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Learning review - The use of the RedRose Data Management Platform for CVA

Piloted in Gambia, Rwanda, Tanzania, Uganda and Zambia

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Contents

Glossary of terms

- RedRose The company that owns the RedRose platform
- The RedRose platform (RR platform) A data management platform used for the collection, storing, processing and reporting of data and information to manage CVA and in-kind distributions.
- Kobo App An App available for smart phones which allows users to collect data (usually personal data) used during a crisis response.
- FSP Financial Service Provider (e.g. mobile-money operator)
- DM (Data management) skills, processes and systems related to the collection, storage, sharing and processing of data
- IM (Information management) skills, processes and systems related to the interpretation and use of data (transforming it into information) to support decision making, accountability and advocacy
- CVA Cash and Voucher Assistance
- Full integration Seamless sharing of data between the RR platform and the FSP systems
- Semi-integration Sharing of data between the RR platform and FSP systems by downloading/uploading of data files
- Virtual training Training delivered by trainers who are located remotely and provide training through video links e.g. Zoom or MS Teams

Introduction

CVA (Cash and Voucher Assistance) programmes increasingly rely on technology and digital tools to enable cash to be distributed securely, quickly and at scale. The ability to work with reliable, timely and appropriate data is key to the success of these programmes and it follows that good data management practices in the collection, storage, processing, sharing and consent to use personal data is an underlying factor to successful CVA programmes. Data management platforms, such as the RedRose platform (RR platform) have been designed specifically to support such good data management practices.

The RR platform has been piloted and used by the RCRCM (Red Cross and Red Crescent Movement) since 2018 and learnings from previous pilots have been well documented. This learning review aims to shift the focus slightly, from what the National Society's (NS) experience of using the technology was, to recommendations for how the RR platform could be embedded as part of a NSs CVA response and what support is required beyond the pilot to enable NSs to continue applying good data management practices.

This document describes the experience of five NSs (Gambia, Rwanda, Tanzania, Uganda and Zambia) who piloted the RR platform for CVA, supported by the IFRC, PNSs and NSs. The five pilots have much in common, including similar timeframes, budgets, size, modality and travel restrictions due to Covid-19. This makes it possible to review each pilot within a wider and comparative context, to gain additional learnings from what were the common issues and challenges for all of the NSs and to understand why some pilots have already led to the subsequent use of the RR platform, while other NSs are still preparing and assessing how it can be used in the future. The review focusses on three main areas:

- Preparedness of the NS before the pilot What experience and capacity did the NS have in CVA and data management before the pilot i.e. what was useful before they started the pilot?
- What was the NS experience of the pilot What worked well and what didn't, throughout the pilot? What was their experience of learning and using the RR platform?
- What learnings and recommendations do the NSs have for next steps and sustainability?

A description of the review methodology is included in Appendix A. Information was gathered through a mix of key informant interviews (KIIs) combined with a desk-based review of supporting documentation which also included some previously documented learnings for these pilots.

This Learning Review was commissioned by the IFRC and carried out by Opal Cherry Limited.

Executive summary

The RR platform has been piloted within the RCRCM to support CVA responses since 2018. Feedback from these pilots has been positive about the features of the system. NSs often refer to the following advantages of using the RR platform:

- stores data securely and in one place
- can be used for different payment modalities
- provides segregation of duties (i.e. approval processes are built-in)
- useful to be able to create groups within the RR platform for processing, approvals & payments
- offers increased auditability, accountability and compliance
- easy to use and fast
- good at checking and validating registration data and identifying duplicates

The above indicates that the RR platform is considered to provide stronger data management when compared to other approaches such as managing sensitive or personal data on Excel spreadsheets. In that regard, the conclusions from the five pilots in this learning review are no different from previous learnings. All five of the NSs were **positive about the features and benefits of using the RR platform.** Two of the five NSs have since used the RR platform in subsequent CVA responses (Gambia & Zambia), two said they are keen to use it again (Tanzania & Uganda) and one was unable to provide feedback (Rwanda). This is very encouraging and indicates that out of the five pilots, four have either led to the subsequent use of the RR platform or continued interest to explore how it can be used in the future for CVA responses.

Insights from the KIIs offer some clues as to where **NSs may benefit from ongoing support to embed the use of the RR platform**. This report also includes recommendations from the NSs in how to achieve ongoing sustainability of the platform as well as considerations for other NSs that are considering piloting it.

It should be noted that **many of these findings are not specific to the RR platform** and could equally be applied to other data management systems. Many fall within the wider topics of data management, digital transformation and sustainability of technology and digital tools. The following provides a summary of the key findings and recommendations:

Sustainability needs to be planned for. Before the pilot even starts the NS needs a clear understanding and vision of how the RR platform will be sustained if the pilot is successful. Without such planning, the reasons for starting the pilot are less compelling. Planning should include an understanding of the ongoing costs to use the RR platform, how skills, knowledge and resources are maintained within the NS to enable it to continue to use the RR platform and how the use of the RR platform fits into the NSs strategy for CVA responses. Without this planning, NSs may find the step from pilot to sustainability challenging.



One of the most common questions related to the ongoing use of the RR platform is **how the NS can support the cost of using it after the pilot**. NSs expressed the need to understand ongoing costs, either per year or per response.

Whilst NSs know the cost of the pilot, knowledge of ongoing operational costs are less well understood. The cost of the pilot, typically, does not reflect the ongoing costs, as many of the pilot costs are one-off.

If an NS is fully trained, confident and experienced in using the RR platform, then **costs are dramatically reduced for ongoing use with less need for training, purchase of equipment and technical support**. Reduced costs rely on the NS receiving a good level of overall training initially, along with opportunities to refresh knowledge, use the RR platform and have staff available to ensure that those skills are maintained within the NS.

Together with a **better understanding of the running costs** of the RR platform, NSs also expressed their need to **understand how those costs could be covered**. It was remarked in one of the KIIs that when CVA responses are budgeted there is usually a budget-line for the FSP services (e.g. mobile-money provider or bank charges) but **the cost for data management is not usually budgeted for**. It could be argued that this is an essential cost and embedding it as a key component of a CVA response, including budgeting for it, would provide a step towards sustainably using data management platforms for good data management. **Accessing funds made available for data management** offers additional opportunity for sustainability. Both the Gambian Red Cross Society and the Zambian Red Cross Society used DREF funds available for the use of the RR platform, enabling them to subsequently use it since their pilots.

The level of ongoing costs partly depends on the amount of technical support that a NS needs from the RR team for each CVA response. The more experienced and capable the NS is, the lower the demand for support. It follows that one of the steps to the sustained use of the RR platform is trained staff within the NS who are knowledgeable in the full range of features available (e.g. mobile-money, vouchers, multiple tranches, vendors, reporting, M&E and feedback options). Feedback from KIIs indicates that **the training received was often specific to the pilot itself**, aimed at delivering an understanding of what was necessary for the success of the pilot but leaving gaps in the wider understanding of how to use the RR platform for other CVA responses with different parameters. This has led to some NSs questioning how to use the RR platform for future CVA responses. All NSs who received specific training in using the RR platform for other modalities, for example, e-vouchers, multiple tranches, vendors or physical cash.

Effective learning relies on effective training. Whilst the feedback on the RR trainers was positive, the KIIs indicated a **general preference for face-to-face training over virtual training**. It should be noted that whilst the pilots all benefited from the reduced costs of virtual training, a key factor in deciding to provide training remotely was related to the challenges with travelling during Covid-19 lockdowns. Virtual training was shortened to 2-3 days (which was generally considered too short) compared to face-to-face training (usually 5 days with 2 consultants onsite). Challenges with internet and power interruptions, participant engagement and not having access to all necessary equipment (e.g. e-cards) meant that most of the NSs recommend, if possible, that training should be provided face-to-face.

Given some of the challenges with virtual training the **support provided by the RedRose team during the pilot was highly appreciated and key to the success of the pilots**. This was typically available through the RR Skype helpdesk or via email during the pilots and was used by all NSs to ask questions on topics that had either been missed during the training or were not fully understood.

Staff who were already knowledgeable about data management and had previous experience in data collection and data analysis found it easier to grasp the concepts and learn how to use the RR platform. This background knowledge in data management was recognized as a key advantage and indicates that **pre-training in data/information management is a useful pre-cursor to using the RR platform**. It should be noted that the Gambia Red Cross Society, the Tanzania Red Cross Society and the Zambia Red Cross Society all received introductions to Cash IM concepts, data collection, data analysis and data cleaning from the 510 team. The Ugandan Red Cross Society also received support in DM/IM from the Netherlands Red Cross and the 510 team following its OCCA (Organisational Cash Capacity Assessment) since 2018.

Where training is complete and the pilot is successful, NSs referred to the **risk of learnt skills being lost or diluted through high staff turnover**. It was noted that handover processes are needed to maintain skills within the NS for the RR platform. It was also noted that not only operational skills may be lost but also advocacy and leadership steer for data management tools (e.g. RR platform) could be affected with frequent changes in senior management. It was recommended that continual support is needed, including advocacy for data management platforms as well as "refresher training" on different features of the RR platform. Without this, there is a risk to the sustainability of using the RR platform. This appears to be the case at the Rwanda Red Cross where it was difficult to meet with key members of the team who were involved in the original RR pilot as they were no longer working there.

Networking and collaboration within the RCRCM played a key part in inspiring NSs to pilot RR through learning exchanges with other NSs, PNSs and the IFRC. Prior to the pilots, most already had an awareness of the RR platform through regional workshops and demos. In addition, NSs who already had experience in using the RR platform were able to provide information and support, in particular the Kenya Red Cross played a key role in influencing the Tanzanian Red Cross to pilot the RR platform and the Rwandan Red Cross provided support for that pilot. Since the pilots, the Gambian Red Cross and the Zambian Red Cross have both shared their experiences and learnings of the pilots more widely, continuing this cycle of knowledge sharing.

Some NSs said they were **keen to explore integrating the RR platform fully with FSPs**, to provide seamless payments via mobile-money. Such a full integration (money transfer at the touch of a button from RR) is not essential for CVA distributions but offers a slightly more streamlined process, avoiding the need to send a "payment file" between the FSP and the RR platform. Note: Four of the NS pilots did not have full-integration between the RR platform and the FSP and were nevertheless able to distribute mobile-money effectively and it was noted in the KIIs that sending the "payment file" to the FSP was not an issue. This indicates that full integration is not essential but more of a "nice to have".

It was noted by one NS that **full control of the RR platform would provide NSs with more flexibility**. An example was the need to request changes to the Registration form through the RR technical team. Providing a way for the NS to configure this themselves would offer greater flexibility - although there are also advantages of a centralized and controlled system (managed by the RedRose team). The balance of control versus managed-service therefore needs further consideration to determine where control is best handled for different aspects of the platform.

The observations and recommendations within this report mostly relate to strategic and operational topics within digital transformation such as – budgeting for technology, building and maintaining skills, planning for sustainability and sharing knowledge across RCRCM networks and teams. The RR platform itself was seen as an enabler - improving the security, accountability and control of CVA responses, with a clear majority of the NSs (80%) saying they were keen to continue using it if challenges to sustainability were met.

Gambia Red Cross Society (GRCS)

The GRCS (Gambia Red Cross Society) piloted RedRose in November 2021 and saw it as an opportunity to grow their capacity in CVA and data management. The GRCS had previously heard about the RR platform during a presentation in 2019 in Senegal which motivated them to pilot it as part of the CVA response to Covid-19. Funds were made available from the British Red Cross for the pilot.

45 households were targeted (one household on average constitutes 9 household members) mainly in the Northcentral, South A, and South B regions of Gambia. The CVA distribution took place from 22nd to 26th November 2021.

The GRCS were already experienced in CVA projects prior to the pilot and were providing CVA as a response to the Covid-19 pandemic from 2019/2020. They were already experienced in using the Kobo App to collect data and Excel to manage that data but had identified gaps in their data management process and were keen to learn about the RR platform and its ability to support the full lifecycle of a CVA response. The GRCS remarked that they were keen to find a solution to data protection issues related to storing personal data on Excel spreadsheets which were stored on local computers.

Experience in using the Kobo App and background knowledge in some aspects of data management (on Excel) provided a useful foundation for the RedRose pilot. The GRCS were familiar with data collection, data management and data analysis and had received additional support on this, particularly data analysis (e.g. vulnerability scoring), from the 510 team (Netherlands).

The Kobo App is still used by the GRCS to collect data for rapid assessments. These skills were an enabler in quickly picking up the concepts and getting up-to-speed with using the RR platform. The GRCS were confident in the internal IM skills and capacity gained through previous IM trainings and the GRCS IM officer has subsequently been invited to share knowledge about the RR platform pilot with the Liberian Red Cross.

Training for the pilot was carried out over 5 days and was a mixture of CVA training (first 2 days) and RR platform training (3 days). The CVA training was delivered face-to-face, supported by the IFRC senior cash officer. It provided fast-track training in CVA and included an introduction to CVA, response analysis & design, assessment & feasibility of CVA, monitoring and distributions. The training was found to be useful in a broad range of CVA topics and allowed the GRCS to improve their knowledge in CVA preparedness and response.

Immediately following the CVA training, the GRCS received 3 days training in using the RR platform. The training was delivered by the RedRose team, remotely in virtual sessions. (Note: RedRose trainers were not always able to travel during the Covid-19 pandemic due to travel restrictions).



(Onsite training on RedRose would typically take 5 days with 2 RedRose consultants onsite, compared to 3 days of virtual training which was carried out in this pilot due to Covid-19).

The training was well received with good feedback about the trainers but it was also noted that face-to-face training (onsite) would have been better. Challenges with an unstable internet connection made it difficult for the participants to follow virtual classroom sessions for 3 days. In addition, power interruptions and poor ventilation in the training room meant that participants often left and returned to sessions resulting in interrupted learning.

Training included practical sessions where

concepts or tasks within the RR platform were demonstrated and participants were then given the opportunity to practice what they had seen on a "Demo" platform. This was seen as an essential part of the training by the GRCS, who commented that the more practice sessions that were available the better. Training was accompanied by documentation which was found to be useful.

As a result of the challenges with virtual training, ongoing support from the RedRose team was key to the success of the pilot. This support was particularly appreciated by the GRCS who commented that the RedRose team were available to fix issues and offer additional explanations. It was also noted, however, that it was not always clear who to contact at RedRose and which member of their team was responsible for what.

Whilst feedback was generally positive for the training received, gaps were subsequently identified in the content of what was being taught. The training was focused on the tasks needed to carry out the pilot (using mobile-money) and did not include wider functionality and options available. An example of this is in the explanation of e-vouchers, which was demonstrated, but without sample e-cards available, the GRCS were unable to practice and fully learn how to use them. Another example is the option to collect and store M&E feedback within the RR platform. This was not covered in the training and the GRCS commented that it would be useful to know whether it is possible and how to do it so that all information for a response is kept in one place.

It is unsurprising that a 3 day compressed virtual training course is focused on explaining tasks needed for the successful delivery of the pilot but it was found that 3 days was not enough time to provide a complete training. It has resulted in the GRCS being given the knowledge to be able to replicate the pilot but has left them without the complete knowledge of all features within the RR platform which may be useful for them in other CVA responses (or in-kind). Ongoing and refresher training would be welcomed to complete their learning, particularly in topics that were not fully covered such as M&E and reporting.

During the set up (configuration) of the RR platform, certain tasks were carried out by the RedRose team – for example changes made to the "registration form". The GRCS mentioned that they would prefer complete control of the RR platform to allow them to manage all aspects of the system (Note: there is a balance between

what is managed by technical teams at RedRose and what can be managed locally, especially if the RR platform is hosted, maintained and updated centrally by the RedRose software developers).

The virtual training was quickly followed by the pilot, ensuring that recently learned concepts and skills were still fresh. The RR platform was used for the registration of people in crisis, the allocation of CVA amounts, checking of registrations (e.g. for duplicates), the creation and approval of the payment file (sent to the FSP – Q-Money) and the reconciliation of CVA distributed against CVA allocated.

Volunteers were deployed to register the details of people in crisis using the RedRose App. They found the App easy to use thanks to its close resemblance to the Kobo App (which they were already familiar with). The only challenge mentioned during the registration process was that not enough "Red Cross" smartphones were available for use. (These have the advantage of being managed by the GRCS, allowing them a tighter control over data protection, compared to a volunteer using their own private smartphone).

Once registered, ID cards (with a QR code) were printed at the head office and these were then given to the registered people as a form of identification to be used during the CVA response. Printing these on paper meant that they were quite flimsy, especially when used a few times. It was noted that it would have been better to print them on card or a stronger material.

Registrations were grouped for payment within the RR platform which was found to provide a secure and central place for managing the CVA process and data. Feedback received was that the GRCS "loved using the system" saying that it worked well and was easy to use during the pilot.

CVA was distributed via QMoney (a mobile money service). This was through a semi-integration between the RR platform and the FSP (QMoney). This meant that a payment file containing details of who to pay and how much to pay, was created and downloaded from the RR platform. The payment file was then sent to the FSP who subsequently uploaded the payment details into their own system to make the payments. Once payments were made, the FSP sent the GRCS a file containing details of who was paid and how much – which provided a means to reconcile "who should be paid" with "who was paid" within the RR platform. Whilst this semi-integration (file sharing) was acceptable to the GRCS, a more streamlined approach with full integration (where payment information is transferred seamlessly between the RR platform and the FSPs system) would have been an improvement, reducing the need to download and upload files between systems.

The GRCS acknowledges that full integration between the RR platform and FSP systems is not straightforward and relies on agreement and coordination between all parties – RedRose, FSPs and the NS. They also see this as taking time and comes at a cost but are willing to explore the possibilities. This would include the possibility of integrating the RR platform with a variety of FSPs (not only QMoney) to provide different options for CVA payments.

Since the pilot, the GRCS have used the RR platform again for a CVA response to the wind storm in July 2021. Funding was accessed through the DREF for the use of the RR platform. This indicates that where funding is available and data management is included within project budgets, the use of the RR platform is sustainable. The GRCS would welcome support in understanding ongoing costs and how the use of the RR platform can be funded and budgeted for. This will help the GRCS in their understanding of whether it is a sustainable solution for them.



Positive feedback on the use of RedRose and the fact that GRCS have used it since the pilot for a DREF/CVA response (response to the wind storm in July 2021) indicates that the GRCS are interested in continuing to use the RR platform for CVA. Future use would ideally include full integration between the RR platform and FSPs (e.g. mobile money providers) but the challenges of these integrations which have time/cost implications is also understood and such challenges are not unique to the RR platform but apply to any CVA data management platform are not essential to CVA delivery. The GRCS continue to share their knowledge of the RR platform with other NSs, building awareness and sharing their experience and learnings during the pilot.

Rwanda Red Cross (RRC)

The RRC (Rwanda Red Cross) piloted the RR platform in early 2020 as part of their CVA response to the Covid-19 pandemic. The pilot took place in the Nyarugenge District, Kigali City where a large population were identified as being some of the first to be affected by the Covid-19 lockdown restrictions which impacted on their small businesses. A sample group of 360 families (average of 5 family members per family) were identified in need of food and health insurance due to the lockdown restrictions. Unconditional CVA was offered with each family receiving 20,000 RWF. Vulnerability criteria focused on female headed households and people with disabilities.

90% of the identified people in crisis were already using and familiar with MTN mobile money. It was therefore decided to distribute unconditional CVA through mobile money to 85% of the identified group with the remaining 15% being sampled to receive CVA as a voucher. These two modalities were chosen to provide two different scenarios for the pilot. Families were able to contact a free hotline for assistance and to provide feedback during the pilot.

The RRC decided to pilot the RR platform as they considered it as a way of speeding up the CVA response. They had no prior experience of the RR platform but were already experienced in using the Kobo App and Excel for data collections and data analysis.

The support received and participatory approach during the pilot was seen as a real positive and considered key to the success of the project. In particular, good communication and engagement with all stakeholders including RRC senior management, staff, local authorities, RedRose team, IFRC, British Red Cross and representatives of the community was cited as a positive. Tasks included budgeting, planning, agreeing on roles and responsibilities, timelines and the project approach. Regular status meetings helped to keep all stakeholders informed. This was identified as particularly important when planning for the training which was delayed by a few weeks due to delays in smart phones being cleared by customs in Rwanda. This equipment (e.g. smart phones and fingerprint scanners) was purchased through RedRose and sent to Rwanda. It was reflected subsequently that it would have been quicker to order equipment locally in Rwanda (with the necessary technical specifications).

Training of the RR platform was carried out virtually by RedRose trainers due to Government restrictions with lockdowns. Key staff from the cash technical working group were trained (11 RRC staff and 2 PNS staff from the Belgian Red Cross attended). Training was carried out over 4 days but challenges with the instability of the

internet meant that the training would have been more effective if it had been delivered face-to-face, however, given the circumstances there was no other option.

Training focused on the particular tasks within the RR platform that were needed to successfully deliver the pilot (through mobile money).

The RRC pilot used LMT (Last Mile Technology, an offshoot of RedRose) to support the CVA distribution. LMT already had a service agreement and integration with MTN (mobile-money provider), which meant that the CVA distribution could flow seamlessly between the RR platform and the MTN system (full integration). This meant that the RRC needed to transfer the distribution funds into the LMT account for distribution which raised questions about control and contractual agreements with FSPs as the RRC already had a bank account with the local bank.

Targeted households were registered using the RedRose App on smart phones. The RR platform was then used for data validations and duplication checking, grouping for payments, allocating payment amounts, processing and reconciling the payments via a direct integration with MTN.

The RR platform was found to be easy to use and performed well during the pilot. Specific feedback mentions "easy management of beneficiary data", a reduction in "back and forth" during the CVA process, user friendly, easy to identify duplicates, secure (good data protection) and provides improved accountability.

The CVA process was said to be well organized with support from the RedRose team. A key observation was that the segregation of duties within the RR platform (e.g. different roles within the platform – e.g. Finance, IT, M&E) meant that planning and the availability of key team members is needed to prevent the whole process being managed by one person.

It was noted that legal elements of the agreements with FSPs should be well understood. This was a particular challenge of this pilot which used LMT as the holder of funds before distribution. The RRC identified that there needs to be a clear understanding of who controls the financial flows and funds with data sharing agreements in place.

Since the pilot, the RRC have not used the RR platform. Staff turnover has meant that feedback for this report was gathered from previously documented findings, combined with recent KIIs with IFRC staff who were involved in the pilot. Unfortunately, no staff at the RRC who were directly involved in the pilot were available to provide feedback.

It remains unclear as to why the RRC have not used the RR platform since the pilot, however the question of operating costs and how the NS can cover those costs was mentioned. It was also commented that if a reduction in costs could be negotiated, that would provide an additional benefit.

Given the difficulty in finding staff who were involved in the pilot to participate in the KIIs, it is also worth considering that staff turnover may have led to a loss of motivation and knowledge in the RR platform and a possible reason why it hasn't been used since the pilot. This may be an opportunity for advocacy and refresher training if requested.

Tanzania Red Cross Society (TRCS)

The TRCS (Tanzania Red Cross Society) were already experienced in delivering CVA responses before they decided to pilot the RR platform in December 2021. The support of the IFRC and other NSs (in particular, the Rwanda Red Cross and the Kenya Red Cross Society) were key factors in the TRCS deciding to proceed with the pilot. They are part of the East Africa cluster and knowledge and learnings are shared within this group. They had heard about the RR platform previously and were excited to pilot it when the funding was made available to do so.

The pilot was carried out in Zanzibar, targeting 300 individuals to receive CVA through mobile-money. Targeting was based on the degree of vulnerability to livelihoods as a result of the Covid-19 pandemic. A single CVA tranche was distributed, with 3 geographic areas covered within Zanzibar – North, Central and South.

CVA activities were carried out in close coordination with the government and government officials who were engaged throughout the lifecycle of the pilot.

The project team included a good mix of skills and experience including disaster management, finance, IT, CEA and M&E. Project coordination was initially challenging with gaps in communication between the various stakeholders (IFRC, BRC, TRCS and RedRose).

Whilst being experienced in using the Kobo App and Excel for previous data collections, the TRCS would have benefited from further DM/IM training before the pilot. Such pre-training would have been particularly useful in increasing the NSs capacity in data collection, data analysis, data cleaning (e.g. de-duplication) and reporting.

Due to Covid-19 travel restrictions, virtual training was provided by the RedRose team, which was delivered over 3 days (9am to 4pm) at the TRCS headquarters. The training was supported by IFRCs DM coordinator and the BRC's cash preparedness manager. A mixture of 20 staff and volunteers participated in the training, sitting together with good video-conferencing equipment (2 large screens).

Training was a mixture of demos and practice sessions, with participants able to practice what they had been shown on a "demo" platform. In addition, documentation was provided - "3rd party open loop – distribution guide". Whilst feedback was complementary about the training and it was also mentioned that virtual training offered a good way of reducing costs, it was also noted that face-to-face training would have been more effective. Virtual training led to less engagement within the team, with some key members too busy to fully focus on the training.

The training was very specific to the pilot and was found to be lacking in a wider understanding of the RR platform's various functions and capabilities e.g. how to use vouchers, how to use the RR platform for in-kind distributions and how to collect feedback (M&E) into the RR platform.

Although the TRCS were shown the RR App, they opted to carry out the data collection (registrations) using the Kobo App. This was because TRCS already had smart phones that were compatible with the Kobo App and did not want to purchase additional smart phones specifically to use the RR App. This was not considered an issue as the RR platform is compatible with Kobo and allows registration forms to be downloaded into Kobo and registration data to be imported into the RR platform easily.

The TRCS purchased fingerprint scanners for the pilot. These were procured locally, which proved much easier than procuring them through RedRose and having them transported to Tanzania (recommendation and learning received from the Rwanda Red Cross).

Once the registration data was collected, the TRCS staff checked for duplicates and then grouped the registration data for payment within the RR platform. Segregation of duties meant that different users performed different tasks within the RR platform, ensuring that controls were in place and followed. Staff found the RR platform easy to use, commenting that duplicate checks (of registration data), the security features of the system and the ability to manage groupings of registrations for payment were all useful features. In addition, the reporting dashboards within the RR platform and the ability of RR to check data as it was being



uploaded from Kobo for incompleteness or inaccuracies were also seen as useful. An example cited were the checks that distinguished between a 0 (zero) and an O (letter O) which made it easy to identify where registration data may have been typed incorrectly.

When comparing the RR platform with Excel to manage data, the TRCS commented that within Excel it was much easier to tamper with data and that the RR platform offered tighter controls for data protection. The ability to allow different users

to access and share data in a controlled and managed way within the RR platform was also seen as an advantage compared to the way that data is shared and used on Excel spreadsheets (which may contain sensitive personal data) between various people.

Agreements were already in place between the TRCS, the Tanzania Bank and Vodacom (mobile-money service provider). A semi-integration between the RR platform and the Vodacom was used for the distribution (i.e. data files for payment and reconciliation were downloaded/uploaded manually between the two systems). Whilst this sharing of the payment file between TRCS and the FSP offered a solution to making the payments, the TRCS would have preferred a seamless, full integration between the two systems.

Concerns were raised over the use of mobile-money generally. It was commented that some of the targeted households had not previously used mobile-money and were not familiar with it and some elderly members of the population also found it a challenge. In addition, not all SIM cards were registered under the individual's name which led to confusion over payments. The TRCS mentioned that community engagement and education is key to the success of such pilots and distributions to overcome such challenges.

Mobile-money payments were considered fast and secure and whilst some of the recipients initially questioned why their personal data was being collected, once the reasons were explained, they were reassured and were willing to provide their details.

The support received from the RR team was considered good, with particular mention of the Skype helpdesk and the ability to ask any question and receive help.

The TRCS indicated that they would like to use the RR platform again but there are a number of questions that remain open. The training that they received did not provide enough detail on all of the features and functions available within the RR platform. For example, using RR for M&E, managing in-kind distributions, using vouchers are all topics that the TRCS would need to understand better. More training in reports/dashboards, how to distribute CVA in multiple tranches and the relevance and use of fingerprint recognition were all identified as further gaps in their understanding of the RR platform.

The TRCS would also welcome general IM/DM training in data storage, backups, data management and reporting. This would help to support capacity gaps in those skills.

Learning and holding onto these skills was mentioned as a key part of embedding and being able to sustain the ongoing use of systems like the RR platform. The TRCS have had a comparatively high turnover of staff at all levels recently and would benefit from ongoing training and advocacy in DM/IM.

Since the pilot, the TRCS have not used the RR platform, although they are keen to understand more about the different features of the platform and how the costs of using it can be covered.

In the CVA response to the 2022 drought response, 700 households were initially targeted, followed by a further 500 households. The project was managed using the Kobo App and Excel with physical cash being distributed through an FSP (Bank). The main reasons cited for not using the RR platform were the remoteness of the population and poor telecoms availability which would not have been appropriate for mobile-money. Discussions on whether and how to use the RR platform were held, although those discussions were seen to be delaying the response. (Note: the RR platform is often associated with mobile-money but can be used for a variety of responses).

The experience of the TRCS is an example of the need for continuous support, training and capacity building. With staff turnover, there is a risk that skills and motivation may be lost or diluted if new staff do not receive ongoing training and support in DM/IM and systems such as the RR platform. This means that whilst the pilot may have been successful with benefits identified in using it, the ongoing use, embedding and sustainability of the RR platform is gradually lost unless continual advocacy and support is available. This also applies to the NSs ability to cover the costs of using the RR platform.

Uganda Red Cross Society (URCS)

The Uganda Red Cross Society (URCS) have delivered numerous CVA responses since 2020. They originally undertook an Organizational Cash Capacity Assessment (OCCA) in 2018 and were initially supported by the Netherlands Red Cross to build capacity in CVA.

In 2020, with support from the German Red Cross, the first CVA project provided multi-purpose cash to 245 HH for basic needs in response to floods in Eastern Uganda. Since then, the URCS (with support from the German Red Cross and the Belgium Red Cross) has provided CVA in response to numerous crises, including support for refugees in the Bidi Bidi settlement, support to people affected by floods and landslides and support for people affected by the Covid-19 pandemic. The URCS also continues to provide CVA through the Uganda cash consortium.

Kobo and Excel were used for the collection and management of data for these CVA responses (2000 people or less were registered to receive CVA in each of these responses).

The URCS were keen to pilot the RR platform as they saw it as a better solution to processing and managing personal data compared with Excel spreadsheets. They were also motivated by seeing other organizations using dedicated data management systems (e.g. UNHCR using ProGres V4). Keen to keep up with advances in the way that data was managed by other partners and keen to explore the interoperability of systems where multiple actors were present (e.g. URCS and UN) led them to piloting the RR platform.

Having previous experience in using the Kobo App provided a useful foundation for using the RR platform. In addition, training provided by the 510 team in *Cash Information Management System (Netherlands RC - 3 days training)* was also regarded as very useful.

The pilot was run in conjunction with the DIGID (Digital Identity) project and was aimed at individuals who did not have a formal form of identification. 4 groups of women (max. of 15 women per group) were identified as having common income generating activities. CVA was distributed as cash in envelopes to 37 individuals with the remaining individuals (just over 20) receiving CVA through mobile-money. CVA was distributed in a single tranche (450,000 Ugandan Shillings per individual).

(Note: The DIGID pilot is out of scope of this report but the different roles between the RR platform and the Digital ID system (Gravity https://www.gravity.earth/) is worth mentioning briefly. Registrations were taken using the RR collect App which uploaded the registration data directly into the RR platform. This data was then exported into the Gravity system to produce durable ID cards (with QR codes) for each individual. These ID cards were then accepted as a valid and verified ID (when the QR code was scanned and an associated password was entered) to collect the cash in envelopes.

Training on the RR platform was delivered remotely over 2 days (5 hours each day) to four members of the URCS team. The training was originally planned to take place onsite but due to travel restrictions/issues it was decided to provide the training remotely. The team received training on standard RR functions, including the RR collect App, groupings for payment, vendors, commodities and activities. Feedback was positive on the training and setup of the RR platform. It was useful to have time to practice on the Demo environment for a few weeks following the training before carrying out the actual pilot distribution (training started on the 11th October 2022 followed by the pilot in Nov 2022). The URCS were very positive in their feedback about the remote training and did not report any internet or connection issues. They commented that the RR platform was initially difficult to understand but once they were given the opportunity to practice it became easy.

Similar to the other pilots, the URCS accessed the RR support via a Skype group which they found very useful.

The URCS provided very positive feedback about using the RR platform. They already had a system for sending mobile-money payments, so simply created the "payments file" from the RR platform.

The URCS commented on the challenge of using two systems in the pilot (Gravity & RedRose). This challenge was specific to this pilot (as 2 separate systems were being piloted at the same time) but it's useful to note their preference for a single system for registrations, IDs and payments.



The URCS are very motivated to use the RR platform in the future and said that they would recommend it 100% to other NSs as it met the challenges that they faced previously with data management. They saw the key advantages as:

- Easy transfer of registration data from the RR collect App into the RR platform
- Ability to track budgets easily
- Ability to check and confirm beneficiary details
- Secure system
- Will enable URCS to keep up with other partners, in terms of technology and data management (e.g. UNHCR)

URCS are keen to receive ongoing training on the RR platform, for example from the Kenya Red Cross who already have considerable experience in using it. They would also like to increase the number of staff who are trained, particularly their Finance team who were not involved in the initial training. Broadening the number of staff who are able to use the RR platform would also help with advocating to use it (i.e. more teams become aware of the benefits).

They would recommend that a member of the team is dedicated to supporting the RR platform and would recommend this approach for other NSs.

The URCS are keen to embed the RR platform as a tool to support CVA responses. They are also keen to understand how the cost of using the RR platform can be covered for future responses.

Zambia Red Cross Society (ZRCS)

The ZRCS (Zambia Red Cross Society) piloted the RR platform in December 2021 as part of a CVA response to support households displaced due to land disputes. 80 households were targeted (480 people).

Before the pilot, the ZRCS had previously provided CVA in 2020, using the Kobo App for the registration process and Excel to store and manage the CVA data & process. Having identified the need for a data management platform for CVA, the ZRCS were keen to explore available options. They had previously heard of the 121 platform (510 – Netherlands) but it was additional information provided by the Kenya Red Cross Society and their experience with piloting the RR platform that helped the ZRCS make the decision to pilot it in Zambia.

Previous use of the Kobo App and Excel proved useful when learning how to use the RR platform as it meant that the ZRCS were already experienced in collecting registration data and contextualizing the registration form for different responses. Teams that had previous experience in data management had an advantage and were able to pick up concepts and learn how to use the RR platform more quickly than teams who had less prior experience.

No additional hardware or equipment was purchased for the pilot as the ZRCS were able to use their existing stock of laptops and smart phones.

Training on the RR platform was conducted in September 2021 and the pilot was completed quickly within a very tight timeline:

- 28th December Stakeholders meeting
- 29th December Registration of targeted households and validation of data collected
- 31st December CVA distributed via mobile-money MTN.

Training was conducted over 3 days by the RR trainers remotely (virtual training) and was attended by approx. 12 participants from the finance, logistics, branch development and disaster management departments. The cash data management officer (IFRC) supported the process and was able to attend onsite. Training included a demonstration of different distribution methods (e.g. vouchers, mobile-money) and provided opportunities to practice what had been taught.

Feedback on the training was positive with enough time being given to practice tasks. The documentation provided by RR was also found to be useful and has since been used as a reference guide in a subsequent CVA response. Although the feedback was generally positive, the ZRCS also commented that face-to-face training would have been preferrable. This would have provided more opportunities for questions and the type of informal learning and discussions that often take place "over coffee" and outside of the classroom.

The level of support available from the RR team was appreciated. When issues/bugs were identified during the training sessions, the RR team were quick to respond and resolve the issue (very few issues arose).



During the pilot, details of the targeted households were collected using the Kobo App as the TRCS were already familiar with it and it is compatible with the RR platform. Once the registration process was complete, the data was uploaded into the RR platform, cash amounts were allocated, payment approval was received from the finance team and a single tranche payment file was produced – these steps were managed within the RR platform. Once the payment file was produced it was sent to the FSP (MTN).

The ZRCS already had a contract with MTN (via mobilemoney. Full integration between the RR platform and the MTN payment system was not available which meant that

the payment file (containing details of who and how much to pay) was downloaded from the RR platform and then uploaded into the MTN system for payment. The ZRCS would have preferred a direct integration between the two systems, mentioning that the RR platform would "carry more weight" if it was fully integrated with FSPs. They are exploring the possibility of integrating the RR platform with MTN but are aware that this takes time and money and would not have been feasible within the constraints of the pilot.

The ZRCS were confident in using the RR platform during the pilot. They also had the support from the RR team when producing and uploading the payments file. No issues were mentioned and the ZRCS provided positive feedback, commenting on the following advantages:

- the ability to easily check for duplicates
- good data management
- segregation of duties (different roles and access within the platform)
- good approval processes
- good data security
- useful dashboards for reporting

The ZRCS have subsequently used the RR platform (February 2022) for a CVA response to floods. 500 households were targeted to receive CVA and the costs of using the RR platform were covered within the DREF budget. The decision to use the RR platform was based on the skills developed, the positive experience of the pilot and the advantage of a centralized data management platform. It was also noted that refresher training is always welcome, particularly for staff who have joined since the pilot.

The ZRCS are experienced and confident in using the RR platform and are considering embedding its use within their CVA processes. Clarity is needed on the contractual arrangements for how this should be done (ZRCS directly with RR or through the IFRC?). Next steps being considered are peer-learning and knowledge sharing with other NSs.

Recommendations from all pilots

The following is a consolidated list of recommendations received from the five NSs following their pilots. They are grouped within - Coordination & communication, Operational, Learning & Advocacy:

Coordination & planning

- Good coordination and communication from the start of the pilot between all stakeholders (NS, IFRC, PNC, RedRose, FSP) will help to keep the pilot running smoothly. In Rwanda this included RRC senior management, staff, local authorities, RedRose team, IFRC, British Red Cross and representatives of the community. Regular status meetings helped to keep all stakeholders informed. This was particularly important when planning for the training which depended partly on the arrival of equipment (smart phones) which were delayed by a few weeks when clearing customs in Rwanda.
- Community engagement should include information on the pilot, how CVA will be distributed and reasons for collecting personal data. When the reasons are explained, individuals are less likely to question why their personal data is being collected.

- One of the controls available within the RR platform is the "segregation of duties" (i.e. different team
 members control or approve different steps in the CVA process). Ensure that there are enough team
 members trained and available so that these controls can be properly followed during the CVA process,
 to avoid a single person controlling the process.
- Pilots should include a plan for how the NS intends to continue using the RR platform if the pilot is successful. Without such a plan, there is a risk that the use of the RR platform will end after the pilot – whether the pilot was successful or not.
- Consider including the cost of data management (e.g. RR platform) within response budgets. The cost of using an FSP is usually budgeted in a CVA response, so the cost of data management should also be budgeted. Also check if DREF funds or Digital Transformation funds are available for the use of the RR platform.

Operational

- Using the standard RR platform, without customizations, reduces the costs and time taken to train and use the platform. All five pilots used the standard RR platform.
- A member of staff should be dedicated to the RR platform (not necessarily full-time)
- Start with a very small distribution in the pilot to learn and test how the RR platform works.
- If using RedRose to print ID cards (with QR code), print them on a more durable material (e.g. card) rather than paper, which was found to be too flimsy.
- Carry out the pilot as soon after the training as possible when the learning is still fresh.
- If equipment is needed (e.g. smart phones or biometric readers), consider buying them locally based on the specification needed. Ordering and shipping through RedRose may result in goods being delayed by customs.
- Explore options to integrate the RR platform with FSPs this may not be possible during the pilot but it is
 useful to understand the legalities, risks, time and cost implications. (NOTE: full integration is not
 essential to successful delivery of CVA but is a "nice to have" if available)

Learning & Advocacy

• Prior knowledge or training in IM/DM (e.g. data collection, data analysis, reporting) provides a useful foundation for learning the RR platform.

- If possible, opt for face-to-face (onsite) training rather than virtual training. If face-to-face training is not
 possible, explore options to improve internet connectivity, increase the number of training days, provide
 enough time to practice and consider ways that staff can dedicate their time completely to the training
 (e.g. offsite venue). Participants should be allowed to dedicate their time to training and break from office
 work during that time if possible.
- Training should include all functions of the RR platform including different distributions (mobile-money, vouchers, in-kind, vendors etc.), feedback mechanisms (M&E), distributing multiple tranches and explanations of different reports and dashboards. Provide refresher and follow-up training to keep skills updated.
- To mitigate the risk of losing skills through staff turnover, keep knowledge and learnings about data management within the NS through handovers and requests for refresher training. This applies to all levels within an NS. i.e. continued advocacy for good data management at the leadership level as well as knowledge of RR functions at the operational level.
- Continual learning and support is needed to understand all functions of the RR platform and to keep knowledge fresh.



Appendix A: Learning review methodology

Below are details on the approach and plan submitted to carry out this learning review.

The following focus areas aim to provide structure for the review, enabling an understanding of the different aspects of the RedRose CVA projects from inception to completion:

What was the starting point? -> What took place? -> What was learnt? -> What are the recommendations?

- Focus area 1: Project background This initial research will be predominantly desk based, drawing on existing documentation. It aims to understand the "starting point" of each NS (cash preparedness) i.e. their previous experience in CVA, previous use of RedRose or other technologies, motivations for using RedRose for this project, CVA project outline, size, timelines. This provides the base knowledge and informs the next focus area.
- Focus area 2: Setup / Implementation of RedRose This research will be mainly carried out through KIIs but may also draw upon any existing feedback (if already available). It aims to understand each NS's experience with the setup/implementation of RedRose i.e. configuring, training & learning, documentation, testing and incorporating RedRose into its CVA operations. Of additional interest will be the NSs capacity in IM and any previous trainings received. Questions will focus on any advantages/challenges/learnings associated with the implementation of RedRose, dependencies (e.g. 3rd parties) and general recommendations that arose from the implementation stage.
- Focus area 3: Use of RedRose (Operations) This research will also be mainly through the KIIs but
 may also incorporate any existing and documented feedback (if already available). It aims to understand
 each NS's experience with using RedRose during a CVA programme i.e. use of the Registration App (if
 applicable), registration forms, grouping of individuals or households for payment, checking for errors,
 financial controls, data security, managing payments, reconciliations and reporting. Similar to Focus area
 2, questions will be aimed at understanding advantages/challenges/learnings as well as
 recommendations for future projects.

The following steps describe the analysis in greater detail.

Step 1: Gather and review existing project information

This is a desk-based review of CVA project documentation for each of the NSs. It is assumed that this will be made available by the IFRC, PNS or NS to provide an overview of each CVA project, scope, timelines, objectives, context.

Step 2: Analysis of primary data sources

If access is provided (temporary login credentials), an overview analysis of the primary data source (e.g. RedRose and any reporting dashboards) for each CVA project will provide a more granular understanding of each NS programme, including number of recipients and cash distributed. This will provide additional quantitative data to inform the background understanding of the individual NS CVA project.

Step 3: Key Informant Interviews

Schedule and host key informant interviews to learn from the experiences of each NS. The questions (see last section in this document) within these KIIs will be aimed at obtaining a greater understanding of focus areas 2 & 3 (described above). It is assumed that at least 2 informants will be available from each NS for these KIIs. These informants should include a mixture of those who were involved in the set up (implementation) of RedRose and those who used RedRose during the CVA programme (in some cases, this may be the same individual). If available, KIIs with the project sponsors (e.g. IFRC, PNS or other implementing partners) will also be carried out. KIIs will also be carried out with relevant members of the RedRose team (technology partner) in order to include their perspective, learnings and recommendations in the report.

Interviews will be carried out remotely using Zoom or MS Teams and recorded, if permission is granted. It is estimated that approx. 10-15 KIIs will be carried out in total, in English, each lasting approx. 50 minutes.

Step 4: Consolidation of notes

Notes from the KIIs will be consolidated within the 3 main focus areas and provide the structure for the final report.

Step 5: Focused Group Discussion

If the KIIs show significant differences in the experiences of the NSs in using RedRose, then a FGD may be needed to better understand how these differences arose and any specific recommendations that relate to those differences. If the KIIs show that the NSs are fairly aligned in their experiences, then a FGD may not be needed unless requested for another reason – to be discussed with the IFRC.

Step 6: Report write-up

The evaluation will be provided as a written document (Word or pdf). It will be provided initially in draft form for review by report stakeholders (IFRC). Feedback will be reviewed and incorporated if appropriate into the final report.

Appendix B: Key informants and supporting documentation

The following is a consolidated list of the notes from the Key Informant interview with the Gambia Red Cross Society and existing project documentation. The KII interview was carried out remotely (on Zoom). Notes were taken during the meeting and also taken from the meeting recording.

Name		Date
Abdoulie Fye	Director of Programmes & Operations / The Gambia Red	KII on 16/11/2022
	Cross Society (GRCS)	
Draft lessons learnt workshop	Document	Notes from March 2022
report		
Report of the CVA and	Document	Notes from 3 rd December 2021
RedRose training conducted for		
the Gambia Red Cross Society		
IFRC Pledge-Based	Document	Reporting period
final report		1 October 2021 – 31 December 2021
Notes from Gambia RedRose	Document	Notes from 21 st January 2022
review meeting		

The following is a consolidated list of the notes from the Key Informant interviews about the RedRose pilot in Rwanda and existing project documentation. The KII interviews were carried out remotely (on Zoom). Notes were taken during the meeting and also taken from the meeting recording.

Name		Date
Daniel Wanyoike	Program Manager	KII on 18/11/2022
Daniel Kyalo Mutinda	IFRC	KII on 23/11/2022
Lessons learnt workshop report	Document	Notes from January 2022

The following is a consolidated list of the notes from the Key Informant interviews about the RedRose pilot in Tanzania and existing project documentation. The KII interviews were carried out remotely (on Zoom). Notes were taken during the meeting and also taken from the meeting recording.

Name		Date
Lucrecia Rubandwa	Disaster Preparedness Officer and the Cash focal point of NS	KII on 08/11/2022
Simon Kadogosa	M&E specialist	KII on 08/11/2022
Daniel Wanyoike	Program Manager	KII on 18/11/2022
Daniel Kyalo Mutinda	IFRC	KII on 23/11/2022



The following is a consolidated list of the notes from the Key Informant interviews about the RedRose pilot in Uganda and existing project documentation. The KII interviews were carried out remotely (on Zoom). Notes were taken during the meeting and also taken from the meeting recording.

Name		Date
Doreen Atukunda	Project Officer	KII on 12/12/2022
Sandra Twinomugisha	IT assistant – supporting the DIGID project and setup of RedRose	KII on 12/12/2022
Enock Bukenya	Information Technology Officer	KII on 12/12/2022
Joram Musinguzi	Cash focal point	KII on 12/12/2022

The following is a consolidated list of the notes from the Key Informant interview with the Zambia Red Cross Society and existing project documentation. The KII interview was carried out remotely (on Zoom). Notes were taken during the meeting and also taken from the meeting recording.

Name		Date
Elina Chilembo	Cash Transfer Officer	KII on 17/11/2022
IFRC Pledge-Based	Document	Reporting period
final report		1 October 2021 – 31 December 2021

Appendix C: Evaluation questions

Focus area 1 – Background (starting point)

- What was the NS's starting point for the CVA project (cash preparedness) previous experience in CVA, previous use of systems/technology for CVA? Capabilities in IM and previous IM trainings received? e.g. any previous useful experience before the RedRose pilot e.g. previous IM training, IM skills, experience with data collection or data management tools, reporting tools, previous CVA projects etc.
- What were the key metrics for each NS CVA project size/scope/cost of the pilot, households or individuals targeted, cash distributed, geographic regions, timescales, any contextual constraints/barriers. If available, what was the cost of RedRose (setup and use) – including any supporting hardware?
- Why was it decided to use RedRose who, why, how were there any contextual factors?

Focus area 2 – RedRose Implementation / Setup

- Describe how RedRose was implemented? Who, what, how, when? What was the NS involvement at this stage and who else was involved – RedRose, supporting PNS, IM delegate?
- What was your experience of the <u>implementation</u>? Provide specific details on configuration of RedRose, training, documentation, testing, equipment, integrations (e.g. FSPs), resourcing and support available. Were there any issues or were you pleased with how the implementation went? Does the NS now have the capabilities in place to use RedRose in the future for CVA?
- Having been through the implementation process, what recommendations would you suggest to another NS that is considering implementing RedRose? Are there recommendations that you also have for the IFRC and the RedRose team?

Focus area 3 – Use of RedRose during the CVA programme

- What was your experience of <u>using</u> RedRose during the CVA programme? Provide specific details about the registration process, checking registration data, preparing groups for payment, payment through FSPs (if applicable), payment reconciliation, financial controls, data security & access, reporting and having information available to make decisions.
- Were any issues encountered during the use of RedRose? What went well and what didn't during the CVA operation and what have you learnt? What would you do differently and do you have any recommendations for other NSs considering using RedRose for CVA?
- Any feedback from the people who received CVA on the process or from volunteers?

• Would you use RedRose again for a future CVA programme? What do you see are the advantages or disadvantages of using it? If you wouldn't use it, why not? What would you like to see improved?

Appendix D: Consultancy – profile and experience

Opal Cherry Limited was incorporated as a private limited company in the UK in 2017 and provides consultancy services to humanitarian agencies and organizations, in the appropriate use of technology and digital tools.

The company director, Peter Mujtaba, has over 25 years of experience within the information technology industry. Initially working within the private sector, he has spent the last 15 years specializing in supporting digital and information technology projects for not-for-profit and non-governmental organizations.

For more information on the services provided and company background, please refer to www.opalcherry.com

