# A living lab putting digital technologies at the service of agro-ecological transition within the territories of Occitanie

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# Agriculture and food: two majors stakes!

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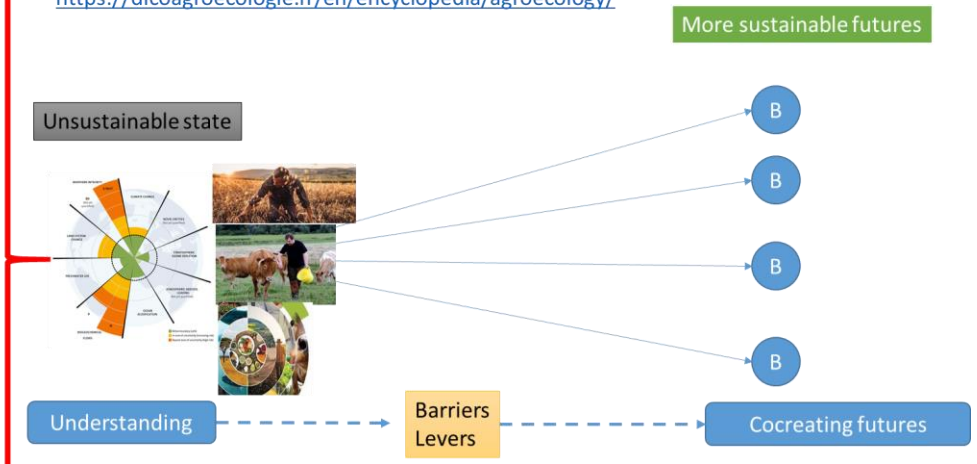
## Context

Agroecology aims to promote sustainable food systems, respectful of people and the environment. These systems involve agricultural production methods and sectors which value the ecological, economic and social potential of a territory.

https://dicoagroecologie.fr/en/encyclopedia/agroecology/




digital technologies can be a lever

**Agriculture**

- Reduction of the environmental footprint of agricultural production (expected 20-30% decrease),
- Optimal adaptation to climate change,
- Increase farmers' income
- Improved agricultural career attractivity

**Food system**

- improved access to local food products
- Track products
- Increase efficiency and sustainability of supply chain (less losses)

- Test new digital solutions to help the transition to agroecology
- Test in a real-world environment
- As agriculture is diverse, develop innovative projects for a variety of agricultural systems (arboriculture, apiculture, livestock, field crops, viticulture and horticulture) and local food systems.
- **Include local and regional stakeholders, farmer communities, local authorities, agricultural development actors, AgTech firms, citizens as well as researchers, engineers, technicians, and academics**
- Develop/deploy methods over an archipelago of **13 Living Labs** across the Occitanie Region

# Seven open-labs

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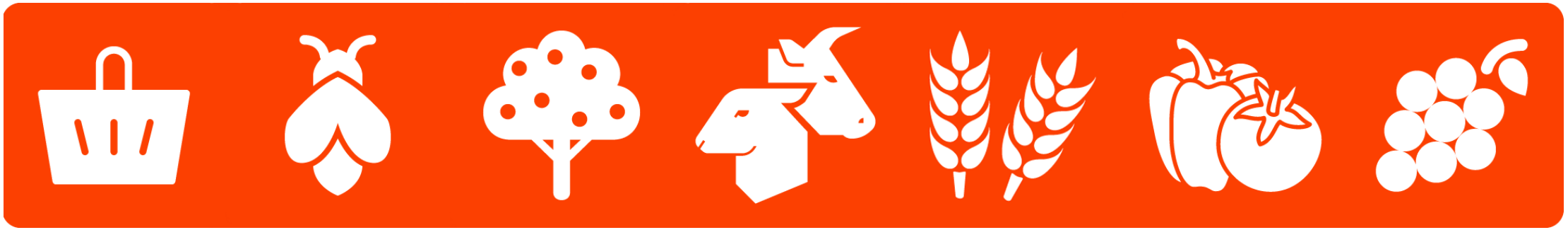
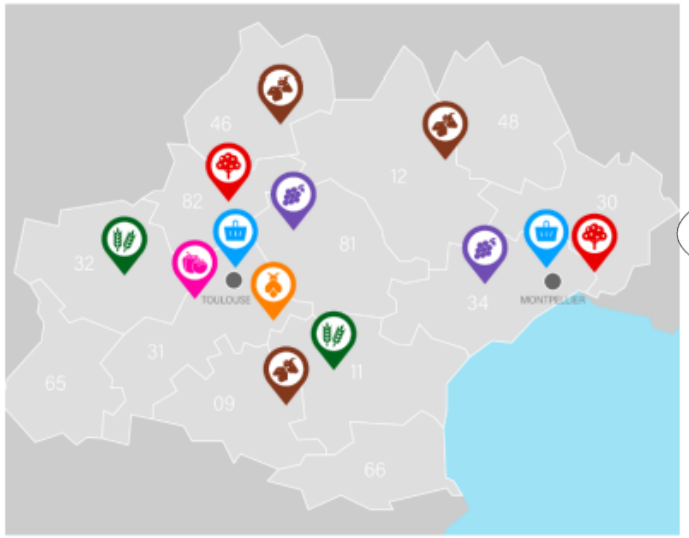
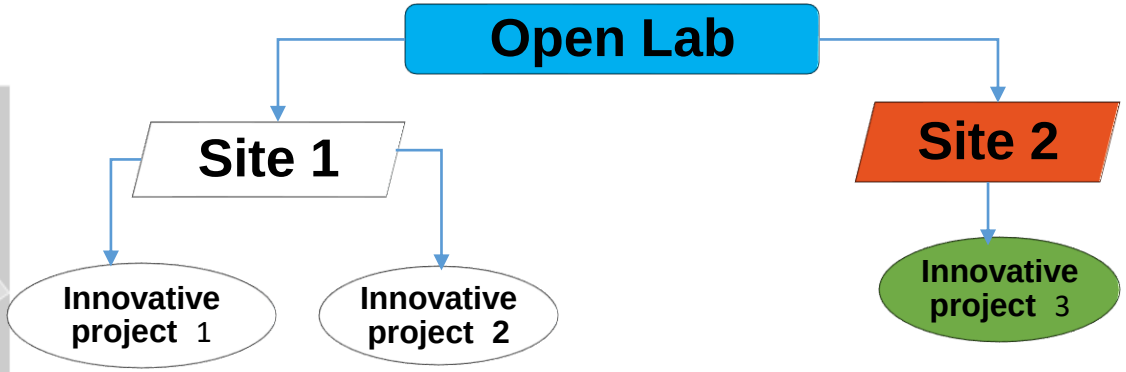


- Build LOCAL SUPPLY CHAINS based on sustainable logistics
- Help APICULTURE while promoting biodiversity and agroecology
- Improve ARBORICULTURE production with greater moderation (in input terms) and diversify sources of income
- Enhance animal welfare and enhance the value of grass-fed LIVESTOCK systems
- Support FIELD CROP cconversion to agroecology and diversify sources of income
- Deploy « Low tech High tech » solutions for production systems in HORTICULTURE
- Prepare VITICULTURE to address climate and environmental challenges




## People involved

- Technology users (farmers and advisor)
- Companies providing the technology
- INRAE in charge of technology assessment
- Local actors (community civil society)
- Any other stakeholder essential to the innovation project

# Governance

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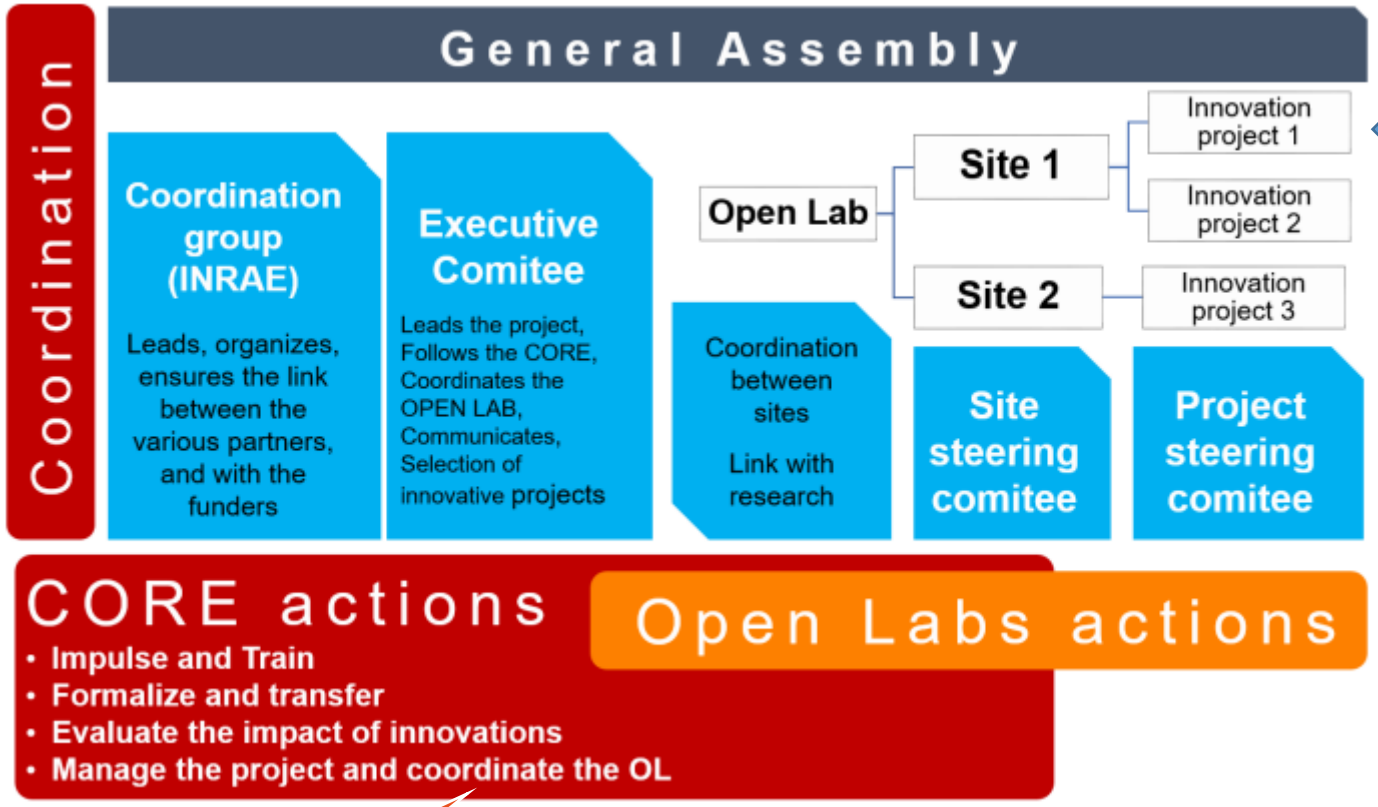


Prototyping
Research
Development
Data
Evaluation
Teaching

How to work to codevelop innovative project

Need innovative methods

Agroecology
and/or
Sustainable food system

Numerical

Multiple
stakeholders

Link to the territory

Open Innovation

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Le Living Lab Agroécologie Numérique en Occitanie

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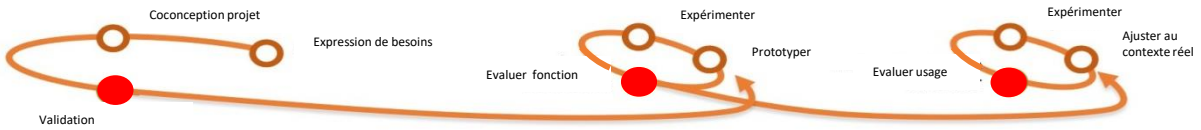
| Organising Open lab sites | Designing innovative projects | Run innovative projects |
|---|---|---|




**Sprouting ideas** | **Building a project** | **Prototyping** | **Pilote**

TRL/SRL

- Gathering actors
- Starting an Occitanum project?
- Integrating new partners
- Link with the territory?
- Civil society  involvment?

- Eligibility criteria
- Planning projects
- Upscaling

- Assessment
- intellectual property
- Finance
- AgTech companies

# Codesigning an innovative project

1. Identify the chain of services based on needs

2. Where is the numeric in the chain of services

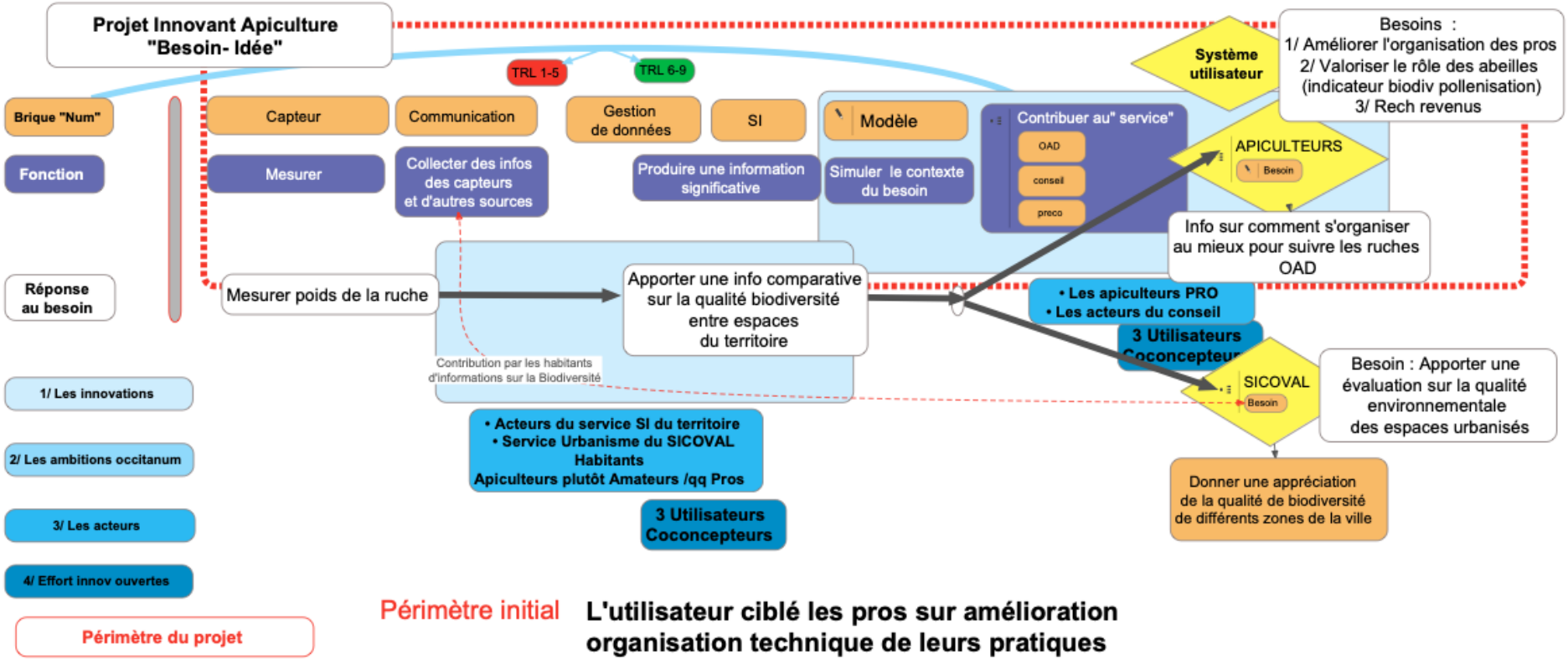
3. Functions of the numeric stones

4, Innovations

5. How does that fit with Occitanum

6. Partners to involve

7. Effort needed of open innovation




Périmètre initial

**L'utilisateur ciblé les pros sur amélioration organisation technique de leurs pratiques**

2 points faibles :

- Contribution agroécologie
- TRL de la brique technique Modèle non analysé

# Some key figures

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- ✓ 46 partners including 8 founding organizations
- ✓ 3 local authorities
- ✓ 10 communities of users, farmers and consumers
- ✓ 18 agricultural development organizations.
- ✓ 8 founding AgTech companies
- ✓ 5 Research - Training - Transfer institutions
- ✓ 3 facilitators
- ✓ 1 common resource center
- ✓ 7 thematic Open Labs
- ✓ 13 field experimentation sites
- ✓ 14 multidisciplinary research units
- ✓ A budget of €100 million (grants and investments)
- ✓ 8 years to experiment, build and disseminate

## Research, teaching, transfer

IFV – Institut Français de la Vigne et du Vin
Institut de l'Elevage idele
acta – Les Instituts Techniques Agricoles
INRAE
l'institut Agro – agriculture • alimentation • environnement
SupAgro Montpellier

## Territories governance

La Région Occitanie Pyrénées · Méditerranée
SICOVAL – Le Sud-Est Toulousain
Le Muretain Agglo

## Development partners

Agricultures & Territoires – Chambre d'Agriculture Occitanie
La Coopération Agricole Occitanie
SUDEXPÉ
CEFEL
ADA Occitanie
09 11 12 31 32 82 34 81 66 65 46
#COFARMING
EZ – Earth observation Living Labs
AGRI SUD-OUEST INNOVATION

## Enterprises

### AG TECH

itk
api-agro
terraNIS
promus
Sun'Agri
naïo technologies
BeeGuard
OKP4 smart FARMERS

## End-users

Arterris – L'Art de la Terre
Roquefort – Garanti d'origine et de qualité
La Bastide – Créateur de vins de légende
Capel – Groupe coopératif agroalimentaire
Les Vignerons de Florensac
HUM'AGRI – Pour le développement d'une agriculture vivante de territoire
OVALIE INNOVATION
cofruid'oc – Méditerranée – Producteurs de vraies saveurs
Arbo – novateur