PRIMA
PARTNERSHIP FOR RESEARCH AND INNOVATION IN THE MEDITERRANEAN AREA

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

RESILINK

DIGITAL PLATFORMS FOR INCREASING SMALLHOLDERS' RESILIENCE: FACILITATING DIGITAL TRANSITION AND STIMULATING LOCAL INNOVATION

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UNIVERSITÉ DE PAU ET DES PAYS DE L'ADOUR

LIUPPA

INOVFARMER Better fruit from smart business · MED-LINKS · PRIMA IN THE MEDITERRANEAN AREA · FAIRCHAIN · RESILINK

FIRST SYMPOSIUM MEDITERRANEAN

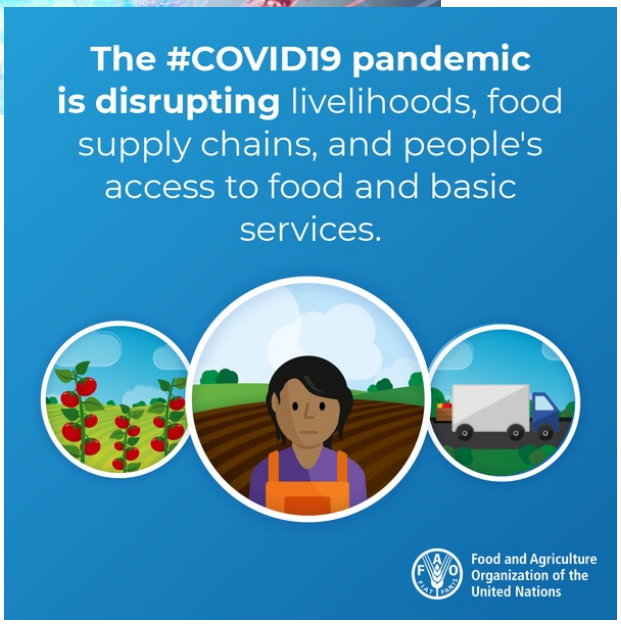
FRUIT: HUB FOR INNOVATION

16-17 May 2024

Hybrid Event

INRAE, Avignon- FRANCE

Towards more frequent crisis?



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PRIMA S2 2021 RESILINK

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https://prima-med.org/

- **P**artnership for **R**esearch and **I**nnovation in the **M**editerranean **A**rea
- **Call: Section 2 Multitopic 2021**
- Thematic Area 3-Agrofood chain
  - 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
- Implementation: June 1st, 2022 →May 31st, 2026 (4 years)

ACICT: Arab Company for Information and Communication Technology	ARC: Agricultural Research Center	INRA: National Institute of Agronomic Research	Orange	UMCM: University Mohammed-Chérif Messaadia Souk-Ahras	USMS: University Sultan Moulay Slimane	UPPA: University of Pau & Adour Country	WAZIUP eV: WAZIUP association
Egypt	Egypt	Morocco	France	Algeria	Morocco	France (coordinator)	Germany (associated partner)

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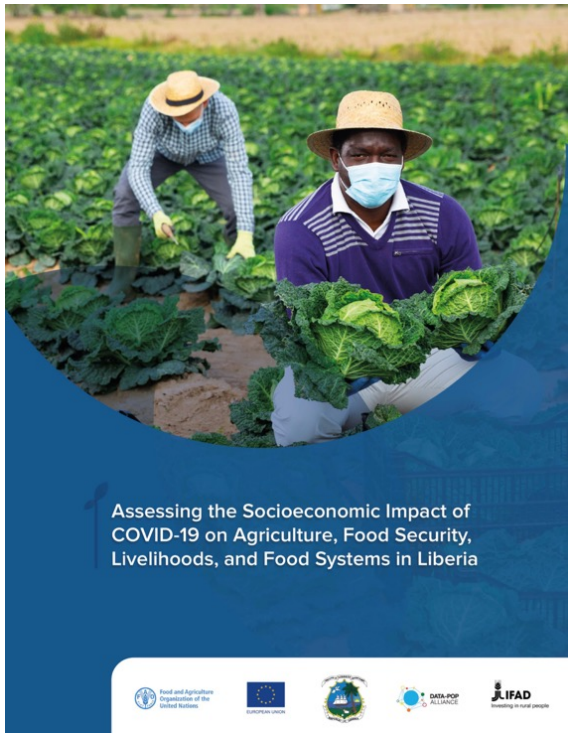
Smallholders are more vulnerable!

- Most (84%) of the world's 570 million farms are smallholdings
- Smallholder farmers: first to be impacted by climate change, unexpected crises. They are very economically fragile!



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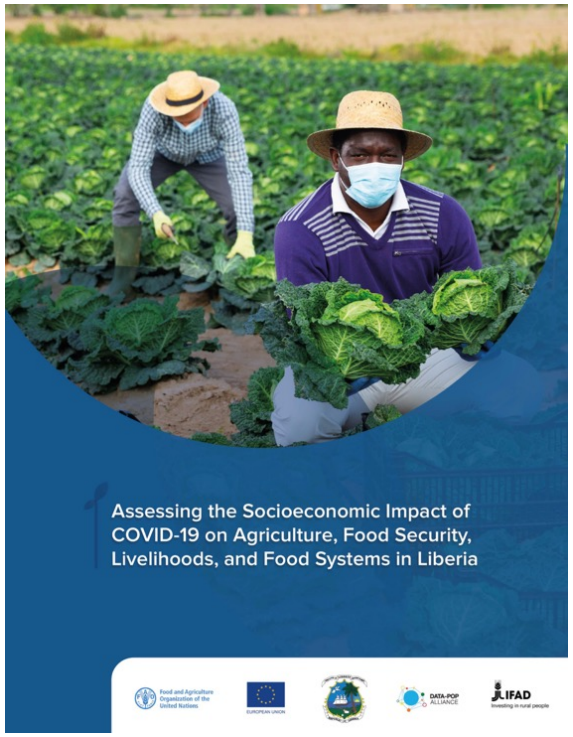
Increase smallholder's resilience?

- RESILINK will increase smallholder's resilience by providing continuity of access to both resources and markets in crisis situations
- → Digital platforms to promote localized usage of resources



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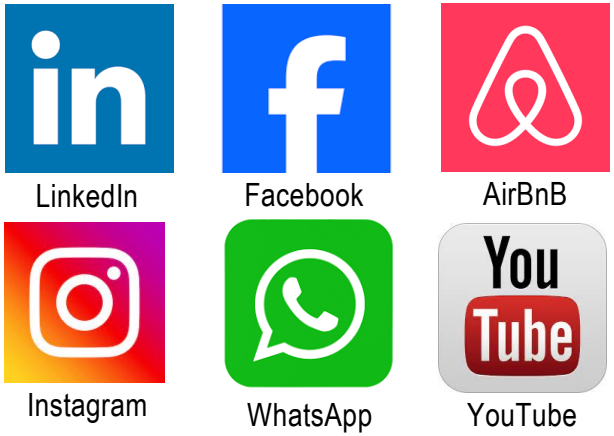
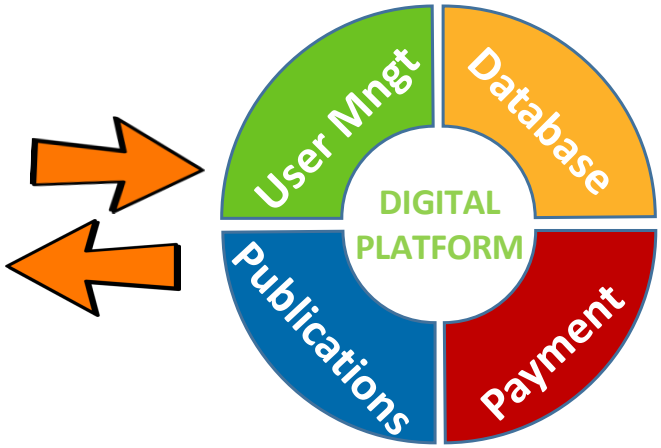
What is a digital platform?

- Very generally, it is a software component to enable services, interactions and possibly transactions among users
- Digital platform = more flexibility than a standalone application
- Many well-known "applications" are actually digital platforms offering key functionalities: user management, database, content storage & management, payment, …
- Web site or mobile apps are usually "front-end" to the platforms





Why digital platforms are useful?

- Social media platforms, knowledge platforms, sharing platforms, service platforms, …
- They can create communities! Community of Facebook users, of WhatsApp users, of AirBnB users, …
- For instance

> 12:00h - 12:10h — OC 04 - Argan fruit quality improvement through genetic selection

- We could create a community for Argan fruit lovers!
- People in the community could communicate, exchange, showcase, advertise, trade, sell, buy, rent, …
- They are a key element of digital transformation

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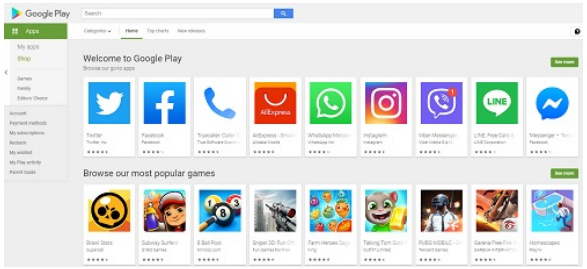
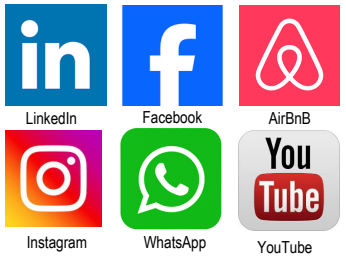
Going digital: digital transformation

- Create innovative & adapted digital servives





- Digital platforms are a key element of digital transformation for smallholders and the whole agri-food value chain
- BUT, smallholder farmers have less digital technologies experience
- For the smallholder communities, it is important to make digital technologies attractive & accessible → digital transition

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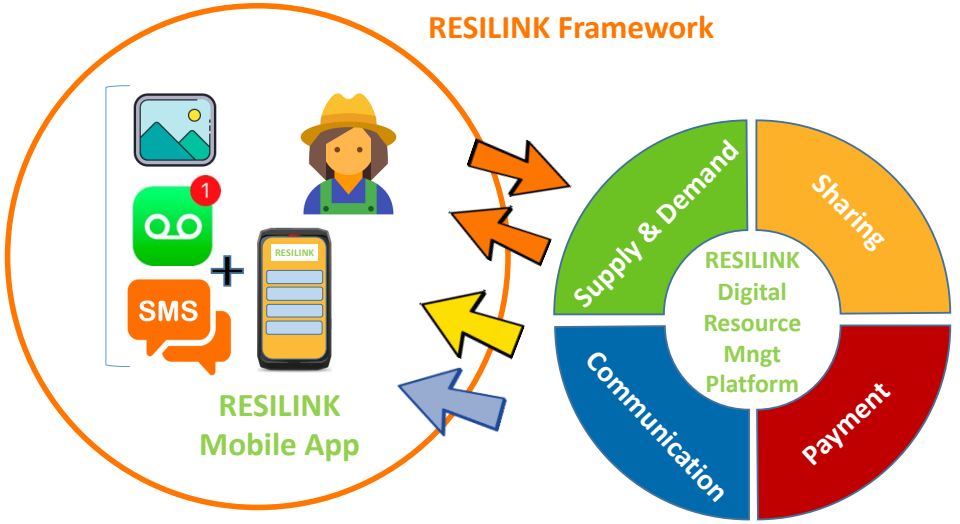
The RESILINK digital platform

- Will enable real-time exchange of information on territorial resources and supplies & demands; connecting smallholders to new supply, sharing opportunities and distribution channels

1. Improve the agri-food value chain by optimizing usage of local resources, generalizing local resource sharing approach and facilitating territorial markets
2. Develop distributed digital resource management platform for real-time exchange of information on territorial resources and supplies & demands; connecting smallholders to new supply, sharing opportunities and distribution channels
3. Use cutting-edge digital technologies to connect fields and farms resources, automatize and add intelligence in the agri-food value chain to provide simple application interfaces adapted to smallholders



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MEET THE NEEDS! RESILINK use case

- In crisis situation, smallholders wants to maintain continuity
  - Keep selling their products
  - Maintain access to inputs/products/services related to their activities
- BUT, it is NOT ONLY "Yet Another E-commerce Apps"!
- They may want to
  - Discover locally available resources/services related to their activities
  - Diversify beyond their traditional activities, distribute side products
  - Have more interactions with local agriculture services/agencies
  - Be informed of the latest news and/or regulations from official sources
- Perform all the above-mentioned tasks without changing the way smallholders interact, negociate & conclude transactions
- A new digital platform must MEET THE NEEDS!

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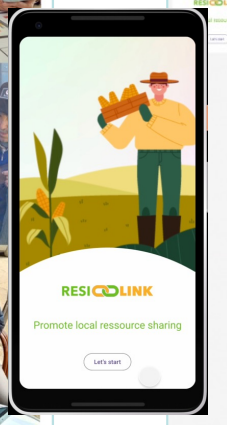
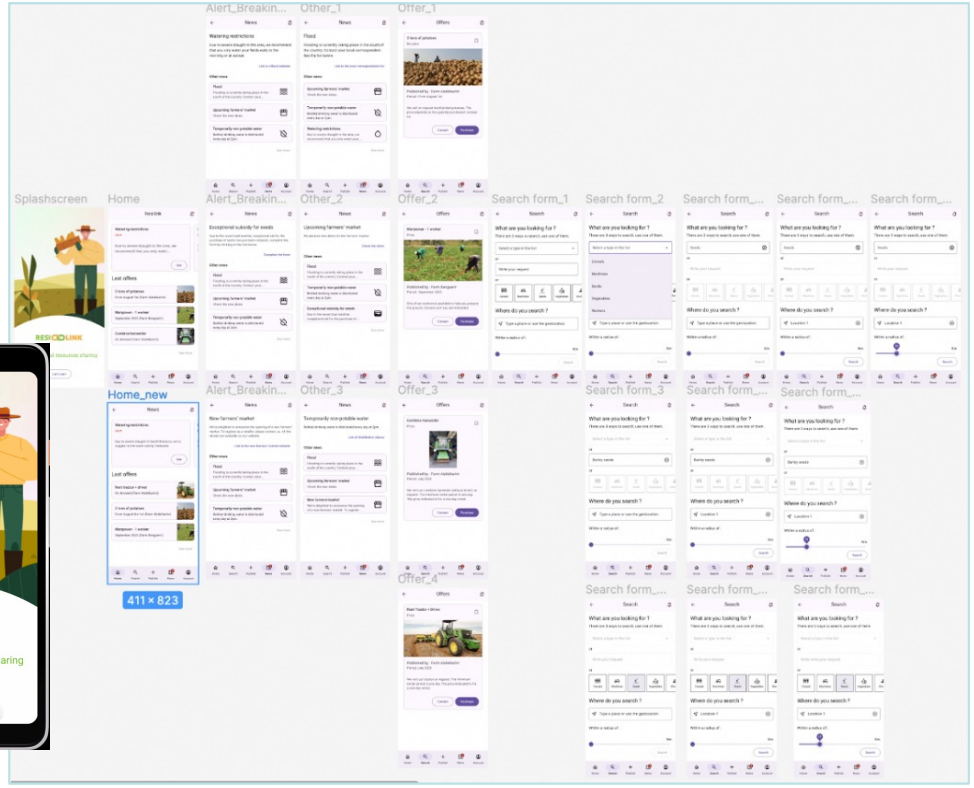
… and increase/ensure acceptability!

- Test & validate the new & innovative functionalities
- Test & validate User Experience & User Interface (UX/UI)

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!





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No "one app fits all"

- Each digital platform will create its community
- Sharing between communities is usually not proposed in traditional platforms → competition, isolation

LinkedIn Facebook AirBnB Instagram WhatsApp YouTube

- Enabling a platform-of-platforms approach will promote a much wider and appealing ecosystem
- Platform-of-platforms approach will allow
  - Specialized platforms to better manage specific agricultural sectors
  - Discover resources/services from other platforms → no isolation

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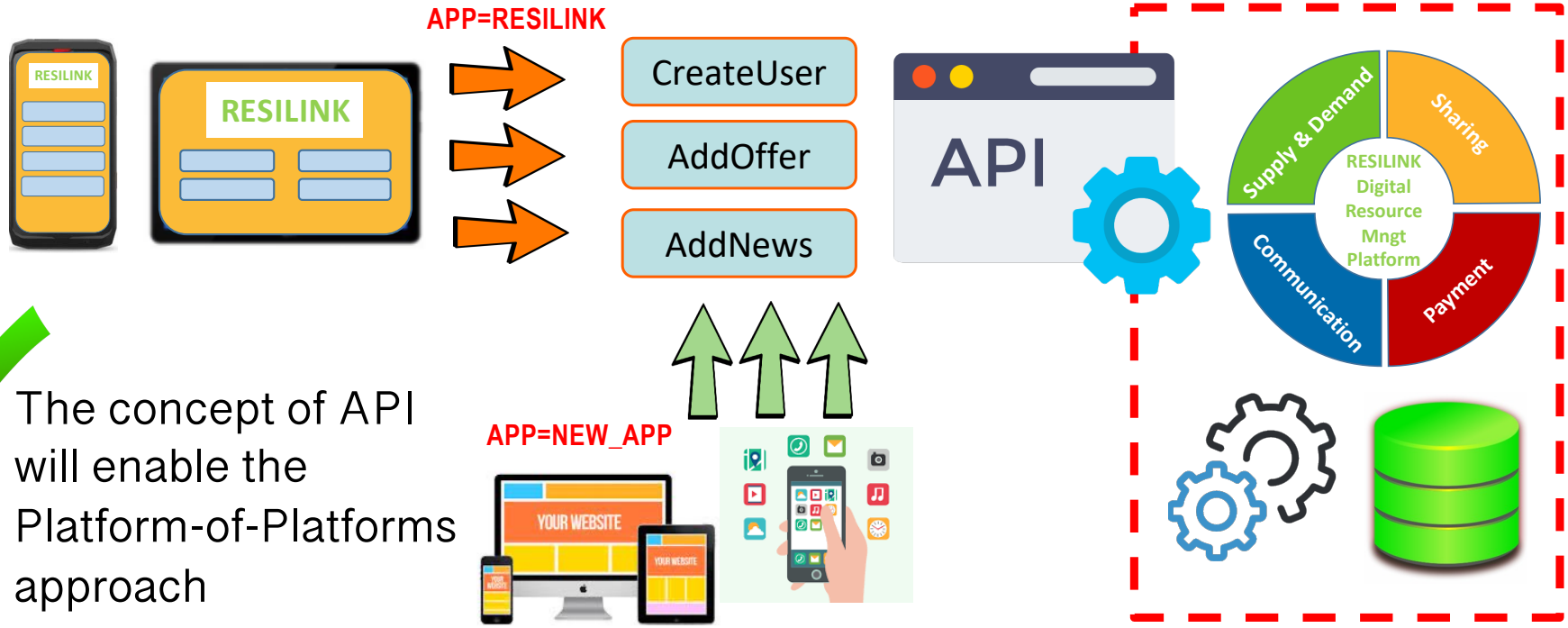
API: key to large adoption!

- API: Application Programming Interface
- Digital platforms > Applications thanks to API-oriented design
- →All functionalities/actions are accessible through an API call



The concept of API will enable the Platform-of-Platforms approach

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Stimulating local innovation?

- Creating a digital platform is a major development effort!
- A new platform will also need to build its own community!
- Entrepreneurs may step back because of these challenges!

- RESILINK will design and propose an Application Programming Interface (API) for the development of new resource sharing platforms
- The open API will reduce development time & complexity of new platforms
- All platforms can fully inter-operate and a new platform can benefit from all the other platforms' communities by sharing users & contents

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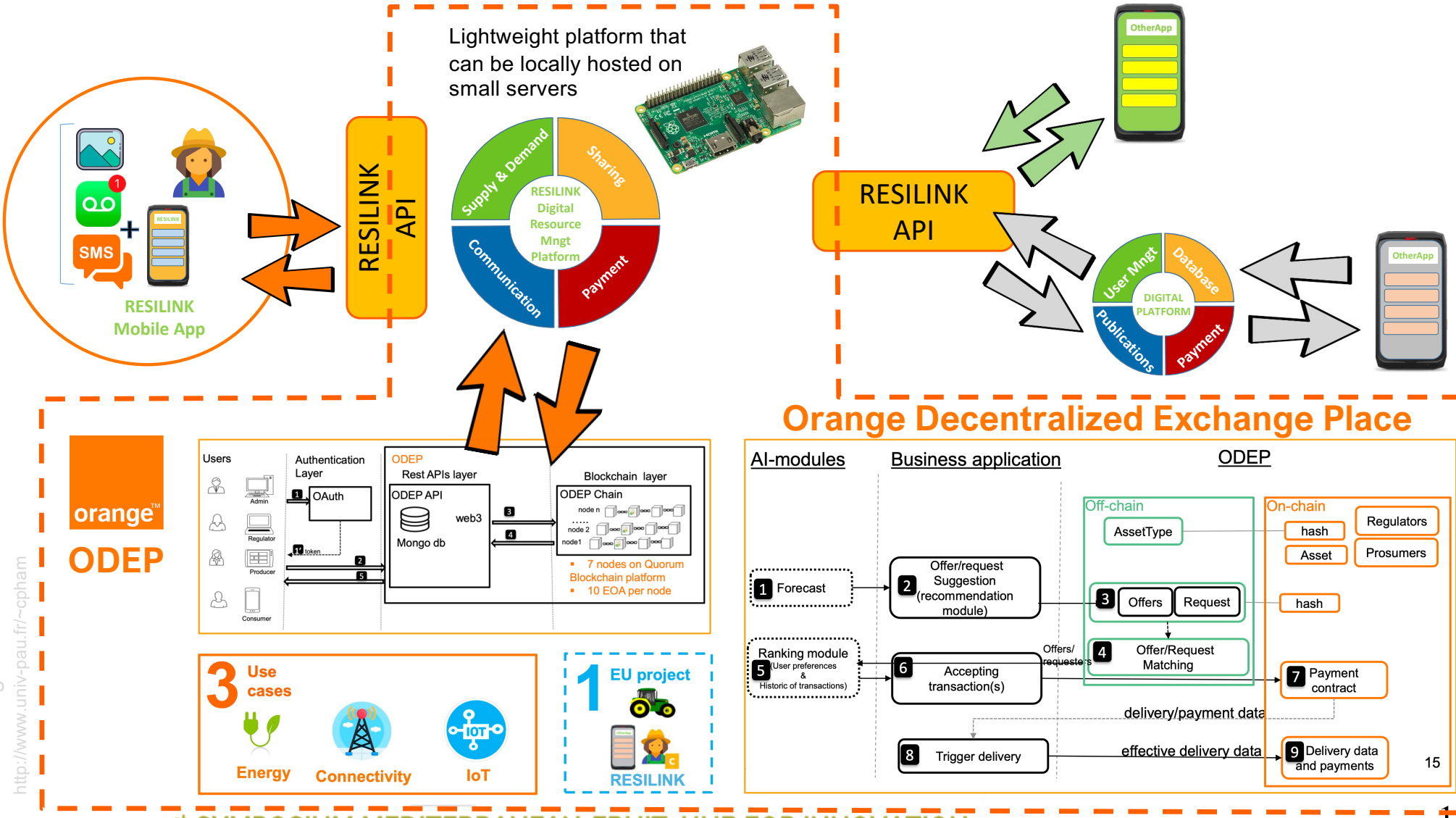
RESILINK's building blocks



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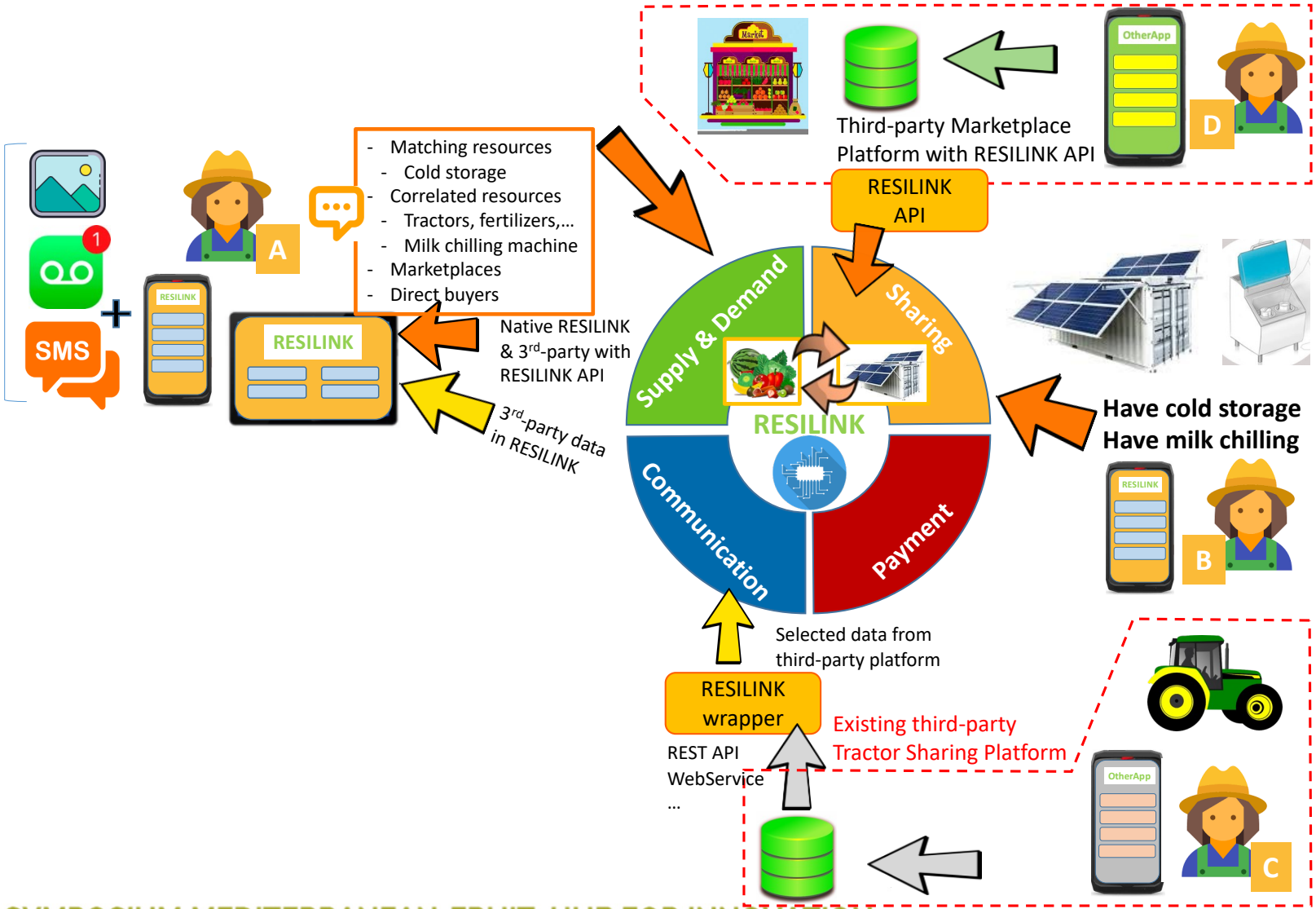
RESILINK big picture



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Conclusions

- Digital platforms can contribute to the overall ambition to innovate in the whole agriculture/farming value chain
- However, targeting smallholder communities is not simple
  - Technology readiness
  - Technology acceptability
  - Technology cost
  - Technology simplicity
- Designing a good digital platform needs transdisciplinary research …
- … and transdisciplinary needs a lot of meetings & discussion!
- Sometime, transdisciplinary research may lead to frustration!
  - Tradeoff in complexity & accuracy
  - Tradeoff in results & impacts

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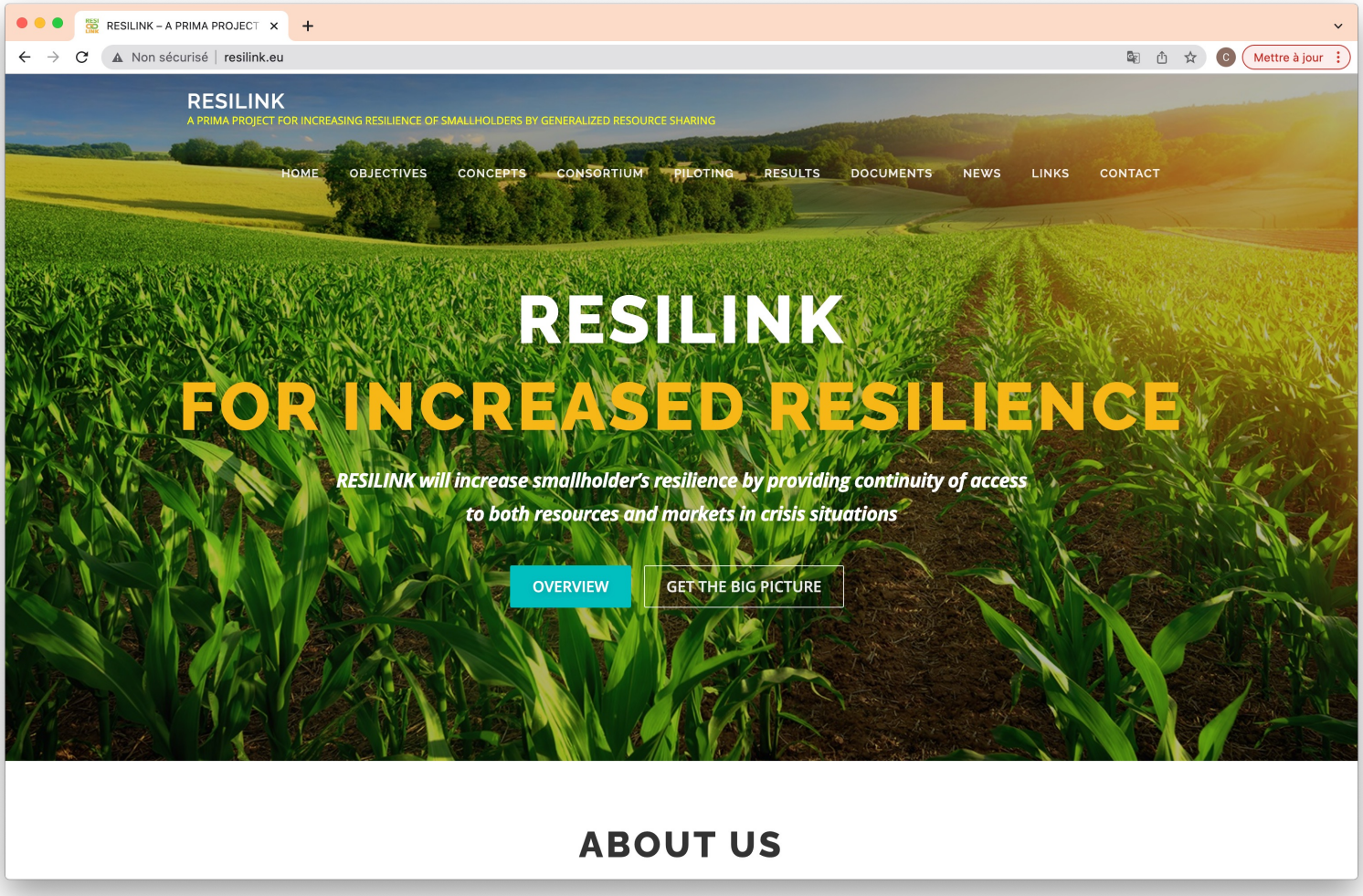
Web site: https://resilink.eu



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