H2020 - INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Information and Communication Technologies (ICT)

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CHILD RESCUE

Collective Awareness Platform for Missing Children Investigation and Rescue

D4.5 - ChildRescue Pilot Experimentation Documentation, Release II

Workpackage: WP4 – Missing Persons Cases Piloting and Evaluation

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ChildRescue Project Profile

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Partners

	National Technical University of Athens (NTUA), Decision Support Systems Laboratory, DSSLab Co-ordinator	Greece
Missing Children Europe	European Federation for Missing and Sexually Exploited Children AISBL - Missing Children Europe (MCE)	Belgium
The Smile of the Child CARE. DIGNITY. EQUALITY.	The Smile of the Child (SoC)	Greece
Child Focus 116000	Foundation for Missing and Sexually Exploited Children – (Child Focus)	Belgium
Ελληνικός Ερυθρός Σταυρός	Hellenic Red Cross (REDCROSS)	Greece
FRANKFURT UNIVERSITY OF APPLIED SCIENCES	Frankfurt University of Applied Sciences (FRA-UAS)	Germany
SingularLogic Innovation at your doorstep	SingularLogic ANONYMI ETAIREIA PLIROFORIAKON SYSTIMATON KAI EFARMOGON PLIROFORIKIS (SLG)	Greece
UBITECH ubiquitous solutions	Ubitech Limited (UBITECH)	Cyprus
MADE by MADEGROUP.CO	MADE Group (MADE)	Greece
Suite5 We Deliver Intelligence	SUITE5 DATA INTELLIGENCE SOLUTIONS LIMITED (S5)	Cyprus

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Executive Summary

D4.5 - "ChildRescue Pilot Experimentation Documentation, Release II" reports the results from the final pilots operation and execution, which include the feedback collected from the participants. This deliverable D4.5 combined with the D4.3 will lead to the final pilot evaluation and assessment in D4.6 – "ChildRescue Pilot Evaluation and Lessons Learnt" [M36] as well as the final evaluation and validation of the overall ChildRescue solution.

The **ChildRescue pilot experimentation** is divided into two parts, the first and the second pilot phase, consisting respectively of: a) simulation/tabletop exercise and b) a field exercise. D4.5 documents the simulated exercises of the second pilot phase that were conducted during the first semester of 2020 in the premises of each of the **three pilot organisations.**

By the time the final pilot experimentations were taking place, measures for the protection against the COVID-19 were still in place in both countries, i.e. Greece and Belgium. The organisations conducted the pilots **in a simulated way, staying as close as possible to the conditions of real life scenarios, and relying at the same time on the use of online platforms, permitting distance communication among all relevant partners.** By the time of the exercise, all ChildRescue components were deployed as the integrated ChildRescue platform and apps and were prepared as needed to support the pilot execution.

Three scenarios were provided by the pilot organisations to support the pilot operation; two for the Missing Children Emergency Case (Greece-supported by SoC and Belgium-supported by Child Focus) and one for the Discovery and Identification of Unaccompanied Minors (Greece-supported by REDCROSS). The developed scenarios were based **on true facts** to create a plausible environment, but any personal data related to the children were **carefully anonymised**. Members and staff of the pilot organisations participated in the exercise and were supported by the technical partners of ChildRescue consortium. The execution of the full-scale exercise followed the pilot guidelines provided in D4.4 (March 2020). The pilot guidelines also included a provision for the systematic collection of participants' feedback through interviews and online surveys/questionnaires. The collected information was used as input for further analysis and the extraction of useful conclusions based on the developed evaluation and validation framework. This information was also used for a preliminary calculation of validation KPIs.

The perception of ChildRescue by the organisation members that participated in the exercise was overall positive with some differences in the answers from the different organisations. Despite some comments for improvements in the platform and apps, the participants were willing to adopt ChildRescue in their every-day operations, as they **identified possible benefits** from its use. This feedback was used for the refinement of the final release of the ChildRescue platform and app. Planning for further modifications of the ChildRescue platform and apps is presented.

The results from D4.3 and D4.5 combined will lead to the final pilot evaluation and assessment in D4.6 – "ChildRescue Pilot Evaluation and Lessons Learnt" [M36].

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Abbreviations List

CRM	Customer Relationship Management
Dx.x	Deliverable x.x
EC	European Commission
EKKA	National Centre for Social Solidarity
EU	European Union
GDPR	General Data Protection Regulation
GPS	Global Positioning System
IASC	Inter-Agency Standing Committee
ICRC	International Committee of the Red Cross
KPI	Key Performance Indicators
MFC	REDCROSS Multifunctional Center
MCOs	Missing Children Organisations
PBM	Performance Based Management
RFL	Restore Family Links operations by Tracing Department of Redcross
S&R	Search & Rescue
TS	Tracing Service
Tx.x	Task x.x
UMC	Unaccompanied Migrant Children
UNHCR	United Nations High Commissioner for Refugees
WP	Work Package

1 Introduction

1.1 Purpose & Scope

ChildRescue project has the purpose to create a platform that facilitates the investigation of missing children and unaccompanied minors by using new technologies and promoting social awareness and involvement. It also involves the creation of mobile applications for Android/iOS Users, through which ChildRescue will provide location-based notifications to the citizens about missing children and found unaccompanied minors that spread to different geographic areas as time goes by, according to the places a missing child is probable to be found or has gone from.

This deliverable report D4.5 – "ChildRescue Pilot Experimentation Documentation Release II" [M34] contains the documentation and results of the second pilot of ChildRescue and provides substantial feedback for the refinement of the implemented ChildRescue platform and apps. Additionally, it will be used for the final pilot evaluation and assessment in D4.6 – "ChildRescue Pilot Evaluation and Lessons Learnt" [M36].

1.2 Structure of the deliverable

The deliverable D4.5 is structured as follows:

- Section 2 constitutes the overview of the pilots. This overview includes the presentation of the two use cases of ChildRescue that drive the pilots (Missing Children Emergency Case and Discovery and Identification of Unaccompanied Minors), the overall pilot scheduling as well as the preparatory steps that were needed to appropriately facilitate/accommodate the final pilot execution using the ChildRescue platform and apps.
- Section 3 presents Pilot 1: Missing Children Emergency Case – Greece that was performed by SoC. It consists of the pilot exercise scenario, the actual execution of the full-scale field exercise, the pilot evaluation and the data collected for the refinement of the ChildRescue solution.
- Section 4 concerns Pilot 2: Missing Children Emergency Case – Belgium, performed by Child Focus. It is structured identically to Section 3.
- Section 5 is dedicated to Pilot 3: Discovery and Identification of Unaccompanied Minors-Greece, performed by REDCROSS. It is structured identically to Section 3.
- Section 6 involves the planned technical modifications for refinement of the last version of the platform and apps, and finally,
- Section 7 summarises each organisation's planning for the adoption of the ChildRescue solution within their regular work in the future.

1.3 Relation to other WPs & Tasks

D4.5 [M34] represents the second release of the deliverable D4.3 and documents the execution of the second pilot phase of ChildRescue. It incorporates the result of all the activities of various tasks of WP4 - "Missing Persons Cases Piloting and Evaluation".

D4.5 combined with D4.3 will provide information required for the final evaluation of ChildRescue pilots in D4.6 - "ChildRescue Pilot Evaluation and Lessons Learnt" [M36].

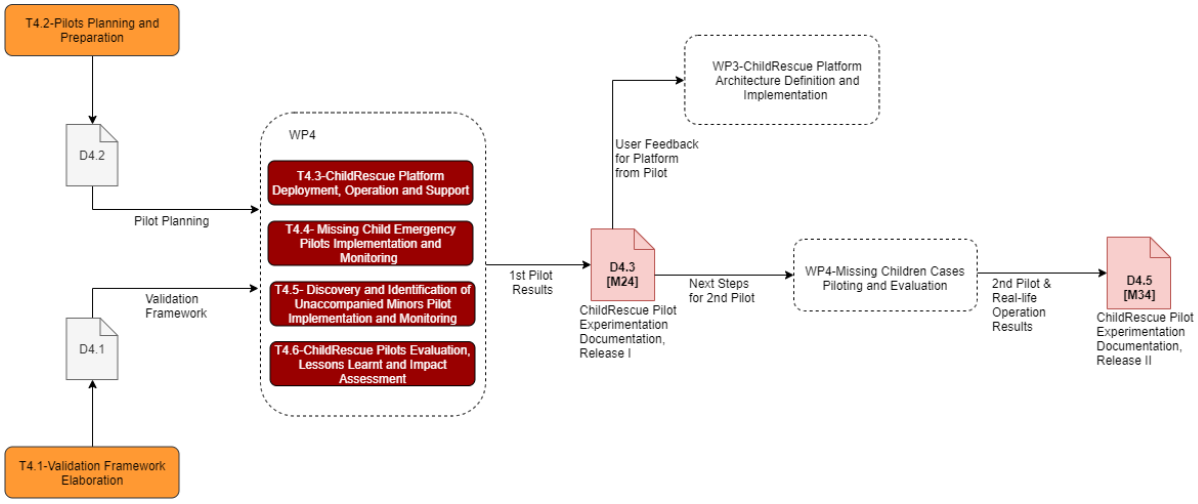

Figure 1-1: Relation to other WPs/Tasks

2 Piloting Preparation

2.1 Pilot Overview

Pilot use cases are used to validate, demonstrate and evaluate the ChildRescue approach. ChildRescue introduces features that will enhance the standard processes of the organisations when handling such cases.

Each pilot consists of a scenario which is based on true facts from past cases. The scenario is appropriately formed to make use of all **functionalities** supported by ChildRescue at the time of the exercise execution. Then, the pilot scenario is executed by the actors participating in the exercise.

The execution is followed by interviews based on a template with **open-ended questions and close questions** for the participating staff members and supplemented by a **survey** designed for the pilot and platform as well as app evaluation (D4.4). Additionally, the survey for the staff members from the first phase is included in the second phase with the implemented changes as described in D4.4. Also, for the second phase of the piloting evaluation, an additional online survey for the volunteers has been developed.

Collected input and comments by participants are followed by an initial calculation of simple statistics from the close-ended questionnaires and extraction of conclusions based on feedback from the open-ended focus groups (interviews).

The added value of ChildRescue to existing procedures will be assessed through the validation framework during the first and second pilot phase.

It was decided that all KPIs, those concerning the execution of pilots as well as the general impact of ChildRescue and public usage of the platform, since they cannot be calculated inside a simulation environment, they will be completed after the public release of ChildRescue, in the context of D4.6.

Two use cases are explored in the ChildRescue demonstrators and supported by the three pilot organisations.

2.1.1 Missing Child Emergency Case

This scenario involves a standard case where a child goes missing from his/her home, the incident is reported to the hotline, a decision for publication of a public appeal is taken, the community and search parties become engaged, and the child is located and returned to his/her family. The procedure follows the processes as described in ChildRescue, emphasising the contribution of the ChildRescue parallel processes along the way. Processes or events that are outside of the immediate interest of ChildRescue as an enhancement of already existing operations are either omitted or only briefly mentioned.

The actors involved in the process are the following: Missing Child, Parent/Guardian/Relative of the missing child, Visitor, Simple User, Search & Rescue / Volunteer Team Member, Search & Rescue / Volunteer Team Leader, Organisation Case Manager, Organisation Network Manager, Organisation Coordinator Manager.

2.1.2 Discovery and Identification of Unaccompanied Minors

The participation of REDCROSS in ChildRescue focuses on the discovery and identification of Unaccompanied Migrant Children (UMC) in the European Union (EU). *UMC are considered all foreign*

national or stateless persons below the age of 18, who either arrive in the EU unaccompanied by a responsible adult or are left unaccompanied after their arrival (UNHCR). Most UMC come from countries at war and/or poor living conditions and might by default be considered as vulnerable in need of protection and in fear of disappearance.

While the overall objective of the ChildRescue platform is the development of an integrated methodology that will transform research and discovery of disappeared children, REDCROSS participation, taking into consideration the IASC guidelines and also the long experience of the organisation in the protection of UMC, aims to further act effectively in the case of a disappearance of an UMC as well as build on the **potential to predict and even prevent** UMC disappearance.

The REDCROSS response with regard to UMC might be organised around two main axes:

- Protection services provided in the framework of UMC hosting facilities with the REDCROSS
- The Tracing department's operations to restore family links (RFL)

The involvement of the REDCROSS to ChildRescue is thus transactional with the intension of rendering ChildRescue procedures parallel to the existing REDCROSS mechanisms as an added value, especially when it comes to registration, data transfer, monitoring of the UMC, upgrading networking capacity and coordination of activities (research activities included). The pilot's scenario was initially drafted in 2018, taking also into consideration that when an UMC goes missing, the REDCROSS does not automatically engage on search and rescue activities with its employees and volunteers; unless this is for the vital interest of the UMC involved, such as in case of a major concern about his/her life, like in cases of an emergency (i.e. following a shipwreck) or a disaster. In the framework of the ChildRescue platform, different user groups have been foreseen for the REDCROSS that can range from case workers and volunteers to facility managers and organisation coordinators, with different access levels and privileges. All users are somehow affiliated to the organisation, since the REDCROSS has its own responding mechanisms and does not involve general public in its activities. In this regard and taking into consideration the requirements of the tabletop scenario, the participants to the first pilot phase where REDCROSS employees within the REDCROSS UMC Accommodation Centers and the Tracing Service. The intention is to further extend participation for the simulation exercise to include also employees within the REDCROSS Multifunctional Center for Refugees as well as certified REDCROSS volunteers.

2.2 General Pilot Scheduling and Preparation

The ChildRescue pilot operation was divided into two phases: a) simulation/tabletop exercise and b) a field exercise respectively. The simulation exercises were conducted during the second semester of 2019, while the field exercises were conducted the first semester of 2020 (June 2020). Additionally, prior to the public release, the platform and **application will be tested within closed user groups from the organisations**. The specific pilot planning for each of the organisations is presented in the following sections.

2.2.1 Pilot Preparation for SoC

The pilot plan for missing children in Greece by SoC consists of two main phases. The first phase for SoC consists of two sub-phases: sub-phase I.1, internal testing and 1st tabletop exercise (with the involvement of 10-20 people) and sub-phase I.2, 2nd tabletop exercise. During the first sub-phase, the first release of the platform/mobile app was tested, which did not include the volunteer app while during

the second sub-phase the volunteer app was tested. The second phase consists also of two main phases: sub-phase II.1, performing a field exercise where the second release of the platform/app will be tested, including the functionalities for volunteers. After the field exercise an internal testing with a controlled group of about 100 people will be conducted (sub-phase II.2), where the users will be familiarised with the data entry and handling of the platform and the app before citizens will start downloading it.

The initial plan for the field exercise that was agreed between the SoC and MADE Group, the communications partner of the project, had been decided before the outbreak of the pandemic. Ideally, it would be delivered as a real-time exercise, with the participation of a journalist in the role of the missing person, who would also record the process with short videos on her iPhone and also a media crew would cover the entire "experiment". This material would afterwards be available for the publicity and promotion of the project via the ChildRescue's social media platforms and also of third parties.

The field exercise was initially planned to be conducted at the end of March/beginning of April 2020. However, the planning could not be realised due to the worldwide events that have followed the outbreak of COVID-19 in March 2020. Preventive measures such as confinement and social distancing were taken by most countries, including the project's countries until June, when gradually all business restarted their activities with certain measures for employees and volunteers. By consequence, the plan for the second phase of the pilots (field exercises/real cases) was revised with the aim to stay as close to the project's goals as possible so that the field exercise would serve its aim to test the ChildRescue solution.

The field exercise took place with most of the participants being at their own place. A minimum number of participants were hosted with physical presence at the premises of the organisation at Marousi (Athens) so that to secure the necessary distance to the participants in the place. Webex platform gave the opportunity to all the other to connect remotely. The list of participants as well as audio and visual documentation of the exercise was provided through the Webex platform.

Taking into account that being connected for many hours poses difficulties and distress to the participants, SoC decided to implement the exercise in 2 days. The first day (12/6), an essential training took place with the technical partners presenting the platform and app, its functionalities and giving simple examples. The second day, the field exercise took place (15/6).

The days before the exercise, the exercise manager/facilitator revised the scenario upon the new conditions as key persons of the exercise would be virtually present and the scenario would need to take into consideration their presence at their own place (workplace or home) for the execution of the exercise.

The exercise manager of the Smile of the Child informed the volunteers/members of the Search and Rescue Team "Thanasis Makris" and explained the scenario and the actions they needed to take during the course of the field exercise. Based upon their places, they were asked to send certain messages at certain times. The exercise facilitator used Viber in order to notify the volunteers about the time that they should contribute to the scenario with certain evidence/data in order to test the functionalities of the ChildRescue solution and execute the scenario.

An agenda and a Consent form were created for all the participants before the field exercise.

Administrative and technical support was offered throughout the whole exercise by staff of the organisation.

Specifically, the time plan and the steps that were and will be followed for the piloting in Greece is as follows:

- [M18] - June 2019: Operation of the first release of the mobile app
- [M19-21] - July – September 2019: Internal testing of the first release of the mobile app and provision of comments to the technical partners
- [M22] - October 2019: Training and simulation/tabletop exercise (one day) on the basis of the developed scenario – testing was conducted in a controlled group of 16 people (the testing included registered and unregistered users and the key actors of the pilot organisation –Case Managers, Network Manager, etc- as well as the technical partners) (Phase I.1)
- [M22-23] - October – November 2019: Modifications to the platform/app by the technical partners
- [M24] – December 2019: Training and 2nd simulation/tabletop exercise (one day) on the basis of the developed scenario – testing of the volunteers app was conducted in a controlled group of 17 people (the testing included registered and unregistered users and the key actors of the pilot organisation –Case Managers, Network Manager, Volunteers etc.- as well as the technical partners) (Phase I.2)
- [M25-27]- January, February and March 2020: Modifications to the platform/app by the technical partners (beta version)
- [M30] - June 2020: Training (one session) and full-scale/field exercise (second session) of the beta version of the ChildRescue platform/mobile app that included the volunteers' app (Phase II.1)
- [M31] – July 2020: Final version of the platform/mobile app and internal testing to a larger controlled group of volunteers/staff)– data entry and internal handling of the platform and app (Phase II.2)
- [M31] – end of July 2020 (28th): Public release of the ChildRescue platform/mobile app in Greece
- [M32-36] Use of Child Rescue with real cases

2.2.2 Pilot Preparation for Child Focus

The pilot plan for missing children in Belgium consists of two main parts: the first and the second part. The 1st phase consists of two sub-phases: Phase I.1, internal testing and tabletop exercise (with the involvement of 18 people) and Phase I.2, internal testing to a controlled group. During the 1st phase, the 1st version of the platform/mobile app will be tested, that will not include the volunteer app. The 2nd phase consists of performing a field exercise where the 2nd version of the platform/app will be tested, including the functionalities for volunteers and geo-localisation.

The field exercise was initially planned to be conducted at the end of March/beginning of April 2020. However, the planning could not be realised due to the worldwide events that have followed the outbreak of COVID-19 in March 2020. Preventive measures such as confinement and social distancing were taken by most countries, including Belgium. By consequence, the plan for the second phase of the pilots (field exercises/real cases) was revised with the aim to stay as close to the project's goals as possible so that the field exercise would serve its aim to test the ChildRescue solution.

The field exercise took place with the participants being at their own place on June 23rd. Microsoft Teams was used as a communication platform by 13 participants, 2 observers, the ChildRescue project manager at ChildFocus as well as representation from Frankfurt University and the technical partners.

Specifically, the time plan and the steps that were and will be followed for the piloting in Belgium are:

- September 2019: Training on the functionalities of the platform for the employees involved in Phase I.1 and I.2
- October 2019: simulation/tabletop exercise (one day) on the basis of the scenario below – testing will be conducted in a controlled group of 18 people (Phase I.1)
- January 2020: training on updated platform (if modifications were needed after Phase I.2)
- June 2020: Field exercise of the beta version that will include also the volunteers' app (Phase II)
- July 2020: Final version of the platform/mobile app
- August 2020: Public release of the ChildRescue platform in Belgium
- September – December 2020: Use of ChildRescue with real cases

2.2.3 Pilot Preparation for REDCROSS

Figure 2-1: REDCROSS volunteers and staff attending a preliminary training before the field exercise

Prior to implementation of the field exercise, a series of preliminary-preparatory actions were taken in order to safeguard a smooth execution and minimise possible drawbacks. In parallel, all preparatory actions were focusing on updating participants attending the field exercise about the mobile app use and modifications occurred after the tabletop exercise and recommendations shared with technical partners.

The preparation of the pilot field exercise in terms of steps that were followed towards its actual implementation might be split in the following phases:

Phase 1: On Monday **22 June 2020**, a preparatory meeting took place at the Volunteer Training Center of the Social Welfare Division of the REDCROSS, located at 34 Voulis street in Athens. The

meeting involved a **refresher course on the use of the ChildRescue app and platform, the hands on familiarisation exercise for the simple users and a first coordination meeting for the participants to the exercise**.

Participants profile:

- 2 Coordinators
- 2 Facility managers
- 1 social worker
- 4 Hellenic Red Cross volunteers
- 2 RFL team members

In addition, all technical partners participated to this meeting, however, due to COVID-19 protective measures, many- including the main instructors- attended remotely.

Phase 2: On Tuesday the **23 June 2020**, the registration of the UMC to participate in the field exercise took place by the facility manager and the social worker (care giver) of the facility in Athens. All UMC were informed on the exercise and signed the written consents for their participation. The 12 participating UMC were registered with nick names they chose themselves, which made the whole process more appealing to them and helped to ensure data protection at any case.

➡ **A list of 12 UMC had been created with ChildRescue**, to also serve as a take-attendance tool for the facility.

Phase 3: The actual field exercise took place on Thursday **the 25th of June 2020** (see Chapter 5).

2.3 Platform and Apps Preparation for Piloting

The 2nd phase of the pilots involved a field exercise using the final release of the ChildRescue developed solution. The ChildRescue solution consists of a web platform and two mobile applications, one for the general public/community (Android and iOS support) and one specifically designed for volunteers (Android).

2.3.1 Platform preparation

ChildRescue platform is a web-based software tool accessible by any device with a web browser. The users are requested to login with valid credentials to be able to work on the platform. Therefore, the first thing performed as part of the platform preparation during previous stages on a clean instance was for the ChildRescue administrator to create an administrative account for each of the pilot organisations. This role is known as Organisation Owner, and through its privileges all other role accounts can be created and managed. The first step was to fill-in the various details of the organisation (e.g. contact details, description, etc) and to register its facilities (e.g. headquarters, hosting facilities). Next, accounts for each of the available ChildRescue roles were created, namely the Coordinator, the Case Manager, the Network Manager, and the Facility Manager (the last one only for the REDCROSS scenario) and each one was assigned to a facility. Lastly, the Owner registered the available volunteers for the exercise by filling-in a form with their e-mail and password (that would hand to them later during the mobile apps preparation).

The final step of the platform preparation had to do with the appropriate population of the database with data required for the execution of the pilots. In particular, a number of dummy closed cases, filled with verisimilar information, were created so that data analytics could function properly since they base most of their outcomes on historical data.

Before the beginning of the exercise, a short presentation of the platform was performed in order for technical partners to educate the platform users on new features and functionalities.

2.3.2 Mobile Apps preparation

The preparation of the mobile applications involved two steps: the first step was to make the apps available to the users, and the second step to validate their registration on the apps.

For the Android versions (community & volunteers) the Google app store was the main source where the users could download both apps. Since the apps were in beta version, the users would need to provide their e-mail address and be part of the beta testers group, before they were allowed by the provider to access the download section. For the iOS version (community) the users had the app installed manually, since Apple is extremely strict regarding their store and does not allow apps in beta or demo version.

Some of the users opted to be anonymous citizens (visitors) and some decided to register as simple users providing an e-mail and a password. In the case of volunteers, the users had to make a successful login with the credentials they had received by the respective organisation, in order for them to access the full functionalities of the volunteer app.

During the installation of the apps on the mobile devices and the registration of the users, the technical partners made sure that everything worked as intended and supported the users on every issue they encountered. Furthermore, a short introduction to the mobile apps' usage took place so that the mobile users would become aware of the basic functionalities of each app, especially the volunteers.

3 1st Pilot: Missing Children Emergency Case – Greece

3.1 Pilot Overview

The scenario as described in D4.4 was used for the full-scale field exercise:

A 16-years old girl, Maria, participates in the five-day school trip to Athens (Lyceum of Argostoli, Kefalonia Island). The school`s hotel is in Palaio Faliro. Every day, the school visited a different place of interest. For Maria, it is the first time to be in the capital city, Athens.

Figure 3-1 Students outside the Hotel

The day that Maria disappeared, the school had visited Acropolis. Then, all together they went for lunch in the nearby area of Thiseio and afterwards they had a free time. Everyone had to be back at 17h00 to leave for the hotel. The responsible professor then discovered that Maria was not there. Her friends sitting next to her said that Maria went to the toilet around 16h00. On her seat, her jacket, a backpack and her mobile phone were found. After a quick search of the area, the professor informed Maria's parents and then the Police Station about the missing child. At 18h15, the police officer reported the missing child and formally informed the parents of the girl. The Police Station activated its forces in the area (two Motorcycle units). However, it was 19h00 and the weather was becoming bad with high winds and heavy rain, while temperature was below 12^{o}C. The rest of the schoolmates were in the bus waiting for any progress.

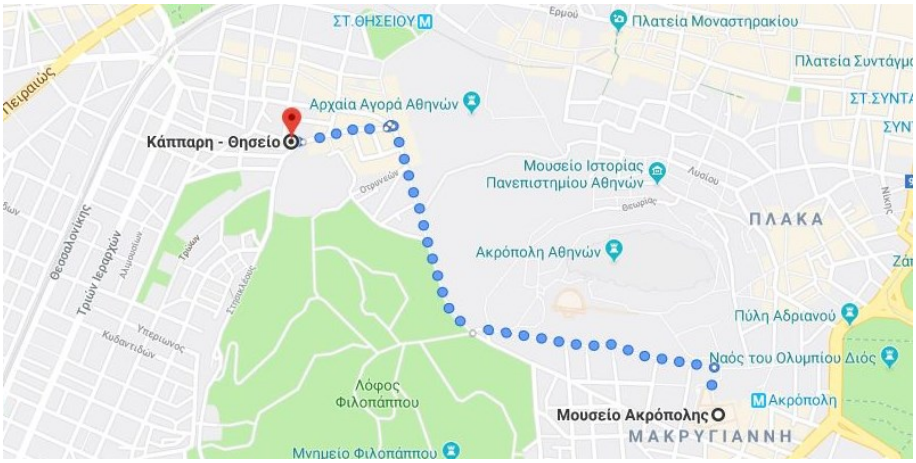

Figure 3-2: Route from Acropolis to tavern

At 19h30, the responsible teacher returned in the tavern in case Maria would come back and at the same time communicated with the European Hotline for Missing Children 116000 of the Organisation "The Smile of the Child" asking for advice and guidance.

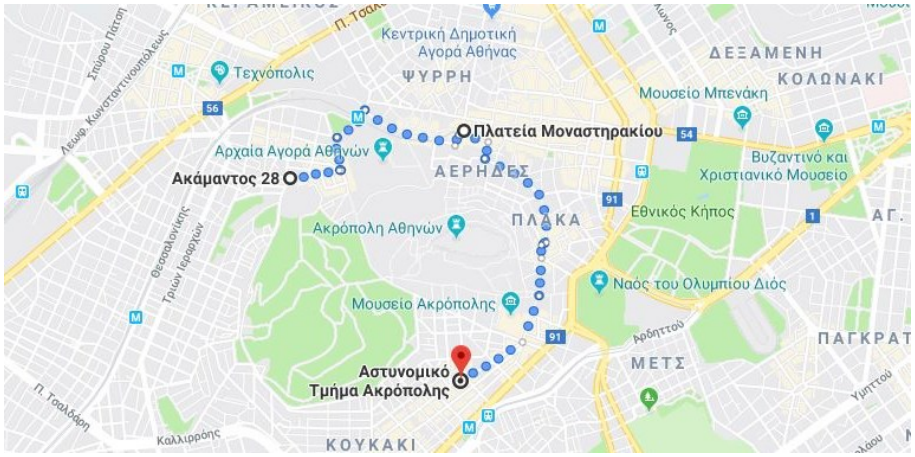

Figure 3-3: Route from tavern to police station

The Social Worker of the European Hotline for Missing Children 116000 (organisation Case Manager) recorded all the information provided by the responsible professor and then he/she communicated with the parents from whom he/she learned that Maria used to receive negative comments and teasing from her classmates because of her appearance and her mother's origin, too. The parents were terrified because the last days Maria had expressed her intention to skip/escape from this situation while her parents insisted on participating in the school excursion. The parents added that Maria had regular sessions with a psychologist, and she followed an antidepressant treatment.

It is 20h00 and the research of the Police Motorcycle Unit (DI.AS) has no results yet and the Division of Missing Persons of the Hellenic Police and the responsible Prosecutor accept the proposal from the organisation 'The Smile of the Child" to activate the Amber Alert Hellas.

Maria's parents agree and follow the procedures foreseen during this process. At 20h25, the Amber Alert is activated.

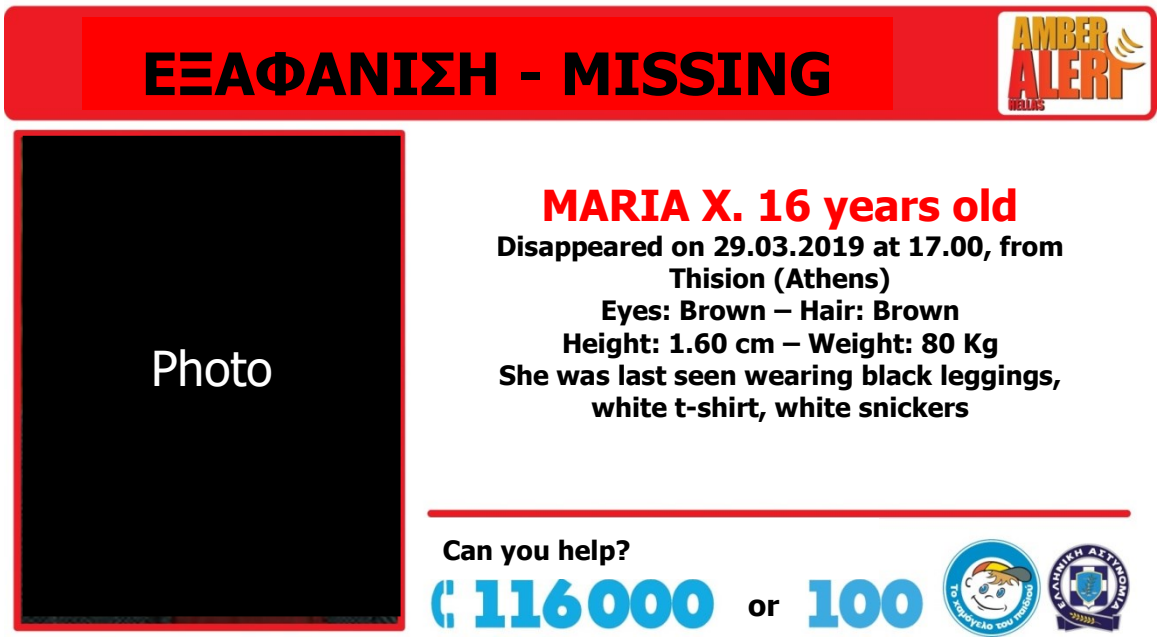

Figure 3-4: Sample of Hellenic Amber Alert

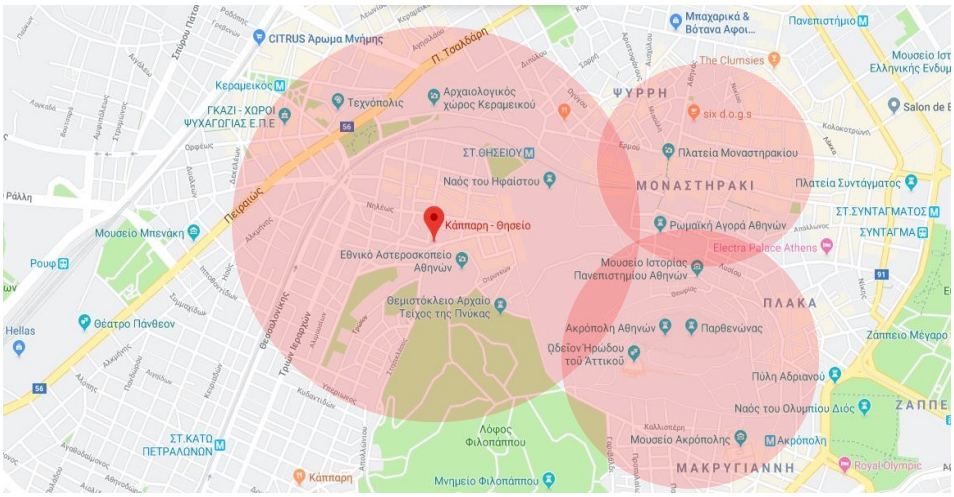

Figure 3-5: Points of interest for Maria's search

Until now, the procedures followed are those that are foreseen for every new case occurred in the Operational Emergency Centre of "The Smile of the Child".

At this stage, new procedures are introduced due to the ChildRescue platform, where each responsible actor is reacting complementarily with the use of ChildRescue.

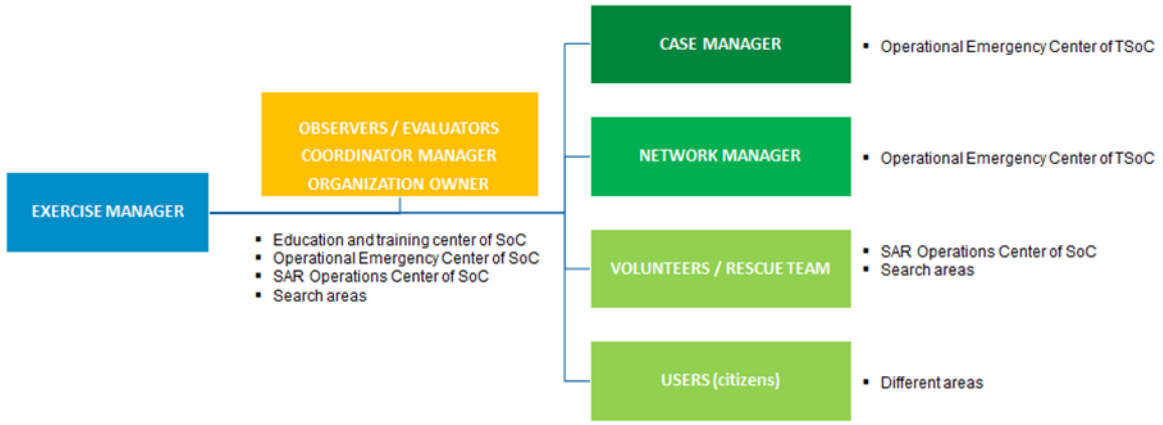

Figure 3-6: Actors and places of the field exercise at SoC

The different roles assigned during the exercise were:

Lead facilitator / exercise manager: The Lead Facilitator serves the traditional role of an exercise controller and has several key responsibilities during the exercise.

Firstly, the Lead Facilitator assigns roles to exercise staff and brief them on the details of the exercise. Secondly, the Lead Facilitator leads and guides the exercise by presenting information to the exercise participants. The different actors follow the Lead Facilitator Guidelines to keep the exercise moving forward. He provides messages to the exercise participants to ensure key decision points in the exercise are reached. Thirdly, the Lead Facilitator observes and coaches. In this role, he observes the actions of exercise participants and is standing by for potential unexpected issues. The Lead Facilitator may also intervene to help the team members clarify their decision making by asking questions about their thought process and the factors they considered in making choices.

Finally, the Lead Facilitator wraps up the exercise, overseeing clean-up and ensuring that all players and volunteers are accounted for.

Evaluator: The primary responsibility of the Evaluator is to assess the exercise and get feedback by the participants related to the ChildRescue platform/app. The Evaluator has a passive role and does not interfere with the exercise.

Missing child / actor: the role of missing person of the exercise would be undertaken by one observer. However, due to the simulated conditions of the field exercise this role was not deemed necessary for the purpose of the exercise.

Case manager: the case manager / 116000 hotline operator is responsible for entering in the platform the missing case's data. The participation of the rest of actors starts after the completion of this process by the case manager. In addition, the case manager is responsible for receiving and evaluating facts by the users.

Network manager: the network manager monitors the data provided by the case manager and the facts and coordinates the search and rescue mission via communication with the appointed team leader.

Search & Rescue / Volunteers: the search & rescue volunteer team members use the volunteer app in order to respond to the request to participate or not in the investigation, are activated, communicate and provide feedback to the search & rescue / volunteer team leader and network manager.

Team leaders: Volunteers who coordinate and supervise the rest of the volunteers.

Users (anonymous users, registered users): the people who share via the app information regarding the potential route and/or the profile of the missing child.

In addition, the roles of **Organisation Coordinator Manager** and **Organisation Owner** were tested.

Organisation Owner: the President of the Organization, namely Mr. K. Giannopoulos

Organisation Coordinator Manager: the person who coordinates the communication between all involved partners (ChildRescue Project Manager)

Presence, support and training by representatives of the technical partners were also foreseen.

Table 3-1: Participants and location of the FULL-SCALE exercises

Piloting organisation	Number of EXERCISE participants	Location and date of field exercise
The Smile of the Child	2 case managers 1 coordination manager 4 network managers 2 team leaders 9 members of the Search and Rescue team of the organisation 1 lead facilitator/exercise manager, 1 organisation owner, 1 evaluator, and 11 Volunteers (registered and unregistered users)	Athens, 12th and 15th June 2020

For the realisation of the exercise SoC ensured the following tasks:

- administration and logistics (e.g. participants, materials, venues, facilities, technology and connectivity);
- development of scenarios, injects and exercise material;
- evaluation planning;
- briefing and training (e.g. of evaluators, facilitators, role players and participants);
- preparation of debriefing and exercise report;
- communications and media; and
- safety and security.

3.2 Scenario Execution

Firstly, key staff members of the pilot organisation (SoC) and members of the Search and Rescue Team "Thanasis Makris" were trained about the main steps that the actors should follow when using the ChildRescue platform and app. Therefore, during the first day a half-day seminar was conducted by

representatives of the technical partners (via the Webex platform) that included the main steps that each actor should follow. Functionalities of the app were also presented with a PPT presentation. The content of the training seminar was mainly based on Annex I: End Users' Handbook of D4.4 that was delivered on March 2020.

During the field exercise, the technical partners assisted and explained the functionalities to the actors as many times the actors asked for help in using the platform. Also, many operational issues had to be resolved during the exercise.

As depicted also on the following table, a total of 28 persons participated in the full scale / field exercise from SoC (as well as 6 members of the consortium).

Some participants were gathered at the premises of the organisation, simulating the Operational Centre of the Organisation and the European helpline for missing children 116000, while the majority of the players were at the places they have declared before the exercise, as these places were used for simulating the virtual movement of the missing child during the exercise.

Table 3-2: Overview of the full scale / field exercise conducted by SoC

	Full Scale / Field exercise
Time schedule	12th & 15th June 2020
Platform release	2.0
Actors	- Visitor (Anonymous user): 6 persons - Simple User (Registered user): 5 persons - Search & Rescue Team Member: 2 persons (team leaders) - Volunteer Team Member: 7 persons - Organisation Case Manager: 2 persons - Organisation Network Manager: 4 persons - Organisation Coordinator Manager: 1 person - Organisation Owner: 1 person Presence, support and training by representatives of the technical partners (4 people) and the project coordinator (NTUA – 2 people)

The Lead facilitator/exercise manager started describing the scenario and the Organisation Case Manager started entering the case's information in ChildRescue, while at the same time the case manager sought for further information for filling in the profile of the missing child from the parents.

According to the scenario, further collection of information and communication with all competent authorities took place, including the police, the missing girl's parents and the prosecutor.The activation of the Amber Alert was decided based on the estimation of the missing girl's emotional state and risk for her life.

An alert was sent to the users in the area that is defined by a centre and a dynamically changing radius. It was initially set to 50 km based on the time that had passed since the report was done to the police. The Organisation Coordinator Manager supervised the exercise and had access to the data.

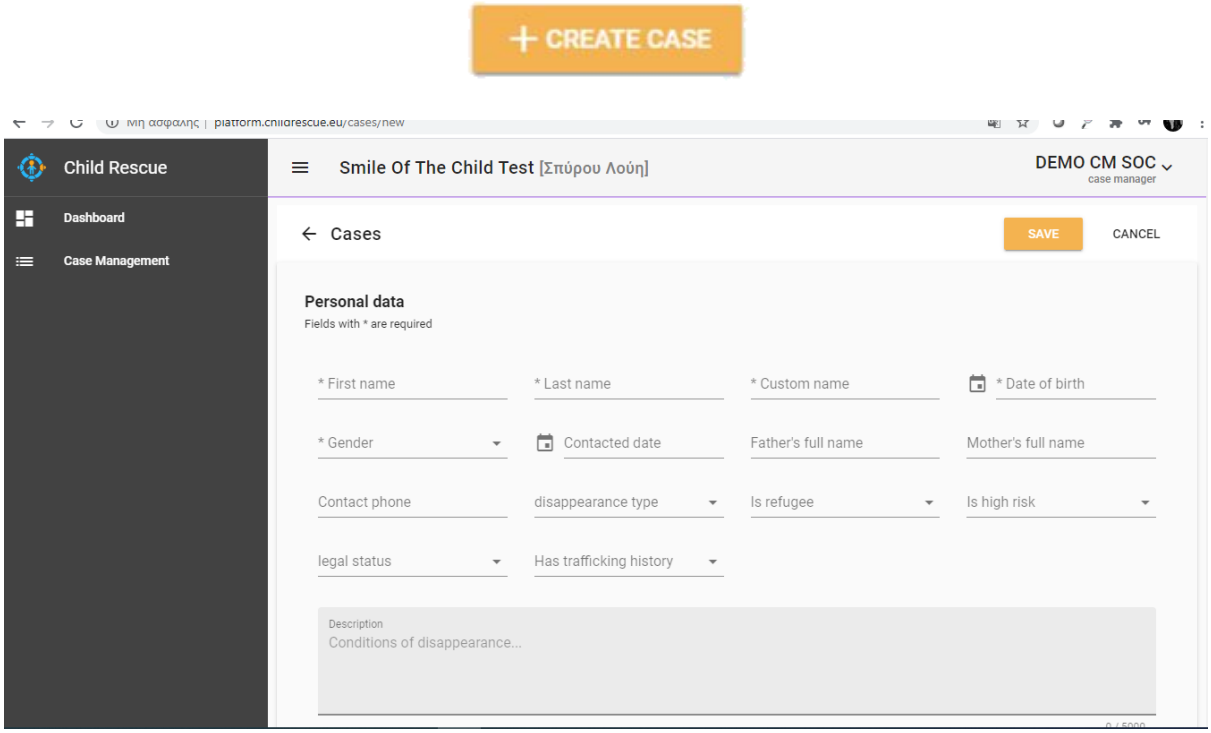

Figure 3-7: The Case Manager creates the alert

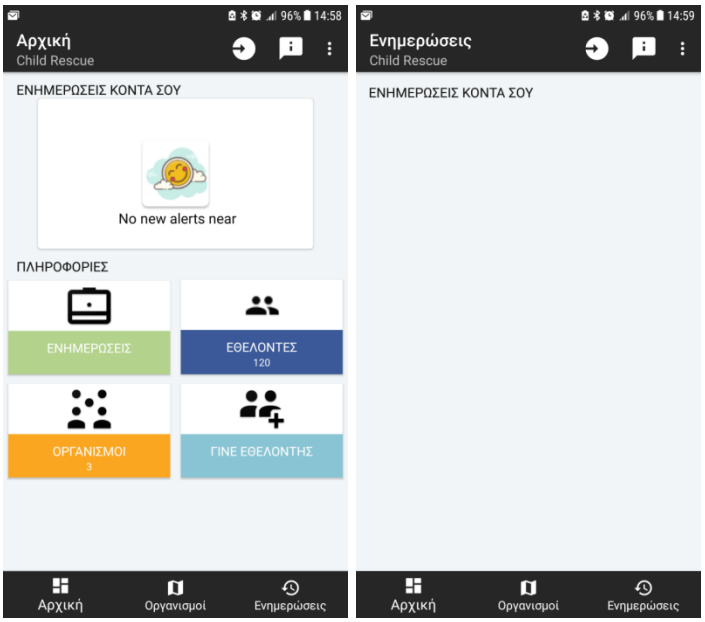

Figure 3-8: The alert is available on the app

We note that in the premises, there were two (2) persons acting as case managers and four persons acting as potential network managers for familiarisation with the ChildRescue platform.

The case manager receives the first notifications by the users of the app, about 20 minutes after the activation of alert, evaluates and shares info with the network managers.

User A (anonymous) sends a message via app, saying "*Good Evening! I have the impression that I saw the Maria you are looking for at 16.45 on the Green Line in the direction of Piraeus. At that time I also boarded from Kallithea and she must have been in the same wagon. She looked crying…. I'm not sure if she got off at Moschato".*

User B (registered): "*The girl you are looking for was around 17.00 in the afternoon at the EVEREST store where I work, at 101 Karaoli and Dimitriou, next to the Station at Moschato and bought a bottle of water. She was agitated and kept looking behind her."*

User C (anonymous): *"I am sure that I saw Maria at 18.30 at the Stavros Niarchos Foundation. She entered the Library and simply sat on a bench next to the entrance. She was cold and looked distressed"*

User D (registered): "*We saw Maria between 18.00 and 18.30 today at the Stavros Niarchos Foundation. We saw her 2 or 3 times because she was wandering aimlessly, and it was cold. Last time we tried to reach her and ask if she needed help, but she left quickly."*

The Case Manager evaluates this evidence and notifies the Network Manager. **As these incoming messages are evaluated as relevant and are pointing to a certain area, they are seen on the places and represented as green circles, suggesting that these areas are to be investigated.**

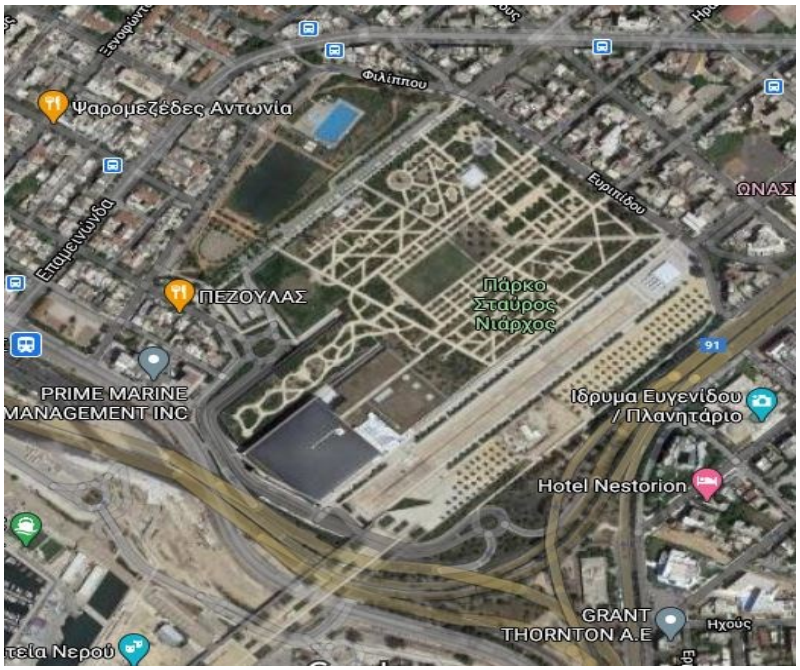

Figure 3-9: Evidence shows that Maria was located in Stavros Niarchos Foundation

The Network Manager evaluates the information and mobilises the Search and Rescue Team for Missing Children "Thanassis Makris" of the Operational Emergency Center of "The Smile of the Child" that was already in readiness (via the Search & Rescue / Volunteer Team Leader) since 11 rescuers and 2 Canine Teams were already on alert.

The Network Manager coordinates and provides guidance to the operational teams via the app.

The Network Manager asks from the Team A to go to Stavros Niarchos Foundation. Team A that consists of 4 volunteers/ team members are moving towards the search area.

The Team Leader A sends a message (18.28) via the collaboration space that they are on their way to Cultural Foundation SN. A few minutes later, a member of the Team notifies the Network Manager that they arrived at the IPSN and that they are looking for the missing girl.

40 minutes later (19.10), The Search and Rescue Team of Thanasis Makris with 4 Rescuers and 1 Canine team, is located at the Stavros Niarchos Cultural Foundation, where they are conducting a search in the area. The Library keeper confirmed to the Team Leader that Maria was there and pointed to the bench she was sitting, as well as a hair scarf she was wearing which she left on the bench. The Dog's handler collected the scarf and the specially trained dog gave an indication of the person wearing it. With the assumption that that scarf belongs to Maria, the team began a search along the path that the dog followed. The Search and Rescue Team of Thanasis Makris with 4 Rescuers and 1 Canine Team follow a route from the Cultural Center to Doiranis Street (parallel to Syggrou Avenue).

At the same time, at the premises of the organisation at Marousi, the case manager receives new data by User E (anomymous), saying that *"A girl who looks like Maria was at noon in Krini Square and together with other girls they were cleaning the square. It seemed to me that it was a voluntary action. It may not have been her…. I hope I helped. I will also send you a photo."*

Figure 3-10: Photo sent by volunteer

Another User F (anonymous) sent another message with a photo via the app: *"I work at a kiosk in Rimini Square in Ilion. The girl with another I think is here... I send you a photo."*

Figure 3-11: Photo sent by volunteer

The case manager and the network manager are constantly evaluating the new evidence arriving via the App from the volunteers acting as citizens. The case manager evaluated the messages accordingly while at the same time the technical partners are explaining the operations in the system.

The scenario is evolving according to the Lead Facilitators instructions and new notifications are sent to the Case Manager.

Another registered user writes*: "I saw a girl who is desperate and wants to fall from the first floor of the Mall. She looked a lot like the girl in the photo", while* **an anonymous user notifies:** *"Good evening! I was at the MALL in Neratziotissa and I have the impression that between 20.00 - 20.15 the girl who was wanted was there, specifically next to the entrance to the balcony and she was alone. I remember it because I went there to smoke."*

Another user *"At around 19.15 Maria was on the train to Kifissia. It was definitely inside the Attica Station."*

The new evidence is pointing out a new search area towards the area of the MALL, Marousi. The Network Manager evaluates the evidence.

The Network manager is being notified (19.49) that The Search and Rescue Team Thanasis Makris (2nd Section) with 5 Rescuers and a Canine Team, have received from the Team that operated in Faliro, the smell sample of the missing girl and having evaluated the information are going to the Mall, they are to start investigations with Pls at the Landing Platform in the direction From Piraeus.

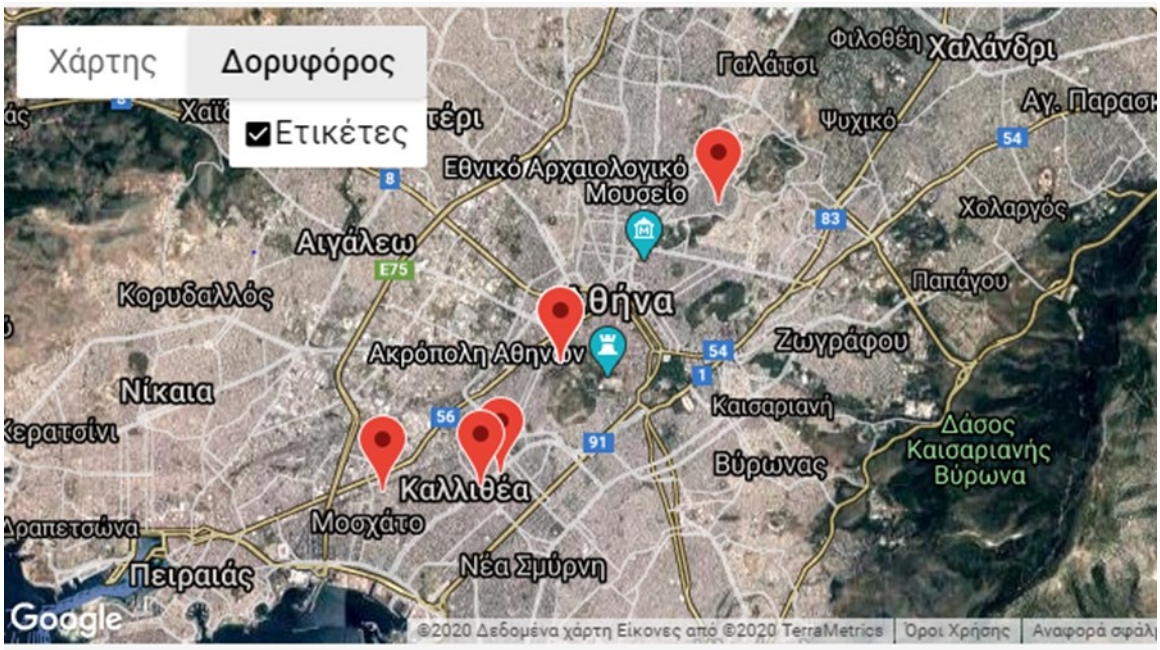

Figure 3-12: Various search areas

A registered user from Kilkis, about 500 km away from Athens, sends an SMS that Maria was seen at the Train Station of Mouries in Kilkis and that she was waiting for the train.

Based on the received evidence and the hours that intervened, the location area where the alerts are sent is widened, because most probably Maria is not at Acropolis area. Soon, the provided evidence automatically indicates a specific area. The case manager creates and sends a new alert to the new search area. Via the exercise, it was made clear to the participants that until locating the missing child, no area can be excluded from the search.

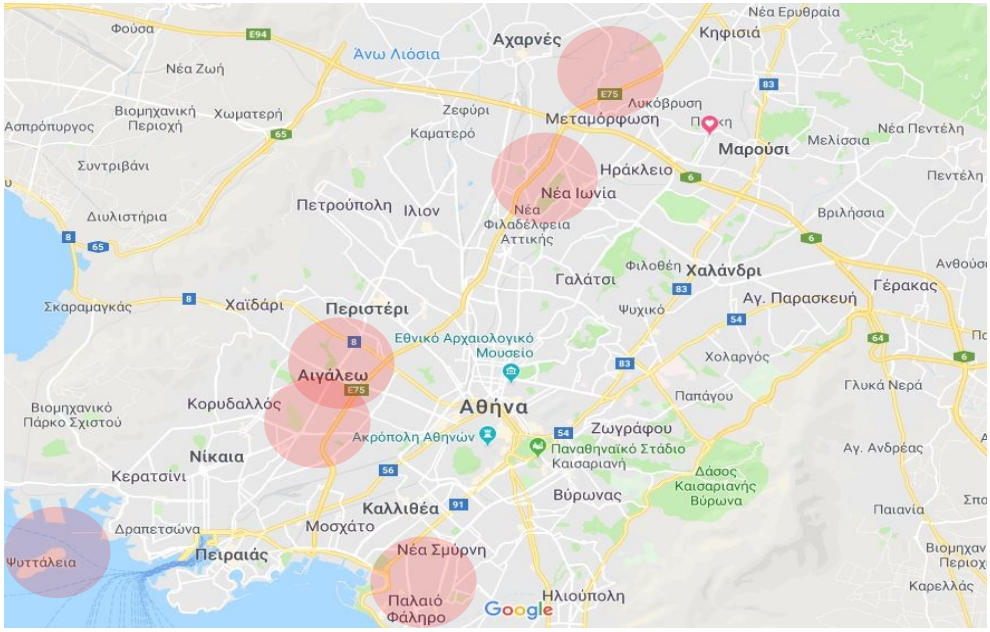

Figure 3-13: Potential location of Maria

A few minutes later, **20:05** The Search and Rescue Team of Thanasis Makris (2nd Section) with 5 rescuers and a Canin Team, located the missing girl, Maria, in the outdoor area of the Mall in Maroussi. Maria was spotted by the search Dog behind the Store "Veneti". She looks distressed, with symptoms of hypothermia and first aid was provided by the group members. The Vehicle of the Organisation is called upon immediately with the doctor, as well as the Mobile Intensive Care Unit for Children and Newborns, to pick up Maria, while the Police are being informed at the same time.

Figure 3-14: Shopping Mall in Maroussi, where Maria was finally found

When Maria is found, the Case Manager, performs his/her duties (removes photos and replaces the photo of Maria with a photo informing about the result of the case, closes and archives the case and closes the app. Finally, the case manager writes the case report to be distributed to the press.

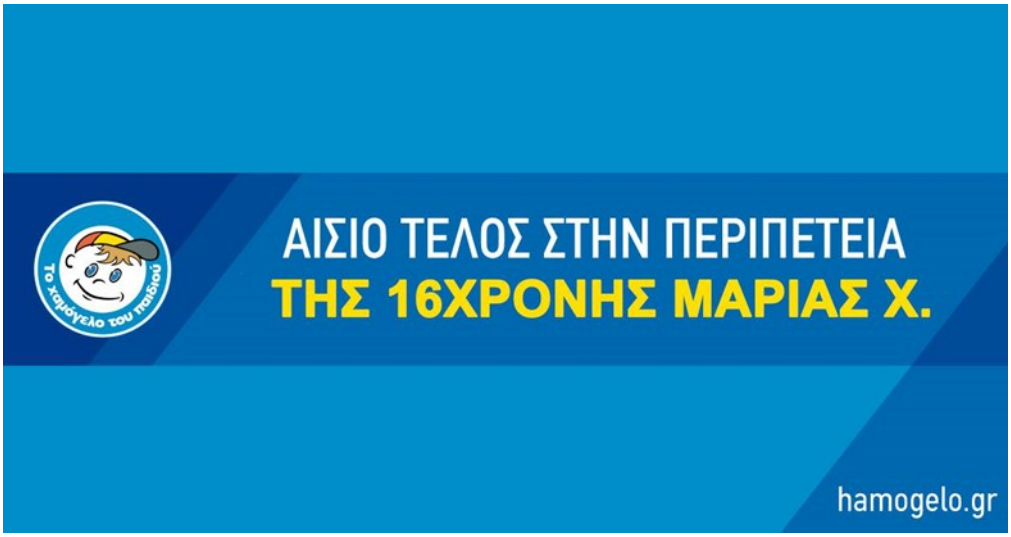

Figure 3-15: The Case Manager closes the case

In total eleven (11) users (5 registered and 6 anonymous), provided feedback via the app. The actors on many occasions needed guidance from the technical partners during the exercise in how to precede with certain actions as well as explanations on the information the platform provides to the users (case managers and network managers).

3.3 Pilot Evaluation

3.3.1 Main Outcomes

In general, the participants found the **platform and app** very useful for their everyday work. Both the platform and the app are considered to assist the Case Managers and volunteers in their work. They will facilitate the communication with even more citizens in real time, and they will greatly help for the quicker location of a missing child via profiling, multisource analytics and other features.

However, the application and platform need refinement and modifications, to maximise the usability within the scope of the project's goals.

Modifications include:

1. Platform should be translated in Greek language so that case managers can work in their own language
2. Platform: The Network Manager should see the info that the Case Manager sees, but they should also be able to filter the info they send to volunteers
3. Platform: The Network Manager needs to see only the active cases
4. It is important to have a space for dialogue between the Network Manager and the Case Manager
5. ALL to have the possibility to see the maps with the search area
6. To have two types of communication:

- Push notifications to all rescue team members,
- bi-lateral communication with team leaders and
- Possibility to send filtered info to the Team Leaders (and not to all the rescue team members), or be able to "tag" the person to whom you want to send the specific info

7. Network Manager to be able to have separate communication with different Team Leaders (Groups of Volunteers) – NOT all share the same info
8. Network Manager after sending the invitation to Volunteers / Team Leaders, needs to be able to see who has accepted the invitation (now they see only who has been invited)
9. Regarding the control space where the Case Manager shares info with the Network Manager, the last info should appear at the top
10. Case Manager to be able to tag some information as "important" so that the Network Manager is aware of that
11. Network Manager needs to do "refresh" to see who has responded to the invitation
12. Network Manager needs to press "All" to see all available volunteers
13. Network Manager needs to see at the top of the screen who are the Team Leaders
14. Platform: Case Manager needs to hear a sound when a new notification arrives
15. Platform: there is no possibility to upload another photo of missing child (only one photo per case)
16. Network Manager needs to able to edit / delete posts

17. Case Manager to be able to create a timeline depending on the info received, be able to sort info by the date of incidence
18. Platform: Case Manager when a new notification (fact) arrives, it could be helpful to have the possibility to communicate back with the person who sends the info
19. Platform: in the area of social media, put an option "NO social media"
20. MAP – to have different icons for volunteers and info coming from citizens. Not display spam or irrelevant messages because it is confusing
21. Platform: To have filters to view the volunteers per area (e.g. Attica, Thessaloniki)
22. Platform: The Network Manager to be able to add custom text when he/she sends invitation to the volunteers
23. Platform: to have different colour and symbol points on different locations (e.g. at that location I took scent, at that location there are the SAR vehicles, at that location the car of the missing person was found, at that location the missing child was last seen, at that location there are the SAR dogs) (previous comment)
24. To be able the Network Manager after sending the invitation to volunteers to join rescue team and when they accept to be able to put them on "stand-by" mode. Then, the Network Manager will be able to activate volunteers for rescue team (volunteer status: activated for rescue team) (previous comment)
25. For the team leader we should have a notification that s/he becomes team leader (accept -> notification to all members about the team leader) (previous comment)

<u>Volunteer</u>

1. Volunteers who accept the invitation automatically become Team Leaders

   A notification to be sent to the volunteer who has been assigned the role of the team leader and decision to be made by the user if s/he accepts to become team leader (previous comment).
2. The Network Manager to be able to send message to all or only to specific team leaders - there is no possibility to have rated communication between the Network Manager and the Team Leaders/volunteers
3. Volunteers need to be able to see larger photo of missing child,
4. Volunteers do not need to receive Spam and irrelevant facts,
5. In Places: to see only relevant info,
6. Volunteers: in order to upload an info, they cannot find the button, not clear,
7. Volunteers collaboration space: to have a button to send a post directly in the collaboration space,
8. To have a notification about the closure of the case they follow – have a certain form for closure, without the child's photo, stating the result of the case, e.g. "happy ending in the case of X".

   The closure form should be available for a certain period of time, before the case disappears (e.g. 2 days).
9. Pending inactive invitations for volunteers: find a workaround for invitations that have been sent to volunteers to be added in a group but finally this group is closed, and they do not need to respond (previous comments)
10. Addition of layers to the map (urban earth etc.) (previous comments)

11. Profile: collaboration space/members/member x · add contact details (phone and nickname) (previous comments)
12. When the case is closed to remove the invitation accepted from the volunteer (previous comment)
13. At the location post, it is good to also have a radius and if completed, to be shown the area on the mobile app (previous comment)
14. Refresh on swipe in collaboration space activity (previous comment)

3.3.2 Participants Feedback

Due to the changes in the second pilot exercise that were necessary in light of the COVID-19 pandemic, the surveys were adapted to match the different setting of the second exercise. The surveys were split in two phases: A pre-piloting survey that was handed out before the exercise took place and inquired after the length of work practices *without* the use of ChildRescue. In the post-exercise surveys, which were handed out after the second piloting exercise was completed, the staff members and volunteers received a survey that was tailored to the aspects of ChildRescue that are accessible to them. In particular, the staff members were asked about their experience with the app as well as the platform, while the volunteers received a reduced survey that only included questions on the app. The last part of the survey, inquiring about the length of work practices *with* the use of ChildRescue, was deleted due to the changes in the second piloting exercise. Instead, this part of the survey was created as its own document and answered after the piloting organisations had a chance to use ChildRescue in their work, delaying this survey to mid-October. It will be analysed and presented in D4.6, along with the pre-piloting survey to show the difference in the time it takes to react to missing children cases with and without ChildRescue. Additionally, the surveys were conducted digitally to enable staff members to specify answers if they needed clarification. Additionally, qualitative interviews were conducted using a semi-structured guideline with mostly open-ended questions as well as three additional closed questions which served for ranking the piloting exercise itself, the app and the platform as it was presented.

For the Smile of the Child, the results of those staff member interviews (N=6) showed a general positive attitude towards ChildRescue, but also differing views on the helpfulness of it in its presented state. Overall, the participants at the Smile of the Child gave the lowest ratings out of the piloting organisations. This may be due to specific issues during the piloting exercise or the work processes of this organisation. The interviewees made some practical recommendations that could be adapted easily and lead to a higher level of content with ChildRescue. One interviewee remarked that some of the presented actions could not be supported by the app in its current state and that the real case management or field operation needs to be taken into account in order to increase the innovative character of the ChildRescue solution. Additionally, another interviewee mentioned the lack of serious progress since the first piloting exercise, which was mirrored in some of the feedback for the technological partners. Some design issues and user-friendliness of the app (such as accessibility issues concerning colouring and contrast) were still raised during the second piloting exercise, hinting at a need to further improve on it in order to correspond to Web Content Accessibility Guidelines (WCAG) requirements. The three interviewees that raised the concerns also rated the piloting exercise lower than the other three participants. While the mean was 3,5 (n=6), the three interviewees who raised concerns all marked the piloting exercise with a 3 on a scale from 1-5, with 5 being the best mark. Overall, the piloting exercise was therefore marked somewhat positively, but half of the interviewees raised issues that need to be addressed by the technical partners. Nevertheless, even those three

interviewees that were not fully convinced by the app in the current state showed a willingness to use it if the full functionality was established. Two of those three also rated the usefulness of the app for working in the NGO at 3 in its current state, while one of them rated it as 4. In total, the mean for the usefulness of the app was 4 (n=6) with an average absolute deviation of 0,5. Interviewees mentioned the helpfulness of the app in communicating with the public, especially since members of the public will be enticed to help if they realise that the disappearance is in their area. However, the app was still criticised for not being intuitive to use and badly organised in its design, which should be reconsidered by the technical partners.

The usefulness of the platform for the work in the NGO also received a 4 as a mean rating (n=5), with a standardised deviation of 0,33. On the platform, one interviewee remarked the positive impact on the communication with the team, whereas the criticism on the platform's design and usability was directly send to the technical partners and can therefore not be analysed in detail here. Points that were raised, however, were the lack of aesthetic in the platform design itself as well as some functionalities that the case managers require. The specific functionalities that are missing were, sadly, not mentioned.

The staff member surveys (N=6) mirrored the results from the interviews in so far as that one of the main criticisms was the lack of intuitiveness in the use of the app, which received a mean rating of 2,5 (n=6), which equals 'bad- ok'. Clearly, there is a need for improvement here, which should be addressed by the technical partners. A number of items received a mean rating of 3 ('ok'), namely: 'Features are understandable for staff members' (ad= 0,67), 'Easy to use'(ad=0,4), 'Usability in everyday work'(ad=0,67), 'Understandable for volunteers (if working with volunteers)'(ad=0,67), and 'Alarm signals audible'(ad=0,67). Of these, only 'easy to use' had an average absolute deviation of less than 0,5, meaning that the interviewees were divided in their opinions, as the interviews had already showcased. The size, colour and contrasting of the text all received a mean rating of 4 ('good'), as well as the protection of sensitive data, which had an average absolute deviation of 0, meaning all participants agreed in their estimation. However, it should be noted that the six participants in the second survey gave out lower mean scores for all items than those of the first tabletop exercise (cf. D4.3), which clearly shows a need for further improvement on the user friendliness and design of the app and platform. Yet, there were far less 'I don't know' or 'not applicable' answers than in the first survey, which might also contribute to the lower mean scores.

The platform was scored as 'good' (or 4) most often, namely in the size (ad=0,33), colour (ad=0,17), and contrasting of the text (ad=0,4) as well as the protecting of sensitive data (ad=0,2) and the understandability for staff members (ad=0,4). As all of these items further had an average absolute deviation of <0,5, the participants were fairly in agreement with each other. The items 'navigation in platform' (ad=0,83) and 'easy to use' (ad=1) were both rated as 'good-very good' (3,5 as the median). The high average absolute deviation, however, shows that the participants drifted quite strongly in their opinions on these specific matters, which is again mirrored in the interview results, with some interviewees strongly criticising the usability of the platform in its current state and sending their feedback straight to the technical partners. The divisiveness of the participants is further stressed by the average absolute deviation on the item 'usability in everyday work', which received a mean rating of 3 ('ok') with an ad of 0,83. More consensus was shown in the scoring of the intuitive use of the platform (ad=0,33) and the item 'understandable for volunteers' (ad=0,25), which were also both rated as 'ok' (3), but had average absolute deviations of <0,5. One issue that was voiced in the surveys was the audio signals of the platform, which received a mean rating of 1,5 ('very bad-bad') with an average

absolute deviation of 0,5. This should be addressed by the technical partners to ensure the widespread adoption of ChildRescue.

The usability of the App received an overall mean rating of 3 ('ok') in all items that were answered with a numeric value by the majority of the participants. Two items were answered with 'don't know' by half ('increasing the speed of recovery of missing children') or all of the participants ('matching old cases to similar cases'), which led to their exclusion from the analysis. Of the remaining four items, two had average absolute deviations of <0,5, namely 'recruiting new volunteers' (ad= 0,25) and 'timely response to missing cases' (ad=0,25). In answering the last two items, namely 'organising volunteers' (ad=0,6) and 'Establishing relevant locations of missing children' (ad=0,6), the participants were in disagreement, with answers ranging from 2 ('bad') to 4 ('good'), which might be due to the different roles of the participants within the organisation.

The surveys for the volunteers (N=10) produced similar results as the surveys of the staff members. The functionality of the organisations section was rated as 3,5 ('ok-good') as the mean (ad=0,5), with answers ranging between 3 and 4. The app was rated as 3 ('ok') in the mean for all other items, namely: overall design (ad=0,3), overall functions (ad=0), design of the alerts (ad=0,1), functionality of the alerts (ad=0,2), design of the organisations sections (ad=0,1), design of the dashboard (ad=0,1) and functionality of the dashboard (ad=0,2). The low average absolute deviations further point to a high level of agreement among the participants, which shows that some potential for improvement remains in both design and functionality of the app from the perspective of the volunteers. The accessibility of the app was rated slightly higher, with the colour (ad= 0,2) and the contrasting of the text (ad=0,4) being rated as 'good' (or 4) with little deviation. The size of the text was rated as 'ok-good' (3-4) (ad=0,5). All other items were yet again rated as 3 or 'ok', namely: 'features are understandable' (ad=0,1), 'easy to use' (ad=0,2), 'protecting sensitive data' (ad=0,13), 'navigation in app' (ad=0,33), 'intuitive use of app' (ad=0,22), 'alarm signals audible' (ad=0,56). Out of these items, only 'alarm signals audible' generated a somewhat diverse image, with answers ranging from 'bad-good' (2-4).

The functionality of the app in signing up as a new volunteer was also rated as 'good' or 4 (ad=0,33). Other functions for volunteers were also mostly rated as 'ok' (increasing the speed of recovery of missing children, increasing the speed of recovery of missing children, timely formation of volunteer search group, receiving new information on existing cases, initiating the response from volunteers faster) with the average absolute deviance at or below 0,5. The timely response to missing cases as well as the communication with staff members were both rated as 3,5 or 'ok-good'. The overall reserved estimation of the functionality of the ChildRescue app as it was presented might be due to the fact that the altered piloting exercise could not fully showcase the benefits of ChildRescue due to the Covid-19 restrictions in meeting face-to-face and a resulting confusion about certain functions.

Overall, the comparatively low mean scores in the piloting exercise at Smile of the Child should be addressed by more in-depth training of the staff members and volunteers before using the app and platform and clearing up remaining uncertainties about functionalities of ChildRescue to enable everyone to utilise the solution in the best way possible.

3.3.3 ChildRescue KPIs based on Second Pilot

Due to some changes in the second pilot exercise because of COVID-19 pandemic, all KPIs will be included in the deliverable D4.6 – "ChildRescue Pilot Evaluation and Lessons Learnt" [M36].

3.4 Challenges and Next Steps

In general, the participants found the platform and app useful enough for their everyday work. The ChildRescue platform and app will be beneficial only if it will be fully developed and supplementary to the existing processes. Both the platform and the app are considered to assist the Network Manager and the Search and Rescue Team in their work but only with the simultaneous use of the other tools that the team already uses. Specifically, it has advantages for a) the organisation, b) the citizens and c) the missing children.

Specifically, the advantages for the organisation will be:

- New alerts: quick creation of an alert
- Ability to extract case reports (quickly & electronically)
- Quick access
    - Quick search engine in case of multiple disappearances of the same child
    - Easy access to the platform from multiple users and from users with different profiles/levels of access
    - Easy changing of the configurations of an active alert or even immediate deactivation (total control of the alert system)
- Encoding of the child's profile (not visible to the public) such as psychosocial status, health status, reasons that leaded to the disappearance, etc.
- Updates: quick update of information about an open case
- Maintaining of record of feedback from citizens also having the ability to mark their evaluation in the platform (relevant, irrelevant, credible etc.)
- Search and rescue members can quickly access a directory to get search alerts and chat/communicate using the app (different chat rooms)
- Scalable alerts (restricted or wider geographical area of notifications)

The advantages for the citizens:

- Facilitation of the provision of information by the citizens (real time) about a case via the app (not only via the hotline)
- Ability to get informed for missing children in the citizen's area but also at national level
- Citizens can send location information and media (e.g. images, video) via the app
- Real-time alerts prompt users with immediate updates (with the ability to follow or unfollow a case)

The advantages for the missing children

- Ability to automatically remove the information on the app upon case's closure/expiration
- Ability to ensure that all citizens that were informed about the case, all get informed about the closure of the case
- The rights of the child on its personal data, under GDPR, are respected
- The ultimate goal of ChildRescue is to reduce the time period between the moment a child is reported missing and the one it is found

Among **the challenges,** the following can be included:

- The work of the Network Manager can be highly assisted by the availability for free of a Position tracking system of the volunteers during the search and rescue actions

- For profiling that can also assist the search and rescue teams, other material can also be taken into account such as the "Missing Person Behaviour Handbook or the Lost person behaviour handbook".
- Profiling for the cases of abductions cannot be applied
- Due to the GDPR restrictions only public data from social accounts can be examined; however, the authorities always have the option to request break of confidentiality constraints for missing children in danger
- It would probably be more useful in the cases of missing children in urban environments to mark the areas of search (maps) not using radius but using blocks
- Availability of volunteers' version of the app both in Android and IOS. Now only the community version is available for both devices (androids, ios)

Next steps: As a final step, before the onset of the pilot in real cases, staff and volunteers of the organisation should be familiarised with the use of the platform and app. For that, an internal testing of the app by 100 people and provision of feedback is foreseen.

The final results of the evaluation of ChildRescue will be reported in D4.6.

4 2nd Pilot: Missing Children Emergency Case – Belgium

4.1 Pilot Overview

As the field exercise had to be held remotely with all participants participating from home, the scenario that had been initially foreseen had to be slightly revised. The main issues tackled in the initial pilot however remained the same in order to assure the foreseen outcome: an in-depth testing op the ChildRescue-platform as well as the pilot, including the geo-localisation and collaborative working space for the volunteers.

The roles that were assigned to the participants were:

Lead facilitator / exercise manager: The Lead Facilitator serves the traditional role of an exercise controller and has several key responsibilities during the exercise.

First, the Lead Facilitator assigns roles to exercise staff and brief them on the details of the exercise. Second, the Lead Facilitator leads and guides the exercise by presenting information to the exercise participants. The different actors follow the Lead Facilitator Guidelines to keep the exercise moving forward. He provides messages to the exercise participants to ensure key decision points in the exercise are reached. Third, the Lead Facilitator observes and coaches. In this role, he observes the actions of exercise participants and stands by for potential unexpected issues. The Lead Facilitator may also intervene to help the team members clarify their decision making by asking questions about their thought process and the factors they considered in making choices.

Finally, the Lead Facilitator wraps up the exercise, overseeing clean-up and ensuring that all players and volunteers are accounted for.

Case manager: the case manager / 116000 hotline operator is responsible for entering in the platform of the missing case's data. The participation of the rest of actors starts after the completion of this process by the case manager. In addition, the case manager is responsible for receiving and evaluating facts by the users.

Network manager: the network manager monitors the data provided by the case manager and the facts and coordinates the search and rescue mission via communication with the appointed team leader.

Users (anonymous users, registered users): the people who share via the app information regarding the potential route and/or the profile of the missing child.

In addition, the roles of **Organisation Coordinator Manager** and **Organisation Owner** were tested.

The scenario followed during the pilot field exercise was the following:

14u Case manager: input in platform the following details

Officer De Boeck from the Police Zone AMOW (Wemmel) calls the 116000. Our receptionist, An, receives a call from the officer upon request from the public prosecutor (PS). The officer mentions that Laura, 14 years old (date of birth 15/09/2005), has been missing since this morning. She was supposedly on her way to school, but never arrived.

She had the following things with her:

- her cell phone – but it is disconnected
- her school bag – but she carried nothing unusual with her (nothing seems missing from her room)
- bank account empty – some cash but total amount unknown

- we are not sure whether she has a pass for public transport. She recently lost it and had to apply for a new one

Together with the officer, the Case manager establishes a first profile of Laura:

- Psychological problems
- No medication
- It is unusual for her to disappear without a trace
- She never stayed out longer than permitted
- She never skipped classes
- Social media account inactive during last couple of weeks
- Boyfriend unknown

The officer gives the contact details of the parents. The parents live together.

She left at 7 a.m. to school, not showing any suspicious behaviour. She took her school bag with her. It did not look like she was carrying more weight than on other days. There was no particular fight the day before. She left, but never arrived at school in Jette, a couple of stops away. She left in the direction of the bus stop. Laura is officially reported as missing and the neighbourhood examination as well as the examination of her cell phone and camera images were negative. We also obtain some more profile clarifications. These last couple of days the parents have noticed some behavioural changes. She has been extremely introvert, hiding in her room and struggling with negative thoughts. Her school performance has deteriorated the last couple of weeks. The school council mentions that she has been very distracted. There have not been any suicide-attempts in the past.

Laura has lived quite isolated in her room for the last two weeks. The parents are in touch with Laura's best friends – they are very worried too. Her friends mention the possibility that she might have a boyfriend, but they don't know a lot about him, except that he is a lot older then Laura.

We discuss Laura's hang out spots. She likes to hang out in parks (park next to the Atomium near the movie theatre) and often meets up with friends on place de Mirroir in Jette. When she goes to the city centre, she hangs around Place Saint-Catherine. These last weeks she declined to meet up with friends.

14u35: Case manager launches the ChildRescue-alert targeting a 15 km radius around the neighbourhood (Wemmel).

14u40: Network manager contacts 2 volunteers (Alice & Aurelie) via ChildRescue

The Network responsible sends through ChildRescue the checklist to volunteers in the area for them to report back on where they put out the posters.

14u50 – 15u10: the volunteers respond through ChildRescue with a list of the places where they put-out the posters.

14u40 : Berengere evidence sent accompanied by a photo (anonymous user)

14u45 : Alexandra evidence sent (anonymous user)

14u50: Miguel evidence sent (registered)

14u55: Charlotte evidence sent accompanied by a photo (registered)

14u55 : Joëlle evidence sent (registered)

15u : Marie-Laurence evidence sent (registered)

14u40 – 15uu: Case manager tries to extract the testimonies from the platform (functionalities test + check how to send testimonies to the police)

15u10: Case manager past cases check

The case manager retrieves information from similar past cases and from the profiling features of the system. The case manager evaluates the feedback and at the same time examines the social media analysis and possible routes.

15u25: Case manager widens the radius for alerts

30 km from Wemmel

15u30: Network manager contacts Stephan, Alice, Aurelie and Lise-Laura (volunteers) via ChildRescue

The Network responsible sends through ChildRescue the checklist to volunteers in the area for them to report back on where they put out the posters.

15u40: Stephan, Alice, Aurelie and Lise-Laura (volunteers) responds through ChildRescue with a list of the places where they put-out the posters.

15u30: Luc evidence sent (anonymous user)

15u35: Sofia evidence sent (anonymous user)

15u35 : Anke evidence sent accompanied by a photo (registered)

15u40 : Nel evidence sent accompanied by a photo (registered)

15u40 : Leyla evidence sent accompanied by a photo (registered user)

15u50: Case Manager closes the case in ChildRescue

Girl has been found. Followers are alerted that Laura has been located safe and sound and the volunteers are automatically alerted that they have to go out and take down the paper posters.

15u55: Network Manager sends out checklist to 3 volunteers via ChildRescue

16u: Stephan, Aurelie, Alice & Lise-Laura (volunteers) report back via ChildRescue on having taken down the posters.

Table 4-1: Participants and location of the FULL SCALE exercises

Piloting organisation	Number of EXERCISE participants	Location and date of field exercise
Child Focus	1 case manager 1 coordination manager 1 network manager 2 team leaders 1 lead facilitator/exercise manager 1 organisation owner 3 Volunteers	Brussels, 23rd June 2020

	6 Simple registered users 5 Anonymous unregistered users	

For the realisation of the exercise Child Focus ensured the following tasks:

- administration and logistics (e.g. participants, materials, facilities, technology and connectivity);
- development of scenarios, injects and exercise material;
- evaluation planning;
- briefing and training;
- preparation of debriefing and exercise report;
- safety and security.

4.2 Scenario Execution

The agenda of the field exercise day looked as follows:

- 10u : Welcome & introduction
- 10u15 : Dealing with technical issues (installation, log-ins, etc.)
- 10u30 : Training by the technical partners
- 12u : Lunch break
- 14u: Start Pilot
- 16u : End of pilot and debriefing with technical partners
- 16u20 : Pilot evaluation questionnaires and interviews
- 17u15 : End of the day

The revised scenario as discussed under 4.1 was used as foreseen and all foreseen participants (also described under 4.1) were present and were all able to fulfil the tasks assigned to them. There were no connectivity-issues and the Microsoft Teams application worked perfectly. Therefore, we can safely say that there were no deflections from the foreseen outcome, although the field exercise could not be held in presence but had to be done remotely.

4.3 Pilot Evaluation

4.3.1 Main Outcomes

In general, the participants found the **platform and app** very useful for their everyday work. Both the platform and the app are considered to assist the Case Managers and volunteers in their work. They will facilitate the communication with even more citizens in real time, and they will greatly help for the quicker location of a missing child via profiling, multisource analytics and other features.

However, the application and platform need refinement and modifications, in order to maximise the usability within the scope of the project's goals.

Modifications include:

- Case Managers should be notified when a new fact is sent through the app and arrives in the platform. Especially when more than one case is active at the same time, this will shorten the time period needed to analyse and send through facts shared by the general public. Now, the case manager has to manually refresh to see whether new facts arrived.

- Add the possibility to modify alerts after creating/sending
- Alert should, if needed, be able to show more than one picture.
- When a child is found, we feel it is very important to share this news with the general public who are using the app, which is in line with our other digital procedures of public appeals, fi social network sites. This message should not only be sent to the people following the case, as these might not be the majority of people, but everyone who received the alert in the first place.
- Push-notifications did not all come through at the moment of them being sent on the platform. The time-lapse in between was sometimes too long.
- When a testimony (called FACT on the platform) comes in, we have the Download-button that allows us to take a testimony out of the platform and send it to the police. But if we push it, it does not reflect the whole content of the information that the citizen sharing the testimony provides in the free comment field.
- We have to publish our alerts in Dutch and in French. This is not a problem at all for the free text field, we manage, and we are used to it. But this also means that in the fields stating 'eye color', 'hair', we have to include both languages, for instance by stating for brown eyes 'bruin / brun'. For these cases this was feasible but if we have to give more detailed info (fi 'long curly hair', but then in both of our languages) the limited number of characters might become a challenge. Therefore, would it be possible to extend the total number of characters that can be introduced?
- As the application has the purpose to serve local notifications, many people might download the app without seeing a lot of activity on it. We fear that people then might start deleting the app, so it would be a good idea to send out a message to all users every 3 months in order to assure they do hold on the app, even if they might not have received any notification.
- Minor translation adaptations
- Support needed in integrating ChildRescue with our existing database system (CRM) to avoid double encoding
- Before using the app and platform, other partners (such as police) would also have to be trained in the use of the app, so the communication with them is not further complicated
- Since the Belgian system also includes people up to 24 years of age in some circumstances, the word 'child' when providing information can be problematic
- There should be a possibility to directly communicate with either an individual volunteer or a group through the app to instruct them in specific situations (e.g. spreading the search party in two groups)
- Automatic 'rating' of the volunteers to check who has participated in how many actions
- The platform currently requires a lot of data input, which is important but also time consuming. Maybe some fields should therefore only be optional, not required.

4.3.2 Participants Feedback

The results from the pre-piloting survey will be presented in D4.6 along with the additional survey that was held in October to compare the results of the estimated length of work practices with and without ChildRescue.

Some of the results of the interviews with staff members that participated in the second piloting exercise (N=12) were already presented in 5.3.1. alongside the modification wishes that were voiced during the exercise. For ChildFocus, the results of the interviews showed an overall positive attitude towards ChildRescue in the presented form, as the usefulness of both the app and platform were rated with a

4 on a scale from 1-5 (both n=10). The piloting exercise itself was also rated with a 4 (n=12) and the deviation for all three answers was at or below 0,5, thereby showing little disagreement between participants. Overall, both the exercise itself as well as the acceptance of the app and platform should therefore be considered successful. The feedback on the app and platform did show the need for streamlining the design. Additionally, the participants correctly identified the app and platform as still not being in its final form, which dampened some of their enthusiasm, as they were waiting for the finished product. All the interviewees responded very positively to the introduced ChildRescue solution, with one participant even calling it 'evolutionary'. However, the need for clarification of some aspects (cf. 4.3.1. list of modifications) was made clear in the interviews as well. Additionally, the second piloting exercise was deemed too long by some participants, which might be due to the digital nature of altered exercise during the COVID-19 crisis. Furthermore, the need for training in the use of the platform and app of both volunteers and staff members was pointed out. Overall, the beneficial character of ChildRescue for adding to existing work practices was identified throughout the interviews, with staff members feeling optimistic about being able to use ChildRescue in their everyday work.

During the analysis of the staff members' surveys (N=13) with regard to the app, two items had to be excluded ('understandable for volunteers' and 'protecting sensitive data'), because the majority of answers were non-numerical in nature, but rather either 'don't know' or 'not applicable'. This points to a potential lack of information on the data protection protocol within the second piloting exercise and should be addressed in future introductions to the use of the app and platform within the organisation. All the other items (size, colouring and contrasting of the text, easy to use, usability in everyday work, navigation in and intuitive use of the app, and alarm signals audible) were in the mean rated as 'good' or 4. Of those, the following had an average absolute deviation of >0,5, meaning the participants did not fully agree: 'contrast between text and background' (ad=0,69), 'intuitive use of the app' (ad=0,62) and 'alarm signals audible' (ad=0,56). Therefore, these items should be critically assessed for future introductions to the use of the app. The review of the platform also excluded the two items that were excluded for the analysis of the feedback on the app as well as the item 'alarm signals audible'. All the other items were also rated as 'good' or 4 in respect to the platform. The only two items with an average absolute deviation of >0,5 were the colouring of the text (ad=0,54) and the usability in everyday work (ad=0,54). Due to the answers in the interviews, the latter can be contributed to a fear of not being able to implement ChildRescue in their current data processing and therefore a substantial work time needing to be devoted to the data input for ChildRescue as well as lengthy obligatory data entry in the platform. The colour of the text and its contrasting was seen as too basic and not inviting and clear for users, which should be addressed by the technical partners. Additionally, the use of symbols was encouraged to make the app look less basic.

Regarding the analysis of the staff members' feedback on the usability of the app for certain workflows, two items had to be excluded since the majority of answers were 'don't know': 'recruiting new volunteers' and 'matching old similar cases to new cases'. The latter could be due to the fact that ChildFocus does not compare old cases to the current ones in their work processes, while the first one is most likely due to the lack of practice in recruiting volunteers with ChildRescue and the resulting uncertainty about its potential for it. All the other items, namely 'organising volunteers' (ad=0,75), 'timely response to missing cases' (ad=0,1), 'increasing the speed of recovery of missing children' (ad=0,23), and 'establishing relevant locations of missing children' (ad=0,33) were rated as 4 or 'good'.

Only the item 'organising volunteers' showed a greater division in the participants, which might be due to their different roles and resulting perspectives on the matter.

The sample of volunteer surveys (N=4) was comparatively small for ChildFocus. Additionally, the average absolute deviation was fairly high, indicating that the volunteers had differing perspectives on the app. Overall, it became clear that the functionality was rated higher than the design. The overall design (ad=1) as well as the design of the alerts (ad= 1) received a mean rating of 2,5 ('bad-ok'), with ratings ranging from 2 to 5 ('bad- very good'). This shows that design is a subjective matter and could also be dependent on the age or eyesight of the participants, but the majority of participants did not enjoy the current design. The design of the dashboard was rated as 'ok' or 3 with an average absolute deviation of 1,25. The design of the organisations' sections was rated the highest at 3,5 ('ok-good') (ad=1), with answers ranging from 2 ('bad') to 5 ('very good'). This shows that the design needs to be improved by the technical partners to improve the readiness to use ChildRescue. The functionality was rated at 3,5 ('ok-good') for both the overall functions (ad=0,5) as well as the alerts (ad= 0,5) and the organisations' sections (ad= 0,5) with relatively low average absolute deviations and an accordingly high level of agreement among participants. The functionality of the dashboard was rated even higher at 4 ('good') with little disagreement among the volunteers (ad=0,25).

When rating the accessibility of the app, two items had to be excluded because the majority of volunteers had indicated either 'don't know' or 'not applicable': 'protecting sensitive data' and 'alarm signals audible'. Since the item on the data protection had to be excluded in both surveys from ChildFocus, it seems that the topic was not covered fully in the second piloting exercise. Any confusion about this should be cleared up through an internal introduction into the data protection protocols that were developed for ChildRescue. The need for an improvement of the app design was yet again made clear by the volunteers' surveys, who gave the colour of the text a mean rating of 2,5 ('bad-ok') (ad=1) and the contrasting of the text and background a 3 ('ok') with an average absolute deviation of 0,75. Yet again, one participant has rated the colouring and contrast of the app as 'very good' (5), which explains the high deviation score. The items 'easy to use' and 'intuitive use of app' both received a mean score of 3,5 ('ok-good') with an average absolute deviation of 0,75, which ratified the answering patterns of the participants, since the two items were designed to check the same dimension. The navigation in the app (ad= 0,5), size of the text (ad=0,5) and 'features are understandable' (ad=0,25) all received a mean score of 4 or 'good' with little disagreement by the participants. One volunteer further indicated in the survey that there should be more room for the individual branding of the organisations to make it more recognisable as the layout now is too basic. It was further noted that there should be a possibility to log out if one is using the app as a registered user and that the symbols should be made to look more intuitive, like on other social media platforms.

Overall, the interviews as well as survey results showed a generally positive attitude towards ChildRescue with median results that are similar to the first piloting exercise (cf. D4.3). There seems to be a sustained need for a more in-depth explanation of the data protection protocols that have been put in place. It should be considered to gather material on the introduction to the app and platform to ease the use as well as explain underlying concepts such as the specific data protection. Additionally, some participants who have been present at both piloting exercises were not wholly satisfied with the changes made since the first instalment as not all their (design and functional) wishes had been met.

4.3.3 ChildRescue KPIs based on Second Pilot

Due to some changes in the second pilot exercise because of COVID-19 pandemic, all KPIs will be included in the deliverable D4.6 – "ChildRescue Pilot Evaluation and Lessons Learnt" [M36].

4.4 Challenges and Next Steps

The ChildRescue platform and app, was assessed as highly beneficial and supplementary to the existing processes. Specifically, it has advantages for a) the organisation, b) the citizens and c) the missing children.

Specifically, the advantages for the organisation will be:

- Platform is user-friendly and allows an easy navigation
- New alerts:
    - quick creation (and take-down) of an alert and the rapidity of the launch of the alert, especially when compared to paper public appeals
    - local alerts, especially positive when compared with other digital solutions such as social networking sites
    - Scalable alerts (restricted or wider geographical area of notifications) and the rapidity in which we can 'move' an alert.

The advantages for the citizens:

- Facilitation of the provision of information by the citizens (real-time) about a case via the app (not only via the hotline)
- Ability to get informed for missing children in the citizen's area but also at national level
- Citizens can send location information and media (e.g. images, video) via the app
- Real-time alerts prompt users with immediate updates (with the ability to follow or unfollow a case)

The advantages for the missing children

- Ability to automatically remove the information on the app upon case's closure/expiration
- Ability to ensure that all citizens that were informed about the case, all get informed about the closure of the case
- The rights of the child on its personal data, under GDPR, are respected
- The ultimate goal of ChildRescue is to reduce the time period between the moment a child is reported missing and the one it is found

Among **the challenges can** be included the following:

- For a case manager it can be challenging to manage the flow of information coming in via and by the platform (e.g. the machine learning output, combined with facts that all might come in at the same time)
- Integration of the platform with our existing CRM-systems
- Integration of ChildRescue in our existing procedures. "Who does what" decisions need to be taken, as at ChildFocus many people are part of the 'machinery' of launching (paper) alerts and dealing with information coming in from the general public.
- The main challenge will remain to assure that as much people as possible have the app on their device and continue to use it.

Next steps: After the launch, ChildRescue will be used in real cases. Criteria have been decided upon to decide for which cases ChildRescue will have an added value. Regular updates and debriefing moments are foreseen between September and December 2020 to provide the technical partners with our input on what is going well and what needs improvement after deployment.

The final results of the evaluation of the ChildRescue will be reported in D4.6.

5 3rd Pilot: Discovery and Identification of Unaccompanied Minors – Greece

5.1 Pilot Overview and Current Status

Planned Scenario – Updated

The planned scenario as initially planned is fully developed in D4.3. Hereafter, the main aspects of the scenario with the relative amendments are presented.

Sub-hypothesis: ChildRescue platform is used in parallel to regular REDCROSS procedures to locate UMC going missing from the REDCROSS hosting facility in Athens following an emergency incident (i.e. natural or manmade disaster)

Region of interest: Attica (narrowed down to Athens Downtown)

Places involved: REDCROSS hosting facility for UMC at Alkiviadou str. - Athens, REDCROSS hosting facility in Kalavryta (simulation), REDCROSS Multifunctional Centre for refugees (MFC) in Athens, REDCROSS Tracing Service (at 3rd Septemvriou str, in Athens), REDCROSS Branch on Kos island (simulation)

Amendment: Due to COVID-19 protective measures restrictions and also, for operational/administrative reasons, the operational area had to be narrowed down to Athens downtown area. In this regard, Pireaus branch had been excluded from the scenario to avoid unnecessary movement and usage of transportation means in rash hours, while the UMC facility in Kalavryta and the REDCROSS Branch on Kos Island participated in vitro. Aiming to keep the flow of the scenario as realistic as possible, Kalavryta facility replaced Volos facility where one of the missing children was initially foreseen to be spotted, mainly for time management reasons, as it was a prerequisite for the field exercise to be completed within a working day.

Basic information about the facility in Athens

Full name: REDCROSS Accommodation Centre for UMC (hosting facility)
Location: 4, Alkiviadou str. Athens
In house beneficiaries: 30
-sex: boys
-age group: 14-17
Key roles with the shelter: The hosting facility manager supported by a social worker. In addition, one more social worker facilitated the whole procedure, without however an active participation on ChildRescue app and platform.

Profiles of the missing children:

- Hitman, 14 years old from Afghanistan. He has a family in Germany, and they are in regular contact
- Bayami, 16 years old, also from Afghanistan. He has an uncle on Kos island. They have located each other through the REDCROSS RFL (see tabletop case)

Note: The details of the missing children differ from the one in the original scenario, as the UMC who participated chose to participate with nick names they chose themselves. That slight deviation did not affect the execution of the scenario nor the flow of information involved.

Case Scenario

At 9.45 a.m. an earthquake of 5,4 degrees on Richter scale hit Attika. Following the relative protocol, the UMC and the personnel of the REDCROSS hosting facility evacuate the building. After the first checking, everyone was found to be ok, however damages of minor scale -a general water linkage and a collapsed pergola- had resulted in a traffic jam and confusion in the surrounding area. Telephone lines were overloaded and communication by phone was difficult. Some children were in distress. When counting the children, the facility manager and the social worker found out that two of them went missing. Relative alerts were issued with ChildRescue and within the next half an hour a research operation for the two children had been initiated by the nearby located REDCROSS Operational Centre.

Basic information on The Operational Centre of the REDCROSS

For the sake of the exercise, the premises of the Tracing Services of the REDCROSS covered the role of an Operational Center. That was not a big deviation from real life scenarios, as the building accommodates also the REDCROSS Volunteers department.

The in the scenario Operational Center accommodated the coordination team, consisting of both the two coordinators of the projects, and the volunteer leaders covering the morning shift.

Basic information on the RFL team

Two persons of the REDCROSS Tracing Service staff in place participate to the exercise with their distinct role of an RFL team.

Overall Participants (pre-exercise amendments to the original plan)

Coordinators - 2

RFL staff – 2 (simple users)

REDCROSS volunteers – 4 (as REDCROSS volunteers are all registered as simple users or volunteers)

Facility Manager – 2 (one for Attika, one for Kalavryta).

Social worker with the facility in Attica – 1 (to contribute as Athens facility manager to ChildRescue and cover in vitro the role of the Kalavryta facility manager)

A social worker to assist the whole procedure, take care of the participating UMC and escort the children who will need to move within the research area.

Participating UMC - 12

Note: To enable a realistic approach, including a real time perspective, UMC accommodated at a hosting facility were selected to participate in the field exercise. Because of the COVID-19 protective measures but also not to interrupt the daily routine of the facility, the number of participants was restricted to 12 children, also following the recommendations of the facility manager. All participating UMC gave their written consent to participate and their consents are available with the coordinators. All protection measures had been taken, especially in regard to their identity. In fact, the UMC participated to the project with personal details and names they chose themselves.

5.2 Scenario Execution

Despite slight adaptations and deviations from the original scenario that were related to COVID-19 protective measures and to time-management issues, pilot 2 followed the original scenario and had developed as planned, with a two or three "surprise factors" secretly added by the coordinators to keep the interest of the participants and help the research develop as close to reality as possible, in regards to both the flow of the information and the time frame.

The date started for everyone at 9:00, with a simulation of a working day at REDCROSS, including the start of the day in a simulation Operational Center (OC).

The first-half hour served to make sure that the ChildRescue app had been downloaded to all appliances to be used and that all the equipment to be used were operational. Moreover, it was safeguarded that all participants had fully understand the scenario and how their respective roles and their inputs to the ChildRescue app and platform would contribute into the development of the research and the realistic implementation of the case scenario.

Figure 5-1: Volunteers and Tracing Service staff checking the ChildRescue app on their cell phones and taking last instructions from the coordinators, just before the field exercise

Further to the REDCROSS participants, ChildRescue partners attended the exercise in vitro via Zoom, having also full access to the maps and messages exchanged on the platform (shared view).

➡ The actual filed exercise stared at **9.45 with an earthquake - alarm**

Following the earthquake alarm, the UMC accommodated with the REDCROSS hosting facility in Athens gathered at the back yard that has been defined as assembly station 1 in case of emergencies. The manager of the hosting facility asked the social worker to check on the UMC and confirm everyone was ok and that there was no harm.

➡ **The social worker checked the presences of the children with ChildRescue** (by crosschecking the registration list created in phase 2) **to find out that 2 of them had gone missing**.

The facility manager **confirmed with** ChildRescue **that the 2 children were present during the last counting/taking presences at 7 o' clock** on the same day (assumption) and informed accordingly the Organisation Coordinators, also via CR.

➡ **Alerts for the two UMC** were consequently **issued with ChildRescue by the facility manager with the green light of the coordinators**

➡ A REDCROSS team of 4 Volunteers was developed using the collaboration space (standardised REDCROSS procedure – preparedness plan) to assess the area. Team members were equipped with cell phones with the ChildRescue app (simple user status)

➡ **At 10:00**: The Volunteers headed to **the hosting facility**, were they received the first information by the facility manager.

According to the first information that had resulted both from the ChildRescue registrations and from the feedback of the in-person interviews that the facility personnel had taken in the meantime from the rest of the UMC:

- UMC 1, named Hitman, had a scar on his right arm and use to wear his favourite green jokey hat all day; in fact he was seen to wear it during breakfast time, earlier on the same day. Hitman had parents in Germany with whom he was on regular contact.
- UMC 2, named Bayami, had parents in Sweden. He was talking a lot on the phone the last couple of days and he was often visiting an internet cafe nearby.

The information received was registered by Volunteers in place to ChildRescue with a request for further instructions from the OC.

First point of interest identified: a nearby the hosting facility internet café – the exact address was found and spotted on the map with a google search on Organisation Coordinator level.

➡ In parallel, the RFL team in the TS received and checked the alerts and shared via the ChildRescue collaboration space the information that the UMC 2, Bayami, had a positively concluded tracing case revealing that he **had a relative on Kos Island**.

Figure 5-2: REDCROSS leaders have just shared with the coordinators the information they received at the hosting facility and wait back for instructions

Second point of interest identified:

The REDCROSS TS premises to receive additional information about Bayami

➡ The Coordinators via ChildRescue asked:

a. the volunteer leaders to split in two teams to cover two different areas of interest. One towards the nearby internet café (team B) and the other towards the Training Service (team A).
b. The RFL team to try to contact Bayami's uncle on Kos for additional information.

➡ **The RFL team** registers on the ChildRescue that they already **received a phone call by Bayami's uncle on Kos Island**, who was much worried, because he was trying unsuccessfully to contact Bayami on the phone but his phone was out of service. No other information was available from the uncle's side.

➡ At **11.00**: **Volunteer Team B** that had visited the internet café informed via ChildRescue that **there was no trace of the children there and asked for permission to go to Vathis square,** as following the earthquake many migrants from the surrounding areas had been gathered there.

Third point of interest identified: Vathis square

➡ Coordinators green lighted for **Volunteers Team A to move to Vathis square**

➡ At **11.18:** the **RFL team reported having received a notification by the German Red Cross** (simulation) that Hitman's father contacted them to report that he had a telephone appointment with his son at 11.00 am, but that as he could not reach him on the phone and he had heard about the earthquake he was very much worried about his welfare.

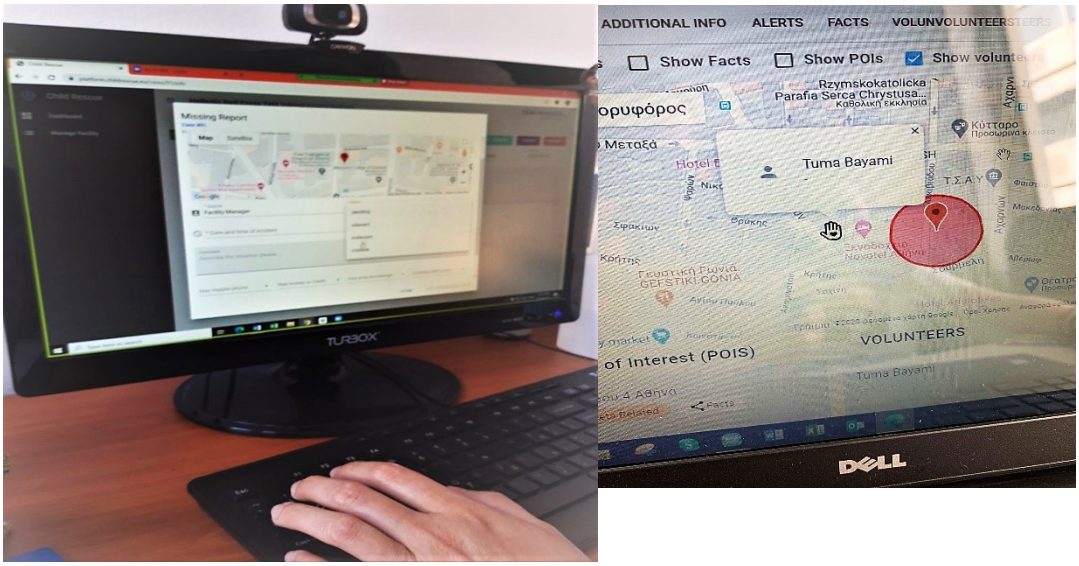

Figure 5-3: Coordinators are following up and facilitate the research for the two UMC via the platform

➡ **At 11.55**: **the RFL team registered a second call from Bayami's uncle on Kos**, who **admitted to having asked Bayami on the day before, to go to Patras port**, as he had made arrangements with "an agent" to help him go to Italy.

Fourth point of interest: Larissis Train station (as a means of transportation to Patras)

➡ The **coordinators asked the volunteer team on Vathis square for a feedback**. The team reports that there was no trace of the children and no other information about their possible destination had been revealed from the people gathered at the square.

Coordinators ask Team B **to leave the place and move to point four, namely Larissis train station**, where to ask information about the trains to Patras.

➡ In parallel, **Volunteer Team A** that was heading to the REDCROSS TS received as an instruction from the Organisation Coordinator that they should go to the predefined destination; however the interest now was more about UMC 1 and the details of the information released by his father to the German RC.

➡ **Volunteer Team A** reported that while moving towards the REDCROSS TS, they kept on asking pedestrians and people around about any possible traces of the two children. At Veranzerou and September 3rd street they received the information that a boy with a scar on his arm and a green jockey was earlier heading towards Kapodistriou street.

➡ At **12:00**: **Volunteer Team A reached the REDCROSS TS** premises. They received the information released by Hitman's father that till recently Hitman had not a cell phone and they were in contact with the assistance of the Multifunctional Centre of the REDCROSS (MFC).

Fifth point of interest intensified: The MFC of the REDCROSS at 2 Kapodistriou str.

➡ **Coordinators instructed Volunteer Team A to go to the MFC**

➡ **At 12.08**: **Volunteer Team** B reported on ChildRescue that they had reached Larissis train station, where they had received the information that **no train had left the station since 9.40'** and that **the last train to Patras had left at 8.30' in the morning.**

➡ **Team B was instructed to return to the OC**

➡ **At 12.11: Hitman was located by Volunteer Team A at the MFC.**

Actually the manager of the MFC said to the team that she was just calling the hosting facility to inform them that Hitman was with them, as he had arrived with no escort and she thought that they might be concerned because of the earthquake earlier in the morning.

➡ **The researched for UMC 1 had been successfully concluded and the relative alert was cancelled.**

With the assistance of the MFC and a facility social worker that arrived in place, Hitman spoke to his parents in Germany and was afterwards been safely escorted back to the hosting facility.

➡ **At 12.15:** the hosting facility in Athens reported to having **received a call from the respective Kalavryta hosting facility asking to cross-check information** as they were about to receive a boy UMC who they believed to be the same to one of the UMC currently on missing alert.

By cross-checking the information provided by Kalavryta with the information available on ChildRescue level, the facility manager in Athens confirmed that he was indeed the missing UMC 2, Bayami.

The facility manager of the hosting facility in Athens shared in addition with the Coordinators the information on the event, as provided by the Kalavryta hosting facility: earlier in the day and in fact before the earthquake, following his uncle instructions Bayami had left the hosting facility and tried to go to Patras. He had however, been detected by the Police when at Korinthos and he was referred to EKKA that by its turn placed him at Kalavryta hosting facility.

After Kalavryta hosting facility had confirmed that it was ready to accommodate UMC 2, it requested for ChildRescue contribution to receive the personal data of Bayami as already registered on Athens hosting facility centre level.

➡ The facility manager in Athens asked the coordinators to **greenlight the sharing of Bayami's data with Kalavryta hosting facility**. Coordinators gave the green light as needed.

➡ **The research for the UMC 2 was concluded with the successful sharing of Bayami's details between Athens and Kalavryta hosting facility**.

As both missing children had been located, relative alerts were deactivated and all participating teams returned to their initial posts.

After a short break to rest and better absorb the experience of the day, the focus group discussion and evaluation session took place.

The overall field exercise was concluded at 14:00 o'clock.

5.3 Pilot Evaluation

5.3.1 Main Outcomes

The field exercise provided a good opportunity to better understand how the ChildRescue app and platform can contribute to the REDCROSS procedures, also considering the specificities of the REDCROSS participation to the project. In this regard, the following aspects were tested and evaluated:

- Registration of UMC
- Creation of a list of UMC with each facility/accommodation centre which can potentially be linked with each other to enable a full overview of the UMC supported by the REDCROSS
- The use of the above-mentioned list as a tool to take presence of the UMC with a REDCROSS facility at different times within a day
- A tool to detect on time possible absences on facility level that can by its turn enable quicker detection of missing children cases and alerts
- Capacity to detect missing children in case of emergencies
- Facilitation of volunteer deployment and update, as well as a research procedure in an emergency situation
- Coordination of different REDCROSS Services, especially when research is needed (including on time sharing of accurate information at different levels)
- Feeding the ChildRescue with information
- Possibility/ability to serve parallel research of missing children
- Overview of the research procedure – real time feedback on a map

As a result of the testing of the above-mentioned aspects, the following outcomes and comments have been noticed:

- The fact that the Volunteers' App was originally agreed to be applicable only in Android, actually excludes iOS Volunteers, which might result to a big drawback considering that iOS were very popular within the testing team. For that reason, the number of the cell phones to be used was lower to the number of people who actually participated to the exercise.
- Modifications on the devices on the side of the users was needed for many aspects, i.e. for alert notifications to become more obvious, e.g. with sound effects
- In the app menu it was not clear to whom out of the two missing children referred both the incoming (attribution of the simple user) and the outgoing messages (attribution of the coordinator); in this regard, facilitation of parallel research was proven problematic
- Overall ChildRescue solution (App and Platform together) however, was proven very useful and quick in regard to alert notification and information sharing to multiple users
- The overview of the research on a map and on real time was really useful and handy

As an overall outcome, one can say that the piloting exercise had been a good experience and we could see the applicability and the effectiveness of the ChildRescue solution in real time, which is expected to have a positive impact on the deployment of volunteers, especially in case of a research (at least when a single person goes missing). In any case however, the ChildRescue solution cannot work independently as many times during the field exercise regular REDCROSS procedures and mechanisms

needed to be used to cover gaps in coordination and problem-solving analysis. It is true though that the REDCROSS participation involves a rather extended and more complicated use of ChildRescue.

5.3.2 Participants Feedback

During the second piloting exercise, not all roles within ChildRescue were showcased, only coordinators and simple users. Due to the necessary adaptions to the piloting exercise because of Covid-19, the pre-piloting surveys that asked about the length of work processes without the use of ChildRescue will be presented in D4.6. By then the results from the surveys on the work processes with ChildRescue, which were surveyed in October, will have been analysed and a comparative analysis can be made.

During the second piloting exercise, only two interviews could be gathered. Therefore, the results are limited in their scope. One participant rated both the piloting exercise as well as the platform as 4 out of five, but did not rate the app at all, since they only used the platform during the exercise. However, the respondent was confident that ChildRescue could be used for future work practices and viewed the potential to have an information database on the children as a positive. They were also very positive about the platform as it was displayed during the piloting exercise but did mention the need to make changes to an alert after it has been published without needing to create a new alert. The second interviewee also rated the piloting exercise with a four of five, thereby deeming it a success. However, both the app as well as the platform were only given a two due to data protection concerns that had not been addressed properly for the app and a lack of training on the use of the platform. This indicates that – in spite of the positive feedback on the piloting exercise – some essential information was not given. This should be addressed by the Hellenic Red Cross internally. The interviewee also mentioned the need to improve the access to the data for internal use, which seems to contradict the data protection concerns. Yet, they described the ChildRescue solution as 'interesting', indicating a general positive attitude towards the app and platform.

In the surveys for the staff members (N=5), the overall attitude was somewhat positive. All the items on the accessibility of the app except for 'usability in everyday work' (ad= 0,6) had average absolute deviation scores of under 0,5, indicating a great level of agreement among the participants. Three items reached a median score of 4 ('good'), namely 'features are understandable for staff members' (ad=0), 'easy to use' (ad=0,2) and 'protecting sensitive data' (ad=0,4). The other items were on median scored as 3 or 'ok', namely size (ad=0,2), colour (ad=0) and contrasting (ad=0,4) of the text, understandable for volunteers (ad=0,4), the navigation in (ad=0) and intuitive use of the app (ad=0,25) and 'alarm signals audible' (ad=0,4). Additionally, 'usability in everyday work' (ad=0,6) was also scored as 3 ('ok'), but with a slightly higher average absolute deviation and answers ranging from 2-4 ('bad-good'). The accessibility of the platform received similar ratings to the app, with the items 'easy to use'(ad=0,4) and 'features are understandable for staff members'(ad=0) also reaching median scores of 4 ('good'), much like with the app. However, the data protection in regard to the platform only reached a median score of 3 ('ok'), with answers ranging from 2-4 ('bad-good') and the average absolute deviation at a corresponding slightly increased 0,6. Instead, the item 'navigation in platform' also scored 4 ('good') in the median rating (ad=0,2). The size, colour and contrasting of the text, the intuitive use of the platform and the audible audio signals all reached median scores of 3 ('ok') with an average absolute deviation of 0, meaning all participants rated these items the same. 'Understandable for volunteers' also reached a median score of 3 with fairly little disagreement (ad=0,4), whereas the items 'usability in everyday work' (ad=0,6) and 'protecting sensitive data' (ad=0,6) reached the same median, but with answers ranging from 2-4 ('bad-good') and a resulting higher average absolute deviation. The high level of

agreement for most of these items and their relatively low score showcase the need to improve the design, especially the size, colour and contrasting of the text by the technical partners as well as the need to internally explain the usability for everyday work in more detail to ensure the advantages of using ChildRescue are fully understood.

Lastly, the staff members were asked about their impression of the usability of the ChildRescue app in different work processes. The answers reflected an overall positive image, with the items 'organising volunteers' (ad=0,33), 'recruiting new volunteers' (ad=0) and 'timely response to missing cases' (ad=0,2) all reaching a median score of 'good' or 4 with little or no disagreement. The items 'increasing the speed of the recovery of missing children' (ad=0), 'matching old similar cases to new cases' (ad=0,2) and 'establishing relevant locations of missing children' (ad=0) only received median ratings of 3 or 'ok' with little to no disagreement among participants. This might be due to the lack of practice in using ChildRescue since the second piloting exercise had to be adapted to the requirements during the Covid-19 pandemic. Any potential benefits of ChildRescue to the efficiency of the workflows will be reported in D4.6 after the data analysis of the additional surveys from October have been finalised.

The surveys of the volunteers (N=4) showed a similarly general positive attitude toward ChildRescue. However, in contrast to the participants at ChildFocus, the volunteers at the Hellenic Red Cross gave higher median scores for design rather than functionality. The overall design (ad=0,25), the design of the alerts (ad=0,33) as well as the design of the dashboard (ad=0,2) all reached median scores of 4 ('good') with low average absolute deviations, meaning they were mostly in agreement. Only the design of the organisations' sections was scored lower, namely a 3 ('ok') in the median with an average absolute deviation of 0, meaning all volunteers agreed. The functionality mostly also scored a 3 as the median, namely the items 'overall functions' (ad=0,25), functionality of the alerts (ad=0,25), and functionality of the organisations' sections (ad= 0). Only the functionality of the dashboard received a higher median score of 4 ('good') with all participants in agreement (ad=0). The highly homogenous nature of the answers of the volunteers' surveys at the Hellenic Red Cross leads to the conclusion that some functionalities may not have been presented fully during the second piloting exercise, which might be due to the altered exercise during the Covid-19 pandemic. Nevertheless, the Hellenic Red Cross should include all functionalities in their internal training of staff members and volunteers alike before utilising ChildRescue in their work practice to ensure that it is handled correctly.

5.3.3 ChildRescue KPIs based on Second Pilot

Due to some changes in the second pilot exercise because of COVID-19 pandemic, all KPIs will be included in the deliverable D4.6 – "ChildRescue Pilot Evaluation and Lessons Learnt" [M36].

5.4 Challenges and Next Steps

The challenges and issues identified can be summarised in the following:

- Alerts and messages cannot be modified after sending
- The "cloning" of alerts as new in order for the manager to provide additional info or make changes is a complicated procedure.
- The app is not very convenient and handy when it comes to multiple researches at the same time (more than one person). Although each map and collaboration space are connected to a single case that is not very obvious.

The integration of the use of both Platform and App into the everyday work of the REDCROSS will depend on the ability to safeguard the bonding procedures for registration and research of the REDCROSS as they result from the Red Cross Movement Principles and directions.

If all prerequisites are fulfilled and provided that data protection needs are met, ChildRescue can turn to have a database with essential information on the minors accommodated in UMC shelters and thus ameliorate coordination and cooperation at all levels. At the same time, it provides a very good tool for the deployment of REDCROSS volunteers and as such it will be presented and suggested to the respective REDCROSS Department.

6 Technical Modifications Planning

The technical modifications plan contains all updates and fixes planned by the technical partners to be implemented until the end of the project based on the feedback from the various stakeholders and end-users. This feedback was the outcome of both the pilots' field exercise (M30) and the public launch (M31) and at the time of this writing consisted of several requests.

It should be noted, however, that the technical modifications plan does not include requests that require architectural changes, the development of extra components or any, completely new, functionality, since such tasks fall under the WP3 scope which has been completed and delivered in M27.

The items to be implemented or fixed can be categorised into two categories. The first category consists of the issues to be resolved as top priority, while issues of lower priority fall under the second category. This prioritisation is based on the issue significance for the pilots (all three), the effort and time required and whether this issue can be considered as something completely new or an improvement of something already existing.

In this direction, the updates planned for months M32-M36 - as first priority - are as follows:

Table 6-1: Planned modifications

Modification/Improvement	Component	Notes
Bi-lateral communication support between Network Manager and selected Volunteers (leaders or other individuals)	Platform/ Mobile Volunteer App	The plan is to allow for messages to be sent either a) to all volunteers assigned to a case, b) to the members of one team or c) to a specific team member. Each message will create a push notification to the designated recipient(s)
Find a way to notify Managers when new information arrives in platform	Platform	New facts will be highlighted, and desktop notifications will be employed, if possible.
Improvements on Network Manager UI	Platform	Network Manager dashboard will show only active cases for easy access
Improvements on Coordinator/ Org Owner UI	Platform	An updated reporting dashboard will be supplied with various useful information in organisation level
Improvements on general UI	Platform	UI/UX updates
Modify Alerts after creating/sending	Platform	Since an end-user is notified only on receiving a new alert, it is better for the end user experience if we add a "create duplicate" functionality that creates a new alert with the same details that can be modified and re-sent

Translation of platform to multiple languages	Platform	Translations are required to be provided by the pilot partners
Sort messages by most recent on collaboration space feed	Platform	Apply sorting functionality
Automatically "refresh" info on volunteers Tab	Platform	Content on page will refresh automatically every 60 secs
Make user details (who sent a fact) available to Case Manager, in case s/he needs to contact them	Platform	User details (e-mail, phone) will be available on facts list
Add custom text to the invitation sent to all volunteers to join a case	Platform	Custom text field will be added
Remove irrelevant or spam facts from collaboration map	Platform	Only relevant or credible facts to be shown on map
Add filtering by city/area in volunteers' section	Platform	The ability to filter volunteers by city (for those who have provided it) will be available in volunteers' selection screen
Ability to view images in larger scale	Platform/ Mobile Volunteer App	Ability for full screen view will be provided
Add more contact details on user profiles	Mobile Community App/ Mobile Volunteer App	Optional extra fields for all users: contact phone, birthday, home address
Get notification about a case been closed with a custom message. Case should remain in mobile app for a certain amount of time (e.g. 48 hours)	Platform/ Mobile Community App	Will be implemented as described
"Cold" cases should be clear which organisation they belong to	Mobile Community App	The cases will be filtered by relevant organisation(s) based on mobile user location (e.g. show by default only Greek cases for Greek mobile users)
Send message regarding the closure of a case to all people in the area of alert	Mobile Community App	Opening an alert will make user automatically follow the case, so they will receive the notifications about the closure
Make the "send info" functionality more user friendly for volunteers	Mobile Volunteer App	The Send Information button will be placed in a more prominent position

On a location post, show also the area based on radius supplied	Mobile Volunteer App	
Refresh the activity using swipe in collaboration space	Mobile Volunteer App	
UI/UX improvements on both mobile apps	Mobile Community App/ Mobile Volunteer App	
Bug fixing	All	

The following requests come second in priority and are to be implemented if, and only if the available time until the end of the project permits it, having in mind that various new issues or bugs may jump in at any time until then.

Table 6-2: Further requests for modifications

Modification/Improvement	Component
Ability to send an "internal" alert, i.e. to be sent only to volunteers of the organisation	Platform
Ability for volunteer user to accept or reject the assignment as team leader	Platform/ Mobile Volunteer App
Addition of layers on the map, more icons, different colours per event	Platform/ Mobile Volunteer App
When a case is closed, remove the invitation acceptance from volunteer's phone	Platform/ Mobile Volunteer App
Remove pending inactive invitations to volunteers when no longer needed	Platform/ Mobile Volunteer App
Allow for multiple searches of multiple children on the same map	Platform/ Mobile Volunteer App
Find a way to notify Managers when new information arrives	Platform
Allow for multiple photos of a child to be stored and sent in Alerts	Platform
Ability for Managers to edit/delete posts in collaboration space	Platform
Ability for Case Manager to create a timeline of events	Platform
Ability to mark information as important and highlight it accordingly for all other users to see	Platform
Set volunteers who have accepted the invitation into "stand-by" mode until they get "activated" to join a rescue team	Platform/ Mobile Volunteer App

7 Planning for the Adoption of ChildRescue Solution

7.1.1 Adoption of ChildRescue Solution by SoC

After the release of the last updated version of the app and the real cases testing, internal discussions will begin within the organization to define the details on the adoption of ChildRescue.

7.1.2 Adoption of ChildRescue Solution by ChildFocus

The app launch took place on August 30th. As of then ChildFocus started using ChildRescue with real cases. In preparation of this, internal coordination meetings were organised to integrate ChildRescue in their existing procedures and investigate who will do what. A meeting has also been foreseen with ChildFocus IT department to assure also technical integration. After every real case deployment, a debrief meeting is foreseen to pick-up on points of improvement that will be shared with the technical partners or that will lead to an alteration of the internal ChildFocus procedures.

7.1.3 Adoption of ChildRescue Solution by REDCROSS

The REDCROSS participation to the ChildRescue CR project is distinct, mainly because of the specificities of the Red Cross Mandate, while the ChildRescue solution for the REDCROSS entails far more aspects than the ones foreseen for the rest of the partners. In this regard, the REDCROSS can find the distinct attributes of ChildRescue to the registration of the UMC and the transfer of data between facilities as useful and handy, although there are still many issues to be solved, such as the access of information at different levels and the protection of considerations involved, one being accessibility to personal data and keeping personal details of UMC in cloud environment.

In regard to the research procedure itself, the ChildRescue solution offers to regular REDCROSS procedures an element of better coordination and on-time sharing of information with multiple users. The long institutional experience in tracing of REDCROSS has resulted in the development of different tools and procedures that ensure a unicity on Movement's level. Therefore, the REDCROSS understands the added value of the ChildRescue solution mainly as a useful tool to be used as an auxiliary to the regular procedures for registering and locating children, provided that Movement's prerequisites and standards are met. In this regard, the final use of ChildRescue will depend also on the Movement's feedback on its usage.

As the REDCROSS President had explained himself, the REDCROSS paying attention to the vulnerable group of UMC supports ChildRescue project as a modern protection-oriented solution using advanced technologies. In compliance to the Red Cross Movement principles and directives, however, the REDCROSS participation to the project aims to remain distinct and serve a more holistic approach. It focuses on both upgrading protection and ameliorating case management for UMC with the organisation, without excluding of course the REDCROSS from contributing to all UMC that come to its attention through ChildRescue. REDCROSS participation insists though on the respect of the "Do No Harm" principle and the right of each individual in privacy. As a result, safeguarding a discreet procedure is among the aims of the organisation for ChildRescue. In this regard, it has to be ensured that accessibility to the information of the children is with conditions and restricted to authorised REDCROSS Volunteers and employees.

8 Conclusions

D4.5 - "ChildRescue Pilot Experimentation Documentation, Release II" reported the results from the final pilots' operation and execution, which included the feedback collected from the participants.

The **ChildRescue pilot experimentation** was divided into two parts, the first and the second pilot phase, consisting respectively of: a) simulation/tabletop exercise and b) a field exercise. D4.5 documented the simulated exercises of the second pilot phase that were conducted during the first semester of 2020 in the premises of each of the **three pilot organisations.**

By the time the final pilot experimentations were taking place, measures for the protection against the COVID-19 were still in place in both countries, i.e. Greece and Belgium. The organisations conducted the pilots **in a simulated way, staying as close as possible to the conditions of real life scenarios, and relying at the same time on the use of online platforms, permitting distance communication among all relevant partners.** By the time of the exercise, all ChildRescue components were deployed as the integrated ChildRescue platform and apps and were prepared as needed to support the pilot execution.

Three scenarios were provided by the pilot organisations to support the pilot operation; two for the Missing Children Emergency Case (Greece-supported by SoC and Belgium-supported by Child Focus) and one for the Discovery and Identification of Unaccompanied Minors (Greece-supported by REDCROSS). The developed scenarios were based **on true facts** to create a plausible environment, but any personal data related to the children were **carefully anonymised**. Members and staff of the pilot organisations participated in the exercise and were supported by the technical partners of ChildRescue consortium. The execution of the full-scale exercise followed the pilot guidelines provided in D4.4 (March 2020). The pilot guidelines also included a provision for the systematic collection of participants' feedbacks through interviews and online surveys/questionnaires. The collected information was used as input for further analysis and the extraction of useful conclusions based on the developed evaluation and validation framework. This information was also used for a preliminary calculation of validation KPIs.

The overall perception of ChildRescue by the organisation members that participated in the exercise was positive with some differences in the answers from the different organisations. Despite some comments for improvements in the platform and apps, the participants were willing to adopt ChildRescue in their every-day operations, as they **identified possible benefits** from its use. This feedback was used for the refinement of the final release of the ChildRescue platform and app. The participating pilot organisations will examine the terms of adoption to their every-day operations according to their specific characteristics and activities.

The results from D4.3 and D4.5 combined will lead to the final pilot evaluation and assessment in D4.6 – "ChildRescue Pilot Evaluation and Lessons Learnt" [M36].