

Living lab methodologies and examples of Living Labs in animal agriculture

**First experiences from H2020 Project Roadmap
about a prudent use of antimicrobials**

Bernadette Oehen (FiBL), Mette Vaarst (AU-ICROFS), Annick Spaans (ZLTO) and Florence Beaugrand (ONIRIS).

Aims of this session

- Sharing our experiences as researchers about the use of the Living Lab approach in a research project;
 - The process in LL
 - Stakeholder selection
 - Support provided for the LL
- Exchange your experiences with / your thoughts about participatory multistakeholder approaches;
- Discussion of recommendations for the implementation of a Living Lab approach in a research context.

The Aims of Roadmap

- Foster the transition towards a prudent use of antimicrobials (AMs) in animal production in different contexts;
- Rethink AM decision systems and animal health management;
- Develop options for encouraging prudent AMU in animal production;
- Engage all the food and drug supply actors in fostering a more prudent use of AMs.

Transition concept

Affolderbach and Schulz

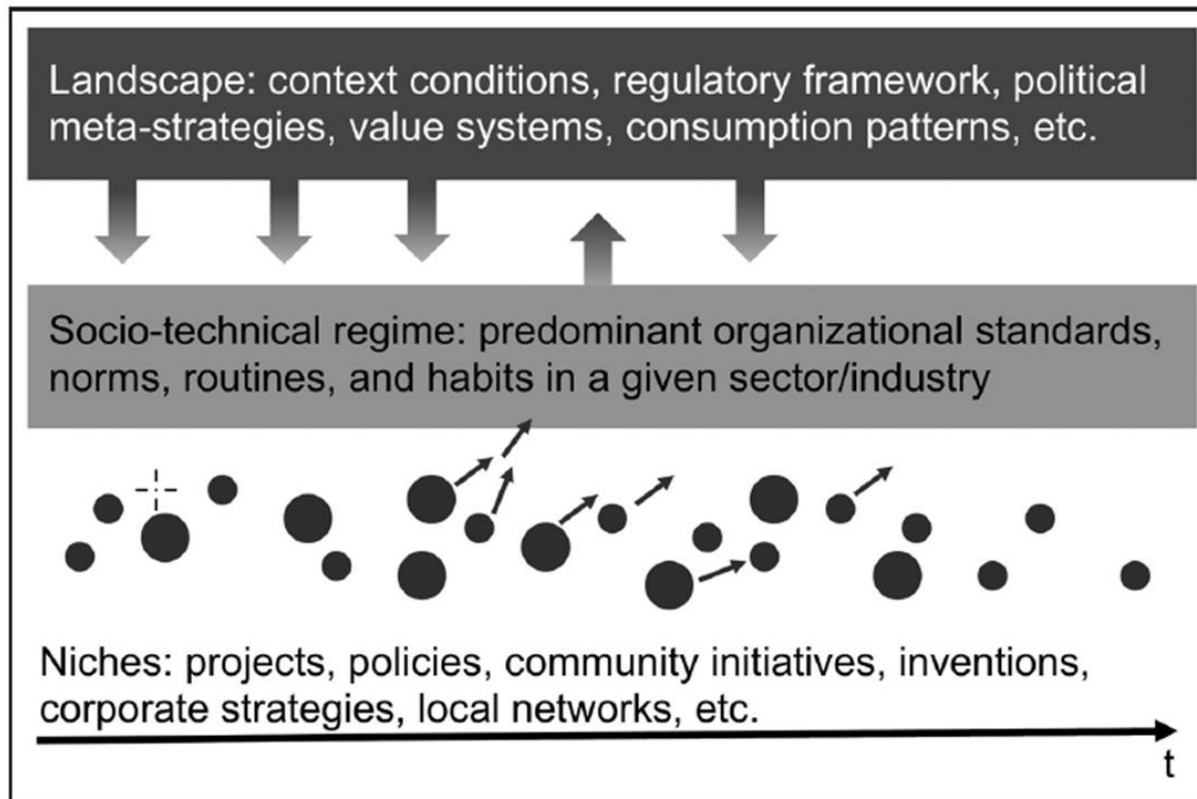
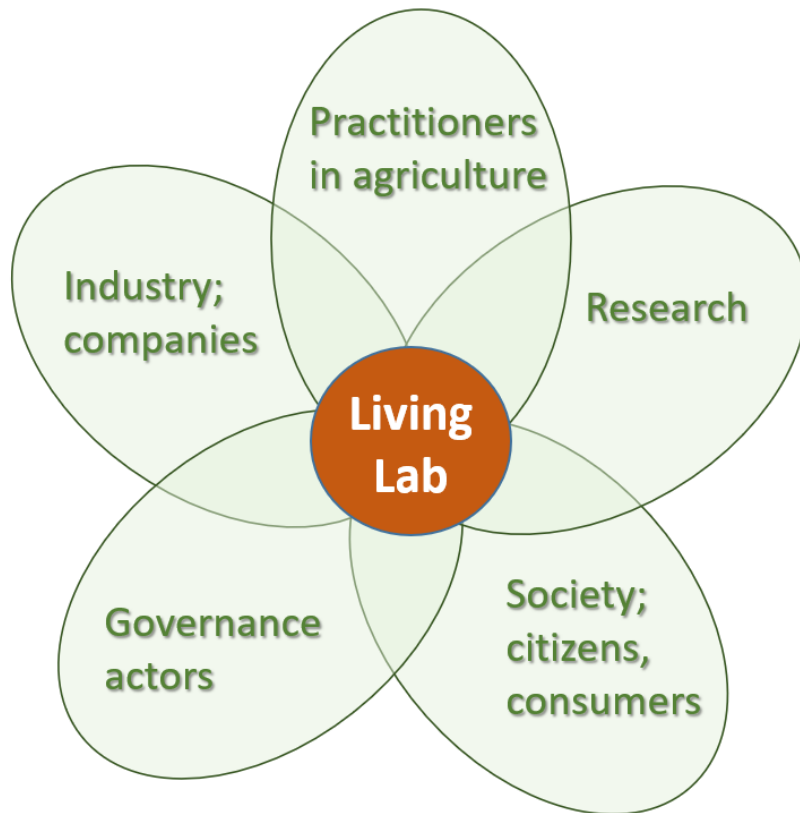


Figure 1. Geels' multi-level perspective.

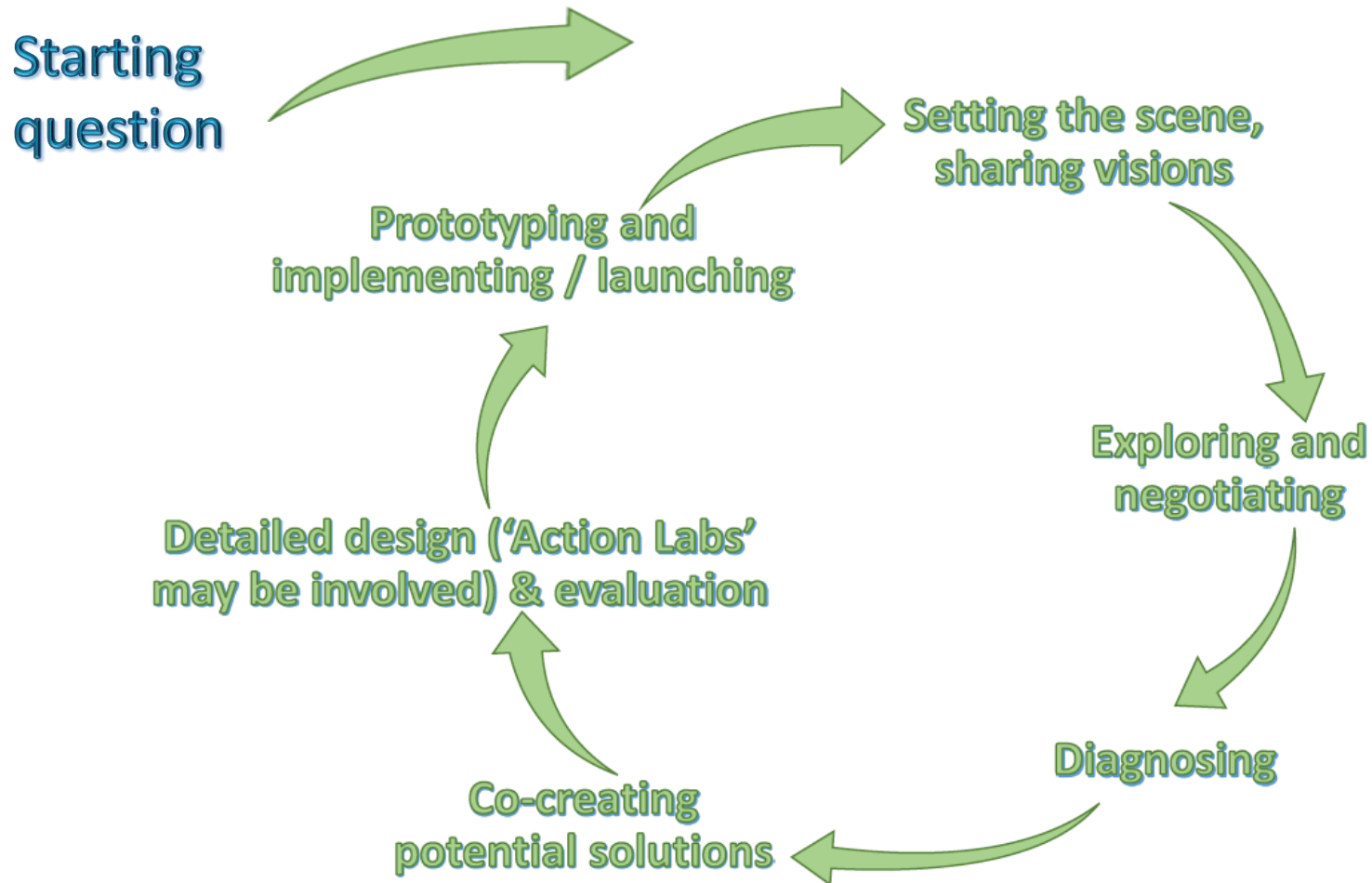
5

The potential of Living Labs

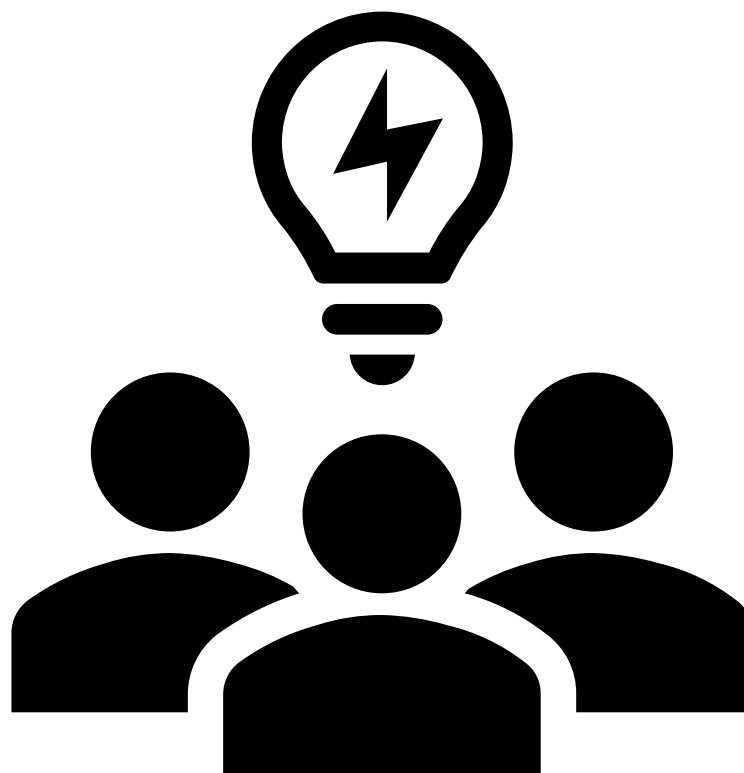


“When the goal is to co-create and develop innovative solutions to complex problems or challenges in a given setting, and solutions necessarily have to involve multiple stakeholders, Living Labs will be a relevant option to consider”

The processes in Living Labs



Living Lab? What did you know at the beginning of ROADMAP?

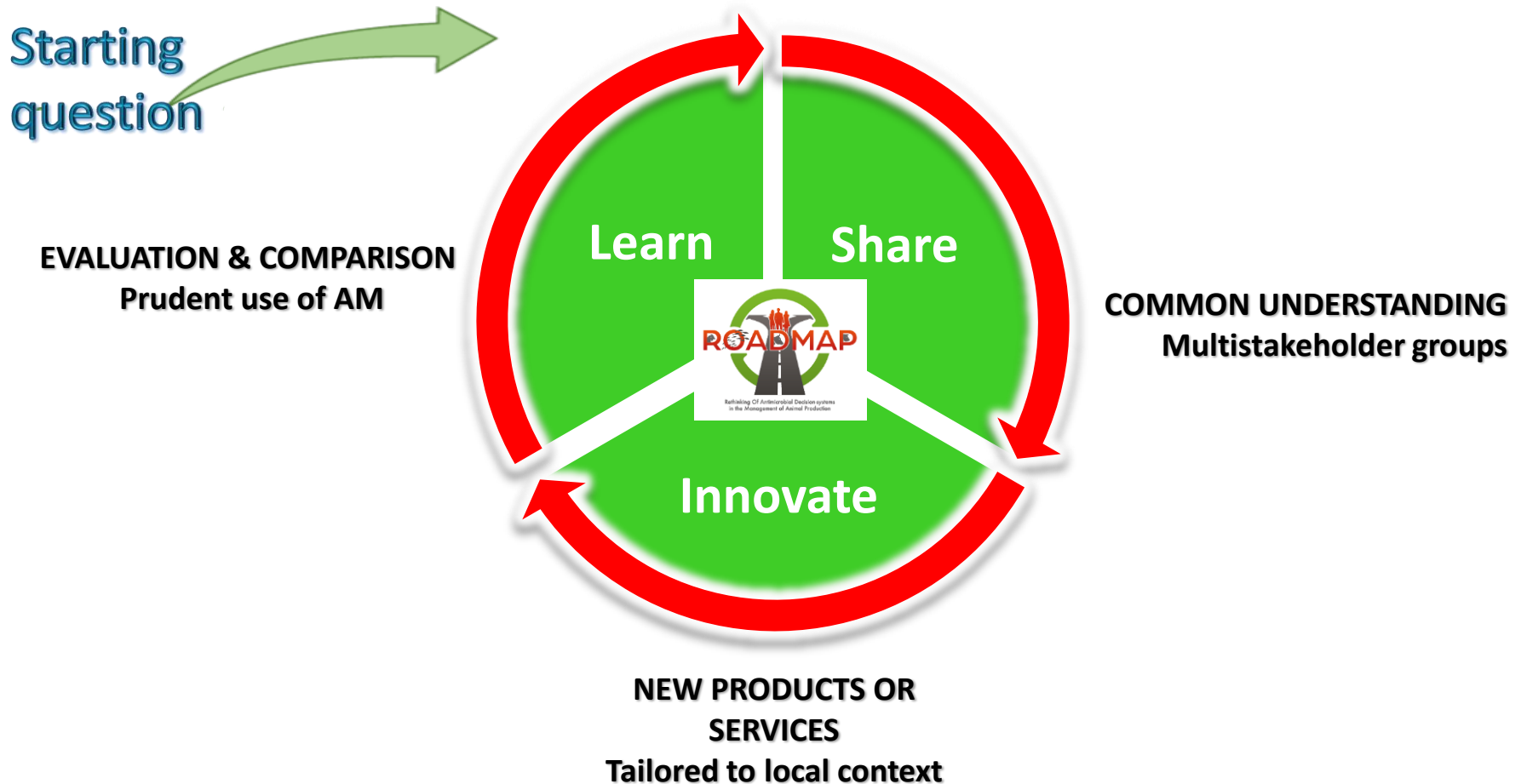




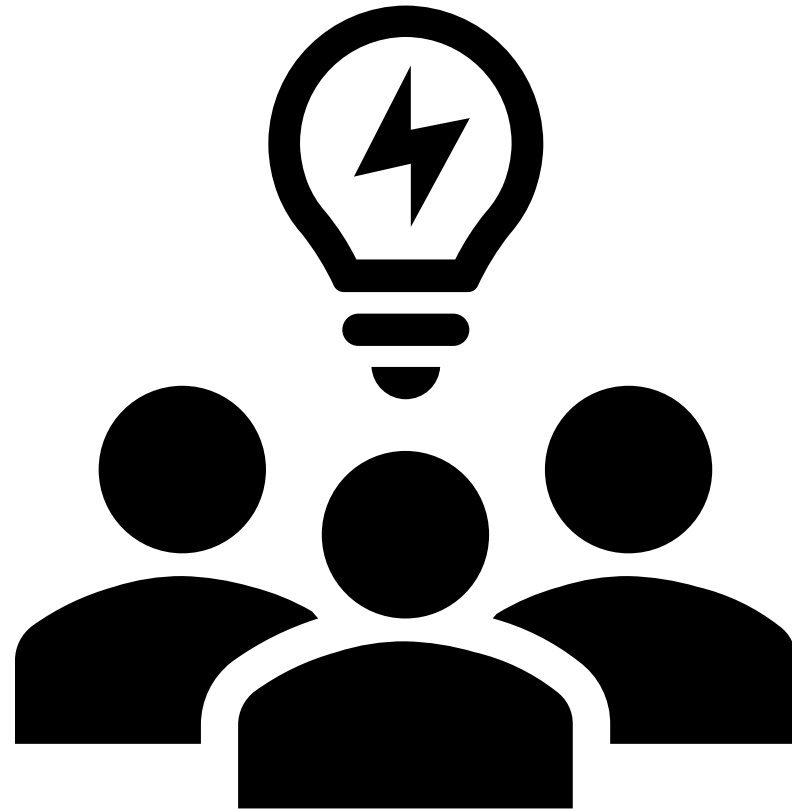
How we framed Living Labs in our project

- Living Labs are a forum where
 - stakeholders and end-users co-create new products, services or strategies;
 - innovations (new products, services or strategies) are iteratively developed and continuously validated.
- The Living Lab is embedded in real-life settings;
- Living labs need facilitation/coordination;
- Open to different outcomes;
- The Living Lab method is different from an approach where innovations are tested at the end.

How we framed Living Labs in our project



What was needed to start the Roadmap LL?



Support needed to start the Living Labs



- Shared understanding of the process in the team and the involved partners;
- Feedback to the starting questions;
- Guidance document with practical tools like
 - Criteria for stakeholder selection,
 - How often do LL meet (at least 4 times during the project)
 - Agenda with information about processes,
 - Suitable methods / tool kit,
 - Avoidance of risky / expensive ideas,
 - Evaluation forms to document and learn;
- Definition of a coordinator and facilitator;
- Regular meetings with Living Lab facilitators/ coordinators to exchange material, inspire each other and mutual support
- Confidence that the process will go well.

Generic criteria for stakeholder selection



1.	Who are the end users and beneficiaries of the research products, and what is the added value of their participation in the partnership?
2.	Which academic disciplines should be represented in the partnership to address the ecological complexity of the determinants of and solutions to the identified public health issue?
3.	Who needs to be involved in the partnership to ensure that the values driving the research are respected in the planning and implementation of the research?
4.	Who needs to be involved in the partnership to ensure that the research results will be translated into practice and action?
5.	Who needs to be involved in the partnership to ensure that the research can be implemented with a balance of scientific integrity, social relevance, and cultural relevance?
6.	Who needs to be involved in the partnership to ensure that the utilization of resources and assets from the community of interest are maximized during each phase of the participatory research process?
7.	Who needs to be involved in the partnership to facilitate sustainability of the (a) research products, (b) capacity, (c) relationships, and (d) infrastructure?
8.	Which other stakeholders could be involved to help the partnership achieve its goals and objectives without compromising its values?

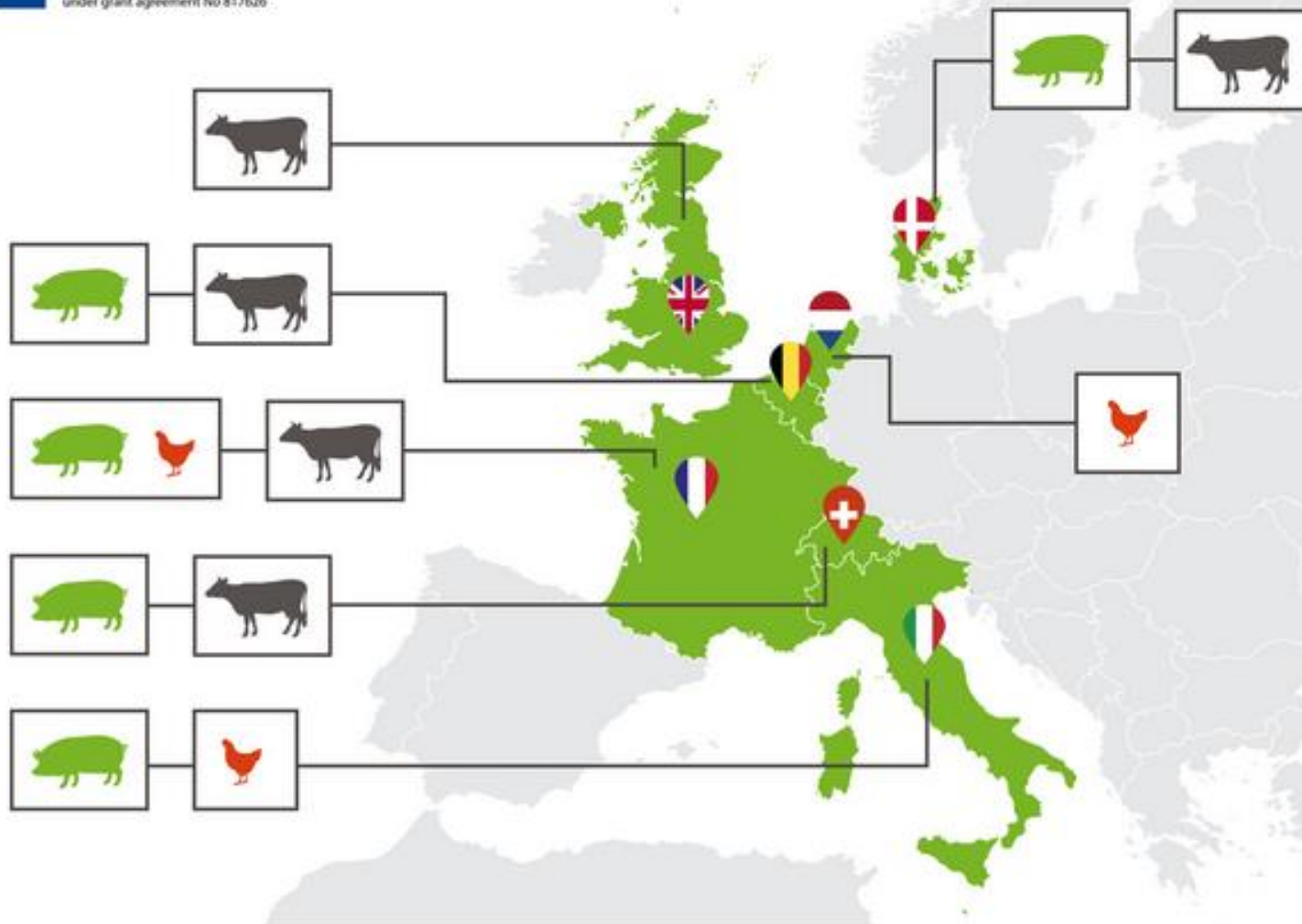
Guiding questions for establishing an optimal mix of participants in participatory partnerships (Cargo and Mercer 2008)



12 Living Labs

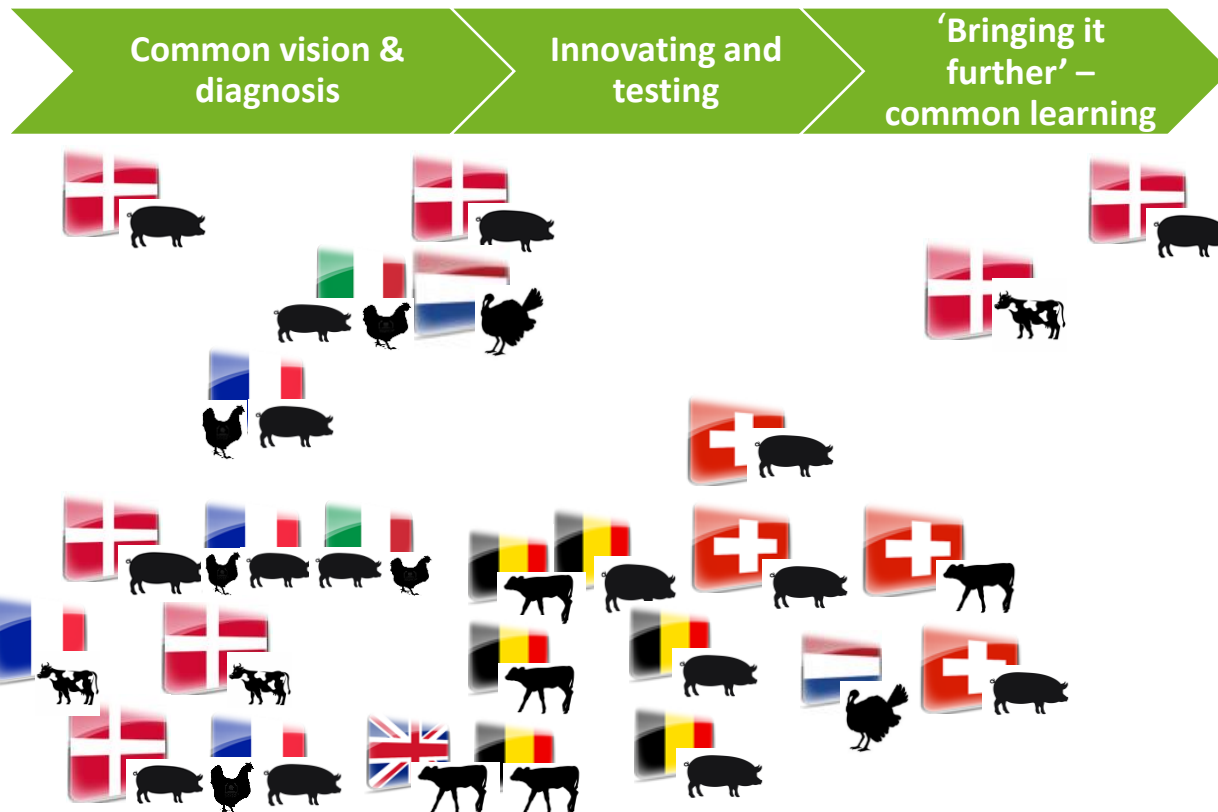


This project has received funding from the European Union's H2020 research and innovation programme under grant agreement No 817626



The Living Labs worked on multiple levels

Levels where the LLs work



A bi-monthly reflective meeting with LL facilitators

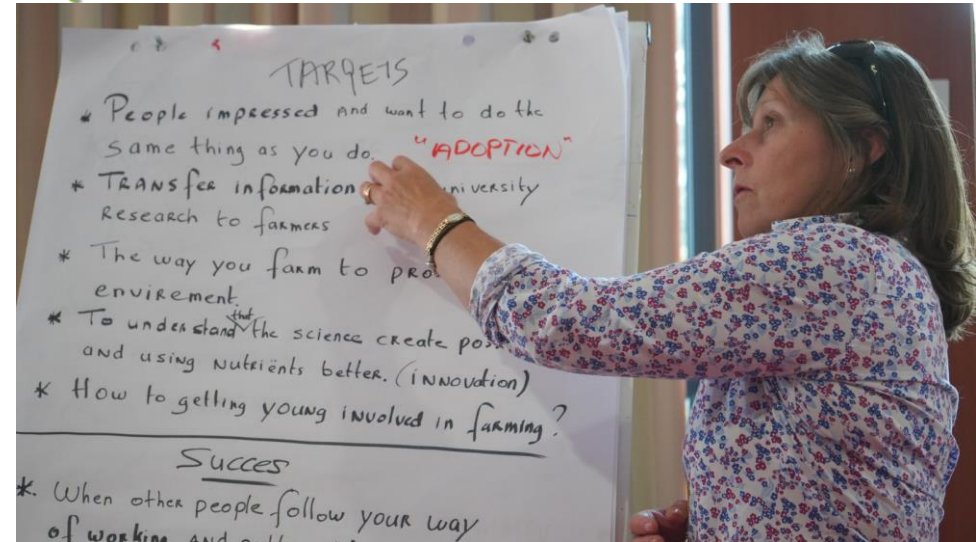


- Learning about LL;
- Supporting facilitators in their (new) role;
- Reflection and co-learning about LL;
- Cross country fertilization;
- “Project - internal” dissemination via small videos for meetings.

How to work in groups

Tools used in our LL

- Word cloud for shared visions
- Problem tree
 - Effects of the problem
 - Causes of the problem
- Solution tree
 - Effects of the solution
 - Solutions to the problem
- Stakeholder map
- Impact – Interest diagram



Challenges - Online Meeting



Challenges – Working with existing groups



Living Lab topics in ROADMAP – topics at farm level



Country	Sector	Achievements
NL	Turkey	On-farm multi-actor coaching (farmer, vet, advisor)
BE	Pig	On-farm veterinary advice, optimisation of colostrum management and cleaning & disinfection
CH	Organic Pig	Monitor / document AMU (electronic eartags)
CH	Organic Beef	Gain overview of management and antimicrobial input on organic cattle farms
DK	Dairy	Foreign farm workers exchange groups about animal health and AMU
DK	Pig	Testing and approving an App

Living Labs in ROADMAP – topics at industry level



Country	Sector	Achievements
VT	Poultry	Organize training for drug sellers on AMU, AMR, biosecurity, and organic production
UK	Cattle	Trial a central data hub to record AMU and identify challenges and solutions
FR	Pig/ Poultry	Identify and validate indicators useful to monitor AMU

Living Labs in ROADMAP – topics at regulatory level



Country	Sector	Achievements
DK	Dairy	Analysing the current legislation on veterinary treatments with antibiotics, to influence the next legislative framework
IT	Pig/ Poultry	Harmonization of the regional guidelines on prudent AMU in pig farming with the framework of the new European legislation on veterinary medicines and the 2023-2027 Common Agricultural Policy (CAP) cycle

Living Labs in ROADMAP – topics at societal level



Country	Sector	Achievements
DK	Pig	Organising a roundtable for public debate
DK	Dairy	Initiate dialogues with agricultural colleges; create debates in professional environments
CH	Organic Pig	Material and training courses for vets who need knowledge on organic livestock farming
CH	Organic beef	Promotion of the use of complementary medicine in veterinary education and post graduate training to reach a maximum of active veterinarian practitioners



What did the Living Lab achieve

- Establishing a dialogue;
- Work on a common understanding;
- Developing and testing training for vets;
- Accompany a policy process;
- Testing some technical tools;
- Committed researchers and participants in the living labs;
- Collaboration beyond the project.

Lessons learnt about stakeholder selection in Roadmap



- Diversity among categories of users/actors;
- Flexibility, openness for a change/transition process;
- Social competence;
- Open minded person;
- Voluntary participation;
- Be aware of underlying conflicts and dependencies along supply chains in the agri-food system.

Lessons learnt: who is in charge...

- Planning the meetings?
- Managing the process between the meetings?
- Invite for meetings?
- Plan the time between the in-person/online meetings?
- Delegate activities for shared ownership!





Find a good way to finalize

- Some Living Labs will end, some will continue beyond the project;
- Jointly look back, what you achieved together;
- Find ways to (international) co-learning

Highlights – Co-learning



Highlights and conclusions until now

- ROADMAPs LLs worked with levers to AMU reduction:
 1. Farm and local actors
 2. Sector and industry (agriculture or food chain),
 3. Governance and regulation
 4. Societal level
- Living Labs (LLs) bring stakeholders together, experiment and negotiate to solve problems and find new social (primarily) and technical solutions to AMU
- ROADMAP LLs have a common learning cycle approach to reach their goals, but work widely differently, determined by context and mainly bottom-up-approach

Main learnings so far



- LL are an adventure for everyone involved
- LLs have to be shaped by context, stakeholders, different phases and routes;
- Negotiation paramount – far beyond ‘innovation’;
- Establishing LLs in itself seems to have an impact : Dialogue, addressing and articulating the issues;
- LL do produce different innovations, part of them unexpected at the beginning – you never know, where you end;
- The real life settings could impact the Living Lab work
 - Decreasing prices
 - New policies
 - Animal health issues, e.g. African swine flue
 - Changes in the team (research institution, stakeholders...).



Take home messages

- Go out of your comfort zone and try out something new
- Facilitation skills needed to move away from the usual position.
- Select stakeholders who are interested in a change
- ... and acknowledge that systemic changes can be necessary, and frustrating and difficult
- Structure the process to build and reach
 - A common vision
 - A shared understanding of the problem
 - A dialogue between actors who rarely meet
- Create an atmosphere where the contribution of every participant is valued, each voice is heard.
- European wide / global issue – what can niches contribute?



Thank you for your attention!

Living Labs - Conference

Interviews lead by

France Pig & Poultry LL

Italy Poultry LL

Belgium Pig LL

Netherlands LL

Switzerland Cattle LL

Switzerland Pig LL

Great Britain Calf LL

Denmark Pig LL

Mette Varst, Annick Spaans,

Florence Beaugrand, Bernadette Oehen

Catherine Belloc

Caetano Luiz Beber

Stefaan Ribbens, Fanny Baudoin

Fleur Hoorweg

Michael Walkenhorst

Barbara Früh

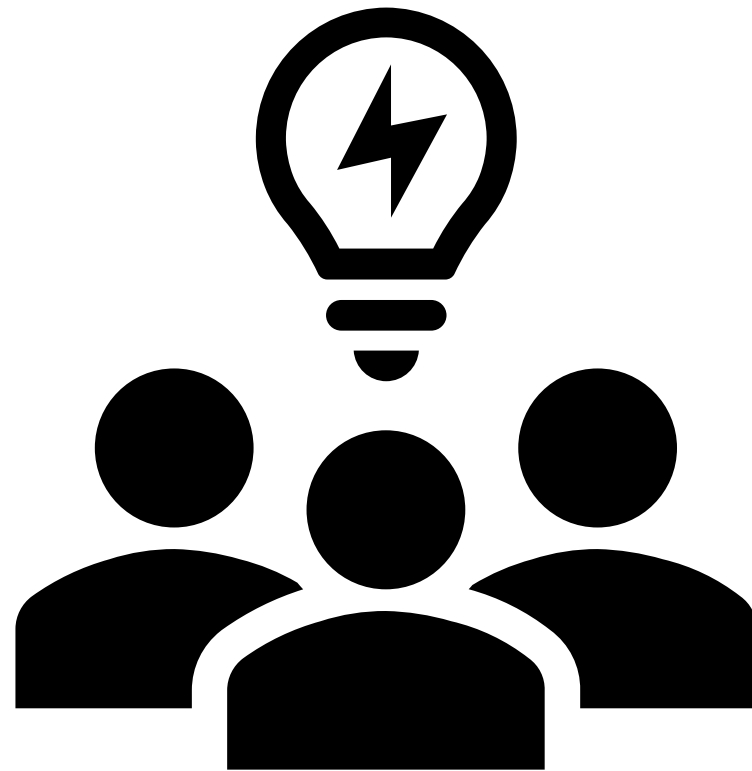
Garreth Enticott, Carol Kyle

Hanne Kongsted, Merete Studnitz

Enjoy and reflect...



Living Lab? Have you used the LL approach? In what contexts?



Living Lab? What do you need to implement LL in your project?

