

# ▸ Sustainability Report

September 2022 / September 2030

The beauty of the small  
**Every gesture counts**

# ▸ Index

01

## Introduction

---

- ▾ CEO Message
- ▾ The Power of Communication

02

## Who we are and what we do

---

- ▾ History
- ▾ Chronology
- ▾ Organization chart
- ▾ Knowledge leaders
- ▾ Activities
- ▾ Product
- ▾ Advantages
- ▾ Value Chain
- ▾ Stakeholders

03

## Policy and strategies Principles and values of behaviour

---

- ▾ Milestones 2022
- ▾ Mission -vision- values
- ▾ USW Policy

04

## Circular Economy Actions

---

- ▾ Principles
- ▾ European Objectives
- ▾ Our rol
- ▾ Application

05

## Sustainable Development Goals

---

- ▾ What do we do
- ▾ Strategy
- ▾ Commitments
- ▾ Main
- ▾ Secondary

# 01

## ▸ Introduction

- CEO Message
- The Power of Communication

# Message from the CEO

Julián Alberto Soler (CEO)



Our only certainty is that the sustainability of our planet must come through the transition from a linear economy to a circular economy.

We are convinced and committed to contributing to a more sustainable planet and leaving a better legacy for future generations.

That is why, at ECONWARD, we have aimed to create triple-impact business models: **social, environmental, and economic.**

Decarbonizing the economy, reducing emissions, improving waste management, reducing landfill usage, increasing recycling rates, and expanding the share of renewable energy are just a few of the global advancements and trends revolving around the environment. ECONWARD aims to align itself 100% with these initiatives.

Since late 2019, we have experienced the consequences of climate change, the circular economy, and inequality. Since then, we have been striving to heal the human, social, and economic damages primarily caused by a major health crisis.

Now more than ever, people must come together, particularly in terms of environmental awareness, so that we can combat the uncertainty that the future holds and, especially, to reduce the consequences primarily caused by ourselves.

**At Econward, we embrace these environmental challenges with a comprehensive vision that combines state-of-the-art techniques, respect for the environment, economic sustainability, public-private collaboration, enhanced competitiveness, as well as wealth and job creation.**

All our efforts are directed towards product quality and, above all, customer satisfaction.

Our main objective is to build a solid and enduring company over time.

We offer high standards of quality, improve worker safety and health, and invest in R&D to achieve a highly efficient engineering system.

Real action is what strengthens our commitment to the Sustainable Development Goals and ensures our compliance

We take pride in the achievements and milestones we have reached, and we are deeply grateful for the effort put in by all our employees, suppliers, partners, and stakeholders who have supported us in reaching them.

We will continue working together with the common goal of becoming a business model to be followed.

We are convinced of our bold commitment: **to achieve a more humane, greener market that is sustainable in the long term and economically more profitable.** Only by adhering to the principles of sustainability can we prevent future generations from bearing the burden of ecological footprint.

We hope that our report is of interest to you, and we invite you to provide us with your feedback on our sustainability strategy and actions. We value your opinion greatly.



# ▸ The Power of Communication

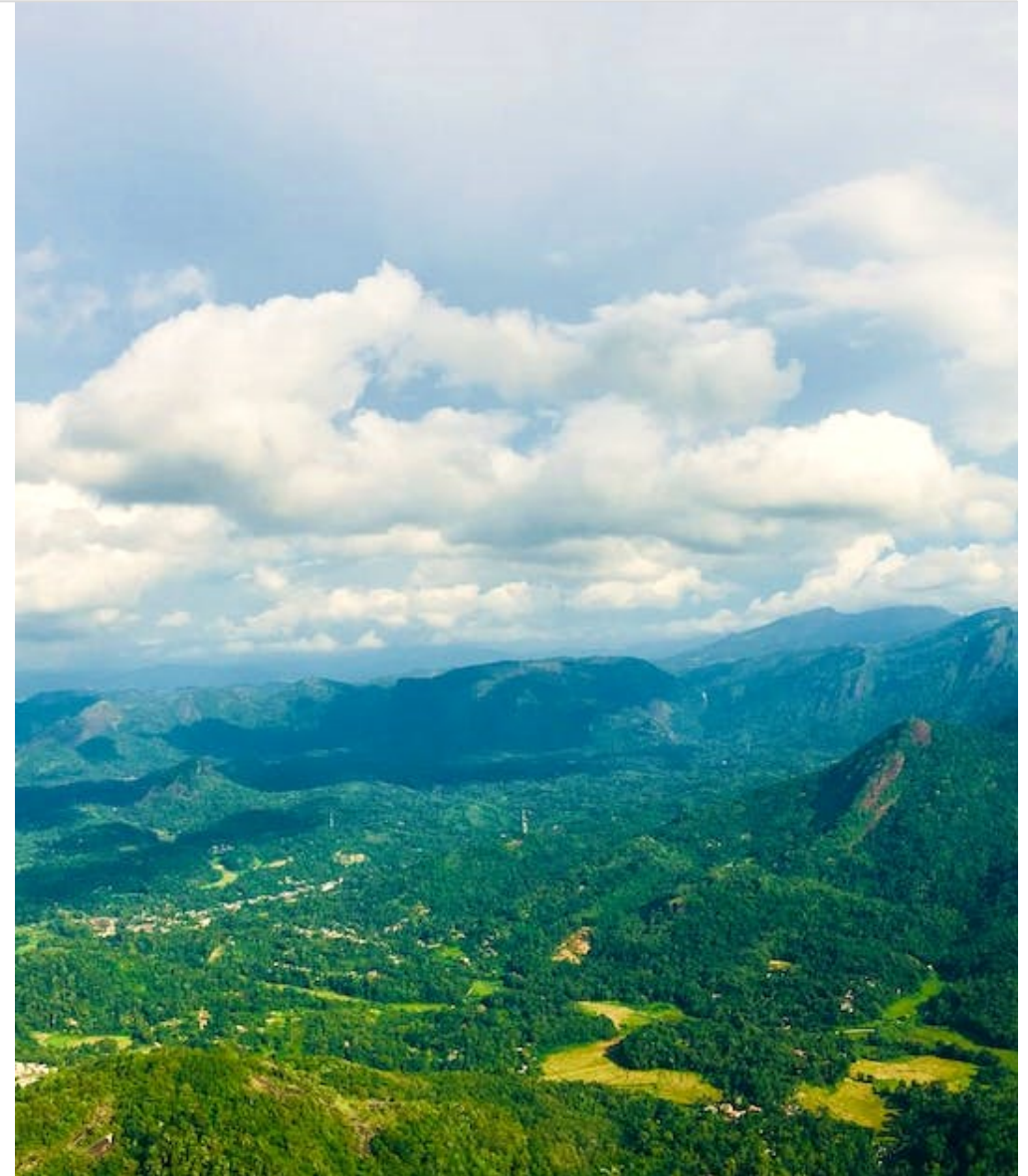
From the second half of the eighteenth century begins the era of the Industrial Revolution. A race towards economic, social and technological transformation is beginning, to move from a system based on rural, agriculture and commerce, to one characterized by an urban, industrialized and mechanized economy. After a long period of evolution, it is only at the end of the twentieth century when we begin to become aware of the adverse impacts that human activity generates on the planet.

With the aim of working under a policy of transparency, **ECONWARD assumed in 2018 the commitment to communicate the activities it carries out to achieve and sustainably maintain economic, social and environmental development. To do this, we rely on two major transformation levers:** the Circular Economy and the Sustainable Development Goals.

These concepts involve not only the rational use of resources, with their effects for future generations, but also refer to the totality of human and social aspects.

Thus, through this report, we communicate our strategy, our policy and the values that represent us and are part of our corporate identity.

We are currently at the beginning of our commitments, and we focus on the empirical analysis of the results obtained. This allows us to identify what are the opportunities for improvement we must integrate into our objectives. Thanks to the cooperation of all departments in achieving the long-term goals, we work with dedication and effort so that together we can strengthen our contribution to preserve the planet.



# 02

## ▸ Who we are and what we do

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- History
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- Stakeholders

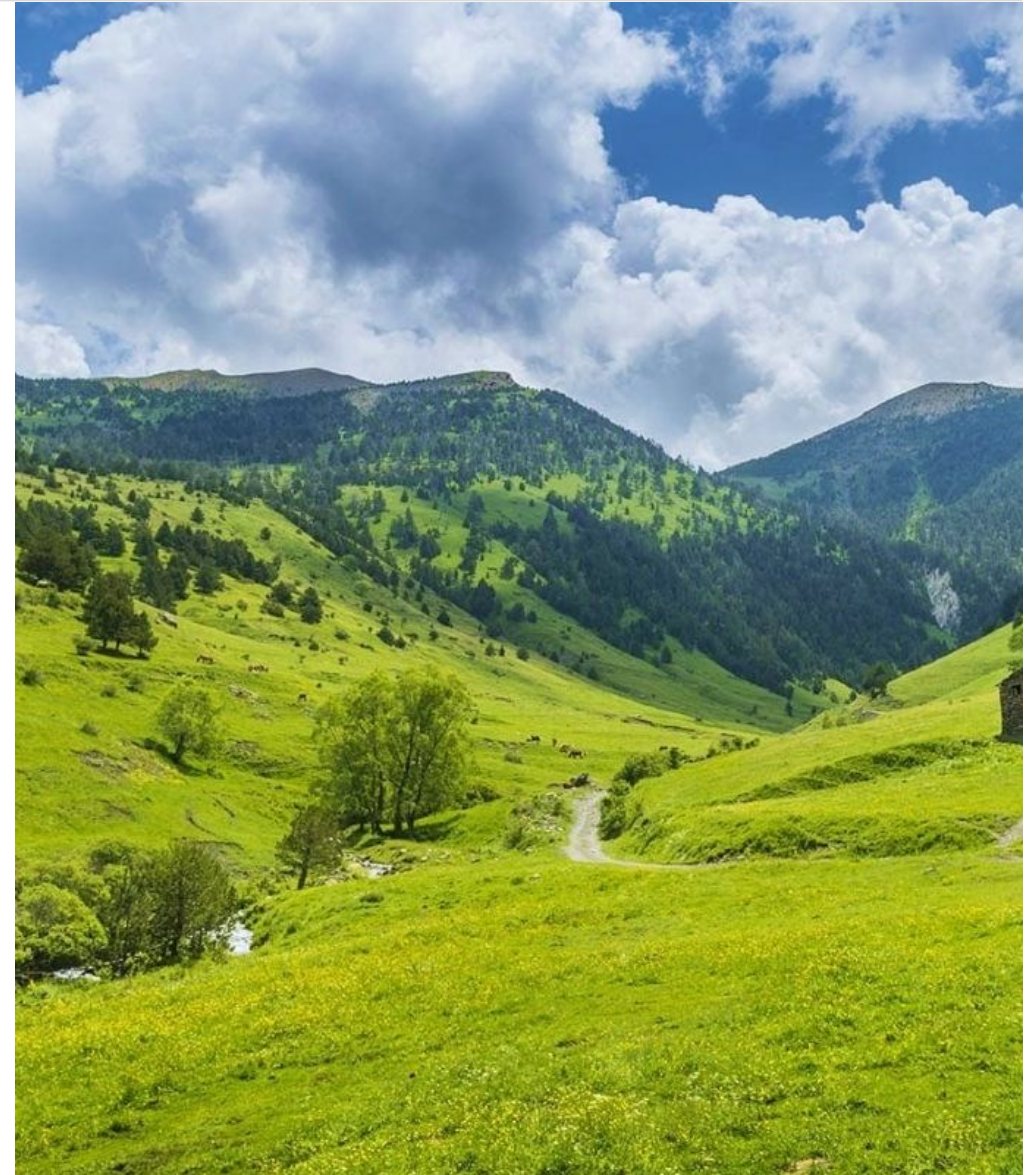
## ▸ ECONWARD

**ECONWARD** is a technology company specialized in the development of innovative, efficient and sustainable solutions for the treatment, recycling and recovery of waste.

Our main goal is to reduce landfill disposal and transform waste into biomass with multiple certified applications and uses in the market. We have designed an efficient and sustainable process that contributes to the compliance of the most demanding international environmental regulations.

We invest more than 80% of our resource in **Research, Development and Innovation**, because we believe our technology is part of the solution. In addition, we are committed to research into the uses of biomass by collaborating with large research centres and renowned technology centres, as well as through our participation in projects funded by the European Union.

Our main lines of work are biorefinery, building materials, the creation of fertilizers, the optimization of biogas plants for the generation of renewable energy and the promotion of energy self-consumption.





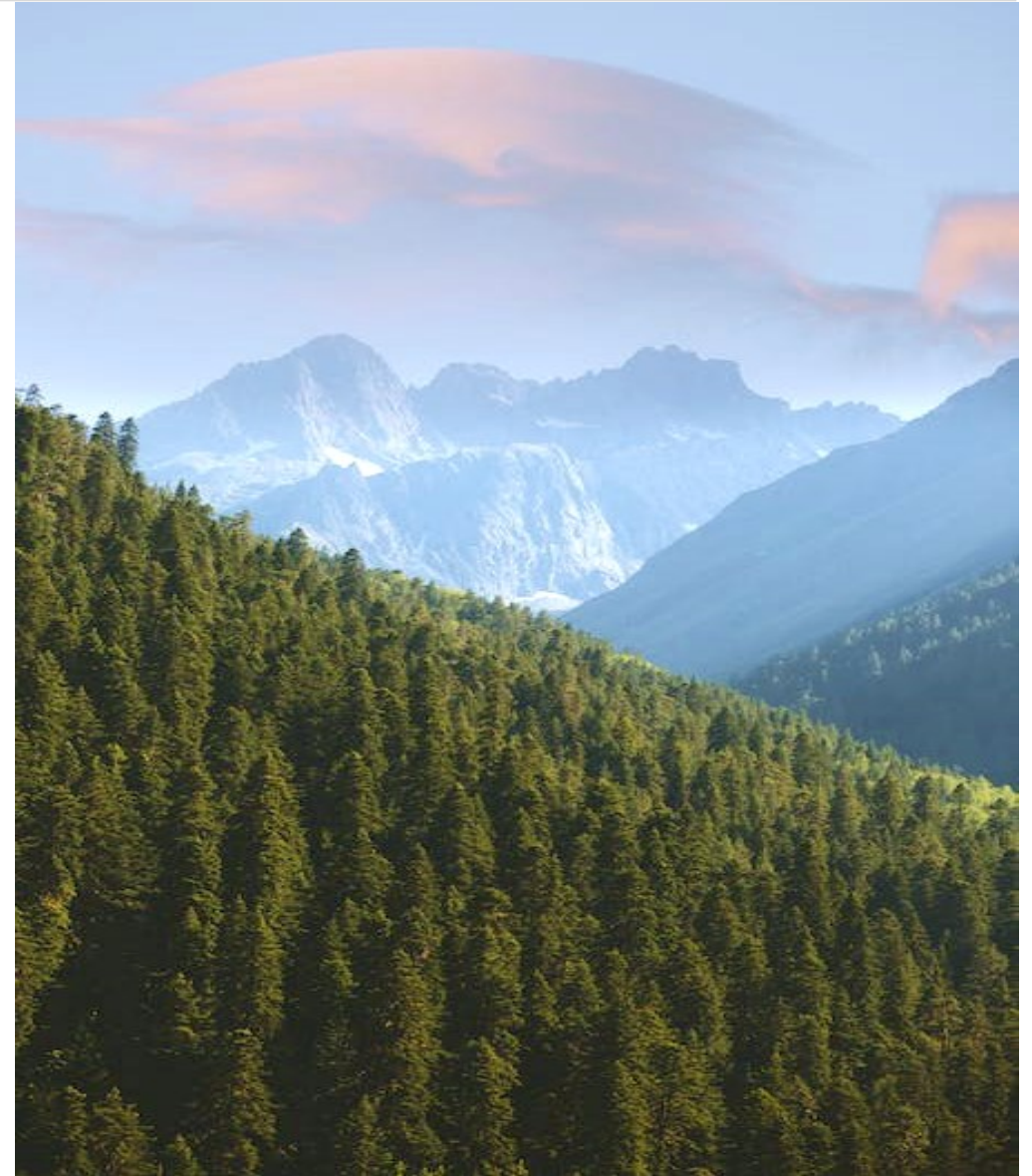
## ▸ ECONWARD

Our research efforts are driving the use of this waste. Our technology is a bridge that connects two major objectives: the correct management of waste and the production of bioenergy. We help accelerate the energy transition. We develop solutions that generate a triple impact: environmental, social and economic, which is part of a solid commitment to the circular economy, in which competitiveness goes hand in hand with a greener and more sustainable future.

We are currently marketing our **BIOMAK®** technology, which allows us to process organic waste more efficiently and generate homogeneous, sanitised biomass with multiple uses, both in the recycling process and in the generation of renewable energies, such as biogas and biomethane.

Organic waste from cities has a high energy potential that has so far remained untapped. However, if properly processed, it is not only possible to avoid its negative impact on the environment, but also to convert this waste into biogas and biomethane, which are essential for the energy transition.

The **BIOMAK®** has been designed to allow the separation of the organic fraction of urban solid waste from inappropriate, non-organic materials, thereby enabling efficient energy and material recovery. This ensures the removal of these impurities from the biomass, resulting in a homogeneous, sanitized product that is partially degraded both physically and chemically.





## ▸ NOWON SYSTEM: FROM WASTE TO RESOURCE

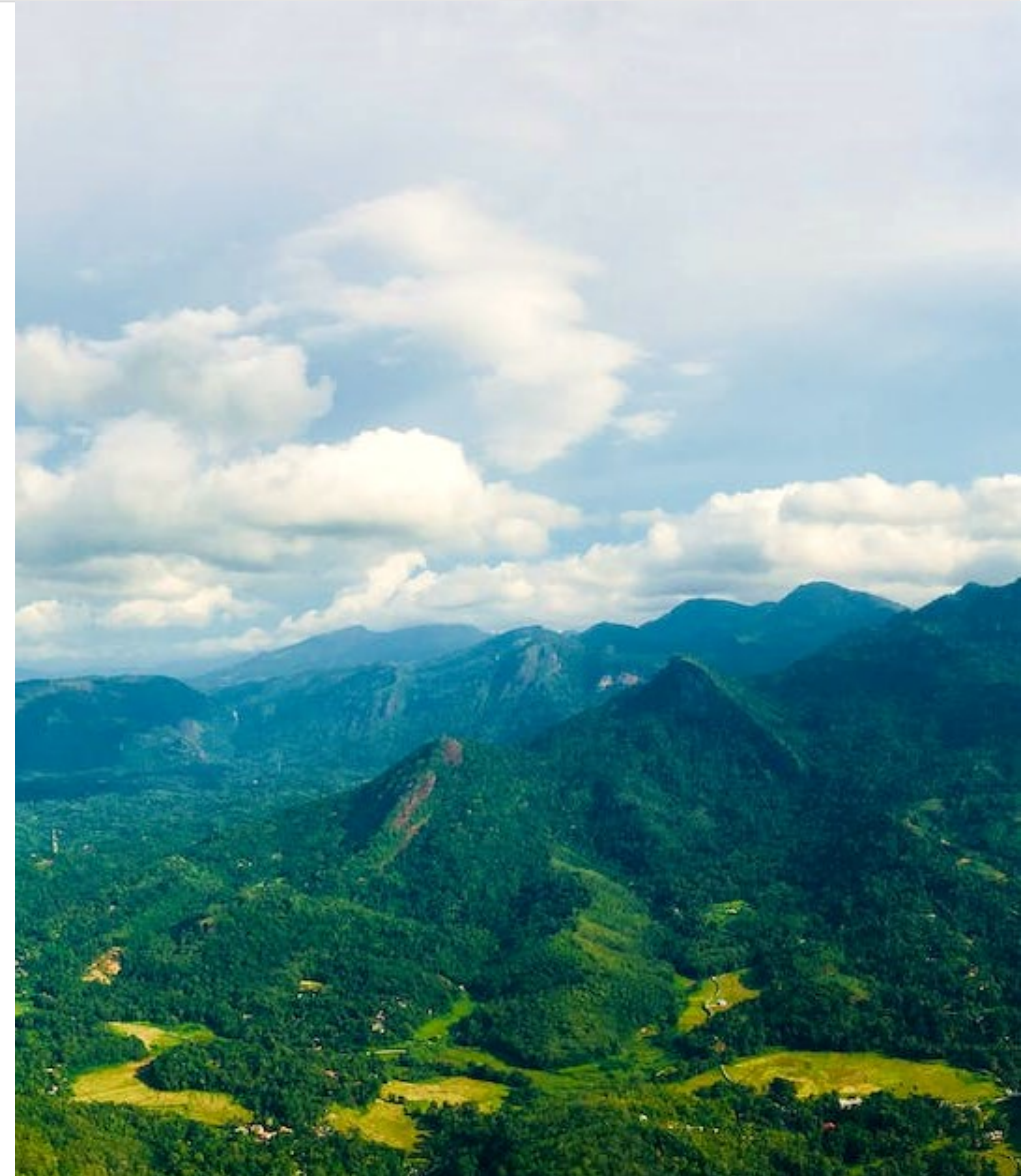
### A Comprehensive Solution

ECONWARD's technology is designed to integrate into an urban waste treatment plant and improve its efficiency. This makes it possible to recover virtually all the organic matter that arrives at the plant, preventing it from reaching landfills and enabling optimal recovery.

Thanks to alliances developed with engineering firms, EPC contractors, industry technologists, and financial entities, the ECONWARD group offers its clients the possibility of developing a comprehensive solution that includes the design, construction, operation, and maintenance of complete plants. This solution, known as the NOWON system, consists of a state-of-the-art waste plant, with ECONWARD's technology as its fundamental pillar.

The NOWON system represents an unprecedented advancement over conventional waste treatment plants, as it enables the recovery of organic matter and most materials currently reaching landfills, allowing for their recycling or recovery.

Currently, we have our headquarters in Madrid\* and a waste treatment plant in the municipality of Rivas-Vaciamadrid\*.



## History

ECONWARD was founded in 2009 with the goal of focusing on R&D&I for technologies applicable to the waste sector. The result of this effort was the development of a patented technology.

Starting in 2018, we strengthened our management, technical, and scientific teams, which allowed us to perfect our technology, achieving a version with a higher level of efficiency and international competitiveness.

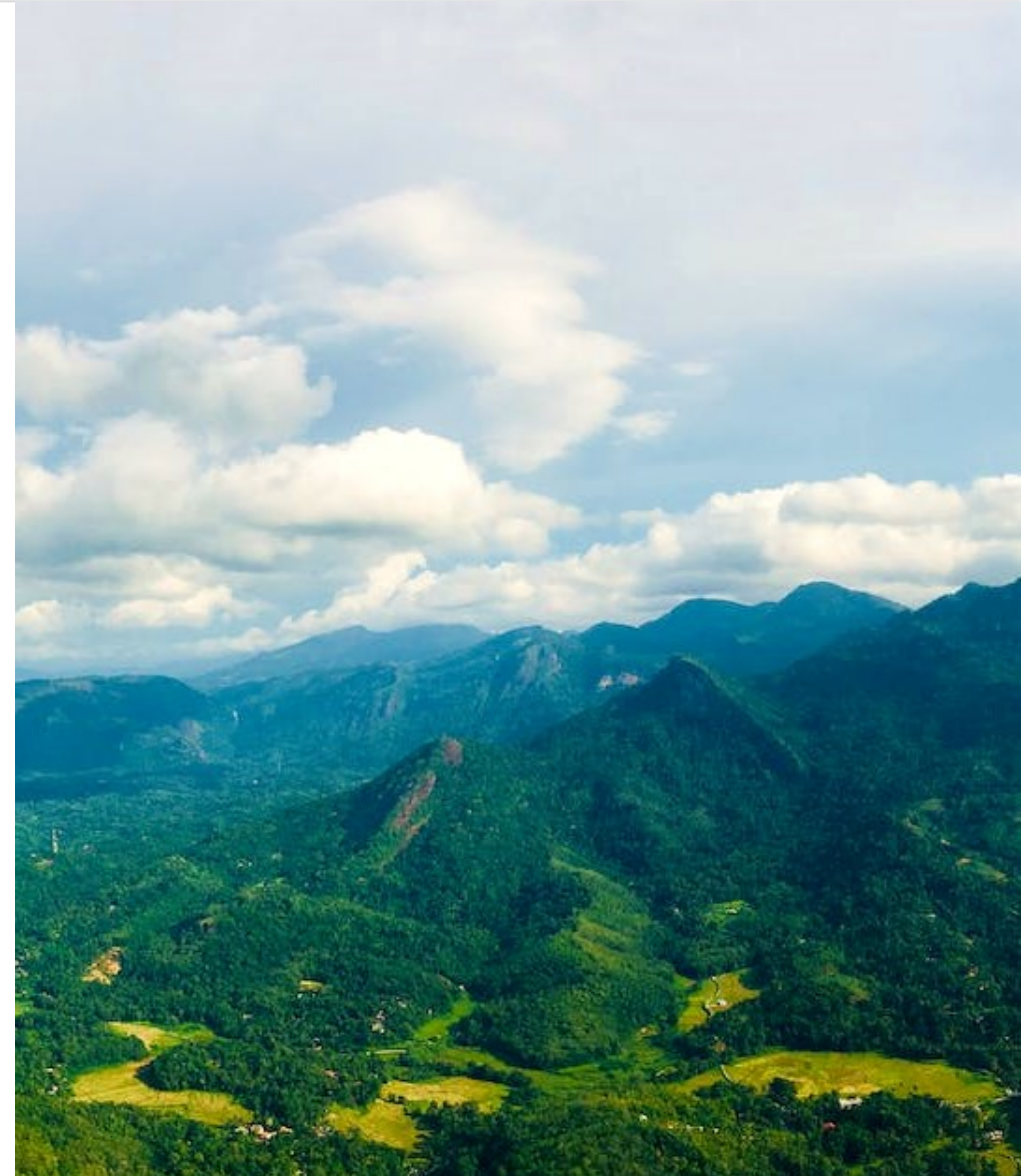
From this date, we began new lines of research on the potential uses of biomass, including processes that generate renewable energy and second-generation biofuels.

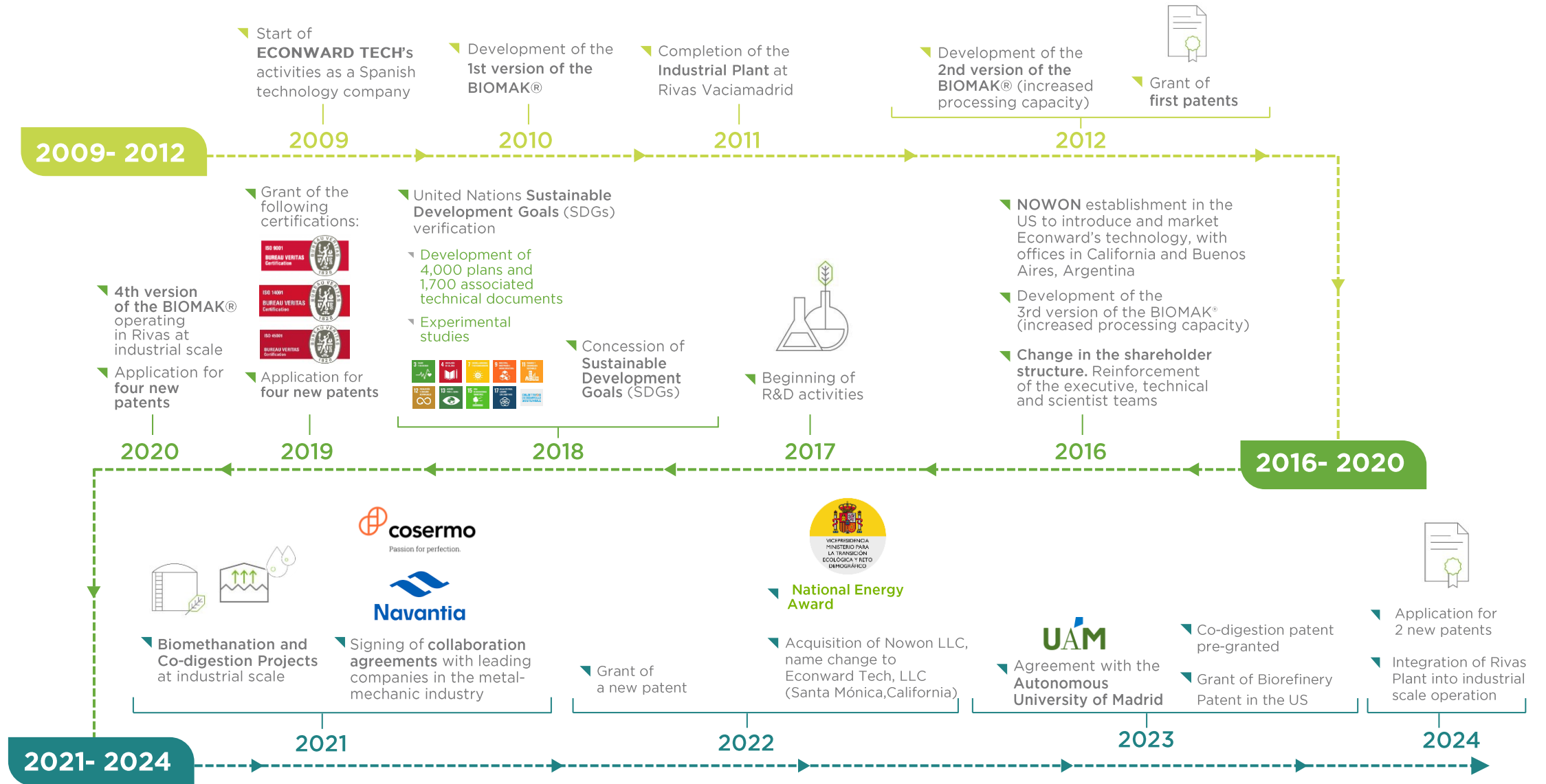
At the same time, with the aim of strengthening our international expansion, ECONWARD reached a key milestone with the acquisition of NOWON, whose mission is focused on business management and development in America. Currently, we have our headquarters in Madrid and operate a waste treatment plant in the municipality of Rivas-Vaciamadrid.

Composed of a highly qualified team, ECONWARD maintains a constant R&D&I activity in which patent development is at the core of its operations. Thus, in 2020, it presented four new patents. As a result of this intense research effort, it was awarded the National Energy Prize in 2022 by the Spanish government, granted by the Ministry for the Ecological Transition and the Demographic Challenge (MITERD).

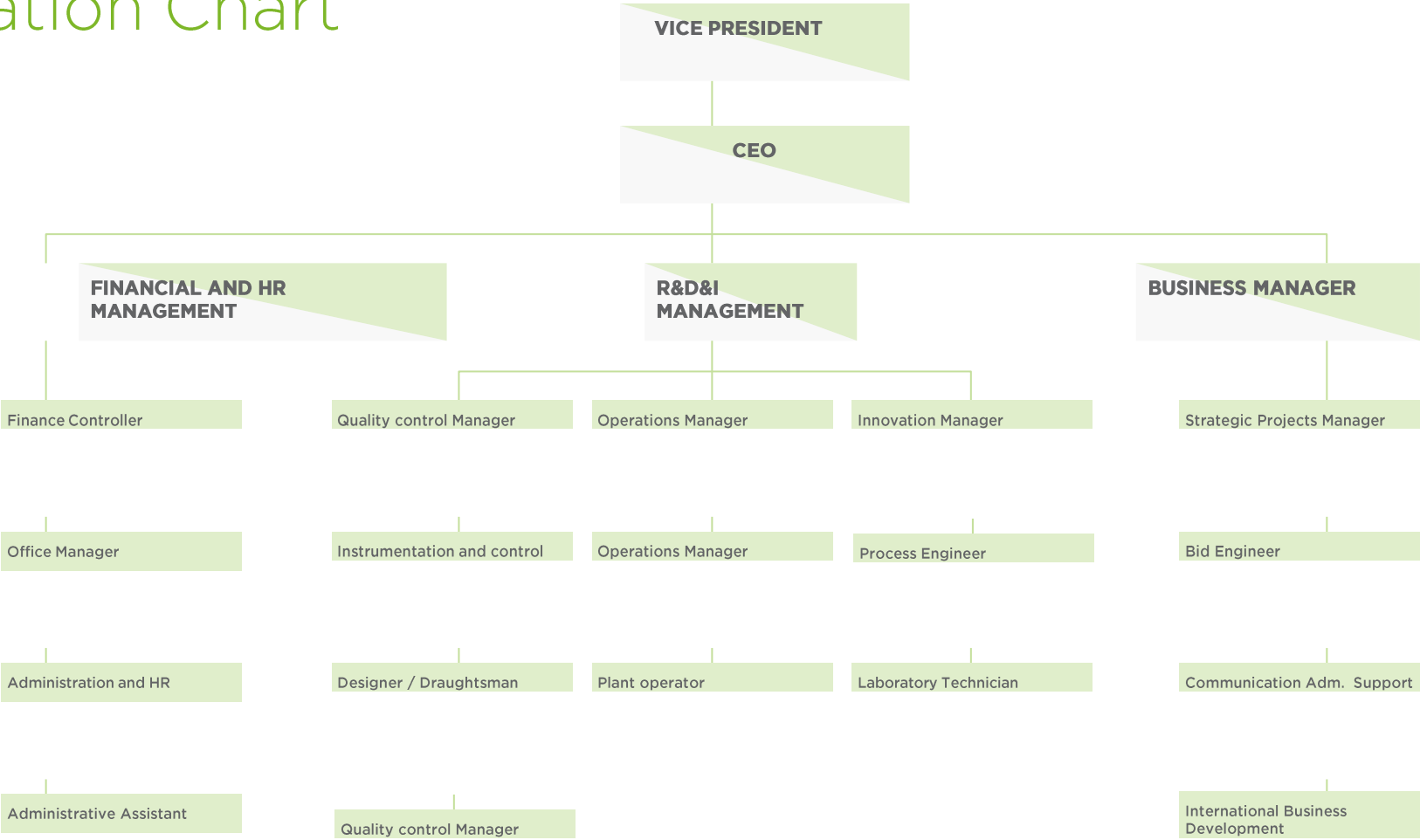
Also in 2022, ECONWARD acquired the U.S. company **NOWON LLC**, based in California, which had been the distributor of ECONWARD's technology for the North American market. In 2023, the U.S. subsidiary changed its corporate name to ECONWARD TECH LLC to globally align with the parent company, adhering to operational efficiency criteria.

Please note that this report only pertains to the offices in Madrid and Rivas-Vaciamadrid\*





# Organization Chart





## ▸ Leaders in knowledge

The company maintains a constant R&D&I activity in which the development of patents forms part of the core of its operations. ECONWARD is formed by a highly qualified team to offer the best solution adapted to each project from all angles: business, commercial, technical and scientific.

Our team, supported by the company's strategic alliances with universities, research centers and technological innovation organizations, allows ECONWARD to position itself as a knowledge leader.

Throughout these years, we have become part of different associations that allow us to stay updated and in constant contact with companies in the waste sector, enabling us to share experiences and exchange perspectives. Our ultimate goal is to promote, develop, and manage waste in a sustainable manner and drive them towards a circular economy.

We are also members of various associations in the energy sector that help us understand, learn, and transform outdated structures with the goal of building a future that leans towards renewable energy and clean technologies.

### We promote the circular economy.

Signatories of the “Pact for a Circular Economy: Commitment from Economic and Social Agents 2018-2022” to drive the transition towards a circular economy in Spain.

Members of:



# Activities

## Big problems, big solutions

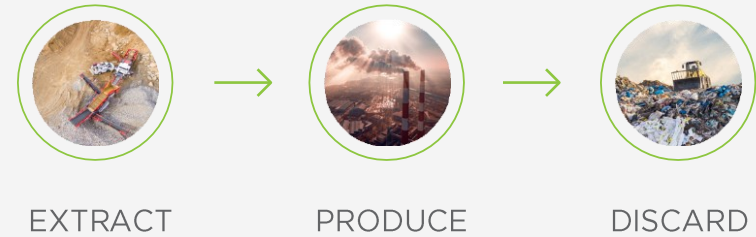
The focus of our company's activity lies in solving a global problem. Econward contributes to the **recovery of waste** that ends up in landfills and/or incinerators.

Consequently, our **technological** development allows us to **recover raw materials from waste and generate clean energy** efficiently in anaerobic digestion processes.

Our sustainable management alternative generates:

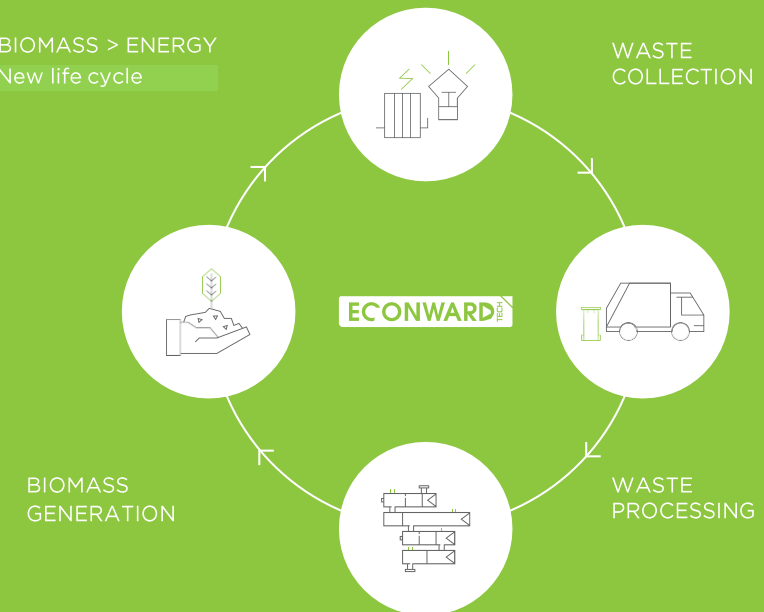
- **Economic value:** Energy efficiency, secondary materials and higher productivity.
- **Environmental value:** Reuse of materials, renewable energy and reduction of impacts.
- **Social value:** Distribution of resources and clean cities.

### LINEAL ECONOMY



### CIRCULAR ECONOMY

BIOMASS > ENERGY  
New life cycle



# Value Proposal

## Our Solution

### Fully automated autoclave system

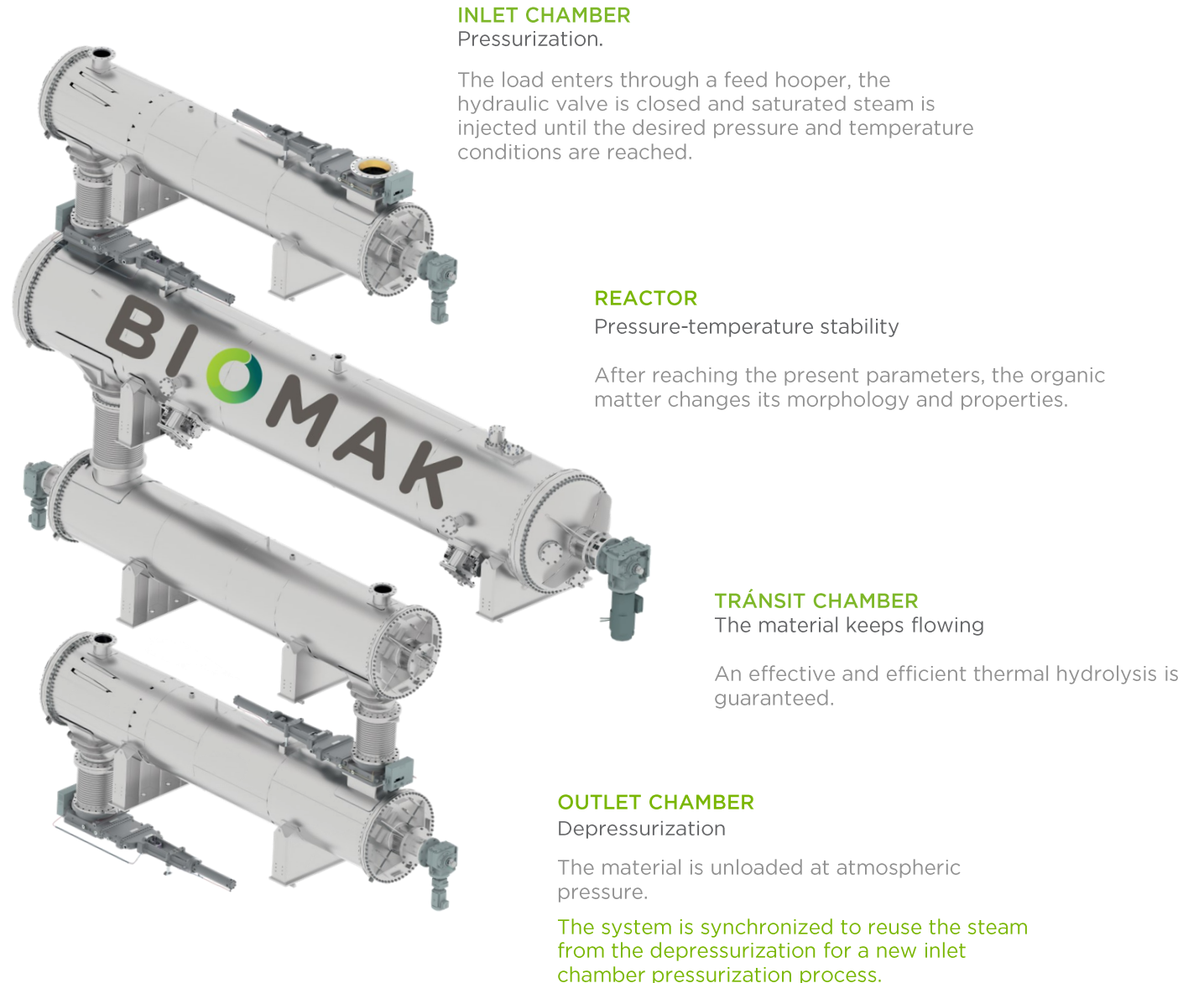
for the semi-continuous thermal hydrolysis treatment of biowaste

We are a young company that has made significant advancements in our technology within a short period of time. Currently, we are continuously improving both our product and the applications of biomass.

The outcome of these studies has led to the filing of several patents and the acquisition of unique **know-how** in the industry.

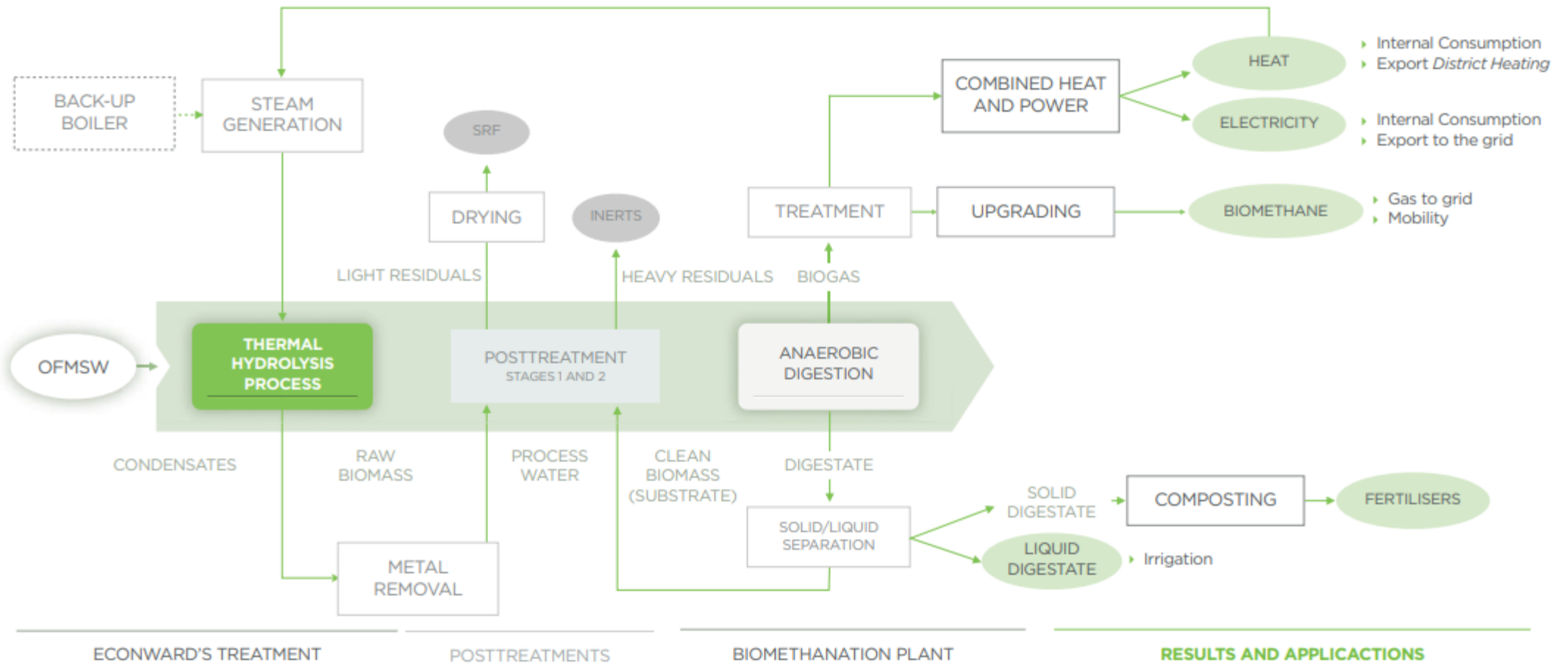
Our goal is to continue developing a **technology** of high efficiency and durability, maximizing its useful life to meet the current and future needs of the industry from the fulfillment of our own environmental requirements.

We work with all stakeholders in our environment, offering maximum flexibility and integration of our technology into existing projects. Furthermore, our expertise as technologists is what validates our product.



## Value Proposal

### Nowon System





## Value Proposal

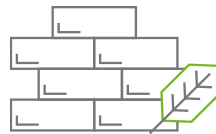
Our efforts go beyond the patented technology, as our R&D department is dedicated to researching different applications of biomass due to its high potential. Due to the versatility of biomass, we pursue various lines of investigation and focus our studies on three different approaches to facilitate its utilization and valorization.

Our additional lines of work encompass biorefinery, sustainable construction materials, the creation of high-value-added fertilizers, and the development of other technologies to enhance waste recycling and valorization processes.



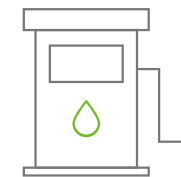
### Green Chemistry

Extraction of high-value-added compounds.



### Sustainable construction

Biomaterials for infrastructure and building construction.



### Biofuels

Renewable energy and mobility solutions.

## Product

Our process consists of the treatment of the organic fraction of solid urban waste and the rejects from treatment plants. The waste is subjected to a thermal hydrolysis process in an **autoclave system** using steam pressure and semi-continuously.

## R&D

We research and invest in the development of various applications for our biomass due to its high potential.

The versatility of ECONWARD's biomass facilitates its better use and valorization.

Hydrolysis breaks down **complex molecules**, achieving the **decomposition, sanitization, and homogenization of all organic waste to enable high-quality recycling both in the form of energy** (biogas production) **and material** (compost and fertilizer).

Through the previous process of physical degradation, we reduce the size of organic particles, allowing for optimal separation from other organic materials. Simultaneously, with chemical degradation, we transform organic waste into a new material with a high level of utilization.

Our expertise as technologists is what validates our product.



## ▸ Objective reasons to trust in Econward's technology

01

### We are accredited

Econward Tech is certified in compliance with ISO 9001, ISO 14001 and ISO 45001 standards, and verified in the achievement of the UN Sustainable Development Goals.

02

### Long-term commitment

13 years expertise in developing equipment and processes. A fourth manufactured, tested and certified version of the BIOMAK® is currently available

03

### Financial Solvency

More than €35MM invested in R&D and Innovation for the last five years

04

### Verified Parameters

Process consumption, production and yields certified by an external body, Bureau Veritas..

05

### Intellectual Property

Unique, patented technology. Manufacturing engineering 100% defined and owned by ECONWARD.

06

### Detail Engineering

More than 4,000 drawings, 55,000 hours of engineering designing, and 1,700 associated technical documents.

## Objective reasons to trust in Econward's technology

### Designing and manufacturing

07

Entirely made in the European Union and the United States.

- Engineering developments technically validated by the leading companies in the metal-mechanic industry.
- Manufacturing made in austenitic and martensitic stainless steels, carbon steel and bronze.
- 2 types of technical treatments and 17 types of surface treatments.

### Quality Assurance

08

Machine elements and pressure equipment designs manufactured under ASME (American Society of Mechanical Engineers) codes and standards.

Finite elements for all components are subjected to high tension and stress which guarantees the equipment safety and lifespan.

### Comprehensive experimental studies

09

Carried out in leading technology centres for the selection of the best base materials and superficial treatments:

- Test of oven corrosion for the selection of stainless steel and superficial treatments.
- Test of abrasion resistance of coatings
- Test of mechanical properties and chemical compatibility of the sealing materials.
- Test of coatings for parts in contact subjected to friction without lubrication.
- Test of deterioration and tribology of the mechanical subassemblies.

### High Precision

10

The entirety of the mechanical subassemblies has been designed and manufactured following the setting and precision standards of the Military Industry.

### Fully automated equipment

11

Through the use of Rockwell software with in-house programming, suitable to customer needs.

### We are fully operational

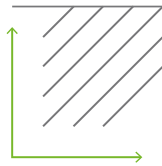
12

Industrial plant set up and operated in Rivas-Vaciamadrid (Madrid) which receives and processes various waste streams (separated collection and rejected material from treatment plants) provided by Municipalities and Companies.

The resulting termohydrolysed material (a substrate with high organic content) is supplied to different institutions, companies and other organisations, to jointly conduct case studies at both laboratory and industrial scales.

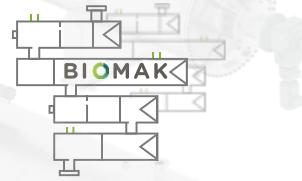


## ▸ Main characteristics



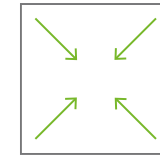
### High treatment capacity

65.000 t/year



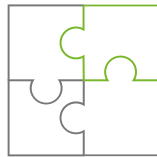
### Scalable and modular

Adaptable, easy and integration



### Small footprint

270 sqm. of area required



### Optimised and compatible

With existing technologies



### Automated

In-house software development



### Low operating costs

Rapid Return on Investment

# Value Chain



## ▸ Stakeholders

At **ECONWARD**, we build strong bonds and long-term relationships with all our stakeholders by being accessible and transparent. Through these relationships, we meet expectations and requirements, standing out in the marketplace with a set of values and a strong brand identity.

Feedback matters, because by listening to it, we move towards global understanding and respect for human rights.

We want to diagnose and expand the positive impacts we have on society and, even more, to know our weaknesses in order to transform them into strengths, opportunities and new challenges.

For all this, we establish a communication strategy with different channels open to the public. Internet, social networks, telephone and digital communication are our channels to stay always connected.

- Employees
- Suppliers
- Shareholders
- Costumers
- Environmentalists
- Communities and civil society



## Employees

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Every single person at ECONWARD is important to the company. For this reason, we encourage direct communication and provide them with different channels to improve fluidity. Our aim is to motivate and encourage our teams, which is why we provide training, generate discussion groups and promote corporate talks.

## Customers

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They are our most important segment, and their satisfaction is our main objective. Our commercial team provides support and personalized attention to our entire network.

## Suppliers

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Quality is the driving force behind our self-demand. As a result, we maintain a fluid and constant dialogue with our suppliers so that they also offer the best of themselves.

We select our suppliers according to internal quality criteria in order to carry out all projects with security and satisfaction.

## Environmentalists

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We want to know public opinion about our sector and, given our commitment, we are connected to environmental groups. Our listening channels for direct participation are available to everyone and we value their opinions as an opportunity for contrast, improvement and evolution.

## Shareholders

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We maintain a fluid, direct and transparent dialogue to inform them of all the actions and strategies established, transmitting security and confidence.

## Communities and civil society

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We are always in contact with all the communities involved in our activity and in constant communication through meetings, conferences and personalized meetings with organizations, public administrations and research centers. On our website we show our main activities and through the form we encourage direct contact.



# 03

## ▸ Policy and strategies.

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Principles and behavioural Values

- Milestones 2022-2023
- Mission / vision / values
- CSR Policy

## ▸ Main Milestones 2022-2023



2022

### 4º Quarter

- Invitation to the reception of Their Majesties the King and Queen at the Royal Palace of Madrid
- Integration of NOWON LLC into ECONWARS LLC Staff enlargement
- Speech at the National Congress on Environment

2023

### 1º 2º & 3º Quarter

- Application for End of Waste Status
- Rotary Drum patent granted in Europe and USA
- Biorefinery patent granted
- Participation in the World Biogas Expo in Birmingham, the largest fair in the sector in the United Kingdom.
- Start of production of the first marketable Biomak
- Tests completed with positive results

## ▸ Mission, vision and values

We are a technology company based on a great human team. **ECONWARD** is strongly committed to a corporate culture based on solid principles and values that start from our staff and branch out into all our business activities.

### MISSION

Offer comprehensive technological solutions for waste management and treatment that are environmentally sustainable and add value to the activities of our customers.

Contribute to achieving the European objectives of increasing recycling rates and increasing the weight of renewable energies.

### VISION

- To contribute value to society by transforming organic material from USW into biomass, avoiding its subsequent dumping.
- To guarantee high quality customer service and attention.
- Promote circular economy models through the reuse of USW as energy value or as raw material.
- To be a leading company in innovation, with great professionals, suppliers and a strong brand image, capable of expanding the business internationally.
- To reduce the environmental impact of existing technologies in USW treatment plants.
- To ensure the highest quality standards in our designs, our processes and our products.
- To make a global impact on the USW treatment industry with the goal of "Zero Landfill" (minimize landfill).
- Provide customized and unique planning and design to our customers.
- Continue to improve performance, reduce the consumption of our equipment and expand biomass recovery options through research and development.

## ▸ Mission, vision and values

### VALUES

#### Effort

Finding solutions that contribute to the common good in the face of the problems posed by waste disposal.

#### Awareness

Disseminating and transmitting a corporate identity based on the concept.

#### Leadership

Taking the initiative in our sector by proposing innovative solutions.

#### Multi-R

Rethink, Redesign, Remanufacture, Repair, Reduce, Reuse, Recycle and Recover.

#### Quality

Offering maximum internal and external efficiency at all points in our value chain.

#### Commitment

To continuous improvement towards service excellence..

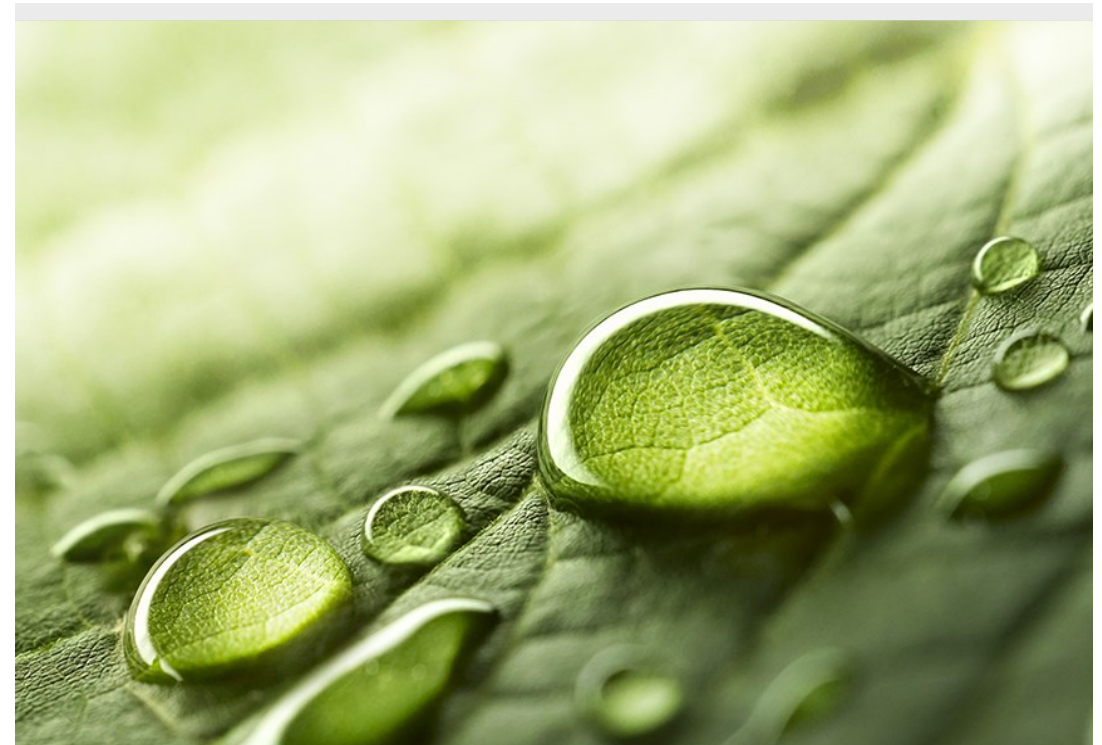


## ▸ CSR Policy

**ECONWARD**'s general management is aware of the importance and responsibility of business behavior towards society, and we are committed to establishing a transparent policy with quality standards to guide and raise awareness of our corporate social responsibility, highlighting the application of Multi-R criteria and the importance of environmental care:

- Protect and conserve the habitat within our scope of action, promote and communicate the sustainable development objectives to which the company is committed, in order to become involved in the achievement of these objectives.
- To respect all laws and regulations applicable to our activity, as well as to comply with the requirements of our customers and all stakeholders.
- To apply the Multi-R criteria to the maximum: rethink, redesign, remanufacture, repair, redistribute, reduce, reuse, recycle and recover energy.
- Reduce paper consumption and promote recycling, as well as research into technology for the reduction of resource consumption.
- Integrate the SDGs with ISO 9001, ISO 14001 and ISO 45001 systems, and manage conflicts that may arise between the different objectives and ensure the necessary resources for the management, implementation and continuous improvement of the management systems.
- Carry out periodic evaluations of the possible risks that may occur in all the company's activities.
- Establish environmental improvement and climate change deceleration programmes.

As this is the reference framework on which **ECONWARD** is based to achieve the commitments of the objectives that affect us, we consider that, throughout the evolution and deepening of the actions in the environment, these can be susceptible to be modified for improvement.



# 04

## ▸ Circular

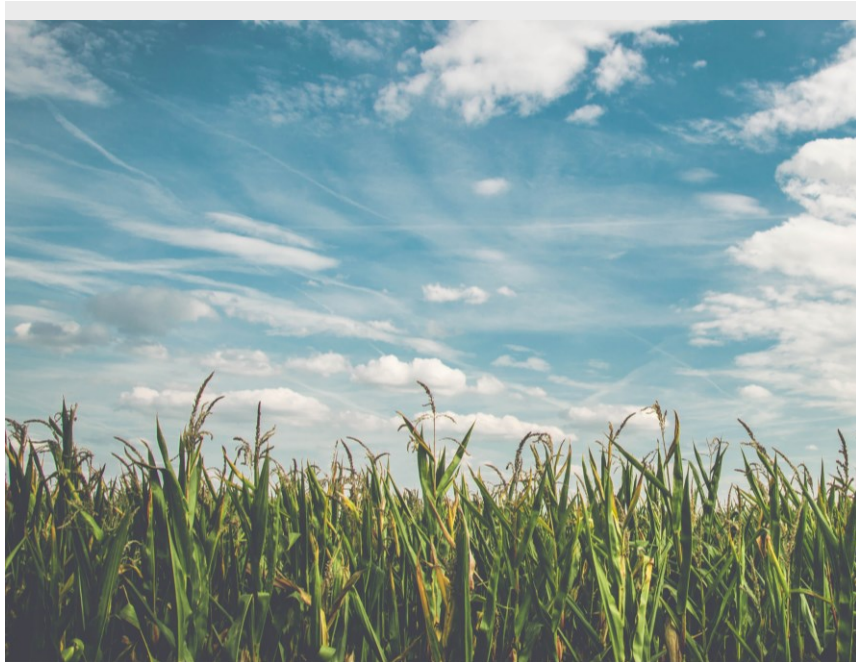
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### Actions

- Principles
- European targets for waste
- European Goals for waste
- Innovation at the service of Circular Economy
- Current Organic Waste Scenario

## ▸ Principles

Due to the growing global concern and the roadmaps defined by the major international organizations aimed at the development of a sustainable society, the main lines of action in terms of sustainability are based on the transition from a linear economy to a circular economy.



The circular economy is about the efficient use of resources throughout their entire life cycle. The direct consequences of a comprehensive reuse of resources are the reduction of extractive activities without reducing their supply and the reduction of their adverse impacts at the environmental, social and economic levels. The circular economy scheme is divided into three main principles:

01

Conserve and improve the natural capital from which we supply ourselves, through the control of non-renewable resources and the rational use of renewable resource flows. This principle is based on the regeneration, replacement and recovery of materials.

02

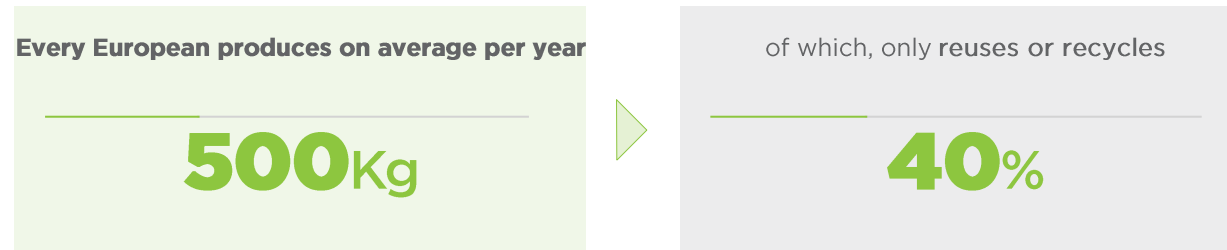
Optimizar el uso de recursos, es decir, crear, reparar y/o reciclar de una manera eficiente, apoyándonos en el ecodiseño para lograr un mayor ciclo de vida de los productos y componentes.

03

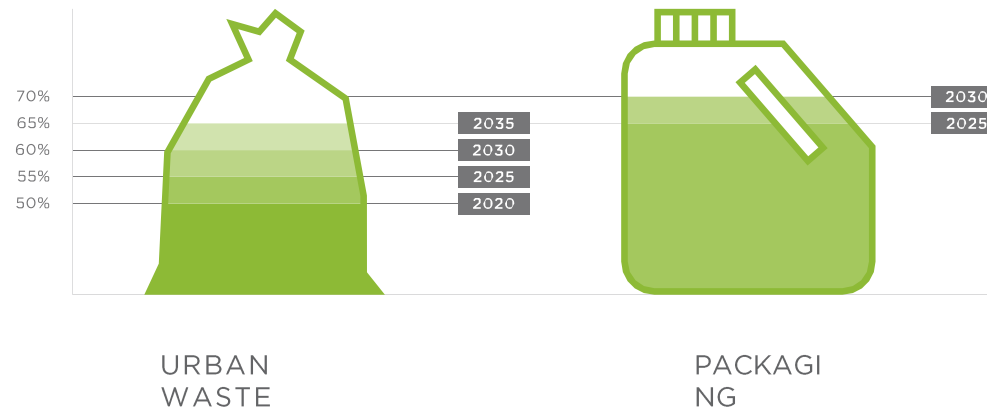
Enhance the guarantees and effectiveness of the system by identifying and eliminating losses and negative externalities produced.

## ▸ European targets for waste

### SOME DATA ABOUT WASTE



### Percentage of reuse/recycling according to legislation



### Start of separate collection of other waste

**2022**

Dangerous domestics

**2023**

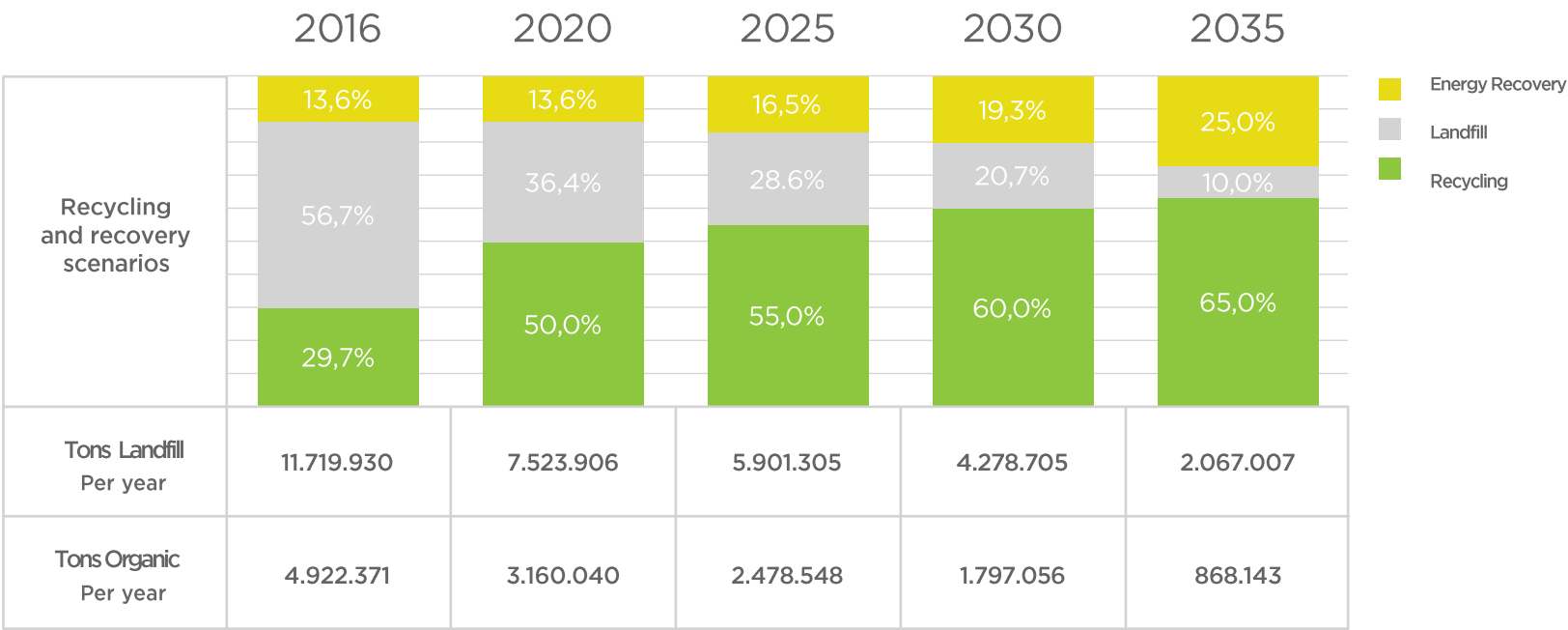
Biological

**2025**

Textiles



▸ European targets for waste



Source: Eurostat 2016, linear assumption.

## ▸ European Goals for waste

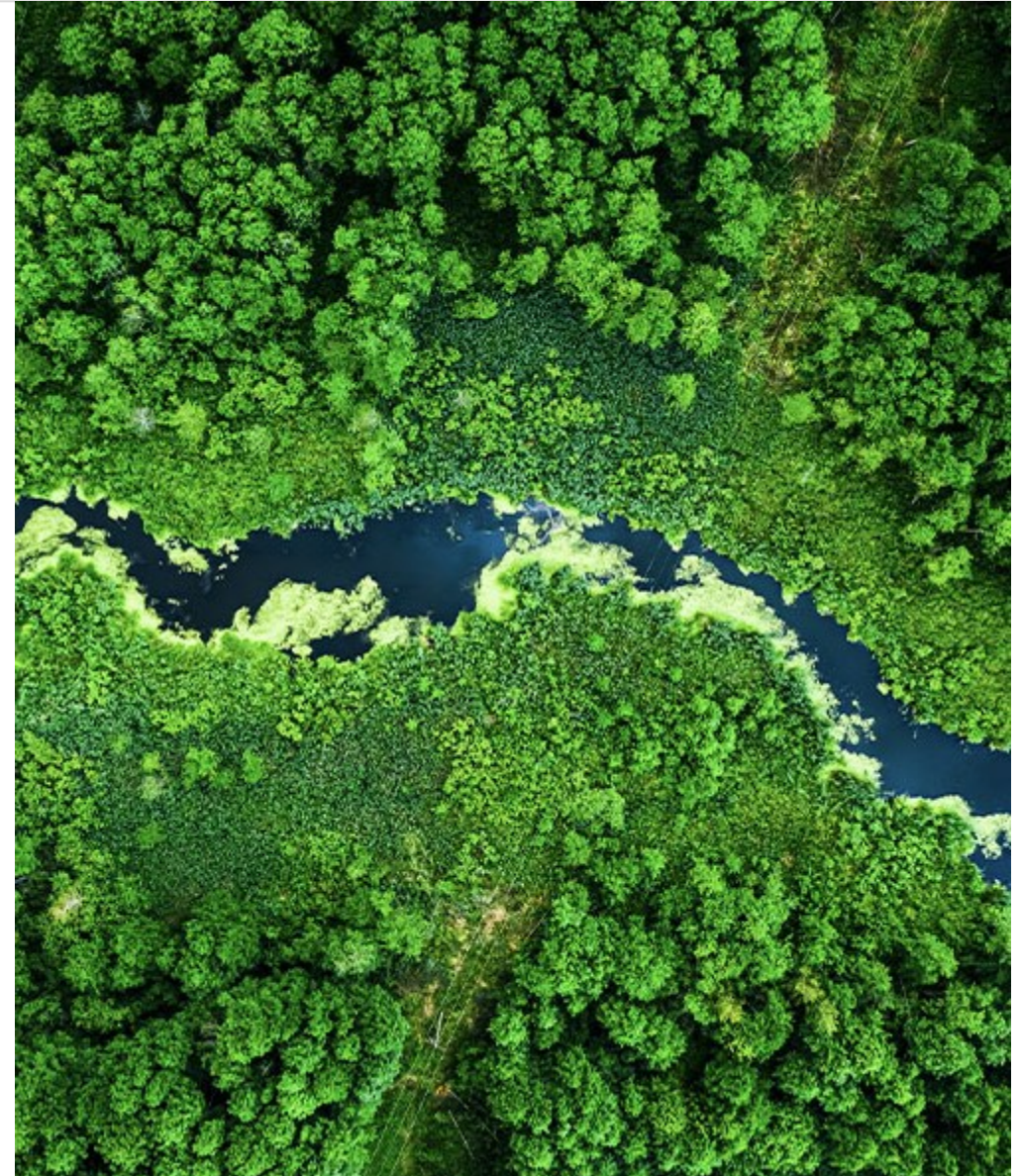
For several years, **ECONWARD** has joined the challenge of the transition from the linear economy to the circular economy, based on the pillar of recycling and reuse of raw materials. Many of our objectives are aligned with the increasing regulatory action by the European Union to reduce landfill and recover waste.

This means less expenditure of raw materials in production processes and a reduction in waste after use. Even so, **ECONWARD** has promoted research in this sector, given that there is a large field of action and a significant margin for improvement.

The ultimate goal of a complete reuse of waste is ambitious.

**ECONWARD** promotes this great objective by increasing waste recovery rates, converting them into new resources by means of its own technology and investment in research to increase the versatility of the biomass generated.

We want to contribute to a change in the economy based on extracting resources, producing and discarding and move towards a circular economy based on sustainable production and consumption and recycling so that quality is maintained and continues to be useful beyond the life cycle. We work to turn today's waste into tomorrow's resources.



# ▸ Innovation at the service of Circular Economy





## ▸ Current Organic Waste Scenario

We are generating more and more waste, that is an undeniable fact, and more than 40% of the waste we generate is organic. The European Waste Directive states that all EU countries must recycle at least 65% of their waste by 2035 and if we do not manage to recycle the huge amount of organics we produce, we will never meet these targets. In addition, we need to reduce the amount of waste that ends up in landfill or incinerated, so that it accounts for no more than 10% or 25%, respectively, which are the limits set by the European Union. Currently, a large part of organic waste ends up in landfills or in incineration processes.

From 2023, separate collection of organic waste will be mandatory for all EU countries. The law states that if organic waste has been collected separately, it is recyclable in anaerobic digestion or biomethanisation processes. This process captures the biogas generated during the degradation of organic. At the same time, the part of the waste that is not converted into biogas can be used as a compost.





# 05

## ▸ Sustainable Development Goals

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### Actions

- What do we
- do Strategy
- Commitments
- Main
- Secondary

# What do we do

Two 2015 initiatives call on all political, social and business actors for global action in the cause of sustainability: The Paris Summit on Climate Change (COP 21) and the **"Sustainable Development Goals (SDGs)"** adopted by the governments of the member countries of the United Nations (UN) General Assembly.

The SDGs have a timeframe, from 2015 to 2030, to take action to tackle the planet's major problems and address the challenges facing humanity: ending poverty and inequality, protecting the environment, promoting sustainable development and ensuring that all people enjoy peace and prosperity under the premise of **"No One Left Behind"**.

These goals, which give continuity and breadth to the Millennium Development Goals (MDGs) (2000-2015), are exactly 17 in number, made concrete in 169 targets, and which unify the three dimensions of sustainable development: **economic, social and environmental**.



## ▸ What we do about the SDGs

Following this call to business, **ECONWARD** got involved to meet the challenges of this global commitment, helping to ensure that our present means building a better future.

01

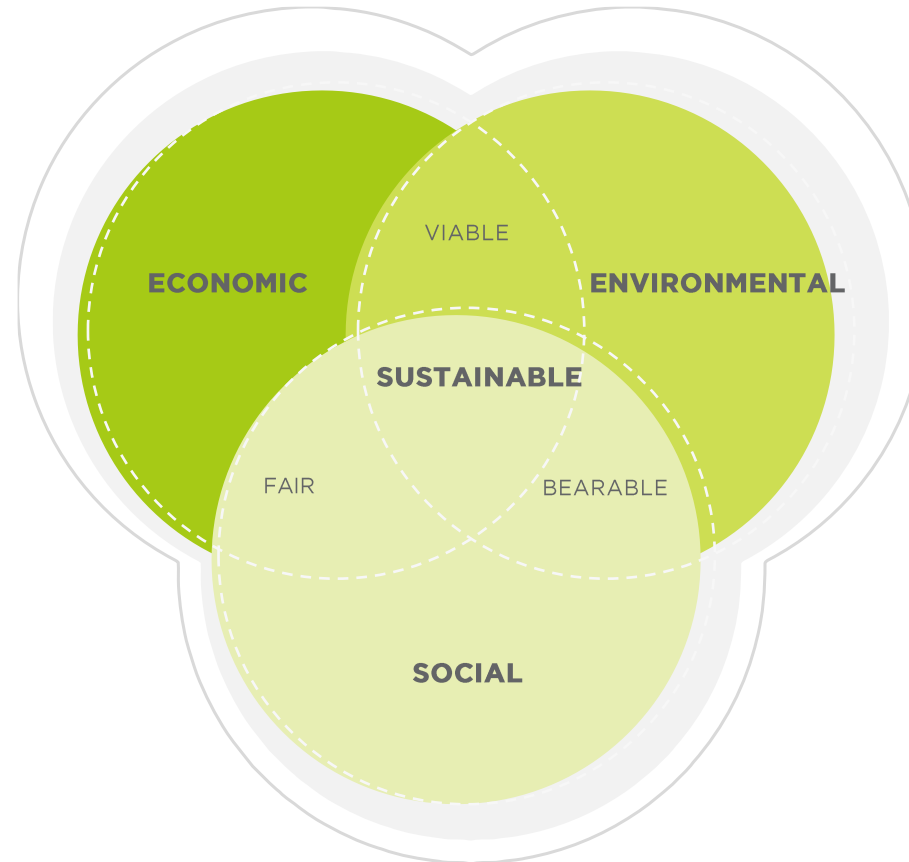
We respond to this need to meet the Sustainable Development Goals through the materiality analysis of our company with **3 main and 6 secondary objectives**.

02

Each goal is composed of several actions that guide our practices towards those goals. In addition, each action is composed of a series of performance indicators and, finally, each indicator has a quantifiable commitment, which we seek to achieve through our internal policies and relations with external actors.

03

**ECONWARD** aims to lead a sustainable renewal in the urban waste management industry by betting on prioritizing recycling, reuse and reduction, with the firm purpose of achieving a more sustainable future through technological innovation.



## ▸ Sustainability Strategy





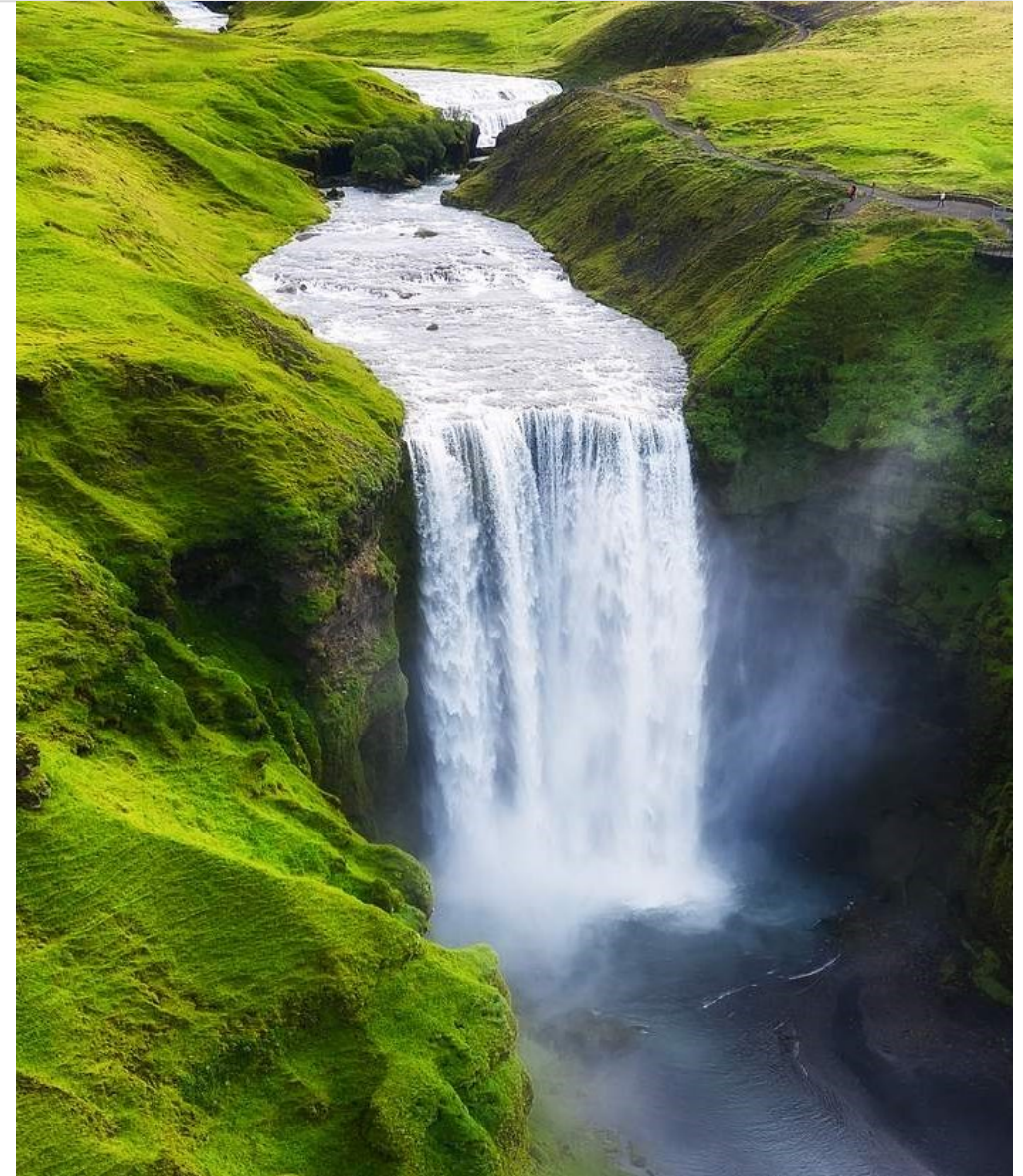
## Commitments

Our main strength lies in applying a global vision of the Circular Economy, where we recover waste, reuse what we produce and generate new resources.

We believe that business success goes hand in hand with sustainability, which is why we invest in technology to offer a highly viable environmental improvement with great viability, being a contribution to environmental care and social welfare.

Complying with the 3 pillars of sustainability, at ECONWARD we work to provide society with a technology that responds to a global problem. We take sustainability to all areas of our business model, and we rely on 4 key elements that mark our strategy: Technology, Social Commitment, Waste and Planet and climate. It is worth highlighting the great involvement of both our employees and our managers. We know that the key is the continuous dialogue we maintain with our stakeholders, demonstrating transparency and protection of Human Rights and making it the core of the company.

For this reason, we have set 3 main objectives and 6 sub-objectives which we aim to achieve through actions that are demonstrated in specific initiatives. For monitoring, we rely internally on an analysis of results against the figures we are committed to achieve.





# ▸ Sustainable Development Goals to which we commit ourselves

ECONWARD contributes to the achievement of the United Nations Sustainable Development Goals. Many of our actions and business goals are aligned to the 17 specific objectives, however, we believe we have a greater impact on the following 9 that we list below:



We want all our workers to have a good working environment in both the field of occupational safety and health.



We promote research, development and innovation, generating economic opportunities, quality of life and creating jobs.



We study how all activities in the different areas of our company impact environmentally, minimize them or eliminate them trying to mitigate climate change.



Without education there will be no change. We know that environmental education was not part of our society until signs have begun to emerge that make us consider the system in which we live. Without re-education we will not achieve that change, so at **ECONWARD**, we believe in the importance of raising awareness among citizens.



We seek to make cities and human settlements inclusive, safe, resilient and sustainable. This is part of our business.



Promoting the protection of biodiversity is also part of the main objectives of our company. We act for its preservation.



We innovate through our technology to increase energy efficiency and research on new uses of biomass.



We try to raise awareness among all the inhabitants about the beliefs of our company, which are to solve the existing problem of waste. To this end, we subscribe to the principles of the Circular Economy



Only when you are aware of the importance of others is when you really believe in alliances. We want to contribute in knowledge and achieve the objectives. That is why we have expanded our reach and generated strong and lasting partnerships.

# ▸ Main Sustainable Development Goals

While all objectives are important to achieve an ecological transition for the common well-being, our company contributes mainly to the following 3 objectives, which determine the company's strategy:

## AFFORDABLE AND CLEAN ENERGY

Achieving clean energy is one of our long-term objectives and, with it, we would achieve our own self-sufficiency. In addition, we will contribute to the decarbonization of the economy.

We promote energy self-consumption through the production of renewable gases (biogas and biomethane) and the reduction of dependence on fossil fuels.

## INDUSTRY, INNOVATION AND INFRASTRUCTURE:

At **ECONWARD** we stand out for our innovative character. We invest most of our resources in RDI activities to provide innovative technology solutions to the energy and waste management industry. We were born with the ambitious idea of bringing an improvement to the planet by proposing new solutions through R&D&I. We want to create a new vision in the waste sector and be a leading driver for achieving the commitments made by the European Union.

## RESPONSIBLE PRODUCTION AND CONSUMPTION

All our lines of work are in line with the principles of the circular economy, which is the pillar of our identity and the guide of our activity.

We develop efficient technologies that reduce resource consumption and optimise the performance of existing solutions.

We must point out that these 3 objectives have many actions and indicators in common and that they could be put both for each other, but we thought it advisable not to repeat them and distribute them the way they are to give more meaning to the objective.

## ▸ Secondary Sustainable Development Goals

Our **6 secondary objectives** are also important in the structure of the company because they mark many of our lines of action. People, prosperity, the planet and partnerships are the main themes that ECONWARD takes into account when evaluating and setting goals.

### PEOPLE

We are part of a global whole made up of many intertwined aspects,

but only individuals can change the course of how we want to be part of this whole.

That is why we believe that all the issues around Human Rights and our behaviour within this scenario are very important.

### ASSOCIATIONS

Without union we cannot improve and we are well aware of this.

We want to generate powerful links that help us to achieve the commitments we have set ourselves and, above all, we see this activity as an incentive to improve and evolve as a company.

### PROSPERITY

Our technology is based on the foundations of the Circular Economy and the Multi-R concept, which is all about bringing prosperity, not only economically and internally, but also in all areas of sustainability

### THE PLANET

**ECONWARD** tries to conserve and protect the planet as much as possible by offering efficient and non-polluting solutions.

# OUR TECHNOLOGY

## MAJOR INVESTMENTS FOCUSED ON THE FUTURE

At Econward we work every day with our eyes focused on the near future, with the desire to be able to contribute a grain of sand and improve this planet that welcomes us. Almost 50% of the expenses we invest are dedicated to R&D&I because we truly believe that we can contribute to improving the planet through our technology. And it is only because we believe in it that we strive to demonstrate our results in the form of projects.

## OUR ENERGY PROJECTS

### Codigestion Project:

The Codigestion project builds upon the achievements of the OFMSW-TH biomethanisation project, aiming to achieve dual objectives. Firstly, it seeks to enhance the productivity of the anaerobic digestion (AD) of sludge in wastewater treatment plants (WWTP). Secondly, it aims to stabilize this particular stream and improve its composition.

The initial phase of the project involved a comprehensive laboratory-scale investigation, including biochemical methane potential (BMP) tests and semi-continuous experiments. This collaborative effort, in partnership with Clamber Biorefinery, focused on optimizing the process conditions. The outcome of this investigation revealed that the addition of 20% FORSU-TH effectively doubled the biomethane productivity. Encouraged by the positive results obtained at the laboratory scale, the process was subsequently replicated at a semi-industrial scale.

Experimental results showed that TH improves the yield and biodegradability of organic waste, leading to an increase in biomethane production by 51-68%.

Based on the good results at laboratory scale, during 2022 and 2023 the process has been replicated at industrial scale. This study is aimed at experimental validation and is intended to achieve:

- Increase EDA's biogas production
- Ratify the quality of the digestate
- Verify optimal mix conditions and operational parameters



Thanks to **BIOMAK**® technology an anaerobic digestion plant using MSW as input material, can at least double its biogas production.



The **BIOMAK**® plant installed in Madrid processes eight tons of waste per hour on a semi-continuous process.



# OUR TECHNOLOGY



## The post-treatment project:

The post-treatment project consists of internally validating the results of the screening technology in order to be able to offer the customer the best solution and, to this end, different separation tests have been carried out and it has been observed which technology recovers the greatest amount of organic matter.

In September 2023, the project will resume again to continue research on the optimisation of waste recovery.



## Integration study of the equipment with a digester:

Development of a complete process with the aim of obtaining biomethane from waste. The waste preparation / segregation systems will be integrated in order to subsequently subject it to thermal hydrolysis by means of Biomak and then to anaerobic digestion. The reduced biogas will be enriched by means of the most appropriate upgrading technology, and the unused fractions (rejects, digestate) will be assigned to a controlled landfill.



## OUR PATENTS

We continue to make progress and we will continue to create new projects and patents in the future. During this year, progress has been made on all the projects that are underway and we have continued to maintain the two patents granted and another five still in process.

Econward, as a technology company, always seeks to stay ahead of the market through R+D+i. As a result of this work, patents emerge that allow us to protect our knowledge.

The patenting strategy is in line with the R&D&I activities. On the one hand, the entire equipment, i.e. the **BIOMAK**® and its control, is developed, and on the other hand, all applications of the biomass, i.e. the **BIOMAK**® product, are researched.

All our patentes:

ES2448396T3 - Device and procedure for continuous waste treatment – First application requested in 2009 in Spain, and then in United States of America and Japan.

WO2020079289A1 - Rotating drum for gravity feeding material into its interior – Application requested in 2018 in Spain, United States of America, Argentina, Turkiye, San Marino, Slovakia and Slovenia.

WO2020074753A1 - System for continuously treating solid waste and associated process – Application presented at the EIPO and requested to United States of America and Argentina.



# OUR TECHNOLOGY



Our consumptions




ECONWARD’s integrated policy refers to the conscious and responsible use and protection of the environment in order to prevent pollution and environmental impact.

This year we have managed to reduce our electricity consumption in our offices and have switched to a renewable energy supplier.



2022	2023
334kw	321kw
Per person	Per person





Incoming Waste

MACHINE PATENTS

Hydrolysed Waste (Biomass)

# ▸ Society, what we belong to



AS A REFLECTION OF OUR HEALTH, OUR DATA

**ECONWARD** is created from the idea of bringing health and wellbeing to many countries and with them to the whole population. We continue to develop and improve the technology year after year, with the idea of optimising resources and creating a more sustainable world, especially in the use of resources and respect for the planet.



Every year **ECONWARD** obtains and maintains ISO 9001, ISO 14001 and ISO 45001 certificates from the Bureau Veritas certification body, subjecting itself to high levels of control and quality, in order to take care of both its customers and its own employees.



At **ECONWARD**, we are not only concerned externally, but above all internally, i.e. with the health and safety of our employees, which is why we are constantly improving our risk prevention and environmental control systems. We carried out all the improvements proposed by the External Prevention Service and with the help of our maintenance team, Rivas-Vaciamadrid plant has become a very safe and noteworthy place to work.

Since 2020, the company decided to take care of the health of its employees by offering the possibility of obtaining private health insurance. Based on the established conditions, **ECONWARD** took over 88.58% (2021=93.17%) of the coverage for its employees as an annual average in 2022. During this year 2023, the company is assuming 88.58% (2022=90.58%).

Following the line of taking care of our workers, this year we have achieved:



**100%** of our employees receive a remuneration higher than what is established in the collective agreement, and we do not have any salary differentiation based on gender because none of the job positions are identical to each other.

# ▸ Society, what we belong to



## NO EDUCATION, NO EVOLUTION

Education is the basis for socio-economic improvement, growth and mobility and what enables human beings to coexist on the planet with other cultures and contexts. Therefore, a key concept emerging from **ECONWARD** is the desire to plant a positive seed in society.



We want to provide our employees with learning and knowledge to improve both on a personal and professional level.

**ECONWARD** has now implemented a platform with more than 800 courses available to all employees. In addition to these, important pills such as digital disconnection, conflict management, etc. are offered.



Participation in number of hours per person:

During the year 2022: 46,59h

During the year 2023: 14,90h



**PHAROS**  
by Structuralis  
Lifelong Learning Service

We want to train and integrate young people who are starting their professional careers, so we are committed to selecting talented young people who are capable of promoting and transmitting our vision. In the 2022-2023 period, we have included a trainee profile who will become part of the company's staff.

In addition, at Econward, we are concerned with maintaining a level of welfare for all our workers and during 2022-2023 we have maintained the excess over the collective bargaining agreement salary at over 100%.

Our communication department has done a great job during this year creating visibility to the outside world with the important publications made on our LinkedIn profile, increasing by 55% in number of publications.

2022	2023
68%	55%
Increasing publications compared to the previous year	Increasing publications compared to the previous year

# ▸ Sociedad, aquello a lo que pertenecemos

**3** GOOD HEALTH  
AND WELL-BEING



## WE EXPOSE OURSELVES TO THE WORLD

This year we have once again opened our doors to the world, with more experience in our commercial department, which is fluent in dealing with our potential clients. Not only giving visibility to our public but also participating as speakers at national and international conferences.

We like to be up to date and be part of the current affairs. During this year we participated in several events gaining visibility and networking in the related sectors.



**4** QUALITY  
EDUCATION



**17** PARTNERSHIPS  
FOR THE GOALS



**rwm** | letsrecyclelive

Young  
Professionals  
Group



**ISWA**  
International Solid Waste Association



# ▸ Society, what we belong to



## ALLIANCES BRING US TOGETHER

We know that we are not alone, so there is no better way to stay at the top than by collaborating and working together with the best technologists, associations and organisations in the sector.



We like to exchange ideas and insights to improve. We want to offer the world the best of our technology, so the best thing to do is to create partnerships.



We believe that only by understanding, we can participate, so we try to participate in events related to the SDGs. During this year, we attended the webinar on:

"Strategies and management of SDGs in organisations. Success stories"





## ▸ The waste of others is our product



**E.ON WARD** has more than 10 years of experience in the field of waste treatment technology development.



The **BIOMAK®** process has a utilisation rate of more than 90% of the organic material.



A waste treatment plant with a **BIOMAK®** reduces GHG emissions equivalent to planting 2,700 hectares of forest per year.



The biomass generated in the **BIOMAK®** process allows for obtaining over 98% organic content and is optimal for recycling and reuse processes.



# ▸ The waste of others is our product



## WE CARE FOR OUR CITY

With the growing problem of population growth leading to an increase in waste and the lack of solutions to dispose of or reduce the amount of waste, it is causing major challenges to achieve the targets set by Europe. With our technology we would respect cities and the environment by reducing the amount of waste that ends up in landfill.



+ del 90%  
de Recuperación de la Fracción Orgánica

In addition to being a sustainable company and in favour of the Circular Economy, all of us who belong to the **ECONWARD** group feel strongly about caring for the environment. We are aware of the need to reduce the consumption of resources, even if it seems that our gestures are small, we are making a big gesture for humanity.

If we all made a little effort, with small gestures we could change the planet.

**ECONWARD** therefore puts in place best practice actions to minimise pollution. Our policy for sourcing suppliers is to try to use national suppliers.





Their proximity helps to reduce the carbon footprint and to better control the technical requirements set by the company.

The international percentage is due to the impossibility of working with national suppliers. During this year, from the total of supplier we collaborate with, 88,29% are national suppliers.

Year 2022: 81,55 % national suppliers

▸ The waste of others is our product



	2023	2022
 BATTERIES	0.1 Kg/person	0.35Kg/person
 TONER	0.05Kg/person	0.16Kg/person
 PAPER RIVAS	1.8 Kg/person	3.7 Kg/person
 PAPER MADRID	1.8 Kg/person	6.58 Kg/person

# ▸ The waste of others is our product



## OUR RESPONSIBILITY IS OUR ACTIONS

Econward not only brings wellbeing to the inhabitants, but we also bring wellbeing to the planet. With **BIOMAK®** treatment, we are able to recover waste such as, for example:

2022: 6130 KG ferrous metals  
2023: 3200 KG ferrous metals

2022: 317,85 m3 purified water  
2023: 182,11 m3 purified water

2022: 1948 L/year gasoil  
2023: 1419 L/year gasoil

2022: 348,44 m3 purified water  
2023: 182,11 m3 purified water



On the contrary, we still have to consume other resources that have increased due to rise in activity.

2021: consumption of 45,03 m3 of water in Madrid  
2022: consumption of 48,13 m3 of water in Madrid

The sales department continues to make progress in establishing solid and reliable relationships with public administrations so that they recognize us as a valid company and to achieve the established European objectives

# Everything that represents us is for the planet



Everything we are represents us as a triple impact company. We are a sustainable company, whose goal is to help keep the planet and the people who inhabit it alive.

We have a **know-how** and a **team** that is currently unsurpassed in the market, and we can only be at the pinnacle of innovation.



We transform waste into a biomass with multiple certified applications





Hygienised, homogenous, biostabilised, pathogen-free, physically and chemically degraded.



Our endeavor is for the planet



To address the waste problem, global environmental regulations set mandatory targets. Nations can only achieve these targets if treatment plants incorporate innovative technologies.

 UE  Objectives Green Deal Fit for 55	10%  maximum of organic waste disposal from 2035	65%  recycling rate established for 2035	55%  emission reduction by 2030	40%  Increasing the of energy consumption should come from renewable sources by 2030 is objective to 45% is under consideration.
 CA  Objectives SB 1383 SB 100	25%  maximum of organic waste disposal from 2025	75%  recycling rate established for 2035	40%-50%  emission reduction established for 2030	x 20 Increase in biomethane price (production subsidy) — 60% renewable electricity for 2030 The 100% is expected to be achieved by 2030

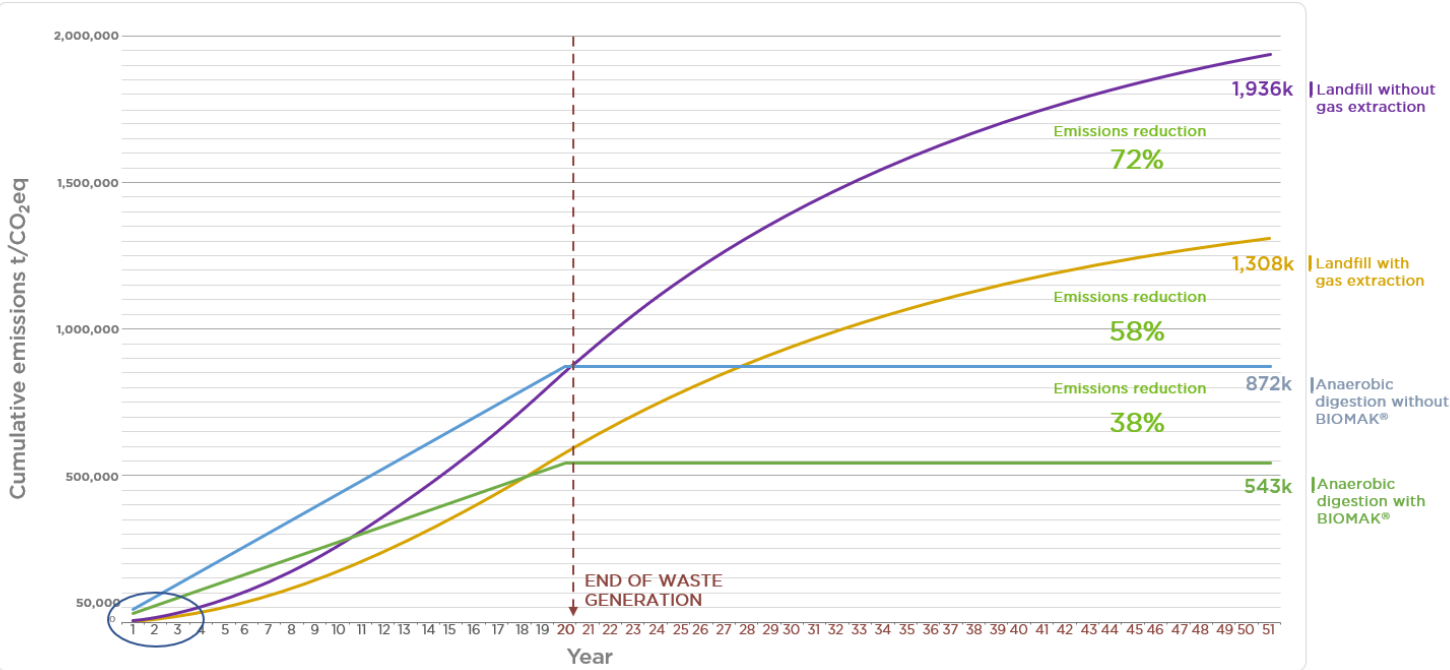
Our endeavor is for the planet



With our technology we provide decarbonisation:



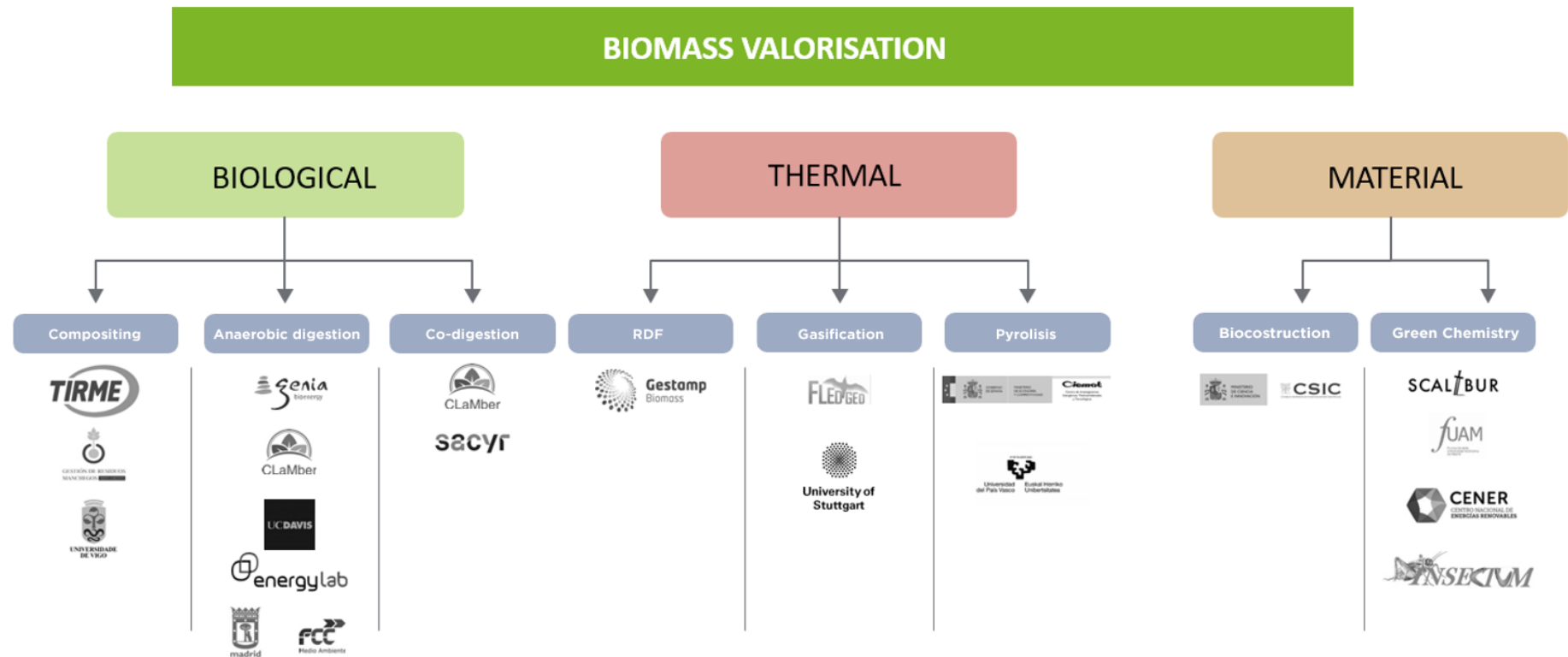
A single BIOMAK® significantly decarbonises the economy compared to other current organic waste treatment or disposal systems. BIOMAK® is a technology aligned with the COP21 Paris Agreement.



# Our endeavor is for the planet



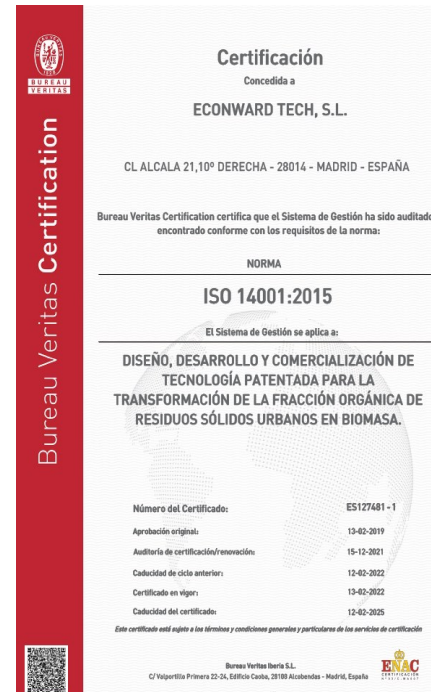
We work on different routes for the use of organic matter.



# Our endeavor is for the planet



We maintain annual certifications that endorse our commitment to quality, the environment and health and safety at work.



## ▸ Annexes

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		UNIT		2019 BASE DE				
COMMITMENT	KPI INDICATORS	MEASUREMEN T	OBSERVATION	REFERENCIA	2020	2021	sept-2022	sept-2023
TECHNOLOGICAL ADVANCES (SDG 7,9)								
7	A.- Encourage research into energy alternatives	Percentage of R&D&I investment expenditure on energy alternatives		7,77	8,74	10,13	10,13	14,54
		Number of research projects on energy alternatives.		2	3	3	4	4
		Number of collaborations with research centres and companies for the study of energy alternatives.		13	7	6	1	3
7	B.- Train, inform and raise energy awareness	Internal communications on energy saving.	NEW 2020	0	0	1	2	0
7	C.- Reduction and/or maintenance of electricity consumption in the Madrid office			2018= 13.053				
				2019= 9.127	9712	8983	8880	8750
		Calculate annual consumption to reduce and/or maintain electricity consumption (MAD)		18	21,25	25,5	26,58	27,25
							334,04	321,10
		Improvements to be made to reduce electricity consumption in Rivas						
		Description of improvements		0	0	0	2	0
			NEW 2021					
9	A.- Inverting in innovation	Percentage of investment in R&D&I especially in technology development and improvements in efficiency and sustainability.		42,49	50,24	47,6	47,6	32,66
9	C.- Continuous improvement of technology	Number of studies of ideas for possible improvements and patentability.		15	17	3	0	3

COMMITMENT		KPI INDICATORS	UNIT MEASUREMENT	OBSERVATION	2019 BASE DE REFERENCIA	2020	2021	sept-2022	sept-2023
PROGRESS ON SOCIAL ENGAGEMENT (SDGs 3, 4, 17)									
3	A.- Occupational health, safety and hygiene system	Implementation and annual maintenance of ISO 45001 - health and safety management system in all Company facilities and require them from suppliers, to reduce occupational accidents and illnesses.	No. Year		1	1	1	1	1
		Private health insurance for all employees (offered to 100% of employees on the basis of seniority)	% employees requested	NEW 2020	0	79,75	93,17	90,08	86,08
3	B.- Improve worker satisfaction and reduce the number of accidents.	Continuous assessment of employee job satisfaction.	No. Year	New annotation 2021	1	1	3	3	1
		Employees with permanent contracts.	% employed		92,79	95,64	91,89	97,77	93,865
		Number of accidents with absenteeism due to occupational contingency	No. Year		0	0	0	0	2
3	C.- Providing decent working conditions and wages	% of remuneration of workers with salaries above the collective bargaining agreement salary	%		100	100	100	100	100
		% excess over collective agreement salary	%	New annotation 2021					>100%
		% of workers with food benefits	%	New annotation 2021					85,7
4	A.- Training and lifelong learning	Number of hours of courses held during the year	h/year		1369,5	1237,5	958,05	1238,55	406
		Number of trainees	No. Year		2	2	2	1	2
		% of trainees have become company employees	%/No. scholarship holders	New annotation 2021	0	0	3,85	3,82	5,77
4	B. -External communication	Attendance at events (conferences, congresses, fairs...) to disseminate our technology that Will change the waste problem ( linked to objectives 7, 13, 15) Count the number of presentations and commercial visits received.	No. of attendees at the fair, presentations, round table	New annotation 2021	13	13	14	12	5
			No. events year		0	0	0	239000	20500
		Share on social networks press releases, news, events about the environment, our Company, other activities related to the sector...	No. publications year	Moved from target 13	5	0	44	74	115
17	A.- Collaborate and create alliances with companies in the same sector, both public and private.	Annual renewal as members of the Circular Economy Pact	No. /Year		1	1	1	1	1
		Number of partnerships established	No. Year		6	5	5	12	13
17	B.- Raise awareness, promote and train in the field of SDGs.	Number of participations in conferences, events and workshops related to the achievement of the SDGs	No. Year	new 2020	0	1	1	1	0
		Percentage of employees involved (hold talks every x amount of time and allow employees to participate by contributing ideas to the objectives)	%	new 2020	20	67	0	0	0

		UNIT	2019 BASE DE	2020	2021	sept-2022	sept-2023		
COMMITMENT	KPI INDICATORS	MEASUREMENT	OBSERVATION	REFERENCIA					
PROGRESS ON WASTE (ODS 11, 12)									
11	A.- Integrating and respecting cities and the environment.	% of the national suppliers we work with. Their proximity helps to reduce the carbon footprint and to better control the Technical requirements established by the Company. The international % is due to the impossibility of working with national suppliers).	% suppliers / year	89,46	89,46	94,54	81,55	88,29	
11	C.- To carry out an adequate management of wastewater( this action is linked to the indicator of objective 12, se we Will not repeat it) and waste in the Company, making employees aware of these issues and putting in place the necessary processes for the management.	Oil recycling (RIV)	Kg year	200	0	0	0	0	
		Total battery recycling	Kg year	2021 changed the unit of measurement	0,89	2	6,8	9,4	0
		Total toner recycling	Kg year	2021 changed the unit of measurement	3,9	6	3	4,4	0
		Paper recycling (RIV)	Kg year		60	80	240	100	50
			kg/person		3,33	3,76	9,41	3,76	1,83
		Paper recycling (A21)	Kg year		0	290	165	175	50
		kg/person		3,33	13,65	6,47	6,58	1,83	
11	E.- Promote Sustainable cities	Count the number of presentations and commercial visits	(nº) año	Moved from target 9	36	17	3	7	13
12	A.- Recovery of materials	Kg recovered of ferrous metals that we have implemented in the plant. In the future, the recovery of non-ferrous metals is being studied.	Kg periodo	4680	0	5120	6130	3200	
12	C.- Prevention in the use of natural resources	Calculation of the m3 of water consumed in Madrid	m3 year	30*	39,49	9,23	45,03	48,13	
		Calculation of the m3 of water consumed in Rivas	m3 year	931	890	1116	3541	1482	
		Register m3 of treated water (RIV)	m3 year	new 2020	0	146,29	88,22	348,44	182,11
		Diesel consumption	l year		2400	1661	1614	1948	1419
12	D.- Presentation of the Company to Public Administrative bodies	Register of visits to public administrations	No. Year	14	5	11	6	6	

COMMITMENT		KPI INDICATORS	UNIT MEASUREMENT	OBSERVATION	2019 BASE DE REFERENCIA	2020	2021	sept-2022	sept-2023
PROGRESS ON PLANET AND CLIMATE (SDG 13 & 15)									
13	A.- Acting under sustainability criteria and incorporating climate change as a corporate culture	Annual review of the CSR policy	No. year	new 2020	0	1	1	1	1
13	B.- Awareness raising and training	Environmental training and internal environmental control procedure	No. year		1	1	1	2	1
13	C.- Implementing certified environmental management systems	Maintain ISO 14001 certification	No. year		1	1	1	1	1
15	A.- Promote research, development and innovation.	No. of projects on biomass use	No. year		6	c	6	2	4

# ▸ Leave no one behind

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## Headquarters

C/ Alcalá 21, 10º Dcha.  
28014 Madrid  
Spain

## Plant and Laboratory

Av. Francisco Quevedo, 13  
28522 Rivas - Vaciamadrid  
Spain