



This project is part of the PRIMA Programme supported by the European Union

**RESILINK**

ACICT: Arab Company for Information and Communication Technology



Egypt

ARC: Agricultural Research Center



Egypt

INRA: National Institute of Agronomic Research



Morocco

Orange



France

UMCM: University Mohammed-Chérif Messaadla Souk-Alnas



Algeria

USMS: University Sultan Moulay Slimane



Morocco

UPPA: University of Pau & Adour Country



France

WAZIUP eV: WAZIUP association



Germany

# RESILINK

INCREASING RESILIENCE OF SMALLHOLDERS WITH MULTI-PLATFORMS LINKING LOCALIZED RESOURCE SHARING

## Innovating in Platform-of-Platforms Approaches for Increased Resilience Targeting Smallholder Farmer Communities

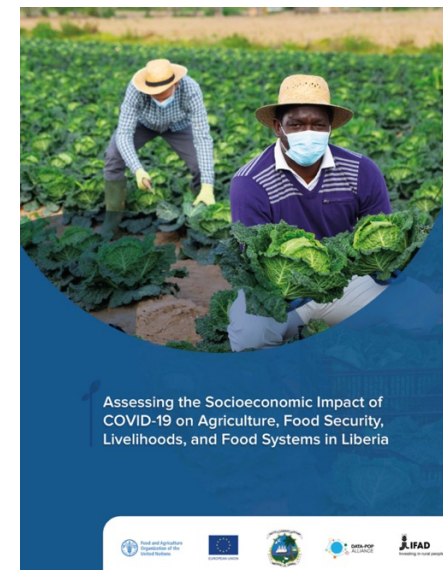


# A BIT OF CONTEXT

COVID-19 made us realized that severe crisis can dramatically restrict physical movement

reducing access to essential resources and services by disrupting supply chains, closing facilities & markets

Smallholder farmers are one of the first to be impacted





# THE RESILINK PROJECT

## PRIMA: Partnership for Research and Innovation in the Mediterranean

### 2021 CALL in Agrofood chain thematic

Topic 2.3.1 Increasing the resilience of small-scale farms to global challenges and COVID-like crisis by using adapted technologies, smart agri-food supply chain and crisis management tools

<https://prima-med.org/>



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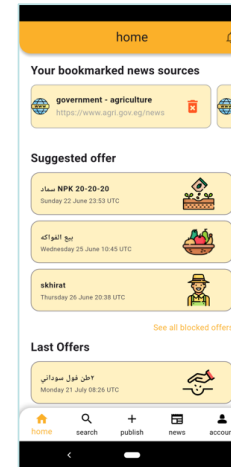
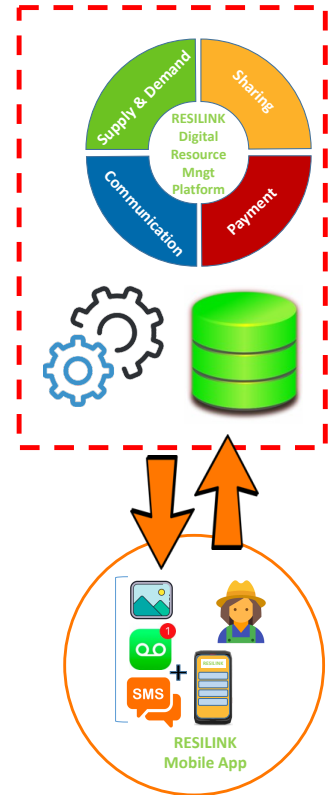


# WHAT RESILINK IS DOING?

Identify needs & expectations when providing Digital Tools for crisis situations

Develop the core components of a Digital Platform to share local resources

Develop a demonstrator with a mobile application for validation in Living-Labs



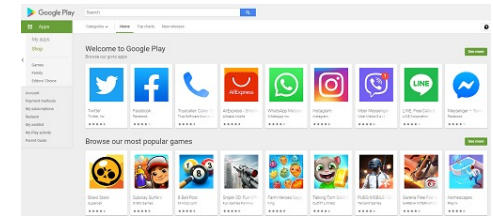


# YET ANOTHER DIGITAL PLATFORM?

Already a lot of digital platforms! They are key element of the digital transformation



But each new digital platform or app tries to create its own community!

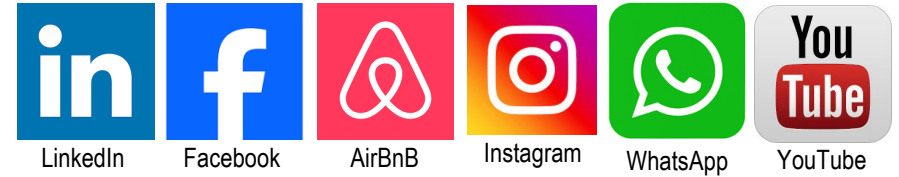


Sharing between communities is not their objective  
→ competition and isolation





# NO "ONE APP FITS ALL"



Competition → Isolation → Fragmented ecosystems ☹️

A platform-of-platforms approach will promote a much wider and appealing ecosystem 😊

→ Platforms for specific agricultural sectors

→ Discover resources/services from other platforms

→ No isolation



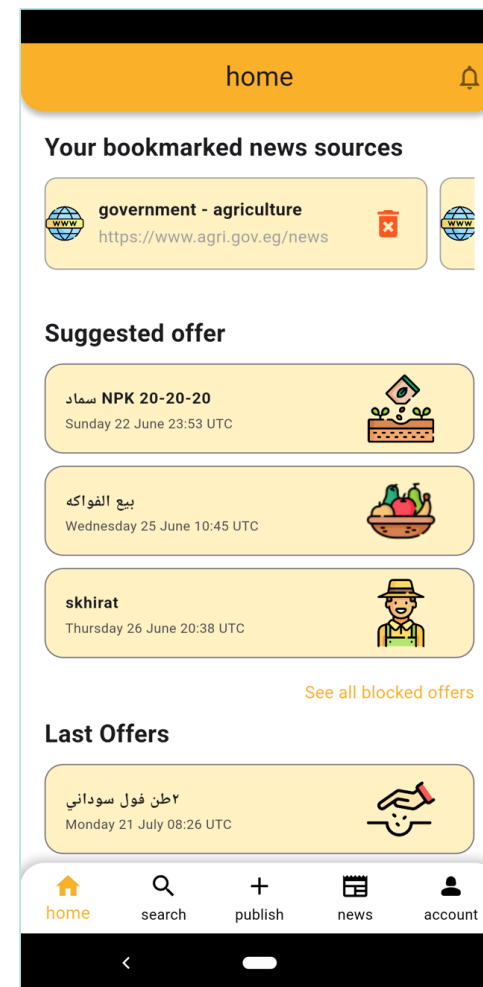


# THE RESILINK DEMONSTRATOR

The RESILINK mobile application allows farmers to publish & search for resources

It connects smallholders to sharing opportunities, local distribution channels

Provides quick links to news & alarms from governmental agencies





# THE INNOVATIONS BEHIND THE APP!



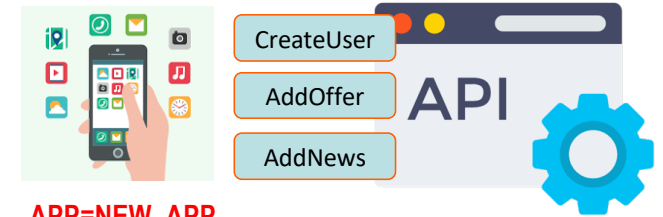
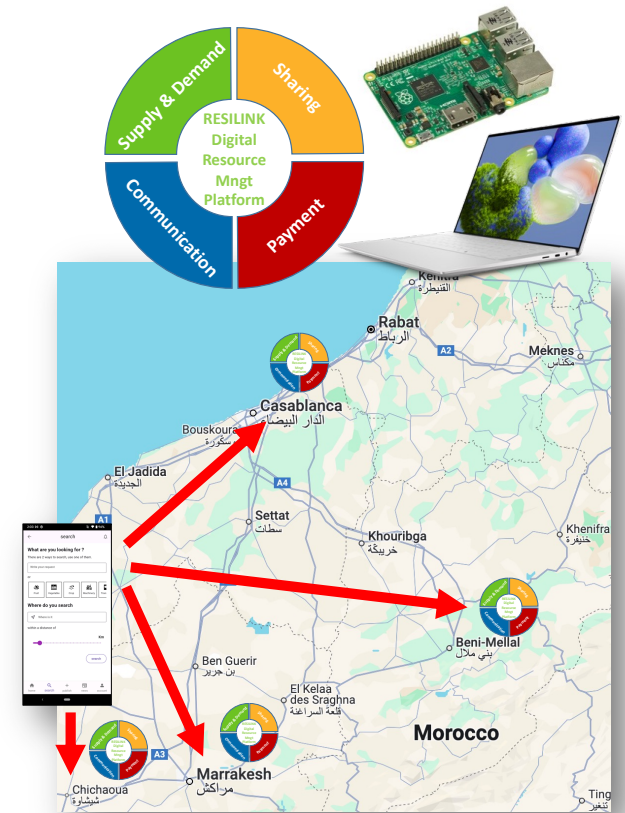
Develop lightweight Digital Platforms that can be quickly & locally deployed



Digital Platforms can be incrementally deployed for various geographical areas



Open API enables Platform-of-Platforms approach to extend the ecosystem



APP=NEW\_APP



# TRADITIONAL DIGITAL PLATFORMS vs LIGHTWEIGHT SERVERS

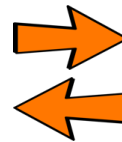
✓ Develop lightweight Digital Platforms that can be quickly & locally deployed

Digital Platforms can be incrementally deployed for various geographical areas

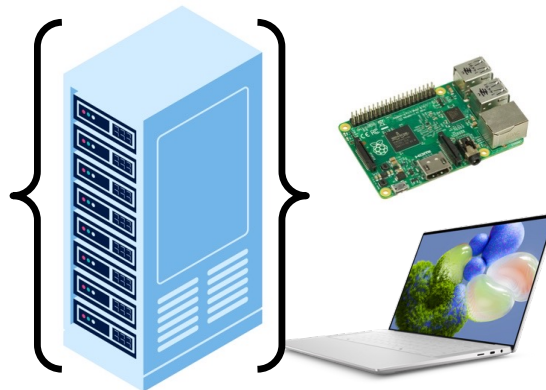
Open API will enable Platform-of-Platforms approach to extend the ecosystem



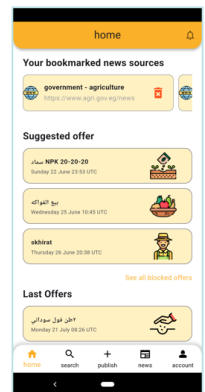
BACK-END



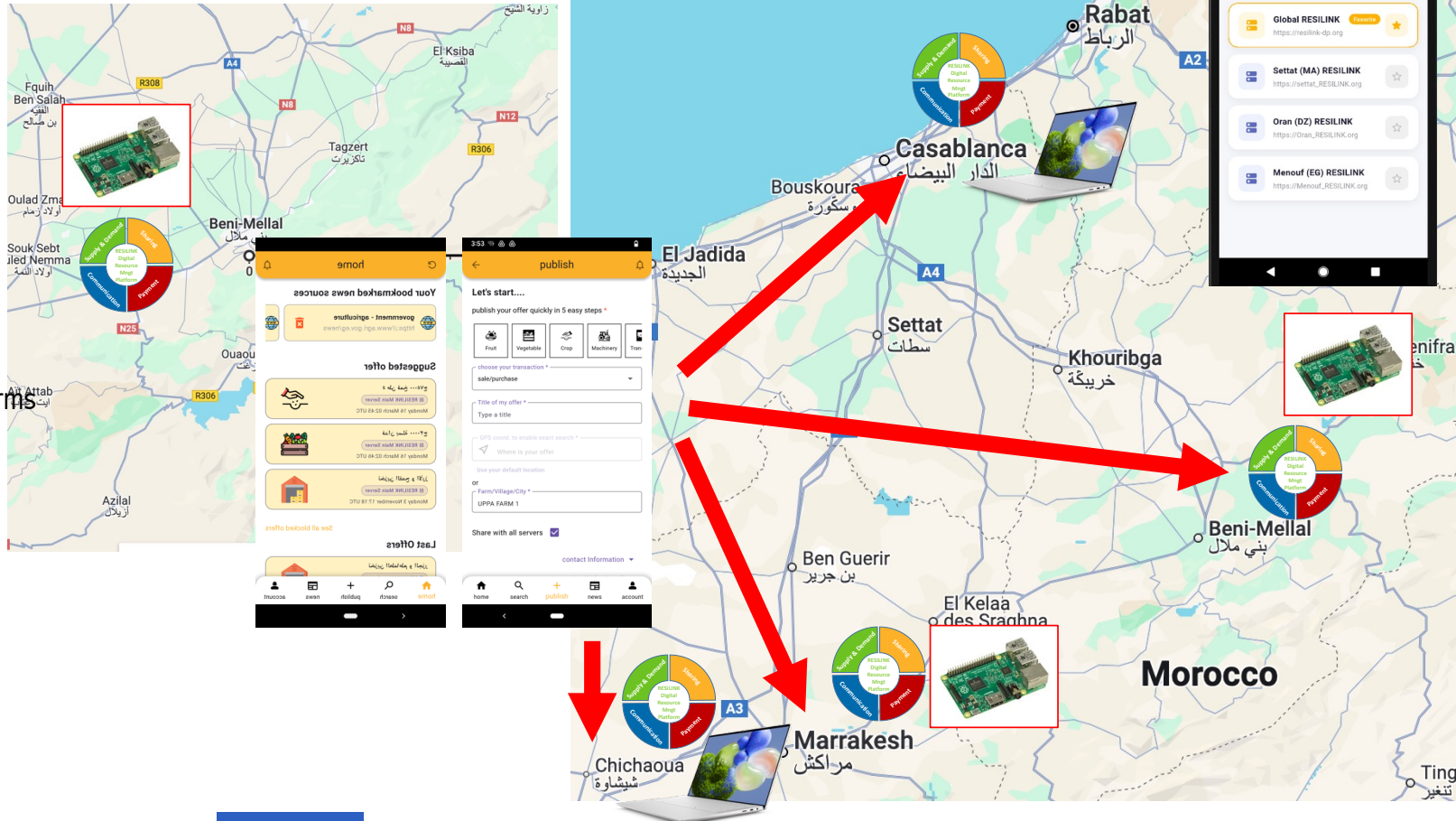
FRONT-END



RESICO LINK



# INCREMENTAL DEPLOYMENT OF SERVERS ACCORDING TO NEW NEEDS



Develop lightweight Digital Platforms that can be quickly & locally deployed

✓ Digital Platforms can be incrementally deployed for various geographical areas

Open API will enable Platform-of-Platforms approach to extend the ecosystem

Prof. Congduc Pham  
http://www.univ-pau.fr/~cpham



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# QUICK DEVELOPMENT OF NEW PLATFORMS, STIMULATING LOCAL INNOVATIONS

Fast development of new applications by local entrepreneurs

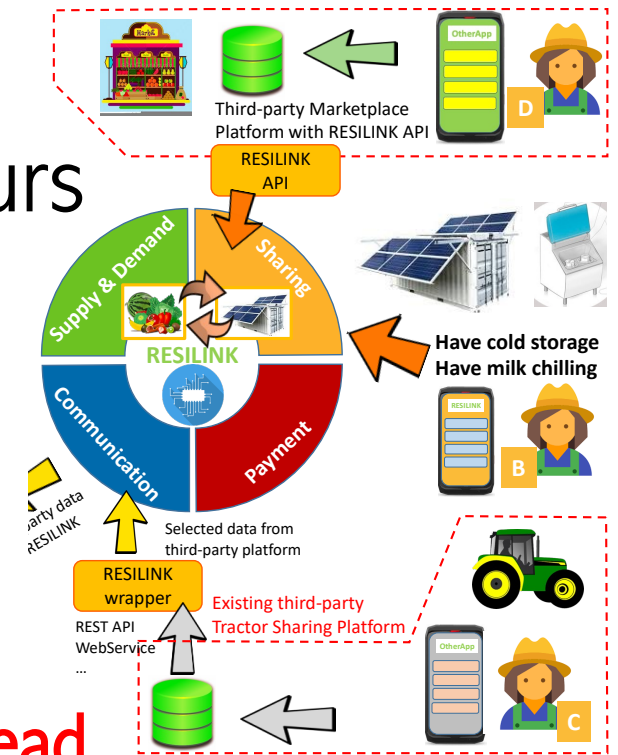
Develop lightweight Digital Platforms that can be quickly & locally deployed

Digital Platforms can be incrementally deployed for various geographical areas

Open API will enable Platform-of-Platforms approach to extend the ecosystem

New applications will bring new functionalities for specialized needs

**Open API = Collaboration instead of Isolation !**





# ORANGE'S LOCKITSOLAR DEMONSTRATOR

LockItSolar is a demonstration application showcasing how to leverage the RESILINK API for building a solar product marketplace.

Develop lightweight Digital Platforms that can be quickly & locally deployed

Digital Platforms can be incrementally deployed for various geographical areas

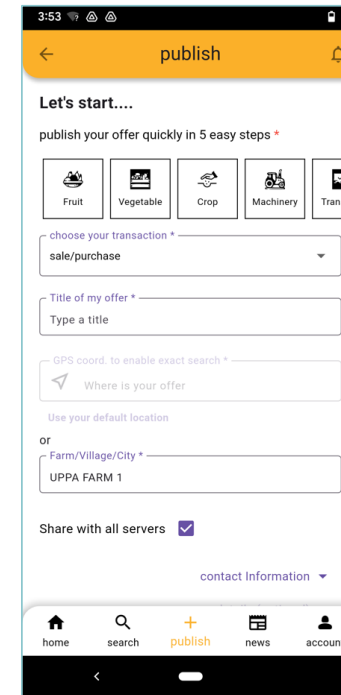
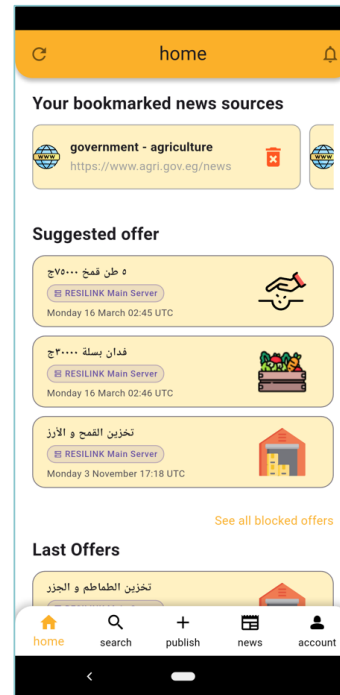
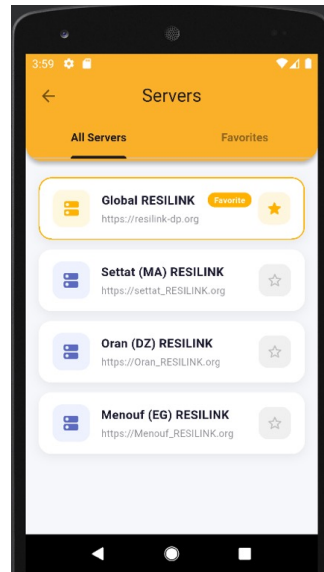
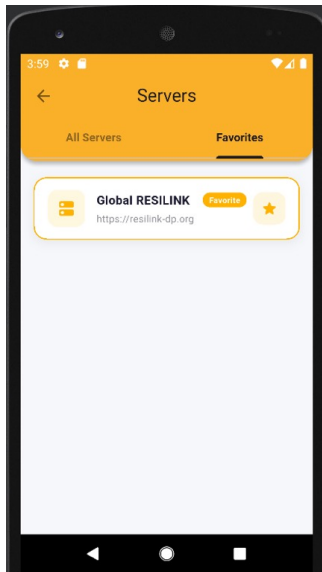
✓ Open API will enable Platform-of-Platforms approach to extend the ecosystem

Product Name	Price / Location	Key Features	Buttons
Kit Arrosage Automatique	150 D / mois (location)	Pompe solaire automatique matin et soir, aspire depuis tonneaux / puits jusqu'à 2m Débit max : jusqu'à 30L par jours.	Voir l'offre, Contacter
Kit irrigation solaire	A négocier	Jusqu'à 42L/min, panneau + contrôleur de pompe + batterie	Voir l'offre, Contacter
Kit solaire pour chambre froide	Sur devis	Convertisseur 23 Volts, 2 panneaux solaires + batterie, Câbles & guides d'utilisation.	Voir l'offre, Contacter



# THE PLATFORM-OF-PLATFORMS ECOSYSTEM

- Several servers can be deployed and selected
- Offers can be shared across servers and applications





# RESILINK: LIVING-LABS

1 year Living-Labs participatory program, Jan. 25 to Jan. 26

Several sessions from 2 weeks to 3 months

Algeria, Egypt & Morocco: +130 farmers, +25 stakeholders & decision-makers





# INTERVIEWS, TESTS & LIVING-LABS

RESILINK received a lot of support from smallholder farmers!

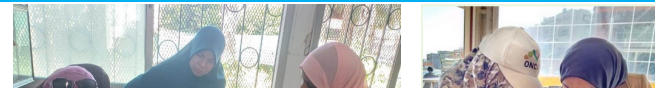
March 2023 to Oct. 2023 in Algeria, Egypt and Morocco



**IT IS IMPORTANT TO CATCH SOCIOLOGICAL ASPECTS AND UNDERSTAND THE FARMER'S EXPECTATIONS**

Jan 2024 to May 2024

From March 2023 to May 2024, a series of workshops and interviews with questionnaires and then with the RESILINK mobile application mockup have been conducted by our Algerian, Egyptian and Moroccan research teams to ensure that proposed functionalities meet the farmers' needs and expectations. It was a great source of information to prepare the piloting in Living-Lab mode. Congrats to UMCM (Algeria), ARC (Egypt), INRA & USMS (Morocco) for their hard work!



**WE WANT TO THANK FARMERS & STAKEHOLDERS FOR THEIR COMMITMENT & FEEDBACK!**





# INTERVIEWS, TESTS & LIVING-LABS

## RESILINK received a lot of support from smallholder farmers!

**Dec. 10th, 2024, Morocco**

Dec. 10th, 2024. As part of the RESILINK Evaluation Program, INRA in Morocco has started sessions to install and use the RESILINK Mobile Application. The Evaluation session was 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 in a manner, easing the collection of feedback after the installation and the demonstration of



**Nov. 18th, 2024, Egypt**



**Dec. 26th, 2024, Morocco**

ORGANISE  
**UNE FORMATION**  
L'INNOVATION TECHNOLOGIQUE AU SERVICE D'UNE AGRICULTURE RÉSILIENTE

JEUDI 26 DÉCEMBRE 2024  
FACULTÉ POLYDISCIPLINAIRE, BENI MELAL  
[HTTPS://RESILINK.EU](https://resilink.eu)

MODÉRATION: Pr. Samira KRIMISSA  
COORDINATION: Pr. Mustapha NAMOUS, Pr. Abdenbi ELALOU

**Jan. 5-6, 2025, Egypt**



**Nov. 19th, 2024, Morocco**

DÉPARTEMENT DES SCIENCES DE LA TERRE  
MASTER GÉOMATIQUE ENVIRONNEMENTALE

ORGANISE  
**WORKSHOP**  
AL MOUTMIR ET SES SERVICES DE VULGARISATION AGRICOLE

MARCHÉ 19 NOVEMBRE 2024  
MAGASIN DES CONFÉRENCES  
FACULTÉ DES SCIENCES ET TECHNIQUES, BENI MELAL

COORDINATION: Pr. Abdelghani BOUDHAR, Pr. Abdenbi ELALOU



Prof. Congduc Pham  
<http://www.univ-pau.fr/~cpham>



This project is supported by the European Union



# ALL SOFTWARE ARE OPEN SOURCE!

The BACK-END server is open source



 RESILINK\_BackEnd\_Server Public  
forked from [ZiQuwi/RESILINK\\_BackEnd\\_Server](#)

The demonstrator mobile application FRONT-END developed with Flutter is open source



 RESILINK-Mobile-App Public  
forked from [ZiQuwi/RESILINK-Mobile-App](#)

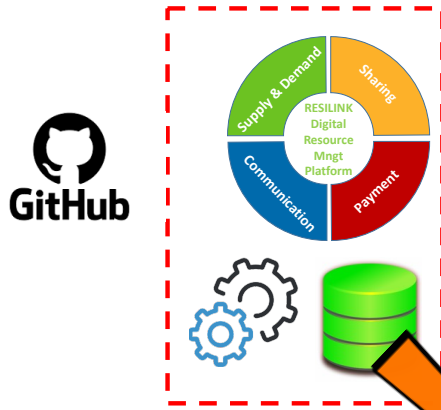
Documentations are available to install & deploy BACK-END

The demonstrator mobile app is an example of mobile app FRONT-END that can further be adapted & customized



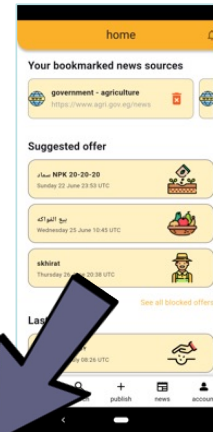
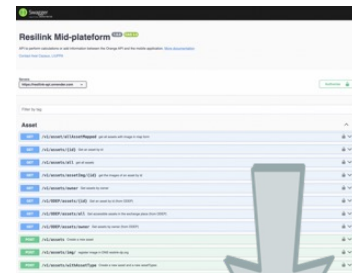
# TAKE THE MOST OUT OF GEN AI!

## BACK-END SERVER

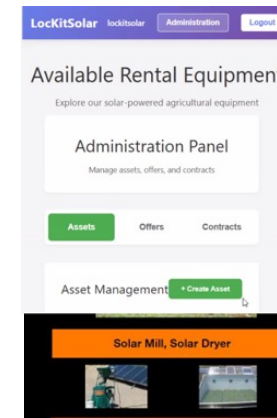


## RESILINK MOBILE APP DEMONSTRATOR

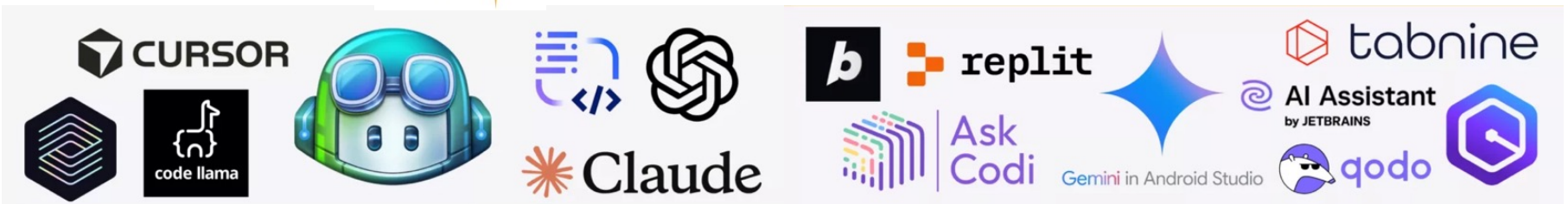
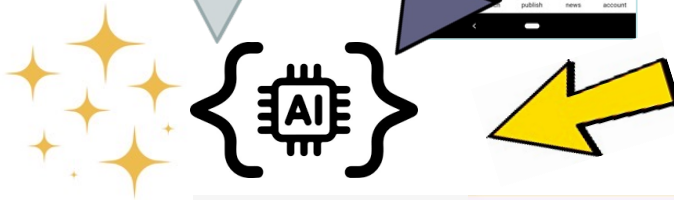
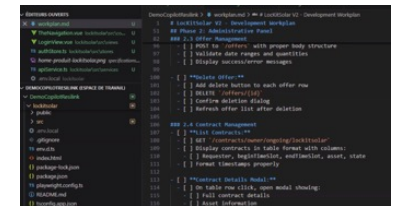
### OPEN API



## ORANGE'S DEMONSTRATOR FOR SOLAR KIT RENTAL

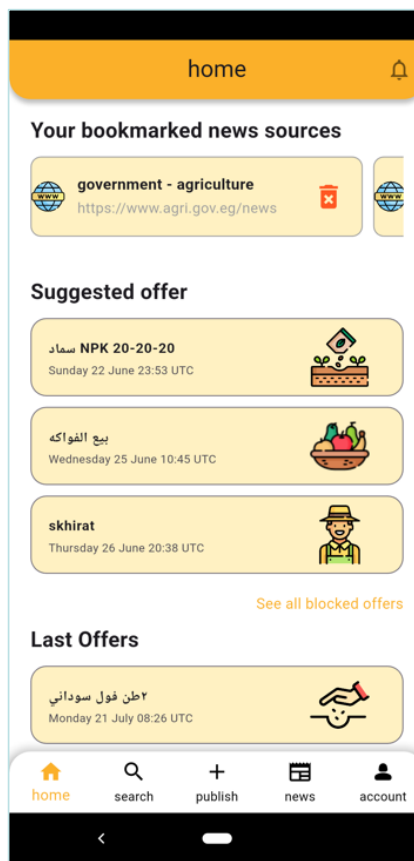
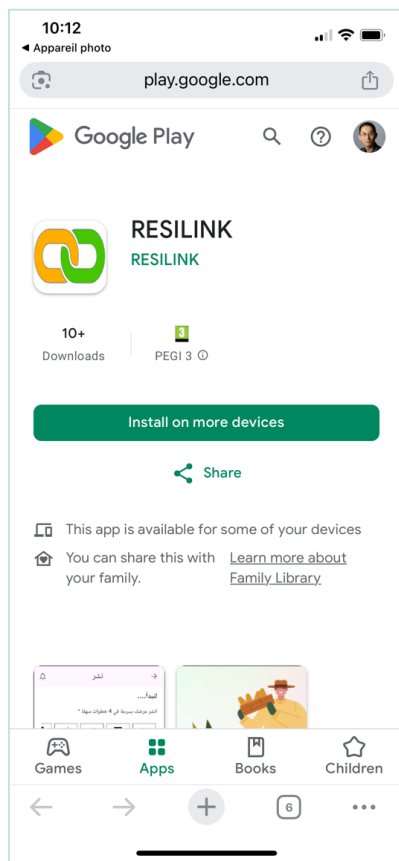


## DEMO BY ORANGE WITH COPILOT





# RESILINK MOBILE APP ON GOOGLE PLAY



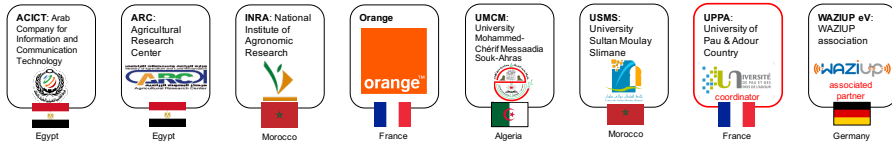
INSTALL THE APP  
CREATE AN ACCOUNT  
AND START PUBLISHING OFFERS  
TO CREATE A COMMUNITY



FLASH TO INSTALL



# ACKNOWLEDGEMENTS



**Thank you!**  
**FARMERS, STAKEHOLDERS,**  
**COLLABORATORS, ETC.**



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