OccitaNum

The Digital Agroecology Living Lab in Occitanie

A Multilevel Evaluation Approach of Agroecological Living Labs: The Occitanum Case

Alexia Gobrecht, INRAE, France

& co-authors

Flore Barcelini (CNAM), Véronique Bellon-Maurel (INRAE), Jacques-Eric Bergez (INRAE), Cécile Bruère (INRAE), Pierre-Benoit Joly (INRAE), Jean Larbaigt (INRAE), Giulia Volpini (INRAE), Moustafa Zouinar (CNAM)

IF-ALL

Montreal 4-6 october 2023

HOW

a Living Lab
(and its embeded processes)

IS TRANSFORMING

the stakeholders, their practices, the processes, the society,

the environment, the public policies etc … ?

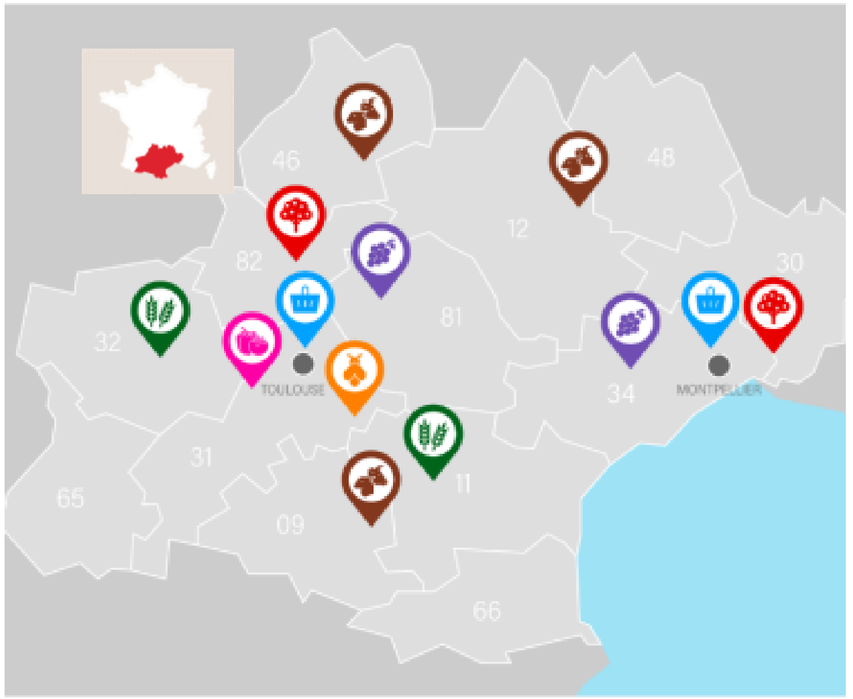
A territorial open innovation ecosystem

Putting digital technologies at the service of the agroecological (AE) transition of agriculture & food systems in the Occitanie Region, SW of France

- 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

7 OPEN-LABS

An archipelago of pilot territories



OBJECTIVES

- **Identifying or co-creating** digital techs (to unlock bottlenecks to AE transition)
- **Evaluating** the cost & benefits of digital techs in real use in agriculture
- **Raising awareness** of farmers & advisors with regard to digital techs and open innovation
- Promoting **on-farm experimentation (OFE)** using digital techs
- **Understanding** the processes in this ALL and evaluating its impacts

CORE → GT EVALUATION

Evaluation at different levels of the LL

- **Project level**

Transformation of the farmer's practices towards Agro-ecology
→ In situ evaluation of the C&B of digitalization

Agroecology

Digital technologies

- **Open Lab level**

Transformation towards Open innovation
→ Comprehensive analysis of LL practices

Multiple stakeholders

Link with the territory

Open Innovation

- **Living Lab level**

Transformation towards agro-ecological Agriculture in Occitanie
→ LL impact analysis for the funders
→ Asirpa^{RT} to pilot the LL

Project Level:
Evaluation of the Costs and Benefits of digitalisation

OccitaNum

Stakeholder's needs → Call of interest → Select Technologies → Evaluations in real conditions of use → Iterations, ways to improve → Appropriation, dissemination

CORE →

Development of protocols for evaluating the costs and benefits of using digital technologies in real-life conditions, based on methodological frameworks with solid scientific foundations

Methodological frameworks
Scientific basis

Economic	Environnemental	Social / Human-centered C&B
ROI, CBA,NPV	Environmental Life Cycle Assessment (LCA)	Social Sciences, Design Science Ergonomy, Marketing

?

Living Lab Level
ASIRPA RT: a real Time formative assessment method

ASIRPA_RT is a real-time and formative assessment methodology

- to help piloting a project
- to amplify the impacts and to maximise its success

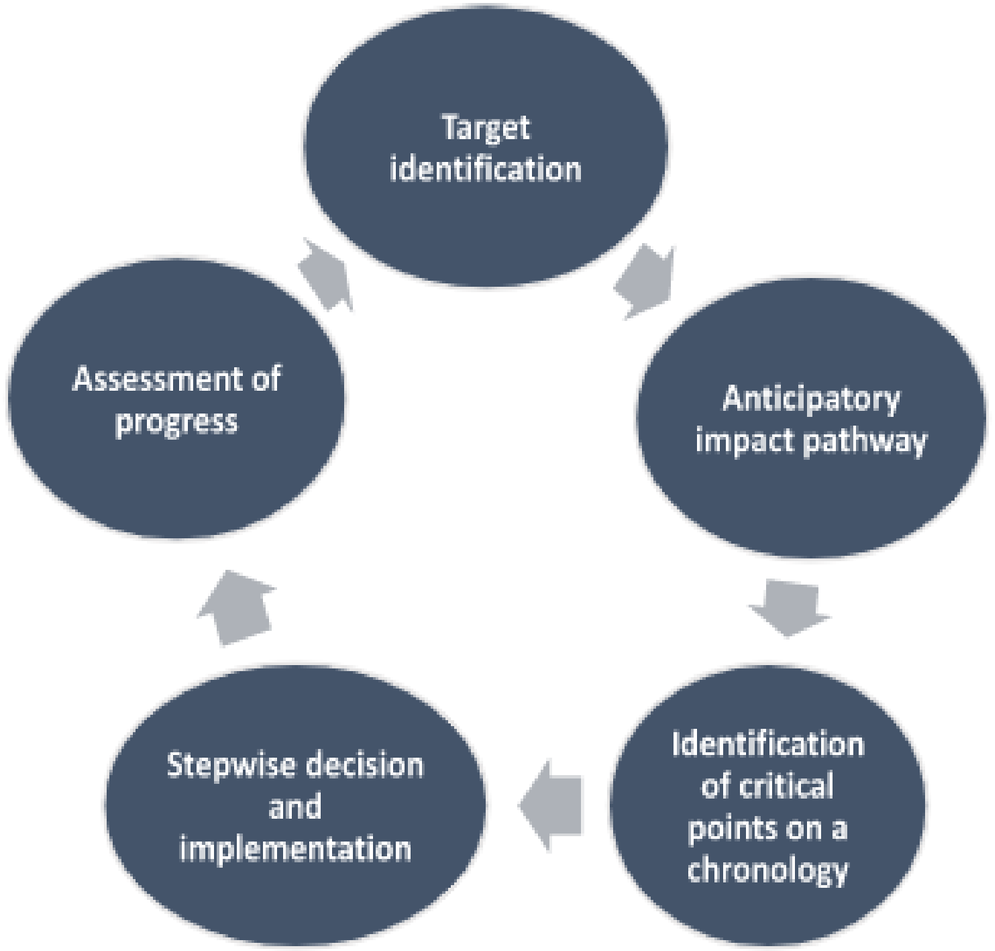
Giulia Volpini, phD student
Adaptation of the methdology ASIRPA_RT to the context of Living Labs

Joly P.B., Matt M., Robinson DKR. 2019. "**Research Impact Assessment: from ex post to real-time assessment**", fteval Journal, 47, 35-40,

Living Lab Level
ASIRPA RT: a real Time formative assessment method

ASIRPA provides tools and methods for :

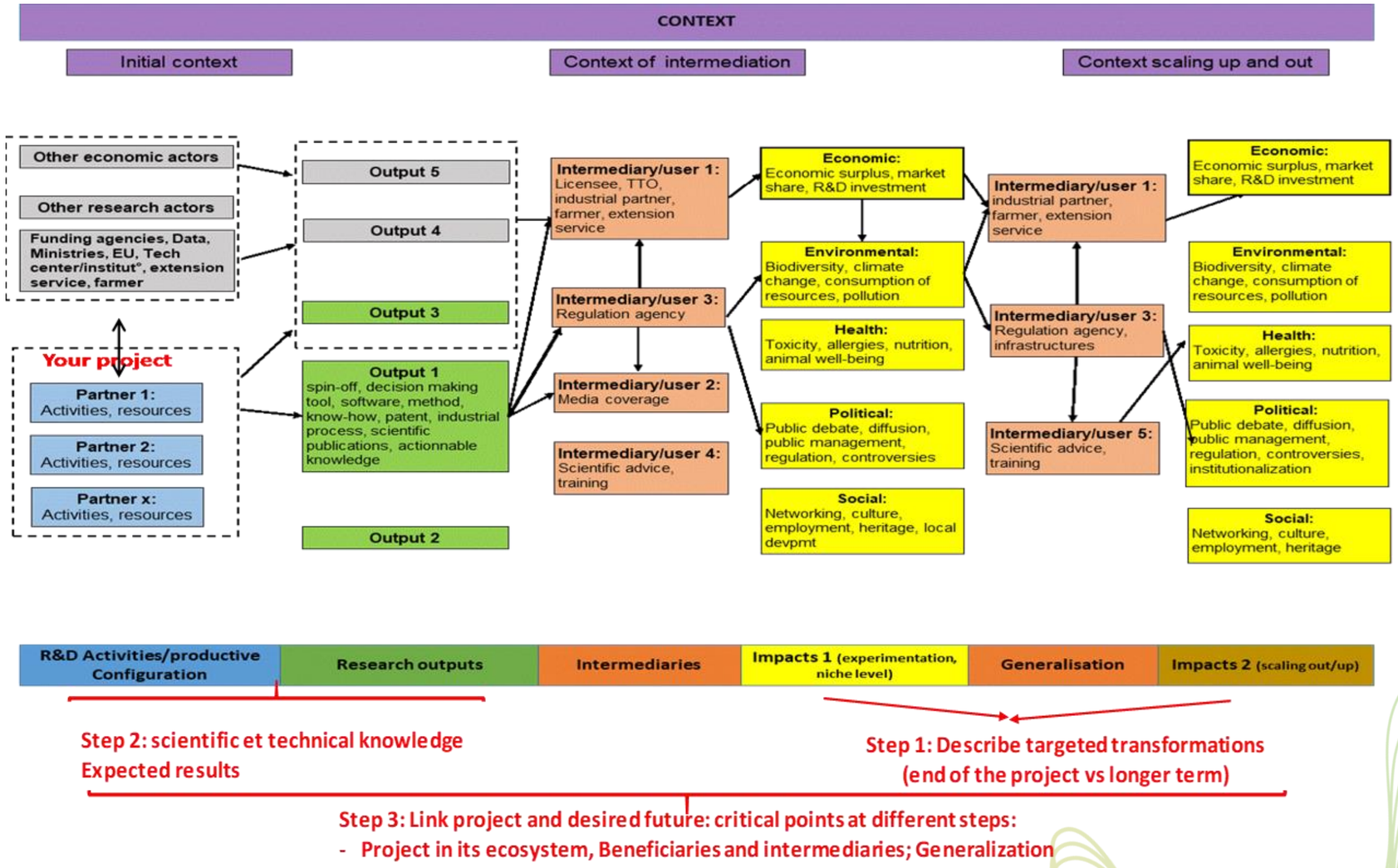
- Piloting the projects toward the expected impacts and targeted transformations
- Determining the path the project should take to reach the goal
- Determine and analyse control points on this pathway and check where you are
- Revise the objectives and the impact



The ASIRPA_TR tools

- Impact pathways, to help identify the components of the theory of change

- Pilot indicators determined from the analysis of the impact pathways



Some Take-home messages

- A multi-level approach to evaluation is needed to adapt processes to objectives
- Scientifically solid methodologies need to be developed
- The proposed framework for assessing the C&B of digitization can be adapted to any transformative farm process (agro-ecological practices, conservative agriculture, ...)
- It's the LL approach that takes us forward in the methodological research of evaluation

Thank you!

Follow us online: www.occitanum.fr, @OccitANum

OccitaNum