

**INSTRUCTIONS FOR THE LEAD:**

The Innovation analytical paper mainly address overall results, assumptions and learning questions/lessons learned regarding to the Innovation Project

**DUTCH RELIEF ALLIANCE – 121 PERSONAL CASH AID**

<b>1. Summary</b>		<b>Max 0,5 page</b>
Project name	121 Personal Cash Aid	
Summary project (max 4 lines)	With 121, we aim to make Cash Based Aid safe, fast & fair, to help people affected by disasters meet their own needs. We involve People Affected by disasters, Aid Workers and People Donating in the design process, and use robust and available technology to create the solutions that are needed.	
IATI Activity Identifier	NL-KVK-41236410-DIF2019	
Reporting period	January 2019 – December 2020	
Lead organization	Dorcas	
DRA Partner (co-lead)	Tear, Help a Child	
Other partner(s)	The Netherlands Red Cross 510, Disberse, Price Waterhouse Coopers, Tykn	
Budget (plan)	€ 795.855	
Budget (expenditure)	€ 736.090 (cf. section 5)	
Contact	Anton van Wijk, <a href="mailto:a.vanwijk@dorcas.nl">a.vanwijk@dorcas.nl</a> , 0228-595900, Skype: anton.dorcas	

<b>2. General information</b>		<b>Max 0,5 page</b>
Please provide a brief description of the project, the innovative aspect(s) of it and the underlying assumptions and learning questions.		
<p>For a brief description and the innovative aspects of the project please see the project proposal and <a href="#">website</a>. The assumptions and learning questions as formulated in the log frame are included in section 6 of this proposal, in order to present them together with the relevant lessons learned on them.</p> <p>In a brief introduction of this project the two scope changes in which the original envisioned project was adapted need mentioning. The first scope change (approved 30 January 2020), concerned a limitation in the technical scope and a simplification of the pilot planned in Malawi (cf. Annex 1 Scope Change Request). A second scope change (approved 10 August 2020) was necessary due to the Covid-19 related travel restrictions and the retreat of consortium partner Disberse from the project (cf. Annex 2 Contingency Plan). The implications of these scope changes run as a red thread through the report. Notwithstanding the associated challenges we are convinced that the project has generated substantial learning and insights and has created a good basis to continue building on strengthening Cash and Voucher Assistance (CVA) using 121 solutions.</p>		

<b>3. Achievements</b>		<b>Max 1 page</b>
Please provide concise information of the achievements of the main activities. Make sure that this links up to the results published in IATI.		
Number of beneficiaries planned <sup>1</sup> :	200 people register in the 121 system people receive vouchers	
Number of beneficiaries reached:	57 people registered in the 121 system (until 31-12-2020) 46 people received a total of 212 vouchers	
Main achievements: Describe the main achievements (in addition to the results published in IATI)		
<p>Within this section of the end term report the focus is on the activities and targets as formulated in the logical framework in the updated version as shared during the second scope change.</p> <p><b>Result 1:</b></p> <ul style="list-style-type: none"> <li>- <b>A scalable kernel system that allows humanitarian organizations to initiate direct cash programs in a transparent, inclusive and efficient way, is operational and accessible for DRA members.</b></li> </ul> <p><b>Indicators for result 1</b></p> <ul style="list-style-type: none"> <li>- <b>1.1: 121 kernel system, ready, piloted and accessible for DRA members</b> The 121 system has been piloted and its code is open source and available for DRA members and other interested parties. See further under result 3.</li> <li>- <b>1.2: 200 people registered through the 121 kernel system with a digital identity</b> 57 people were registered in the 121 system until December 31, 2020. See for explanation “Pilot core system” under “Activities for result 1” below.</li> </ul> <p><b>Activities for result 1:</b></p> <ul style="list-style-type: none"> <li>- <b>Test protocols for beneficiary inclusion and validation of needs</b> Needs assessments have confirmed the relevance of CVA in the pilot countries Ethiopia and Malawi and protocols for beneficiary inclusion and validation of needs have been set up. For the scope change to NL needs of prospective pilots participants have been established by the Landelijke Vreemdelingen Voorziening (LVV). Undocumented migrants on the LVV waiting list for Amsterdam, i.e. not yet enrolled in the LVV’s program have all been considered eligible for participation and assistance.</li> <li>- <b>Refine safe digital identity system</b> The conclusion of this project is that using self-sovereign identity can technically work as a digital identity system in a cash program. There are however practical obstacles to implement this at scale such as no or low-tech environments, unstable or lacking internet connectivity and an uncertain added value for people affected. Indirectly, working on self-sovereign identity, helped to put privacy-by-design and responsible data use front and center of our efforts. In the short to medium term, the likelihood of having self-sovereign identity used between organizations by people affected is low. (See further Annex 3, “121 Product Roadmap”, p. 21,).</li> <li>- <b>Optimize cash allocation algorithms</b> Research was conducted into the optimization of the cash allocation algorithms or distribution algorithms. The research started as a mathematical endeavour, but it was quickly realized optimizing cash allocation algorithms is more a technological and societal challenge. The research concludes that “completely taking over the decision-making process seems to be the wrong solution for all stakeholders”. (See further Annex 4, “Research cash allocation algorithm”)</li> <li>- <b>Co-design workshops in Malawi and Ethiopia</b></li> </ul>		

<sup>1</sup> The targets mentioned throughout this document are conform the revised log frame, shared during the second scope change.

Co-design sessions in Malawi and Ethiopia took place in May and June of 2019. In preparation of the NL pilot a series of co-design sessions were held with the target group (about 50 sessions in total). This has given the consortium a good understanding of the vulnerability and needs of the target group and helped shape the PA app. (See further Annex 5, “Insights co-design Malawi, Ethiopia”)

- **Pilot core system**

The 121 system has been piloted in the Netherlands for the LVV program from the Netherlands Red Cross (NLRC) and partners, starting November 2, 2020. The NLRC has decided to continue using the 121 system until at least May 31, 2021. The following metrics describe some parameters of the pilot until 31-12-2020:

<b>Program LVV</b>	<b>31-12-2020</b>
<b>Number of people invited to register for aid</b>	96
<b>Number of people registered</b>	57
<b>Number of people received vouchers</b>	46
<b>Number of distribution rounds</b>	7
<b>Total number of vouchers distributed</b>	212
<b>Total value distributed [EUR]</b>	7.420,-
<b>Average stay in program [weeks]</b>	5

Throughout this pilot the 121 platform was accompanied by a Helpdesk (physical and whatsapp-based) and the easy to use and easy to maintain Helpful Information web-app (also called Referral-app or WegWijzer app). At January 7 this web-app was visited 115 times, with the average session taking 3.5 minutes. Most popular topics were Shelter (day & night) and Doctor (body & mind). Less beneficiaries were reached than planned during the project period due to the scope change to NL. Subsequently there were also unpredictable variations in the size of the LVV waiting list for Amsterdam with people eligible for participation. In order to increase its reach, during the project preparations were made to extend to Utrecht. Actual registrations and voucher distributions in Utrecht are taking place but outside the project period. Rather than focusing on the actual number of people reached by December 31, 2020, we consider it more important that people have actually been reached using 121, and that NLRC has decided to continue to use 121 beyond the project period within a second cash program.

**Result 2: Multiple donation and last-mile payment interfaces developed and end-to-end system piloted in different humanitarian contexts.**

**Indicators for result 2**

- **2.1: donation modules integrated**

The scope change towards a pilot in NL without participation of Disberse implied that the pilot needed to run without actual integration of a donation module and actual donations, despite preparations made to this effect. Instead cash distributions were financed with funds not specifically raised for 121. A small research with people donating from Dorcas did not validate that tracking and tracing their donations was a priority for people donating. For this reason it is no longer a priority on the 121 roadmap.

- **2.2: 1 campaign executed to raise funds for cash payments**

The scope change towards a pilot in NL without participation of Disberse implied a cancellation of the campaign. A mock-up user interface of a donation module was however tested with People Donating at Dorcas. This test was unable to establish a validated interest for direct donations and traceability into 121.

- **2.3: 1 last-mile payment solutions integrated.**

The scope change towards a pilot in NL without participation of Disperse made integration with one financial service provider, Intersolve, make most sense. Payment took the form of the creation of an Albert Heijn voucher.

- **2.4: 1 successful pilots of end-to-end system in the Netherlands**

The pilot in NL described above has been successful in testing the self-registration module for people affected, Helpful information app and Humanitarian organization portal for project managers. The validation module for aid workers could not be tested in the pilot context as needs of people affected were validated pre-pilot, by being part of the target group and on the list of the LVV.

- **2.5: 200 people received vouchers through the 121 system**

46 people received a total of 212 vouchers up to December 31, 2020. See for explanation "Pilot core system" under "Activities for result 1" above.

**Activities for result 2**

- **Develop strategies for digital and financial inclusion**

Initially for the pilots in Malawi and Ethiopia, co-design sessions provided some insight in which ways and to what extent people are digitally and financially included. A needs assessment reviewed people's access to banking services and ownership of and/or access to phones. This facilitated preparations for inclusion of people with limited financial and/or digital literacy into the pilot. Similarly for the eventual pilot in NL a thorough analysis was part of the Cash Feasibility Assessment (See Annex 6). This included conversations with circa 50 PAs that confirmed a 100% access to smartphones among the target groups. (Digital) inclusion was also facilitated by incorporating insights from co-design with the target group, including several language options, audio buttons and providing access to a digital and physical help desk.

- **Integrate systems to transfer funds from donor countries to pilot locations (financial B2B)**

Preparations were made to integrate the first-mile solutions (donation channels of Dorcas and Tear) and last-mile solutions (financial service providers (FSPs) in pilot countries) with the 121 system. A fundraising campaign was prepared to use the system after integration.

No actual integration could however take place due to several (delaying) factors: 1. communication difficulties with FSPs; 2. internal processes related to the first-mile solutions taking more time than anticipated; 3. no longer active participation of Disperse due to questions around its survival; 4. the Covid-19 crisis and how this impacts the project.

Whereas individual donation channels (such as Ideal for example) were not linked to the system, the system can handle cash transfers from humanitarian organizations via integrated FSPs to people affected, as was done in the NL pilot.

- **User led design of donation modules and last-mile payment options (financial P2P)**

Co-design sessions have taken place with potential donors and with persons affected. With regard to the donation interface preparations have been made for donations to be done via partner websites. The consortium finished a design research track with people donating to Dorcas. The outcomes of this research were presented into a prototype of the donation interface.

A successful integration between the 121 platform and Intersolve was made. Intersolve is one of the leading platforms for gift-cards in the Netherlands. They represent 450 brands with over 130.000 online/offline retail locations. In this project together with Albert Heijn, a 35 EUR giftcard was created that could be automatically send through WhatsApp (or printed) for use in supermarkets.

- **Pilot end-to-end CBA platform in The Netherlands**

The consortium partners have made substantial preparations for the pilots (two attempted and one actual), including the carrying out of needs assessment, consultations of local communities and authorities, preparation of contingency strategies, liaising with financial service-providers, internet connectivity testing, translation of the 121 interface, protection service mapping and preparation of monitoring and evaluation questions. Due to the limitations to technical integration, amongst other with the in-country Financial Service-providers (FSPs) and the Covid-19 situation, the pilots in Malawi and Ethiopia could however not be carried out. The pilot was tested in NL, see table under result 1.

**Result 3: A strong open source collaboration of humanitarian organizations and developers is in place that facilitates further development and sector wide acceptance and scalability**

- **3.1 Develop and launch an open source license;**

The platform has been launched under an Apache 2.0. license, as can be seen on [Github](#).

- **3.2 Set up a support group of donors NGOs and developers to facilitate sector wide acceptance and scalability**

Due to the delay of the pilot to the last quarter of the project period, the description “support group” is not fully adequate. Throughout the project period, there was engagement with several other donors by 510, that also invested in simultaneous pilot in Kenya. The consortium also engaged with several other partners, including from the Syria Joint Response and the DRA Cash taskforce. Sector acceptance and scalability were also discussed in December 2021 when then the consortium invested in the development of a product roadmap. Outside the project period, January-February 2021 this engagement resulted in a new, approved proposal regarding scaling 121, with the inclusion of several DRA partners new to the project.

**Result 4: Protection risks identified, mitigation measures proposed and linkages established to Protection services**

- **4.1 Research to ensure “Do No Harm’ and mitigation of protection risks**

One pre-pilot protection review (Nov 2020, see Annex 7) was done to identify and analyze potential protection risks and opportunities prior to the launch of the Netherlands pilot, in order to further improve 1) the referral application, 2) 121 application, and the 3) helpdesk. Recommendations were made based upon consultations with both aid workers as well as (former) undocumented migrants and were acted upon directly where possible.

A second review was done with recommendations based upon the insights after two months of cash distributions and the launch of the referral web application (Jan 2021, see Annex 8).

- **4.2 Link the system to complementary protection services**

Protection services had been initially mapped by in-country partners in Malawi and Ethiopia. A referral system had been drafted in pre-final version and protection user journeys were outlined. Due to the context change of the pilot to the Netherlands this was taken up by creating a web-app called Helpful Information, where based on geography and pilot locations an overview of protection services was provided. Through this web app, which was also linked to the helpdesk service, people can easily find out where to go to when they have a specific support question. Ultimately, the concept of such a referral web app can be used in different countries to support CVA by linking it to protection in a concrete way. Linkages were established to services in Amsterdam, and a start was made to map the services in Utrecht as well.

**Result 5: Learning and knowledge shared openly and scale-up phase prepared.**

- **5.1 Technical and data responsibility review of the system executed and results incorporated in further system development**

A review was conducted by PWC at the beginning of this project. Before putting the system to use in the Netherlands a formal data responsibility check was conducted and put forward to the data protection officer within the Netherlands Red Cross.

- **5.2 Learning and knowledge shared in the humanitarian sector**

All research, diagramming and code is available online. 121 has been actively branded in the sector. Presentations throughout the project period include (a.o.): Flanders Red Cross, RCRC EU Regional Working Group, RCRC Cash IM Working Group, the Humanitarian Innovation Exchange, a DRA IWG meeting that was hosted by PWC and in a visit to the Ministry of Foreign Affairs. A 121 twitter, LinkedIn and Facebook account echoes blogpost published by 510 on 121.

Given the delay of the pilot, learning and knowledge sharing has continued after the project period, for example by co-facilitation of a workshop in the DCHI Innovation Course. The main results of all the 121 pilots are presented on 121.global.

Certain learnings are also incorporated in processes, products and/or projects that reach beyond the DIF-funded 121 project and project period. For example:

- The set-up of the Helpful Information web-app is also used in other Information-as-Aid applications for the MENA region
- The set-up of the management portal in 121 is also being used in 510’s Impact Based Forecasting products
- Consortium partners have become more familiar with the processes of co-design and user-testing. These have also been improved and applied in other products developed by 510.
- The technical set-up including but not limited to scrum agile development, technical environments, testing protocols, monitoring tools are finding their ways into different services and products
- 121 continues to be used by the Netherlands Red Cross beyond the project period.

- **Develop scale-up plan**

On December 15 and 16, the NLRC/510 facilitated two scale-up days where consortium partners were brought together to discuss the future of the 121 platform. The outcome is a 121 Product Roadmap that is attached to this report. This document functions as the basis for any next (international) 121 platform developments and is categorized per end-user. It describes the value that we aspired to deliver, followed by what was delivered and closed up with next steps in the short, medium and long-term. One of the major points for attention will be the development of a sustainable business model.

4. Challenges & Risks	Max 0.5 page
Please describe the main challenges and risks and how you mitigated them	
<p><b>Challenges and mitigations</b></p> <ul style="list-style-type: none"> <li>- Scope change 1 End of January 2020 the consortium received approval for a scope change request in the consortium explained how development was taking more time than anticipated and motivated how it prioritized initially envisioned features. Please see attached in Annex 1 Scope Change Request.</li>   <li>- Scope change 2 due to COVID19 In July 2020 the consortium received approval for a scope change request to not conduct pilots in Ethiopia and Malawi, but in the Netherlands, to mitigate for travel restrictions. To ensure doing no harm, while no longer participating in the pilot, communities engaged in Ethiopia and Malawi did receive (cash) assistance. Please see attached in Annex 2 Contingency Plan.</li>   <li>- Disperse drop-out</li> </ul>	

Consortium partner Disperse has expressed to be no longer able to participate in the project. As a result, integration of the platform with donation modules and financial service providers was not possible. To the extent possible this was worked around by attracting extra development capacity at 510 to do the integration. See further the before-mentioned contingency plan.

- Pilot in the Netherlands

Moving the scope to the Netherlands brought its own challenges. Of the consortium partners only the Netherlands Red Cross had relevant programming in the Netherlands. Setting up the pilot cash project required additional human resources in the Netherlands. The target group, undocumented migrants, proved very vulnerable and difficult to reach, which limited the possibilities for user testing and gathering of MEAL data and put a strong emphasis on trust. This was mitigated by doing a small number of user tests on location, retrieving feedback from the implementing organizations and having a strong digital CEA plan.

Due to the scope changes, the pilot in The Netherlands took place in the final quarter of the project period which allowed less time for learning, sharing outcomes and preparing for scaling. Also the reduction from two pilots to one pilot limited part of the learning experience to less actors than initially planned.

- Relationships with FSPs

After selection of the financial service-providers in Ethiopia and Malawi it proved more challenging to engage them than anticipated. To mitigate this, much more efforts than planned were put into engagement with FSPs. In the Netherlands, integration with the FSP was successful in the end, but main challenges were found in choosing the right modality (e-vouchers) that were technically possible but not yet accepted by the vendor. To overcome this and ensure acceptability to the vendor, People Affected received with their voucher an instruction on how to use it.

- Offline use

The level of internet connectivity in Ethiopia and Malawi was tested and turned out to be lower than anticipated. This challenges the use of the system in the field. 510 developed an offline validation scenario, but it remains impossible to register people fully offline due to the blockchain components. To mitigate this 510 developed the system to be less reliant on a stable connection, but uploading data every so often. During the pilot in the Netherlands, people affected needed to have mobile data or connect to wifi for the use of certain functionalities. Enabling offline use continues to be envisioned in the developed 121 roadmap.

### **Risks and mitigations:**

- Community review of the scoring algorithm.

The initially envisioned scoring algorithm for beneficiary selection could yield unfair results, hence a community review was added as a feature in the system. This allows communities and program managers to have a final say on selection. Under the right conditions this can improve the outcome of the scoring and selection. This can be further tested in future pilots.

- Research into key user information.

Humanitarian organization using different vulnerability criteria challenge the interoperability of the system as people affected will build up different identity profiles. This risks people affected to experience repeated registrations/validations. This risk could not be mitigated within the scope of this pilot. More research is needed to define key user information that needs to be registered for every user in the system.

- User-friendliness and privacy awareness.

Limited privacy awareness may affect the perception of user-friendliness. Privacy awareness is not a universal concern and GDPR not a universal law. Certain features of the system are necessarily less user friendly to comply with regulations. The risk is that local humanitarian organizations and people affected do not see the added value. Increasing this privacy awareness could be a way to mitigate that risk but has not been followed up yet.

- Access

Both in preparation and during the pilot in The Netherlands, several measures were taken to maximize access for the target group (see above under “activities for result 2”). Tying selection of people selected to the LVV waiting list and to people involved in did however also lead to exclusion of other undocumented persons and led to feelings of frustrations and the question “why not me?”. Despite considerable investment in CEA and digital CEA, the table under “Pilot core system” above shows that on January 7, 57 out of 96 people invited had registered for assistance. In a comparable pilot started up by NLRC the response rate was much higher. Some of the limiting factors have been: a) Language. The LVV waiting list is a multilingual group, but the 121 consortium had only access to a phone number without further personal information. Technically it was not possible to send a multilingual invitation, hence the first invite was always in English; b) Time. The time that people were included on the waiting list was sometimes very short, which limited the possibility to send reminders; c) some people on the list were no longer in touch with the LVV themselves, and changing phone numbers happens a lot within the target group. Having more information available when inviting would allow for a more targeted invite.

<b>5. Financial report</b>	<b>Max 0.5 page</b>
----------------------------	---------------------

Please fill only in case of deviations

Within this reporting period, January 2019 – December 2020, the 121 Personal Cash Aid consortium spent € 736.090. This is 92% of the total project budget. The financial report builds upon the individual reports from the consortium partners. A summary of the report with some observations and explanations with regard to the project spending is given below.

Budgetlines		Budget	Expenses	Balance	%
<b>I</b>	Total International staff	€ 94.698	€ 103.760	€ -9.062	110%
<b>II</b>	Total National staff	€ 37.678	€ 5.983	€ 31.695	16%
<b>III</b>	Total Programme implementation	€ 550.316	€ 519.631	€ 30.685	94%
<b>IV</b>	Total Assets & Equipment	€ 2.250	€ -	€ 2.250	0%
<b>V</b>	Total Other Direct Costs	€ 6.500	€ 2.479	€ 4.021	38%
<b>VI</b>	Total Monitoring (evaluation) & Audit	€ 38.700	€ 43.460	€ -4.760	112%
<b>Total Direct Costs</b>		<b>€ 730.142</b>	<b>€ 675.312</b>	<b>€ 54.830</b>	<b>92%</b>
<b>Total (incl. man. costs &amp; ICR)</b>		<b>€ 795.855</b>	<b>€ 736.090</b>	<b>€ 59.764</b>	

- Due to the pilot move to the Netherlands there was a slight overspending on international staff cost and substantial underspending on national staff costs. Some national staff costs were made in preparation of the pilots in Malawi and Ethiopia.
- The (scope) changes affecting the project led to an overall slight decrease in costs for program implementation. This composed of an increase in the costs for development of the core system at the one hand and a decrease in spending on other lines under program implementation. Preparations for the pilots in Malawi and Ethiopia made that still substantial costs were made here.
- The small anticipated budget for assets and equipment needed not to be used.

- The small anticipated budget for other costs turned out to be only partly needed, again linked to shift of the pilots to the Netherlands.
  - The budget for audit & evaluation was slightly exceeded due to the audit being more expensive than anticipated.
- It is worth noting that the trends in over- and or under expenditure were also indicated in a revised budget shared in August 2020, which needed no approval.

<b>6. Lessons learned on assumptions and Learning Questions</b>	<b>Max 1 page</b>
---	-------------------

Please describe the lessons learned on the main assumptions and the (preliminary), how they are discovered and provide answers to learning questions

**Assumptions and lessons learnt:**

1. Sufficient blockchain and other software developers are available for the project.  
 In order to be able to work in a more offline non-smartphone environment, the blockchain component has been strongly reduced throughout the project. As such there have been limited difficulties in finding blockchain developers.
  
2. Operational environment in Malawi and Ethiopia is stable enough to implement pilots.  
 The operational environments in Malawi and Ethiopia have been considered not to be stable enough to implement the pilots. This relates first of all to Covid-19. Also slow communication, unkept promises of an FSP and the involvement of an FSP in Malawi in a corruption scandal hindered the integration with Financial Service Providers. In order to still pilot therefore the decision to move the pilot to The Netherlands.
  
3. 121 Project is able to comply with regulatory requirements (e.g. GDPR, AML, and general audit requirements).  
 So far 121 was compliant with relevant regulatory requirements.
  
4. Internet connectivity trends continue in the coming years, significantly reducing the 'unconnected' population.  
 Internet connectivity trends are indeed rising, but within the scope of this project that became irrelevant. The target areas we were working in did not always have a stable internet connection, this resulted in more work to make the system also usable offline, as well as including improved offline capabilities in the product roadmap and a new project proposal. In the end during the pilot in the Netherlands, internet connectivity did not prove problematic.
  
5. Donors, people in need and humanitarian organizations are willing to pilot the 121 system.  
 People donating might have been willing to pilot the 121 system. The discontinuation of Disberse in this project made it unfortunately not possible to test this.  
 People in need showed willing to pilot the 121 system, although the relatively low registration rate shows that some also experienced barriers in using it.  
 Humanitarian organizations were willing to test 121. It has been realized that from a fundraising campaign point of view, using the 121 platform requires a coordination between finance, fundraising and marketing. This sometimes resulted in a longer decision-making processes than anticipated. Also, the use of cash and potential to market the 121 system to individual donors in the piloting phase receives some opposition. This for example resulted in the NL Red Cross and Tearfund deciding not take part in an individual donor campaign when this was still envisioned. Another major lesson learned here is that we are trying to force a big change all at once, and that maybe multiple smaller changes would make organizations more open to it. But also that an

innovation project requires backing and embeddedness in all departments, the earlier we include them and the more frequent we keep them up to date: the better.

On a positive note, the NL Red Cross decided to extend using the 121 platform until at least May 2021 for two programs. Also in a new project proposal to the Dutch Innovation Fund several DRA partners new to the project expressed interest to participate in the consortium.

**Learning Questions and lessons learnt:**

1. What are key factors of success and failure in a multi stakeholder innovation process (NGO's, private sector, knowledge institutes)

The 121 project is an innovation project that is ambitious in its aims and scope. It was realized that the vision is not the scope, but something to work towards to. It required significantly more work than expected to achieve certain goals as many of the activities were new and previously untested. It is also a challenge trying to integrate new and innovative systems into existing organizational systems that are in themselves complex and inter-related.

A number of key factors emerged during the project. First of all, significant time should be dedicated to the inception phase, the division of roles, responsibilities, expectations, interests, coordination preferences and the way in which progress is measured.

Innovation projects should start small and should slowly scale up with each project building on the success of the previous project. Also, rigorous testing to get an idea of how fast a project-team can learn can be helpful.

Innovation projects might need a different contractual and M&E framework than regular humanitarian projects. An output based project setup with a logframe and fixed contracts and budgets over the course of the project limits flexibility and slows down decision making. A more flexible project structure combined dividing funding in different phases would be recommended. When reviewing innovation funding requests it is also very important to look at the innovation team and the problem this team is tackling, the solution may be totally different than what was anticipated but it should solve the problem.

See further section 7 and the external evaluation report.

2. What are the potentials and challenges of a blockchain-based identity management system for beneficiaries of a cash transfer program in regard to usability and technology acceptance?

These insights are captured in Annex 9 as the outcome of a strategy meeting held by 510. In short, the added value for people affected is as of now not significant. The challenges of truly adding value will not materialize in the coming 3-5 years. Given the limitations a blockchain-based identity management system poses to the overall 121 system, in the 121 product roadmap this is deprioritized.

3. How can humanitarian organizations comply with KYC (Know Your Customer) requirements in open-loop cash transfers?

Humanitarian organizations are required to comply with KYC and other regulatory requirements unless those requirements have been lifted (for example, a national government may lift KYC requirements during an emergency). The 121 project has been specifically designed to minimize the regulatory burden on the participating humanitarian organizations while still ensuring that they are compliant.

In the initial first-mile (donation) scenario, the design would involve donors transferring their donations via channels managed by the fundraising organizations, straight into a Disberse segregated account; these funds would immediately be issued as electronic money into an account on the Disberse platform held by the fundraising organizations, based on a nominated donation. Normal KYC processes would be carried out by the fundraising organisation, as per their usual

fundraising obligations, and donor personal information would be managed by the fundraising organisation.

In the last-mile (distribution) scenario, funds will be distributed by a third-party financial service provider (FSP). The FSP will take responsibility for carrying out KYC checks on the PAs using their services, but the humanitarian organisation (HO) will need to match their own PA registration with the registration held by the FSP; this may require sharing some Personally Identifying Information (PII). PAs will be informed that they are eligible for funds using a Voucher Service that is native to the 121 system, but these vouchers will have no monetary value themselves; PAs will request to redeem their vouchers, and the funds themselves will be distributed from an account held by the HO with the FSP.

Also see Annex 10, where 510 graduate student Jan Meyling researched how and if blockchain based identities could be used to satisfy customer due diligence with case studies in Kenya and Malawi.

- 4. What are the main challenges of international money flows from donor to beneficiaries and how can blockchain technology contribute to solving these challenges?

This learning question is answered separately in Annex 11 by former consortium partner Disberse. The main challenges that are identified are speed, efficiency, transparency and mismanagement. Blockchain technology can contribute to making progress on these challenges, but it cannot replace trust relationships, as some proponents have argued. Blockchain technology is not the only possible way to increase transparency. If blockchain technology is used it should be embedded in a wider process to address mentioned challenges.

- 5. What are key factors to enable sector wide acceptance and usage of the 121 open source cash system?

In Annex 12 a research piece (Bouwens, 2020) can be found which was supervised by consortium partner 510. This research describes the factors that are of key importance for local acceptance and usage of a system using self-sovereign identities as a way to include people without formal documentation. A key conclusion is that “the local circumstances and conditions do not provide a sufficient starting point for this, because there is not enough interest and sense of urgency among crucial stakeholders such as national authorities, FSPs and MNOs. These particular stakeholders hold significant blocking power and required resources to realize the proposed change, without their active support and dedication, chances of success remain low. This has led this research to focus on approaches to nurture support among these stakeholders.” (Bouwens 2020, p. 7, Annex 12).

<b>7. Evaluation of Innovation Process</b>	<b>Max 1 page</b>
Please describe the (positive) unexpected results, the things that went better than expected and the changes that occurred in the implementation of the program	
<p>Many of the results (unexpected and expected) and its changes are described in the previous paragraphs, therefore this paragraph focuses on topics not yet discussed. Some of them are more extensively described in the scope change request and contingency strategy for covid-19.</p> <p>For all people involved in innovation within the humanitarian sector, it is valuable to know what works and does not work based on practice. The 121 consortium for the DIF project has been collaborating on developing a cash based aid platform for two years and found some valuable lessons that add value to the existing pool of knowledge, in particular for those involved in the project, but potentially also for other stakeholders, including the Dutch Innovation Fund.</p>	

Our proposal for the Dutch Relief Alliance Innovation Fund (DIF) read that 121 wants to increase the use and coordination of Cash & Voucher Assistance, reduce duplication and management costs, provide greater transparency, enhance engagement between humanitarian and development actors and include people receiving aid in making decisions. With people affected, people donating, aid workers in the field and staff at HQ we had four end-users in mind. For these end-users we would develop and integrate six components into a shared delivery platform in a two-year project:

1. Blockchain-based self-sovereign identity module giving people control over their own digital identity being portable between organizations,
2. A kernel system that applies algorithmic decision-making which validates needs and allocates cash,
3. A blockchain-based fund management platform delivering low-cost and fully transparent international transfers,
4. A common cash ledger that optimizes coordination
5. Context specific donation and payment options and
6. Integrated with protection measures linking to existing referral systems.

**We all want to solve real world problems.**

There are a lot of things we would like to improve, sometimes those are assumptions about problems and other times those are the symptoms of a problem. Rarely do we understand the real problem directly. Human centered design is a way to solve actual problems instead of symptoms or assumptions. It is a design and management framework that develops solutions to problems by involving the human perspective in all steps of the problem-solving process. It is about falling in love with the problem first, then ideate a solution.

With this in mind, our proposal written in the summer of 2018, identifies a myriad of problems and solutions. The proposal was too ambitious in scope and underestimated the extent to which innovation is an iterative process with unknown problems and solutions ahead. Trying to create and implement this ambitious solution has learned us a lot.

**Set up for Success or Not**

According to the *people, process, technology* framework it is people first when you try to change the way things work. In our proposal there was a very strong emphasis on *technology*. Despite its strengths, technology alone does not solve problems, but it does win you proposals. This meant that from the outset of this project bound to several technologies whereas looking backward, more time was needed to validate our assumptions and understand the problem. More time should also have gone initially to identifying more in-depth where the various technical partners were standing, to knowledge about their innovation team, strengths and methodologies (the speed with which teams can build/innovate).

Then comes the *process*, where due to the contract set-up, detailed commitments and Waterfall-like planning that is common within the humanitarian sector, little room was left for the empirical nature of innovation. You only start to find out what is really needed, what goes wrong and why it goes wrong when you start doing it. The reason being that these problems are complex: we do not yet know what the problem is, there is no off the shelf solution, requirements change over time and actual use of the system will define how it is solved. Instead of the existing process, the goal should be to build, measure, learn, build, measure, learn and so on, preferably under one technical lead and reflected in the contractual set-up. Flexibility is needed to determine what is best tested in which context and with which partner. Increasing our learning curve so that when we finally understand the real problems we can learn and build very fast to solve them.

Agile Scrum and Human Centered Design are two frameworks that can empower teams working on complex problems, both were mentioned in the proposal but neither of them were really understood at the start of the project. Two examples clearly illustrate this. First, Agile Scrum is the standard in software engineering and all about empiricism, "it is the opposite of a big collection of interwoven mandatory components". The reality is that three months into our project we had translated the entire vision into a Software Requirements Specification which we signed off on, that somehow got a saint-like status of what we should accomplish. This was before a single piece of code was written. Second, Human Centered Design (HCD) starts with speaking to end-users to find out what their needs are and to understand what is viable in their context. Then take some time to design a prototype, test it and then build it. In our project planning, co-design interviews with people affected were planned for five and six months into our project, whereas in fact they should have been planned right at the beginning. Together with so clearly detailing software requirements upfront, it became more difficult to include additional insights derived from HCD into the system.

Then come the *people*. Of course ideas are important, but even more decisive for success are the people involved in innovation. When we started on this project, we were all qualified, we all had the right attitude, but we came up short on experience. The impact of experience was clearly visible when a senior scrum-master and software architect joined the team. Predominantly on the development part of our work significant steps were made resulting into a potentially shippable product, that was later accepted and successfully used by both 510's pilot team in Kenya and in the Netherlands. This also lead to more people in the team understanding the need for human centered design approach and figuring out how to link up these processes, coming full circle on people designing for people.

**Build, measure and learn**

As some of the realizations described above materialized during the project, we put the emphasis on learning. We aim to apply those learnings along the product roadmap. Maybe unexpected in a humanitarian context, but putting humans first both as an end-user and within our teams is a key learning. The reason we had the product successes we had can be clearly attributed to the human centered design insights that made it into the product. The reason there is a product is because at the right time we started to train people on critical skills, brought in experience and foster the willingness to improve. Sticking to a process that aligns with the characteristics of a project is crucial. This does not have to be a very heavy process and it does not have to have all the answers when you start, but do not implement it halfheartedly. It only yielded us benefits when we genuinely committed.

By slowly switching from a technology focus to a people focus, we realized that blockchain based identities hold potential and link well with humanitarian values, but that they add little practical value in existing contexts. The same concept holds for the common cash ledger or improving the speed of payments. Technology is not the bottleneck per se, it is that it requires a plethora of people from the financial service provider to the administrators at headquarters to all be aligned. The only way you can do that, is by having it very clear what pains you are taking away and what gains you can provide them.

One of the unexpected gains has been that the covid-19 context made the on (social) distance self-registration and digital community engagement more relevant than could initially be anticipated.

**Attachment: Logframe**

Please provide your logframe and report on the progress of all indicators

Section 3, regarding achievements, provides a description regarding all activities in the logframe.