2020 Impact Report

2021

NOVAMONT

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Contents

The epoch-making revolution of Novamont.

The circular bioeconomy for territorial regeneration

Novamont is an industrial company with roots in the Montedison School of Material Science

Created to fulfil the ambitious project of a group of researchers from the Montedison chemical group: the integration of chemistry, the environment and agriculture. Founded in 1990, since July 2020 it has been a benefit corporation and is a Certified B-Corp.

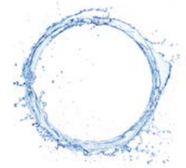
Novamont is an international leader in the bioplastics sector and in the development of bio-based bioproducts and biochemicals that do not pollute the soil, and which can regenerate it through circular models. Its mission is to develop materials and products by combining chemistry and agriculture, creating biorefineries in local areas and providing solutions that ensure the efficient use of resources throughout the product life cycle with social, environmental and economic benefits.
Its development model, which is designed to enable local regeneration, aims to build bridges between different sectors through collaboration with all actors in the value chain: from agriculture to research, from industry to the waste sector, from local institutions to civil society.

The goal is to create systemic demonstrators that focus on problems faced by local areas and their specific characteristics, and to continuously monitor performance in order to measure the extent of environmental, economic and social impact at a local level, while also leaving space for dynamic evolution.
Guided by these principles, and with the ambition of 'making more with less', Novamont promotes a circular approach to the bioeconomy based on regeneration and transformation, going beyond the simple concept of recycling in favour of the ecodesign of products, redesigning the way in which materials and applications are produced, consumed and disposed of and encouraging virtuous local value chains.

This also means rethinking production sites using world-leading technologies, starting with deindustrialised areas, without additional land take, by companies motivated not just by profit but which see the value in regenerating local areas and the social fabric. One example is the plant in Bottrighe, in the province of Rovigo (Veneto Region), which was created from the conversion of a disused site in Veneto into the first industrial site in the world for the production of bio-butanediol from sugars, and the plant in Patrica, in the province of Frosinone (Lazio Region), which makes biodegradable polymers and biopolyesters following the conversion of a PET production plant that was no longer competitive.

Novamont develops renewable, biodegradable and compostable products for applications at high risk of dispersal in the environment: this, together with an efficient network of treatment plants, may ensure that no residual substances accumulate in purified water, in sludge and in organic matter.
Its main product is Mater-Bi, the innovative family of biodegradable and compostable bioplastics developed to provide solutions to specific environmental problems, combining product quality and performance with an efficient use of resources. Mater-Bi can be biodegradable and compostable in home and industrial composting and is biodegradable in soil according to the principal European and North American standards: UNI EN 13432, EN 17033, e ASTM 6400. It was designed for applications in which biodegradability and compostability constitute added value, such as carrier bags that can be reused for collecting food waste, or catering and food packaging products that cannot be recycled if they become 'contaminated' by food leftovers, or else for products in which it offers specific functionality such as agricultural mulching film.
The main application sectors are separate waste collection, agriculture, large-scale retail distribution, catering and packaging. As well as bioplastics, Novamont develops and manufactures a series of other bioproducts designed as bespoke solutions in sensitive sectors for health and the environment: biodegradable cosmetic ingredients (Celus-Bi), bio-based, rapidly biodegradable biolubricants and dielectric fluids (Matrol-Bi) and formulated bioherbicides made with pelargonic acid.

Mater-Bi
innovative family of bioplastics.



Celus-Bi
biodegradable ingredients for cosmetics.

Matrol-Bi
biolubricants and dielectric fluids of renewable origin

Research and innovation have always driven development at Novamont, which now has a wide range of skills and specialisations, with equipment ranging from laboratory activities to innovative pilot plants. Thanks to major investments totalling around EUR 380 million, over the years Novamont has developed five proprietary technologies for the production of bioplastics and bioproducts, creating synergies between different areas of study (bioplastics, biotechnology, agronomics and organic chemistry). It holds a portfolio of around 1,400 patents and patent applications, and every year it invests around 5% of its turnover in research and development activities, with over 20% of staff involved in R&D.

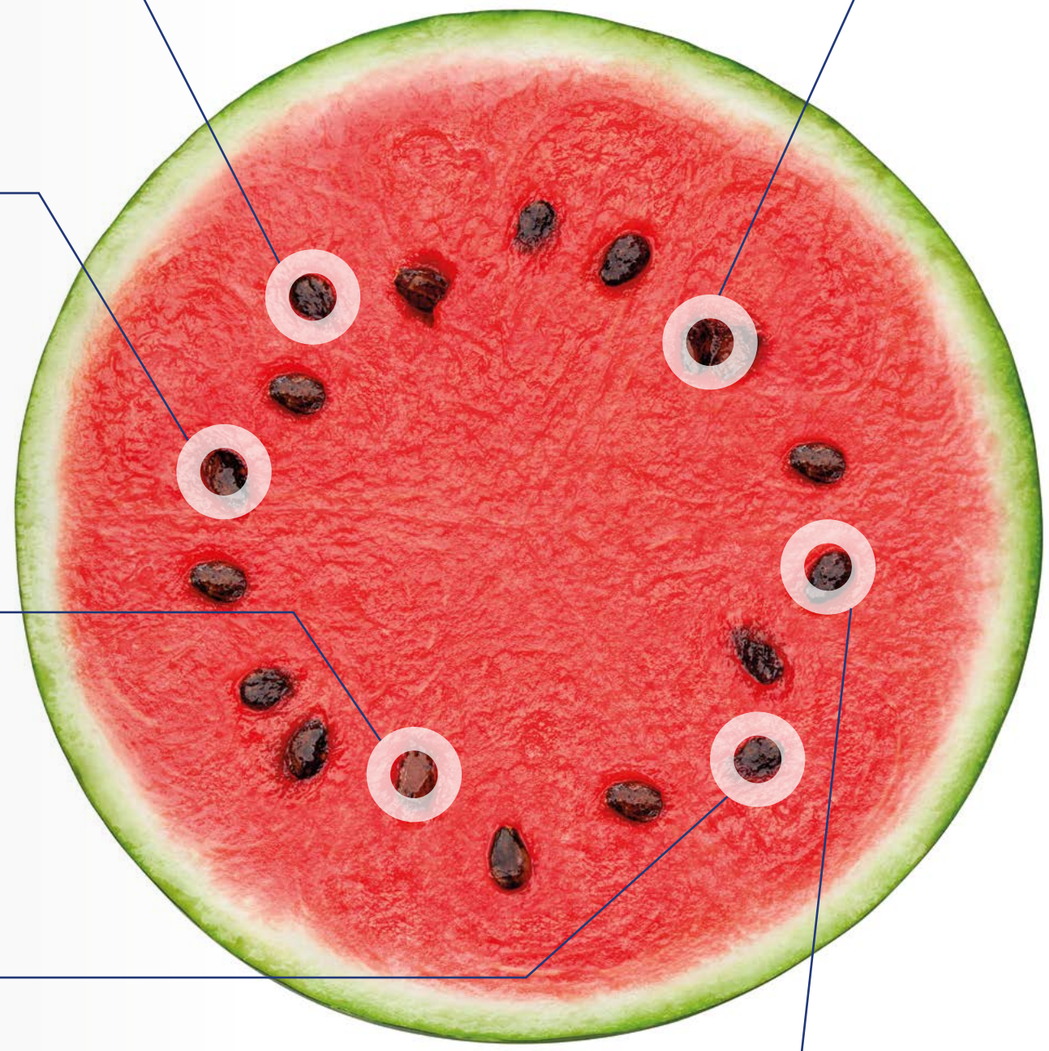
Novamont regularly organises training programmes for young researchers and experts, in partnership with schools, universities and research centres (over 400 training activities have been held since 1996).

With over 600 people, the Novamont Group has its headquarters in Novara, production plants in Terni, Adria (province of Rovigo), Patrica (province of Frosinone), the Matrìca joint venture with Eni Versalis in Porto Torres (province of Sassari, Sardinia Region) and research and development laboratories in Novara, Terni and Piana di Monte Verna (province of Caserta, Campania Region). It has offices in Germany, France, Spain and the United States and a representative office in Brussels (Belgium). It has its own distributors in over 40 countries worldwide. In 2021, with the goal of creating new alliances with international stakeholders and creating innovative projects aimed at improving separate collection of bio-waste and composting systems in North America, the Scandinavian countries, Eastern Europe and Australia, Novamont acquired BioBag International, a world leader in the development, production and sale of certified compostable and biodegradable applications. This acquisition is an important step towards the international consolidation of the integrated value chain of Novamont bioplastics and biochemicals.

Over 600 people

Distributors in over 40 countries

Production plants
- Terni
- Adria (RO)
- Patrica (FR)



Headquarters abroad
- Germany
- France
- Spain
- United States

Research and Development laboratories
- Novara
- Terni
- Piana di Monte Verna

3 technology hubs
with pilot plants
and demo plants

Novamont,
a convinced BC.

Framework of Benefit Corporations

The benefit corporations (BC) are the expression of a more up-to-date economic paradigm: beyond seeking profits, their corporate object includes making a positive impact on society and on the biosphere,

instead traditional companies have the sole object of distributing dividends to shareholders. In January 2016 Italy[1] introduced the legal structure of the benefit corporation to allow business owners, managers, shareholders and investors to protect their company's mission and stand out from all other types of company on the market through an innovative and virtuous legal structure. There are currently over 800 benefit corporations in Italy.

Therefore in pursuing their corporate activities, in addition to focusing on profits BCs voluntarily pursue one or more common benefit objects. Common benefit means the pursuit of one or more positive impacts (which can also be achieved by reducing negative impacts) in relation to people, communities, local areas and the environment, social and cultural heritage and activities, entities and associations and other stakeholders.

Benefit corporations seek to achieve these goals in a responsible, sustainable and transparent manner. Managers of benefit corporations must strike a balance between the interests of shareholders and the interests of society. To monitor their progress in achieving the objectives of common benefit, benefit corporations appoint a management representative who is responsible for the company's impact and commit to report their own activities transparently and comprehensively through an annual impact report, which describes both the actions that have been taken and the plans and commitments for the future.

Benefit corporations have two fundamental characteristics:

1) MEASURE WHAT MATTERS:

They measure their own results in terms of the positive impact they have on society and on the environment with the same comprehensive, rigorous approach adopted for economic and financial results. Performance is measured using the B Impact Assessment (BIA), which was created as an integral component of the benefit corporation concept in 2006 and is now the most robust and widespread measurement standard in the world, adopted by over 130,000 companies that use its tools in 65 countries and across 150 sectors. Measuring the company's impact produces a number on a scale from 0 to 200 points which distinguishes 'standard' companies from excellent ones, which have a score of over 80 (Certified B Corp®); http://bimpactassessment.net/. Novamont exceeded this threshold and qualified as a Certified B Corp, joining the movement comprising 115 Italian companies and over 3,800 worldwide.

2) PROTECT YOUR MISSION:

They pay specific attention to all those with an interest in the company's corporate object, whether shareholders or stakeholders. http://www.societabenefit.net/

1 Law 208 of 28.12.2015, paragraphs 376-384.

Driven by
the common benefit.

The new Novamont articles of association

"The regeneration of local areas has always been a fundamental part of our development model. Over the past 30 years we have worked hard to pursue this objective, against prevailing trends, by promoting a circular bioeconomy model that aims to preserve and revitalise the soil, maximising the recovery of organic material and developing innovative and sustainable products and production processes. More than ever, being a benefit corporation and a B Corp means looking at our business as a force for regeneration, rethinking the role of companies in society and going far beyond today's profits, to guarantee transparency and value across local areas."

Catia Bastioli
Chief Executive Officer of Novamont

Novamont has inserted a number of specific common benefit objects into its articles of association, which it intends to pursue in carrying out the company's economic activities.

Extract from Novamont Articles of Association, Article 2 – Object:
Novamont wants to support the transition from a product economy to a system-based economy and accelerate the cultural and operating evolution towards economic, environmental and social sustainability.
The transition involves society as a whole and is based upon improving the local area and collaborating with a range of interdependent parties, to create lasting and systemic prosperity.
As a benefit corporation, in order to achieve its corporate object, Novamont pursues common benefit objects, operating in a responsible, sustainable and transparent manner in relation to people, communities, local areas, the environment, social and cultural assets and activities, entities and associations and other stakeholders.
[...]

The company pursues the following specific common benefit objects through a bioeconomy model that involves:

1. ***the regeneration of local areas,*** *including through the redevelopment of disused production sites, avoiding the use of virgin soil.*

2. ***the promotion of a circular model*** *that maximises the recovery of organic matter using increasingly sustainable systems for the collection and treatment of biowaste to produce quality compost and organic matter.*

3. ***the preservation and regeneration of soil vitality and health.***
   To achieve this it develops and produces biodegradable and compostable products of plant origin, designed as solutions to specific problems, such as pollution by plastic and other persistent pollutants, closely connected to water and soil quality, and promotes sustainable agricultural practices that improve soil fertility and restore its organic matter.

4. ***the development of innovative and sustainable production processes*** *that help decarbonise the economy along with research and innovation to transform waste and by-products into new applications.*

5. ***the contribution to a virtuous network*** *of alliances with local stakeholders and different industry sectors, as well as the expansion of the culture and knowledge of the circular bioeconomy, promoting training activities in collaboration with public and private-sector partners and educational and awareness-raising initiatives around sustainable development.*

1 The first common benefit object.

The regeneration of local areas, including through the redevelopment of disused production sites, avoiding the use of virgin soil

Short description of how the company intends to pursue this object:

For Novamont, territorial regeneration means having a positive impact on local areas, returning value to communities , not just through economic but also social and environmental development, creating jobs, undertaking multidisciplinary projects in the field, revitalising less-developed marginal areas and transforming uncompetitive or abandoned industrial and research sites. The construction of integrated industrial and agricultural value chains is one of the central elements of the model to promote the sustainable use of biomass.

To this end, Novamont promotes value-chain projects targeted at various areas based on their specific characteristics, starting with experimentation of unconventional dryland crops with low environmental impact and reduced water consumption. These projects can achieve multiple purposes: creating additional production and income opportunities, thanks to agreements signed with farmers' associations, especially for areas of the country where there are marginal lands at risk of abandonment or where crops are being changed, thereby avoiding any competition with food crops; reducing the environmental impact on the soil, water and air by using innovative solutions such as biodegradable mulching film, bioherbicides to control infestations and biolubricants, as well as enhancing the value of the landscape. This sustainable approach to agriculture has not just led to bio-based biochemicals and bio-intermediaries for biorefineries but also food and animal feed products, thanks to the cascading use of biomass and protein flour derived from the extraction of seed oil.

The collaboration with Coldiretti is particularly significant, dating back over ten years in the experimental fields of central Italy, for the cultivation of cardoon and safflower on marginal lands and to develop products designed to supply unique, sustainable solutions to the pollution of ecosystems. An agreement was signed with Coldiretti in 2015 for cardoon cultivation, while the two companies signed another agreement in 2019 for sustainable production of Made in Italy sunflower oil, which can be used together with other vegetable oils from low-impact oleaginous crops.

Regarding the cascading use of biomass, as part of the GO-FORTE, CO-CARD and COMETA financed projects, Novamont began research and experimentation to extract flour from the expeller of dryland crops intended to improve the feed provided to chickens, young bovine animals and sheep. The use of marginal lands through the cultivation of dryland crops, and in particular of lands confiscated from mafia organisations, is at the heart of the collaboration with Terra Felix in Campania, which is described in detail below.

At the international level, Novamont is a partner in the FoodLAND project, which seeks to help strengthen agricultural biodiversity and different types of food, thereby promoting healthy eating to combat the main forms of malnutrition in six African countries: Tunisia, Morocco, Ethiopia, Uganda, Kenya and Tanzania. In particular, this initiative will help implement around 20 innovations for agricultural development aimed at establishing healthier food systems and habits and reducing the spread of different forms of malnutrition.

Territorial regeneration also means selecting disused or uncompetitive industrial sites and regenerating them using world-leading facilities and technologies. These plants are not designed as cathedrals in the desert, but as bioeconomy infrastructure, interconnected biorefineries integrated in the local areas, which are real seeds; starting points for new value-chains, partnerships and alliances. This enables Novamont to help generate positive impacts on employment and local economies, while at the same time reducing environmental impact, protecting virgin areas from land take and helping to reduce CO2 emissions by increasing the energy efficiency of plants and making use of process by-products.
Specifically, the Novamont headquarters and research centre is located in the historical chemical centre of Novara, created from a complete restructuring of the offices and guest quarters of the Donegani Institute. The Terni production site was created in 1990 from the regeneration of the historical building of the Polymer site, while the Patrica plant was a conversion of a PET production facility. The Bottrighe plant resulted from the industrial conversion of the former BioItalia/Ajinomoto site in Adria (province of Rovigo), acquired by Novamont in 2012. The research centre for the development of industrial biotechnology in Piana di Monte Verna, acquired by Novamont in 2012, was created by converting a pharmaceutical research centre formerly used for the production of experimental drugs by Sigma Tau.

Low-impact farming and protection of the landscape in Pantelleria National Park:

In the autumn of 2020, based on experimental evidence of the effectiveness of pelargonic acid for use in agriculture, an agreement was implemented between Novamont, the National Parks Administrative Body and the Department of Agriculture, Food and Forest Sciences of the University of Palermo.
The general goal of the agreement is to promote the conservation of biodiversity and the agricultural landscape, and also to make use of local crops and tourism and archaeological itineraries, design low environmental impact systems that maximise the use of all production components and experiment with innovative agronomic practices in order to reduce water and energy consumption and waste production.
In particular, the project includes activities aimed at reducing use of herbicides, increasing carbon in the soil and reducing the use of traditional plastics to avoid dispersal and accumulation in the soil (biodegradable plastics made from Mater-Bi have been used to cover greenhouses for drying grapes for Passito di Pantelleria wine), in line with the Novamont approach to sustainable and regenerative farming.
The agreement also involves projects to optimise separate collection, from the perspective of the circular economy, and reduce the carbon footprint, with the treatment and reuse of organic waste to restore nutrients to the soil, thereby closing the carbon cycle.
The project also makes provision for training activities for agricultural workers on the use of sustainable raw materials, with seminars and workshops on sustainability in agriculture and the forestry sector and research activities.

Promote
the conservation
of the agrarian landscape
and biodiversity

Biodegradable Mater-Bi bioplastics have been used for the covering of the greenhouses for drying of the passito grapes.

Conversion of the Patrica plant

The Patrica plant, which produces Origo-Bi, bio-based biopolyesters and develops new biopolymers, was created from the conversion of a PET production facility. As of 2020 there were 101 employees on the site, not counting indirect employment required for operations and induced employment. The surface area covered by the production plants and other buildings at the site totals around 74,000 square metres, with a total surface area of 140,000 square metres.
The conversion was made possible through significant investment and the application of proprietary Novamont technologies,

Conversion
of a plant dedicated
to the production
of PET.

thanks to which the various sections were regenerated to allow the use of bio-based raw materials and the implementation of a more sustainable, low-emission process.
The plant, which originally belonged to Mossi & Ghisolfi and had become too small for the economies of scale required by the sector, became part of a joint project between Novamont and Mossi & Ghisolfi in 2009, leading to the conversion of a production line (2010-2015), the start of continuous industrial production of Origo-Bi (2011) and more recently, the conversion of the second line (2018). In July 2019 work also began on a new 40,000 tonne Mater-Bi line.
The Patrica plant is extremely efficient, capable of meeting the highest quality and safety requirements, and has a complex system of utilities that makes it possible to minimise costs and waste by recovering and utilising by-products. The plant also has a section for distilling waste water from production processes, which enables the recovery of tetrahydrofuran (THF) that is generated during polymerisation. Once distilled, THF is used in the chemical and pharmaceutical industries.
The works mentioned increased the site's efficiency, both from the perspective of CO2 emissions and of saving fossil fuel energy resources.

The Patrica plant is highly efficient and able to ensure the highest quality and safety requirements.

ACTION	KPI	2020 RESULTS	2021 COMMITMENT
Implement innovative and unconventional agro-industrial value chains that respect local areas, in collaboration with the agricultural sector (farmers and farmers' associations) and with universities and research centres	no. ongoing experiments	**26**	**28**
Sustainable agriculture projects aimed at economic, social and environmental regeneration in specific areas	no. ongoing initiatives	**4**	**7**
Reactivation of disused or uncompetitive industrial and research sites to avoid land take in building new sites	Ratio of the area occupied by buildings and/or facilities on pre-existing buildings/ infrastructure compared with the total area occupied (by buildings/facilities)[2]	**96%**	**Index of regenerated area ≥ 50%**

2 The field of application of this indicator is all Group offices and plants located in Italy.

2 The second common benefit object.

The promotion of a circular model that maximises the recovery of organic matter using increasingly sustainable systems for the collection and treatment of biowaste to produce quality compost and organic matter

Short description of how the company intends to pursue this object:

Changes in the quality or quantity of organic matter in the soil influence the capacity of soils to ensure ecosystem services that are essential for life on earth. The storage of organic carbon in the soil, by increasing organic matter, is not only responsible for increasing soil fertility and productivity but also helps with water filtration, controlling erosion, the nutrient cycle and providing a habitat and energy for organisms, as well as helping to achieve the common goal of reducing greenhouse gas emissions (Freibauer et al., 2004; Smith, 2004).[3] The application of compost has been suggested as one of the main tools for carbon sequestration in the soil (Powlson et al. 2012; Favoino et al. 2008).[4]

By applying the circular bioeconomy approach, if municipal solid waste and sludge are suitably treated they become a precious source of organic matter, as compost, representing an important solution to two orders of problems: on one hand, preventing organic waste from ending up in landfill, which will be prohibited in Europe from the end of 2023[5], and on the other, providing valuable soil improvers (leading to improvements in the crop health, minimising the use of agrochemicals and fertilisers and helping to decarbonise the atmosphere).

In this respect in 2019, the Italian Composting and Biogas Association (CIC) and Coldiretti signed a memorandum of understanding on the regeneration of the soil and the beneficial use of organic carbon, based on a commitment to increase interception and improve the quality of organic waste, with a view to finding sustainable solutions to position Italy at the forefront of soil regeneration initiatives. Compostability in certain applications not only avoids possible contamination of organic waste, but also provides protection against pollution of virtuous recycling flows, such as plastic and paper.
For these reasons, Novamont has always worked hard to promote and develop programmes to facilitate the collection of organic waste and transform it into quality compost, by using compostable bioplastics, and has also undertaken national and international research and development projects on the study and monitoring of organic waste and projects involving ecodesign and bioplastic interception systems, including initiatives to combine different recycling technologies, such as composting and chemical recycling. The close collaboration with local authorities, multi-utilities and composters has been essential in developing examples of excellence that are ready to be expanded and disseminated, since consumption centres and particularly cities and metropolitan areas have a key role to play, not only in the management and treatment of waste

3 C. Mondini, K. Coleman, A.P. Whitmore, Spatially explicit modelling of changes in soil organic C in agricultural soils in Italy, 2001–2010: Potential for compost amendment, Agriculture, Ecosystems and Environment 153 (2012) 24-32.

4 C. Mondini, K. Coleman, A.P. Whitmore, Spatially explicit modelling of changes in soil organic C in agricultural soils in Italy, 2001–2010: Potential for compost amendment, Agriculture, Ecosystems and Environment, 2011. E. Favoino, D. Hogg, The potential role of compost in reducing greenhouse gases, 2008. See also Kyoto Club and Sustainable Development Foundation, Italy Towards Zero Organic Waste to Landfill, 2016.

5 COM(2020) 98 final, A new Circular Economy Action Plan for a cleaner and more competitive Europe.

but above all in spreading good practices, such as promoting sustainable diet and consumption, reducing disposal and wastage and adopting low-impact packaging materials. Thanks also to this model, Italy is currently the European leader in organic waste recycling, collecting 47% of organic waste compared with an average of 16% across the continent.[6]

Among the most significant projects supported by Novamont, it is worth mentioning the Compost Goal Project, launched in 2018 based on an idea from Progeva in collaboration with Assobioplastiche and the Italian Composting and Biogas Association, in which around 40 municipalities from the Puglia, Basilicata and Campania regions adopted incentivising solutions and strategies to improve the quality performance of organic waste collected in the municipalities. After a year of trials, 50% of municipalities participating in the project improved the quality of the organic waste provided for collection. Also significant are projects that include separate collection through the use of bioplastics set up by the municipalities of Turin and Milan, which are ready to be replicated.
The Italian model, based on cooperation with local authorities, composters' associations, large-scale wholesale distribution and other stakeholders, is also at the heart of the projects started by Novamont internationally, making it possible to implement successful programmes throughout the world, such as the development of separate collection systems for organic waste using biodegradable and compostable bags in such cities as Milan, Paris, Barcelona, Monaco, Copenhagen and New York. Among the most interesting recent developments, it is worth noting various initiatives in Romania, which aim to promote pilot projects to spread separate collection systems for organic waste nationally, as well as the collaboration with the industrial partner Silvex in Portugal, aimed at testing the performance of bioplastic bags in local composting plants and to provide training and information at various levels. Another notable initiative is the Praxistest Bio-Beutel project, implemented in Bavaria, in which compostable fruit and vegetable bags were introduced at certain points of sale in the German supermarket chain EDEKA, which was included by the Sachverständigenrat Bioökonomie Bayern (the Bavarian committee of bioeconomy experts) among the case studies for the Action Plan for the Bavarian Bioeconomy. Another significant initiative involved a collaboration with Co-op UK, which in 2020 adopted compostable carrier bags at all points of sale throughout the country.

Novamont also worked together with the team of Greek students who won the 2020 European Innovation Award for their idea of using ecodesign principles to make a compostable product to improve organic waste collection and reduce the carbon footprint.

6 Zero Waste Europe and BioBased Industries Consortium, Bio-waste generation in the EU: Current capture levels and future potential, 2020.

Projects for the management of food waste in the municipality of Turin

The PoPP project, started in 2016 and repeated in subsequent years as RePoPP, and now structurally incorporated by the Turin municipal administration, came about through collaboration between Novamont, the city of Turin, Amiat – IREN Group, the Eco dalle Città association and the University of Gastronomic Sciences of Pollenzo (province of Cuneo).
The project aims to increase separate collection by the Porta Palazzo Market in Turin, particularly of organic waste, and to create a collection and distribution network of unsold produce for on-site redistribution to people in need.

The separate collection system has been optimised by introducing a bag holder with compostable bags made from Mater-Bi at stalls in the fruit and vegetable area, used by vendors for continuous collection of all waste from the preparation of products, which reduces floor sweeping and the costs relating to cleaning operations.

After the positive results of experiments at the Porta Palazzo market, achieving separate collection rates of 74% in 2020, the project was extended to four new markets – Via Porpora, Corso Cincinnato, Borgo Vittoria and Foron – in order to make an immediate contribution to the current food crisis, reduce production of market waste and also improve separate collection.

In November 2020 the RePoPP project was awarded the 'CRESCO AWARD Città Sostenibili' prize in the 'Municipalities with over 100,000 inhabitants' category. The competition is organised by the Sodalitas Foundation in collaboration with ANCI, and rewards the commitment of Italian Municipalities to sustainable development in territories in line with the objectives of the UN's Agenda 2030.

In another initiative in Turin, Novamont is participating in development of the Bag to Nature project, organised by the Ascom trade association of the city and province of Turin, with the collaboration of the Municipality of Turin. The project involves a programme for companies to raise environmental awareness in order to reduce food waste, thanks in part to the use of biodegradable and compostable containers that are ideal for takeaways and home delivery.

Reaching 74%
of organic waste collection
in 2020 in the City of Turin.

Organic waste collection in Porta Palazzo Market (Turin), and the creation of a network of collection and distribution on site of unsold produce and its subsequent redistribution to requesting people.

The circular economy for food in the Municipality of Milan

In 2020 Novamont worked together with Fondazione Capirlo and ESTà – Economy and Sustainability, to produce the document 'Economia circolare del cibo a Milano' [The circular economy of food in Milan], sponsored by the Municipality of Milan as part of the Food Policy initiative.
The study examines the circular economy as it relates to the food sector, considering three broad topics: management of municipal waste, the use of excess food and the reuse of sewage sludge. Novamont's experts drafted the first section on separate collection, in particular regarding the management of organic waste and the role of compostable bioplastics in facilitating recycling in certain applications.

Organic waste collection.

Examples of impact

The section considers some of the initiatives in which Novamont has supported the municipality of Milan's journey to become a benchmark across Europe for its level of separate collection, which exceeds 50%. Collection of food waste played a central role in this result, in particular thanks to the introduction of door-to-door collection, which in June 2014 reached coverage of 100% of the municipal territory, and the use of compostable bags, promoted in part through the launch of public information campaigns to encourage the reuse of compostable carrier bags distributed at supermarket checkouts.
The document also mentions another virtuous example involving Novamont, namely Milano Ristorazione.

The company was created by the Municipality of Milan in 2001 to provide catering services in public offices, and since 2012 it has used plates and cups made from sustainable materials, initially steel, and then from 2014 it switched to biodegradable and compostable bioplastic. From September 2016 schools in Milan began using compostable tableware made from Mater-Bi for student meals in primary, middle and secondary schools. This collaboration also directly involves the processing partner ILIP SRL. By 2017 all tableware used in schools had been replaced, resulting in annual savings of 720,000 kg of traditional plastic. According to LCA analysis conducted by Novamont, by replacing traditional plastic tableware with compostable products, the carbon footprint of compostable tableware sets is 46 tonnes of CO_2 eq lower (compared with incineration with energy recovery).

Annual saving
of traditional plastic.

Promotion of the circular bioeconomy in Serbia

With a view to promoting the spread of circular and sustainable systems beyond national borders, on 29 January 2020 Novamont signed a collaboration protocol with the Serbian government to design a circular bioeconomy model to enable Serbia to create low impact agricultural and environmental systems. The agreement falls within the scope of initiatives implemented by the Serbian Republic, after the start of the accession process, to harmonise its own laws on environmental protection with European legislation. Specifically, the topic concerns new models for agro-industrial development and environmental protection.
Based on the terms of the collaboration protocol, which covers a five year period, in the first phase Novamont will be providing support for the design of a separate collection model for municipal and agricultural waste, after which it will help implement the model as a pilot project in one or more Serbian cities and then provide consultancy on the circular bioeconomy to the Ministries of Agriculture and the Environment.

The project will directly involve Contarina, an Italian multi-utility which manages environmental services in the province of Treviso.

ACTION	KPI	2020 RESULTS	2021 COMMITMENT
Development of separate collection of organic waste in Italy through systems involving the use of compostable bags	Organic waste collected in Italy (interception of food waste) kg / inhabitant / year	**70 kg / inhabitant / year**	**80 kg / inhabitant / year**
Development and maintenance of best practice from Milan as the 'champion of separate collection' through targeted communications campaigns and tools	Organic waste collected (interception of food waste) kg / inhabitant / year	**90 kg / inhabitant / year**	**95 kg / inhabitant / year**

3 The third common benefit object.

The preservation and regeneration of soil vitality and health

To achieve this, novamont develops and produces biodegradable and compostable products of plant origin, designed as solutions to specific problems, such as pollution by plastic and other persistent pollutants, closely connected to water and soil quality, and promotes sustainable agricultural practices that improve soil fertility and restore its organic matter.

Sustainable agricultural practices
to enhance soil fertility.

Short description of how the company intends to pursue this object:

Soil is a non-renewable resource: it takes over 2,000 years to form 10 cm of soil. Soil degradation therefore represents a threat to our life on earth. As reported by the Food and Agriculture Organisation, at present 33% of the world's soil is degraded. In order to address this phenomenon and help resolve real problems facing society, Novamont develops and produces low-impact biodegradable and compostable products that can close the carbon cycle. These include biodegradable and compostable bioplastics, but also bioherbicides, biolubricants and biodegradable ingredients for cosmetics. This is because in order to maintain the health and fertility of the soil, biodegradability in soil is fundamental for all agricultural products with problems of accumulation and dispersal like herbicides, lubricants, seed additives, slow-release systems and agricultural mulching film. Biodegradability in water and soil is fundamental for products with problems of accumulation in sewage sludge and in water, as is the case with non-biodegradable additives in cosmetics and detergents. Biodegradability in composting becomes essential for all applications in which the materials used have a high probability of being contaminated by food waste and in which the absence of biodegradability would pollute organic waste, which would therefore end up in landfill. Examples of this include thin wall packaging, multilayer packaging, catering products and coffee capsules.

Novamont also pursues the goal of preserving and revitalising the soil by promoting sustainable, regenerative agriculture by spreading good practices aimed at restoring organic material, in collaboration with farmers and farmers' associations but also with universities and research centres. To this end Novamont collaborates with the organic sector to trial sustainable solutions in the field and takes part in research and innovation projects aimed at eliminating the problem of microplastics in the soil.
In particular, Novamont has collaborated several times with the University of Bologna on projects including developing innovative technologies and solutions for the industrial production of biodegradable and compostable materials, bio-based chemicals and chemical intermediaries, sustainable agriculture and studies of soil fertility and function, a topic on which an industrial doctorate has now been launched.
In terms of development of new applications, it is worth noting the collaboration with Philip Morris based on experiments with agricultural bioplastics and bioherbicides for tobacco crops as well as work with Enel Green Power, involving the use of bio-based dielectric oil for revamping a transformer in a hydroelectric power plant in Cuneo, with technical, safety and environmental benefits.

Novamont
pursues the goal of preserving
and revitalising the soil
by promoting sustainable,
regenerative agriculture.

Strengthening of agricultural sectors in Mozambique thanks to biodegradable mulching film

Novamont is working to implement a project in Mozambique to sustainably strengthen the fruit and vegetable, rice and tobacco sectors through the promotion of biodegradable mulching film. The use of biodegradable film in the soil ensures better yields per hectare, improves product quality and enables reductions in the use of plant health products, chemical inputs and water. It also reduces soil erosion and nitrogen leaching.

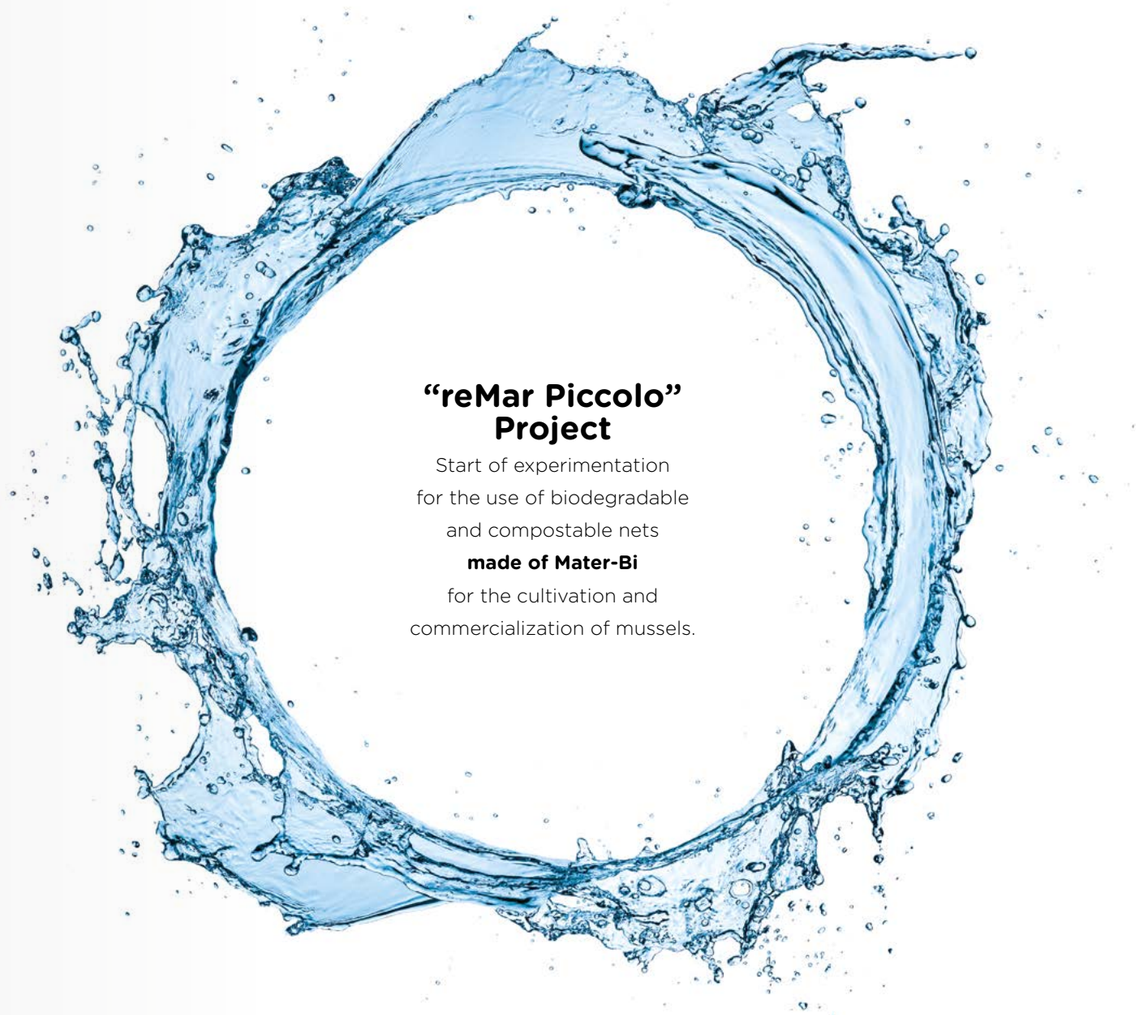
The three-year project also meets the need to reduce the use of plastics in farming, which cause the impoverishment of soil fertility and production capacity, and to increase marketing opportunities for local farmers, ensuring an increase in productivity per hectare and a reduction in the production cycle for certain crops. The project involves the creation of a partnership with the Agricultural Research Institute of Mozambique (IIAM), a public institution attached to the Ministry of Agriculture, and with Helpcode Italia, an NGO operating in Mozambique. Other stakeholders involved are the Ministry of Agriculture and Rural Development, the Ministry of the Environment, the Ministry of Industry and Commerce, the University of São Tomás, the National Sustainable Development Fund and iDE.

The project will create 12 jobs, in addition to the extension officers that the Ministry of Agriculture and Rural Development will make available in the provinces over time to teach and facilitate the use of products by farmers.

The promotion of biodegradable mulching film
for the sustainable strengthening of the fruit and vegetable value chain, rice and tobacco.

Sustainable aquaculture in the municipality of Taranto

As part of the 'reMar Piccolo: nature and tradition to revitalise the sea' project, in the summer of 2020 the municipal administration of Taranto, the Slow Food organisation and Novamont agreed to begin experiments in the Mar Piccolo of Taranto, involving the use of biodegradable and compostable nets for the cultivation and marketing of mussels. These experiments, agreed in the protocol of 9 November 2020 – already carried out by Novamont in the Gulf of La Spezia in collaboration with the University of Siena – may help make mussel farming in Taranto more sustainable, making it possible for black mussels from the Mar Piccolo to obtain the prestigious Slow Food designation. The experiments, which will last for two years, involve 15 local mussel farmers.



Examples of impact

The aim of the experiments will be to close the cycle of biodegradable and compostable nets, which will be recovered in a composting plant after use. Under the agreement, the municipality will devise a method for the separate collection of these nets, using suitable containers, which are already used for collection of bio-waste, in agreement with the mussel farmers participating in the project and with Amiu S.p.A., the manager of the separate waste collection service. The material sent to the composting plant will be treated while monitoring the processing cycle. The project also involves the implementation of actions to create synergies aimed at promoting and enhancing the value of mussel farming in the Mar Piccolo, to support blue growth strategies in Taranto and sustainable development under the Taranto Ecosystem Plan.

GOAL

Closing the cycle of biodegradable and compostable nets that at the end of their use will have to be sent in a composting plant.

Regenerative agriculture: the SOM model for cardoon

Soil Organic Matter (SOM) is principally made up of organic carbon (58%) and provides four important ecosystem services: (i) resistance to soil erosion, (ii) increased water retention by the soil, (iii) soil fertility, and (iv) soil biodiversity, therefore representing the main indicator of the quality of land. Maintaining, restoring and improving the content of SOM in land through regenerative agricultural practices has extremely significant impacts on food safety and the mitigation of anthropogenic greenhouse gas emissions. In the Italian research project BIT3G (Third Generation Biorefinery Integrated at the Local Level to obtain high value-added bio-based chemicals and energy), financed by the Ministry of Education, Universities and Research (MIUR) as part of the SPRING National Technology Cluster of Green Chemistry, a SOM model has been developed and applied in collaboration with CREA.
This model is a predictive tool to estimate the (site specific) dynamics of the SOM based on pedoclimatic conditions and farming practices.

It is underpinned by the methodology of the Hénin-Dupuis model (1945), in which the organic matter introduced to land through residues and organic fertilisers such as compost can compensate for the organic substances in the soil that are mineralised.
The model was tested on experimental industrial cardoon crops grown in the north-west of Sardinia according to two agricultural protocols: with and without applying compost. In the first scenario the results of the model indicated an increase of 6.2 tonnes of SOM/ha over a period of 22 years while in the second scenario, without applying compost, the model showed a reduction of 3.6 tonnes of SOM/ha (also in a 22-year period). In the 2018-2022 period the SOM model was further improved by CREA researchers and once again applied to the cardoon protocol thanks to the availability of new experimental data on variables such as yields and the biomass of the root system. The data obtained from this simulation, which was written up in a scientific journal, confirmed the increase in SOM in the land totalling on average approximately 1 tonne of SOM/ha*year, confirming the regenerative effect linked to the introduction of the perennial cardoon crop.

ACTION	KPI	2020 RESULTS	2021 COMMITMENT
Continuous commitment to research and innovation and to the development of new biodegradable and compostable products of plant origin	R&I investments % of turnover	~ 5%	**Maintenance of investment at 5% of turnover**
	% R&I employees	~ 20%	**Around 20% of employees involved in R&I activities**
Promotion of agricultural best practices to spread the use of mulching film that biodegrades in the soil	no. of ongoing experimental initiatives and partnerships with farmers	**30 initiatives ongoing in Italy and abroad**	**Maintaining around 30 active initiatives in Italy and abroad, representing different areas and crops**
Promotion of sustainable farming practices and methodologies for the analysis and restoration of organic matter (regenerative farming)	no. of ongoing initiatives aimed at restoring organic material	3	6

4 The fourth common benefit object.

The development of innovative and sustainable production processes that help decarbonise the economy

Along with research and innovation to transform waste and by-products into new applications.

7 Direct emissions of GHG from installations within the confines of the organisation due to the use of fossil fuels and the atmospheric emission of any greenhouse gases.

8 Indirect emissions of GHG from the generation of electricity, heat and steam imported and consumed by the organisation.

9 Indirect emissions due to the company's activities. This category includes sources of emissions that are not under the company's direct control, but whose emissions are indirectly caused by the company's activities.

Short description of how the company intends to pursue this object:

The climate crisis is already causing impacts and phenomena of unprecedented scale and intensity and is increasingly exerting a more central influence on choices made by consumers and companies. Companies and financial institutions have a decisive role to play in the transition towards a low-carbon economy. In this complex scenario, Novamont's commitment to decarbonising the economy encompasses all three areas: Scopes 1[7], 2[8] and 3[9]. The actions under Scope 3 (upstream and downstream) relate to the development of new materials with high levels of renewable content and innovative applications but also the implementation of new integrated processes that can make use of waste (from other sectors) and the use of alternative feedstocks with positive impacts on the complex circularity of systems. Scope 3 also includes the development of innovative agro-industrial value chains, based on agricultural raw materials that enhance the value of local characteristics and biodiversity and ensure the efficient use of resources.
We conduct wide-ranging research in this sector, in collaboration with the academic world and the leading research centres, from evaluating agronomic aspects and genetic enhancements to optimising the mechanisation of farming activities, extracting active compounds, oils, protein flours and sugars.
Experiments conducted over the years have allowed to draw up a cultivation protocol, identifying the agronomic practices that farmers should adopt for sustainable and efficient production of crops which is also capable of generating carbon credits thanks to increased SOM.
Finally, Scope 3 also includes sustainable purchases such as the use of carbon neutral raw materials.
For Scope 2 emissions the main intervention is the purchase of electricity from 100% renewable sources, a commitment adopted in 2010 which contributes to the development of renewable energy sources while simultaneously reducing emissions of greenhouse gases and other pollutants.

Finally, for Scope 1 we are constantly looking for energy efficiency solutions, which are coordinated and supported by the Group's Energy Manager, whose main tasks involve providing support: (i) for the planning and management of activities relating to energy, (ii) for the Group's strategic choices for renewable energy sources and (iii) for energy efficiency. To date the Group has already installed a high-efficiency cogeneration plant and a biodigester to degrade production sub-products and convert them into energy (further details in the examples of impact) and a trigeneration plant is also being built which will enable a 15% reduction in energy consumption. In addition to developing circular economy infrastructure in Italy and participating in the decarbonisation of the energy sector, Novamont decided that from 2020 onwards it would offset Scope 1 emissions relating to the combustion of methane that represents around 99% of the Group's direct emissions.

Examples of impact

Bottrighe plant as an example of energy efficiency

Increasing energy efficiency is one of the key objectives in developing the low environmental impact biorefineries promoted by Novamont, of which the Bottrighe plant is a virtuous example. The plant, which was created by converting a disused site, is a prime example of increasing energy efficiency, achieved by applying a series of measures and solutions designed to minimise waste and maximise recovery of all waste heat which would otherwise be lost.
These include the adoption of inverters, IE3 high efficiency motors and LED lighting, the installation of a cogeneration plant and the use of a digester and a mechanical compression system, as well as the recent installation of a biogas upgrading plant. Each of these solutions helped us to meet our sustainability and circularity objectives.
Having a cogeneration plant allows the production of electric and thermal energy required by the process, whose overall efficiency reaches 90%.
The surplus electricity produced by the plant is fed into the national grid.
The anaerobic digestion plant (biodigester) processes excess biomass from the fermentation process, namely production sub-products and sludge from the water treatment plant, generating biogas, which in turn is used in a bi-fuel boiler to produce steam, which is used by the plant.
Regarding the purification unit for bio-BDO, a mechanical compression system is used to make use of all waste heat which would otherwise be lost.

The anaerobic digestion plant (biodigester) treats the excess biomass of the fermentation process.

Finally, in July 2020 the upgrade of the biodigestion plant was completed, allowing the conversion of all biogas produced into biomethane to be fed directly into the network, helping to spread renewable energy sources.
This can be described as an advanced biofuel according to the Ministerial Decree of 14/11/19 because of the biomethane produced.
Novamont underwent its first audit, conducted remotely, to obtain the respective certification. The 1,4 BDO produced at Bottrighe is used as a renewable building block for production of Mater-Bi. This enables the production of the fourth generation of Mater-Bi, containing an even higher proportion of bio-based raw materials and an even lower level of greenhouse gas emissions and dependence on fossil raw materials.
From an environmental perspective, based on LCA considerations, the use of the bio-butanediol produced at Bottrighe makes it possible to reduce the net cradle-to-gate Global Warming Potential by more than 50% in terms of CO2-equivalent emissions compared with non-fossil alternatives.

The overall efficiency reaches 90%.
The surplus of electrical energy produced by the plant is sold to the national grid.

The Bottrighe plant represents a virtuous example.

Regenerative turnover (circularity)

The transition from a linear economy model to a circular model is a historic challenge. Novamont has built a great deal, working to create an integrated value chain both upstream and downstream, favouring the efficient use of resources, building five world-leading plants for the production of bio-based products, at a time of offshoring and deindustrialisation. These are integrated biorefineries that use plant-based raw materials, as well as organic waste and sub-products, enabling Italy to become the proving ground for a true circular bioeconomy case study. The biodegradable products, like bioplastics, bioherbicides, biolubricants and ingredients for cosmetics, have not been designed as drop-in solutions to replace existing products, but rather to make it possible to solve serious problems relating to the accumulation of pollutants in soil, water, sludge and compost and to maximise the recovery of organic waste, as well as to increase the recovery of waste through compostability.
A metric was devised for this area which makes it possible to measure our contribution to the circular bioeconomy. In particular, the circular (or regenerative) material flows have been linked to the economic value generated by the group thanks to implementation of a circularity indicator called the 'regenerative turnover', which is briefly described below.

Regenerative turnover is defined as the Index of Circular Flows (ICF) multiplied by turnover, both in respect of the accounting year in question.

Regenerative turnover = IFC x Turnover

The Index of Circular Flows (ICF) quantifies the regenerative flows of materials and energy as inputs and outputs of the organisation.
Incoming circular flows are renewable (of plant origin) or recycled raw materials and energy from renewable sources, while waste (as an output) sent for recycling, recovery or regeneration, recovered sub-products and end products that are certified compostable and biodegradable are outgoing circular flows.
Linear flows are all non-regenerative flows, such as energy from fossil fuels, non-renewable raw materials and waste sent to landfill.

Regenerative turnover therefore represents the percentage of turnover linked to a company's circularity. The greater the regenerative turnover, the better a company's capacity to generate revenue from its circular products or activities.

The higher the regenerative turnover, the better a company's ability to generate revenue from its products or circular activities.

Projects for innovation and the use of waste

The use of raw materials derived from sustainable farming processes is a fundamental element of the Novamont model, based on the development of regenerative agricultural value chains capable of enhancing the value of dryland crops that are suited to growing in lands considered marginal in terms of geographic location or productivity.
However, from the perspective of promoting circularity and waste reduction, Novamont has worked for years on innovative research projects aimed at studying the possibilities for making use of sub-products and waste, in collaboration with industrial firms and research bodies.
One example is the EMBRACED project, in which Novamont works with different partners such as Fater, a leading company in the Italian market for absorbent hygiene products and in the European market for bleaches. In the province of Treviso, Fater built the first plant in the world capable of reusing nappies and sanitary pads, separating their components and making plastic, cellulose and polymers. The project, financed by the European Commission, consists of demonstrating a replicable, economically valid and ecologically sustainable model of an integrated biorefinery, in an industrial environment, based on making use of the cellulose elements of waste from absorbent hygiene products (nappies and sanitary products), in producing bio-based building blocks, polymers and fertilisers.

Treviso
the first plant in the world able to reuse diapers and sanitary napkins to make plastic cellulose and polymers.

An example of a partnership that seeks to promote the use of sub-products is the research agreement between the CAP Group and Novamont, signed in 2018 at Ecomondo, in which the two companies identified a series of projects with the common goal of regenerating resources, restoring quality organic carbon to the soil, ensuring the quality of water and using these operations to obtain new value-added products. Through this agreement Novamont and CAP undertook to carry out joint research activities: among the first projects were the ecodesign of microplastics from the industrial cosmetics sector and the production of raw materials obtained from the use of chemical components found in waste water.
A more recent agreement, signed in 2020, is the partnership with Melinda, which from a commercial standpoint is based on the development of a compostable bioplastic film for the production of packaging for the Melinda BIO range. The partnership also led to the creation of a research project linked to the use of waste from the processing of Melinda apples, for the extraction of second-generation sugars that can be used to produce 1,4 BDO, a renewable component employed in the production process for Mater-Bi bioplastics.

2020,
partnership with Melinda, for the development of a compostable packaging for Melinda Bio range

ACTION	KPI	2020 RESULTS	2021 COMMITMENT
Avoidance and/or offsetting of greenhouse gas emissions thanks to energy efficiency and mitigation interventions	t CO2e avoided and/or offset per t of useful product	**1.07**	**t CO2e avoided and/ or offset per t of useful product of at least 0.5**
Maximisation of the circularity of systems by using renewable energy and raw materials, the use of sub-products and production of compostable/biodegradable materials that can be recovered through organic recycling	% of turnover that is regenerative	**69%**	**At least 50% of turnover should be regenerative (i.e. ICF > 0.5)**

5 The fifth common benefit object.

The contribution to a virtuous network of alliances with local stakeholders and different industry sectors

As well as the expansion of the culture and knowledge of the circular bioeconomy, promoting training activities in collaboration with public and private-sector partners and educational and awareness-raising initiatives around sustainable development.

Short description of how the company intends to pursue this object:

The circular bioeconomy is a highly multidisciplinary sector, which requires great individual and collective effort. For Novamont it is essential to create alliances and strategic partnerships with actors along the value chain and with local areas and communities, not just to assimilate the different information and experiment with new solutions with a pioneering and constructive spirit, but above all to contribute to the creation of a shared culture on topics relating to the circular bioeconomy.
With this in mind, Novamont actively participates in the most important networks and institutional initiatives that are considered points of reference for the circular economy and the bioeconomy both nationally and internationally. The company is a founding member of the Bio-based Industries Joint Undertaking – BBI JU, a public-private partnership set up within the scope of the Horizon 2020 programme between the European Commission and the Bio-based Industries Consortium (BIC). BBI JU is a key tool for accelerating the circular bioeconomy in Europe, as well as for the more ambitious initiative of research and innovation relating to the bio-based industry. Also at an international level, Novamont is a partner of the Ellen McArthur Foundation, one of the largest foundations, whose mission is to accelerate the transition to a circular economy. Specifically, Novamont participates in the New Plastics Economy, an initiative that brings together the main actors interested in rethinking systems for the production, consumption and disposal of plastics, and the Food Initiative, which aims to rethink and transform the role of cities in the food system.

Novamont
takes an active part in the most important networks and institutional initiatives considered points of reference for the circular economy and bioeconomy at national and international level.

With reference to sustainability and climate change, both of which are closely connected to the circular bioeconomy, Novamont joined the UN Global Compact, the largest strategic corporate citizenship initiative in the world to promote a sustainable global economy and is a partner in the EIT Climate-KIC, the knowledge and innovation community of the European Institute of Innovation and Technology dedicated to climate change.

At a national level, Novamont, together with companies representing the most important Made in Italy production chains, created the Alliance for the Circular Economy, promoted by the Ministry of the Environment and the Ministry of Economic Development, which aims to continue with political investment into the circular economy and involve SMEs in this new approach to industry and business ownership. For years, Novamont has worked alongside the Symbola Foundation, which was created to unite and support companies, communities and think tanks that focus on sustainability, innovation and beauty, employing its expertise in the drafting of the GreenItaly Report. Novamont also belongs to the ICESP platform, a 'network of networks' that aims to create a national focal point on the initiatives, experiences, prospects and expectations of the circular economy which the Italian system seeks to represent in Europe.

With the goal of making Italy one of the global centres of excellence of the sustainable and circular bioeconomy, in which it is easy to invest, conduct research and do business, in 2014 Novamont promoted the foundation of the SPRING National Green Chemistry Technological Cluster, to raise the profile of local areas by forming connections between regions, universities, research centres, associations and industry and by developing multidisciplinary innovation projects. Another front on which Novamont is firmly committed is advocacy and awareness-raising for the protection and regeneration of the soil. This led in 2020 to the creation of the Re Soil Foundation, organised together with the University of Bologna, Coldiretti and the Polytechnic University of Turin, whose goal is to connect scientific, technological, environmental and humanistic knowledge to become a meeting point for the various Italian and European companies focused on the soil.
The creation of synergies and partnerships along the value chain is key to Novamont's business model, whose cornerstones are research and shared innovation.

Novamont participates in many research projects in partnership with the leading Italian and international companies in the field of the bioeconomy and the circular economy, including universities, research centres and technology parks, but also the world of industry, agricultural transformation and waste processing as well as brand owners, institutions and the voluntary sector.

As noted in section four, in the agricultural sector Novamont has a long-standing partnership with Coldiretti to create a new model of cooperation which introduces innovation and regeneration into industry and agriculture through the bioplastics value chain, starting with vegetable oils.

Novamont has promoted the foundation of the SPRING Cluster to enhance the territories through the connection between regions universities, research centers, associations and industry, and the development of multidisciplinary projects of innovation.

Novamont collaborates with Coldiretti to create a new model of cooperation through the bioplastics value chain.

Re Soil Foundation foundation with the objective of connecting the scientific, technological environmental and humanistic knowledge.

The synergies established with brand partners and converters have been essential to guide product innovation towards greater sustainability. Novamont has always seen the relationship with its Mater-Bi brand licensing partners as a dynamic two-way partnership based on the reciprocal exchange of knowledge, technical support, the transfer of innovation and the results of the significant investments made in over 30 years of activity.

For these reasons Novamont assists its partners throughout the country and in all Italian regions in developing new applications and in diversifying their business, offering a wide-ranging service which includes technical support, assistance with certification activities, communications campaigns and access to new experimental materials. At the same time, for Novamont these partners represent a veritable proving ground in which to perfect formulations and test new applications in an industrial setting and in which the knowledge acquired immediately becomes a shared asset. Examples of this sort of collaboration are the development of the first biodegradable and compostable bag for Campana buffalo mozzarella, which received an award in March 2019 and resulted from collaboration with Polycard, Cooperativa Ventuno and the social cooperative 'Le Terre di Don Peppe Diana – Libera Terra'; the collaboration with Crocco, a group specialising in flexible packaging, to carry out validation tests in 2020 for new cling film made from Mater-Bi bioplastic, five years after introduction of the first prototypes; or the collaboration with Ticinoplast and Carton Pack to develop an innovative biodegradable and compostable package for fresh salads, now used by La Linea Verde for its DimmiDiSì range. Other examples include the collaboration with Saes over the implementation of a project for the traceability of compostable items in order to assist composting plants to screen out on arrival any unsuitable items disposed of with organic waste. Or else the launch of the first high-barrier compostable food packaging created in collaboration with Saes, the IMA Flexible Packaging Hub, Sacchital and Ticinoplast. Once again, the partnership was not limited to the technological development of an entirely unprecedented product, but also included the launch of the 'It's compostable' campaign aimed at showing the hidden value of what might otherwise appear to be a simple compostable package. In this context, partnerships with brand owners are fundamental, not just to bring increasingly sustainable solutions to market, but above all to help spread good practices. An example of this is the collaboration with the Colussi Group, which decided to adopt high-barrier compostable packaging both for its Misura product line and for its Agnesi pasta range. Or else the Fileni Group, which not only chose completely compostable packaging for its antibiotic-free range, but also formed a research and innovation alliance with Novamont based on the spread of dryland crops, including for animal feed, and on the use of bioproducts.

1

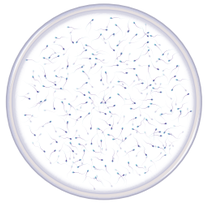
Technical support

2

Assistance with certification activities

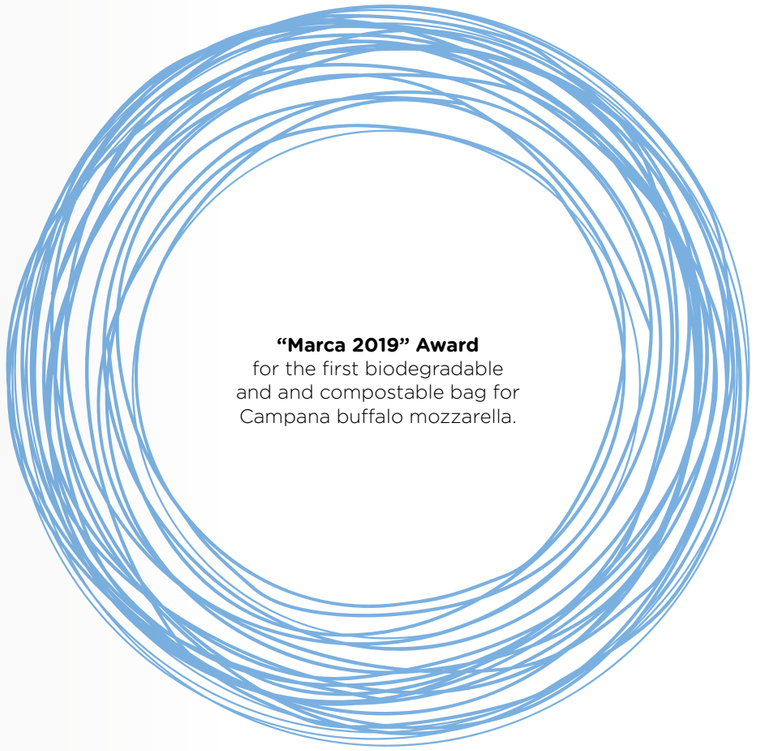
3

Communications campaigns



4

Access to new experimental materials



"Marca 2019" Award
for the first biodegradable and and compostable bag for Campana buffalo mozzarella.

Finally, it is worth mentioning the partnership with Melinda which allowed the implementation of a bioplastic film to make all packaging across the Melinda Bio range completely compostable, and which, using the circular bioeconomy approach, saw the launch of a research project into the use of waste from apple processing for the extraction of second-generation sugars that will be used in producing the bioplastic itself. Partnerships with public authorities, multi-utilities and with the waste processing sector in general have been essential in establishing good practices for organic waste management which have made Italy an example in Europe, but also in generating research and innovation projects. As well as the activities described in detail in section 5 of this report (The second common benefit object), at an international level Novamont participates in working groups at the Witzenhausen-Institut, which since 1990 has held meetings in Kassel (Germany) for stakeholders from industry, public authorities and the scientific world to discuss new approaches to waste management and on how to increase recovery rates.

At a national level, one of the most recent partnerships has been with Iren in order to reduce non-recyclable waste at source and fully implement the objectives of the circular bioeconomy, by developing specific projects for the optimised management of certified compostable items and packaging, to ensure they are suitably recovered and utilised together with the organic fraction of municipal solid waste.

Collaborations and partnerships along the value chain also underpin significant protocols signed with major industrial players for the development and validation of sustainable solutions and innovation projects.

One significant example is the protocol signed with Enel in 2019 at the World Economic Forum Annual Meeting in Davos, a collaboration agreement to further address innovation topics and projects within the scope of the circular economy in connection with the electricity and gas sectors.
Finally, NGOs and the voluntary sector play a key role in forming connections with civil society, to promote the citizen science approach, with experience in the field, sharing local projects capable of stimulating a whole range of initiatives. For example, Legambiente and Novamont have worked together for many years to raise awareness about technological innovations to promote sustainability. Novamont supports many Legambiente initiatives to publicise and raise awareness about circular economy topics, about the increasing use of low-environmental impact products and on legal issues, such as Ecoforum or Festambiente, or the Goletta Verde project, which aims to monitor the level of plastic pollution in the sea and on beaches. Regarding the monitoring of water and the performance of compostable products in the marine environment, it is also worth mentioning the work with Marevivo, an association that operates throughout Italy to defend the sea. Legality is the central topic in the partnership between Novamont and Terra Felix, which aims to regenerate areas in the south of Italy that have shown marked deterioration owing to property speculation, the lack of infrastructure, pollution and the extensive presence of organised crime. For years Novamont has also worked alongside WWF Italy, not just to promote sustainable behaviour and lifestyles that respect the limits of the planet, but also to make a real contribution to maintaining biodiversity and the beauty of our landscapes. This led it to adopt Golena di Panarella, a WWF oasis on the banks of the River Po.
Given its belief that scientific and economic-humanistic knowledge must always evolve side by side to find a new balance between the development and use of resources and the importance of quality education with a holistic approach, over the years Novamont has put in place several doctorates and research grants in collaboration with the leading universities and has provided its expertise for training activities aimed at all targets.

Novamont supports Legambiente
with the Goletta Verde project aimed at monitoring the level of plastic pollution in the sea and on the beach.

Collaboration with the Marevivo Association
active in the defense of the sea.

From this perspective Novamont promotes connections between the world of industry and the economy and that of training the new generations, by organising guided tours and open days for students, teachers and citizens. In addition, Novamont works actively with different teaching institutions, such as the Terni Higher Technical Institute, particularly in the Biotech Academy area. The main joint activities include the design of the syllabus, the planning of lessons for some modules, the organisation of visits and apprenticeships at the company. Moreover, Novamont devised 'Discovering Mater-Bi', a touring educational project for younger children featuring interactive games, multimedia experiences and creative workshops.

It also helped develop the One Planet School project, an e-learning platform created by WWF Italy to provide more in-depth analysis of topics relating to man and nature, helping to train students and teachers about the circular bioeconomy and the soil.

For years the company has worked with the University of Gastronomic Sciences of Pollenzo, providing lessons on the circular bioeconomy to university students from all over the world. Together with the University of Bologna, the University of Milano-Bicocca, the University of Naples Federico II, the University of Turin and other leading non-academic bodies, it created the BioCirce Master's Programme, now in its fourth cycle, the only Master's degree in Italy entirely devoted to the circular bioeconomy. Finally, it supported the Science Museum of Trento in 'Beyond Plastic', a project that aimed to involve young Italians in awareness raising and activities to reduce, recycle and reuse plastic waste.
Novamont's contribution to education and training also includes support for projects and cultural resources for social inclusion with significant impacts on the local area. Guided by this approach, in 2020 Novamont provided financing to a number of local associations in Novara involved in promoting art, culture, awareness-raising and education.
These included Novara Jazz, an international festival devoted to jazz and electronic music and visual arts; Circolo dei Lettori, an association that promotes meetings with writers and cultural figures, editorial presentations, initiatives for schools, courses, performances, live music and workshops for children, and also Promemoria Auschwitz, an educational project aimed at helping new generations to approach history with a critical eye, launched by the Deina association.

Novamont and the Terra Felix Cooperative

The Terra Felix social cooperative is a non-profit organisation whose goal is to pursue the general interests of local communities, centred on the human development and social integration of citizens, combining solidarity and support, in close collaboration with all local social agents.
Because of these characteristics, Terra Felix is a key player in promoting Novamont's sustainable development model, which is why over the years they have established an increasingly tightly structured partnership.

They are working together to promote regenerative and sustainable agriculture to shift the paradigm in that part of the region of Campania, which is unfortunately known as the 'Land of Fires'. This area represents the most important agricultural sectors in the province of Caserta, such as Campana buffalo mozzarella, Annurca Campana IGP apples and Asprinio di Aversa DOC wine as well as other local produce.
The Terra Felix cooperative also makes social use of assets confiscated from organised crime by resuming cultivation of abandoned land through social agriculture projects.
The Dalla terra alla terra [From the land to the land] project is based on the social use of confiscated land in the municipality of Santa Maria la Fossa, where around 12 hectares are being cultivated, of which five on the La Balzana farm, an agricultural estate which is the largest property confiscated in south of Italy. The project involves various voluntary sector bodies and institutions such as Libera and Comitato Don Peppe Diana.
To promote agricultural sustainability on the confiscated properties, Novamont supports the Terra Felix cooperative in implementing the 'AgRigeneration – rigenerazione dell'agricoltura sui beni confiscati' Project, a project to regenerate agriculture on confiscated lands, financed by the Region of Campania through Regional Operating Programme FSE 2014 – 2020, Axis II, Action 9.6.4. Promotion of networking, services and support actions aimed at voluntary sector organisations and public authorities to manage assets confiscated from mafia organisations.
Another project in which Novamont is involved is Teverolaccio Rural Hub, linked to the creation of an agricultural innovation incubator in Succivo (province of Caserta) at Casale di Teverolaccio, an abandoned 18th century agricultural estate. The project was created in the heart of the so-called 'Land of Fires' and aims to enhance the value of agricultural production to ensure that land is not abandoned or impoverished. The project is financed by the Con Il Sud Foundation, and the partnership involves Slow Food Campania, Coldiretti Caserta, Novamont, Terra Felix and other local partners.

Other projects in which Terra Felix is involved are linked more specifically to promoting the use of mulching film, biodegradable nets for mussel farming in the Gulf of Naples and the use of pelargonic acid in farming and for civil applications (Santa Maria Capua Vetere amphitheatre), to protect the health and fertility of the soil. These also include the project on the island of Pantelleria, mentioned in section 4.

ACTION	KPI	2020 RESULTS	2021 COMMITMENT
Promotion of the circular bioeconomy model, focused on soil health through activities such as high-level partnerships, advocacy, participation in national and international initiatives and networks, implemented by Novamont, by the SPRING Cluster and by the Re Soil Foundation)	no. ongoing Novamont initiatives	13	Number of initiatives > 10
	no. of SPRING Cluster initiatives and events	18	Number of initiatives > 15
	no. Re Soil Foundation initiatives and events	5	Number of initiatives and events > 10
Development of a business model based on connections with different sectors	no. ongoing collaborations along the whole value chain	12	Ongoing collaborations > 10
Projects / collaborations with the voluntary sector and for the community	no. ongoing initiatives	8	Between 5 and 10 ongoing initiatives
Environmental training and educational activities	no. ongoing initiatives	7	Between 5 and 10 ongoing initiatives

A range of proactive initiatives for Novamont.

Common benefits within the organisation

In 2020 Novamont decided to undertake several initiatives that would improve and further evolve the organisation, in particular focusing more on the development of employees and relationships with them, principally in Italy.

The following are the five most significant activities undertaken during the year to achieve this goal:

two master's theses were completed with the Sociology and Social Research faculty and the Educational Sciences faculty of the University of Milano-Bicocca, which investigated the implementation of remote working in companies and the motivational analysis of employees;

to increase the level of inclusion among employees, anonymous surveys were drafted and distributed in order to canvass the opinions of employees on the definition of a system of company values. This process was followed by a series of focus groups to foreground representative cases relating to the content drawn up in the questionnaires. This exercise allowed a bottom-up reading of the ways in which employees view the company's situation;

a psychological counselling service was implemented (for all employees in Italy), run by a specialised psychotherapy practice, in order to provide emotional, cognitive and behavioural support to those working at Novamont during the COVID-19 pandemic; the aim was to safeguard the well-being of employees at a particularly complex time in the organisation's life cycle, allowing them to express their feelings and views and giving them the possibility of examining them with professionals who were capable of providing in-depth and alternative readings of the experiences they reported;

the company implemented an experimental performance management system for around 125 people; the process was undertaken in order to enable an assessment of employees by managers, while at the same time allowing employees to manage their own self-assessments. The process was handled using a visualisation tool for a skills model structured on three axes: responsibilities of the role, technical knowledge and organisational behaviour. Afterwards, feedback meetings were held between managers and employees leading to development processes, including through support from mentors (Novamont colleagues involved in the process);

finally, the company began designing a Corporate Academy which, from 2021, will be able to start spreading the values of the B Corp certification through various events and tools, to reinforce and supplement all learning, development, inclusion and involvement initiatives for employees and channel all the energy necessary to ensure that Novamont can make a significant and relevant contribution to educational institutes through partnerships.

Novamont has been recognized as Certified B Corp.

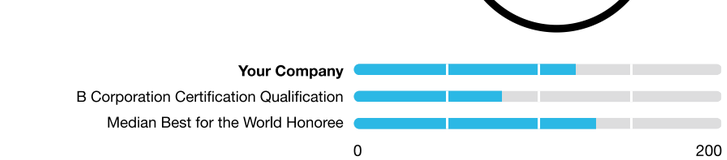
Impact Assessment

To comply with its legal obligations as a Benefit Corporation and therefore report on the company's general impact, Novamont uses the international third-party standard B Impact Assessment (BIA), developed by the non-profit B Lab. Using this tool to measure all its economic, environmental and social impacts, Novamont exceeded the threshold of excellence of 80 points, assessed by B Lab's Standard Trust on a scale from 0 to 200, and was therefore recognised as a certified B Corp in July 2020.
The following sets out Novamont's overall impact in 2020:

Overall B Impact Score

Novamont

For Fiscal Year End Date:
December 31st, 2020



Governance

QUESTIONS ANSWERED 33/33
OVERALL SCORE **18.0**

Workers

QUESTIONS ANSWERED 58/58
OVERALL SCORE **26.3**

Community

QUESTIONS ANSWERED 61/61
OVERALL SCORE **11.7**

Environment

QUESTIONS ANSWERED 104/104
OVERALL SCORE **60.5**

Customers

QUESTIONS ANSWERED 12/12
OVERALL SCORE **3.3**

Reviewed with Care by Nativa.

Impact report

This impact report is the result of a review process that Novamont asked Nativa B Srl to carry out in order to improve the level of reliability and accuracy of reporting, in accordance with the commitment to transparency, responsibility and correct governance shared by B Corps and Benefit Corporations.

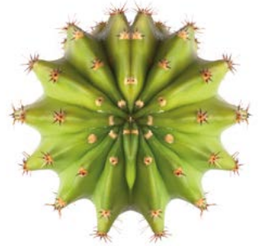
The assessment by Nativa relates to:

a) the annual result of the B Corp impact measured through the B Impact Assessment, which fully meets the requirements under Law 208 of 28.12.2015, paragraphs 376-384 on benefit corporations

b) the effective commitment to pursuing the specific common benefit objects as a Benefit Corporation as set out in the company's articles of association.

The assessment is based on three fundamental activities, which refer to the accounting principles established by the Italian Civil Code:

continuity, prudence, competence, separation, consistency and predominance of substance over form.
In particular:



Identification of the correct allocation of responsibility in the various company areas to ensure that the key roles have been involved in the various scopes of assessment and that the necessary know-how has been assured for correct updating of the BIA.

Reliability of the data collection process to ensure that the data and information produced is based on a quality process.

Correct completion of the BIA, ensuring that the information is inserted in the analysis tool in a complete, clear, accurate and correct manner.

Novamont SpA,
Benefit Company, B Corp certified
via G. Fauser, 8 - 28100 Novara - IT

NOVAMONT

Certified
This company meets the highest standards of social and environmental impact
Corporation