

REBUILD

ICT-ENABLED INTEGRATION FACILITATOR AND LIFE REBUILDING

GUIDANCE

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TABLE OF CONTENTS

D	DCUMENT	TINFO	2
	А итно	ors .	2
	Docum	MENT HISTORY	2
	Docum	MENT DATA	3
1.	Intro	DDUCTION	4
	TERM	INOLOGY	4
2.	Purp	OSE, GOALS AND OBJECTIVES OF THE PILOT TEST	5
3.	Deve	LOPMENT AND PILOT APPROACH	8
	3.1.	Considerations	8
	3.2.	An evolving delivery methodology	10
	Agil	le Methodology	12
	3.3.	Pilot approach	13
	Imp	pact on approach for partners	13
	Sco	pe of Pilot Testing	15
	Pilo	t Test Reports	16
4.	Рісот	TESTING PLAN	17
	Test	t Groups	17
	Con	nmunication Strategy for the piloting phase	18
	CIDAS	High-level plan of activities:	19
	MDAT	High-level plan of activities:	20
	OMNE	ES High-level plan of activities:	21
	UAB F	ligh-level plan of activities:	22
	Pre te	sting guidance	23
5.	Рісот	TING AND IMPACT ASSESSMENT	25
6.	Sumi	MARY	26
Bi	BLIOGRAPH	Υ	28

1. Introduction

The overall objective of ReBUILD is to improve migrants' and refugees' inclusion through the provision of a toolbox of ICT-based solutions aiming at the enhancement of both the effectiveness of the services provided by local public administration and organizations as well as the life quality of the migrants and refugees.

This project, implemented in three country clusters (Italy, Spain and Greece) follows a user-centered and participatory design approach, having the ambition of properly addressing real target users' needs, ethical and cross-cultural dimensions, and of monitoring and validating the socio-economic impacts of the proposed solution. Both target groups (immigrants/refugees and local public services providers) are part of a continuous design process which includes the gathering of their feedback and suggestions to inform the development process, with the aim of creating and maintaining their engagement throughout and after the project timeline.

The Consortium's capacity to engage relevant stakeholders external to the project is a key factor in the three main piloting countries: Italy, Spain and Greece, chosen due to their geographic situation, i.e crucial points with regards to the main immigration routes.

The first phase of the project engaged users and stakeholders in the design of the Rebuild toolbox application by means of Co-Creation Workshops organized in each of the countries. The testing phase, conducted in the period M22-M28 of the project, has seen the involvement of all Consortium partners in experimenting, assessing and validating their respective service scenarios to provide essential feedback to the technical Work Packages. The full results of this phase are available in deliverable D6.2.

TERMINOLOGY

Definitions

"Services": In respect to the REBUILD App and Dashboard, a Service is intended as the sequence of steps facilitating the access to the LSP "real service" by the migrant. Services in the REBUILD App are not meant to implement LSP's "real services" (e.g. REBUILD App is not booking an appointment to the doctor).

"Places": In respect to the REBUILD App and Dashboard, LSPs can input places of interest in relation to their domain, so to bring those to the attention of the user.

"Pilot testing": a type of Software Testing that verifies a component or the entire system under a real-life operating condition¹, with a view to identify any issues related to the various components of a system, user-friendliness, understanding and acceptance. This operation is performed between the UAT (User Acceptance Testing - D6.2), and the Production phase.

¹ https://www.guru99.com/pilot-testing.html

"Data priming": prior to the beginning of the Pilot Testing, it defines the process to prepare the system with data that reproduce or simulate real-life conditions, so to provide the basis for a meaningful user experience and for performance evaluation.

2. Purpose, goals and objectives of the Pilot test

As foreseen in the REBUILD project proposal, the third phase of the project (M27-M36) shall lead to system consolidation and the deployment of the toolbox developed by technical partners (WP5) for its piloting with the target users, migrants and refugees, with REBUILD Consortium partners to act as specific service providers matching user needs. This phase is expected to provide the necessary inputs and knowledge to inform the release plans of the REBUILD toolbox at the end of the project as a replicable, reusable and scalable product, with a view to involve new service providers and target groups in the three Pilot countries and beyond.

The Pilot phase of the project requires the REBUILD toolbox to be tested in a Pilot setting to simulate the roll out and adoption with a larger tester community, and minimalistic interventions by the project partners. At the end of the pilot testing period, feedback is sought with quantitative data being obtained from system reports and the majority of qualitative data; from post-test interviews in whichever format the Consortium Partners choose. Guidance on feedback will be provided and documented in D6.4.

In order to help Pilot Partners the setting up or provision of a support resource could be envisaged by WP6 so to ease the understanding, formulation and reporting of feedback from Pilots, with the aim to gather structured and consistent data to inform the final Pilot report.

As a reminder, the REBUILD toolbox is composed of:

- the REBUILD App, for mobile phones, also identified as "Digital Companion" because of its role in relation to the user, providing access to REBUILD services; and
- the Local Service Providers (LSP) Dashboard, a web-based tool for REBUILD services management.

At the end of the project's phase 2, the REBUILD Toolbox has developed a number of REBUILD services and implemented the following:

- Support to Job Seeking
- Access to National Health System (Italy)
- Access to National Health System (Greece)
- Access to Social Mentoring (Spain)

Additional services will be developed prior to and during the Pilot Tests, based on the Scenarios blueprints developed in D6.1. This will include Legal, Housing and Education services.

The expected toolbox's Dimensions, Modules, Components and Scenarios are ascribed to define the scope of functionality delivered. The phase would embrace an agreed priority of functional changes following from the test phase conducted and captured from D6.2 as follows:

- the concepts of the App and Dashboard operational approach
 - Domains
 - Services
- The Services Design and implementation (Domain Suitability)
 - Services blueprints based on assumed LSP and Migrant journeys
 - Flows of data
 - o Functions provided
 - Information presented on the interface screens
- Usability/Response time (Technical usability)
 - App user experience
 - Dashboard user experience
- Usefulness (User Acceptability)
 - Services beneficiaries
 - Services providers

The scope of the testing phase includes the components designed from the blueprinting project phase and inherited from D6.2 (see Figure 1 below)

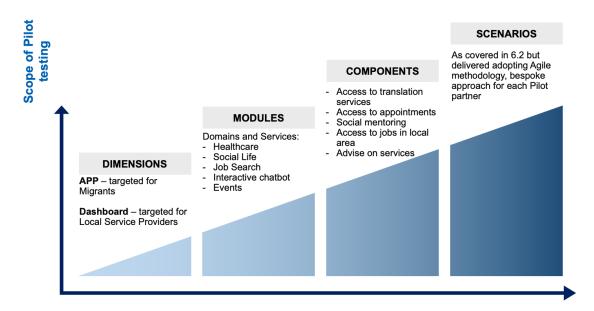


Figure 1- High-level scope of testing, based on the blueprint and D6.2

The REBUILD toolbox acceptance as a social inclusion enabler would need to be validated prior to its launch to test for stability, usability and deliver the benefits from the KPIs identified in WP6.1. The outcome of the testing (Perry, 2006), would provide feedback to the Project team on its relative success to failure to proceed into a Production state (live). Therefore, the planned Pilot would have the attributes of collating feedback, measuring usability and benefits, focused on a target audience and would include the consortium Partners and delivered via an Android APP as well as a Dashboard (website/portal). See Figure 2 below.



Figure 2 - Goals, Purpose and Objectives of the Pilot test

The delivery of this piloting phase would adopt an 'agile' way of working (Hendrickson, Elisabeth, 2008), devolving control to the Consortium / Pilot partners to manage the roll out of the APP and access to the Dashboard with the only controlling delimiter being duration.

The methodology of soliciting the feedback would be based on the cultural and ethical boundaries governed by the social dimension of the testers. It would serve to replicate as closely as possible, to a real-life scenario, on how the APP and Dashboard is rolled out, utilized and managed.

The actual Pilots are expected to take place between July 2021 and October 2021 with varying start and end times based on Partners' environment conditions, including the actual availability of users to engage in the pilot testing.

3. DEVELOPMENT AND PILOT APPROACH

3.1. Considerations

The REBUILD Architecture, described in D5.1, was designed to be scalable and interoperable in order to deliver a user-friendly tool for users to easily access the proposed services. The final user manages (LSPs) or accesses (migrants) the REBUILD services through the Toolbox user-interfaces.

The REBUILD toolbox is built around a rich set of technical features: The App provides users with personalised suggestions for a specific REBUILD service. Users can exchange with the REBUILD App ChatBot in order to receive help and suggestion on specific needs, including by using a developed set of pictograms provided by a specific Pictograms APIs². The ChatBot uses the REBUILD Recommendation System to analyse the profile and service data (e.g., personal data, educational data, skills, user desiderata, etc.) and provide suggestions or propose content to the user, according to the service chosen.

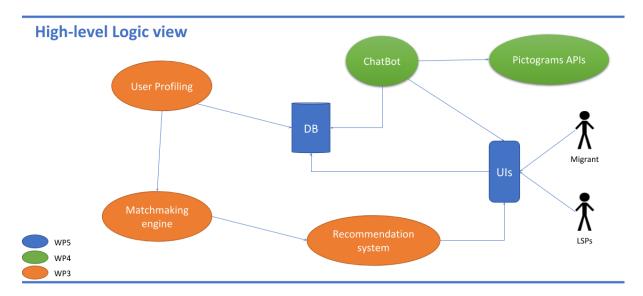


Figure 3 - High level REBUILD Architecture

The REBUILD Toolbox was then designed and developed following a modular approach (D5.2) in order to integrate and use specific technical components according to the specific requested service: this kind of high-level architecture approach contains therefore all the elements needed to accommodate the features identified in the Use Case Scenarios.

Accordingly, the Data Model for the REBUILD toolbox was developed (D5.2) stemming from the Use Case Scenarios defined in D5.1, D2.5 and D6.1 (scenario blueprints) the information needed for the system to perform the various operations.

The Testing phase was designed (D6.2) and conducted (D6.3) with a view to perform a formal User Acceptance Testing of the Use Case Scenarios analyzed and developed from the Services Blueprints.

² APIs: Application Programming Interface, https://en.wikipedia.org/wiki/API

The Tests were conducted on the basis of detailed UAT templates and Tests documentation (the Test Pack). While UAT templates strictly define the scope of each test batch, Test Partners would also provide full support to a limited set of users throughout the whole process, with the purpose of ensuring the effective running of the tests and capturing results and feedback.

Pilot Testing, on the contrary, shall give users the full freedom of navigating through the App, or the Dashboard, exploring REBUILD services available in their area, and interacting with both the REBUILD ChatBot or human operators, depending on the service, to simulate the roll out of the Toolbox and assess the acceptance, easiness and usefulness of the services as implemented in the system.

Hence, a methodology for Pilot implementation was discussed among Consortium Partners so to take into account different parameters: Partners are geographically dispersed; they have different approaches and modalities for contacting local LSPs and migrants; they manage these relationships in full autonomy; they should be able to collect feedback as most appropriate in consideration of local habits and organization-specific rules of conduct; they must abide to different restrictions due to continuously evolving Covid-19 regulations.

A structured "hub and spoke" methodology with testing responsibilities spread across the partner geographical areas is therefore the preferred approach (Ghaffarinasab, Ghazanfari and Teimoury, 2014). This will result in a bespoke pilot delivery for each region that embraces the cultural and social differences while maintaining the core delivery methodology from a central control hub - See Figure 4 below.

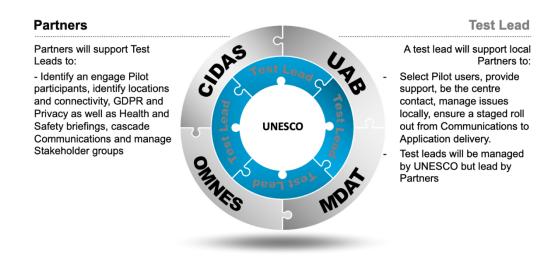


Figure 4 - Hub and Spoke approach to facilitate control and delivery of the Pilot

In the hub and spoke approach, as implemented in REBUILD, a central hub group oversees the consortium-wide pilot testing efforts, ensures a coherent approach and that results are collected in a common pool. At the same time, each individual Pilot Partner can organize and prioritize tests according to their own environmental variables and objectives (Pilot Partners are acting as LSPs).

3.2. An evolving delivery methodology

The delivery methodology adopted throughout the REBUILD Project follows the traditional waterfall approach with succinct phases and divided into ten work packages as follows:

- 1- Background information gathering
- 2- Codesign processes
- 3- Data analysis and skills matching
- 4- The Digital companion
- 5- Integration and technical validation
- 6- Deployment, piloting and user validation
- 7- Ethical and Cross-Cultural Impacts
- 8- Dissemination and Communication
- 9- Socio-Economic impact assessment and exploitation

However, as a sequential process of software development, the waterfall methodology (McCormick, 2012) has identified the high-level tranches of the approach as:

- Feasibility study
- Requirements
- System Design
- System Implementation
- System operation / support

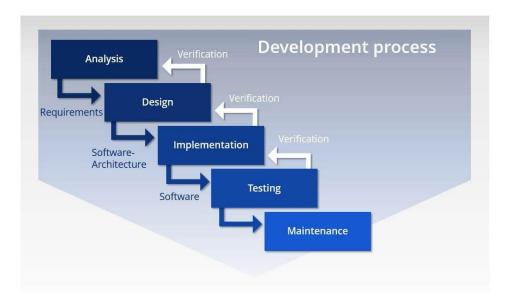


Figure 5 - Waterfall model simplified © IONOS

This provided the basis for which the project designed its delivery methodology.

As the development of the REBUILD toolbox progressed, and Agile methodology was adopted, and Pilot Partners were solicited to inform the development of the real Service Scenarios, and instance Services Blueprints (D6.1). The testing phase thus served also to refine the Service Scenarios and get rapid feedback from the Test Partners, while allowing technical Partners to test and validate REBUILD's systems integration.

See Figure 6 below, on the phases of the project; to the eventual transition into testing and the adoption of Agile methodology.

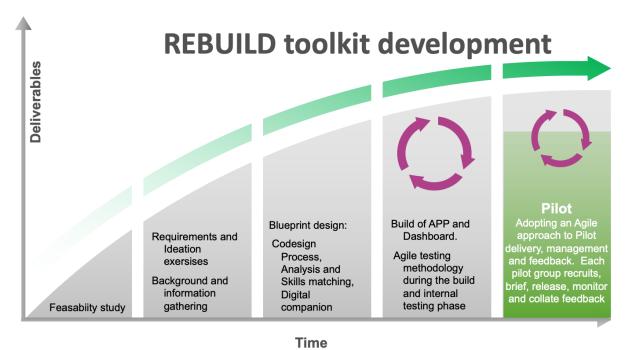


Figure 6 - Development progress from Background information gathering to the current phase of Pilot testing

Agile Methodology

The testing process has adopted the Agile methodology that can be used not only as a delivery methodology in systems development but extended to include other succinct phases of a traditional waterfall project (Conboy, 2009). In this case, applied to testing as the project is developed and implemented in a distributed network with Partners that are geographically dispersed across Europe.

Agile principles, when applied to testing, serve to reduce the risk of exceeding time in the application development release cycle (Swanganon, Martin, 2017). The methodology also speeds up development and addresses users' feedback into the design and development.

The testing methodology, related in D6.2, was successful in producing feedback and is now transitioned as the approach for the Pilot test phase.

With a view to maximizing results in the limited remaining time before the end of the project, this approach is therefore adopted to all stages of the product development: bug fixing, UI and dialogs changes, new features, new services.

Thus, the Agile approach becomes a central pillar of the development process and a proper review process needs to be implemented, where a full collaborative team of developers and testers, in this case represented by the Pilot Partners, is established. When executed well, agile lets developers "run wild" and testers perform optimally as a self-motivated group that works on a continuous basis, with a clear picture of goals so that timelines can be met (B. K. Madhu, 2010).

Further to the testing phase, Pilot partners (WP6) are then invited to continuously exchange with technical partners (WP5) to ensure test results are fully captured and to provide the necessary clarifications.

3.3. Pilot approach

Each test partner will create a launch, pilot testing and feedback window during this phase of the Project, which is expected to start in Mid-June 2021 and last until October 2021. This would provide adequate time to undertake preparation activities to ensure a successful Pilot test that best replicates a production / live environment. The key non-technical elements are:

- Communication
- Preparation of bespoke briefing pack
- Identification of testers
- Support channels (only if necessary)
- Feedback process
- Closure and Summary

It is expected that LSPs data are primed before roll-out to migrants, to provide a 'rich' experience for the testers. This may include Healthcare services, Jobs and Social Mentoring Programmes as well as Events that the Migrants can subscribe to. This must, in the best possible way, reflect a real-life interaction scenario.

As the Pilot testing progresses, there would be interaction between Dashboard users and Migrants, therefore it is expected that this is planned to a certain degree to facilitate interaction and ensure that all users have a full experience of the Toolbox. Depending on the services, interactions may be direct, with App and Dashboard users directly exchanging inputs and outputs, or indirect, with App users accessing information that was loaded into the system beforehand.

Both APP and Dashboard users will have a channel to raise issues as they experience it. This will be managed by the Technical teams and end users given a response. If a given issue cannot be resolved, then it is passed to the local Pilot teams to manage.

Impact on approach for partners

Each team contributes collectively towards creating a seamless experience for all parties to ensure the optimal output is achieved within the timeframe set for the phase. This section outlines the main activities that partners are expected to perform.

Technical team activities

During the Pilot testing phase, the technical team will:

- A) Create a baseline version of the APP and Dashboard and Communicate when this is ready and available for 'live' / production.
- B) Monitor the systems on an agreed frequency using a combination of automated and manual tools.
- C) Support partners via a triage process, with the Partners engaging with the testing team throughout the process to support with any issues encountered. It is planned that during the tests, there will be pro-active consultation when required, through-out the cycle.

Consortium Test Partners activities

Consortium Members are expected to perform the following operations:

- A) Mobilizing pilot testers, both LSPs and migrants, through a targeted communication campaign
- B) Identification/recruitment of the pilot testers for this phase: in compliance with KPI 4.2 Number of ethnicities to verify the understanding of the tool, it is recommended that pilot partners engage App testers of a minimum of 2 ethnicities from the highest population groups in their respective locations
- C) Preparation/Organization of the pilot tests: scheduling, launching, managing, reporting
- D) Ensure that testers validate the functionalities of the Dashboard and the App according to their respective roles
- E) Capture feedback at the end of the testing period
- F) Make recommendations (if required)

Pilot Test co-ordination team activities (UNESCO)

The coordination team will:

- A) Set Pilot test expectations and timelines, in consultations with the Test Partners
- B) Support the organization in preparation and delivery of the pilots
- C) Generate a post-pilot report that summarizes the outcomes of the test, supported by meetings with the Pilot partners

Parallel evaluation activities

Following the approach taken during the testing phase, it is expected that parallel evaluations will be conducted during the piloting phase. This approach gives flexibility and agility to evaluate very specific aspects, without the need to wait for results until the end of the pilot, or the need of a final version of the App. The feedback gathered can be strategic for some partners and developments to get preliminary feedback before going into open pilots, and have time to fine tune the element under evaluation. For example, assessing comprehensibility of new videos and animations was performed during the testing phase and provided relevant information in order to identify what content was missing information. New videos and animations will be created for the pilot, and it is expected to evaluate comprehensibility before launching the pilot. Specific developments like those provided in T4.4 - Personalised interaction, might require specific attention. This is a new service that will be launched during the pilot. Besides technical validations, it has been considered relevant to perform a usability test to understand how usable is the service.

Data evaluation questions

Pilot testing will also provide feedback concerning the user perception of data handling by the REBUILD App. In this regard, feedback from users shall be sought by Pilot partners as follows:

Questions		Assessment value
Overall, I am concerned about how my data is handled when using a new application.	Strongly disagree = 1	
When using the REBUILD app, I felt that my data would be handled correctly and kept safe.	Chun alu agua	
I felt comfortable adding my personal data to the REBUILD app.	Strongly agree = 5	
I understood why the REBUILD app was requesting my data.		
I find REBUILD's privacy policy clear and easy to understand.		

Figure 7 - Data handling feedback form

Scope of Pilot Testing

Following the Test phase, the Partners (WP5 and WP6) conducted a Gap Analysis based on qualitative and quantitative findings. The analysis divided the gap into three broad categories: UI related defects (including processes, language-chatbot, visuals and interface), Bugs (system errors or anomalies), new functionalities (in respect to the MVP version).

New functionalities include the technical implementation of Services scenarios already analysed (D6.1) but not implemented, as well as of features already foreseen in the development plan, such as Services maps and personalization.

The Pilot Testing phase shall therefore provide elements for validating the following technical areas:

REBUILD App

Registration, profiling, profile editing, calendar and events, service navigation, settings, video
Chatbot, Recommender, ESCO, Dashboard Data (places, events, jobs, ect.)

REBUILD Dashboard

General	Registration, Places, events, settings
Services/domains	Education, Jobs, Social Mentoring, etc.

Pilot Test Reports

Pilot Test Reports will provide a basis for the team to make decisions on how to progress within the Agile development cycles. Findings, major decisions and progress, as well as suggestions for further improvements and developments will be gathered in deliverable D6.4 that informs the overall REBUILD project results in terms of system validation.

Quantitative outputs can be obtained from system reports that provide the following:

- A) Number of system driven matches was achieved by service-type
- B) Number of users started the chatbot for accessing a service and number of users who concluded the conversation
- C) Number of people applying to be a Mentor or Mentee and received a response
- D) Validation of the Social Mentoring algorithm ie; the percentage match returned against the planned output from the algorithms
- E) Number of Jobs matched and reported percentage of accuracy (threshold)
- F) The use of the bot to answer questions:
 - a. Number of clicks on Rebuild button (to open and to close)
 - b. Number of services started through drag and drop and number of times the user went away from the Ask a question dialog
 - c. Number of service conversations activated
 - d. Number of service conversations concluded
 - e. Number of times the user has reviewed concluded conversations (through the Procedures-Services button)
 - f. Number of times the user has resumed conversations (through the Procedure-Services button)
 - g. Number of times the user has hit the "back" button in a conversation
 - h. Number of video-exchange interactions started and concluded (OMNES scenario)

This list is not baselined, as at the time of creating this document, the extent of the System reporting was still being explored.

Qualitative outputs would be solicited from the Pilot partners directly to formulate feedback on the toolbox. Templates for qualitative feedback will be provided to each partner. Additional or revised templates may be further developed at the time the Pilot-ready App and Dashboard are released.

A combination of quantitative and qualitative outputs from the Partner testing phase will formulate a basis for providing a conceptual perception on the project meeting the expected state, to be formulated in deliverable D6.4.

4. PILOT TESTING PLAN

The Consortium partners would manage the Pilot locally based on culture, capacity and ethical boundaries that influence the geographical area that they are responsible for. This would include communications distribution, tester identification and collating feedback at the end of the phase.

The current approach is to initially release the Dashboard for testing and data priming purposes, then followed by a launch of the APP across all Pilot groups. See Figure 8 below.



Figure 8 - Pilot calendar

Test Groups

The target partners for the pilots are CIDAS, OMNES/MDAT, UAB and UNINETTUNO, with the APP testing scenarios shared across all groups (See Figure 8 below) and service scenarios shared with specific teams, that will conduct test based on available services at the time of the Piloting. This includes, at the time of submission of this document, Job seeking, Legal Support, Healthcare, Social mentoring and Education.

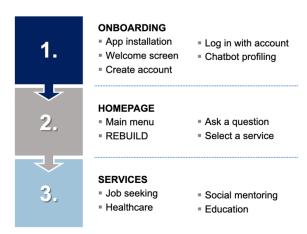


Figure 9 Sequence of APP testing scenarios for all testing groups

The services will require the LSP dashboard to be primed with data, based on the scenarios provided, with each team undertaking following:

CIDAS group: Job Seeking, Legal Support and Healthcare

OMNES/MDAT group: Healthcare

UAB group: Social Mentoring

UNINETTUNO: Education

Additional scenarios are being finalized at the time of submission of this document.

Communication Strategy for the piloting phase

MDAT, as responsible partner for promotion and dissemination activities (WP8), will identify with all Rebuild partners – especially pilot testing partners – the key communication messages, the channels, the collaterals and the materials needed for the pilot testing campaign.

A concrete action plan for promotional activities will be prepared both on a general and localized level per each pilot country. The communication strategy will include three consecutive steps: awareness, understanding and taking action / participating.

The proposed promotion and dissemination approach will start in June, while partners continue with conducting testing activities with the LSPs both with recruitment and testing throughout the period (see Figure 9 below).

Tasks	May	Jun	July	Aug	Sep	Oct
Phase 1 (Preparation - internal)						
Identify channels and key messages						
Discuss collateral and material with partners						
Make a concrete campaign action plan						
Phase 2 (Promotion campaign)						
Promotional actions / awareness						
Promotional actions / understanding						
Promotional actions / Actions and participation						

Figure 9 - Communication process timeline and promotional activities for awareness raising

MDAT will be utilizing the project's channels to distribute communications and raise awareness of the Pilot phase. Communication strategy will be shaped and distributed following the themes of an awareness campaign, an understanding of the REBUILD APP approach as well as its benefits and finally a call for action to participate in the pilot testing events and actions (locally based).

The following collateral and channels may be used (detailed development will be in the concrete action plan):

- ✓ Social media accounts, project website, YouTube channel, other blogs, and local channels media channels
- Posters, and sign boards (electronically shared or hard copy used locally in each pilot partner's place)
- ✓ Using additional communications collateral that are currently being developed, including video campaign and graphic material.
- ✓ Examine the possibility to introduce a launch online event (live streaming) and/or a webinar

CIDAS High-level plan of activities:

CIDAS would be launching the Pilot with LSPs to register and create Healthcare, Job and Legal support elements (service's information, documents, Places, event) on the dashboard to provide a rich experience for the Migrant testers. Feedback from LSPs and Migrants are provided via a support resource from a channel within the Dashboard and uploaded to Google share, along with direct interviews/reports that are provided by CIDAS.

The proposed approach, would conduct testing activity with the LSPs in June and Mid July, which feedback will be collected from Mid-June to end of July. In the meanwhile, CIDAS will start in identifying and recruiting Migrants, in order to join the Test in Mid-July to the end of September, with a very dynamic approach Test/Collect feedback. See Figure 10 below.

KEY RISKS/ Challenges and Issues:

- There is the potential for the pace of recruitment of LSPs to be challenged based on their availability
- There may be limited events that can be created at the time of pilot testing, due to local conditions linked to health emergency situation due to Covid-19
- There may be limited interview with migrants in order to collect feedback, due to local conditions linked to health emergency situation due to Covid-19

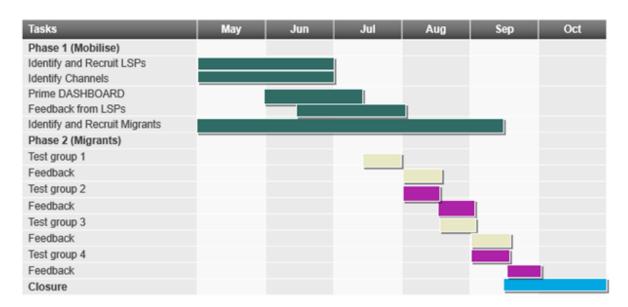


Figure 10 - CIDAS Agile Test approach

CIDAS will be utilizing local channels to distribute communications and raise awareness of the Pilot. Communications strategy will be shaped and distributed following the themes of an **awareness** campaign, an **understanding** of the REBUILD APPs' functionality and its benefits. The following collateral and channels will be used:

- Posters, and sign boards in Places of interests
- Engaging with CIDAS partners directly
- Relaying information verbally with attending Migrants
- Institutional Communication and Dissemination campaign in CIDAS social media channels (website, Facebook, Instagram, Telegram also redirecting to official REBUILD's website uploaded with Pilot activities.
- Additional communications collateral that are currently being developed, including video and animation videos

MDAT High-level plan of activities:

MDAT would be launching the Pilot with LSPs to register and create "Places"; in addition, the LSPs will be requested to add 'live' events within the localised area, to provide a rich experience for the Migrant testers. Feedback is provided via a support resource from a channel within the Dashboard and uploaded to Google share; along with direct interviews/reports that are provided by MDAT.

The proposed approach would start conducting testing activities with the LSPs in June, while continuing with recruitment and testing throughout the period. See Figure 11 below.

KEY RISKS/ Challenges and Issues:

- There is the potential for the pace of recruitment of LSPs to be challenged based on their availability
- There may be limited events that can created at the time of pilot testing due to local conditions

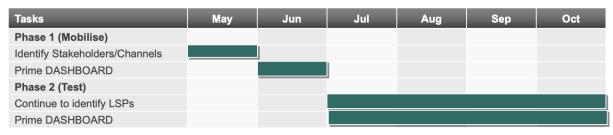


Figure 11 - MDAT Agile Test approach

MDAT will be utilizing local channels to distribute communications and raise awareness of the Pilot. Communications strategy will be shaped and distributed following the themes of an **awareness** campaign, an **understanding** of the REBUILD APP and Dashboard's functionality as well as its benefits and finally a call for **action** to participate in the Pilot testing events. The following collateral and channels will be used:

- Engaging with MDAT partners directly
- E-promotional material
- Using additional communications collateral that are currently being developed, including video and animation videos

OMNES High-level plan of activities:

OMNEs Pilot would be adopting an Agile methodology to delivering and soliciting feedback from their testers. This is expected to be conducted in a phased 'Ramp up' approach; with feedback being provided fortnightly and uploaded to the Google Docs share.

The proposed approach would be to initiate testing activities in July in order to provide a rich experience for Migrants. This is delivered in 2-week windows, while continuing with recruitment throughout the period. See Figure 12 below.

KEY RISKS/ Challenges and Issues:

- There is the potential for the pace of recruitment of Migrants to be challenged based on their availability.
- Migrants may not return to be interviewed to provide feedback
- Technical issues may not be addressed especially with 'Farsi' and 'Arabic'
- Consent form, for the Video needs to be embedded within the chatbot conversation tree

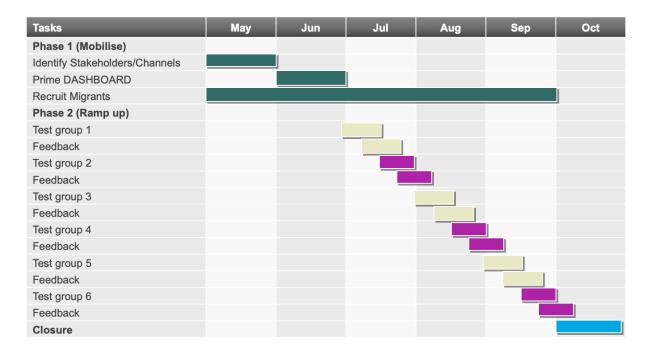


Figure 12 - OMNES Agile Test approach

OMNES will be utilizing local channels to distribute communications and raise awareness of the Pilot. Communications strategy will be shaped and distributed following the themes of an **awareness** campaign, an **understanding** of the REBUILD APPs' functionality and its benefits and finally a call for **action** to participate in the Pilot testing events. The following collateral and channels will be used:

- Posters, and sign boards on the perimeter of the building
- Engaging with OMNES partners directly
- Relaying information verbally with attending Migrants
- Additional communications collateral that are currently being developed, including video and animation videos

UAB High-level plan of activities:

UAB pilot is related to a social mentoring programme. This programme involves LSPs, mentors and mentees, which relate to three different types of users. UAB has been collaborating with Fundació Autònoma Solidaria (FAS) from the early beginning of the project. The main pilot will take place at UAB with FAS and its ongoing social mentoring programme. Based on previous contacts, it is expected that UAB will be approaching at least two additional LSPs to pilot a social mentoring programme. Engagement is expected to happen through already existing networks of contacts, where LPSs will contact both mentors and mentees to take part in the pilot. If considered necessary, information events will be organised by UAB to support engagement. In order to facilitate participation of users in the pilot, it is foreseen to organise on-site and online events to explain the pilots and the objectives to participants.

Ideally, pilot activities should start in June (mid-June), where most users will still be available. Recruitment will take place in May. UAB team will be actively looking for additional LSPs to participate until the end of the pilot phase (October 2021). At this time, three groups have been identified for piloting. Depending on the availability of users, pilots will last between one or two weeks. Feedback will be gathered and provided following Pilot coordinators indications.

KEY RISKS/ Challenges and Issues:

- Engaging mentors and mentees in July and August will be difficult since most users are away
 or working long hours. Relaying on piloting with most users in September-October adds
 uncertainty to reach expected KPIs.
- Accumulated and additional delays in the developments will mean losing the time window for engaging users.
- The whole social mentoring programme was not available during the testing phase. New features will be available and will require to be tested beforehand.



Figure 13 - UAB Agile test approach

Depending on the availability of services, piloting strategy might need flexibility. Although most piloting activities are expected to happen as soon as the REBUILD App is available, complementary pilots will be considered after summer in order to increase the number of participants.

Pre-testing guidance

During the time of releasing this document, the extended scope of the REBUILD project was being ratified. However, this will be addressed and included in the scope of the Pilot in the form of a 'Test Pack' to the Pilot partners that will contain: 1- Support resources for collating the feedback; 2- A channel for data protection consent; 3- the extended scope to include newly agreed functionality; 4-Ethics questionnaires; 5- Video feedback and 6- Communication Strategy and Collateral.

The approach to testing is agile, however, Pilots Partners will be requested to note the following few points when launching the Pilot within their respective Domains:

Users

- At least 2 differing ethnicities
- Literate, as text input is required
- Post pilot in soliciting feedback users to be as honest as possible, and reassured that the information provided will only be used for the purposes of the test

Devices

It is highly recommended that all pilot testers report on the technical conditions/environment they have been using to run the REBUILD App. This includes:

- Android version 6 and above
- Mobile manufacturer and Model
- Internet Service provider (when possible)

Time line

- Must be completed by October 2021; but APP testing to start only after Dashboard data has been primed

CIDAS, OMNES, MDAT, UAB and UNINETTUNO should use the table below as a guide for executing the Pilot.

REBUILD – APP	REBUILD - Dashboard
BEFORE	
Identify Communications channels and collateral	Identify Communications channels and collateral
Identify Migrant / Migrant groups	Identify LSP /LSP groups
Provide communication brief to Migrants include definitions (see below)	Provide communications brief to LSPs include definitions (see below)
DURING	
Advise testers to use the system without guidance from yourselves	Advise testers to use the system without guidance from yourselves
AFTER	
Interview or distribute surveys the testers to capture Qualitative data elements	Interview or distribute survey he testers to capture Qualitative data elements
Submit	Submit

Figure 14 - Pilot execution tasks

5. PILOTING AND IMPACT ASSESSMENT

The piloting phase is an important milestone for the REBUILD project and it represents an ideal moment to collect data potentially useful for the impact assessment activities of WP9.

Therefore, following the methodological framework described in D9.1, DEN will provide testing partners with a set of questions to be answered respectively by LSPs and migrants at the end of the piloting phase. Considering the fact that the piloting phase will show practical features and timing that are influenced by local needs and characteristics, the data gathering activities will be designed with each of the pilot partners in order to best adapt to their users' needs and preferences.

Therefore, the data gathering for the impact assessment could take the form of:

- In person or online focus group session
- Online surveys embedded or not in the REBUILD App
- Set of questions to be presented to the user groups in persons or online interview as part of the feedback gathering process.

It is important to stress that, in order to reduce the workload of final users, the impact assessment data gathering activity will be merged with the pilot feedback gathering activity so that the final user (LSPs and migrant) will not see the boundaries between one activity and another.

Here below the impact dimensions and sub-dimensions that could be investigated during at the end of the piloting phase respectively for LPs and Migrants. The areas of impact and dimensions here listed are a subset of those included in the REBUILD impact assessment methodology (D9.1) and consider the services that are available on REBUILD the time of writing but will be enriched following the technical development and service integration of REBUILD. Moreover, not all the dimension/subdimensions are (equally) relevant for all the pilot countries and related scenario so that their analysis will be performed in a modular way following local relevance.

REBUILD impact on migrants:

- Social impact
 - Education and human capital
 - o Health
 - Citizenship and social capital
- Economic impact
 - Employment
 - Economic empowerment
- Political impact
 - Impact on civic participation.
 - Impact on trust in host country' institutions
 - Impact on digital democracy
- Technological impact
 - Impact on digital literacy
 - Use of technology
 - Impact on information asymmetries

REBUILD impact on LSPs

- Social impact
 - Impact on workforce human capital
 - Impact on collaboration and networking
 - Impact on workforce working conditions
- Economic impact
 - Impact on efficiency
 - o Impact on internal working routine & work processes
 - Impact on competitiveness
- Technological impact
 - o Impact on services' digitalisation
 - Impact on access to information

Beside this, DEN will interview the pilot partners in order to collect additional information on the piloting and their links to the impacts at societal level and at organizational level.

Finally, additional data for the impact assessment will come from the system report that is still under development at the time of writing and that could provide interesting information on user experience in interacting with REBUILD.

6.SUMMARY

This phase of Pilot testing is used to evaluate the adequacy of the planned REBUILD toolbox towards meeting the expectations of the end users (Local Service Providers and migrants) and the business case that provided the foundation for the Project. It follows the phase of user testing and development that ratified defects and improved the user interface that provided additional stability to the toolbox.

The approach to delivering the Pilot test is to adopt an agile methodology, justified by the disparate target user testers, separated geographically and with different cultural and language backgrounds. This methodology devolves the approach to a more localised pragmatic tactic that is adapted to the local ethos, that govern those specific tester segmentations.

Agile testing strategies mitigate and reduce testing risk; to ensure that the testing teams have the ability to pivot their approach when required in order to achieve the outcome of the test in terms of:

- Volume
- Scope / coverage
- Managing shifts in test biases between Dashboard and APP
- Working as the product as a solution, and if the problem is unresolved then the product has failed
- Adapting delivery methodologies based on cultural differences

The methodology proposes the simulation of a 'live' setting that ensures that minimalistic interventions are undertaken by the consortium partners to provide accurate feedback that would help, in transitioning the toolkit into a commercial environment. The key activities within the micro-environment would be:

- Communications exercise:
 - o Identify Stakeholders, Channels and Collateral
 - Distribute communications based on the themes Awareness, Understanding and call for Action
- Launch with Dashboard primed initially
- Launch with APP functionality
- Continue recruitment of testers
- Solicit feedback and capture based on General and Domain specific functionalities
- Meet with Test coordinators (UNESCO) to provide feedback

The Pilot test would also provide a basis to canvass early feedback on the sustainability of the toolkit and provide insights into potential commercial opportunities and channels that can be explored.

The feedback provided will formulate the qualitative summary of the phase, supported by system interrogation reports on quantitative data. These then informs the outcome of the Pilot test and advisory on how to proceed to the next phase.

7. Table of figures

Figure 1- High-level scope of testing, based on the blueprint and D6.2	7
Figure 2 - Goals, Purpose and Objectives of the Pilot test	8
Figure 3 - High level REBUILD Architecture	9
Figure 4 - Hub and Spoke approach to facilitate control and delivery of the Pilot	10
Figure 5 - Waterfall model simplified © IONOS	11
Figure 6 - Development progress from Background information gathering to the current phase of	
Pilot testing	12
Figure 7 - Data handling feedback form	15
Figure 8 - Pilot calendar	17
Figure 9 - Communication process timeline and promotional activities for awareness raising	18
Figure 10 - CIDAS Agile Test approach	19
Figure 11 - MDAT Agile Test approach	20
Figure 12 - OMNES Agile Test approach	21
Figure 13 - UAB Agile test approach	22
Figure 14 - Pilot execution tasks	23

8. BIBLIOGRAPHY

B. K. Madhu, M. J. (2010). A study on Agile Software Testing: Emergence and techniques. *African Journal of Mathematics and Computer Science Research Vol. 3(11)*, pp. 288-289.

APM (2016) What is the difference between a trial and a pilot? | APM. Available at: https://www.apm.org.uk/resources/find-a-resource/what-is-the-difference-between-a-trial-and-a-pil ot/ (Accessed: 3 March 2021).

Budiu, Raluca (2017) *Quantitative vs. Qualitative Usability Testing, Nielsen Norman Group*. Available at: https://www.nngroup.com/articles/quant-vs-qual/ (Accessed: 9 April 2021).

Conboy, K. (2009) 'Agility from First Principles: Reconstructing the Concept of Agility in Information Systems Development', *Information Systems Research*, 20(3), pp. 329–354.

COOKE, J. L. (2014) Agile Productivity Unleashed: Proven approaches for achieving productivity gains in any organisation. 2nd edn. IT Governance Publishing. Available at: https://www.jstor.org/stable/j.ctt7zsxks (Accessed: 17 March 2021).

D, I. H. P. and Chhillar, R. S. (2015) Software Test Process, Testing Types and Techniques.

Ghaffarinasab, N., Ghazanfari, M. and Teimoury, E. (2014) 'Robust optimization approach to the design of hub-and-spoke networks', *The International Journal of Advanced Manufacturing Technology*, 76. doi: 10.1007/s00170-014-6330-5.

Hendrickson, Elisabeth (2008) 'Agile Testing - Nine Principles and Concrete Practices for Testing on Agile Teams'.

Kasunic, M. (2003) 'Conducting Effective Pilot Studies', p. 39.

Krüger, N. (no date) *Agile Testing Methodology — 5 Examples for the Agile Tester, Perforce Software*. Available at: https://www.perforce.com/blog/alm/what-agile-testing-5-examples (Accessed: 17 March 2021).

LEYBOURN, E. (2013) *Directing The Agile Organisation: A lean approach to business management*. IT Governance Publishing. Available at: https://www.jstor.org/stable/j.ctt5hh6fh (Accessed: 18 March 2021).

Lowe, N. K. (2019) 'What Is a Pilot Study?', p. 2.

McCormick, M. (2012) 'Waterfall vs. Agile Methodology', p. 8.

McQuade, M. R., Hunter, A. and Moore, S. (2019) *Appendix A:: How Agile Software Development Came to Enable Adaptable Systems*. Center for Strategic and International Studies (CSIS), pp. 31–36. Available at: https://www.jstor.org/stable/resrep22602.11 (Accessed: 17 March 2021).

Mittal, V. and Aditya, S. (2015) 'Recent Developments in the Field of Bug Fixing', *Procedia Computer Science*, 48, pp. 288–297. doi: 10.1016/j.procs.2015.04.184.

Penmetsa, J. R. (2017) 'Agile Testing', in Mohanty, H., Mohanty, J. R., and Balakrishnan, A. (eds) *Trends in Software Testing*. Singapore: Springer, pp. 19–33. doi: 10.1007/978-981-10-1415-4_2.

Swanganon, Martin (2017) *B&E* | How Testing is Challenging in Agile Methodology. Available at: https://www.indrastra.com/2017/04/BE-How-testing-is-challenging-in-agile-003-04-2017-0060.html (Accessed: 18 March 2021).

Testing, G. A. (no date) *Best Practices for Agile Testing*. Available at: https://www.globalapptesting.com/the-ultimate-guide-to-agile-testing (Accessed: 17 March 2021).

Wikipedia (2021) 'Software bug', *Wikipedia*. Available at: https://en.wikipedia.org/w/index.php?title=Software_bug&oldid=1013830349 (Accessed: 13 April 2021).

William E. Perry (2006) Effective Methods for Software Testing. 3rd edn. Wiley Publishing, Inc.

WRIGHT, C. (2014) *Agile Governance and Audit: An overview for auditors and agile teams*. IT Governance Publishing. Available at: https://www.jstor.org/stable/j.ctt7zsx7z (Accessed: 18 March 2021).

Zhang, D. and Adipat, B. (2005) 'Challenges, Methodologies, and Issues in the Usability Testing of Mobile Applications', *International Journal of Human-Computer Interaction*, 18(3), pp. 293–308. doi: 10.1207/s15327590ijhc1803_3.

REBUILD

ICT-enabled integration facilitator and life rebuilding guidance

Deliverable: D6.3 Pilot planning



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