on going).

Speed

**Scores for:**

5

- Decision makers find that monitoring gains speed over paper voucher.
- Staff does the **monitoring** faster than with paper voucher.
- Staff **reconciles data** for vendor payment faster than with paper voucher.
- Staff **pays** vendors faster than with paper voucher.

4

- Decision makers find the **implementation** faster than with paper voucher.
- Staff does the **registration** faster than with paper based system.
- Staff does the **first distribution** faster than with paper voucher.
- Staff does the **first following distributions** faster.
- Vendors **reconcile sales** data faster than with paper voucher.
- Beneficiaries receive their **transfers** faster than with paper voucher.

3

- The **system set-up** is faster than with paper voucher.
- Vendors **sell** faster than with paper voucher.
- Beneficiaries **purchase** is faster than with paper voucher.

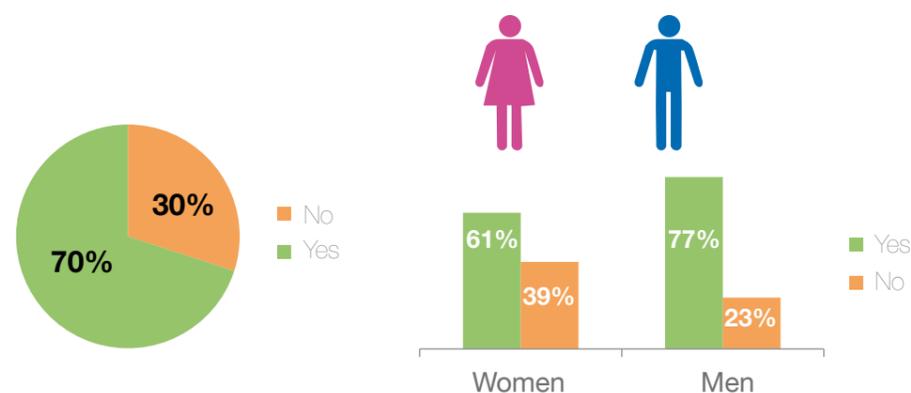
>>>>>> > 4. How did the kit perform?



**Beneficiaries** > The smart card system has been planned fundamentally for beneficiaries to have control over their own resources, to give them privacy and to protect them from theft thanks to individual PIN codes. For this reason the maintenance and protection of the cards and the PIN codes is an important issue to take into consideration. To achieve a high rate of security a few factors have to be taken into account; from feeling safe, to where the PIN code is kept, who knows it, who keeps the card or has access to it, and how is the support given at the store.

100% beneficiaries felt safe using the system and valued the fact that the card and pin code are unique and can be deactivated if card is lost or stolen. Data privacy protection measures were implemented, including beneficiaries' informed consent to manage their data. The greater beneficiaries' autonomy to insert the pin by him/herself, the better data privacy on his/her entitlement can be ensured.

**Did beneficiaries keep their own cards**



Key informants stated that beneficiaries felt safe (83% of agreement).

22% of beneficiaries let someone use their card.  
48% of beneficiaries did not verify the balance before purchasing on the terminal's screen.

**Vendor** > Material storage – Vendors felt concerned about maintaining the terminals safe. There were a 50% of vendors that found this to be a disadvantage. All equipment was returned back to ACF safely.

- ✓ 50% of vendors kept the equipment inside their store hidden.
- ✓ 50% of them took it home with them.

KIs had a 73% of confidence in vendors' safety using the system, and in how they can safely store the terminals. They do agree that invoice printing minimizes the risk of fraud (which seemed to be a practice to reinforce).

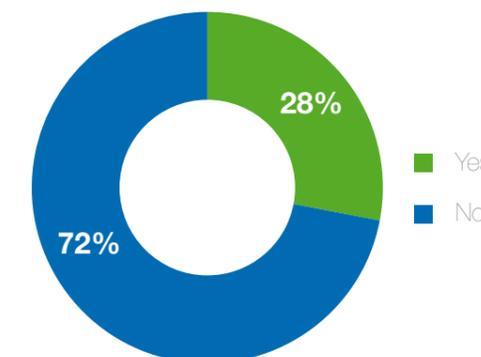


> **“Certainly, as a member of the committee and as a village advisor we had nothing to earn in this project, as no one gave us anything, we prefer the KACHE system rather than others. It makes us clean and avoids usual quarrels between village communities and authorities.”**

Abdramane Hana, committee member from Kadji

**ACF staff** > The system scores high regarding processes that diminish fraud risks, thanks to the digital tracking of the whole process. The system provides a module of user management that supports the creation of new users, assign rights access and comply internal standard procedures.

**Beneficiaries received a receipt with their purchase**



### Security

**Scores for:**

5

- The system is secure and minimize the risk of fraud.
- The system provides a secure mechanism to transfer to beneficiaries.
- System can store data safely.
- The system allows to enable and disable cards.
- The invoice printing minimizes the risk of fraud.
- Beneficiaries have access to an individual card that is non-transferable, reliable and traceable .

4

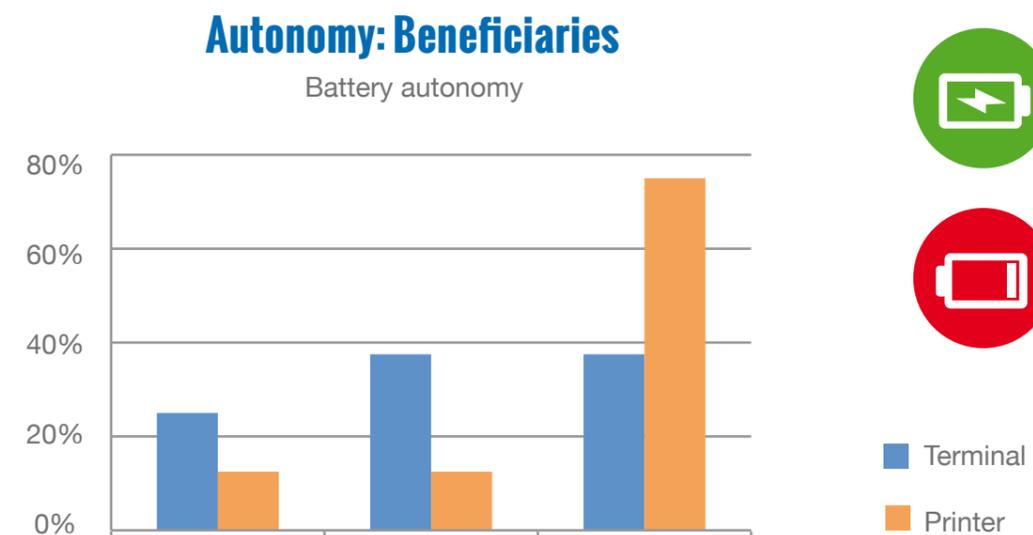
- The system provides different levels of access for its different type of users.
- Staff feels safe using the system.
- The system diminish the need to manage cash by the staff.
- The system ensures confidentiality in personal registration data.
- Vendor feels safe using the system.
- Vendors minimize risk of robbery.
- Safe terminal storage can be done by the vendors.
- Beneficiary feels safe using the system.



**Beneficiaries >** The first advantage perceived by the Head of Project is that the beneficiaries did not need to travel to get their cash transfers for every delivery. Cash transfers are done automatically and as long as the vendor terminals have been synchronized with the platform, beneficiaries will be able to access their goods. However, there was just a 60% of confidence from the KI in the autonomy of beneficiaries introducing their PIN code.

**Vendors >** The autonomy of terminals and printers has been a key matter during this project due to the limited availability of power outlets. Vendors were provided with extra batteries (2) that were replaced by ACF staff.

**> “Need to improve pin code barrier and ways to foster beneficiaries to check their balance autonomously”.**



**ACF staff >** KI have a 90% of confidence that the system can be pre- stocked for emergency preparedness, and a 70% of confidence that it can be quickly set up in remote and/or chaotic contexts. Offline features were highly valued as well as the system’s capacity to manage several modalities<sup>11</sup>. The capacity to top up in a timely way was highly scored.

<sup>11</sup> To be tested.

Autonomy

**Scores for:**

5

- The system can be pre- stocked for emergency preparedness
- The system is available to respond to emergencies in a timely manner.
- The system can be physically deployed in any given operation.
- The system can be quickly set-up in remote/chaotic/insecure contexts.
- The system has the capacity to reach a large number of beneficiaries.

4

- The system works for any transfer modality.
- The system can be deployed by ACF staff.
- The system works in an offline environment.
- The system does not require constant connection.
- Terminals write and read cards quickly, simply and offline.
- The cards can be loaded in a timely manner by ACF.
- The cards can be re-loaded in a timely manner by ACF.
- IT issues were quickly solved.
- Vendor printer has good autonomy in terms of battery.
- Recipients can know their balance in a simple, clear and free way, and use the cards as many times as needed.

3

- The kit has battery autonomy for environments lacking of electricity.
- Vendors sell autonomously.
- Vendors manage terminals autonomously, without constant support.
- Terminals have good autonomy in terms of battery.
- Vendors introduce units and prices per unit autonomously.
- Beneficiaries buy autonomously.
- Beneficiaries enter the pin code and buy autonomously.



Please refer to the next section for IT reliability issues.

PDMs show that more than 70% of the beneficiaries trusted the system and the information it provides. During the documentation workshop, transparency, reliability and accountability of the system were highly valued by the participants. KACHE prevents from mistakes and it was considered transparent and reliable by the Head of Project. Nevertheless, the fact that cash transfers and payments are done electronically inevitably generates doubts within the illiterate and non-technological population, because they don't see physical movements of cash or vouchers. A man also mentioned that a weak understanding of the tool can generate fear.

Key informants strongly relied on the system's information. They appreciated highly the reliability regarding the information about beneficiaries, transfers and expenditures. The following highlights from FGD:

- “When prices are fixed and beneficiaries are too many, it is exhausting for vendors to type every commodity's price which can end up increasing typo mistakes and producing mistrust”
- “As they need to be assisted in some cases, beneficiaries' privacy is not guaranteed.”

**> “The wholesalers wish that the KACHE system continues because its reliability, its transparency and its speed. With KACHE beneficiaries' food products go directly to their basket.”**

### Reliability

**Scores for:**

**5**

- The system provides reliable information about the transfers.
- The system provides reliable information about expenditures.
- The invoice printing minimize the risk of fraud.
- Beneficiaries see cards as unique and non-transferrable.
- Beneficiaries rely on the terminal information for top-up.

**4**

- The system diminishes the risk of rejected payments.
- Vendors rely on the system.
- Vendors believe that terminals recordings reflect sales.
- Vendors rely on the system reconciliation data for later payments.
- Beneficiaries can rely on the system.
- Beneficiaries rely on the terminal's information about their balance.
- Beneficiaries rely on the terminals to purchase.
- Beneficiary relies on the information provided by the printed invoice.
- Beneficiary relies on the system's privacy and their data protection.

**3**

- The application has the capacity to minimize typo mistakes.

### 4.2.2 IT implementation issues report

The main objective of this section is to do a review of the implementation issues occurred during the field test assessing the impact they had on the distribution. This exercise is done in order to reflect, learn and establish the groundwork for prevention and to solve issues optimally in future implementations.

All issues were solved in less than 24 hours by KACHE focal point at ACF level and/ or Red Rose team.

## Implementation Issues Report

### Introduction



The main objective of the report is to do a review of the implementation issues occurred in the pilot project to assess the impact they had on the distribution. To reflect, learn and establish the groundwork for prevention and solving of issues optimally for future implementation.



The distribution was in Mali Gao region. In an offline context.



The implementation was developed from May 25th to October 31th of 2015.



### What is an implementation issue?

Are those system issues that happen in any of the to following phases:

- 1

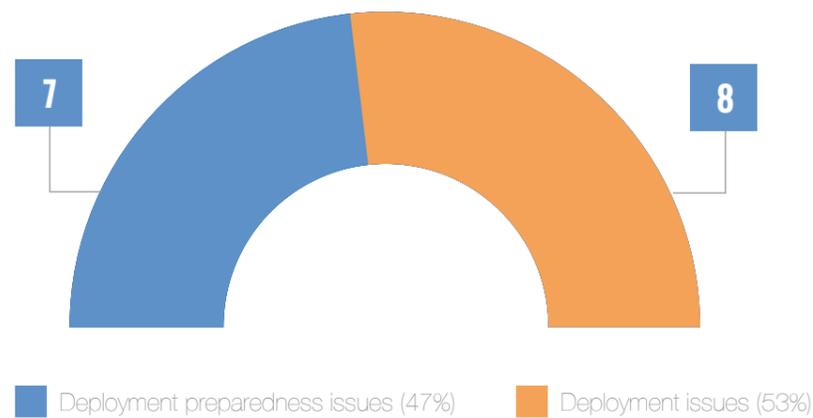
**Deployment Preparedness**

Englobes all the processes related to the record of information on the paltform, the setup and configuration of the equipment and the 1st sychronization.
- 2

**Deployment**

Point of Sale (PoS) set up, beneficiary card distribution and the Distribution Cycle. It's the most important phase.

Number of Implementation Issues by phases



**Most of the issues occurred in the Deployment phase.**

### Severity

Is the impact an specific issue has in the distribution. In order to categorize, we must have in mind these factors:

- When?
- How many?
- How long?
- How often?

The impact depends on the process of the distribution in which we are. This could be and small set back or could stop the distribution completely.

Number of kay elements or processes which are being affected by the issue.

How much time is takes to solve the problem.

Likelihood of the issue to happen again.

### Severity levels

- Minor**

Issues which have minimal impact to the distribution.
- Moderate**

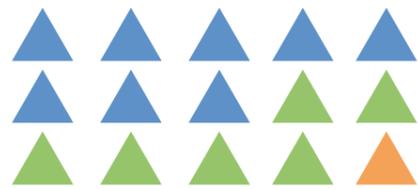
Issues which disturbs or obstructs the normal development of the distribution, delaying the process in some way.
- Critical**

Issues which stops the distribution completely.

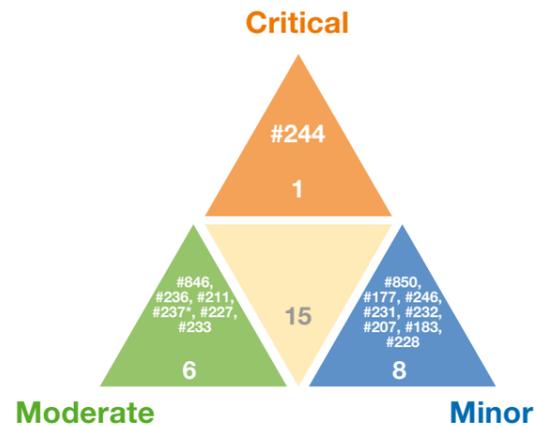
>>>>>> > 4. How did the kit perform?

Number of issues by severity level

May 25th - October 31th



■ Minor (53%) ■ Moderate (40%) ■ Critical (7%)



Deployment preparedness issues

May 25th - Julio 30th



■ Minor (57%) ■ Moderate (43%) ■ Critical (0%)

- May 27th #177 Platform minor configuration problems.
- May 29th #183 Platform database configuration problems.
- July 13th #207 1st synchronization troubles due to unstable internet connection.
- July 20th #211 Some Platform functionalities become inaccessible, due to recent updates.
- July 24th #237\* Platform visualization problems. Distribution menu affected.
- July 27th #227 Name errors in the printed PIN distribution list.
- July 27th #228 One terminal is not displayed in the Devices menu of the Dashboard.

Deployment issues

August 1st - October 31th



■ Minor (50%) ■ Moderate (38%) ■ Critical (13%)

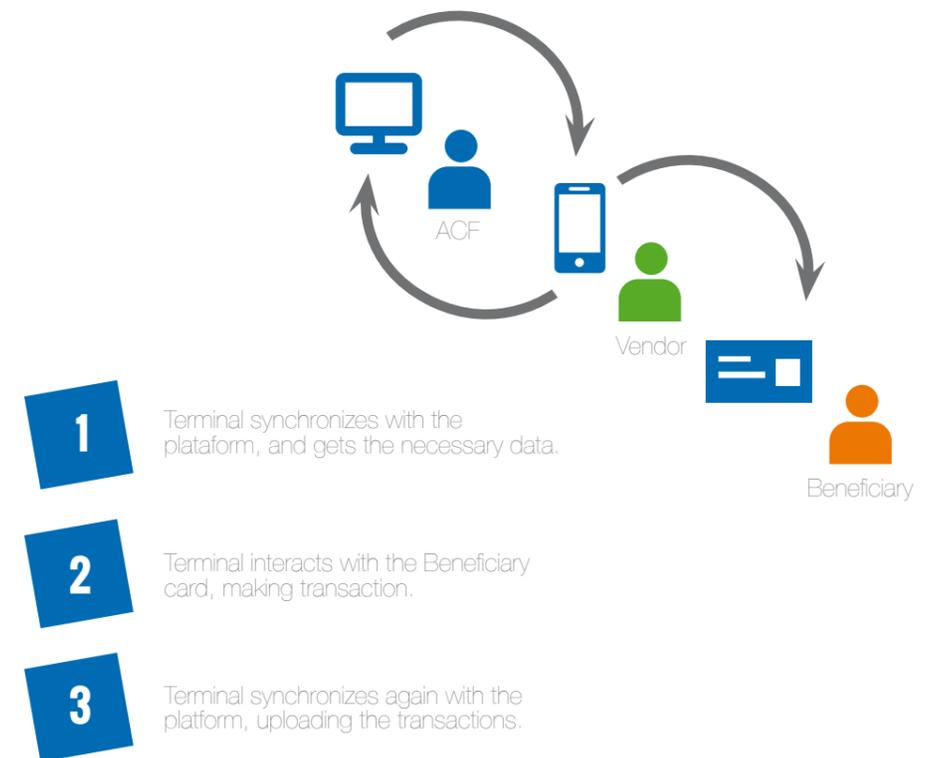
- August 3rd #231 Platform minor functionality error. Distribution not affected.
- August 3rd #232 One beneficiary card is defective.
- August 4th #233 Another Platform visualization problem. Distribution menu affected.
- August 6th #236 Transaction summary form errors.
- August 11th #244 Market day. Terminals become inoperative.
- August 13th #246 Platform Activities menu get stuck loading data.
- September 15th #846 Trouble with transaction summary. Payment to a vendor affected.
- October 6th #850 Top up error with a beneficiary card.

Key elements

The delivery mechanism it's built upon three elements:

- 1 Platform** It's a web based dashboard. Stores the information and manages the distribution operation.
- 2 Terminal** It's an Android smartphone manages the sale process and stores the transactions until it's synchronized. All the data pass through the terminal.
- 3 Smart Card** Personal beneficiary card. Stores devalence amount and the last transactions off the beneficiary.

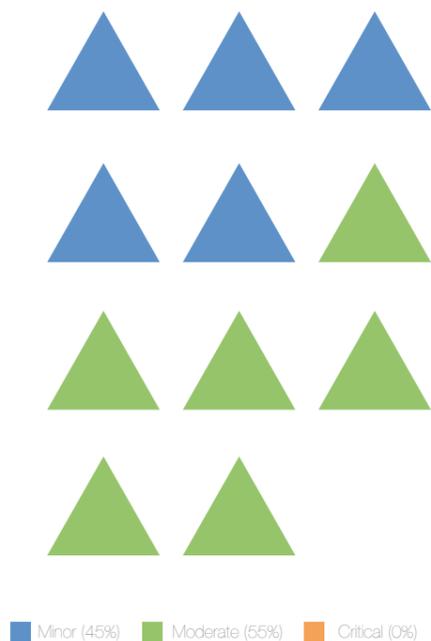
Data flow schema



For a better understanding about the issues and its place in time, please, visit No Hunger Forum Mali implementation issues timeline.

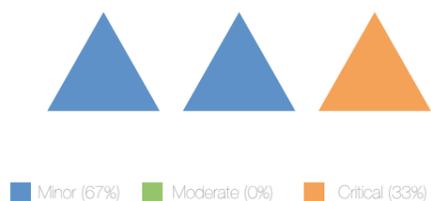
>>>>>> > 4. How did the kit perform?

 Platform issues



- May 27th  **#177** Platform minor configuration problems.
- May 29th  **#183** Platform database configuration problems.
- July 20th  **#211** Some Platform functionalities become inaccessible, due to recent updates.
- July 24th  **#237\*** Platform visualization problems. Distribution menu affected.
- July 27th  **#227** Name errors in the printed PIN distribution list.
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- August 6th  **#236** Transaction summary form errors.
- September 15th  **#846** Trouble with transaction summary. Payment to a vendor affected.
- October 6th  **#850** Top up error with a beneficiary card.

 Terminal issues



- July 13th  **#207** 1st synchronization troubles due to unstable internet connection.
- July 27th  **#228** One terminal is not displayed in the Devices menu of the Dashboard.
- August 11th  **#244** Market day. Terminals become inoperative.

 Card issues



- August 3rd  **#232** One beneficiary card is defective.

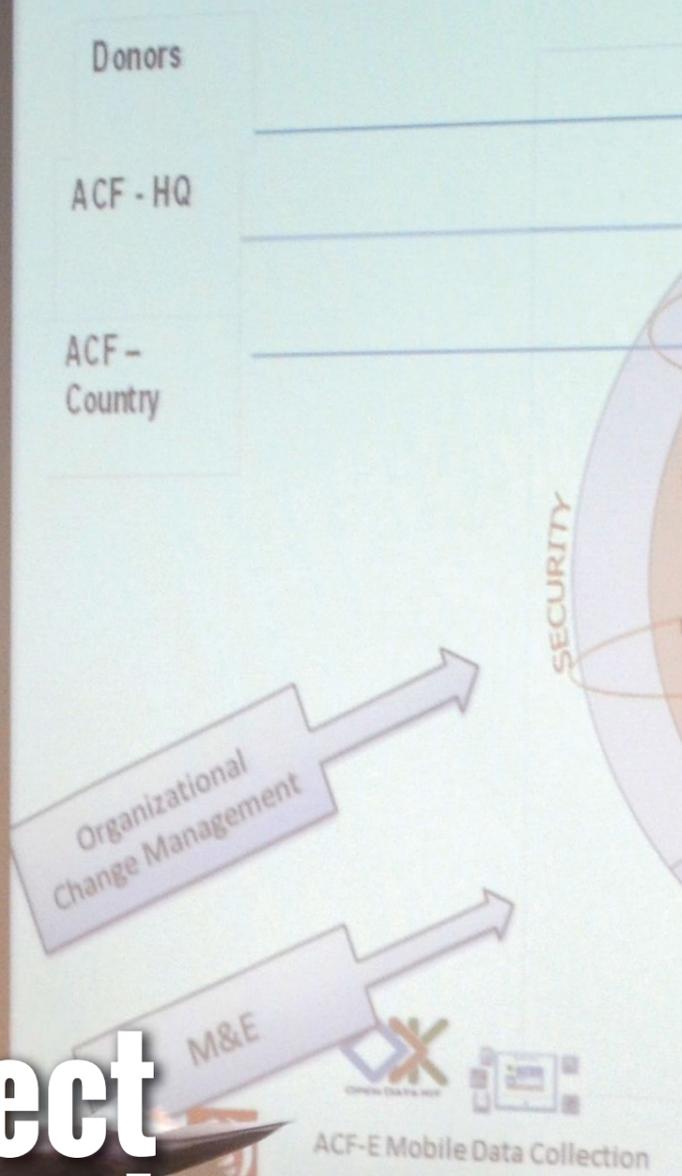
Key elements

The delivery mechanism it's built upon three elements:

|   |  |   |   |
|---|--|---|---|
|    |  Less reliable element, had the highest number of issues.   |    | In order to maximize stability. The development of new functionalities, translations and customization features must be planned and tested with enough time.  |
|   |  Most of the moderate issues were related to visualization errors, affecting functionalities used in the processes.                             |   |   |
|   |  The development of new functionalities, the translation to French and the rescuest of custom reports affected the operability of the Platform. |   |   |
|  |  Most important element, it's the only one which stopped the distribution.  |  | Terminals are the cornerstone of the delivery system. They must be protected, power supplied and synchronized. Especially in an offline context, where the risk of losing transactions is very high.                    |
|   |  All the terminal issues were related to the synchronization functionality.   |   |   |
|   |  The single failure of a terminal could affect several hundred beneficiaries. A widespread failure will stop the whole distribution.          |  | To avoid critical implementation issues. The terminal's app must be extensively tested, especially the synchronization functionality.   |
|  |  Must reliable element. Only one beneficiary card become defective.   |  | The smart card failure rate is really low. However, due to harsh environments or misuse by beneficiaries, this rate could increase. A card enclosure is recommended to protect, and help prevent the card from failing. |

# 5 >

# >>>> KACHE project dissemination and awareness



The KACHE project team has been really active in integrating different events and networks related to e-transfers. ACF as KACHE project liaised with several partners disseminating progress, learnings and contributing to different initiatives that INGOs are carrying out in relation to e-payments<sup>12</sup>. That is, E-LAN (Mercy Corps), Enhance Response Capacity Grant working groups on data management, WFP Scope, Nethope, etc. The following picture summarizes the main dissemination activities that KACHE project has participated in.



<sup>12</sup> Please refer to the following links: [KACHE Launching](#), [BLOG Telefonica](#), [E-LAN Update](#), [CALP Newsletter](#).

6 >



>>>> **Scaling up the  
Kit for Accountable  
Cash Transfers  
and Humanitarian  
Effectiveness**

In conclusion, final results showed that the 5 functional design's performance indicators have been achieved to various extents. 96% of requested functionalities have been achieved working together with Red Rose ©<sup>13</sup>. Out of which 3 have not yet been tested by KACHE, though developed (large scale, conditional cash transfer). Pending issues remain for strengthening reports generation functionalities which will be the main goals for 2016 by integrating data with other platforms using Business Intelligences software (e.g. PENTAHO). In addition, lots of lessons-learnt have been collected. Crucially, the **emergency response teams have now a pre-stocked reliable cash transfer kit that can be deployed rapidly where appropriate and feasible, even in absence of basic infrastructures.**

<sup>13</sup> Refer to Technical functionalities follow up in Annex 06.

## >>>>>> > 6. Scaling up the Kit for Accountable Cash Transfers and Humanitarian Effectiveness

### So ... what to do now?

The process of re-thinking how to move forward consisted of analyzing to what extent KACHE existing functionalities could help to overcome our operational challenges. The KACHE team wanted to make sure that the upgraded version provides an added value to ACF missions in any context, regardless of infrastructure availability. The scaling up road map will ensure that KACHE's functionalities become available broadly to achieve higher level of effectiveness in every operation involving cash transfers.

For this purpose, ACF's scaling-up road map can be summarized as follows: (i) Field-test KACHE toolkit in ACF operations at scale and using different modalities (ii) Build internal stand-by capacities to use KACHE (iii) Improve KACHE toolkit to integrate innovative technical approaches and software developments responding to new challenges, contexts and interventions (iv) Document, learn, evaluate and share continuously.

One main feature during the scale up work plan has been to focus the development of the KACHE kit thinking on processes, products and standard procedures. We hope SOP (web based) reinforces KACHE project capacity to be able to work with several service providers (the ability to switch from one service provider to another, if needed will be part of the scale up plan during 2016).

It is recommended to use KACHE's branding, in order to reinforce visibility and understanding of KACHE as part of an emergency preparedness initiative from ACF that continuously evolves, independently from the product it is using to deliver.

KACHE should allow us to digitalize all sorts of delivery and monitoring in order to increase the use of cash transfers at scale in ACF operations. Our ultimate goal is to reach more people, faster and maximize the impact of each euro delivered to improve poor people's lives.

### Terminal issues

## Using KACHE in ACF operations



# 7 >



# >>>> Lessons learnt and recommendations

The following lessons learnt and recommendations were identified during the process in relation to:

## 7.1 The procurement process

- Even though the process can take longer, it is recommended to have the functional design before launching a call; this will contribute to evaluate coherence and relevance out of several optimal and solid solutions for e-payments that private stakeholders can offer.
- To have an exhaustive list of technological evaluation criteria contributed greatly to evaluate the proposals
- Offer service providers the possibility to include live demos into the process
- We came to reinforce our skills on data protection and beneficiary privacy issues to include in the contract with Red Rose and improve our practices during testing.
- Building a realistic operation scenario was key to evaluate service's provider capacity to scale up and looking for the sustainability (or affordability) of KACHE solution beyond the pilot since the beginning
- Synergies between IT, Procurement and Technical Department in the procurement committee highly contributed to have an exhaustive proposal's evaluation. The disadvantage from this method is that it took longer, but it is really worth it.

## >>>>>> > 7. Lessons learnt and recommendations

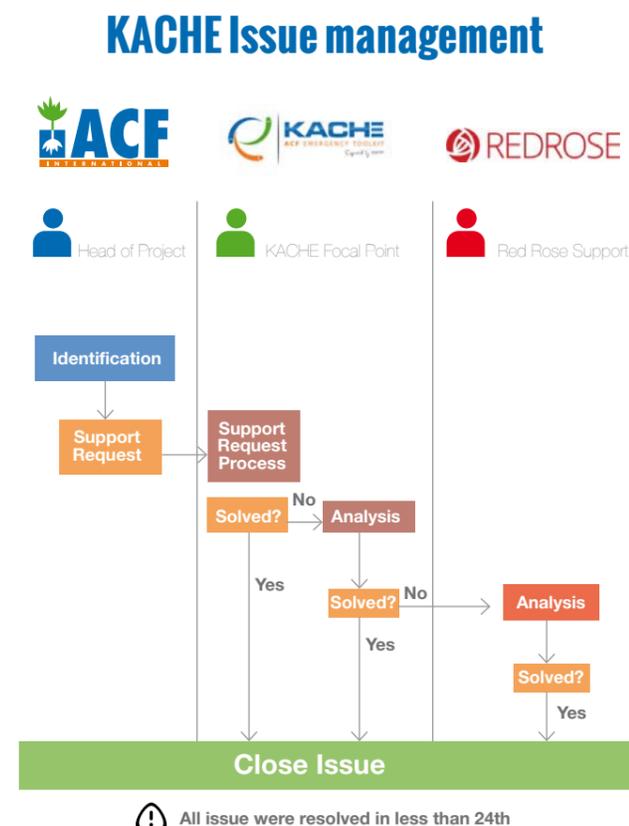
- It is recommended for 2016-2017 to add into the contract performance indicators that could support the parties to measure progress jointly and to evaluate the quality and timeliness of the service.
- Pre-agreements with service providers are necessary in order to be prepared for emergencies responses. Therefore, ACF-Spain has carried out an exhaustive procurement process for KACHE project. As part of the pre-positioned kit, project proposals need to inform donors and counterparts on the pre-selected service provider in order to respond to needs rapidly using KACHE when appropriate.
- Before mid-2016, in coordination with E-LAN Service Provider’s Catalogue, update the pre-selected list of qualified international service providers that could comply with functionalities required by KACHE and in line with SOP.
- If needed, open a call for interest to pre-qualified service providers in order to diversify options for 2017.

### 7.2 Working with Red Rose

- We had a rich kick off workshop (1 week) between Red Rose and ACF staff where Red Rose team introduced us to the ONE system, and we all came up with new features that fit into the desired functional design. This type of initial workshop is clearly recommended to draft a common workplan on what it is expected by the two parties and take the most of the creativity and expertise from both teams.
- We faced delays regarding monitoring functionalities (dashboards) which could not be used during field testing as planned. Dashboards were ready by September, 2015.
- By mid-2015, Red Rose started its own scale up as a service provider (more than 15 NGOS and in more than 9 countries). Once they adjusted and started being able to cope with the increasing demand, it was finally advantageous for all programs, allowing the testing of much more functionalities that the ones tested in Mali<sup>14</sup>.
- We set up the following process to manage issues: Issues are identified by field staff members who must notify any technological problem to KACHE-HQ, who will register them. KACHE HQ will provide support to solve the issue. If staff members and KACHE

HQ can't solve the issue, the issue will be escalated to Red Rose who will provide a solution. All issues were solved in less than 24 hours by KACHE focal point at ACF level and/or Red Rose team and proof to be a really good way to ensure scalability and process optimization.

- It is recommended to Red Rose to continue systematizing training modules of the system's new features using tutorials, in order to focus their technical assistance on new developments and issues that exceed the control of ACF IT staff.
- Work jointly with Red Rose to have harmonized performance indicators to follow the system up and its functionalities (this evaluation report could be a first step), taking the most of the fact that several stakeholders are using the same system to fulfill different needs and processes within their programs.



> **“What I have valued most of Red Rose is that teams worked with flexibility, availability and readiness to get the most of the system to be adapted to our needs”** (Jimena Peroni, Project Coordinator)

<sup>14</sup> For more information about Red Rose scale up contact Jeremy Cole, Director, Red Rose, UK at [jc@redroseecps.com](mailto:jc@redroseecps.com)

## 7.3 Training

### For ACF Staff

- The KACHE Project is built upon an on an easy to use system. KACHE team has developed a training package in order to have an overview of the skills needed to deploy the kit and implement it. The roll out needs to be done also in coordination with Red Rose to take the most of both parties regarding to trainings, on line tutorials, technical assistance, flying deployments and on line support. A specific module of trainer for trainers is recommended to ensure scalability.

### For Vendors and Beneficiaries

- Practical, cultural adapted and tailored trainings to vendors will increase autonomy; usability and reliability at user level (Please refer to Annex 07 “key messages to vendors<sup>15</sup>” that need to be considered as well as internal manuals).
- Do not underestimate investing in training resources (fliers, posters, technical assistance, etc.)
- Disseminate good practices, for instances: sensitization of vendors about beneficiaries’ data privacy when introducing their PIN CODE, or how to use the equipment and keep it safely
- The same recommendation goes for beneficiaries. Constant refreshers are recommendable before first distributions. Refer to Key messages for beneficiaries (annex 07)
- Good practices regarding integrating KACHE into the complaint response mechanism of the mission, proved to be really well accepted and highly valued by beneficiaries, local community and vendors.

<sup>15</sup> Adapted from field experience by ACF US, Nigeria.

## Troubleshooting

Troubleshooting will always be a process of trial and error.



### The Process of elimination

This means you'll make a list of things that could be causing the problem and then test them one by one to eliminate them. Once you've identified the source of the issue, it will be easier to find a solution.



### Write down your steps

Once you start troubleshooting, you may want to write down each step you take. This way, you'll be able to remember exactly what you've done and can avoid repeating the same mistakes. If you end up asking for support, it will be much easier if they know exactly what you've tried already.



### Take notes about error messages

If the dashboard or the terminal gives you an error message, be sure to write down as much information as possible. You may be able to use this information to identify the source of the issue.



### Always repeat the process

If you're having trouble with and specific process, an easy start is to check again all the steps of the process to make sure you've completed them properly.



### Restart the terminals

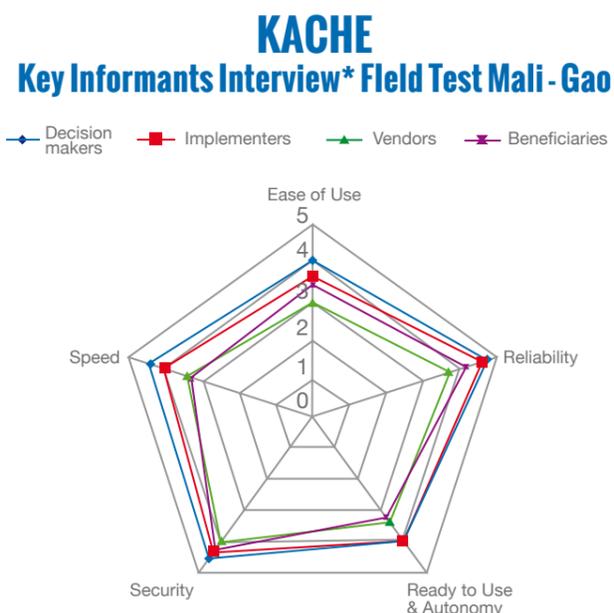
When all else fails, one of the best things to try is to restart the terminals. This can solve a lot of basic issues you may experience with the terminals.

>>>>> > 7. Lessons learnt and recommendations

### 7.4 Monitoring & Evaluation

This section refers to the monitoring and evaluation of the kit. The M&E matrix for the KACHE project (2016-2017) is being developed.

- A good practice has been to monitor thoroughly products and processes vis a vis the initial functional design
- The 5 performance indicators are still relevant to continue monitoring the KACHE throughout 2016-2017.
- It is recommended for further operations to have a simplified M&E matrix, standardizing at least 5 (SMART) sub- indicators per each pillar to be used and measured at the end of every operation using KACHE
- The mix of M&E tools (PDM surveys, KII online survey, FGD and workshops (or Atelier) are still recommendable in order to be able to triangulate information and have an appropriate overview
- KACHE was designed to operate where there are no other means; while we start scaling up to further contexts where local options are available, a Cost effectiveness pillar needs to be included into the M&E plan for 2016-2017. It is recommendable to track cost associated to the kit during 2016 and plan a Value for money evaluation by Mid-2017.



### 7.5 Scaling up

KACHE project offers standardized functionalities/features that can adapt to all types of delivery mechanisms to overcome operational challenges that ACF operations confront in CBIs. The lists of functionalities are neither exhaustive, nor exclusive but invite the reader to think in project cycle compartments to understand the functionalities available, added value of the project as well as the main and different challenges ahead.

- **Assessment and Preparedness:** KACHE project contributes to reinforce emergency preparedness cash transfer programming through the integration of KACHE emergency tool into the ACF's emergency response framework.

### KACHE as Umbrella for CTP - Delivery



The KACHE project provides technical and operational support to ACF Emergency Pools for the integration of the KACHE emergency toolkit into the emergency response framework as well as integrating it for country's emergency contingency plans <sup>16</sup>, for example, training staff, prepositioning ready to use smart cards and terminals, pre-registering beneficiaries, uploading key relief commodities in to the platform, and creating stand- by capacities.

- **Beneficiary Management:** KACHE project contributes to the safe, effective and efficient data management for CBIs (but not only).

<sup>16</sup> Refer to Including CTPs into contingency plans, CALP, 2011.

## >>>>> > 7. Lessons learnt and recommendations

KACHE kit offers functionalities for the reliable and rapid registration of beneficiaries providing a unique code along the whole process linked to the delivery card. KACHE project will coordinate with and integrate several initiatives in place: CAHIER des Charges SYSTEME D'ENREGISTREMENT DE BENEFICIAIRE ELECTRONIQUE (ACF France), ODK (ACF SP), LLMS (World Vision) and new developments. The key issue is to standardize data to promote interoperability and multiple source analysis without taking out flexibility and autonomy to operations. KACHE's component for beneficiary management purposes is not open source and it is available within the platform [www.kacheproject.org](http://www.kacheproject.org) which is linked to a service provider's fee. To use the most of its potential, it is recommended to link it to delivery functionalities; if not the case, it is recommended to use ODK<sup>17</sup>. KACHE project<sup>18</sup> can provide technical support to assess which is the best option to go.

### • Transfer and Delivery

KACHE emergency tool kit delivers in a rapid, reliable way and can be used in off line and online environment. KACHE platform is able to support all kind of modalities of delivery: e-voucher (i.e. vendors/water truckers), paper voucher (bar codes reader), e-cash (i.e. cash out agents), and e-distribution (i.e. ACF staff). The integration with mobile money and bank system is also possible<sup>19</sup>. Where local options are available, the best value for money intervention needs to be pursued.

### • Monitoring and reporting

KACHE emergency toolkit through the platform is able to monitor online a diverse range of output indicators: How much has been transferred, how much redeemed, where, how and what is expended, etc. In addition, operation uses ODK to monitor output/outcome indicators (i.e. PDM). CBIs need to be monitored and evaluated through the use of multiple sources of information. **The toolkit will offer functionalities for data analysis, decision making and reporting, hence, the use of business intelligence software (i.e. PENTAHO) is required.** KACHE project will build a standardized dashboard for monitoring and reporting CBIs whether operations delivers through KACHE platform (2016) or any other delivery mechanism (2017).

<sup>17</sup> Good practices for beneficiary registration: Allocate one unique code per beneficiary/household.

<sup>18</sup> Through the ICT department.

<sup>19</sup> This functionality has not been tested, and will need the support of Red Rose's team.



## 8. Annexes

Annex 01. KACHE Concept Note

Annex 02. Steering Committee Term of Reference

Annex 03. Call for proposals

Annex 04. Key performance indicators

Annex 05. Monitoring and evaluation methods

Annex 06. System's Technical functionalities

Annex 07. Key messages for vendors and beneficiaries (adapted from ACF US)

> **Thanks for requesting annexes or additional information to [kacheproject@achesp.org](mailto:kacheproject@achesp.org)**



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