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Living Labs Implementation Plan for SUSTAvianFEED project

D4.1

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Summary

This document provides a common framework for the Living Lab approach for the SUSTAvianFEED project, presents the Living Lab Implementation Plan, defining activities that are to be developed for the WP4, but also are strongly related to WP3, and facilitated by WP2 and WP5.

The guidelines present an overall methodological approach to be utilized in the Living Labs within the SUSTAvianFEED project. It includes the roles and responsibilities during the Living Lab process, as well as the specific characteristics to be considered when applying the Living Lab methodology as well

A living lab (LL) is a multi-stakeholder approach set up to carry out innovation projects that follow the principles of open innovation and focus on real-life experimentation to co-create, test, and validate novel solutions. Open innovation involves external stakeholders, mainly users or consumers, making them co-participate in the innovation process.

In the SUSTAvianFEED project, LL activities will be conducted in order to adapt the design of the feeding program to the singularities and the local context of each pilot. Relevant stakeholders will be also engaged in the design and evaluation of the pilots and their expected results through different methods and tools such as co-creation workshops, surveys and personal interviews, among others.

Living Labs will be also a key element assuring the new final products will match the market's needs, being the main source of feedback in the definition of the business model and market approach for the final launch.

SUSTAvianFEED project will carry out an Open Innovation Process through Quadruple Helix approach with the participation of members of civil society, public sector, industry, and academia. Consumers, farmers, policymakers, researchers, experts, associations, providers, and retailers will be engaged for the pilot definition and business model validation in each pilot area.

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Acronyms and abbreviations

Abbreviation	Description
LL	Living labs
CEBM	Circular Economy Business Models
SD	Service Design

1 Introduction

1.1 SUSTAvianFEED Project

SUSTAvianFEED-2015 is a four-year project part of the PRIMA programme, supported by the European Union., with a project budget of 2,6 million Euros. SUSTAvianFEED project focuses on the development of sustainable poultry feeds as an alternative in the livestock farming sector. The alternative feed will be more environmentally friendly than the regular sources and will have a close relationship with local agriculture and agri-food sector, while accomplishing with feed safety regulations. In order to develop a sustainable feed, the main proposed approaches will be followed: 1) To use insects as source of protein, 2) To formulate and develop a targeted and sustainable diet considering the product of poultry farming (meat and eggs) and production phase.

1.2 Purpose of this plan

This plan will include the living lab methodology and plans to be implemented during the whole project implementation As a result, a detailed report with the activities developed during the whole task duration and the main results obtained will be developed.

1.3 Development of this plan

ALIA will define together with the rest of the partners a planification of different participatory activities to be developed during the whole project implementation. This plan will be the basis of Living Lab activities and will be considered as a living document, as it will be periodically updated according to project needs. The plan will be based on a common framework, and will include particularities for the different project regions.
The implementation of this plan will be followed up every six months, ALIA will arrange a meeting with partners for this purpose.

1.4 Living Labs in context

The Living Lab approach aims to improve the pivotal multi-stakeholder collaboration within the CE ecosystem. It will engage diverse actors and stakeholders in an open innovation process to contribute to deliver a sustainable and suitable solution, starting from the identification of the sustainable poultry diet, the definition and implementation of the project pilots and to the experimentation towards the development of a Circular Business Model.

Focusing on the following objectives:

- To design a Sustainable feeding program adapted to the context and requirements of each pilot.
- To co-create, co-implement, and co-evaluate this feeding program among relevant stakeholders, including involving end consumers from the first stages of the design.
- To produce a solution suitable to market needs.

2 Context of the methodology

A living lab is a multi-stakeholder approach set-up to carry out innovation projects that follow the principles of open innovation and focus on real-life experimentation to co-create, test and validate novel solutions.

Open innovation is a concept introduced by Henry Chesbrough, who defines Open innovation as "the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively. [This paradigm] assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market"[1][2].

Curley & Salmelin describe the evolution of the concept of Open Innovation into a new paradigm based on the principles of collaboration, co-creation and shared vision and values from multiple committed stakeholders (with special focus on the quadruple helix, which will be defined later in this document). Another key principle is the idea of customers/user participating in the innovation process, "Rather than innovation being something that is done for or to a user, the user co-participates in the innovation process as well as profiting from its outcome", this is represented by a reverse innovation pyramid, being the users in the top of the structure[3]. This new paradigm is named Open Innovation 2.0.

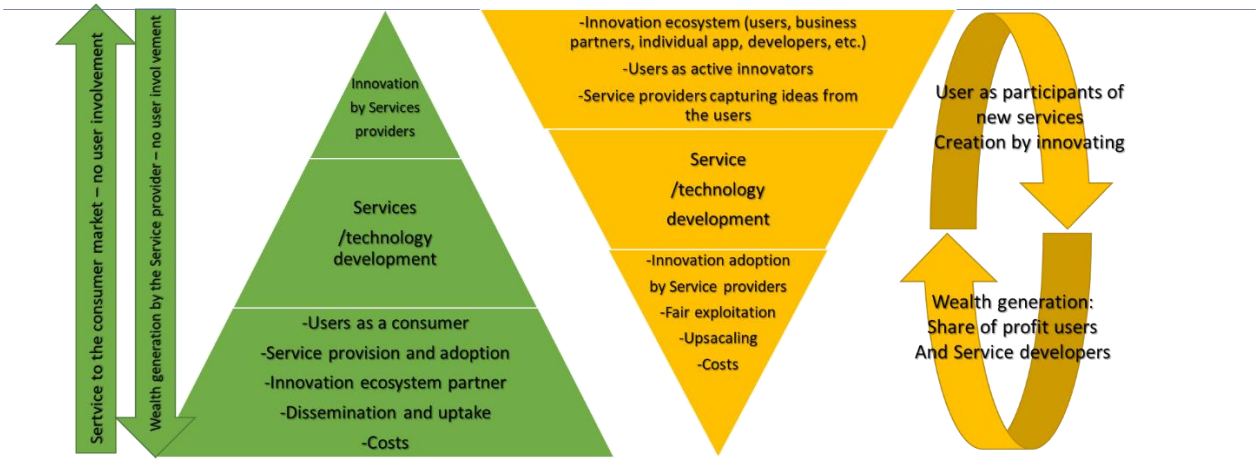


Figure 1. The comparison of traditional and Open Innovation 2.0 approach. **CIRC4Life-project[4].**

2.1 The key elements of Living Labs

The combination of the following elements is central to the Living Lab approach.

[1] Chesbrough, H. (2003): Open Innovation: The new imperative for creating and profiting from technologies. Boston: Harvard Business Scholl Press.
[2] Chesbrough, H. (2006): Open Innovation: Researching a New Paradigm. Oxford University Press.
[3] Curley, M. & Salmelin, B. (2013): Open Innovation 2.0 — A New Paradigm (EU Open Innovation and Strategy Policy Group).
[4] CIRC4Life-project (2019): Living Labs Concepts and Implementation Plan for CIRC4Life (A circular economy approach for lifecycles of products and services) project.

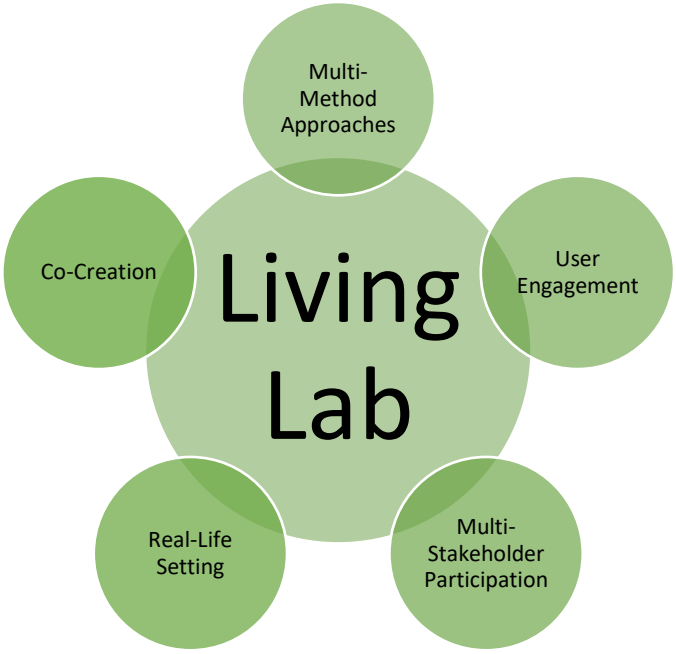


Figure 2. Key elements of the Living Labs. European Network of Living Labs

- **Multi-Method Approaches:** Living Labs combine different user-centered methodologies and tools adapted to the objectives of the project and the nature of the stakeholders involved.
- **User Engagement:** The key to success in any activity is to involve the users from the beginning of the project and ensure their participation and engagement across the whole innovation process.
- **Multi-stakeholder Participation:** Involving relevant stakeholders is crucial, this includes the quadruple helix actors (representatives of public and private sector, academia, and people).
- **Real-Life Setting:** A very specific characteristic of living labs is that activities take place in real-life environments. New solutions are tested and validated in a real usage context from the early stages of the innovation process.
- **Co-creation:** The customers/users become contributors rather than subjects of studies. Other stakeholders may participate in co-creation since quadruple helix actors could collaborate with their particular knowledge and approach. Co-creation is the central process of living labs.

2.2 Phases of iteration on Living Lab Projects

The following phase are conducted during each iteration round:

1. **Exploration:** Getting to know the current state, necessities, and requirements of the users.
2. **Co-Creation:** Respond to the necessities detected in phase 1, by creating solutions together with the stakeholders, using the knowledge acquired in phase 1

3. **Implementation:** Concepts and ideas co-created in phase 2, are put to the test in real-life
4. **Evaluation:** Assess the impact of the implemented solution and obtain feedback to iterate to a new state. The goal is to launch the innovation into the target market.

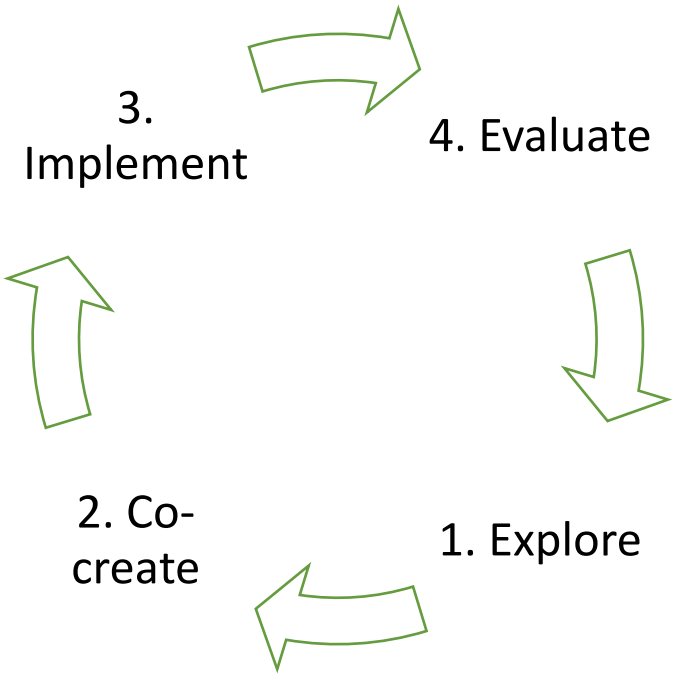


Figure 3. Phases during single iteration round. Modified from CIRC4Life-project.

3 SUSTAvianFEED approach for Living Labs

3.1 SUSTAvianFEED Demostrations

The implementation of pilot activities is one of the main pillars of SUSTAvianFEED project. Five pilots will be developed: Turkish (EGE), Spanish (UMU) and Italian (UNITO) pilots will be performed in experimental farms, using local breeds, or environmentally adapted meat or egg chickens' hybrids. Tunisian case will perform one pilot following the same protocols of the universities (ISA-CM) and other in a real context which will engage rural women of Jendouba region and which will have the focus on their socioeconomic aspects (RAYHANA).

The sustainable feeding program developed in WP2 will be the basis of pilot activities implementation and will be used for chickens feeding. The different pilots will conduct experiments in a common framework and using similar experimental protocols in order to make it able to study their differences and similarities.

LL activities will be conducted in order to adapt the design of the feeding program to the singularities and local context of each pilot. Relevant stakeholders will be also engaged in the design and evaluation of the pilots and their expected results.

Living Labs will be also a key element assuring the new final products will match the market's needs, being the main source of feedback in the definition of the business model and market approach for the final launch.

To comply with the objectives of the Living Lab approach for SUSTAvianFEED, the activities have been classified into four main core topics, as proposed:

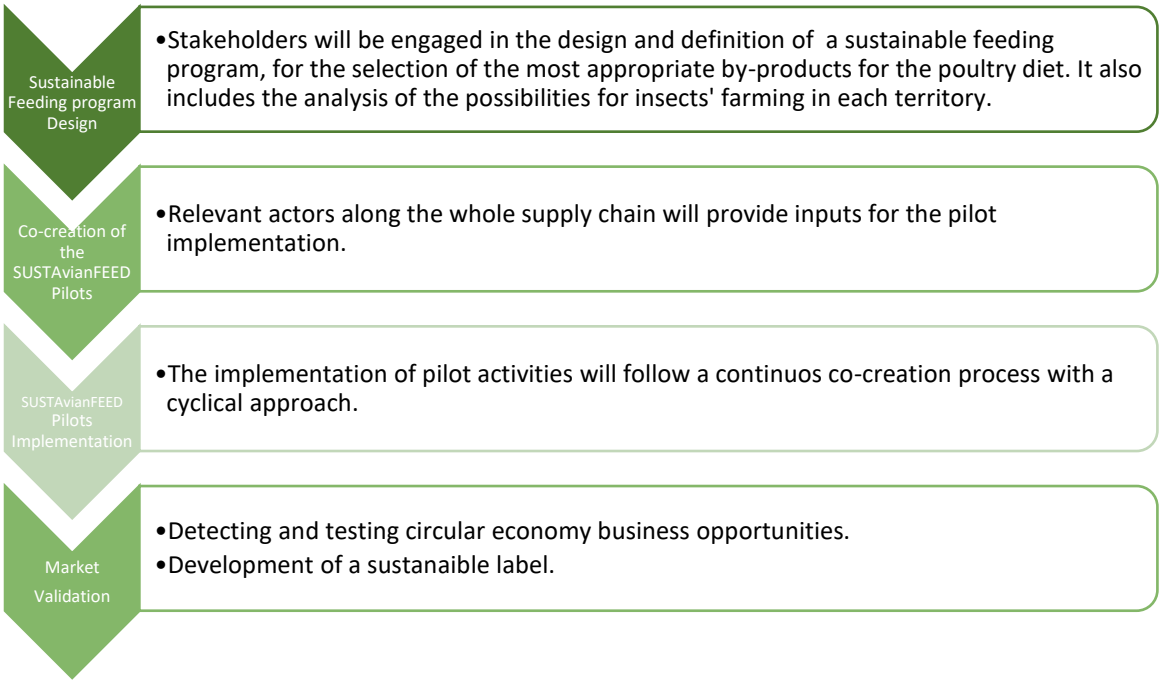


Figure 4. Topics of the SUSTAvianFEED Living Labs

3.2 Partners Roles

- **Management and Coordination/Orchestration** – Alia
- **Pilot partners:** Tunisia (ISA-CM), Spain (UMU), Turkey (EGE), Italy (UNITO) and Tunisia (Rayhana). **Demonstration coordinator:** EGE as the leader of WP3 (SUSTAvianFEED Pilots), as WP3 and LL activities are closely related.
- **Special tasks:** ENTOMO will be the responsible for specific LL activities related to the analysis of insects' farming and supply chain.
- **Communication and dissemination:** SLOWFOOD will have a two-way exchange will other partners since the LL activities will serve as material for communication, and communication is a key resource for engaging stakeholders in LL activities.

3.3 Stakeholders

The interdisciplinary and multi-actor approach of Living Labs allows collaborating and co-creating solutions, in order to reduce the risks and complexity of the innovation processes, while gaining agility. In this context, the Living Labs acts as a network, to orchestrate collaboration and interchange of knowledge and resources between actors.

Curley & Salmelin, consider the use quadruple helix model as a core pattern in the Open Innovation 2.0 paradigm. Is a model where public sector, industry, academia and civil participants collaborate together to co-create the future and drive structural changes far beyond the scope of what any one organization or person could do alone.

The following stakeholder groups constitute the Quadruple Helix, having the private sector a major importance for SUSTAvianFEED project.

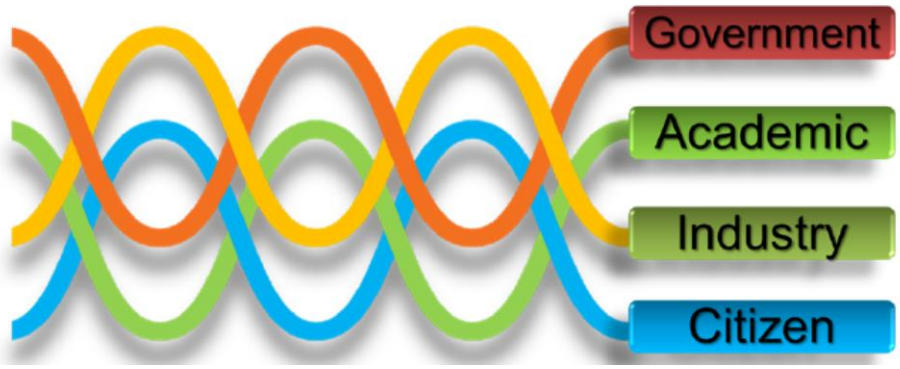


Figure 5. Quadruple Helix Innovation. Curley & Salmelin 2013.

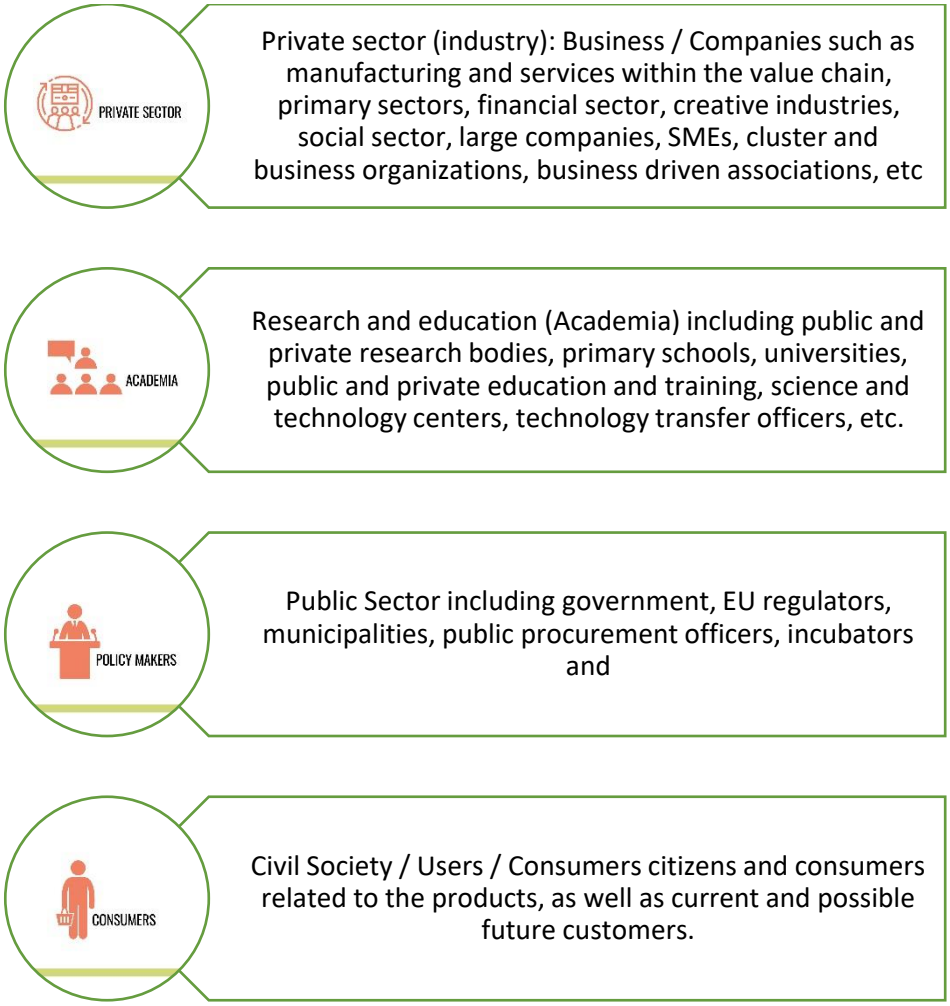


Figure 6. Quadruple Helix Approach

Each stakeholder group is able to contribute to the Living Lab process and benefit from it, enriching the innovation process from their perspectives.

	Benefits of their participation	**Benefits for the participants:**
Private sector (industry, companies)	Produce and invest on products and services that the market needs. Make ideas and innovation come true.	Get new and innovative ideas, test and validated innovations in real-life environments.
Academia (Research and education)	Knowledge and expertise in the field.	Get study cases and multidirectional flows of knowledge.
Citizens (Users, consumers)	First-hand information about the market and validation of innovative ideas before being launched.	The possibility to take part in the innovation process, ensuring that their main needs and desires are met.

	Benefits of their participation	Benefits for the participants:
Public sector	Take part in the decision-making process, drive structural changes.	Ensure that the innovation process addresses wider social concerns.

Table 1. Role of the Stakeholder Groups

4 Methods and tools

The Living Lab strategy for SUSTAvianFEED will combine tools from different methodologies. The first one, Circular Design Guide, is centred in the product or service, developing a set of phases with clear objectives and tools from the understanding of the current situation to the release of the circular economic innovations. The second one, End-User Engagement Toolkit, focused in user engagement tools, developing a more in-depth relationship with the user/customer.
Both methods have a similar process, the key is to understand the aim and phases of each one, and select the tools most suitable for SUSTAvianFEED LLs depending on the stage and objectives of the activities to be developed.

4.1 Circular Design Guide.

The Circular Design Guide, developed by IDEO and Ellen MacArthur Foundation, introduces a set of methods to understand, define, make, and release circular economy innovations. Some of the methods are related with the objectives of SUSTAvianFEED project. The most suitable are the following:

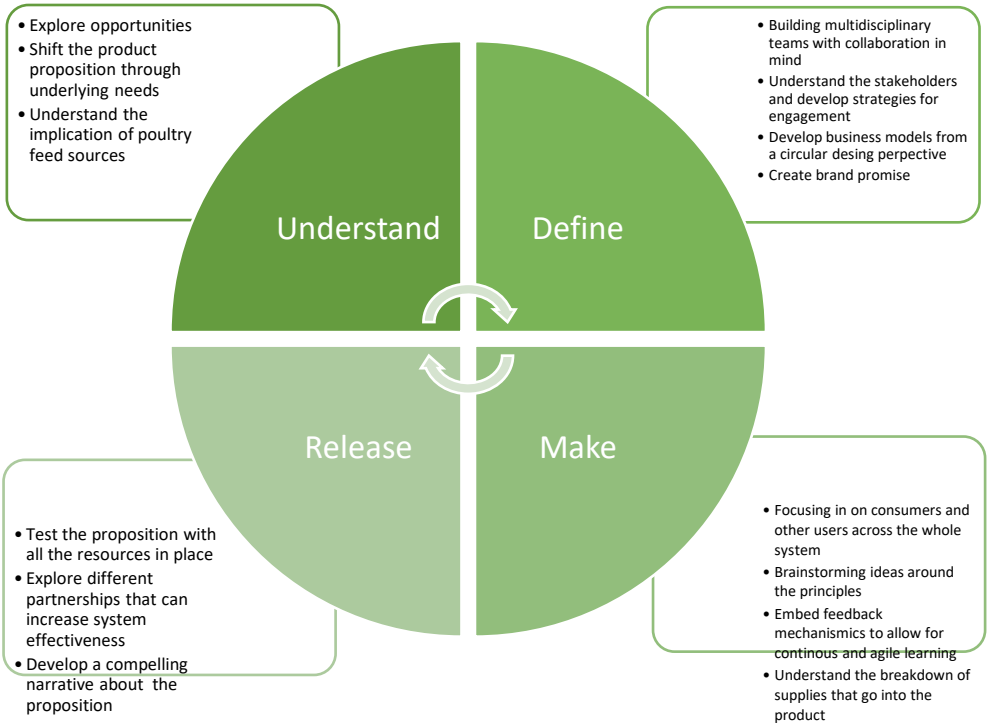


Figure 7. Methods of the Circular Design Guide

Understand
The key is trying to find innovation beyond the conventional solutions. The shift starts with understanding the underlying user/customer needs and thinking more creatively about how they can be met.

On the other hand, with the help of the stakeholders of the supply chain, it is possible to analyse and understand widely the material flows, and the conditions needed to get each poultry feed sources into the process.

Define

is about detecting and understanding the perspective of the customers and stakeholders. Is it also the stage to detect which elements of sustainability reinforce the brand purpose and how to communicate this message to the customers/users. It is necessary to identify key stakeholders and develop strategies for how you involve these stakeholders throughout the project, from co-creation to keeping them engaged. Develop or redefine your business model from a sustainable or circular perspective.

Materials
Stakeholders Mapping
Brand Promise
Business Model Canvas

Make

Develop mechanisms to collect feedback before the release of the product, gaining insight from outside the own organization and enabling continuous and agile learning. Understanding the needs of everyone involved in the use cycle – the end-users or beneficiaries, but also suppliers, manufacturers, retailers, and others. This knowledge will be valuable for end users, other users in the chain, and the strategy of the business.

Materials
Interview Guide
Ideas captures for brainstorming
Embed Feedback

Release

Release involves pilot actions, which are the main part of this project, before fully launch to the market. The guide states that when launching a pilot "you should feel confident in your solution and be testing how it works with the staff, support, materials, resources, and partners in place".

The goals, potential learning, feedback, and tools to measure success have to be defined before starting the pilot.

Feedback cycles are very useful to iterate the initial proposition, collecting the feedback, and explore the next steps to continue improving the final product and business proposition.

This is also the stage to go deeper in concepts developed in the DEFINE stage, as of identified potential partners (listed before in the business model canvas) or create an emotional narrative that make people identify with the product.

Materials
Continuous Learning Loops

4.2 End-User Toolkit

The European Project U4IoT5 developed an End-User Engagement Toolkit, to guide the Large-scale pilot (LSP) projects and especially the pilot sites through the innovation processes. Despite this project is related to Pilots in the Internet of Thing, the toolkit has useful insights for SUSTAvianFeed mainly due its special focus on user-engagement.

4.2.1 Exploration

This process begins with the "understanding" of the problem, the context and users, followed by observation and immersion in the situation and empathizing with the users/ customers as a "discover" iteration. Once there are discoveries and insights, "define" iteration helps to convert these ideas into defined necessities and opportunities, which are framed as a complete concept in the "conceptualize" iteration. The "think" iteration contains brainstorming and ideation tools to help thorough this entire iteration journey.

Understand	Discover	Define	Think	Conceptualize
•WWWWWH •The five why's	•Guided tour •Observation & Shadowing	•Empathy Map •User Personas •Validaded personas •Customer Journey	•How might we •Brainstorming Rules •Idea dashboard	•Co-create workshops

4.2.1.1 Understand

WWWWWH: Is an interviewing technique utilizing guiding question; Who was involved, what happened, where did it take place, when did it take place, why did that happen, how did it happen? The aim is to understand as more as possible at a general level. Similar to the 5 Why's Technique that goes deeper into why?
The five why's: Is an interview technique that led to a deeper level of explanation. The interviewer should ask "why" to every answer provided by the interviewee five times in a row.

[5] U4IoT User Engagement for Large Scale Pilots in the Internet of Things is a European Project funded by Horizon 2020 Program, coordinated by Lulea Tekniska Universitet, Sweden, with the participation of the European Network of Living Labs among other partners.

4.2.1.2 Discover

Observation: There are different ways: the researcher may observe from a distance, separating themselves of the situation, or participate themselves together while observing the participants.
Shadowing: In shadowing, researchers are following the participants around for a set period of time. In doing so, you may or may not interfere at times by asking some questions as an ad-hoc interview throughout the process.
Guided Tour: When conduction a guided tour, the participant is explaining what they are doing, how they are feeling, etc. This provides insights would not always come across in an observation or shadowing.

4.2.1.3 Define

User persona: (user persona, customer persona, buyer persona), is a representation of the profile and behaviour of a hypothesized group of customers. Personas are used throughout the whole innovation process; however, they are especially useful in market research and go-to-market strategy.

Validated personas: While the user personas are often created as hypothesized representation, not always correspond to the real-world situations. In the other hand, Personas based on qualitative and quantitative research represent validated personas.

Empathy Map: May be considered as the first step in the creation of the user persona, include the essential to-know of the customer. There are several templates for mapping, but the essential is to thinks the following aspects of your persona, What they… think? feel? say? Do? See?

Customer journey: is a visual representation of the steps or stages the customer goes through in their experience and interaction with the product or service. It is important to detect the touchpoints (specific interactions) and channels (methods of communication), and then map the process including critical points that can determine customer frustration or customer satisfaction.

4.2.1.4 Think

Brainstorm: Brainstorming sessions are a very popular and useful way to get a lot of ideas and solutions. The key is to have in mind some rules, the most important is to make participants feel comfortable to share their ideas when they come up, and not criticize or discard them without going into them deeper or allow others to build or enrich on them. Then there are plenty of ideas to choose the best ones. Perfect solutions may be reached in a collaborative and open way.

Idea Dashboard: Explain something in words is difficult, asking participants to represent a concept or idea in images or another articulated way, may help to confirm if everyone understands the idea.

How Might We: This is an approach to explore different points of view. Is often used to start an ideation or brainstorming session. It starts describing your current insight or idea with "how might we…", and going deeper from this point taking it to an extreme, exploring the opposite, and questioning the original assumptions.

4.2.1.5 Conceptualize

Co-Creative Workshops: The goal of the method is to bring together partners, stakeholders, and end-users to co-create solutions in a couple of hours. It is composed of four co-creative phases: Co-analysis, Co-design, Co-evaluation, and Co-implementation.

4.2.2 Experimentation/Implementation

On this stage the concept is putted to the test after defining it in the previous stage. The Plan & engage activities aim to plan the pilot or implementation activities ensuring sustainable involvement from the stakeholders. Prototypes may be created to measure the assumptions made, especially in the case of pilot actions. When deciding the prototype to be launch the concepts of MVPs, Solution Prototype vs. Empathy Prototype may be useful. Once there is a prototype is time to test it and collect feedback to improve the initial concept.

The implementation and co-creation phases are often repeated more than once. It is the case of this project, on which there are 3 iteration cycles planned.

Plan &Engage	Prototype	Test
•Community Canvas •Panel Management •Social Media	•Solution Prototype vs. Empathy Prototype •Minimum Viable Product •Test Card	•Prototype Testing Plan •I like I Wish •Learning Card

4.2.2.1 Plan & Engage

Community Canvas: Is a structure to build meaningful communities. It has 3 sections: Identity (Why the community exist and why they stand for), Experience (translating identity into concrete activities) and Structure (Operational elements of running a community).

Panel Management: Detecting groups and subgroups of users and stakeholders, and them mapping them into a panel connecting those groups with the project' activities. With this panel, it is possible to have an overview on which groups would have to be involved in which activities.

Social Media: The use of social media as a channel to get people involved and connected with the project. It is more effective when there is a strategy and planned social media campaigns.

4.2.2.2 Prototype

Solution Prototype vs. Empathy Prototype: Solution-oriented prototypes aim to test a concept or explore a solution, and empathy-oriented prototypes intend is to learn about the user o people.
What we are trying to learn with the prototype? Both categories of prototypes are not mutually exclusive, however, is useful to have the intention clear when setting the hypothesis for a pilot.

Minimum Viable Product (MVP): Consist on preparing an initial prototype that fulfil enough requirements to test in a real environment with the least effort and inversion possible. The idea is to collect feedback and improve the product from the initial assumptions while minimizing the risks.

Test Cards: Help to structure the hypothesis and results of an experiment or test. They should include the following aspects: 1. Description of the idea/hypothesis/assumption; 2. Description of the test/experiment; 3. A way of measure the result, is the hypothesis valid or invalid? And 4. Set a Target threshold.

4.2.2.3 Test

Prototype Testing plan: A step-by-step process with clear instructions for planning prototypes.

I Like I Wish: Is a creative form to collect feedback from interdisciplinary teams and users. Formulate the feedback and suggest ideas in the form of "I like, I wish, what if" could be more comfortable for participants since it avoids direct criticism.

Learning Cards: Complements the test cards and aim to structure the insights gained during an experiment. Are used mainly for Business Model and have to include the following aspects: 1. Description of the idea/hypothesis/assumption; 2. Outcomes; 3. Insights obtained and 4. Actions to be taken.

4.2.3 Evaluation

This phase is related to the full scale and go to market of the product or solution. Firstly, launching final prototype of product or service after ensure the outcomes of the whole process are implementing and taken into account, and secondly, identifying the key elements for the ongoing sustainability of the product/service in the future.

Launch	Implement	Identify
•Business Model Canvas •Value Proposition Canvas •Dotmocracy	•Co-Implementation •Social Media Strategy	•Growth Hacking Canvas •Triple Layer Business Model Canvas

4.2.3.1 Launch

Value proposition Canvas: The value proposition refers to promise of value a product will deliver to customers/users. The aim of the Value Proposition Canvas is to connect the customer profile with the value proposition, ensuring that the product responds to the customer values and needs.

Business Model Canvas: This canvas covers the vital aspects of creating a successful business, the exercise of fill in the template helps to think about what is needed to launch a product and to make sure the project is viable and creates real value for the market. In the beginning, the contents may be sketched with the initial assumptions, then there could be different versions of the canvas as the business model evolves and is being validated.

Dotmocracy: This is a form of accumulative voting on which participants are given a set number of dot stickers, they could distribute their stickers next to options choosing the number of dots or options they may like. Wins the option with the higher number of dots at the end. This tool could be used when it is necessary to vote in a group session, avoiding "winners take it all", knowing which are the different positions of the "ranking" in order of preference from the participants.

Card Sort: Is another tool to help people rank their options in order of preference. This time utilizing a deck of cards with words or images, making the process visual and dynamic.

4.2.3.2 Implement

Co-Implementation: It refers to engage the customers/users in the phase implementation of the co-creation process.

Social media: Social media could be an excellent tools also in this phase, developing strategies to "spread the word" and reach a large audience.

4.2.3.3 Identify

Growth Hacking Canvas: Growth Hacking is a set of techniques focused on the growth of a product or company, detecting which paths or channels represent the most efficient way

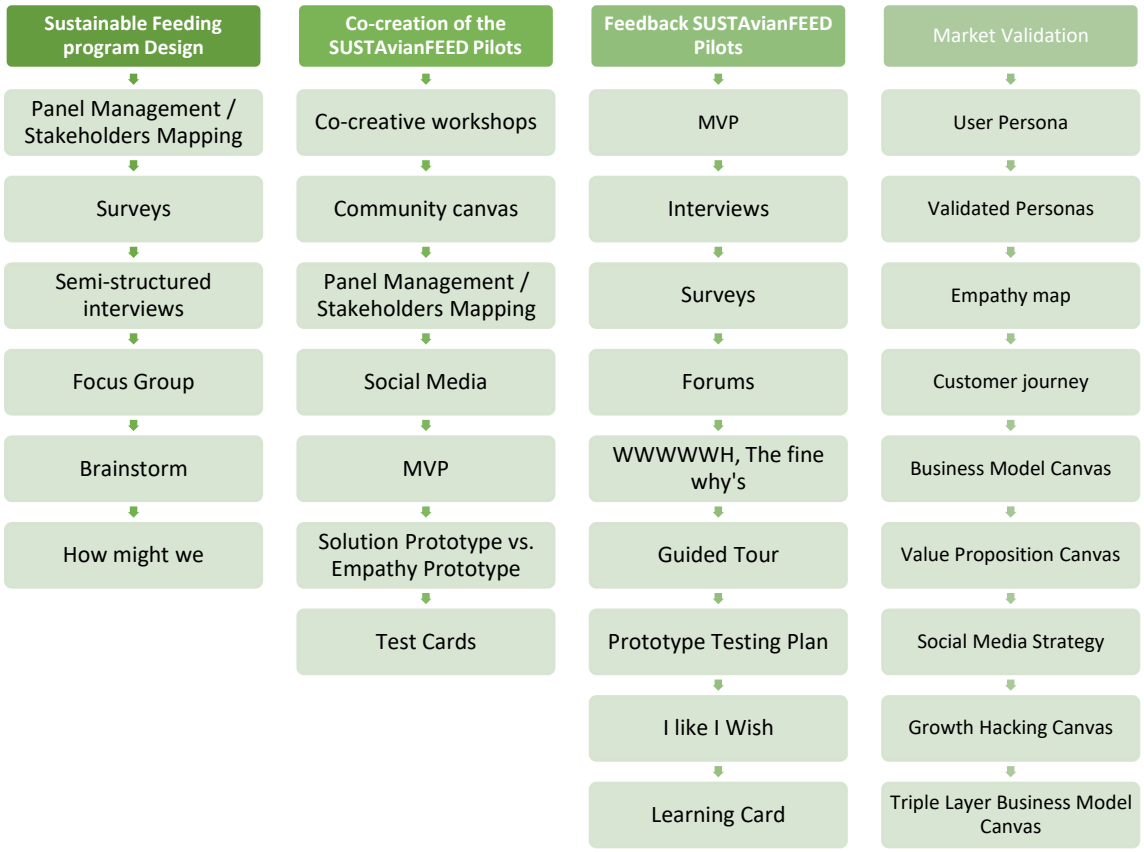
to reach and retain customers and scaling them very quickly. The Growth Hacking Canvas is an adaptation of the methodology of the Business Model Canvas representing growth hackings' key elements.

Triple Layer Business Model Canvas: Introduces sustainability approach through two additional layers to the traditional Business Model Canvas. Those lawyers are Environmental life cycle Layer and social stakeholder layer.

Each topic of the SUSTAvianFEED approach for LLs is strongly related to one or more stages or iterations of the User Engagement Toolkit and/or the Circular Desing Guide. They inspired the selection of the most suitable tools for the SUSTAvianFEED Living Lab Implementation Plan, after analysing the corresponding phase with its objectives within the process.

Overall Implementation Plan for SUSTAvianFEED demonstration Living Labs

Methods and tools for the different objectives of the project.



4.3 Sustainable Feeding program Design

Related methods: Explore and Co-create (Understand, Think and Define).

Objective of the LL activity:
To elaborate an optimal, realistic and extensive list of possible by-products, local ingredients, etc., to be included in the alternative nutritional diet to be developed in the project.

Actors to be involved:
Each partner will have to identify relevant actors of their regions. Some of the actors can be:

- Companies of the sector.
- Public organisms.
- Livestock associations.

- Providers.
- Universities.
- Etc.

Tools to be used:

1. Surveys
2. Semi-structured interviews
3. Others (workshops, focus groups, attendance to trade fairs, etc.)

4.4 Co-creation of the SUSTAvianFEED Pilots

Related methods: Define, Make, Implement (Plan & Engage, Protype, Test), Evaluate, Discover, Conceptualize.

Objective of the LL activity:
Relevant actors along the whole supply chain will provide inputs for the pilot implementation. It allows clients and actor to co-create the background of the pilot according to their needs and motivations.

Actors to be involved:
Each partner will have to identify relevant actors of their regions. Some of the actors can be:

- Public organisms.
- Livestock associations.
- Providers.
- Universities.
- Etc.

Tools to be used:

1. Surveys
2. Workshops
3. Focus groups
4. Storyboards

4.5 Feedback SUSTAvianFEED Pilots

Related methods: Make, Release, Implement, Evaluate, Discover, Conceptualize.

Objective of the LL activity:
Consumers to take part and provide feedback during the pilot. The idea increases among co-creation through iterative interactions between phases.

To promote an evolutionary development, and involve stakeholders from the first moment. In this project, there will be 3 iteration phases. The aim is to collect relevant insights to

apply necessary changes with enough time to test them during the next iteration, this leads to multiple iterative development rounds. This process requires passing from co-creation to implementation phase in a short period of time and then going back to the initial phase to evaluate and think about the results in order to apply changes for a new implementation phase. The final number of iterations will depend on the development of the tasks.

Actors to be involved:

Actors involved in the pilot actions, and potential new end-consumer identified by the validation of persona profiles.

- Clients (Farmers)
- End-consumers

Tools to be used:

MVP
Interviews
Surveys
Forums
WWWWWH, The fine why's
Observation
Shadowing
Prototype Testing Plan
I like I Wish
Learning Card

4.6 Market validation

Related methods: Define, Release, Discover, Understand, Implement, Evaluate (Launch, Identify).

Objective of the LL activity:

Consumers to take part in the detection and testing of circular economy business opportunities, and the development of a sustainable label.
Putting focus on the needs that motivate the users to buy and consume a poultry feed with sustainable diet. ¿What triggers their motivation?

Actors to be involved:

Actors involved in the pilot actions, and potential new end-consumer identified by the validation of persona profiles.

- Clients (Farmers)
- End-consumers
- Potential end-consumers not identified in the validation of persona profiles

Tools to be used:

Buyer Personas
Surveys
Design Sprint
Observations/shadowing
Innovation camp
User Persona

Validated Personas
Empathy map
Customer journey
Business Model Canvas
Value Proposition Canvas
Social Media Strategy
Growth Hacking Canvas
Triple Layer Business Model Canvas

5 Specific Implementation Plan for SUSTAvianFEED Living Labs

LL A1. Sustainable Feeding program Design: Stakeholders Mapping

- Target group: Members from each partner internal team, shareholders.
- Location: Online/ Partners' premises
- Duration: 2-4 hours
- Key themes: Detecting groups and subgroups of users and stakeholders, connecting those groups with the project' activities.
- Tools: Brainstorm, Panel Management, stakeholders mapping, user persona
- Timing: Project months 4-6 (July-September2021)
- Involved Partners: ALIA; ENTOMO; ISA-CM; UMU; EGE; UNITO; RAYHANA

LL A2. Sustainable Feeding program Design: Interviews with local experts

- Target group: Professionals and experts in animal feed from academia and private sector
- Location: Online/ Stakeholders' premises
- Duration: 30 minutes to one hour per interview
- Key themes: List of possible by-products, local ingredients, etc., to be included in the alternative nutritional diet to be developed in the project.
- Tools: Semi-structured Interviews.
- Timing: Project months 4-6 (July-September2021)
- Involved Partners: ALIA; ENTOMO; ISA-CM; UMU; EGE; UNITO; RAYHANA

LL A3. **Sustainable Feeding program Design: Interviews with providers, Analysis of insects' farming in each territory**

- Target group: Providers from the supply chain
- Location: Online/ Stakeholders' premises
- Duration: 30 minutes to one hour per interview
- Key themes: Potential to produce different insects in each area (possible feedstock, connection with other areas, insect feedstock sources and place of consumption of the waste).
- Tools: Semi-structured Interviews.
- Timing: Project months 6-12 (September2021-March 2022)
- Involved Partners: ENTOMO.

LL A4. **Sustainable Feeding program Design: Workshop for farmers validation on the feed program**

- Target group: Farmers
- Location: Online / conference room / Partners' premises
- Duration: 2.5 hours
- Key themes: farmers validation on the feed program
- Tools:to be defined
- Timing: Project months 6-12 (September2021-March 2022)
- Involved Partners: ALIA; ENTOMO; ISA-CM; UMU; EGE; UNITO; RAYHANA

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LL A5. Co-creation of the SUSTAvianFEED Pilots: Online Survey 1 Consumers / Online Survey 1 Farmers

- Target group: End-users (Consumers), Clients (Farmers)
- Location: Online
- Duration: 10-15 minutes / 30 days available
- Key themes: 1) General attitudes, values, and preferences towards poultry feed sources, 2) attitudes, understanding and acceptance of sustainable feeding 3) preferences and ranking possible feeding options
- Tools: Online Surveys (2)
- Timing: Project months 10-12 (January-March 2022).
- Involved Partners: ALIA; ENTOMO; ISA-CM; UMU; EGE; UNITO; RAYHANA.

LL A6. Co-creation of the SUSTAvianFEED Pilots: Open Innovation Camp/Co-creation workshop*- Design of the SUSTAvianFEED Pilots

- Target group: Experts. Public organisms. Livestock associations. Providers. Universities.
- Location: Online / conference room / Partners' premises
- Duration: 1 day
- Key themes: 1) Set objectives and methods for the pilots 2) Select specifics prototypes to be test during pilots 2) Detect relevant KPI for pilot evaluation
- Tools: How might we. Brainstorm. Dotmocracy. Empathy Prototype vs Solution Prototype. Test Cards
- Timing: Project months 10-12 (January-March 2022).
- Involved Partners: ALIA; ENTOMO; ISA-CM; UMU; EGE; UNITO; RAYHANA.

LL A8.SUSTAvianFEED Pilots Implementation: Real-life testing Events 1

- Target group: End-users (Consumers), Clients (Farmers)
- Location: Trade fairs / Public places
- Duration: 1 day
- Timing: Project month 20-21 (November-December 2022)
- Tools: Tasting; Short questionnaire
- Involved Partners: ALIA; ISA-CM; UMU; EGE; UNITO; RAYHANA.

LL A9. SUSTAvianFEED Pilots implementation: Stakeholders Mapping 2

- Target group: Associations, members from each partner internal team, shareholders.
- Location: Online/ Partners' premises
- Duration: 6 hours
- Key themes: 1) Share Experiences. 2) Updating of Stakeholder Mapping and Validation of initial Assumptions. 3) Feedback from other partners.
- Tools: Stakeholder's mapping, validated persona
- Timing: Project months 25 (April 2023)
- Involved Partners: ALIA; ISA-CM; UMU; EGE; UNITO; RAYHANA.

LL A10. SUSTAvianFEED Pilots Implementation: Real-life Testing Events 2

- Target group: End-users (Consumers), Clients (Farmers)
- Location: Trade fairs / Public places
- Duration: 1 day
- Tools: Tasting; Short questionnaire
- Timing: Project month 27-28 (June-July2023)
- Involved Partners: ALIA; ISA-CM; UMU; EGE; UNITO; RAYHANA.

LL A11. SUSTAvianFEED Pilots Implementation: Online Survey 2 Consumers / Online Survey 2 Farmers

- Target group: End-users (Consumers), Clients (Farmers)
- Location: Online
- Duration: 10-15 minutes / Open 30 days
- Key themes: 1) General attitudes, values, and preferences towards poultry feed sources, 2) attitudes, understanding and acceptance of sustainable feeding 3) Share the firsts Life-cycle assessment results (The result are valuable for them?) 4) Opinions about the concrete pilot's actions that are being carried out.
- Tools: Online Surveys (2)
- Timing: Project months 31-32 (October -November 2023)
- Involved Partners: ALIA; ISA-CM; UMU; EGE; UNITO; RAYHANA.

LL A12. SUSTAvianFEED Pilots Implementation: Real-life Testing Events 3

- Target group: End-users (Consumers), Clients (Farmers)
- Location: Trade fairs / Public places
- Duration: 1 day
- Tools: Tasting; Short questionnaire
- Timing: Project month 36-37 (March-April 2024)
- Involved Partners: ALIA; ISA-CM; UMU; EGE; UNITO; RAYHANA.

LL A13. SUSTAvianFEED Pilots Implementation: Workshop, Economic evaluation of pilot activities.

- Target group: Project Partners internal teams.
- Location: Online / conference room / Partners' premises
- Duration: 1 day
- Key themes: Evaluate financial consequences of the proposed production system for farmers.
- Timing: Project month 42 September 2024.
- Involved Partners: ALL PARTNERS: ALIA; ISA-CM; UMU; EGE; UNITO; RAYHANA: ENTOMO; SLOWFOOD

LL A14. Market Validation, Eco-Label: Internal Workshops

- Target group: Project Partners internal teams.
- Location: Online

- Duration: 3 sessions of 1 hour.
- Key themes: 1) Presentation of existing advances and case studies. 2) Share experience, advances and local state of each partner.
- Tools: Guided presentation. Brainstorming.
- Timing: Project month 14-16 (May-July 2022)
- Involved Partners: ALL PARTNERS: ALIA;ISA-CM; UMU; EGE;UNITO; RAYHANA: ENTOMO; SLOWFOOD

LL A15. Market Validation, Eco-Label: Interviews with local/regional/national/international experts

- Target group: Professionals and experts in sustainable labels in academia, private sector and public sector.
- Location: Online/ Stakeholders' premises
- Duration: 30 minutes to one hour per interview
- Key themes: 1) Collect Useful information for the design of the eco-label
- Tools: Semi-structured Interviews.
- Timing: Project month 17-20 (March-April 2024)
- Involved Partners: ALIA;ISA-CM; UMU; EGE;UNITO; RAYHANA

LL A16. Market Validation, Eco-Label: Co-creative Workshop Design of the SUSTAvianFEED Label

- Target group: Members of the quadruple helix (consumers, supply chain members, decision makers, and academia).
- Location: Online / conference room / Partners' premises
- Duration: 1 day
- Key themes: 1) Testing the facts and KPI that are well-valued from the end-users 2) Share and validate results of the investigation process.
- Tools: Dotmocracy. Idea Dashboard. Card sort.
- Timing: Project months 21-26 (December 2022 – May 20232024)
- Involved Partners: ALIA;ISA-CM; UMU; EGE;UNITO; RAYHANA

LL A17. Market Validation, Eco-Label: Online Pool for SUSTAvianFEED Label

- Target group: End-users (Consumers)
- Location: Online
- Duration: 30 days
- Key themes: Validation of a SUSTAavianFEED Label Design (3 options)
- Tools: Social Media
- Timing: Project months 27-31 (June-October 2023)Involved Partners: ALIA; SLOWFOOD

LL A18. Market Validation, Business Model and Eco-Label: Consumer behaviour at the marketplace

- Target group: End-users (Consumers)
- Location: Supermarkets, public markets, poultry shops

- Key themes: 1) Detection the characteristics of packaging, location, price of the products that the consumer values when buying. 2) Confirmation of the assumptions directly with the consumer with a quick interview/focus group.
- Tools: Review of existing studies. Focus Group/Interviews: Five why's interview and Customer Journey to confirm previous assumptions.
- Timing: Project months 27-31 (June-October 2023).
- Involved Partners: ALIA; ISA-CM; UMU; EGE; UNITO; RAYHANA.

LL A19. Market Validation, Business Model: Interviews with local experts

- Target group: Professionals and experts in animal feed from academia and private sector
- Location: Online/ Stakeholders' premises
- Duration: 30 minutes to one hour per interview
- Key themes: 1) Validation of the results of pilot actions. 2)Share the results of the co-creation activities. 3)Collect Useful information for Business Model
- Tools: Semi-structured Interviews.
- Timing: Project months 31-35 (October 2023- January 2024)
- Involved Partners: ALIA;ISA-CM; UMU; EGE;UNITO; RAYHANA

LL A20. Market Validation, Business Model: Telephone interviews potential B2B customers

- Target group: B2B customers; stakeholders from the supply chain: Distribution and retail: supermarkets, poultry shops, etc.
- Location: Online/ Stakeholders' premises
- Duration: 30 minutes to one hour per interview
- Key themes: 1) attitudes towards Sustavianfeed program and pilot results 2) Feeback to business model
- Tools: Semi-structured Phone Interviews (Or Paper survey send by email).
- Timing: Project months 31-35 (October 2023- January 2024)
- Involved Partners: ALIA;ISA-CM; UMU; EGE;UNITO; RAYHANA

LL A21. Market Validation, Business Model: **Co-creative Workshop Design of the SUSTAvianFEED Business Model**

- Target group: Clients (Farmers), Experts. Public organisms. Livestock associations. Providers. Universities.
- Location: Online / conference room / Partners' premises
- Duration: 1 day
- Key themes:
- Tools: Triple Layer Business Model Canvas
- Timing: Project months 34-37 (January-April 2024).
- Involved Partners: ALIA;ISA-CM; UMU; EGE;UNITO; RAYHANA

LL A23. Market Validation, Business Model: **Final workshop: SUSTAvianFEED Business Model Presentations**

- Target group: Project Partners internal teams.

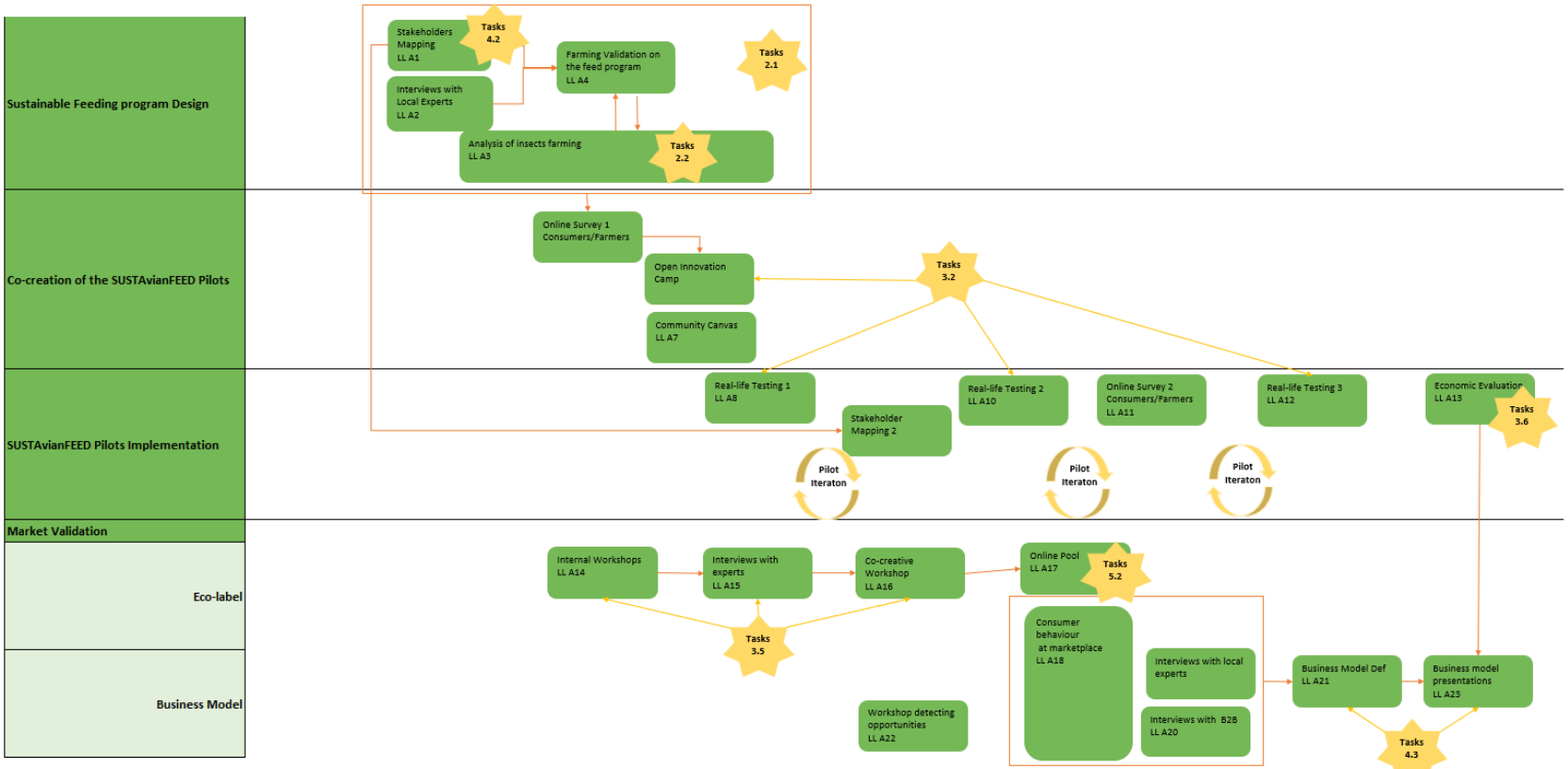
- Location: Online / conference room / Partners' premises
- Duration: 1 day
- Key themes: 1) Share business development main learnings 2) Develop the Final version of Business Models 3) Get useful insights developing guidelines for Circular Economy Business Models
- Tools: Triple Layer Business Model Canvas
- Timing: Project months 43-44 (October-November 2024, Depending of LL A13)
- Involved Partners: ALL PARTNERS: ALIA; ISA-CM; UMU; EGE; UNITO; RAYHANA: ENTOMO; SLOWFOOD

Special activities for ASSOCIATION RAYHANA

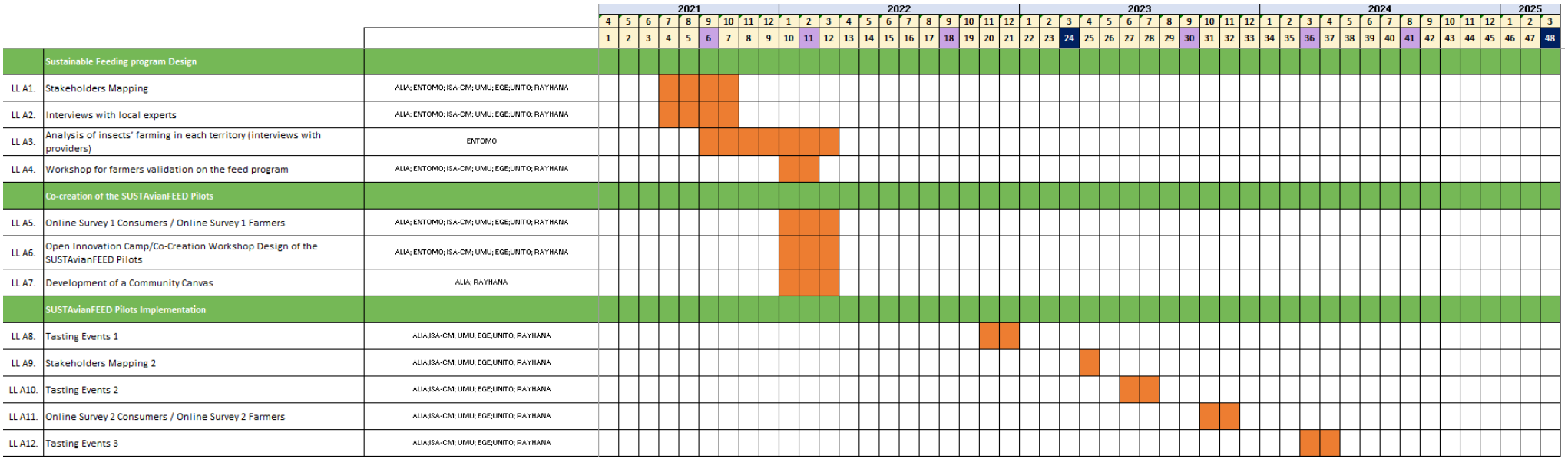
LL A7. Co-creation of the SUSTAvianFEED Pilots: Development of a Community Canvas
LL A10. SUSTAvianFEED Pilots Implementation: Special tasting event for the community members.
LL A22. Market Validation, Business Model: **Workshop: Detecting Opportunities, empowerment of rural women through farming activities**

6 General Workplan

6.1 Overall Process



6.2 Adaptad General Ganttchart



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	Market Validation																																																		
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LL A14.	Internal workshops	ALIA;ISA-CM; UMU; EGE;UNITO; RAYHANA: ENTOMO; SLOWFOOD																																																
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LL A21.	Co-creative Workshop Definition of the SUSTAvianFEED Business Mode	ALIA;ISA-CM; UMU; EGE;UNITO; RAYHANA																																															
LL A22.	Workshop: Detecting Opportunities, empowerment of rural women through farming activities	ALIA; RAYHANA																																															
LL A23.	Workshop: SUSTAvianFEED Business Model Presentations	ALIA;ISA-CM; UMU; EGE;UNITO; RAYHANA: ENTOMO; SLOWFOOD																																															