Increasing Resilience of Smallholders with Multi-Platforms Linking Localized Resource Sharing

Deliverable D6.4

Third year report

Responsible Editor:	UPPA
Contributors:	ALL
Document Reference:	RESILINK D6.4
Distribution:	Public
Version:	1.1
Date:	July 2025

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DOCUMENT REVISION HISTORY

Version	Date	Changes
V1.1	July 25th, 2024	PUBLIC RELEASE
V1.0	July 19th, 2024	FIRST DRAFT VERSION FOR INTERNAL APPROVAL
V0.1	July 10th, 2024	FIRST RELEASE FOR REVIEW

Executive Summary

Deliverable D6.4 reviews the main activities conducted during the third year of the project. However, the purpose of this deliverable is not to duplicate the extensive and more complete information provided by the numerous project's specific deliverables. Therefore, we will briefly summarize the main activities and then provide links to the associated deliverables, resources and documents. We will then present the achieved KPIs with the initial proposed KPIs and will elaborate on the difficulties encountered.

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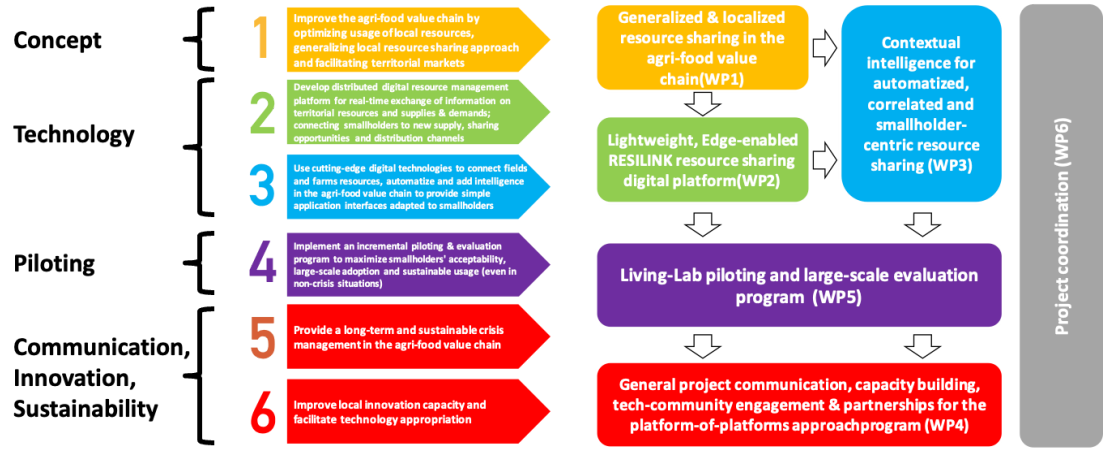
1. INTRODUCTION

1.1. Review of project's structure

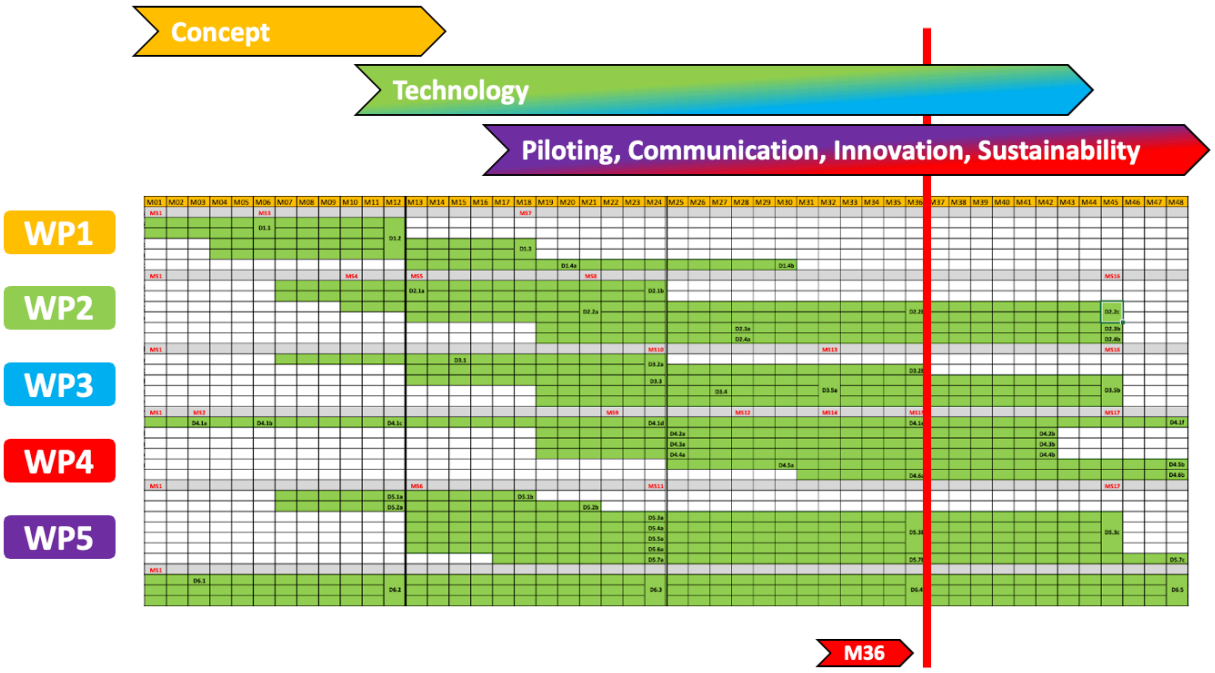
The project's objectives and the mapping to the list of work packages (WPs) are illustrated below.



The list of WPs, showing tasks as well as WPs & Task leaders with color codes are illustrated below.

WP/Task	Title	UPPA	ORANGE	WAZIUP e.	UMCM	INRA	USMS	ACICT	ARC
WP1	Generalized & localized resource sharing in the agri-food value chain	0	0	0	0	0	0	0	0
T1.1	Identification of smallholders' resource requirements in a local & territori								
T1.2	Identification of innovative distribution channels specific to a local & terr								
T1.3	Technical-oriented and user-oriented issues for long-term sustainability								
T1.4	Framework definition of generalized resource sharing for increased resili								
T1.5	Governance, public policy, link with stakeholders and local actors								
WP2	Lightweight, Edge-enabled RESILINK resource sharing digital platform	0	0	0	0	0	0	0	0
T2.1	Co-design of the RESILINK generalized resource sharing digital platform								
T2.2	User requirements and user interface for generalized resource sharing in								
T2.3	Development of lightweight, Edge-enabled RESILINK resource sharing di								
T2.4	Designing a robust Edge-oriented architecture enabling high availability								
T2.5	Development of RESILINK mobile app for generalized resource sharing								
T2.6	Application Programming Interface and software connectors for interope								
T2.7	Tests and validation of the full RESILINK framework								
WP3	Contextual intelligence for automatized, correlated and smallholder-cent	0	0	0	0	0	0	0	0
T3.1	Edge-IoT automation for contextual information sharing at production ar								
T3.2	IoT integration into Edge-IoT RESILINK gateway for an efficient Edge-en								
T3.3	Artificial Intelligence and Machine Learning advanced analytics for corre								
T3.4	Innovative multiple knowledge streams methodology for responsive res								
T3.5	AI integration into Edge-IoT RESILINK gateway for an efficient Edge-ena								
WP4	General project communication, capacity building, tech-community enga	0	0	0	0	0	0	0	0
T4.1	General project communication and dissemination								
T4.2	Development of software templates demonstrating RESILINK's open API								
T4.3	RESILINK mobile app demonstration and dissemination events								
T4.4	Competitions and Challenges for Tech Community engagement								
T4.5	Partnerships and demonstration of interoperability of platforms								
T4.6	Mentoring and pre-incubation of selected partnerships								
WP5	Living-Lab piloting and large-scale evaluation program	0	0	0	0	0	0	0	0
T5.1	Smallholder engagement and acceptance for Living-Lab								
T5.2	Definition and development of the evaluation technical framework								
T5.3	Smallholder Living-Lab Piloting Program in Egypt								
T5.4	Smallholder Living-Lab Piloting Program in Morocco								
T5.5	Smallholder Living-Lab Piloting Program in Algeria								
T5.6	Large-scale RESILINK mobile app evaluation program								
T5.7	Evaluation, synthesis and KPI assessment								
WP6	Project management	0	0	0	0	0	0	0	0
T6.1	Project coordination/administration								
T6.2	Technical management								
T6.3	Quality and risk management								
	Total PM computed	0	0	0	0	0	0	0	0
		WP leader							
		Task leader							
		participant							

The project Gantt chart is illustrated below, showing the various phases of the project.



1.2. Gantt diagram for project's third year

WP/Task	Title	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36
WP1	Generalized & localized resource sharing in the agri-food value chain												
T1.1	Identification of smallholders' resource requirements in a local & territorial agri-food chain												
T1.2	Identification of innovative distribution channels specific to a local & territorial agri-food chain												
T1.3	Technical-oriented and user-oriented issues for long-term sustainability of local resource sharing												
T1.4	Framework definition of generalized resource sharing for increased resilience of smallholders												
T1.5	Governance, public policy, link with stakeholders and local actors						D1.3b						
WP2	Lightweight, Edge-enabled RESILINK resource sharing digital platform												
T2.1	Co-design of the RESILINK generalized resource sharing digital platform												
T2.2	User requirements and user interface for generalized resource sharing in an agri-food chain												
T2.3	Development of lightweight, Edge-enabled RESILINK resource sharing digital platform												D2.2b
T2.4	Development of RESILINK mobile app for generalized resource sharing												
T2.5	Application Programming Interface and software connectors for interoperability between platforms				D2.3a								
T2.6	Tests and validation of the full RESILINK framework				D2.4a								
WP3	Contextual intelligence for automatized, correlated and smallholder-centric resource sharing								MS13				
T3.1	Edge-IoT automation for contextual information sharing at production and transformation level												
T3.2	IoT integration into Edge-IoT RESILINK gateway for an efficient Edge-enabled automatized system												D3.2b
T3.3	Artificial Intelligence and Machine Learning advanced analytics for correlated local resources discovery												
T3.4	Innovative multiple knowledge streams methodology for responsive resource sharing in crisis situation			D3.4					D3.5a				
T3.5	AI integration into Edge-IoT RESILINK gateway for an efficient Edge-enabled decision-making system												
WP4	General project communication, capacity building, tech-community engagement & partnerships for the				MS12				MS14				MS15
T4.1	General project communication and dissemination												D4.1e
T4.2	Development of software templates demonstrating RESILINK's open API	D4.2a											
T4.3	RESILINK mobile app demonstration and dissemination events	D4.3a											
T4.4	Competitions and Challenges for Tech Community engagement	D4.4a											
T4.5	Partnerships and demonstration of interoperability of platforms						D4.5a						
T4.6	Mentoring and pre-incubation of selected partnerships												D4.6a
WP5	Living-Lab piloting and large-scale evaluation program												
T5.1	Smallholder engagement and acceptance for Living-Lab												
T5.2	Definition and development of the evaluation technical framework												
T5.3	Smallholder Living-Lab Piloting Program in Egypt												D5.3b
T5.4	Smallholder Living-Lab Piloting Program in Morocco												
T5.5	Smallholder Living-Lab Piloting Program in Algeria												
T5.6	Large-scale RESILINK mobile app evaluation program												
T5.7	Evaluation, synthesis and KPI assessment												D5.7b
WP6	Project management												
T6.1	Project coordination/administration												D6.4
T6.2	Technical management												
T6.3	Quality and risk management												

1.3. List of milestones for project's third year

Year 3					
No	**Milestone name**	**Description**	**WP**	**Due date**	**Means of verification**
MS6	**Living-Lab Piloting program and large-scale evaluation program started**	**The working groups for preparing the Living-Lab Piloting program and large-scale evaluation program have started.**	WP5	M13	D5.1a and D5.2a
MS10	**IoT integration in RESILINK is demonstrated**	IoT integration is operational in the RESILINK framework. Living-Lab Piloting Program can be extended with IoT features.	WP3	M24	D3.2a; RESILINK v1
MS11	**First consolidated results from the Living-Labs and evaluation program**	Results from the Smallholders Living-Lab Piloting Program and the large-scale RESILINK mobile app evaluation have been consolidated for analysis and possibly corrective actions.	WP5	M24	D5.3a, D5.4a, D5.5a, D5.6a
MS12	**First Competitions & Challenges launched**	RESILINK platform and open API are stable to launch the first Competitions & Challenges for tech communities.	WP4	M28	D2.3a, D4.4a
MS13	**AI integration in RESILINK is demonstrated**	AI integration is operational in the RESILINK framework. Living-Lab Piloting Program can be extended with AI features..	WP3	M32	D3.5a
MS14	**At least 6 dissemination events completed**	Minimum of 6 dissemination events completed in Egypt, Morocco and Algeria.	WP4	M32	6 events completed
MS15	**At least 3 partnerships, mentoring activities are launched**	Minimum of 3 partnerships planned with local initiatives demonstrating RESILINK interoperability enabling mentoring activities to start.	WP4	M36	Agreements

→ MS6 and MS11 were delayed at M24 (see D6.3 due to longer co-design, interviews, development & preparation phase of the large-scale evaluation program and Living-Lab program. They are now achieved.

→ M10 is cancelled because RESILINK cancelled the IoT automation part as it is found not suitable for the current context of smallholders and current orientation of RESILINK platform.

→ M12 is not reached. However, instead of Competitions & Challenges, RESILINK co-founded the Resilient Smallholder Initiative to build a network of other PRIMA projects where digital platforms to share resources can be deployed. RESILINK makes its open API available for these projects and their communities.

→ M13 is delayed as the AI activities has not started yet at M36.

→ M14 is not fully reached as only 5 events have been organized.

→ M15 is not reached. However, instead of partnerships with local initiatives, RESILINK co-founded the Resilient Smallholder Initiative to build a network of other PRIMA projects where digital platforms to share resources can be deployed. RESILINK makes its open API available for these projects and their communities.

1.4. List of deliverables for project's third year (M25-M36)

Code	Deliverable Title	Related Work Package Number	Responsible Editor	Tasks	Due
D1.3b	Final report on local opportunities for generalized resource sharing	1	**USMS**	T1.5	**M30**
D2.2b	RESILINK resource sharing digital platform – v2	2	**ORANGE**	T2.3, T2.4	**M36**
D2.3a	First report on API and software connectors	2	**UPPA**	T2.5	**M28**
D2.4a	First report on test and validation of the full RESILINK framework	2	**ACICT**	T2.6	**M28**
D3.3	Artificial Intelligence and Machine Learning advanced analytics for correlated local resources discovery and mapping	3	**UPPA**	T3.3	**M24**
D3.4	Innovative multiple knowledge streams methodology for responsive resource sharing in crisis situation	3	**ORANGE**	T3.4	**M27**
D3.5a	First report on AI integration into Edge-IoT RESILINK gateway	3	**UPPA**	T3.5	**M32**
D3.2b	Final report on IoT integration into Edge-IoT RESILINK gateway	3	**UPPA**	T3.2	**M36**
D4.2a	First report on software templates demonstrating RESILINK's open API	4	**UPPA**	T4.2	**M25**
D4.3a	First report on RESILINK mobile app demonstration and dissemination events	4	**ORANGE**	T4.3	**M25**
D4.4a	First report on Competitions and Challenges for Tech Community engagement	4	**ACICT**	T4.4	**M25**
D4.5a	First report on partnerships and demonstration of interoperability	4	**UPPA**	T4.5	**M25**
D4.1e	Third year report on communication and dissemination activities	4	**UPPA**	T4.1	**M36**
D4.6a	First report on mentoring and pre-incubation of selected partnerships	4	**USMS**	T4.6	**M36**
D5.3b	Synthetic Report on 2 years of Smallholder Living-Lab Piloting Program and large-scale evaluation	5	**ARC**	T5.3, T5.4, T5.5	**M36**
D5.7b	Evaluation, synthesis and KPI assessment of 2 years of piloting and evaluation program	5	**INRA**	T5.7	**M36**
D6.4	Third year report	6	**UPPA**	T6.2	**M36**

Note: D3.3 planned at M24 has been postponed several times as the development of the core functionalities of RESILINK mobile application took longer than expected. The new expected date is Nov. 2025. This is the reason D3.3 is still in this table. This issue will be described later in section 5 "Modifications & Corrections from initial plan".

2. Quick review of activities by WPs

2.1. WP1

WP1 "Generalized & localized resource sharing in the agri-food value chain"

In this third year, the only active task is T1.5 "Governance, public policy, link with stakeholders and local actors" where the activities overlapped with WP4's activities to increase awareness and dissemination of the project's objectives. In addition, during implementation, T1.5 is actually largely linked to the large-scale evaluation program and the Living-Lab where meetings and discussions with farm cooperatives and stakeholders have been organized.

Therefore, while initially D1.3b "Final report on local opportunities for generalized resource sharing" has been planned, since T1.5's activities are actually very related to the Living-Lab program, we decided to integrate these activities into:

- D5.3b "Synthetic Report on 2 years of Smallholder Living-Lab Piloting Program and large-scale evaluation".

2.2. WP2

WP2 "Lightweight, Edge-enabled RESILINK resource sharing digital platform"

In the third year of the project, WP2 is still probably, with WP5, where the most effort has been devoted to continuously improving the RESILINK server and the RESILINK mobile application with new functionalities and feedback from the Evaluation Program and the Living Lab program.

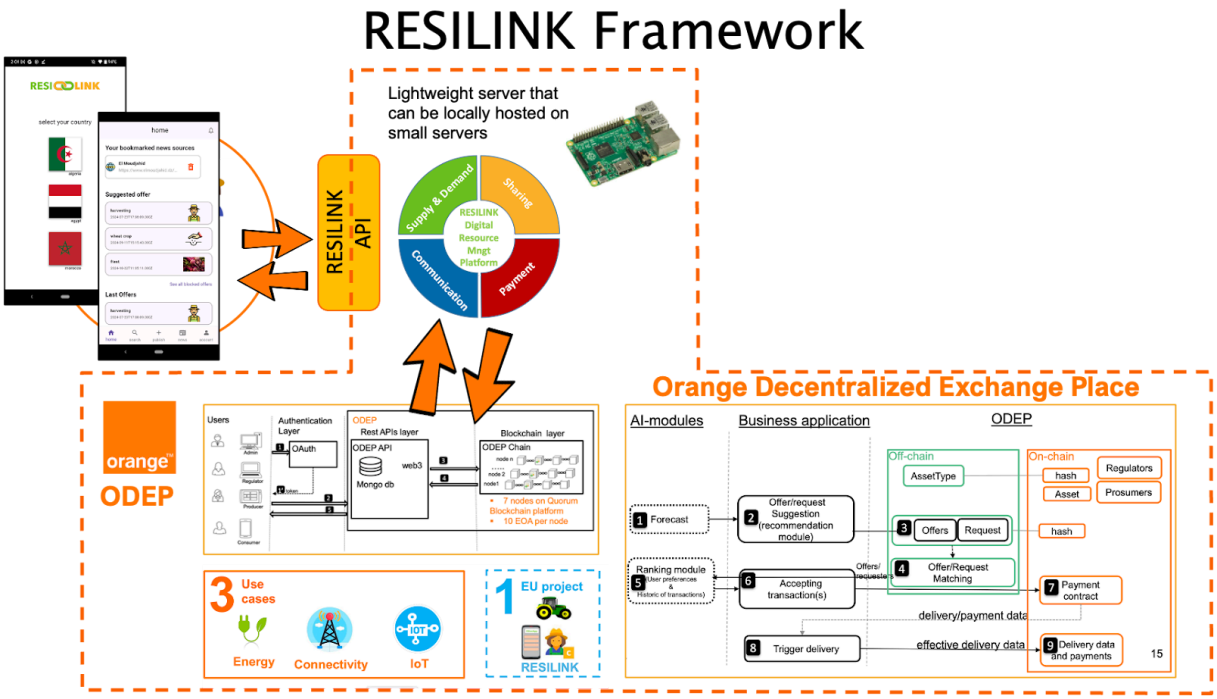
The architecture of the RESILINK digital platform has been consolidated. It consists in 3 components that are interacting but developed separately: **the low-level ODEP** (Orange Decentralized Exchange Place), the **intermediate RESILINK server** exposing an open API and the **RESILINK mobile application**. The latest documentation on the architecture can be found in:

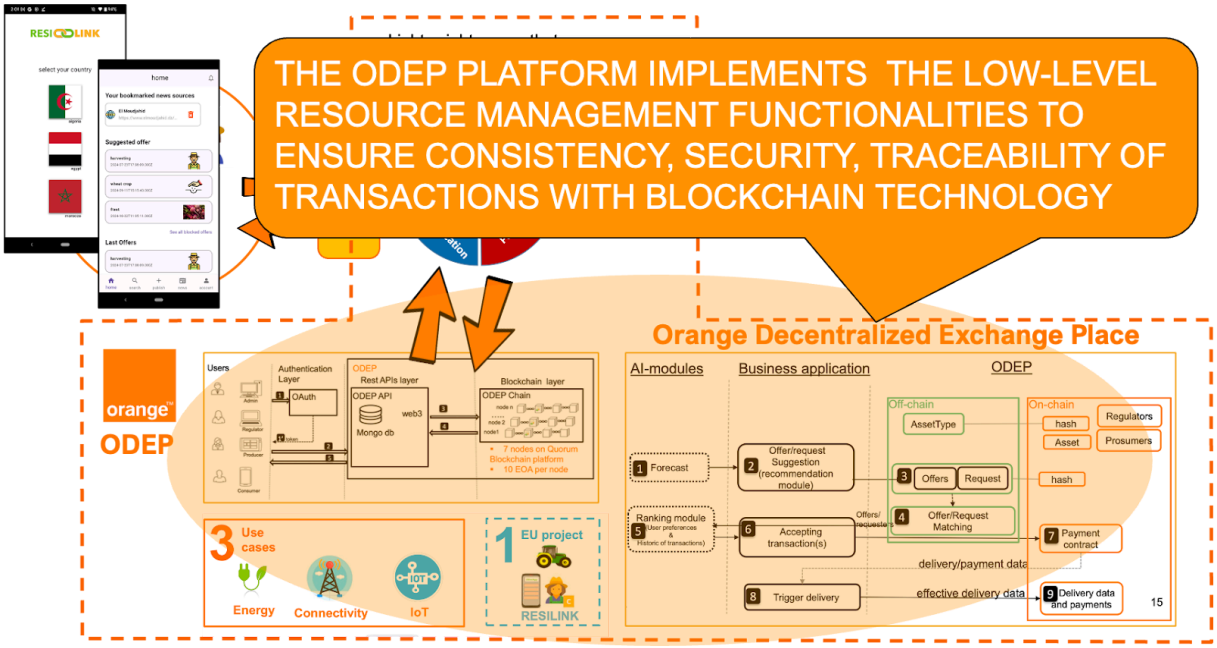
- D2.2b "RESILINK resource sharing digital platform – v2"
  URL: https://resilink.eu/wp-content/uploads/2025/07/D2.2b.pdf

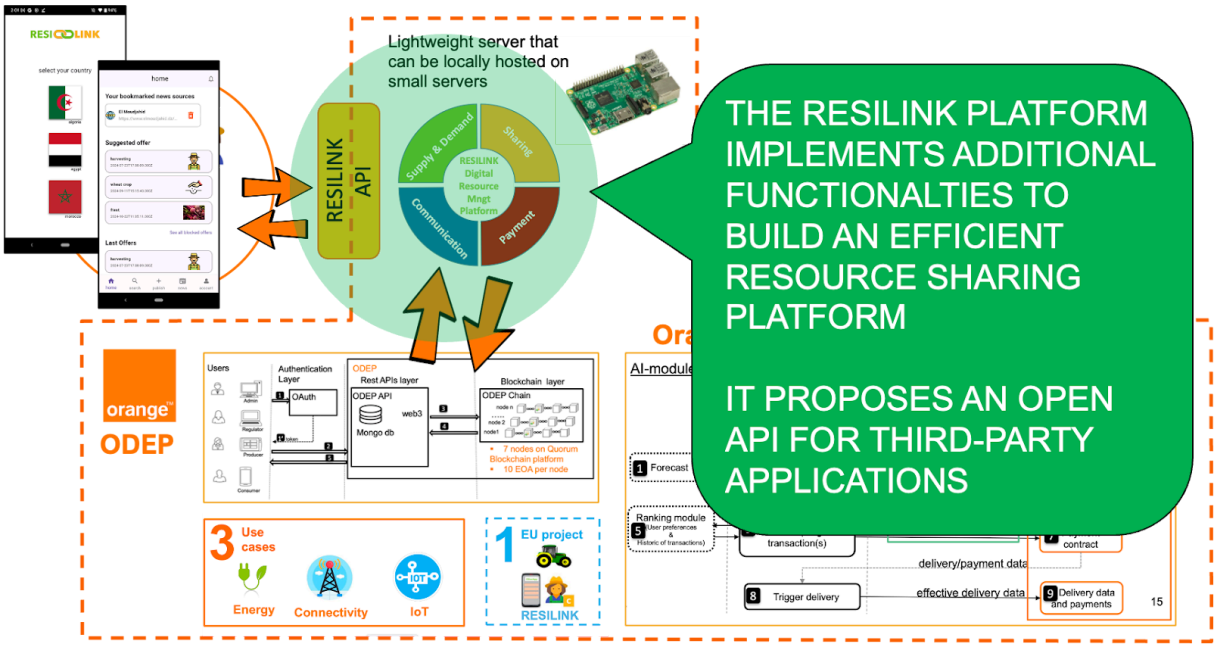
The main motivations behind all these improvements towards the RESILINK platform v2 are:

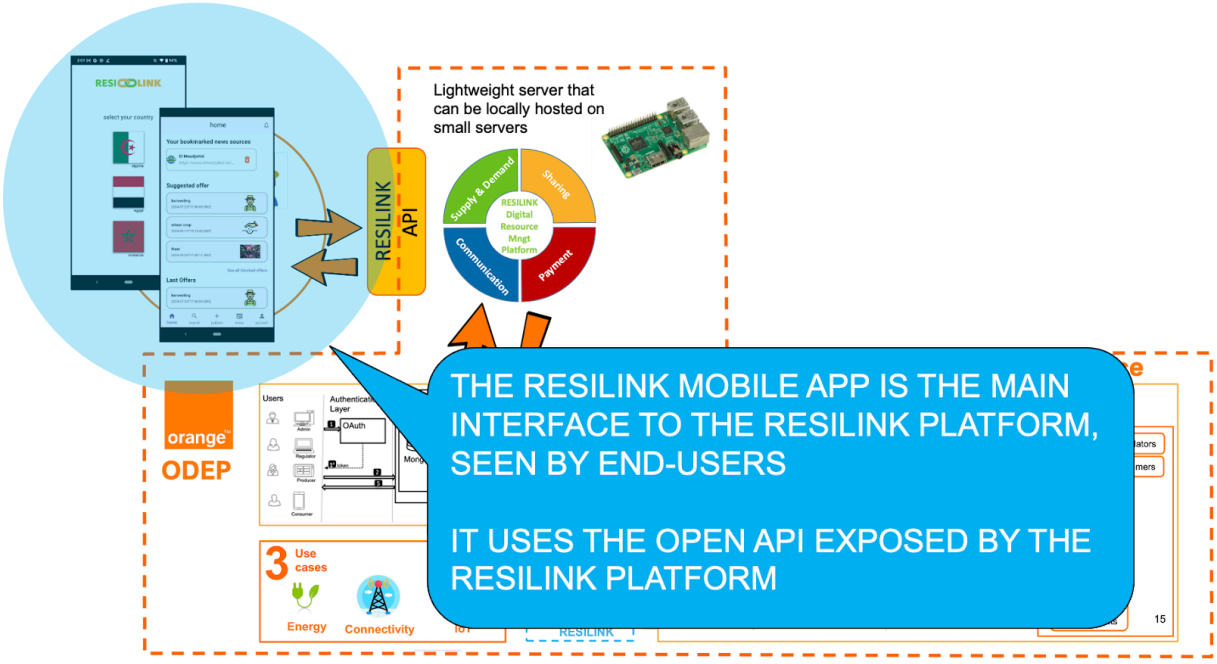
1. Provide a very lightweight server that could be deployed out-of-the-box on laptops or even single board computers such as a Raspberry Pi
2. This lightweight server should be able to manage most of RESILINK platform core functionalities: news feeds, publication of offers, search for offers and contact users
3. Enable the deployment of several lightweight RESILINK servers, where each server could have a geographical scope to efficiently manage crisis in a very local manner
4. Incremental deployment of servers could then be also enabled to provide a very level of flexibility

5. Enable a full platform-of-platforms approach where the RESILINK server can be deployed, possibly adapted and used, through the proposed open API, for other applications, thus stimulating local innovation

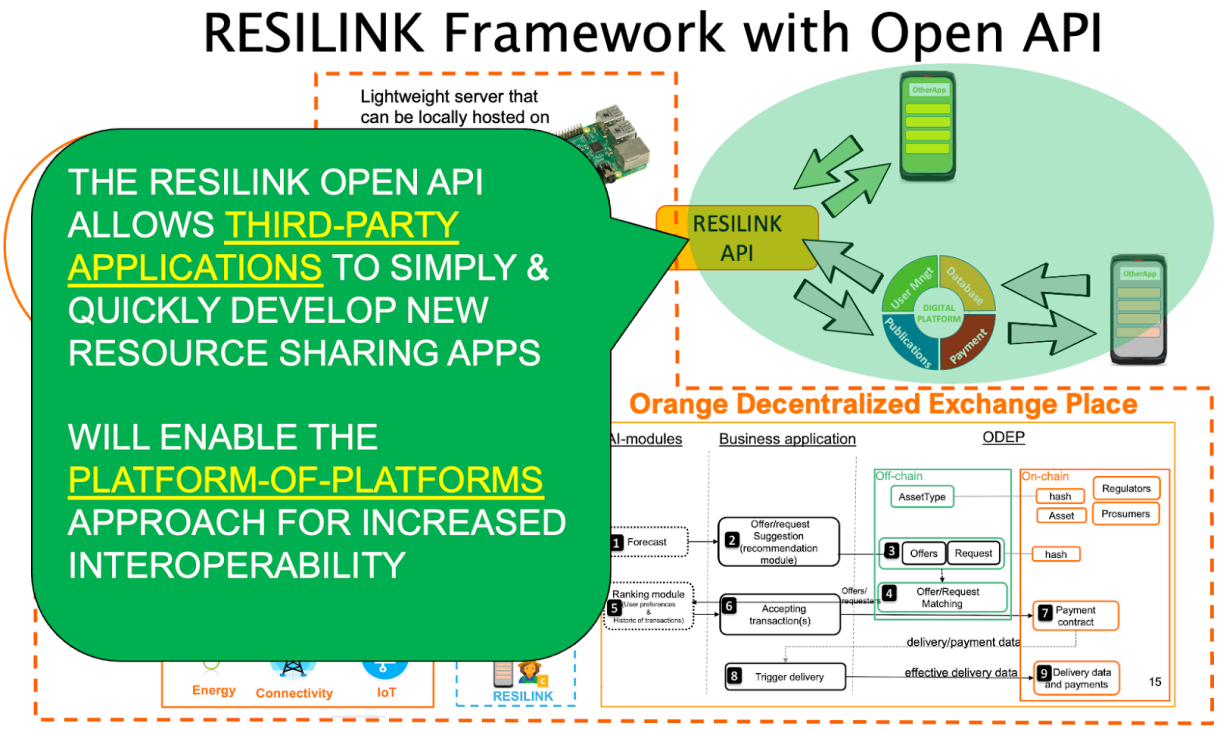




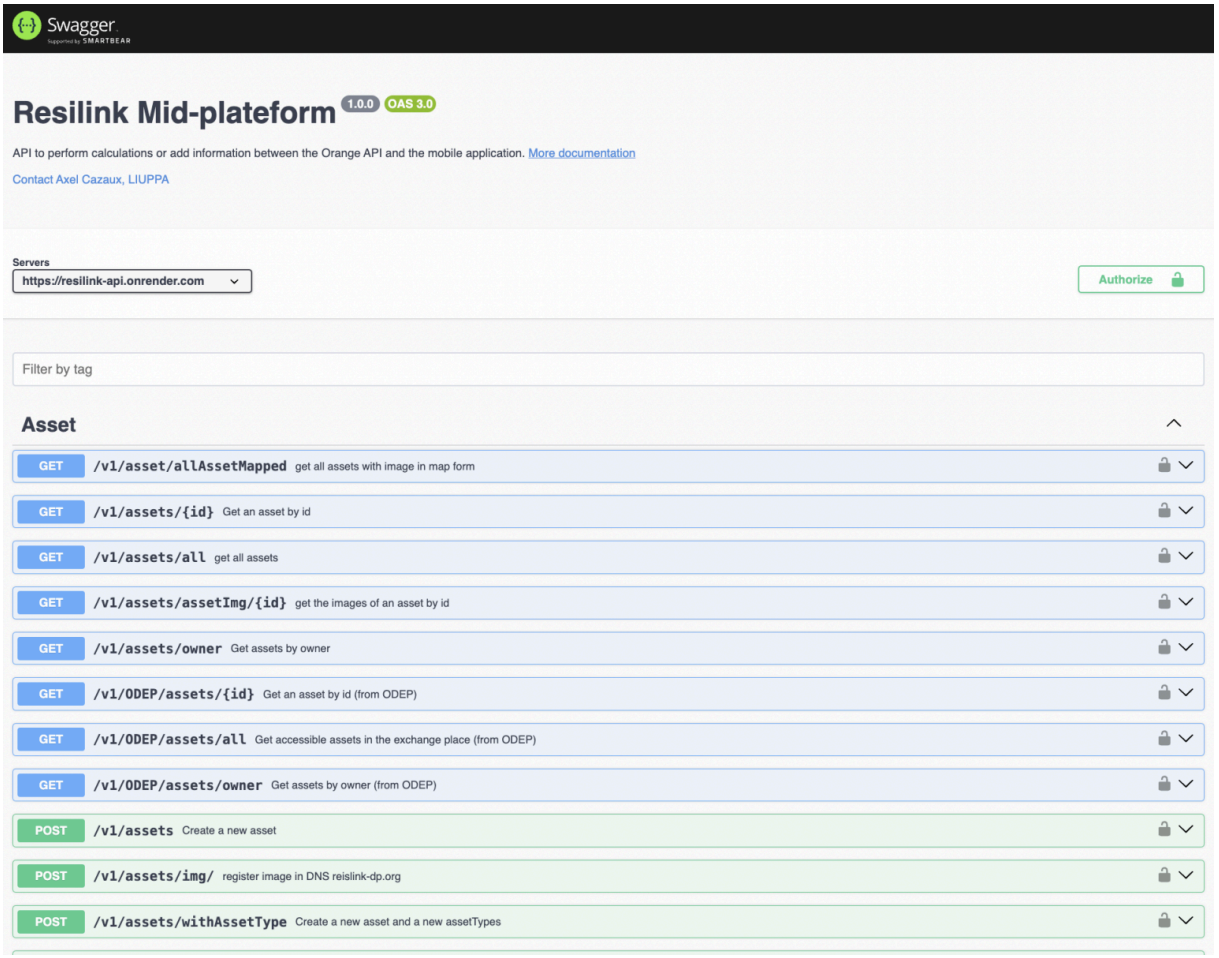




Most importantly, as RESILINK wants to promote a platform-of-platforms approach where the ecosystem is not anymore based on isolation of platforms and competition between them, a lot of efforts has been devoted in the development of the RESILINK open API to enable this platform-of-platforms approach.



Below: example of API functions to support generic resource sharing digital platforms



2.3. WP3

WP3 "Contextual intelligence for automatized, correlated and smallholder-centric resource sharing"

Due to some delays in developing, testing and evaluating the complete RESILINK digital platforms, and especially the RESILINK mobile application for both the Evaluation Program and the Living-Lab Program, T3.3, T3.4 and T3.5 has not started yet and will be initiated in September 2025.

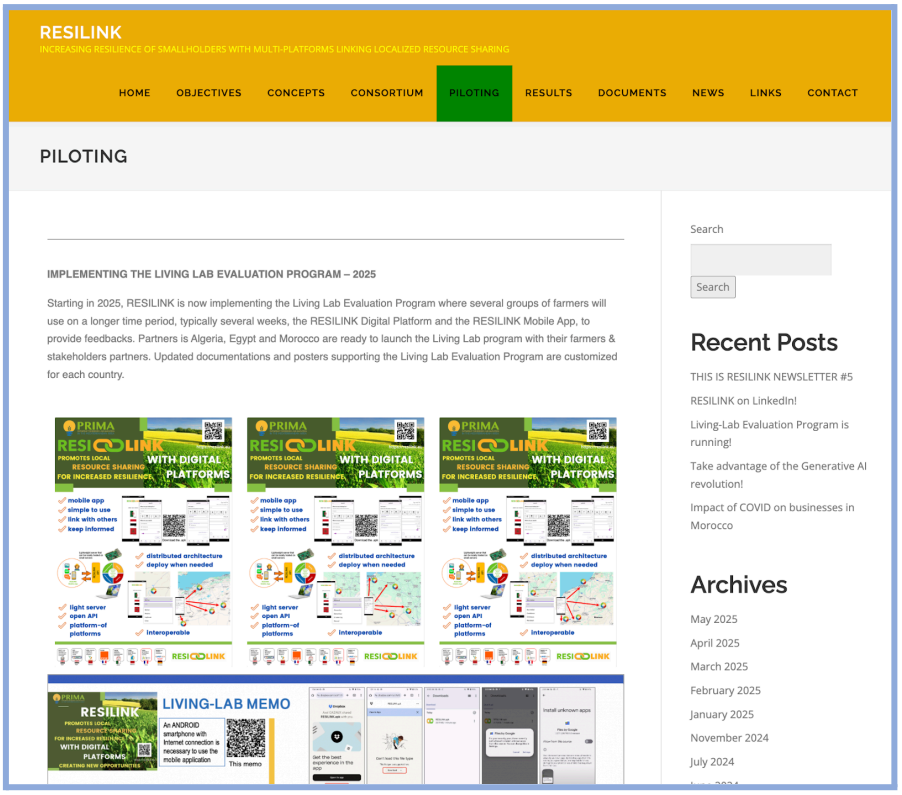
Regarding T3.1 & T3.2 on IoT automation, RESILINK decided to cancel these activities that are found not suitable for the smallholder context. Instead, the development efforts will be put on developing an efficient recommendation system for the RESILINK server.

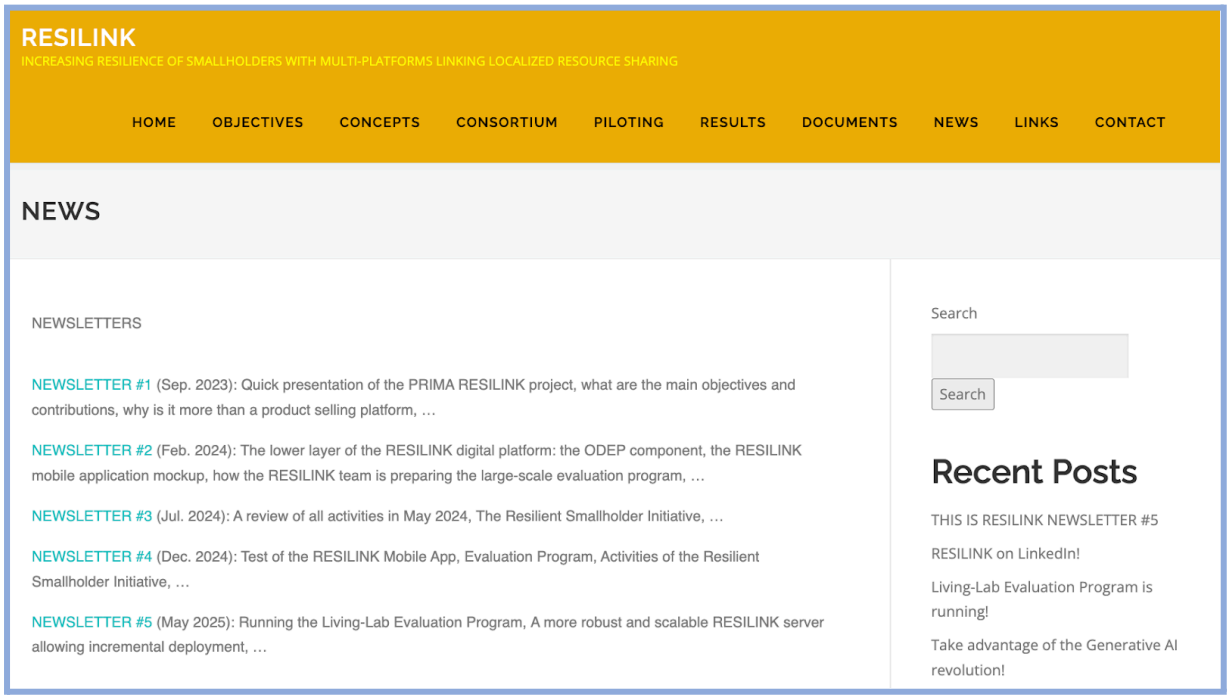
The work on the recommendation system has been initiated during the RESILINK General Meeting of April 2025 in Beni-Mellal, Morocco, hosted by USMS.

2.4. WP4

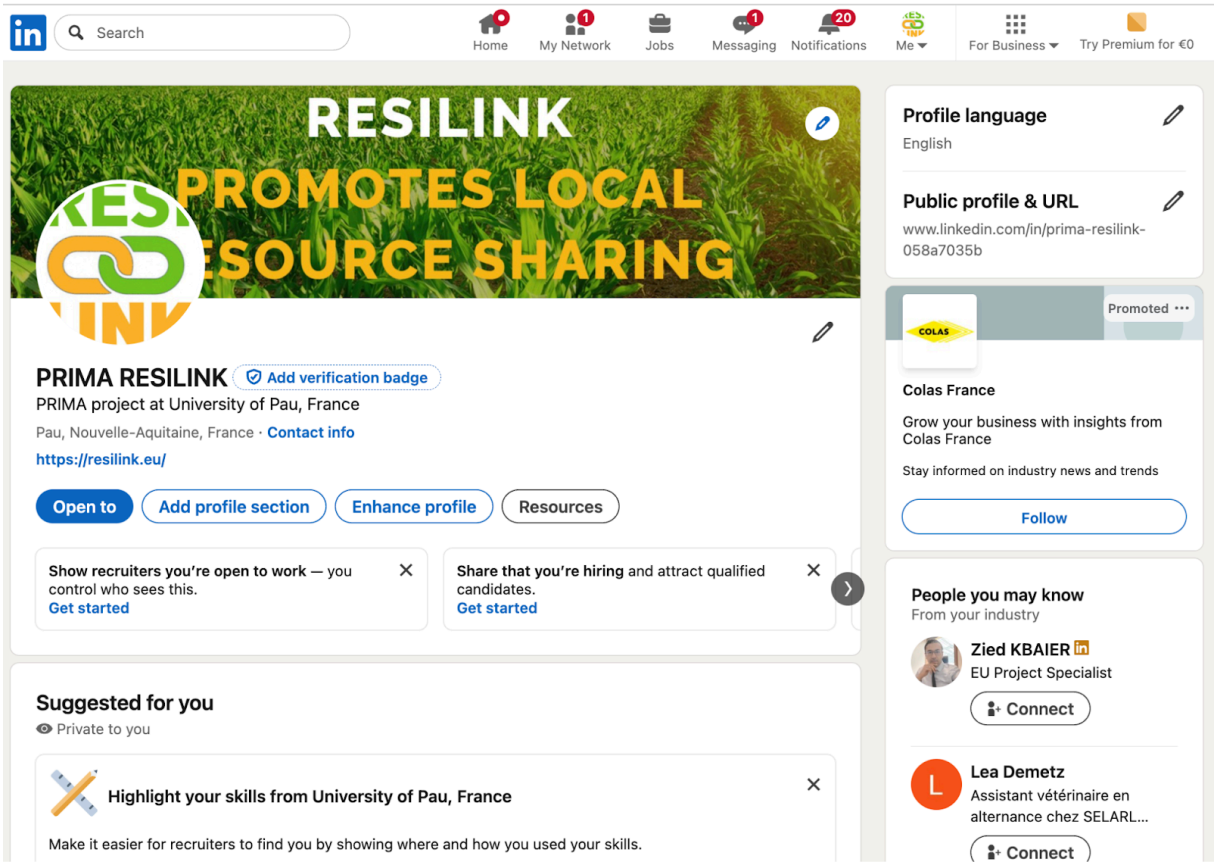
WP4 "General project communication, capacity building, tech-community engagement & partnerships for the platform-of-platforms approach"

The large part of the work conducted in WP4 for this third year was on maintaining the project web site with up-to-date and relevant contents, especially for the Evaluation Program and Living-Lab program, on producing communication materials and Newsletters, developing collaborations and partnerships within the Resilient Smallholder Initiative, organizing/participating to scientific events and dissemination events.





One major change in this third year is the abandon of X (formely Twitter) platform and the adoption and creation on Apr. 13th, 2025 of a LinkedIn account for the project.



All the communication and dissemination activities are described in more details in:

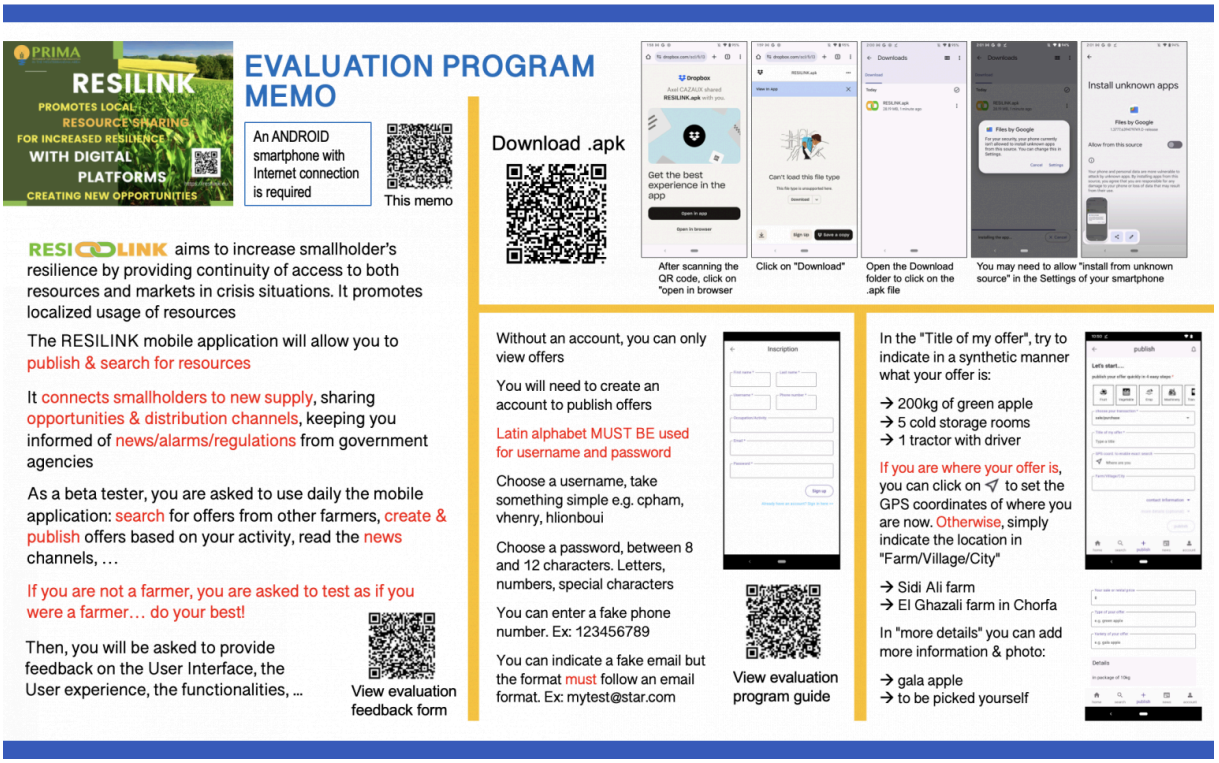
- D4.1e “Third year report on communication and dissemination activities”
  URL: https://resilink.eu/wp-content/uploads/2025/07/D4.1e.pdf

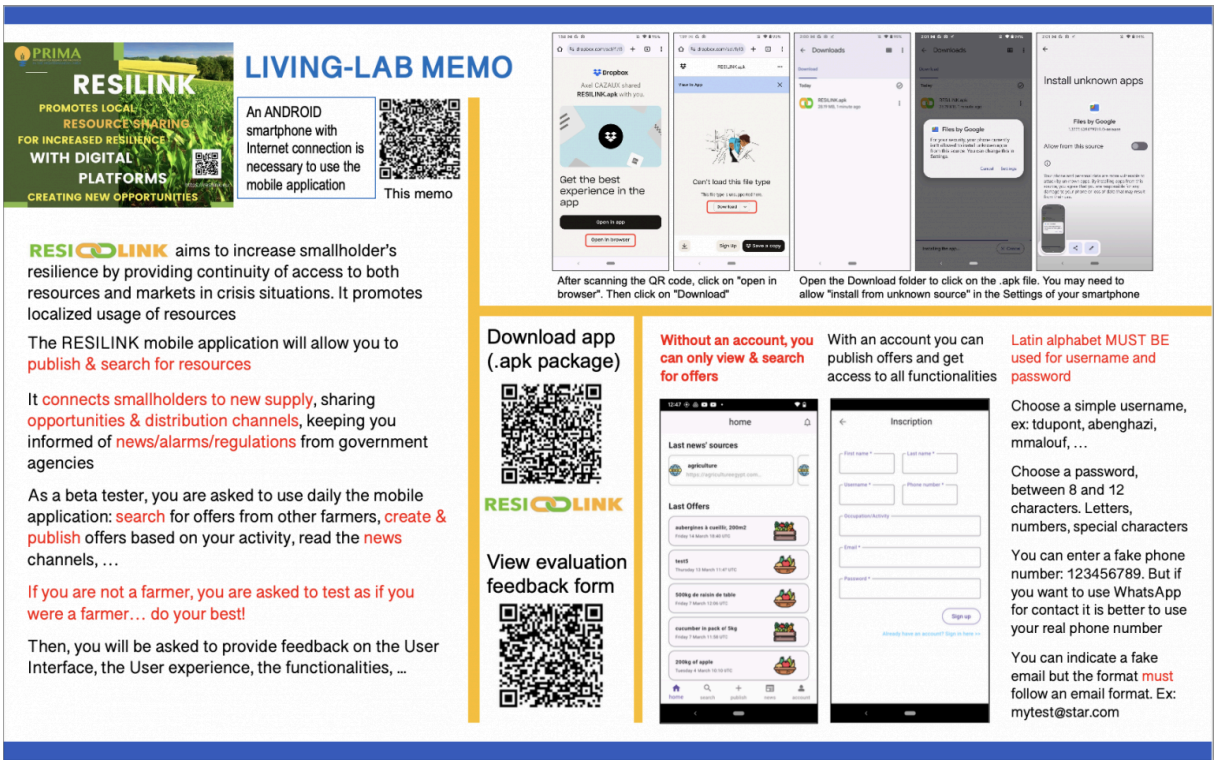
which also lists: organization of Scientific events; Keynote/Talk/Scientific presentation; Participation in exhibitions; project’s Newsletters; project’s Publications and project’s Seminars/Talks.

2.5. WP5

WP5 “Living-Lab piloting and large-scale evaluation program”

In the third year of the project, WP5 is probably, with WP2, where the most effort has been devoted to define and run the large-scale evaluation framework and the Living-Lab program.




PRIMA
RESILINK
PROMOTES LOCAL RESOURCES SHARING FOR INCREASED RESILIENCE
WITH DIGITAL PLATFORMS
CREATING NEW OPPORTUNITIES
LIVING-LAB MEMO
An ANDROID smartphone with Internet connection is necessary to use the mobile application
This memo
RESILINK aims to increase smallholder's resilience by providing continuity of access to both resources and markets in crisis situations. It promotes localized usage of resources
The RESILINK mobile application will allow you to publish & search for resources
It connects smallholders to new supply, sharing opportunities & distribution channels, keeping you informed of news/alarms/regulations from government agencies
As a beta tester, you are asked to use daily the mobile application: search for offers from other farmers, create & publish offers based on your activity, read the news channels, …
If you are not a farmer, you are asked to test as if you were a farmer… do your best!
Then, you will be asked to provide feedback on the User Interface, the User experience, the functionalities, …
Get the best experience in the app
Open in app
Open in browser
Can't load this file type
Downloads
Install unknown apps
Allow from this source
After scanning the QR code, click on "open in browser". Then click on "Download"
Open the Download folder to click on the .apk file. You may need to allow "install from unknown source" in the Settings of your smartphone
Download app (.apk package)
RESILINK
View evaluation feedback form
Without an account, you can only view & search for offers
With an account you can publish offers and get access to all functionalities
Latin alphabet MUST BE used for username and password
home
Last news' sources
Last Offers
Inscription
Choose a simple username, ex: tdupont, abenghazi, mmalouf, …
Choose a password, between 8 and 12 characters. Letters, numbers, special characters
You can enter a fake phone number: 123456789. But if you want to use WhatsApp for contact it is better to use your real phone number
You can indicate a fake email but the format must follow an email format. Ex: mytest@star.com

2.6. WP6

WP6 "Project management"

The works conducted in WP6 are all aspects of project monitoring & management as well as engagement of project partners. For the third year, 10 meetings, including 1 general meeting, have been organized to regularly engage project partners.

LIST OF MEETINGS

Title	Date	Subject	Participants
TM-PRE-LIVING-LAB-JUN-24	11/06/24 12/06/24 24/06/24 online	Meeting to prepare the Living-Labs	Algeria: 11/06 Morocc: 12/06 Egypt: 24/06
TM-LIVING-LAB-WG-1	27/06/24 online	First meeting of the Living-Lab Working Group	ALL
TM-PRE-LIVING-LAB-SEP-24	05/09/24 online	Discussion on how to launch the internal test of the RESILINK mobile app	UPPA, Orange
TM-LIVING-LAB-EGYPT	02/10/24 Cairo	Discussion on initiating Living Lab in Egypt	UPPA, ARC
TM-PRE-LIVING-LAB-OCT-24	23/10/24 online	Discussion on how to launch the larger scale evaluation of the RESILINK mobile app and platform	ALL
TM-MID-TERM-EVAL-JAN-25	10/01/25 Online	Preparation of the mid-term PRIMA evaluation	ALL
TM-PRE-LIVING-LAB-JAN-25	23/01/25	Preparation of the Living-Lab	UPPA, ORANGE
TM-PRE-LIVING-LAB-FEB-25	20/02/25	Preparation of the Living-Lab	ALL
TM-LIVING-LAB-OPEN-API	20/03/25	Discussion on open API and plan for PoC	Orange, UPPA
GM-BENI-MELLAL-APR-25	29/04/25 30/04/235	GM sessions, LLs feedback and presentations for InovFarmer conference	ALL

3. SUMMARY OF MAIN ACTIVITIES DURING THIRD YEAR

3.1. Evaluation Program

Before the Living-Lab, RESILINK run an Evaluation Program from November 2024 to February 2025 to get feedback from smallholders. However, to prepare the Evaluation Program, an internal test program has also been organized that is described in:

- D2.4a “First report on test and validation of the full RESILINK framework”. URL: https://resilink.eu/wp-content/uploads/2025/04/D2.4a.pdf

In order to define the test & evaluation framework, we conducted several meetings since June 2024 and produced several internal documents as well as News/Posts on the web site.

Title	Date	Subject	Participants
TM-PRE-LIVING-LAB-JUN-24	11/06/24 12/06/24 24/06/24 online	Meeting to prepare the Living-Labs	Algeria: 11/06 Morocco: 12/06 Egypt: 24/06
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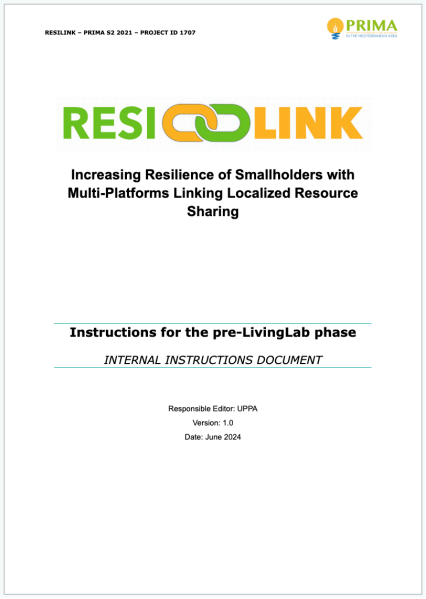
TM-LIVING-LAB-EGYPT	02/10/24 Cairo	Discussion on initiating Living Lab in Egypt	UPPA, ARC
TM-PRE-LIVING-LAB-OCT-24	23/10/24 online	Discussion on how to launch the larger scale evaluation of the RESILINK mobile app and platform	ALL


RESILINK – PRIMA S2 2021 – PROJECT ID 1707

PRIMA

RESILINK

Increasing Resilience of Smallholders with Multi-Platforms Linking Localized Resource Sharing

Instructions for the pre-LivingLab phase

INTERNAL INSTRUCTIONS DOCUMENT

Responsible Editor: UPPA
Version: 1.0
Date: June 2024


RESILINK – PRIMA S2 2021 – PROJECT ID 1707

PRIMA

RESILINK

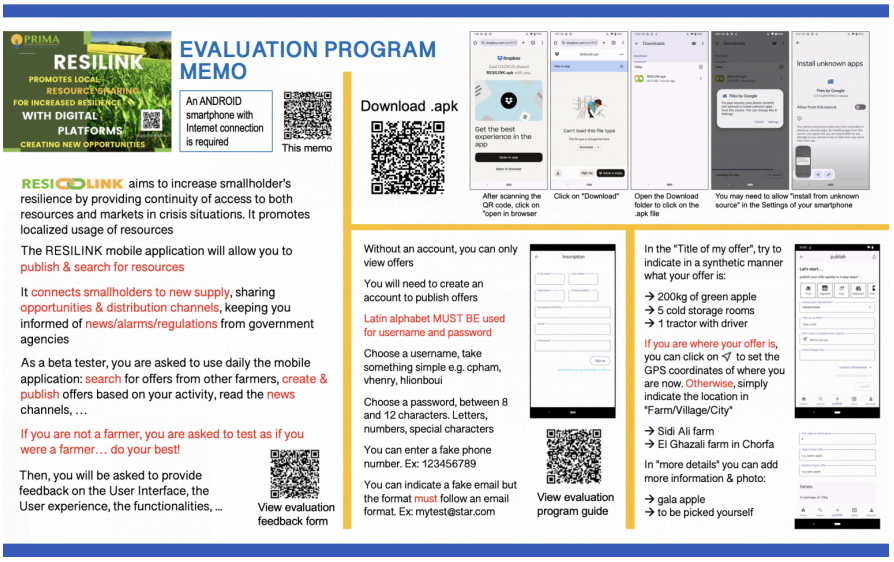
RESILINK MOBILE APP INTERNAL TEST FEEDBACK

Technical annex

INTERNAL TEST FEEDBACK

Responsible Editor:	UPPA
Contributors:	ALL
Document Reference:	Mobile App Test Feedback
Distribution:	Public
Version:	1.0
Date:	September 2024

In the Piloting section of the web site: https://resilink.eu/piloting



For instance, the Evaluation Program Guide is a set of slides describing all the evaluation procedures, from installation of the RESILINK Mobile Application, utilization of the main functionalities to providing the Evaluation Form. It is mainly designed for advisors who will conduct meetings/discussions with testers, although it is also intended to serve as a reference for testers themselves, after the meetings with advisors.

- Evaluation Program Guide
  https://resilink.eu/wp-content/uploads/2024/11/RESILINK-evaluation-program.pdf

The Evaluation Program also consisted in initiating contact and raising awareness of smallholders and stakeholders.

In the News section of the web site: https://resilink.eu/news

Jan. 5-6, 2025. As part of the RESILINK Evaluation Program, ARC in Egypt organized in Beni Suef Governorate a training session to present the RESILINK digital platform and the RESILINK mobile application to more than 35 smallholders.

Dec. 26th, 2024. As part of the RESILINK Evaluation Program, USMS in Morocco organized a training session to present the RESILINK digital platform and the RESILINK mobile application.

Dec. 10th, 2024. As part of the RESILINK Evaluation Program, INRA in Morocco has started interviews and demo/work sessions to install and use the RESILINK Mobile Application. The Evaluation session was conducted in a farm that is also proposing various agriculture services in the Labrachoua village. Farmers were able to install and thoroughly test with the mobile application. As farmers are familiar to the farm environment, discussions have been conducted in an informal manner, easing the collection of feedback after the installation and the demonstration of the mobile application.

All these preparatory activities have been presented during the RESILINK mid-term evaluation on January 16th, 2025:

- RESILINK mid-term evaluation slides https://resilink.eu/wp-content/uploads/2025/01/RESILINK-mid-term-presentation.pdf

3.2. Living-Lab program

With feedback and synthesis from the Evaluation Program, RESILINK launched the Living-Lab program on February 2025. Again, 2 preparatory meetings have been organized with partners in order to carefully plan the Living-Lab, the expected results and how to collect feedback.

Title	Date	Subject	Participants
TM-PRE-LIVING-LAB-JAN-25	23/01/25	Preparation of the Living-Lab	UPPA, ORANGE
TM-PRE-LIVING-LAB-FEB-25	20/02/25	Preparation of the Living-Lab	ALL

Several training and presentation materials have been produced to run the Living-Lab as well as News/Posts on the web site.

LIVING-LAB MEMO

An ANDROID smartphone with Internet connection is necessary to use the mobile application

This memo

RESILINK aims to increase smallholder's resilience by providing continuity of access to both resources and markets in crisis situations. It promotes localized usage of resources

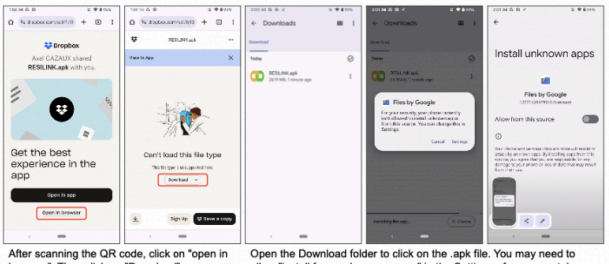
The RESILINK mobile application will allow you to publish & search for resources

It connects smallholders to new supply, sharing opportunities & distribution channels, keeping you informed of news/alarms/regulations from government agencies

As a beta tester, you are asked to use daily the mobile application: search for offers from other farmers, create & publish offers based on your activity, read the news channels, …

If you are not a farmer, you are asked to test as if you were a farmer… do your best!

Then, you will be asked to provide feedback on the User Interface, the User experience, the functionalities, …



After scanning the QR code, click on "open in browser". Then click on "Download"

Open the Download folder to click on the .apk file. You may need to allow "install from unknown source" in the Settings of your smartphone

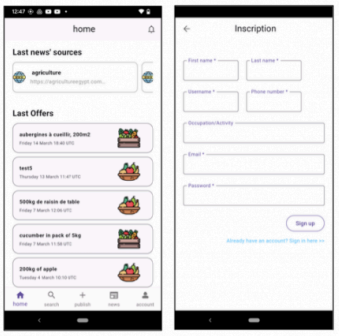
Download app (.apk package)

RESILINK

View evaluation feedback form

Without an account, you can only view & search for offers

With an account you can publish offers and get access to all functionalities



Latin alphabet MUST BE used for username and password

Choose a simple username, ex: tdupont, abenghazi, mmalouf, …

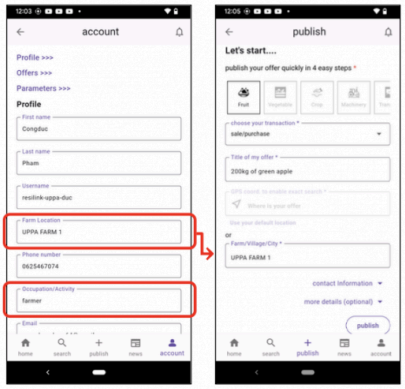
Choose a password, between 8 and 12 characters. Letters, numbers, special characters

You can enter a fake phone number: 123456789. But if you want to use WhatsApp for contact it is better to use your real phone number

You can indicate a fake email but the format must follow an email format. Ex: mytest@star.com

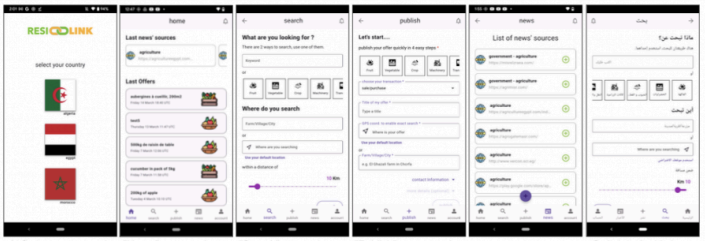
LIVING LAB MEMO

QUICK START



Enter the name of your farm in your account and it will automatically be used when you publish an offer

Enter your main activity to facilitate identification of offers that might be interesting for your activity



At first run, you need to select your country

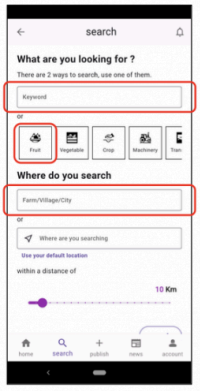
"Home" screen when not logged in with user account

"Search" screen to search for offers

"Publish" screen, only available when logged in with user account

"News" screen to select News sources you want to bookmark

Switch to Arabic in the Account/ Language menu



You can quickly search by "Keyword", for instance "apple"

or search by category

you can also indicate a location, for instance "UPPA", to get all offers with location matching "UPPA"

→ UPPA FARM 1
→ Near UPPA
→ At UPPA close to Pau

In the "Title of my offer", try to indicate in a synthetic manner what your offer is:

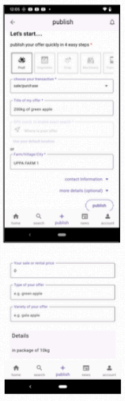
→ 200kg of green apple
→ 5 cold storage rooms
→ 1 tractor with driver

If you are where your offer is, you can click or to set the GPS coordinates of where you are now. Otherwise, simply indicate the location in "Farm/Village/City"

→ Sidi Ali farm
→ El Ghazali farm in Chorfa

In "more details" you can add more information & photo:

→ gala apple
→ to be picked yourself



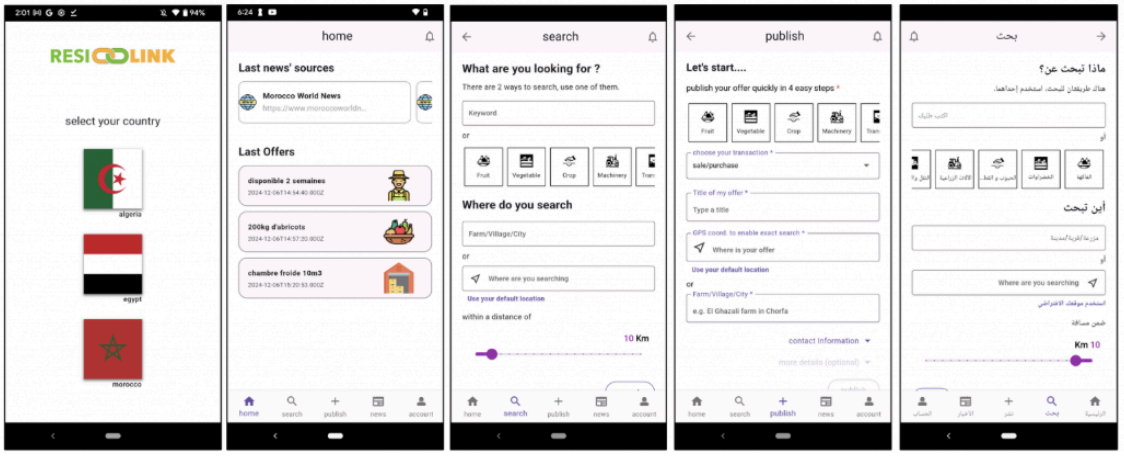
In the Piloting section of the web site: https://resilink.eu/piloting

IMPLEMENTING THE LIVING LAB EVALUATION PROGRAM – 2025

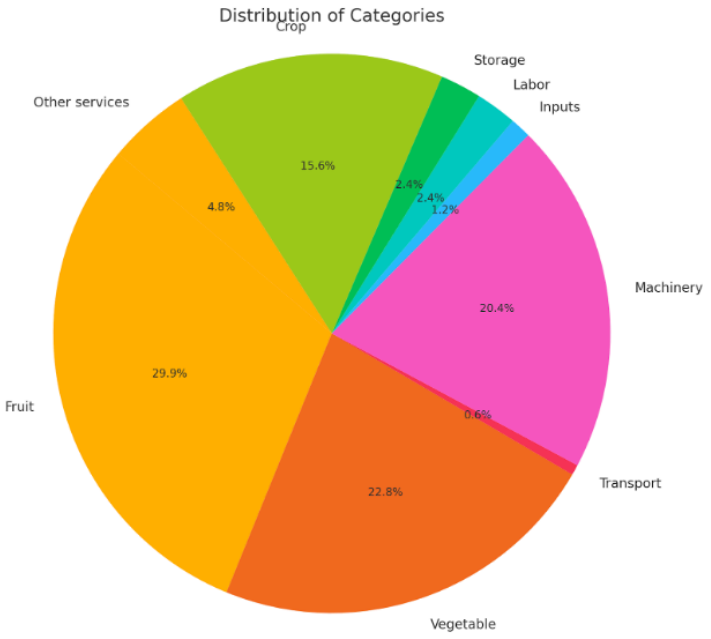
Starting in 2025, RESILINK is now implementing the Living Lab Evaluation Program where several groups of farmers will use on a longer time period, typically several weeks, the RESILINK Digital Platform and the RESILINK Mobile App, to provide feedbacks. Partners is Algeria, Egypt and Morocco are ready to launch the Living Lab program with their farmers & stakeholders partners. Updated documentations and posters supporting the Living Lab Evaluation Program are customized for each country.

In the News section of the web site: https://resilink.eu/news

Feb. 24th, 2025. The RESILINK Mobile App and the RESILINK Digital Platform Server is ready for the Living-Lab Evaluation Program. Both the mobile application and the digital platform server developed by UPPA are much more robust and faster to support a larger number of users. Arabic translation has also been improved and a larger selection of news & information sources have been listed for users to bookmark them. Partners is Algeria, Egypt and Morocco are ready to launch the Living Lab program with their farmers & stakeholders partners.



On the date of Apr. 28th, and from March 1st, we had 168 offers from 20 users for the Living Lab piloting.



3.3. Test of the new version of ODEP

ODEP is currently being upgraded to v3 by the Orange team. There are significant performance differences between v2 and v3 that are illustrated below. In addition to the performance tests, reader can refer to:

- D5.2b Evaluation technical framework – v2
  https://resilink.eu/wp-content/uploads/2024/02/D5.2b.pdf

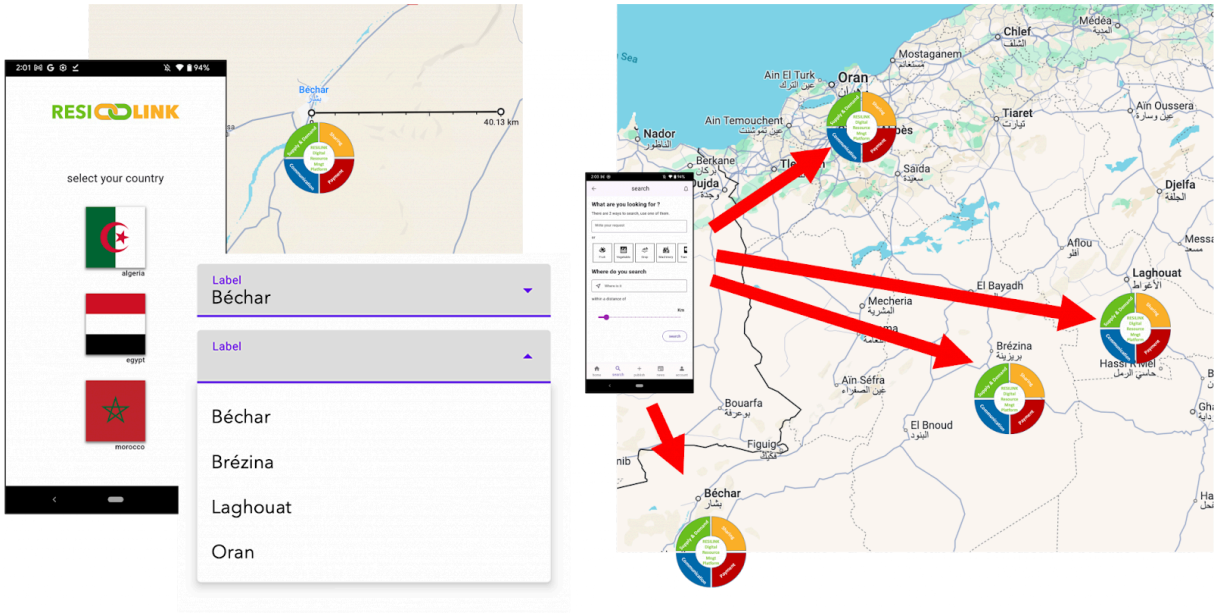
for a more detailed description of the improvements that will be provided by ODEPv3.

Terminology ODEP V2	Terminology 2023 ODEP V3
Material with sale/purchase transaction Multiple asset of one assetType Asset quantity=1	MeasurableByQuantity Multiple assets on one assetType With Asset quantity >=0 if (Asset.subjectOfQuantity=true) Offer/request quantity>0
Immaterial One asset per assetType Asset quantity>=0 Offer/request quantity>0 ImmaterialNotQuantified One asset per assetType Asset quantity=0 Offer/request quantity >0	
Immaterial with unit not measurable Multiple assets on one assetType Asset/offer/request Quantity=0 Many contracts on the same offer (multiple access on the asset)	MeasurableByTime Multiple assets on one assetType Many contracts on the same offer (if Asset. multipleAccess=true) (quantity=1 with rent transaction(Asset. multipleAccess=false))
Material with rent transaction Multiple asset of one assetType Asset/offer/request quantity=1	

Migration from ODEP v2 to v3 has an impact on the RESILINK server and the RESILINK mobile application. Therefore, in addition to the test by Orange of ODEP v3, UPPA also has to migrate both server and the mobile application to the new API of ODEP v3.

3.4. A more lightweight RESILINK server

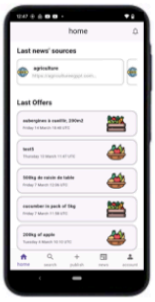
To enable flexible and incremental deployment of digital services in crisis situation, the RESILINK server provides a very lightweight server that could be deployed out-of-the-box on laptops or even single board computers such as a Raspberry Pi. This lightweight server can manage most of RESILINK platform core functionalities (news feeds, publication of offers, search for offers and contact users) enabling the deployment of several lightweight RESILINK servers, where each server could have a geographical scope to efficiently manage crisis in a very local manner. Incremental deployment of servers can then provide a very high level of flexibility. This feature is a major step towards the platform-of-platforms approach where the RESILINK server can be deployed, possibly adapted and used, through the proposed open API, for other applications, thus stimulating local innovation.



Detailed information can be found in:

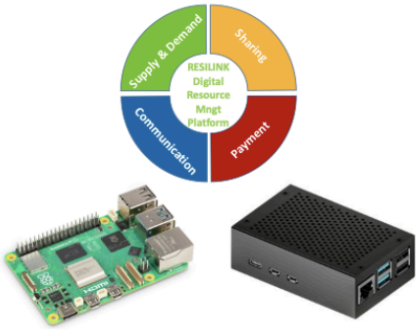
- D2.2b “RESILINK resource sharing digital platform – v2” https://resilink.eu/wp-content/uploads/2025/07/D2.2b.pdf

The feasibility of deploying the RESILINK server on low-cost edge devices was demonstrated on a single-computer board Raspberry Pi 5 with 4GB of main memory. Compared to the standard deployment of the RESILINK server, which uses an external MongoDB Atlas cluster, this Raspberry Pi deployment leverages a local Dockerized MongoDB instance. This design choice avoids the complexity of provisioning and securing new database clusters for each edge deployment, while maintaining compatibility with the application’s data structure. A test on a local network can be easily realized as illustrated below.



Smartphone connected to the WiFi and using the local RESILINK server

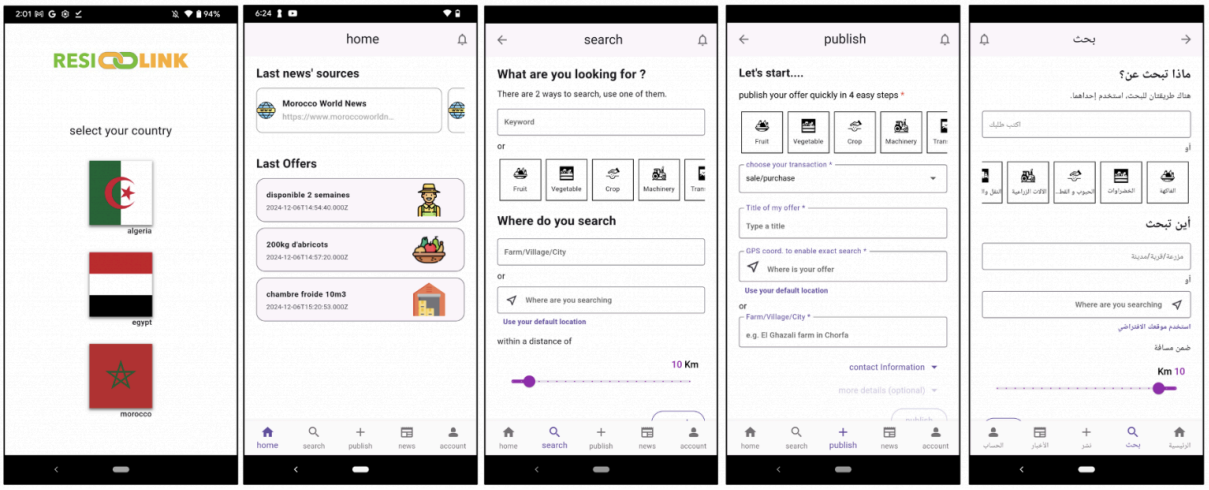
Smartphone running as WiFi access point through its 3G/4G/5G connection



Raspberry Pi 5 connected to the WiFi and running the RESILINK server on the local network

3.5. Improvement of the RESILINK mobile application

The RESILINK Mobile App is improved for more robustness and faster communication with the RESILINK server to support a larger number of users. Arabic translation has also been improved and a larger selection of news & information sources have been listed for users to bookmark them.



Following an Agile development methodology, several rounds of feedback have been integrated during the internal tests, the Evaluation Program and the beginning of the Living-Lab program.

New round ot feedback – 14 Nov. 2024, after integration of first feedbacks

- GPS field in Publish menu seems to still be mandatory to publish. It should not be the case Done
- In Account menu, change the GPS helper text to “Your default GPS location” and allow it to be deleted and changed Done
- In Publish menu, change the GPS helper text to “Where is your offer”. GPS is not set by default, add a clickable text below that says “Use default location”. Allow this field to be deleted and changed Done
- Then, before the “Farm/Village/City” box, add the “OR” text to help user understand that they need to make a choice Done
- The icon to block an offer in suggested offer category should be changed (currently it is misleading as user may think he can delete an offer from somebody else) Done
- in Account, for the GPS helper text: "Your default location" Done
- in Account, for the GPS, cannot change once it has been set Done
- in Search, for the GPS helper text: "Where are you searching?" Done
- in Search, put "Or" between the 2 text box Done
- in Publish, for "Farm/Village/City", put the helper text: "e.g. El Ghazali farm in Chorfa" Done
- Seems that the options for each category of offers are not updated when we change the category. Done
- Need to define a stable behavior when aborting publish and resuming publish: now, it seems that when GPS is set to current location, information are kept, otherwise they are lost, even when choosing default GPS location Done, for now, a page change resets the previous page
- When typing in Farm/Village/city, must also disable “use default location” otherwise, now, the app hangs Done
- For expired offer, how can we renew or extend the offer? Click on “add duration”
- After modifying an offer, if you click on search, you see the offer that has been modified! Done
- It seems that one can still purchase its own offers, which should not be the case Done
- It seems that we don’t see who purchased our offer Done

New round ot feedback – 18 Nov. 2024, after integration of second feedbacks

- When modifying an offer, change “add duration” by “extend duration” Done
- The timer for transactions seems to be too small: modifying an offer fails most of the time when the duration is changed! But it seems that after a while the modification has been actually processed in the background Seeing with ODEP now that it's totally broken
- There are many “Problems in publishing your service” or network problem that are actually solved by re-starting the application, so it is not really a physical connectivity problem but probably an issue from the app who could not re-connect (software issue?) Seeing with ODEP now that it's totally broken
- Is there an issue with the “Other services”? Because after publish, the offer does not display correctly (appears as grey rectangle). We got this issue with bad format of the GPS field. Actually, after this problem, all other published offer appear as grey rectangle. Done (fixed regex)

New round ot feedback – 19 Dec. 2024

- GETTING BACK TO THIS ISSUE. in the “Last offers” section maybe it is better to be able to scroll? How difficult it is? For the scroll, we had said via a technical meeting that the only way to have more offers would be the search page, putting a scroll is very simple, but it remains to be seen how many offers we put in this scroll (all the offers or do we change the interface to add a “see more” button and display all the latest offers in the search result page?

  I think we need to have a simple method to scroll/view all offers, in a chronological order. So a “see more” option to display the last offers is preferable.

New round ot feedback – 28 Feb. 2025, after last test before Living-Lab

- In account, change "Location" by "Farm Location" Done
- When publishing, use either GPS or Farm Location of Account when one of them is available Done
- We need to have a simple method to scroll/view last offers, in a chronological order. So a "see more" option to display the last offers is preferable. Implemented now with 9 offers that can be scrolled

  → I think that limiting to 9 offers is not good, we need to be able to scroll all offers. Also, we need to display the latest first. HIGH PRIORITY Done

  → If downloading all offers takes too much time, then we can download 9 offers by 9 offers for instance. HIGH PRIORITY Done (with a button, not with scroll technique to update list)

- When modifying an offer, we don't see the asset type it belongs to. HIGH PRIORITY Done
- Set the default server to the new server. HIGH PRIORITY Done
- Rename servers in "ODEP server" and "server 1". HIGH PRIORITY Done
- Allow user to create a News source and add it in its bookmark. MEDIUM PRIORITY Done
- Change format Date to full date. Done

New round ot feedback – March 17th. 2025, can be realized in continuous mode, even when Living-lab has started.

- Problem of white space between last offers and "see more" when clicking on "see more" Done
- When clicking on an offer in "Last Offers" from the home menu, and we want to go back to the home menu, we should keep the number of offers that have been requested by the user when he used "See more". Otherwise, we need to redo all the "See more" operations. Done, to reload the page, press the bottom bar button equivalent to home page
- We need to mask the password field when logging Done
- How can we change the password? From ODEP, not possible, From our server, possible
- In the Search menu, after a search, when we want to modify the search, it seems that old parameters are not correctly resetted and/or new parameters are not taken into account. For instance, first search for "fraise" then, modify search to remove "fraise" and search by "Vegetable" category, it will show no offers because it seems that "fraise" was still used. If you reverse the operation, same effect. Done
- In Search, remove the ending space that may be introduced by automatic completion. If there is an ending space, for instance "fraise " is not equivalent to "fraise", then the search will fail Done

New round ot feedback – Apr 30th. 2025, after General Meeting in Beni Mellal.

- Filter the displayed offers according to the selected country for the application. Done
- Change how we select country → have a drop down list with the country name and a small country flag, instead of displaying only 3 countries in start page. Done
- Should we include expired offers? With a check box? Not decided yet, so do not implement now.
- Provide possibility for other applications to use our RESILINK server. Other app can use our asset types (cannot create new ones) and publish offers that should be tagged to belong to the third-party application. Maybe need to tag users from the third-party application also.

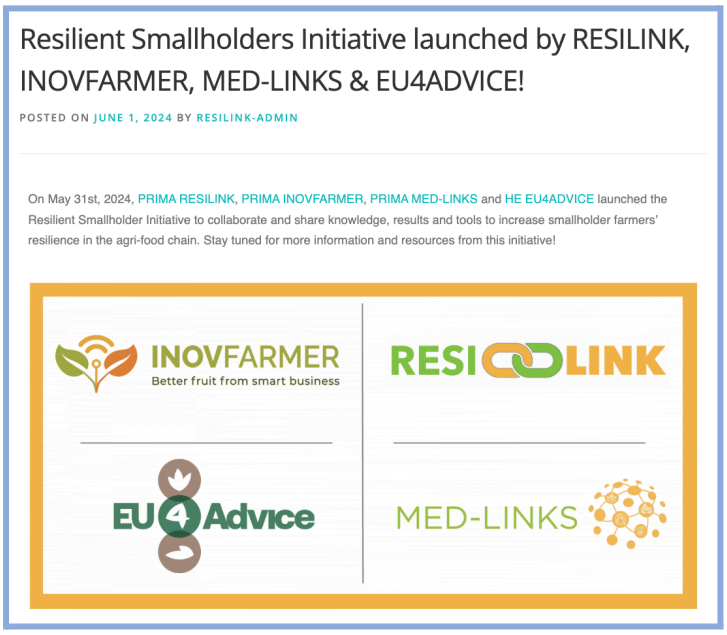
3.6. Launching the Resilient Smallholder Initiative (RSI)

The Resilient Smallholder Initiative was launched on May 31st, 2024, by PRIMA RESILINK, PRIMA INOVFARMER, PRIMA MED-LINKS, H2020 FAIRCHAIN and HE EU4ADVICE. The main objectives are to collaborate, organize events/webinars, share knowledge, results and tools to increase smallholder farmers' resilience in the agri-food chain, spanning all the aspects addressed by the contributing projects. A first focus could be on the Mediterranean

area as addressed by the PRIMA Partnership. However, the scope of the activities can be enlarged to other regions of the world.

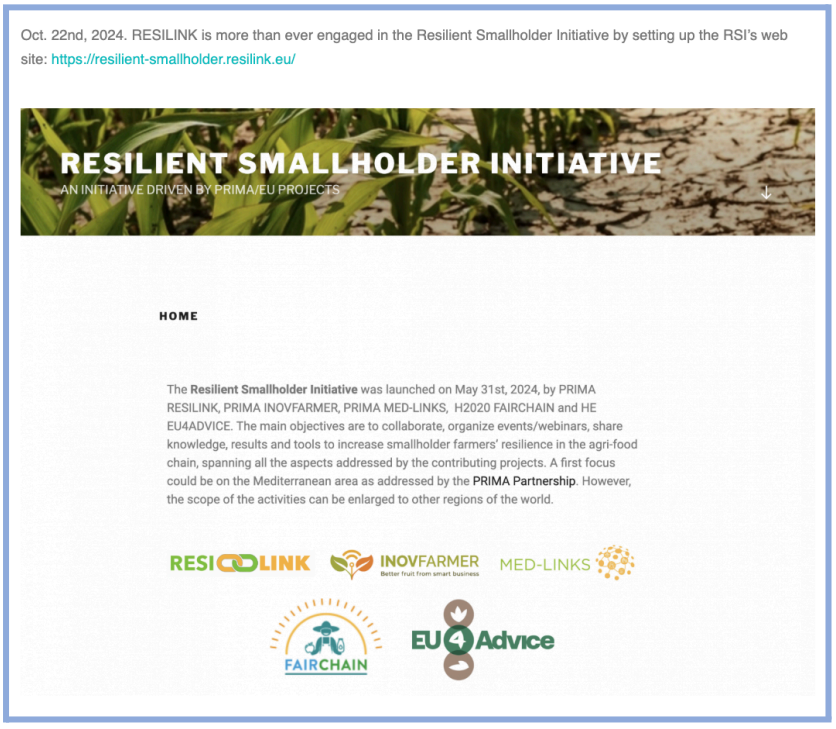
See the post:

https://resilink.eu/resilient-smallholders-initiative-launched-by-resilink-inovfarmer-med-links-eu4advice

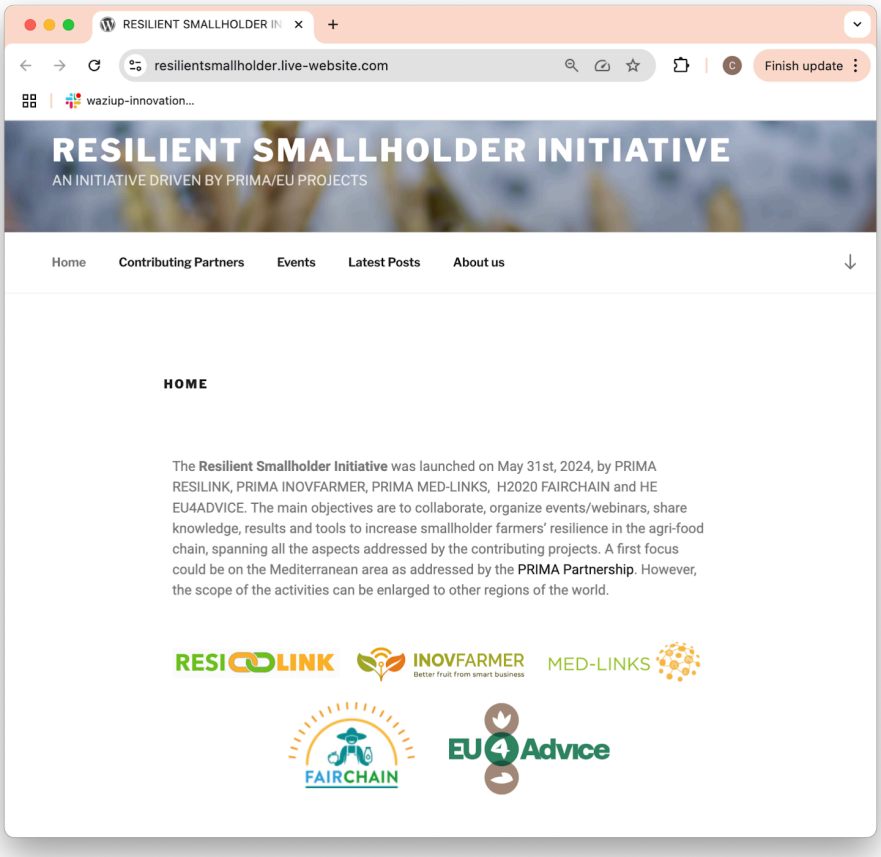


After the creation of the initiative, a dedicated web site for the initiative has been set up.

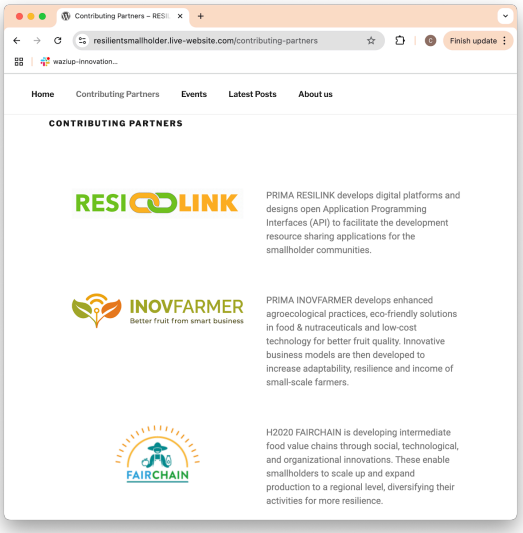
In the News section of the web site: https://resilink.eu/news

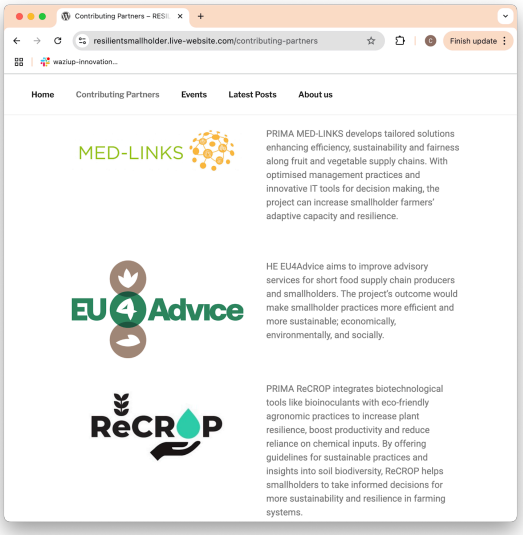


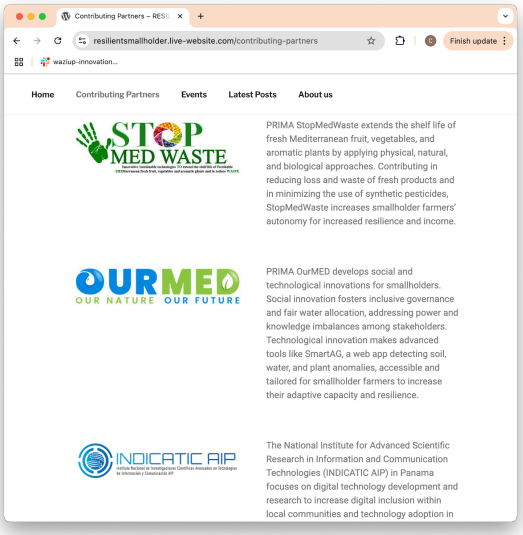
Here is the RSI web site that has been set up by RESILINK: https://resilientsmallholder.live-website.com/

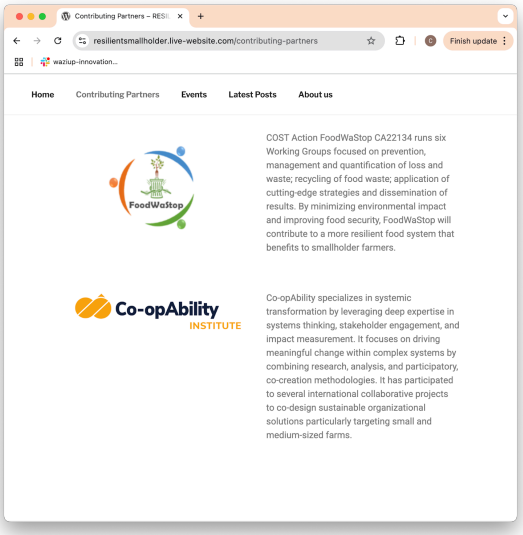


11 contributing partners: https://resilientsmallholder.live-website.com/contributing-partners

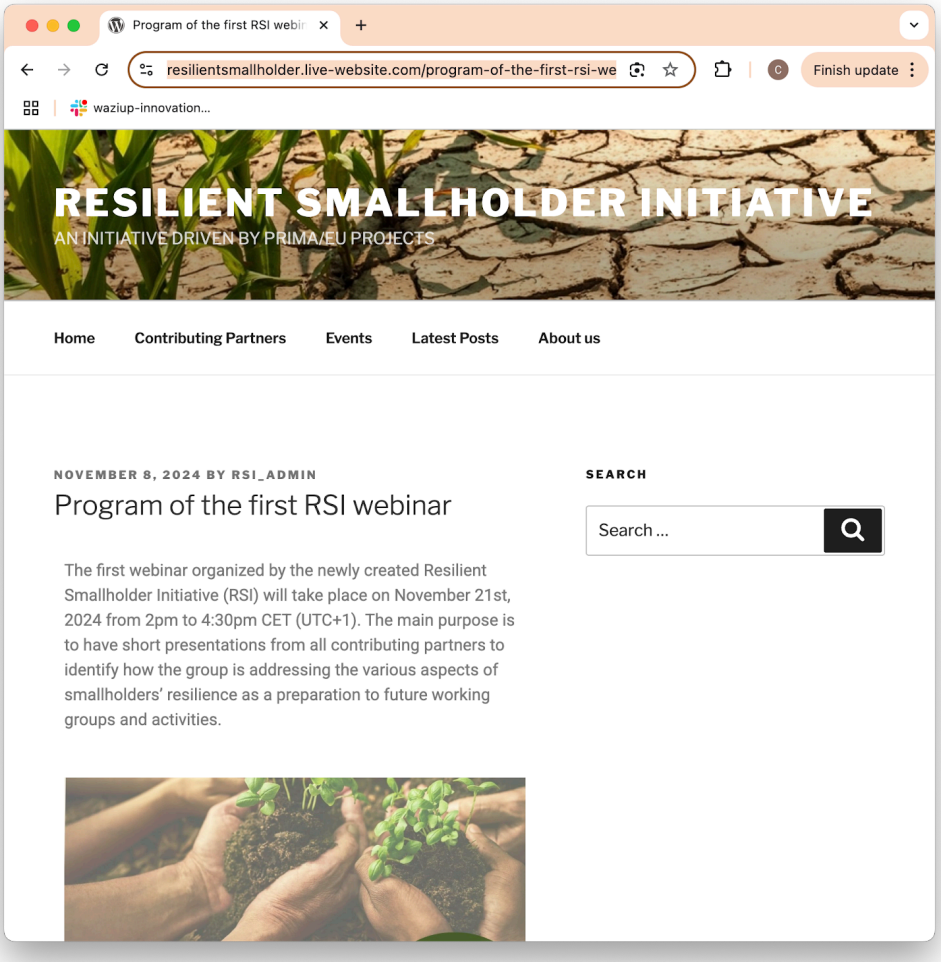








A first webinar was organized on Nov. 21st, 2025 with all contributing partners. The agenda of the webinar can be accessed from here: https://resilientsmallholder.live-website.com/program-of-the-first-rsi-webinar.



In the News section of the RESILINK web site: https://resilink.eu/news

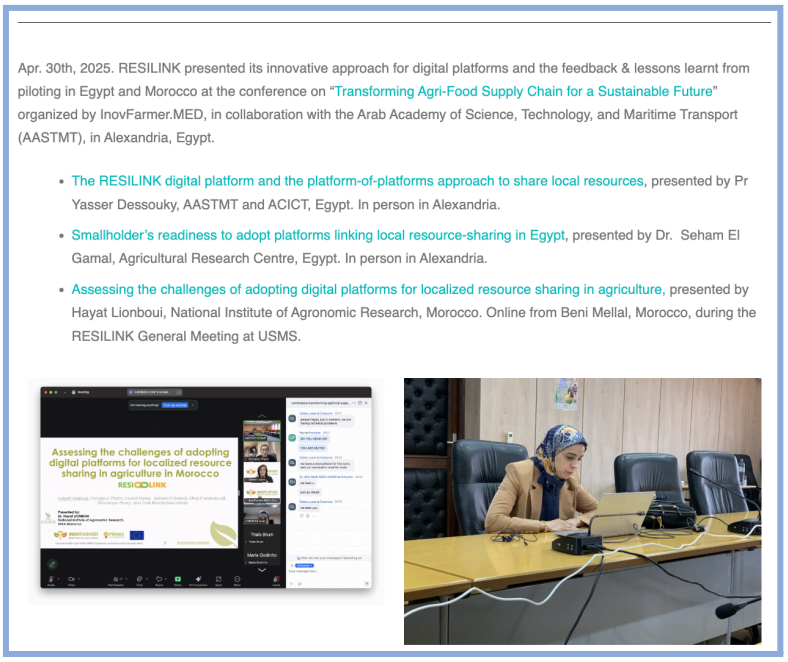
Nov. 21st, 2024. RESILINK presented its activities, main outcome and how it can contribute to increase smallholder farmers' resilience at the 1st webinar of the Resilient Smallholder Initiative.

3.7. Communication & Dissemination activities

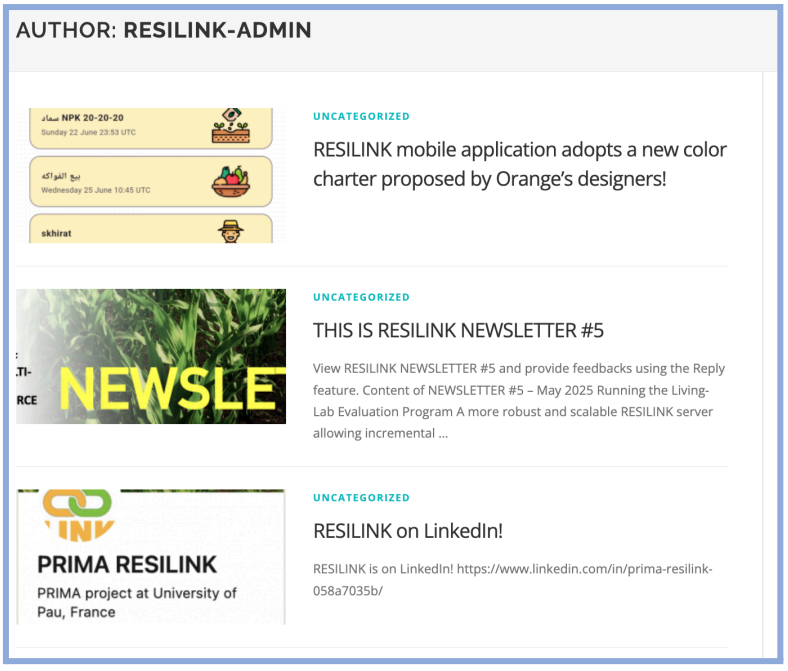
These activities are directly related to WP4.

The RESILINK web site is the main channel for disseminating information related to all the communication & dissemination activities of RESILINK: https://resilink.eu.

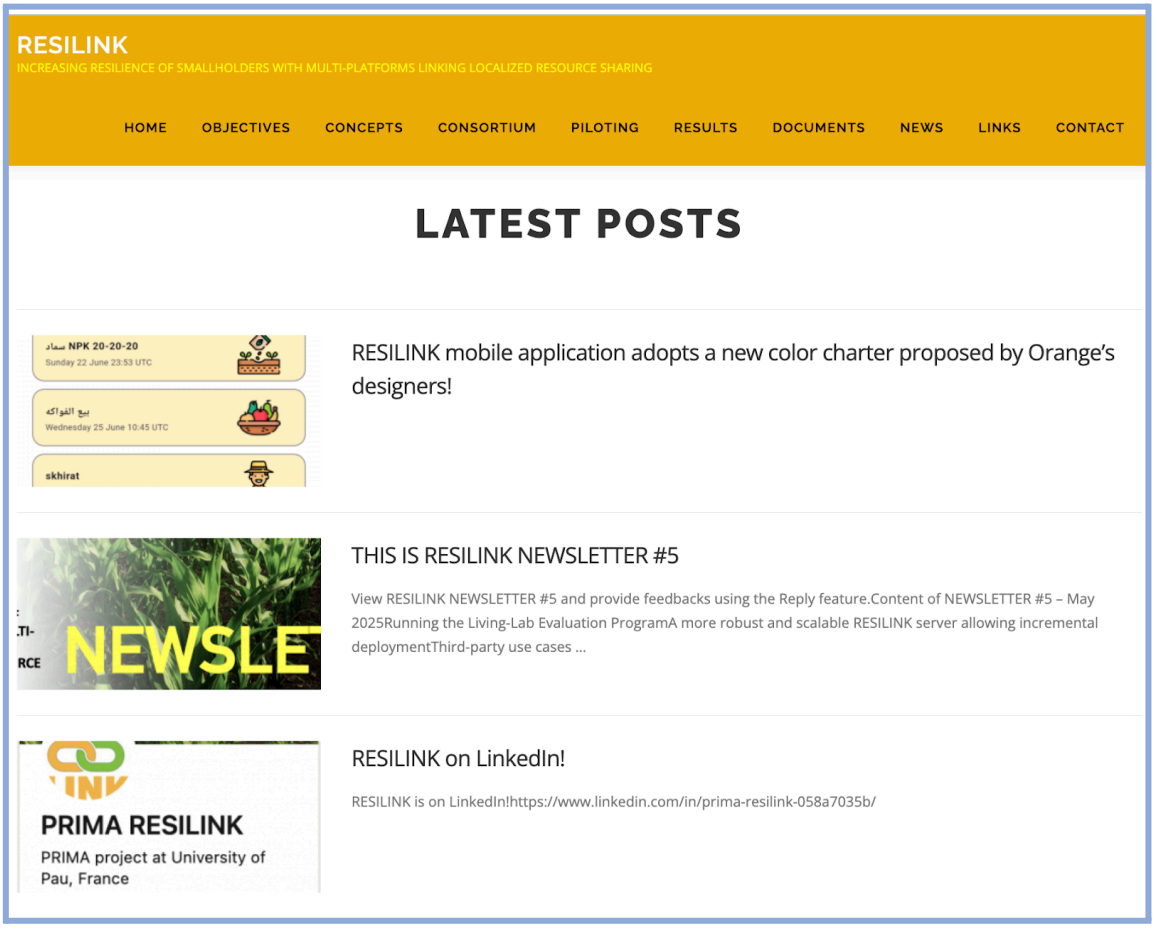
For instance, the News section of the web site: https://resilink.eu/news



For instance, all posts in the project web site: https://resilink.eu/author/resilink-admin



Individual posts can be accessed from the project main page:



All the communication and dissemination activities are described in more details in:

- D4.1e "Third year report on communication and dissemination activities" https://resilink.eu/wp-content/uploads/2025/07/D4.1e.pdf

4. SUMMARY OF KPIS

The following summary of project KPI is taken from:

- D4.1e "Third year report on communication and dissemination activities" https://resilink.eu/wp-content/uploads/2025/07/D4.1e.pdf

Dissemination and Communication Actions	KPIs and Success Indicators	Reached after 3 years
Dissemination Events	**Smallholder-oriented events** with demonstrations of RESILINK platform and app **Visits/meetings** to appropriate stakeholders (e.g., local agencies, local Policy Makers, regional agri-food associations, local Digital Innovation Hub, etc) **Number of dissemination events organized** **Aim**: organize at least **8 communication & dissemination events** to create awareness on the innovative generalized resource sharing approach for the agri-food chain 1 scientific day; 1 symposium; 1 conference "Transforming Agri-Food Supply Chain for a Sustainable Future", 1 RSI webinar, 4 raise-awareness events	**8**
Smallholders audience reachout	**Number of smallholders audience** **Aim**: reach at least **500 smallholders through the dissemination** events and the large-scale evaluation of the RESILINK mobile app (at least 200 smallholders for the latter)	**about 300 through exhibitions & interviews**
Small-scale farmers engaged in piloting tests	**Number of smallholders in the Living-Lab piloting program (duration 33 months)** **Aim**: engage at **least 40 small-scale farms** for Living-Lab Piloting of the RESILINK digital platform	**30 for preparation stage** **30 for Living Lab**
Smartphones	**Number of smartphones that can be lent for the Living-Labs and specific evaluation** **Aim**: RESILINK will provision to be able to **lend 100 smartphones** when necessary	**Due to financial issues, we will enrol only smallholders with their smartphones**
Scientific peer-reviewed papers in	**Number of published peer reviewed papers**	**3 journal + 4 conferences**

conferences and journals	**Aim**: publish at least **3 journals and 8 conference papers** (of which at least 40% are joint-authored papers between RESILINK partners). All publications will be open access.	
Technical Training/Tutorial Materials	**Number of Technical Training/Tutorial presentations produced** **Aim**: release at least **10 Technical Training/Tutorial** presentations/slides **Number of Technical Training/Tutorial video produced** **Aim**: release at least **6 Technical Training/Tutorial video**	**4** **4**
Project Newsletters	**Usage of mailing-lists** **Number of Project Newsletters produced – Aim**: release at least 6 Project Newsletters.	**5**
Scientific Knowledge Transfer	**Number of co-located workshops organised / or with significant presence** **Aim**: organisation of at least **2 co-located workshops** **Aim**: presence in at least 4 major events **Number of attendees (registered / estimated)** **Aim**: average number of targeted attendees per event is estimated in at least 50 **Number of organized webinars – Aim**: at least **12 organized webinars**	**1** **5 (AGRO-IT Day in Meknès; 15th SIAM in Meknès; Intl. Exhibition of Agriculture and Agro-Industries in Béni Mellal 2023 & 2024; SIPSA FILAHA 2024)** **2**
Communication Materials	**Project logo, design/branding** **Number of leaflets / brochures produced** **Aim**: Preparation and distribution of **4 different brochures** **Number of posters – Aim**: publish at least 4 posters **Number of press releases – Aim**: publish at least 4 press releases **Number of demonstration videos produced – Aim**: produce and publish at least 4 videos	**2** **4** **1** **2 promo video, 1 demo video**

Website	**Website exposure with active cross-referencing from all partner websites** **Links to project's social network pages will also be available** **The website will sustain at least 2 further years after the end of the project.** **Audience: Number of visitors** **Aim**: An average of 1200 visits per year would be a positive result, with at least 40% of users spending more than 2 minutes on the site. **Relevant Content:** Use of landing pages to measure specific dissemination actions.	
Engagement & Social Media	**a) Presence in Social Media** **Number of existing social media communities relevant to the project** **Aim**: use Social Media channels (e.g., Facebook, Twitter, LinkedIn, YouTube and other useful networks) **Number of videos on YouTube – Aim**: upload at least **6 Training/Tutorial videos** **Number of views for videos on YouTube** **Aim**: a total number of views over 150000 views would be a positive result **b) Flow of communication, number of posts – Aim**: publish continuous information **Number of Interviews on Media – Aim**: present in at least 3 major events	***GitHub, web site, YouTube and LinkedIn*** **1 promo video (258 view, July 2025), 1 pitch video** **through web site (News, Post) and LinkedIn** **1 (AGRO-IT Day in Meknès)**
Project showcase events, innovation booth, etc.	**a) Project showcase events** **Aim**: at least **2 demonstration stands** at international events including PRIMA/EC dissemination mechanisms and events, showing the RESILINK project features. **b) Innovation Booth** **Aim**: at least **2 Innovation booths** at Exhibition/Fairs (e.g., ITU Telecom World, AfriLab gathering, IST-Africa,...) where RESILINK system can be advertised within a wider community of policy makers and stakeholders.	**4 (AGRO-IT Day in Meknès; 15th SIAM in Meknès; Intl. Exhibition of Agriculture and Agro-Industries in Béni Mellal 2023; SIPSA FILAHA 2024)** **not started yet**

Cooperation with external actors & partnerships	**Number of cooperations with external actors** **Aim**: initiate at least **5 third-party platforms using RESILINK open API** **Aim:** at least **5 partnerships in the mentoring and pre-incubation program** **Aim**: raise interest from at least **10 entrepreneurs/startups**	**not started yet** **not started yet** **not started yet**
Liaison with other projects	**Number of collaborations with other projects** **Aim**: at least **2 other PRIMA/EC** projects on agri-food chain related issues	**7 (INOVFARMER; MED-LINKS; EU4ADVICE; FAIRCHAIN; RECROP; STOPMEDWASTE; FOODWASTOP)**

5. Modifications & Corrections from initial plan

The following modifications and/or corrections have been made regarding deliverables.

Code	Deliverable Title	Related Work Package Number	Responsible Editor	Tasks	Due
D1.3b	Final report on local opportunities for generalized resource sharing	1	USMS	T1.5	M30
D2.2b	RESILINK resource sharing digital platform – v2	2	ORANGE	T2.3, T2.4	M36
D2.3a	First report on API and software connectors	2	UPPA	T2.5	M28
D2.4a	First report on test and validation of the full RESILINK framework	2	ACICT	T2.6	M28
D3.3	Artificial Intelligence and Machine Learning advanced analytics for correlated local resources discovery and mapping	3	UPPA	T3.3	M24
D3.4	Innovative multiple knowledge streams methodology for responsive resource sharing in crisis situation	3	ORANGE	T3.4	M27
D3.5a	First report on AI integration into Edge-IoT RESILINK gateway	3	UPPA	T3.5	M32
D3.2b	Final report on IoT integration into Edge-IoT RESILINK gateway	3	UPPA	T3.2	M36
D4.2a	First report on software templates demonstrating RESILINK's open API	4	UPPA	T4.2	M25
D4.3a	First report on RESILINK mobile app demonstration and dissemination events	4	ORANGE	T4.3	M25
D4.4a	First report on Competitions and Challenges for Tech Community engagement	4	ACICT	T4.4	M25
D4.5a	First report on partnerships and demonstration of interoperability	4	UPPA	T4.5	M25
D4.1e	Third year report on communication and dissemination activities	4	UPPA	T4.1	M36
D4.6a	First report on mentoring and pre-incubation of selected partnerships	4	USMS	T4.6	M36
D5.3b	Synthetic Report on 2 years of Smallholder Living-Lab Piloting Program and large-scale evaluation	5	ARC	T5.3, T5.4, T5.5	M36
D5.7b	Evaluation, synthesis and KPI assessment of 2 years of piloting and evaluation program	5	INRA	T5.7	M36
D6.4	Third year report	6	UPPA	T6.2	M36

→ D1.3b, cancelled since no new contributions from D1.2b

→ D3.3 has been postponed several times as the development of the core functionalities of RESILINK mobile application took longer than expected, which in turn delayed the large-scale evaluation to test the RESILINK mobile app and the RESILINK digital platform. In this context, the activities and the investigation on how to introduce AI analytics for the recommendation system were postponed. The new expected date is Nov. 2025.

→ D3.4, cancelled and will be integrated into D3.3 (see above)

→ D3.5a & D3.2b have been cancelled because **RESILINK will not integrate IoT automation anymore due to re-orientation of project's priority to devote the scientific & technical contributions on a smart recommendation system, the open API and the lightweight and flexible digital platform architecture for the Platform-of-Platform approach. This has been agreed with PRIMA during the mid-term evaluation.**

→ D4.3a has been cancelled because the evaluation program of the RESILINK mobile app has been delayed. Therefore demonstration & dissemination events that have been organized have been integrated and described in D2.4a and D5.3b, along with the Living-Lab.

→ D4.4a & D4.5a & D4.6a have been cancelled because the design, the development, and the test of RESILINK's digital platform functionalities and the RESILINK digital platform's open API took longer than expected. D4.2a described the first version of the open API while D2.2b presented the first attempt and demonstration of the RESILINK's open API usage for other applications than RESILINK.

→ D5.7b has been cancelled and its content has actually been integrated into D5.3b that has been released later than expected because of delays in the large-scale evaluation and Living-Lab. In that context, it was not useful to have a separate D5.7b.

6. Difficulties & Risks

6.1. Difficulties

Egyptian partners have been impacted by both delays in financial & administrative procedures and difficulties in travelling. Thanks to their engagement, we were able to maintain most of the activities to launch the evaluation program as well as starting the Living-Lab phase. There are still difficulties for the ARC partner to travel and physically attend RESILINK's meetings.

For ACICT, although there have been discussions with PRIMA and the Egyptian funding agency there are still critical administrative issues for the funding. With the support of ARC, the evaluation program as well as the Living-Lab activities in Egypt are however maintained.

The development of the RESILINK digital platform also took longer than expected. With limitations of ODEPv2, RESILINK had to implement mitigation mechanisms while waiting for ODEPv3. In addition, the architecture of the RESILINK digital platform had to be re-designed in order to achieve the level of flexibility required to enable the Platform-of-Platforms approach (as described in section 3.4).

The RESILINK mobile application had also to undergo several improvement and debugging cycles to be able to offer a smooth behavior suitable to launch the evaluation program and the Living Lab.

As a result, the project suffers from about 1 year of delay for the Living-Lab activities. Therefore, RESILINK decided to re-design the Living-Lab program into several shorter cycles of about 3 weeks. At each cycle, between 5 and 10 new smallholder farmers are enrolled to test the RESILINK digital platform and mobile application to provide feedback. Then, a new cycle will start. From each previous cycle, between 1 and 2 smallholder farmers are asked to continue the test. In this way, we expect the Living-Lab program to enroll more than 100 smallholder farmers to have a large variety of feedback.

In addition to the development of the RESILINK mobile application, procedures to have the RESILINK mobile application in Google Play app store are also more complex than expected and therefore are taking more time than expected, with many administrative constraints from the university. We are currently solving these constraints.

6.2. Risks

After 3 years of projects, we can better foresee the difficulties and the risks. We try to list the foreseen risks below:

1. It was planned to have more time to develop partnerships as well as “Competition & Challenge” events based of RESILINK’s open API. These activities may be impacted by the accumulated delays and **the risk is that only demonstrators for interoperability and usage to open API would be developed, severely impacting KPIs on “Cooperation with external actors & partnerships” (see Section 4)**. However, the architecture of the RESILINK digital platform is really innovative to provide a high level of robustness with incremental deployment facilities. We expect fruitful cooperation within the Resilient Smallholder Initiative (see section 3.6) to showcase the Platform-of-Platforms approach with other PRIMA projects.
2. The activities related to “Artificial Intelligence and Machine Learning advanced analytics for correlated local resources discovery and mapping” (WP3) have been impacted by the challenges and the difficulties in developing the RESILINK digital platform and mobile application. As the priority was put on having a stable software to launch the evaluation program and the Living-Lab, AI activities will only start in July 2025. **One foreseen risk is that the AI module development time will be again longer than expected with little remaining time to fully test these functionalities before the end of the project**.

Acronyms List

Acronym	Explanation
KPI	Key Performance Indicator
ODEP	Orange Decentralized Exchange Place
PoC	Proof-of-Concept
WP	Work Package

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ACKNOWLEDGEMENT

This document has been produced in the context of the PRIMA RESILINK project. The RESILINK project consortium would like to acknowledge that the research leading to these results has received funding from the European Union through the PRIMA program.