

MATER-BIOTECH is a company based in Adria (North East of Italy) and 100% owned by **NOVAMONT S.P.A.**, pioneer and world leader in the sector of bioplastics and in the development of biochemicals.

MATER-BIOTECH has been created by **NOVAMONT** for the build-up of the first dedicated industrial plant at world level that can produce butanediol (**1,4 BDO**) directly from sugars. It benefits of a partnership that links together a technology developed by Genomatica, a leader in the biotechnology industry, and **NOVAMONT**'s unique skills and know-how in developing low-impact processes.

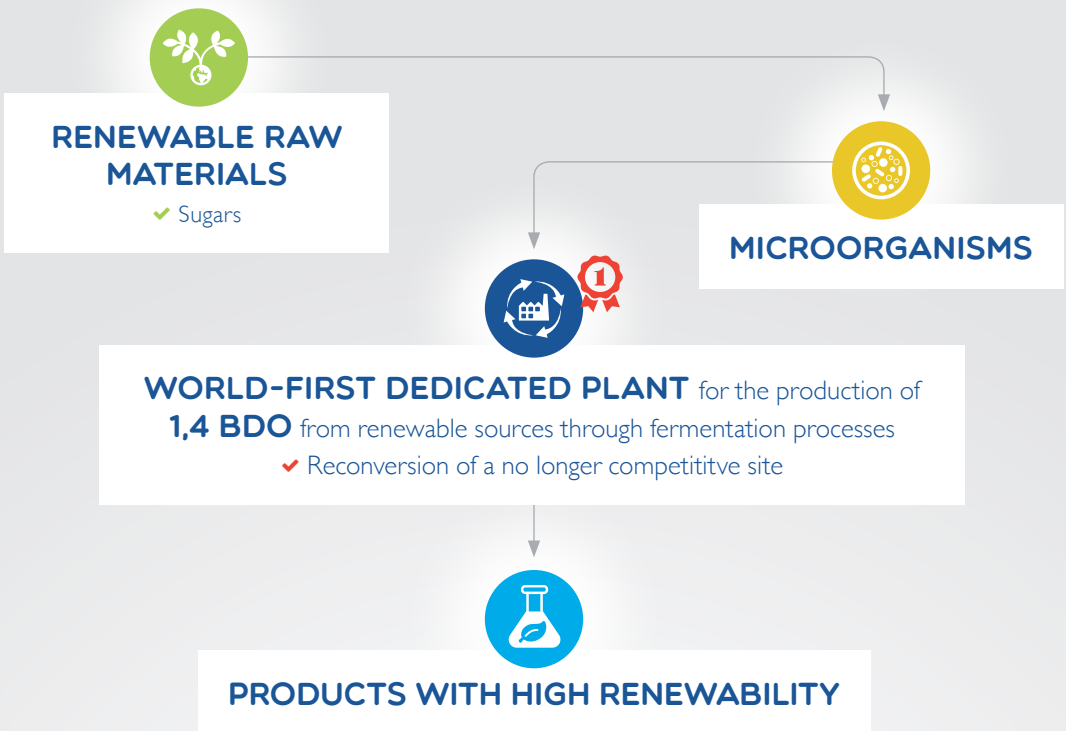
The plant represents a fundamental development of **NOVAMONT**'s biorefinery model, based now on six connected sites and four new technologies, integrating chemical processes already in place for

the production of biochemicals with industrial biotechnology. This paves the way to the production of further chemical intermediates from renewable resources.

With a 30,000 tonnes per year capacity, the plant has been conceived to reuse by-products for its own energy purposes, thus optimizing the life-cycle of the entire process.

In line with **NOVAMONT** strategy, based on the use of world-first technologies for the revitalization of no longer competitive sites, **MATER-BIOTECH** represents a virtuous example of industrial development in a logic of territorial regeneration and enhancement of preexisting infrastructures, skills and competencies, with positive returns on the downstream industry and its connected activities.

🌱 1,4 BDO FROM RENEWABLE RAW MATERIALS



📄 WHAT IS 1,4 BDO?

1,4 BDO is a chemical intermediate characterized by a very high demand for a wide range of applications (textiles, electronics, automotive, consumer goods, etc.) up to now obtained from fossil resources. Thanks to this innovation BDO is now becoming a renewable chemical intermediate for the production of

NOVAMONT bioplastics. More specifically, bioBDO enables the production of the fourth generation of **MATER-BI**, characterized by a higher content of renewable raw materials and a further reduction in greenhouse gas emissions and dependence on fossil raw materials.



NOVAMONT is the world's leading company in the sector of **BIOPLASTICS** and in the development of **BIOCHEMICALS** obtained through the integration of **CHEMISTRY, ENVIRONMENT** and **AGRICULTURE**. **NOVAMONT** promotes a **BIOECONOMY** model based not only on the efficient and sustainable use of renewable resources, but also as a factor for territorial regeneration.

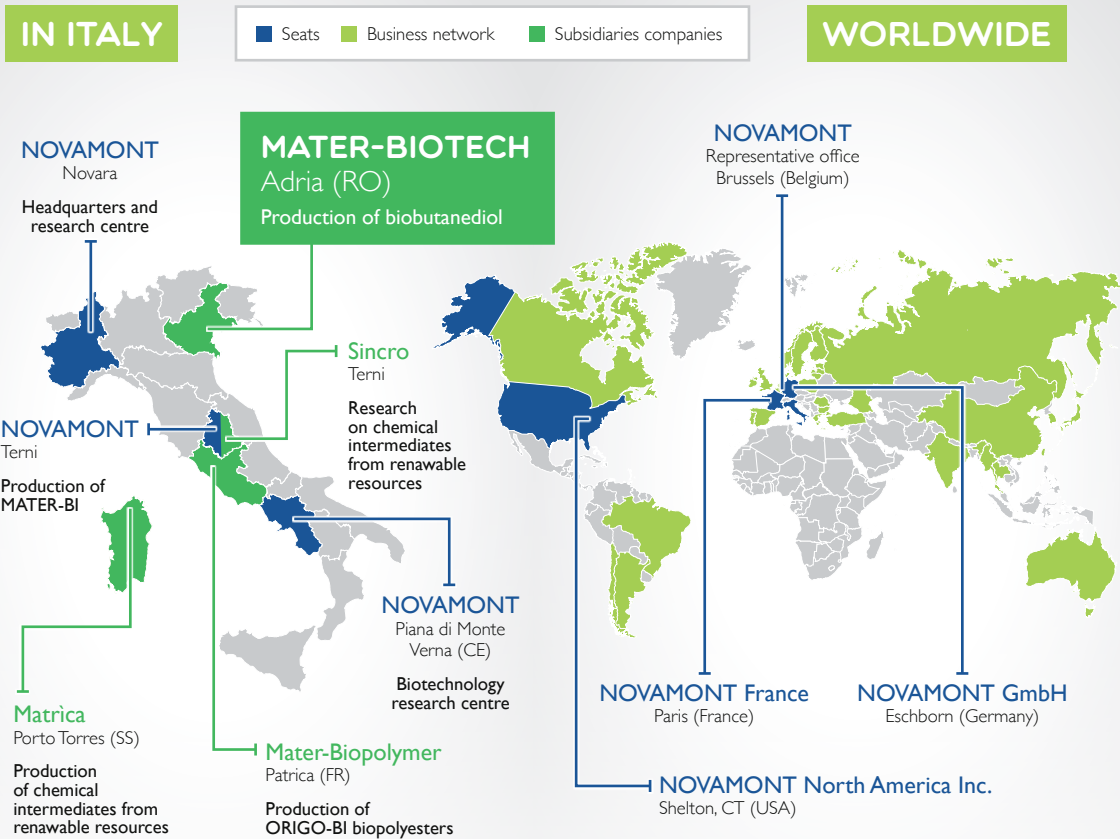
NOVAMONT is driven by **INNOVATION**: it invests in **R&D** activities and develops new proprietary technologies which allow to constantly improve the performance and environ-

mental profile of its products. **NOVAMONT** development model starts from local areas and creates **INTEGRATED BIOREFINERIES** by converting uncompetitive industrial sites, respecting the specific characteristics of the territories, in partnership with all stakeholders in the value-chain. Its approach is cultural as well as industrial, with the aim to **CREATE JOBS** and **COMPETITIVENESS**, enhancing local skills and implementing training programmes at all levels.

MATER-BI is the innovative family of bioplastics born from **NOVAMONT's** research which uses renewable raw materials and it is fully biodegradable and compostable, according to major international standards.

MATER-BI products are used in many different sectors, such as large-scale retail distribution, separate waste collection, foodservice, agriculture and packaging.

NOVAMONT GROUP: WHERE WE ARE



OUR PEOPLE

600 (+9% compared to 2014)

Since 2000: more than **300** training activities for young researchers in collaboration with the leading research institutions in Italy and abroad and continuous training for personnel at all levels.

www.novamont.com/mater-biotech

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ECONOMICS (2015 data)

OVER 1,000 PATENTS

BIOPOLYMERS PRODUCTION CAPACITY

MATER-BI: **120,000** tonnes p.a.
ORIGO-BI: **70,000** tonnes p.a.

TURNOVER

170 million €

RESEARCH AND DEVELOPMENT

INVESTMENTS: **6,4%** of turnover
DEDICATED PEOPLE: **20%**