

## **Description of work and role of participants**

### **Task 5.1 Stakeholders Platform (M1-M36) Task leader: BBIA Contributors: All**

The Stakeholder Platform serves to enhance the project in many ways:

1. by bringing in views from outside of its partners – for example, suggesting unexplored pathways in the process development or in creating market –place relationships;
2. by verifying the activities as they mature and bring a positive critique to enable improvement of the project as work progresses
3. to link into projects and research which is either ongoing or has been completed which may help influence the project, and likewise, may give other projects new knowledge and relationships from this one.
4. as a sounding board and discussion platform to talk through specific elements of the project and to help find solutions to specific barriers
5. to link the project into a wider industrial and policy landscape which may initially be overlooked in the project proposal itself- for example, with local communities on their waste management systems, or local industries on the management of their biogenic residues, or with the financial community interested in investing in new technologies.

So the USABLE project will establish a varied and wide Stakeholder Platform where project partners are in tight connection with stakeholders, which include, among others, bioplastics end users and feedstock producers, public authorities, financial institutions, chemical industries, representatives of the farming communities, industry representatives and their associations. Through sharing knowledge generated during the project and expertise among stakeholders, the SP is aimed at:

- a) Help defining stakeholders' needs and expectations from bioplastics end user sector to market exploitation of target bio-based end-products.
- b) Gathering information on the available feedstocks and establishing relations with providers for future large scale plant.
- c) Help identifying technical, environmental, regulatory, economic and social barriers and constraints along the whole technology chain and products as well.
- d) Giving recommendations and suggestions about the feasibility of possible solutions that will be investigated and found during the project.
- e) Giving also support to elaborate well-targeted dissemination material and spread it around through the communication networks of stakeholders themselves.

Further goals are to create a network with other Platforms of EU projects on bio-waste to bio-based and to products and to engage policy and decision-makers on the bio-based products bioeconomy throughout the duration of the project. Several members of SP have been already identified and have agreed to participate as they are already involved in the stakeholders platforms of the projects NoAW and Res Urbis, whereas other interactions will be established as the project starts and progresses, depending on specific needs. Many of them are in turn Platforms and Associations, which will further open the USABLE Platform to their own networks.

In order to fulfil these targets:

- The SP will be organized both as a general body and as specialized sections (i.e. waste management sector, plastic industry sector, public authorities, social organizations, financial institutions, farmer associations,), for consultation on either general or specific issues, respectively.
- The Consultation of SP members will be carried out both physically and virtually, through face-to-face meetings during project meetings and surveys, questionnaires and interviews, respectively. In particular, the SP will be called for physical meetings at least 4 times, i.e. at the Kick Off Meeting (KoM), 1-year meeting, 2-year meeting and final meetings.
- At the KoM, key points of SP methodology will be defined and agreed among partners and stakeholders, including co-option of new members, confidentiality issues and other operational procedures. A direct link between the SP and the Strategic Committee is also planned: each WP leader will be asked to define a specific interaction with SP sections of main relevance, by carefully selecting Deliverable and Milestones to be discussed with the SP. This will create stronger networking between WP challenges and SP sections. On the other hand, the USABLE partners are fully aware that the participation in the SP is voluntary with no funding other than allowance for meeting attendance. Thus, although based on mutual interest, SP members will not be asked to exceed their true availability: a careful and well-tailored selection of activities to undertake is also needed to make the SP truly effective.

### **Task 5.2 USABLE Product Application Portfolio (M1-M24)**

**Task leader: InnoEXC Contributors: All**

This Task is aimed at structuring of the PHA product grades in a comprehensive product application Portfolio for USABLE, including the entire spectrum of low and high value USABLE Packaging applications developed by WP4, to match type of polymer produced in WP2 and functionalized in WP4, through the input from WP1.

The Portfolio will be based on five main pillars strategic market segments:

1. Performances packaging for food and drinks
2. Pharma packaging
3. Clothing design packaging

A market analysis, including size, drivers and dynamics of each segment will be performed. USABLE Packaging products will be assessed with respect to key economic parameters, such as cross margin and profitability in the perspective of future industrial scale production and on results of performances, by using input from WP2, WP3 and WP4 and support from WP1.

An optimized USABLE Packaging portfolio, will be the outcome of Task 5.1 and this will be taken as basis for the further economic analyses performed in WP5.

### **Task 5.3 Cost-benefit analysis (M24-M33)**

**Task leader: INNOEXC Contributors: All**

Model scenario planning, to be used as decision making tool, will be developed by cost-benefit analysis modelling, of the USABLE Packaging cost structure and margins for three key market segments with respect to other bio-based options and to petrochemical peers., Moreover other parameters such as feedstock availability, as result of the analysis performed in WP1, and USABLE Packaging forecasted demand based on the product portfolio as result of Task 5.2; will be embedded in the model to guide decision making taking into account actual sourcing and market boundaries.

The scenarios will be built with input from partners, taking into consideration three priority locations for future scale up to fit with the geography of the consortium. The feedstock availability will be considered to match the location of the plant whilst minimizing logistic efforts.

Cost analysis as for production will be based on technical data coming from WP2, such as energy and mass balances and reactor design and size, whereas revenues will be calculated by market analysis of developed applications elaborated in T5.2 from WP3 and WP1 inputs.

The USABLE value chain will be compared to petrochemical options for packaging and also to market available PHA plastics from crop feedstock with respect to cost and benefits. Furthermore, the return of investment (ROI) of capital investments will be considered, to guide the decision making.

### **Task 5.4 Integrated strategy roadmap (M30-M36)**

**Task leader INNOEXC Contributors: All**

The activities will aim at structuring an integrated strategy map with granularity at local level, with focus on partnership geographic distribution.

The strategy road map will take into account specific aspects of local value chains and potential replication in the European scenario, considering key factors enabling replication.

The key aspects for transferability and replicability will be defined and the integrated road map will be produced. More in detail:

- the fine tuning of road maps to the scenarios analysed in T5.3 to ensure benefits are maximized
- the effectiveness of strategies especially designed based on-specific needs of the target scenarios, will be tested within the stakeholder platform
- the key aspects for transferability and replicability at national- and EU-level will be also ensured by
  - i. having had a strong interaction with the SP where national- and EU-wide associations are also represented
  - ii. having had a dedicated focus on specific aspects deriving from the feedstock and end use value chains

#### **Deliverables**

D5.1 Report on "Stakeholder Platform Activity", (M12 and M24, final M36), leader BBIA

D5.2 USABLE product applications portfolio, (M24) leader INNOEXC

D5.3 Cost benefit and ROI decision making tool, (M33) leader INNOEXC

D5.4 USABLE Strategy roadmap and go to market perspective, (M36) leader INNOEXC

