



WELCOME TO FIRST2RUN

Welcome to the first issue of the recently started project **FIRST2RUN** – Flagship demonstration of an **I**ntegrated **bioR**efinery for dry crops **S**ustainable **exploIT**ation **T**owards **bio**based materials **pR**oduction.

The **FIRST2RUN** project aims at demonstrating the techno, economical and environmental sustainability at industrial scale of a first-of-kind value chain where low input and underutilized oil crops (i.e. cardoon) grown in arid and marginal lands and not in competition with food or feed, are exploited for the extraction of vegetable oils to be further converted into bio-monomers (mainly pelargonic and azelaic acids) as building blocks for high added value bio-products, biolubricants, cosmetics, bioplastics, additives through the integration of chemical and biotechnological processes.

DIRECT IMPACT FROM FIRST2RUN PROJECT

FIRST2RUN intends to support the European strategy towards the achievement of the aforementioned targets by demonstrating a first of its kind biobased value chain that, starting from underutilized agricultural resources grown in marginal lands and not in competition with food and feed, will allow obtaining biobased materials and products with improved technical and environmental profile in comparison with their petrochemical counterparts.

The integration of all process steps in a virtuous value chain covering the entire process (from biomass to biobased products and materials) will thus have direct impacts on economic, environmental and social levels, leading to a series of tangible and impressive benefits both on the industrial and agricultural sectors:

- **Potential valorization of currently unexploited 3500 ha of marginal lands**, which results in at least 0.375 ton/ha of vegetable oil to be processed to bioproducts and 16.2 MWth of installed thermal power from the energy generation plant using the lignocellulosic fraction
- **Potential revitalization of the local economy by reconverting old industrial sites** and the creation of skilled jobs: estimated 60 new skilled jobs every kton of produced bioplastics, taking into account the whole value chain, from agriculture to the end life of the final products (i.e municipalities, composting plants)

FIRST TECHNICAL MEETING UPDATE

On the **19 and 20 January 2016** all Partners - Matrica, SIP, SoliQzBV, Biophil Central Europe, University of Bologna - attended the first technical meeting organized at Novamont facilities, to update and plan activities at the 6th month from project's launch. Within this two-days meeting, a full agenda has been presented, comprising an overall review of the project objectives and milestones, administrative and management issues, technical presentations of Work packages.

Up to now, according to time scheduling of the project, one of the most intense activity has been foreseen in **WP1**, dedicated to **Oil Crops production and management**.

The main objective of one of this activity is to provide an overview of the agronomic protocols for cardoon cultivation and field management that Novamont has tested and validated at demo scale in the last years in Sardinia in order to fix the optimal protocol that will be used for achieving the targeted productivity within the **FIRST2RUN** project.

According to experimental fields trials, and to internal studies carried out in the last 4 years within cardoon cultivation and management, data and results was resumed and matched in order to identify the protocol to be followed for the large scale demonstration of the cardoon crop cultivation that will be achieved in the **FIRST2RUN** project.



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PROJECT MANAGER SPEAK OUT

What is your role in the project?

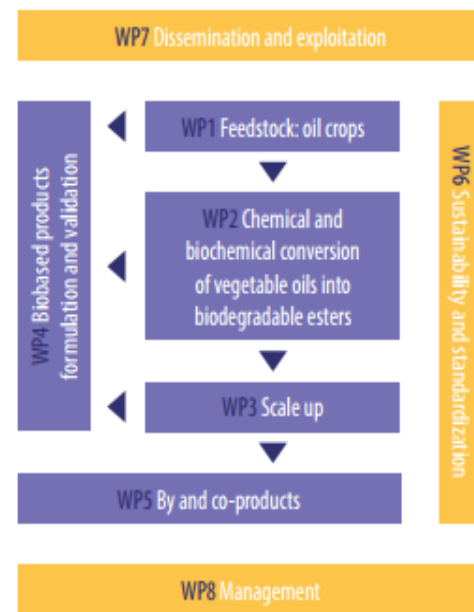
I am the Project Manager of **FIRST2RUN**. The project will last 48 months and has been broken into 8 Work Packages (six technical and two non-technical WPs).



What is the main purpose of the project?

The **FIRST2RUN** project intends to support Europe in the achievement of its ambitious targets in the **bioeconomy** through a successful demonstration of an innovative value chain based on the **valorization of underutilized dry oil crops in marginal lands with high replicability potential throughout Europe**, thus creating the conditions for multiplying the implementation of **sustainable biorefineries** towards increased biochemicals productivity, reduced energy consumption and operating costs, savings of GHG emissions, increased job opportunities and revenues for large companies (technology providers and processes developers), SMEs (as final users of the developed biobased materials) as well as farmers (involved in crops cultivation and management as well as in by and co-products commercialization).

*L. Capuzzi, Research & Development
Director - Novamont S.p.A.
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PARTNERS SPEAK OUT

What is the Matrica's role in the project?

Matrica is strongly committed in the development of a **third-generation biorefinery integrated** in the territory, revamping existing industrial facilities in Porto Torres (Sardinia), Italy, to demonstrate biobased biodegradable oil and biopolyesters production at large scale.

Matrica, with **Novamont's** support, will develop the **chemical and biotechnological** conversion of biomonomers into esters suitable for the formulation of different **biobased products**, i.e. PVC plasticizers, biolubricants and cosmetic products and will also promote the valorisation of co- and by-products from the process in order to generate new business opportunities.



*P. Sedda, Plant Director -
Matrica S.p.A. - ©Matrica*

The total effort of the Project is relevant, being **1.665 MM** with a total eligible **cost of 25.022.688,75 €** and **around 30 mil €** of estimated Additional Activities (Granted: 16.995.882,00 €)

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