Annual Report 2022

5 Business lines

Thanks to cost restraint and business development, FCC Servicios Medio Ambiente achieved an annual turnover of **€3,641.1 million** in 2022 (**+12.21%** over 2021), a **gross operating profit** of **€593.1 million (+10.84%)** and a **profit before tax of €265.5 million (+7.81%)**.

Environment

Geographical divisions and sector analysis. Strategy

The Environmental Services Area of the FCC Group has been delivering municipal services and end-to-end waste management for more than 110 years, **serving today close to 66 million people in 5,200 municipalities**.

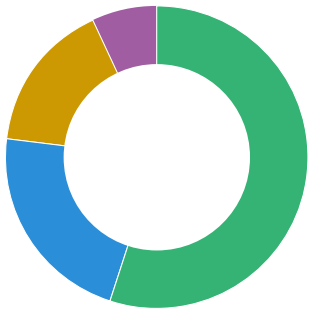
In 2022 the company operated in a total of 11 countries through a variety of services that reflect its extensive experience in the industry, including: collection, treatment, recycling, energy recovery and disposal of municipal solid waste; public street cleansing; maintenance of sewage systems; parks and ground maintenance; treatment and disposal of industrial waste or the recovery of polluted soils.

FCC Servicios Medio Ambiente Holding, S.A.U., backbone of the Environmental Services activities, is structured into **four geographical divisions:**

- **Iberia:** FCC Medio Ambiente Spain, FCC Environment Portugal and Ámbito (Industrial Waste)
- **United Kingdom:** FCC Environment UK
- **Central and Eastern Europe:** FCC Environment CEE
- **USA:** FCC Environmental Services

Following the gradual emergence from the global COVID-19 pandemic crisis, the invasion of Ukraine by Russia in March 2022 has generated a major global socio-economic destabilisation that led to a general escalation in price indexes, especially marked in fuel and energy and basic commodities. Facing this challenge, FCC Servicios Medio Ambiente has responded with **cost restraint and business growth and an outstanding performance** that allowed to surpass the excellent results of the previous year, achieving an **annual turnover** of €3,641.1 million (+12.21%), a gross profit of €593.1 million (+10.84%) and a profit before tax of €265.5 million (+7.81%). Order intake rose to €5,919.5 million (+25.86%) and generated a record backlog of €13,255.5 million.

Turnover 2022 - Divisions



- 55.11% Iberia (Spain, Portugal, Ámbito)
- 21.83% United Kingdom
- 16.26% CEE - Central and Eastern Europe
- 6.79% United States

In 2022, FCC Servicios Medio Ambiente managed 24.6 million tonnes of waste and produced 6.35 million tonnes of secondary raw materials (SRM) and refuse-derived fuel (RDF). The company boasts over 800 operational waste management facilities, of which more than 200 are environmental compounds performing waste management and recycling, including 13 waste-to-energy projects with a capacity of 3.6 million tonnes per year and 435 MW of non-fossil electricity.

As a relevant financial milestone for FCC Servicios Medio Ambiente Holding, S.A.U., it should be noted that throughout 2021 it has been achieved the full investment of the €1,100 million ecological bonds issued by the company in November 2019 according to the 'Green Bond Framework', in projects for the prevention and control of pollution, protection of biodiversity, energy efficiency and vehicles powered by clean energy. These investments have led to significant environmental benefits in the communities in which FCC Servicios Medio Ambiente works. With these investments in Spain, Portugal and the United Kingdom, the equivalent of 6.3 million tonnes of CO_2 greenhouse gas (GHG) emissions have already been avoided between 2019 and 2021.

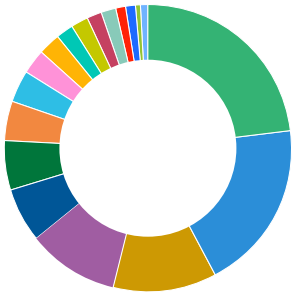
Access the third Green Bond Report here

The company boasts over **800** operational **waste management facilities**

FCC Medio Ambiente Iberia (Spain, Portugal and Ámbito)

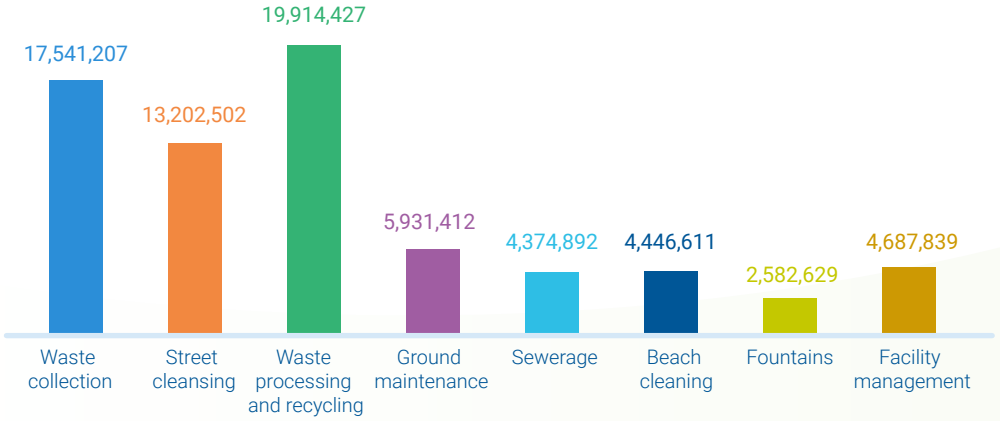
FCC Medio Ambiente provides environmental services in over **3,700 municipalities in Spain and Portugal** (FCC Environment), serving a population of more than **32 million inhabitants** with activities including street cleansing, the collection and transport, treatment and disposal of waste, ground maintenance, maintenance of sewage systems, beach cleaning, and energy efficiency services, among others. During the 2022 financial year, FCC Medio Ambiente Iberia **managed 11.6 million tonnes of solid waste**.

Turnover 2022 - Geographical location

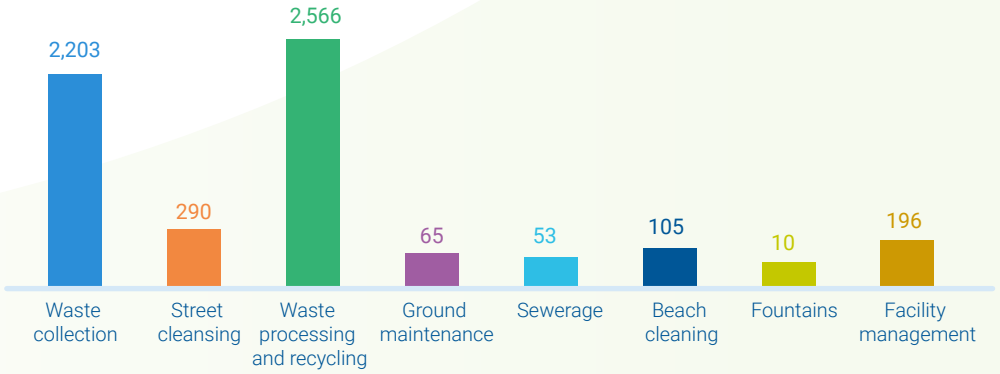


23.1%	Catalonia	2.5%	Murcia
19.2%	Community of Madrid	2.0%	Asturias
11.6%	Valencian Community	2.0%	Navarre
10.3%	Andalusia	1.7%	Balearic Islands
6.2%	Basque Country	1.6%	Portugal
5.6%	Aragon	1.3%	Extremadura
4.4%	Canary Islands	0.8%	Castilla-La Mancha
3.6%	Castilla y León	0.7%	La Rioja
2.9%	Galicia	0.6%	Cantabria

Inhabitants served 2022



Municipalities served 2022



The vaccination of a significant part of the population and the level of immunisation reached in early 2022 have allowed an upturn in economic activity. The invasion of Ukraine by Russia in March 2022 has generated however a major global socio-economic destabilisation that led to a general escalation in price indexes, especially marked in fuel and energy and basic commodities, which impacted on labour costs.

Facing these challenges, **FCC Medio Ambiente Iberia has responded by growing the business and making great effort to optimise costs**, which allowed to surpass the previous year's excellent performance. In the 2022 financial year, an order book value of €3,855.3 million and a portfolio of €8,258.3 million have been achieved, historic figures made possible by the **renewal of key contracts** such as **Zaragoza**, where the company has provided uninterrupted service since 1941; waste collection in **Madrid** (Western area), where it has been present since 1940; **Vigo,** a city it has served since 1989; and **Salamanca**, where it has been accompanying citizens since 1975. The annual turnover reached €2,006.8 million, an increase of 7.08% with respect to 2021. The gross operating profit grew by 7.57% to €306.4 million and the profit before tax raised a 2.76% to €184 million.

In this climate, the company has continued to develop its **2050 Sustainability Strategy** and has achieved the commitments established in the first interval of the plan, reflected in the **20-22 Sustainability Action Plan**. As a remarkable achievement, all energy consumed in the company's main waste processing and recycling facilities is guaranteed to be of renewable origin or produced in the facilities themselves.

Access here the 2050 Sustainability Strategy video

Access here the 2020 Sustainability Report Video-Summary

Innovation is a paramount part of this Strategy, an element within FCC Medio Ambiente's DNA and the basis of its competitive differentiation, as evidenced by the **significant investment figure of €4.08 million** in R&D&I in 2022, an increase of 8.35% over 2021. In this regard, the year has seen the **actual commissioning** of numerous **100%-electric collection and cleaning equipment** developed by the company, which continues to research both in the field of **Renewable Energy Vehicles**, as well as in projects that promote **Circular Economy**, or in **Information and Communication Technologies** applied to services. **Development milestones** have also been reached in the **H2TRUCK** chassis-platform project, hybrid of a hydrogen-powered fuel cell and a battery, which received financial support from the Centre for the Development of Industrial Technology (CDTI from its acronym in Spanish) within the framework of Spain's Recovery, Transformation and Resilience Plan. Of particular note is the characterisation of the fuel cell that will be incorporated in the truck, that was performed at the test bed of the National Hydrogen Centre (CNH2), located in Puertollano (Ciudad Real, Spain); as well as the study and definition of dynamic, structural and regulatory requirements and the propelling system of the mobile hydrogen compression station, which will allow the prototype vehicle to refuel and be tested at any location.

FCC Medio Ambiente Iberia will focus in 2023 on the tenders being carried out in Spain and Portugal for the **development of infrastructures** to meet the European Union's demanding **recycling and landfill diversion targets** and on the implementation of the **selective collection of the organic fraction**.

The **Next Generation European funds** from the Spanish Recovery, Transformation and Resilience Plan (PRTRE from its acronym in Spanish), although materialising at a slower pace than expected, still constitute an important foundation for the development of Spain and the industry, in which FCC Medio Ambiente will accompany its clients, providing value and know-how when considering their approaches to the future.

The environmental services market in **Portugal**, on the other hand, continues to evolve favourably, with the **award of a new contract in the Azores** to serve the municipalities of Ponta Delgada, Vila Franca do Campo, Ribeira Grande and Lagoa.

FCC Ámbito (Industrial Waste)

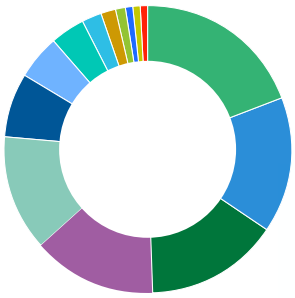
FCC Ámbito is specialized in the comprehensive management of industrial and commercial waste, recovery of by-products and decontamination of soil. Through innovative solutions to make the most of the resources contained in the different types of waste, FCC Ámbito has become a strategic partner of industries and businesses that, in line with circular economy, develop their activities ensuring environmental, social and economic sustainability. Overall, it boasts a total of 39 treatment centres in Spain and Portugal, with more than 67 process lines that guarantee the performance of the facilities. Internationally, FCC Ámbito has a significant presence in Portugal, where it operates through its subsidiary ECODEAL.

Within the Spanish market, a slight decrease in the tonnes of waste managed has been detected throughout 2022, mainly from environmental liabilities waste. However, and despite this small decline, the result of FCC Ámbito's activity shows a slight increase, consolidating the trend recorded in the previous year, which indicates a certain recovery of margins from the lows of the economic and pandemic crisis. This increase is taking place in a context characterised by the intense competition established by waste producers themselves. The legislative changes that are taking place tend towards greater control of the traceability of waste by regional administrations, a fact which, together with the entry into force of extended producer responsibility, will favour management companies that possess end of treatment facilities, as is the case of FCC Ámbito.

In Portugal, there has also been a certain decrease in the number of tonnes treated, mainly due to the absence of special operations this year, but at the same time there continues to be a recovery in activity with the main recurring customers and a recovery in prices.

This year, the Industrial Waste activity will continue to have an impact on the efficiency of operations and the growth of the business. The addition of new technologies will enable FCC Ámbito to strengthen its position in the waste recycling and recovery markets, placing itself as a key player in the circular economy.

Turnover 2022 - Geographical location



19.3%	Catalonia	3.9%	Asturias
15.3%	Community of Madrid	2.2%	Castilla y León
14.9%	Aragon	1.5%	Valencian Community
14.1%	Andalusia	1.1%	La Rioja
12.8%	Portugal	1.1%	Castilla-La Mancha
7.4%	Basque Country	0.8%	Navarre
5.0%	Cantabria	0.6%	Extremadura

FCC Environment UK

FCC Environment is one of the leading companies in the United Kingdom for comprehensive waste management and recycling and continues to focus on harnessing the full potential of the resources it collects, targeting on greater volumes of reuse, recycling and green energy generation in line with Government policy as well as the regeneration of its landbank, bringing closed facilities back into positive economic use. The company has invested in a wide range of waste management facilities that aim to minimize the amount of waste disposed of at landfill sites by processing the material to ensure it reaches its full potential as a valuable resource.

Across the country FCC Environment serves nearly 19 million citizens and in 2022 managed 6.4 million tonnes of waste as a resource, generating 117 MW of green energy from non-recyclable waste.

The UK was the first major economy in the world to legislate for Net Zero setting a binding target for 2050. However, in 2022 little progress was made on policy to support the waste and recycling sector. The focus therefore for the UK business has been on doing what it believes to be right in order to provide environmental excellence and play its part in getting the country to Net Zero. This includes a focus on delivering social value to the communities it operates in, repair and reuse of items with life left in them, ever more recycling, greener fuels and bringing back land into economic use as well as improving biodiversity across its portfolio.

At this juncture, FCC Environment's performance in 2022 was excellent, with revenues of €794.9 million and a gross operating profit of €152.6 million, up 12.23% and 13%, respectively, in 2021.

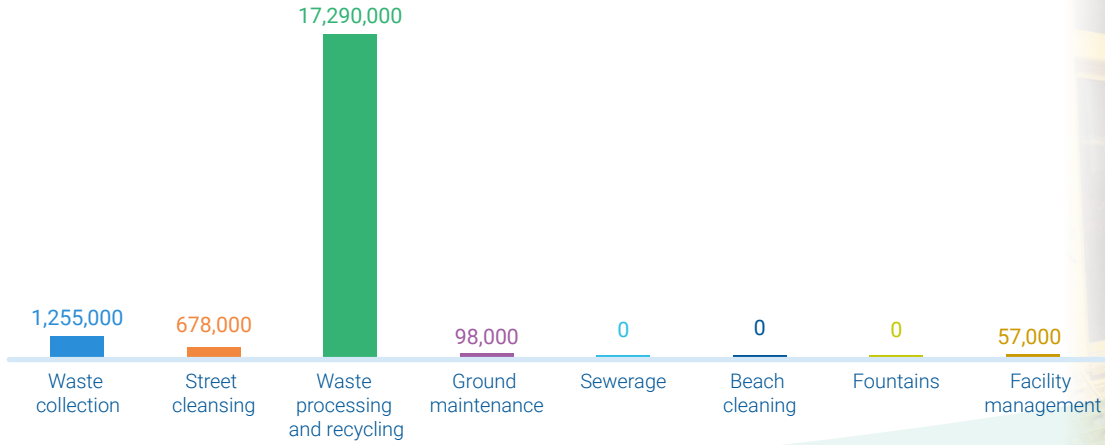
Businesses account for 18% of all UK greenhouse gas emissions where recycling and waste management activities account for 8% of the nation's total.

The third largest sectoral emissions reduction in the UK has been achieved, with a decrease of 46% since 1990. In fact, in 2018, the sector's commitment to reduce emissions resulted in almost 50 million tonnes of CO_2 equivalent avoided year-on-year, with sorting and recycling operations alone helping to avoid around 45 million tonnes.

As an industry, FCC Environment is keen not just on delivering objectives but also on exceeding them and meeting the final target a decade ahead of schedule. Under the Environmental Services Association's "Net Zero Greenhouse Gas Emissions Strategy for the UK Recycling and Waste Sector", members have committed to investing £10 billion and to cut 8% of UK total greenhouse gas emissions to net zero by 2040.

FCC Environment, as a key player in UK waste management and recycling, was the first company in the sector to develop throughout 2022 its own recently published **2040 Net Zero Strategy,** which sets out a roadmap for achieving Zero CO_2 Emissions by that date, ten years ahead of the national target. The company will continue to serve its customers and communities with excellence in the proper management of secondary raw materials and the valorisation of its land holdings.

Inhabitants served 2022

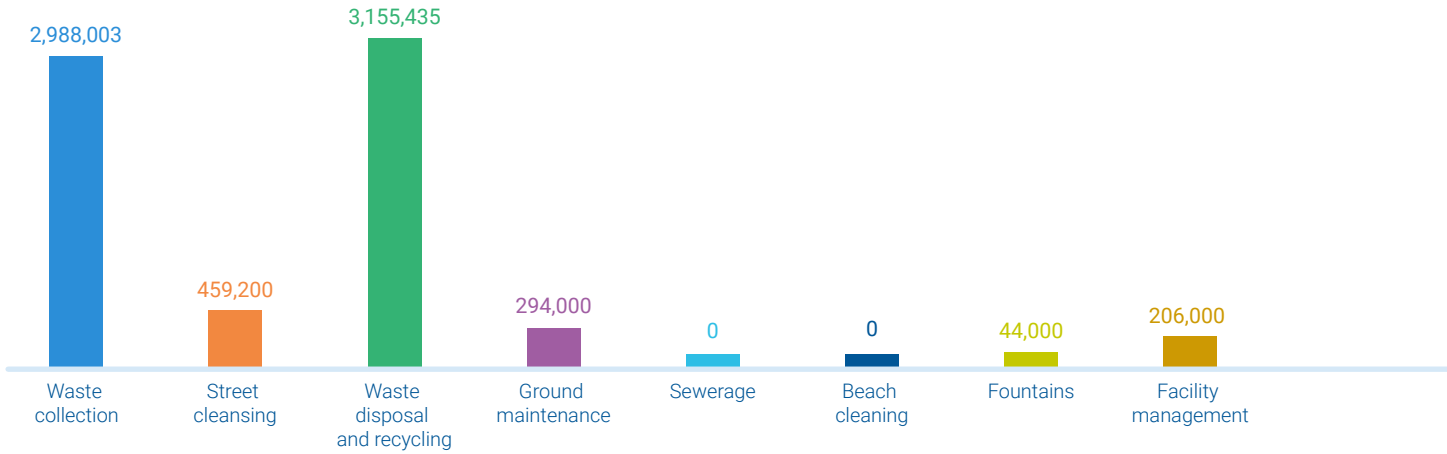


FCC Environment CEE

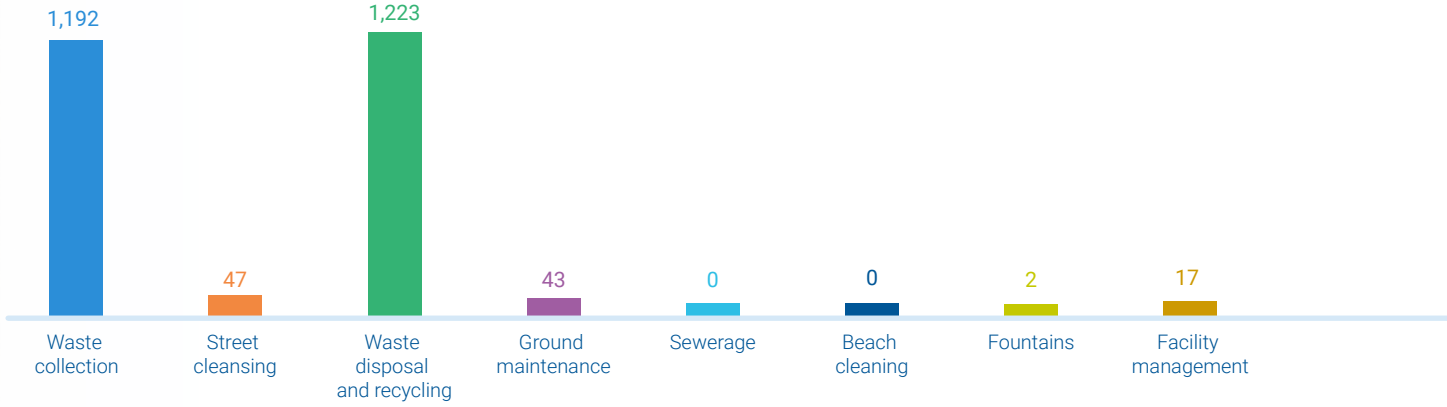
FCC Environment is one of the leading global groups in Central and Eastern Europe (CEE) in the end-to-end management of municipal solid waste and the recovery of renewable energies. It applies innovative systems and the cleanest and most advanced technologies in the provision of quality services, sustainable in the medium and long term and adapted to the needs of its customers.

2022 was one of the most successful years in the history of the Central and Eastern European business division. Annual turnover reached €592.2 million and Ebitda amounted to €101.8 million, 7.5% and 6.7% higher than in the previous year, respectively. Profit before tax reached a record figure of €60.8 million, 10.27% of turnover. Total portfolio amounted to €603.2 million.

Inhabitants served 2022



Municipalities served 2022

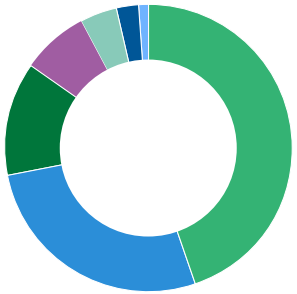


This outstanding result has been achieved in a very unfavourable context. The reduction in household consumption resulting from the war in Ukraine led to a lower generation of municipal solid waste. Lower household demand led the industry to reduce its production, resulting in a decrease in the quantities collected in the commercial and industrial division. The fall in production of consumer goods required less packaging materials, so prices of secondary raw materials such as paper fell substantially from the third quarter onwards. Fuel and energy prices spiked in the second quarter of 2022, but most of the cost increase could be passed on to customers throughout the year.

In addition, the client portfolio has been maintained through the renewal and awarding of new contracts such as that of ARA (Altstoff Recycling Austria AG) in Austria, waste collection and treatment services in the city of Bytom (Poland), or customers obtained through the outsourcing of activities such as Globus, Penny Market and IVECO in the Czech Republic.

The significant increase in sales and Ebitda was also made possible thanks to the implementation of large-scale soil remediation projects in the Czech Republic (Paramo, Mýdlovary or Vítkovice in Ostrava).

Turnover 2022 - Geographical location



- 44.74% Czech Republic
- 27.42% Austria
- 12.79% Poland
- 7.31% Slovakia
- 4.31% Hungary
- 2.45% Romania
- 0.97% Serbia

FCC Environmental Services USA

FCC Environmental Services is one of the top 15 comprehensive solid waste management and recycling companies in the United States. It serves more than 10 million people in the states of California, Texas, Florida, Nebraska and Iowa and in 2022 it managed 1.6 million tonnes of waste.

Just a few years after the start of activity in the United States, the market continues to offer significant growth opportunities in the field of municipal solid waste management, both in household and commercial collection as well as in the recycling and treatment business.

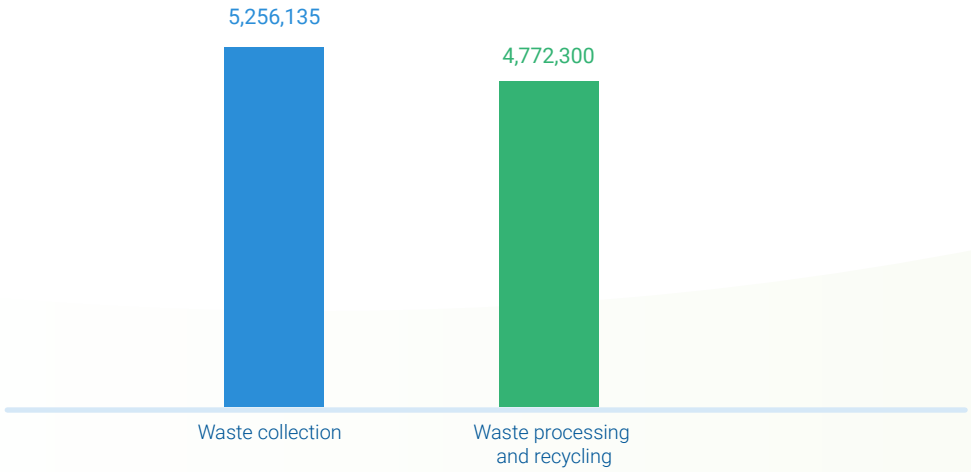
Once again, business in 2022 has been exceptional with the award of several long-term contracts (up to 20 years) in some of the most important municipalities in Florida, such as Port Saint Lucie, Lake County and Palm Coast; or the award of the first contract in California for the refurbishment and operation of an environmental compound for the treatment of municipal solid waste in Placer County. The total contract backlog at the end of 2022 amounts to €2,094.8 million, an increase of 100% over the previous year.

Total revenues in 2022 amounted to €247.2 million, an increase of 121.04% over the previous year, and a 40% turnover growth is expected for 2023.

FCC Environmental Services successfully completed the start-up of four main contracts: Hillsborough, Port St. Lucie, Placer County and Lake County, awarded in 2021 and 2022.

The company has continued to develop its commercial division in 2022 with the acquisition of Houston Waste Solutions, in the Houston (Texas) metropolitan area, that will position FCC as one of the largest commercial companies in the region.

Inhabitants served 2022



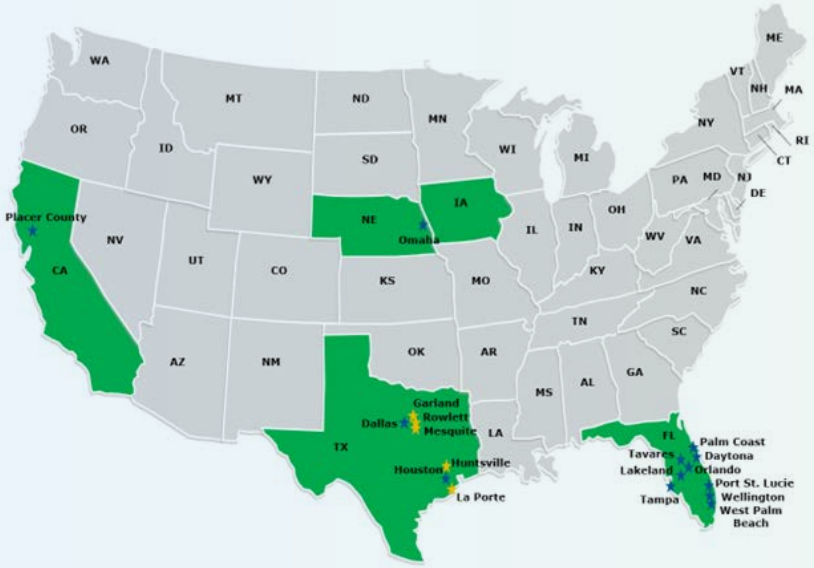
Turnover 2022 - Geographical location

Looking ahead to 2023, FCC Environmental Services' strategy is to keep on strengthening the commercial division and continue with the vertical integration of its activities, with the incorporation of more waste collection contracts and the acquisition of companies that will fit in FCC's long-term plans.

The commercial division of FCC Environmental Services has over 11,000 customers in eight locations of three states: Texas (Houston and Dallas), Florida (Tampa, West Palm Beach, Daytona Beach, Lakeland and Orlando) and Nebraska (Omaha).

The growth strategy for the commercial business, which is expected to exceed 25% by 2023, is three-pronged. First, to sell front-load and roll-off services to small, medium and large companies. Second, to expand the current customer portfolio and market to all the additional services that FCC can offer. Thirdly, to get profitable customers by taking advantage of change of suppliers due to annual and off-cycle price increases.

Presence of FCC Environmental Services in the USA



FCC Environmental Services Activity USA

2022 activity

- Award and start-up of the contract for the renovation and operation of the Placer County Environmental Compound for the next 10+5+5 years (California).
- Renewal of the City of Mesquite's recyclables contract for the next 5 years (Texas).
- Award and start-up of the waste collection contract for Hillsborough County's facilities (Florida).
- Award and start-up of the contract for the collection of municipal solid waste for the City of Port St. Lucie for the next 7 years and 3 months + 3 years (Florida).
- Award and start-up of Lake County's municipal solid waste collection contract for the next 5 years (Florida).
- Award and start-up of Palm Coast municipal solid waste collection contract for the next 7+1+1+1 years (Florida).
- Award and start-up of the Hillsborough and Volusia counties' public schools waste collection contract (Florida).
- Acquisition of Houston Waste Solutions (Texas).

Activity in the Environment Area

1. USA

FCC Environmental Services

Placer County (California)
Refurbishment and Operation of the Environmental Compound for the Treatment of Solid Municipal Waste.
€1.42 billion.

Port Saint Lucie (Florida)
Waste Collection.
€425 million.

Palm Coast (Florida)
Household Waste Collection.
€166 million.

Lake County (Florida)
Waste Collection zone 1.
€43 million.

2. SCOTLAND

FCC Environment

Greengairs
Start of Construction Works of the Waste-to-Energy Centre in Drumgray.

3. ENGLAND

FCC Environment

Suffolk
Refurbishment of the Foxhall Recycling Centre.
€8.85 million.

4. AUSTRIA

FCC Environment

Collection and Transport of Packaging Materials for ARA.
€22 million.

5. POLAND

FCC Environment

Bytom (Upper Silesia)
Waste and Recyclable Materials Collection, Transport and Treatment.
€12.7 million.

6. CZECH REPUBLIC

FCC Environment

Collection, Removal and Processing of Secondary Raw Materials for 16 Hypermarkets.
€2.4 million annual amount.

7. SPAIN

FCC Medio Ambiente

Zaragoza
Waste Collection and Street Cleansing.
€615.45 million.

Madrid
Municipal Solid Waste Collection for lot 1 (Western zone).
€445.92 million.

Tenerife (Santa Cruz de Tenerife)
Construction and Operation of the Environmental and Waste Management Compound of the Island of Tenerife.
€371.47 million.

Vigo (Pontevedra)
Waste Collection, Street and Beach Cleaning, and Management of Household Waste Recycling Centres.
€366.24 million.

Alicante
Waste Collection and Street and Beach Cleaning.
€293.96 million.

Salamanca
Waste Collection, Street Cleansing and Refurbishment and Operation of the Light Packaging Sorting Plant.
€231.66 million.

Girona
Waste Collection, Street Cleansing and Management of Household Waste Recycling Centres.
€152.8 million.

Manresa (Barcelona)
Waste Collection and Street Cleansing.
€91.43 million.

Badajoz
Waste Collection and Street Cleansing.
€83.88 million.

Mijas (Málaga)
Waste Collection and Street Cleansing.
€79.94 million.

Rincón de la Victoria (Málaga)
Waste Collection and Street and Beach Cleaning.
€71.99 million.

Arganda del Rey (Madrid)
Waste Collection and Street Cleansing.
€62.04 million.

Granollers (Barcelona)
Waste Collection and Street Cleansing.
€47.09 million.

Zaragoza
Parks and Ground Maintenance for lot 1.
€43.9 million.

Sasieta Municipalities Association (Gipuzkoa)
Selective Waste Collection.
€39.08 million.

Valdemoro (Madrid)
Waste Collection.
€33.3 million.

Montoliu (Lleida)
Operation of Segrià's Environmental Compound.
€29.65 million.

Valencia
Parks and Ground Maintenance for lot 1.
€29.15 million.

FCC Ámbito

Madrid
Santander Bank corporate buildings and Financial City End-to-end Waste Management.

Valencian Community
Waste Button-Cells and Pencil Batteries Collection.

Barcelona
End-to-end Management of Hazardous and Non-hazardous Waste from Bus and Metro workshops of Transports Metropolitans de Barcelona.

8. PORTUGAL

FCC Environment

São Miguel Island (Azores)
Waste Collection in Ponta Delgada, Vila Franca do Campo, Ribeira Grande and Lagoa.
€19.8 million.

Highlights Environment 2022

Play

January
- FCC Medio Ambiente receives an award at the 17th edition of the Sustainable City Awards for its Cultural Shift Plan in L'Hospitalet de Llobregat (Barcelona, Spain).
- FCC Medio Ambiente starts up the "I+Dehesas" research and development centre at the Valdemingómez Technological Park (Madrid, Spain).

February
- FCC Medio Ambiente publishes the second Green Bond Report (Spain).
- FCC Medio Ambiente launches the ECLOSION project for renewable hydrogen and biomethane to promote a decarbonised, sustainable and circular economy (Spain).
- FCC Medio Ambiente's 'La Campiña' Resource Recovery Centre awarded as Best Municipal Work at the Caminos 2021 Awards (Madrid, Spain).
- FCC Environment rolls out microgeneration at nine of its landfills allowing an additional 7,329 MWh of renewable energy to be fed back into the grid (United Kingdom).

March
- FCC Medio Ambiente obtains European Funds for the H2TRUCK Project: a vehicle with Hybrid Technology of Battery and Hydrogen Fuel Cell (Spain).
- FCC Medio Ambiente renews the contract for street cleansing and waste collection in Badajoz (Spain).
- FCC Medio Ambiente renews the contract for street cleansing, waste collection and operation of the light packaging sorting plant of the city of Salamanca (Spain).
- FCC Medio Ambiente awarded the contract for parks and ground maintenance in Zaragoza (Spain).
- FCC Environmental Services acquires Premier Waste Services LLC. in Dallas-Fort Worth (Texas, USA).

April
- FCC Medio Ambiente begins the provision of energy management and maintenance services for Infrastructures of Catalonia (Spain).
- FCC Environmental Services gets its first contract in California for the refurbishment and operation of a municipal waste treatment environmental compound in Placer County (USA).

May
- The first 100%-electric waste collection lorry (e-truck) in Austria is out on the roads.
- FCC Environment refurbishes the plant for the production of solid alternative fuel from waste in Brno (Czech Republic).
- FCC Environment honoured with the Best Use of Design and Technology in a Waste Treatment Facility award at the Letsrecycle Awards for Excellence for its Household Waste Recycling Centre in Allington (United Kingdom).
- FCC Environmental Services awarded the urban waste collection contract for the city of Port Saint Lucie (Florida, USA).

June
- FCC Medio Ambiente announces that all electric power consumed in its main treatment facilities will have Guarantee of Renewable Origin (Spain).
- FCC Ámbito launches the company EnergyLOOP alongside Iberdrola to lead wind turbine blade recycling (Spain).

July
- FCC Medio Ambiente awarded the waste collection and street cleansing in Mijas (Málaga, Spain).
- FCC Medio Ambiente renews the waste collection and street cleansing contract for the city of Vigo (Pontevedra, Spain).
- FCC Environmental Services strengthens its presence in Florida with a new contract (Palm Coast, USA).

August
- FCC Environment begins the construction of the Drumgray Energy Recovery Centre in Greengairs (Scotland, United Kingdom).

September
- FCC Medio Ambiente renews waste collection and street cleansing contract for the city of Zaragoza (Spain).
- FCC Environmental Services awarded the contract for waste collection in Lake County (Florida, USA).

October
- FCC Medio Ambiente renews Girona municipal services contract (Spain).
- FCC Medio Ambiente to continue providing municipal services in the city of Manresa (Barcelona, Spain).

November
- FCC Medio Ambiente awarded lot 1 (West zone) for the collection of urban waste of Madrid (Spain).
- FCC Medio Ambiente obtains once again the "Calculate-Reduce-Offset" seal granted by the Spanish Office for Climate Change for 2021 (Spain).
- FCC Medio Ambiente shows its commitment against Climate Change at the 2022 Smart City Expo World Congress (Barcelona, Spain).

December
- FCC Ámbito acquires the company InduRaees specialized in the treatment of waste from electrical and electronic equipment (Spain).
- FCC Environment starts operations of the waste collection contract in the island of São Miguel at the Azores archipelago (Portugal).
- FCC Environment begins the construction of its first solar park at a landfill site in Winterton (United Kingdom).
- FCC Environmental Services strengthens its position in the USA with the acquisition of Houston Waste Solutions (Texas, USA).

Other highlights

Third external verification audit on the Green Bond annual report of FCC Servicios Medio Ambiente Holding, S.A.U.

During 2022, the company DNV GL Business Assurance España, S.L. (DNV GL) has carried out the third external verification audit of the Green Bond annual report of FCC Servicios Medio Ambiente Holding, S.A.U. on the use of resources from the Bond until 31st December 2021. It has verified the financing and refinancing of projects and assets for the total amount of the green bond issued, €1.1 billion, corresponding to fiscal years 2019, 2020 and 2021.

These investments have led to **significant environmental benefits in the communities where FCC Servicios Medio Ambiente operates**, such as **avoiding over 6.3 million tonnes of CO_2e** of greenhouse gas (GHG) emissions.

In November 2019, FCC Servicios Medio Ambiente Holding, S.A.U. published its framework for the issuance of sustainable bonds, linked to the United Nations' Sustainable Development Goals (SDGs). Days later, FCC Servicios Medio Ambiente Holding, S.A.U. issued its first green bond for a total of €1.1 billion, divided into two tranches, one of €600 million maturing in 2023 and another of €500 million maturing in 2027.

Distribution chart of eligible divisions by category in 2021

Activity	Category	Investment (M€)	%
Waste Management	Pollution prevention and control	46.04	62%
Energy Recovery	Pollution prevention and control	28.61	38%
Total		74.65	

Distribution chart of eligible divisions by category in 2020

Activity	Category	Investment (M€)	%
Pollution prevention and control		191	94.86%
Energy Efficiency		0.63	0.31%
Clean Transportation		8.38	4.16%
Biodiversity Conservation		1.33	0.66%
Total		201.34	

Distribution chart of eligible divisions by category in 2019

Activity	Category	Investment (M€)	%
Pollution prevention and control		744.52	90.35%
Energy Efficiency		11.72	1.42%
Clean Transportation		60.40	7.33%
Biodiversity Conservation		7.37	0.89%
Total		824.01	

IBERIA

FCC Medio Ambiente Spain

FCC Medio Ambiente renews waste collection and street cleansing contract for the city of Zaragoza

Zaragoza City Council, city FCC Medio Ambiente has been providing services to uninterruptedly since 1941, has renewed its trust in the company with the award of the city's urban waste collection and street cleansing contract. The order book value amounts to more than €615 million for the next 10 years. This new contract is committed to the environmental sustainability of the services, so the implementation will involve the renewal of almost the whole fleet, with more than 270 vehicles, whether electric or powered by compressed natural gas, with the aim of improving air quality and reducing noise pollution. The investment represents more than €61 million and the service boasts a total workforce of around 1,130 people.

FCC Medio Ambiente awarded lot 1 (West zone) for urban waste collection in Madrid

Madrid City Council has awarded FCC Medio Ambiente the contract for the collection of municipal solid waste in lot 1 (West zone), which will serve more than one million inhabitants of the Tetuán, Chamberí, Fuencarral-El Pardo, Moncloa-Aravaca, Latina and Centro districts for the next six years, for €455 million. To collect over 390,000 tonnes per year, the contract boasts a staff of 950 people and a fleet of 209 ECO or Zero Emission vehicles powered by compressed natural gas or electric motors. As a highlight, the innovative, multi-award-winning, 100%-electric ie-Urban Truck, fully developed by FCC Medio Ambiente, has been added to the service fleet.

FCC Medio Ambiente will continue to deliver municipal services for the city of Vigo

FCC Medio Ambiente will continue delivering waste collection, street and beach cleaning and household waste recycling centre management services to the city of Vigo, where the firm has been present since 1989. The order book value exceeds €366 million for the next 9 years and 6 months. Setting the service up will involve the renewal of a large portion of the current fleet, with over 50% of the vehicles presenting Zero-emission or ECO environmental labels, which highlights the City Council's commitment to the fight against climate change and care for the environment. The waste collection service will have about 160 people and 58 vehicles, and the street cleansing service will boast 360 people and 90 vehicles.

IBERIA

FCC Medio Ambiente Spain

FCC Medio Ambiente renews the contract for street cleansing, waste collection and operation of the light packaging sorting plant of the city of Salamanca

The Salamanca City Council, where FCC Medio Ambiente has been providing services since 1975, has once again awarded the company the contract for street cleansing, waste collection and refurbishment and operation of the light packaging sorting plant. The total order book value amounts to €231.6 million for the next 12 years, starting on 1st October 2022. The service will have a total workforce of 440 people and more than 245 newly acquired vehicles and equipment. One of the most noteworthy aspects of the contract is the renewal of all the machinery. Practically 100% of the equipment will be electric and powered by compressed natural gas, making Salamanca a more sustainable city.

Girona City Council once again awards FCC Medio Ambiente the urban services contract

Girona City Council, where FCC Medio Ambiente has been present since 1987, has awarded the contract for street cleansing, municipal waste collection and household recycling centres to the joint venture *Sanejament Girona*, led by FCC Medio Ambiente. The order book value amounts to almost €153 million for the next eight years. The entire fleet of the contract will have Zero-Emission or ECO environmental labels, with over 50% electric vehicles, and the rest powered by compressed natural gas. It will also be guaranteed that the energy supply will come from renewable energy sources, regarding the central machinery depot as well as the street cleansing ancillary work centres. Total resources assigned to the contract add up to 165 people and about 90 vehicles.

Badajoz renews its trust in FCC Medio Ambiente for the provision of waste collection and street cleansing services

The Badajoz City Council has renewed its trust in FCC Medio Ambiente by extending for the next 8 years the street cleansing and waste collection contract that began in October 2010, which represents an order book value of €83 million. The new service has a team of 250 people and a fleet of more than 90 vehicles and machinery. A very important part of the service vehicle fleet will be renewed. Investments include the construction and commissioning of a Compressed Natural Gas (CNG) supply point and the necessary electric refuelling infrastructure within the existing facilities, since a large part of the new fleet will be electric or powered by CNG.

IBERIA

FCC Medio Ambiente Spain

FCC Medio Ambiente wins again the ground maintenance contract in L'Hospitalet de Llobregat (Barcelona)

The City Council of L'Hospitalet de Llobregat (Barcelona) has once again awarded FCC Medio Ambiente the new ground and parks maintenance contract, that the firm holds since 2012. The service began in February 2022 and involves an order book value of nearly €29 million for a three-year period, with a possible extension of two years. To service the city, the contract will have a staff of 155 workers and a fleet of 71 vehicles, out of which those of over 3,500 kg of Gross Vehicle Weight (GVW) are of compressed natural gas and ECO environmental labelled. Newly acquired vehicles will also boast Zero Emission or ECO labels. In addition, 186 new machines will be incorporated, with a large portion of electric units.

Madrid regional government acknowledges FCC Medio Ambiente's "Best Practices for the prevention and control of COVID-19"

FCC Medio Ambiente received an accolade at the 2021 Occupational Health and Safety (OH&S) Acknowledgements and Mentions ceremony for "Best Practices for the Prevention and Control of COVID-19 in companies" from Madrid's Regional Institute Occupational Health and Safety in the category of companies or entities with more than 50 employees under the slogan "At the forefront against the pandemic". This special mention is in an acknowledgement to the company's work in the Area of OH&S during the COVID-19 pandemic. FCC Medio Ambiente has provided uninterrupted services since the beginning of the pandemic, services that have been declared as essential, and the risk prevention protocols implemented have been fundamental to this continuity.

FCC Medio Ambiente's 'La Campiña' Resource Recovery Centre awarded Best Municipal Work at the 2021 Caminos Awards (Madrid)

The 'La Campiña' comprehensive Resource Recovery Centre (RRC), owned and promoted by the Eastern Municipalities Association of the Region of Madrid, and developed and operated by ECOMESA, 100% subsidiary of FCC Medio Ambiente, has received the award for Best Municipal Work at the 2021 Caminos Awards of the Madrid Branch of the Colegio de Ingenieros de Caminos, Canales y Puertos (Civil Engineers Association). This recognition, presented within the framework of the 14th edition of the Madrid Caminos Awards, rewards sustainability and the development of projects that contribute to the improvement of the quality of life and respect for the environment at the municipal field.

IBERIA

FCC Ámbito

FCC Ámbito launches EnergyLOOP alongside Iberdrola to lead the recycling of wind turbine blades

Iberdrola, through its PERSEO programme, and FCC Ámbito have launched the company EnergyLOOP to lead the recycling of components from renewable facilities. The objective will be the recovery of wind turbine blade components -mostly carbon and glass fibers and resins- and their reuse in sectors such as energy, aerospace or automotive. The new company will build an innovative plant in Navarre (Spain), in the municipality of Cortes, with an investment of €10 million and the generation of around 100 jobs, and is supported by the Government of Navarre and Sodena.

Renewal of the 'Ecopilas' battery collection contract in the Valencian Community

The contract with Ecopilas involves the collection with specific vehicles of button cells and pencil batteries deposited in special containers throughout the Community, located in a wide network (supermarkets, shopping centers, stores and schools), and the transportation to the firm's plant in Vall d'Uixó, Castellón (Spain), where the material will be stored until being transferred to the final operator.

FCC Ámbito acquires the company InduRaees

FCC Ámbito has acquired InduRaees, a company specialising in the treatment of Waste from Electrical and Electronic Equipment (WEEE). It has a recycling facility in the Palencia town of Osorno (Spain), which opened 13 years ago, employs 50 workers and has been awarded the silver medal of the Chamber of Commerce and Industry of Palencia. The management of WEEE allows the recovery of different materials such as metals, glass, various types of plastics and electronic cards; and the capture of gases from refrigeration circuits contributes to the fight against climate change.

Renewal of the contract with Transports Metropolitans de Barcelona (TMB)

FCC Ámbito has renewed this contract, which it delivers since 2010, for the comprehensive management of hazardous and non-hazardous waste generated at TMB's bus and metro maintenance workshops in the Barcelona Metropolitan Area (Spain). Waste collected is transported to its plants in Montmeló and Sant Feliu de Llobregat.

FCC Environment Portugal

Setting up the waste collection contract of the island of São Miguel in the Azores

FCC Environment has set up the waste collection contract of four municipalities in the Azores: Ponta Delgada, Vila Franca do Campo, Ribeira Grande and Lagoa.

UNITED KINGDOM

FCC Environment UK

Launching the reuse revolution

FCC Environment, in partnership with The Benjamin Foundation, a local charity, and Precycle, one of Europe's largest multi-material recyclers, has reopened the former household waste recycling centre in Swanton Road, Norfolk, as a revolutionary re-use drop-off centre, helping to breathe new life into second hand items, avoiding waste going to landfill and creating social value. Since its opening, more than 100 fridges and freezers have passed through the facility, many of which are used to help those in need through the Norfolk Assistance Programme, supported by The Benjamin Foundation. The facility has received a prestigious award from the Reuse Network, the enterprise that supports reuse charities across the UK to help them alleviate poverty, reduce waste and tackle climate change.

Implementation of microgeneration

FCC Environment has begun to roll out microgeneration at nine of its landfill sites that will supply an additional 7,329 MWh of renewable energy back to the grid, enough to power over 2,360 homes. Typically, power generation from landfill gas ceases when there is insufficient residual gas to operate the smallest 330 kW engines, resulting in the gas being flared. However, thanks to the current Renewable Obligation subsidy, installations can continue to operate below this threshold and microgeneration projects work down to an output of between 65 kW and 105 kW, providing a more efficient and environmentally-friendly outcome through avoided emissions. This initiative follows a pilot project at the company's Deerplay landfill site on the outskirts of Burnley, Lancashire.

Start of construction on the new solar park

FCC Environment collaborates in the development of a new solar park at the Winterton landfill site in Lincolnshire, which will be operational in April 2023 and will generate circa 4,300 MWh of renewable energy each year, enough to power more than 1,300 homes. The solar farm will occupy approximately 7.3 hectares and will be built in accordance with a methodology approved by the UK Environment Agency, which will protect the existing landfill structure.

UNITED KINGDOM

FCC Environment UK

Construction works start on the Drumgray Energy Recovery Centre (Scotland)

FCC Environment has commenced construction works on the Drumgray Energy Recovery Centre (DERC) at Greengairs, North Lanarkshire. This state-of-the-art plant will be capable of treating 300,000 tonnes of household and business waste per year, enabling it to export circa 25.5 MW of electricity and supply up to 40 MW of heat to local homes and businesses. The project will support the Scottish Government's strategy to eliminate biodegradable waste to landfill. The first phase of construction works comprises ground preparation and stabilisation, preparation of a development platform and concrete grouting of old mineworking structures. These works are planned through to June 2023, when construction of the main facility will be undertaken. As part of this initial work, FCC will be working closely with Nature Scot to move and relocate areas of peat around the site. The plant is programmed to be in operation in early 2026, just as the landfill ban comes into force.

Awarded at the Letsrecycle Awards for Excellence

FCC Environment has won the Best Use of Design and Technology in a Waste Treatment Facility award in the Letsrecycle Awards for Excellence for its Household Waste Recycling Centre in Allington, Lincolnshire. The design incorporates solar panels and rainwater harvesting. The construction has minimised the impact on the environment, as the material used is a recycled composite from plastic bags that have been thrown away. The new centre has been designed to operate without interruption, as it is on two levels allowing full waste containers to be removed safely while residents use the site to deposit their recyclables and waste. To ensure maximum efficiency there will also be an allocated 'reuse space' for items that can still have life left in them to be put to one side and reused.

Redevelopment of Foxhall Recycling Centre (Suffolk)

FCC Environment has started works on a major expansion of the Foxhall recycling centre for more than €8.8 million. The new design will increase vehicle capacity, thereby reducing queuing on the highway, improve access from Foxhall Road and provide greater capacity to cope with future growth. The works are scheduled to complete in early 2024 and the site will remain open to the public during them. Of the 11 recycling centres in the county, Foxhall handles 19% of recycling and waste, collecting over 12,500 tonnes per year.

CENTRAL AND EASTERN EUROPE

FCC Environment CEE

ARA's collection contracts in several Austrian municipalities

In the first quarter of 2022, FCC Environment successfully participated in several regional tenders put out by ARA (Altstoff Recycling Austria AG), the largest Austrian recycling management system (packaging, WEEE, batteries). The awarded services consist of separate collection and transport of packaging materials such as paper, plastic, metal and mixed packaging. FCC Austria has succeeded in renewing and substantially increasing its contracts with ARA, which secures a portfolio of €22 million for the next five years and consolidates its position in the Austrian market.

FCC Environment renews service contract in Bytom (Poland)

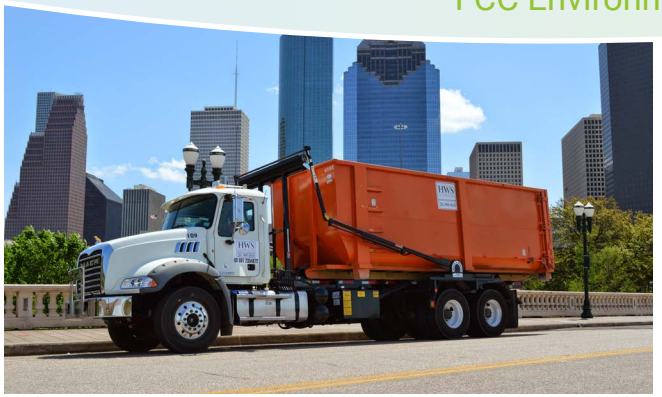
Last 21st July, FCC Environment renewed the contract for the collection, transport and treatment of municipal solid waste (MSW) and recyclables for the city of Bytom, in the Upper Silesia region of Poland. The company will thus serve 135,000 inhabitants who produce approximately 55,500 tonnes of MSW per year. The contract has a duration of 24 months and represents a portfolio of €12.7 million. With this award, FCC Environment significantly strengthens its position in the market and ensures full use of the capacity of its Zabrze treatment and recycling plant.

Renewal of outsourcing contract with Globus CZ, v.o.s (Czech Republic)

FCC Environment has renewed its outsourcing contract with the Globus retail chain, which it has been serving since 1997. The contract, initially for five years, expired in December 2022 and has been extended indefinitely at a value of approximately €2.4 million per year. The new contract covers the collection, transport and further processing of secondary raw materials, including the supply of personnel and machinery, for 16 hypermarkets in the Czech Republic.

UNITED STATES

FCC Environmental Services



Integration of acquisitions

In 2022, FCC Environmental Services has completed the integration of two acquisitions in Texas: Premier Waste Services (Dallas) in 2021 and Houston Waste Solutions (Houston) in 2022. Both companies, combining the experience of its workforce and synergies with the current FCC Environmental Services business, will drive the growth of the commercial division in Texas.

Premier Waste Services has been providing commercial solid waste collection services in the Dallas-Fort Worth metropolitan area for more than 20 years. The company handles in excess of 4,000 contracts with a fleet of over 50 trucks.

Houston Waste Solutions, on the other hand, has been operating for 10 years in the Houston metropolitan area, with more than 40 trucks and 3,000 commercial contracts.

Award of the contract for household solid urban waste collection in Port Saint Lucie (Florida)

The city of Port Saint Lucie has awarded FCC Environmental Services the two lots in the collection tender. The contract, which began on 5th September 2022, runs for seven years, with a possible three-year extension, and serves 82,000 residential and 1,300 commercial customers. FCC provides collection of residual waste, recyclables, bulky waste and pruning and yard waste with a fleet of more than 75 vehicles. The potential order book value is $450 million (around €425 million). Port Saint Lucie, with a population of 220,000, is one of the fastest growing communities in the state. The total investment is $47 million (about €44.4 million) and has created 110 jobs.

Solid waste collection contract in Lake County (Florida)

Lake County has awarded the contract for solid waste collection for zone 1 of the city to FCC Environmental Services for a five-year term with a possible three-year extension. The contract, which began on 1st October, represents a backlog of $45 million (about €43 million). The awarded area covers approximately 24,000 households and 75,000 residents out of a total of 395,000, for whom the company will collect weekly residual waste, recyclables, bulky, pruning and yard waste. The contract involves an investment of $12 million, including a fleet of 20 collection vehicles, as well as the creation of 29 new jobs.

UNITED STATES

FCC Environmental Services

Award of municipal solid waste collection contract in Palm Coast (Florida)

The city of Palm Coast has awarded the municipal solid waste collection service to FCC Environmental Services. The contract, which will begin on 1st June 2023, will serve 90,000 residents and involves a portfolio of $175 million (about €166 million) with a seven-year term and three possible one-year extensions. The company will operate from its Daytona Beach vehicle depot. The contract involves a fleet of 35 trucks, 72 people and an investment of $15 million (about €14.7 million).

First contract in California in Placer County

Placer County's Western Placer Waste Management Authority (WPWMA) awarded FCC Environmental Services the contract for the construction and operation of a 130-hectare municipal solid waste (MSW) environmental recycling compound, for a duration of 10 years and two possible five-year extensions, for a total of $1.5 billion (about €1.4 billion). The contract started on 1st July 2022 and the compound will consist of diverse sorting and recycling plants, a construction and demolition waste processing facility, a composting facility for organics, food and yard waste, as well as a household recycling centre and a deposit for the disposal of refuse waste. With a total annual capacity of 650,000 tonnes, it will be one of the largest facilities in the world of its kind. This contract marks FCC's entry into California, the largest MSW producer state with the most advanced environmental regulations in the United States.

Hillsborough County (Florida) Public Schools and Facilities collection contract award

Hillsborough County awarded FCC Environmental Services the contract for the collection of waste from public facility buildings and schools. Both contracts started at the beginning of November 2022 for a three-year term. The total portfolio amounts to $11.7 million (about €11 million).

FCC Environmental Services strengthens its presence in the state of Texas with several renovations

On one hand, the city of Huntsville has renewed the services for processing recyclables for one year. On the other hand, the company has renewed the contract for the management of recyclables in Garland, which, with 235,000 inhabitants, is one of the main cities in the Dallas-Fort Worth metropolitan area. The city of Mesquite, located to the East of said area, has also completed its third renewal with FCC Environmental Services for recycling processing. The renovations represent a portfolio of more than $3 million.

Excellence and sustainability

Service excellence

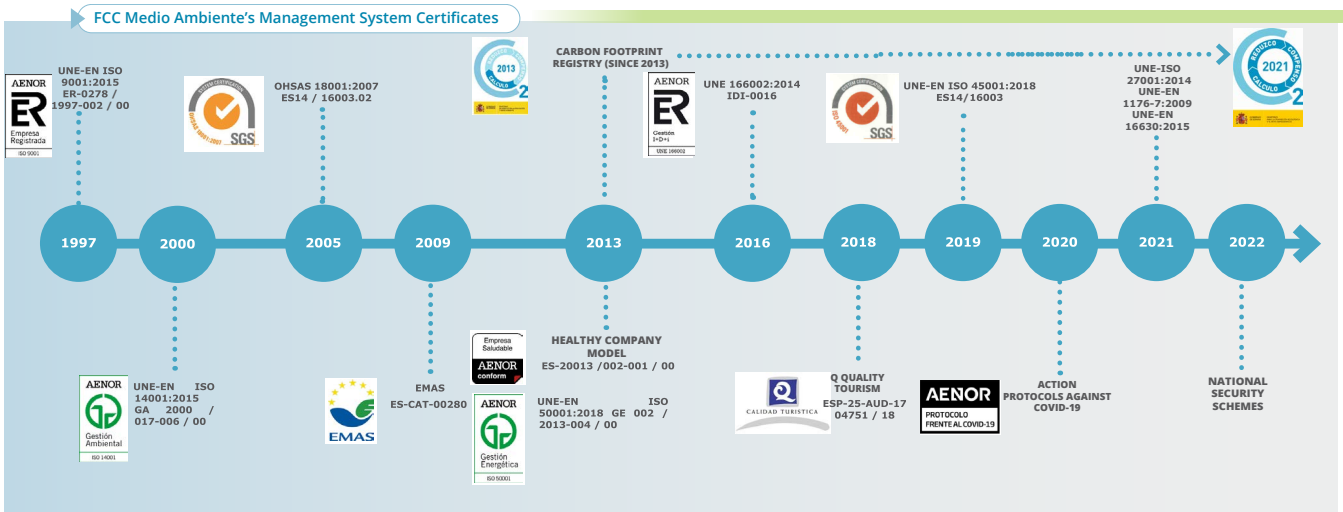
FCC Medio Ambiente's commitment to excellence benefits its entire value chain, from customers, suppliers, employees and, of course, to all the citizens living in the communities the company provides service in, mainly public customers.

The constant concern for customer satisfaction and the improvement of environmental performance is what led FCC Medio Ambiente to implement and certify management systems since 1997. Proof of all this is that in 2022 the quality certificate, under the ISO 9001 standard, celebrated its 25th anniversary.

The certified Management System is based on the requirements of the main international standards of recognised prestige (quality, environment, OHS, R&D&I and energy efficiency) and standardises the work methodology developed in all the company's contracts, guaranteeing that the processes are carried out with rigour and in accordance with common procedures.

The Management System is an effective tool for reassuring excellence to all stakeholders regarding quality, socially and environmentally sustainable and innovative services. The system includes procedures for Quality, Environment, Occupational Health & Safety, Energy Efficiency, Healthy Organisation, the AENOR COVID-19 Protocols and even Tourism Quality. In 2021, FCC Medio Ambiente was certified in the information security system under the ISO 27001 standard, specifically certifying the "Smart platform for the provision of services to cities", VISION, comprehensive management tool that allows to meet defined objectives and respond to the current and future requirements of customers in relation to the provision of services. In 2022, the company decided to take a step further, certifying the platform under the National Security Scheme.

The following graph shows the historical evolution of the certifications and accreditations obtained by FCC Medio Ambiente:



2022 Excellence highlights

- The National Security Scheme certification is achieved in accordance with the requirements of Royal Decree 5/2010, of 8th January. Thanks to this certification, FCC Medio Ambiente ensures that access, confidentiality, integrity, traceability, authenticity, availability and conservation of data, information and services comply with the strictest security requirements.

- During 2022 the carbon footprint corresponding to the previous year's data is verified. For the second year in a row, the Spanish Office for Climate Change has awarded FCC Medio Ambiente the triple "Calculate-Reduce-Offset" seal for scopes 1+2 and 3, which include emissions associated with fuel consumption, waste treatment, recovery and disposal processes, and emissions derived from the purchase of electricity from the grid. On this occasion for this scope, the company has managed to reduce 2.94% of the average emission intensity in the 2019-2021 three-year period. In this way, it reinforces its commitment to reducing greenhouse gas emissions. This triple seal has been achieved thanks to the signing of agreements for the acquisition of absorption rights belonging to reforestation projects.

In 2022, the firm has collaborated in a certified reforestation project for the next 40 years in an area of 40 hectares located in the Monte de Utilidad Pública Nº. 60 "Valle de Iruelas", belonging to the Asocio de Ávila Municipalities Association (Spain) and included within the Nature Reserve of the same name. This area, which is home to one of the most important colonies of black vultures in Europe, was burnt down in 2019, making it urgent to restore it in order to halt the erosive processes and re-establish the regulation of the hydrological cycle. This is why 80,000 trees have been planted, including pine and birch trees.

AENOR
Confía

Certificado de Conformidad
con el Esquema Nacional de Seguridad

ENS-2022/0051

AENOR, certifica que los sistemas de información reseñados
todos ellos de categoría MEDIA y los servicios que se relacionan, de:

FCC MEDIO AMBIENTE, S.A.U.
CL FEDERICO SALMÓN 13 28016 MADRID

han sido auditados y encontrados conforme con las exigencias del Real Decreto 3/2010 de 8 de enero,
por el que se regula el Esquema Nacional de Seguridad en el ámbito de la Administración electrónica,
según se indica en el correspondiente Informe de Auditoría de 2022-05-17

para las actividades: Detalladas en el anexo al Certificado

que se realizan en: Direcciones indicadas en el Anexo

Fecha certificación conformidad inicial: 2022-07-28
Fecha renovación certificación conformidad: 2024-05-05

Número de certificado: ENS-2022/0051

Fecha: Madrid, a 28 de Julio de 2022

Rafael GARCÍA MEIRO
Director General

AENOR INTERNACIONAL S.A.U.
Génova, 6. 28004 Madrid. España
Tel. 91 432 60 00 - www.aenor.com

CERTIFICADO DE INSCRIPCIÓN
Registro de huella de carbono, compensación y proyectos de absorción de CO_2 del Ministerio para la Transición Ecológica y el Reto Demográfico

FCC MEDIO AMBIENTE, S.A.U.

Año de cálculo 2021
Tipo de sello CALCULO, REDUZCO Y COMPENSO
Alcances 1+2 y 3
En alcance 3 se incluyen el consumo de combustibles, el tratamiento biológico, la valorización energética y eliminación de residuos sobre las que la empresa no tiene control operacional.
Límites Se incluyen las siguientes agrupaciones que engloban de manera general las actividades en las que presta servicios la organización y que son desarrolladas en sus 20 sedes:
• Servicios de recogida, transferencia, transporte, almacenamiento, tratamiento, eliminación y valorización (incluida la valorización energética) de residuos.
•Servicios de limpieza viaria y limpieza y conservación de parques, jardines y zonas verdes, mobiliario urbano y juegos infantiles, de alcantarillado, de fuentes y de playas, costas y aguas litorales.
• Limpieza y mantenimiento de edificios e instalaciones industriales, así como mantenimiento de sistemas de protección contra incendios.
•Servicios energéticos y de gestión integral de instalaciones eléctricas.
•Investigación, caracterización y descontaminación de suelos y acuíferos.
• Organización de actividades y eventos deportivos y de ocio, alojamiento y restauración e impartición de programas de educación ambiental.
Reducción 2,94 % de la media de la intensidad de emisión en el trienio 2019-2021 respecto del trienio 2018-2020.
Compensación 0,00 % de su huella de carbono de alcance 1+2 y 3
Realizada con las unidades: 2021-b186/00176-00193

Valvanera Ulargui Aparicio
Directora General
Oficina Española de Cambio Climático
Ministerio para la Transición Ecológica y el Reto Demográfico

Fecha de inscripción: 08/11/2022
Cód. huella de carbono: 2022-a1275
Cód. compensación: 2022-c154

Sustainability

Sustainability highlights

There have been several important milestones in terms of sustainability within FCC Medio Ambiente during the year 2022:

- FCC Medio Ambiente continues to make progress in the development of actions that will drive it to attain the commitments acquired through its **Sustainability Strategy with a 2050 vision**, aimed at all activities in Spain and Portugal. The 30-year project reflects the company's commitment to support the achievement of the Sustainable Development Goals (SDGs) and address economic, social and environmental challenges on a global scale.
- The year 2022 marks the last period defined within the 20-22 Sustainability Action Plan. This plan, based on a comprehensive and inclusive management model, aligned with the principles of the 2050 Sustainability Strategy and within the framework of the global challenges that lead the way to achieving the SDGs, has served to usher the early beginnings of change. All throughout the first quarter of 2023, the results obtained will be finalised and the new action plan for the following period will be announced.

Our driving strategy for the Sustainable Development Goals (SDGs)

Medio Ambiente
Plan 20-22
Our commitment to sustainability

19 strategic objetives
146 commitments
208 performance indicators

Actions showing our commitment
Sustainability report 2019 - 2020

Medio Ambiente

All electricity consumed at FCC Medio Ambiente's main plants in Spain will have a Guarantee of Renewable Origin

Within the framework of its 2050 Sustainability Strategy and its commitments in relation to the fight against climate change, FCC Medio Ambiente has reached an agreement with Iberdrola to ensure that all electricity supplied to its most important waste treatment plants comes from renewable sources and High Efficiency cogeneration, CO_2 and waste-free. In order to reduce the carbon footprint of its waste treatment plants, FCC Medio Ambiente has been promoting for years the self-consumption of renewable electricity produced in the plants themselves by using energy from waste. In 2021, self-consumption accounted for 43% of the electricity used in the plants.

FCC Environment's path to Net Zero

FCC Environment, as a key player in waste and recycling management in the UK, committed to promoting and achieving the targets set by the UK government in its Net Zero Strategy, has been the first company in the industry to develop, throughout 2022, its own recently published **2040 Net Zero Strategy**, which sets out a roadmap for achieving Zero CO_2 Emissions by that date, ten years ahead of the national goal, and defines the measures to be implemented to achieve that target.

Among other actions, the company plans and has already implemented the development of rail networks as an alternative to road transport, adjusting equipment to reduce energy consumption and switching to more efficient vehicles. FCC Environment avoids and mitigates carbon emissions and, only when every option has been exhausted, offsets the amount of CO_2 emitted to achieve the sector-wide GHG emissions target by 2040.

Path to Net Zero by 2040

2020

2021 onwards

- Develop **heat networks** to deliver heat from EfW
- Invest in **energy efficient** technology
- Generated **117MW** of **green electricity**

2022

- Investment in **energy efficient** mobile plant
- Investment in **reducing mobile plant** embedded carbon
- Commenced roll out of **electric vehicle charging points** across UK sites
- Electric cars added to the **company car** list

2022 - 2030

- Increase **capture of methane emissions** from landfill to 85%

2025

2025

- Will generate **187MW** of **green electricity**
- Carbon capture, utilisation and storage-ready

2025 - 2030

- Divert all **organic waste** from landfill

2026

- Will generate **213MW** of **green electricity**
- Working to deliver **solar** on **26 landfill sites**, which will generate **225MW** and power over **65,000 houses**

2030

2030 onwards

- Purchase **zero emission vehicles** where available

2030 - 2040

- Transition to zero emission on **site fuels**
- Phase out **petrol and diesel** entirely

2040

FCC Environment

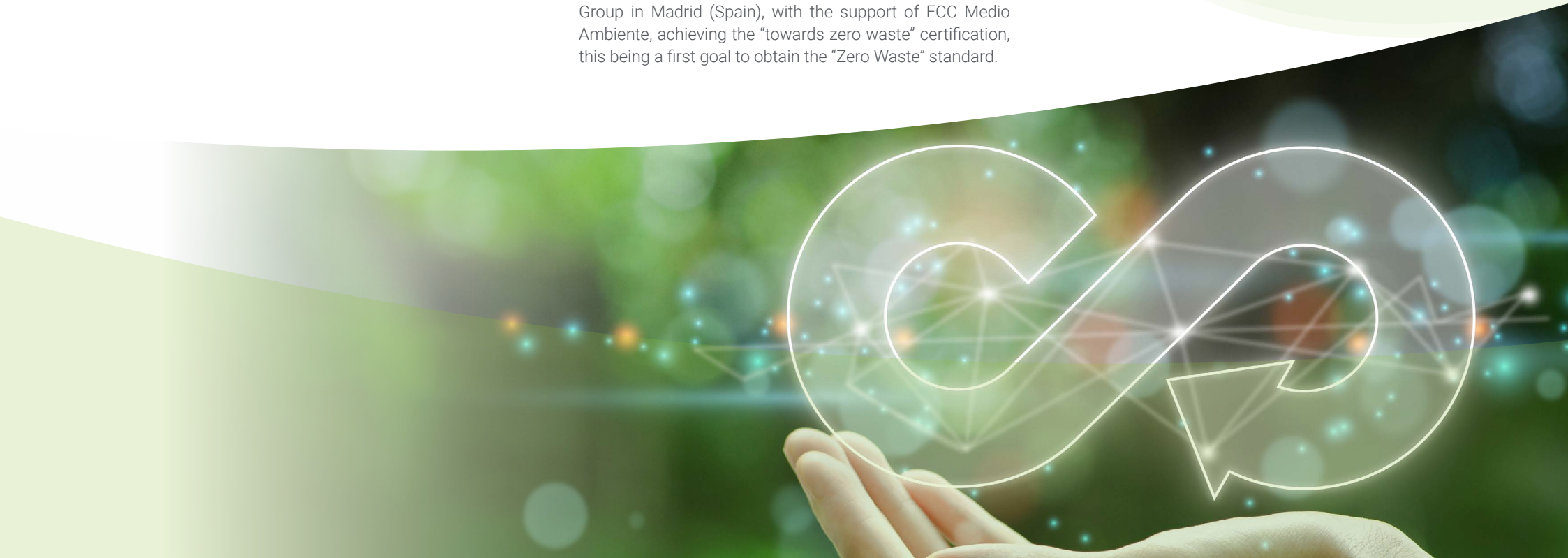
Net Zero 2040

- Sequester any remaining emissions
- **Maintain net zero emissions**

Other sustainability highlights

- The **Spanish Ministry for the Ecological Transition and the Demographic Challenge** (MITERD in Spanish) publishes in the 2022 **III Catalogue of Best Practices in Circular Economy** (BPEC in Spanish) **two R&D projects** managed by FCC Medio Ambiente: **PLASMIX and VALOMASK.**
- Regarding climate change, FCC Medio Ambiente achieved **a reduction in average emission intensity for the 2019-2021 period of 2.79%** compared to the 2017-2019 three-year period, for scopes 1+2 and 3, on its way to achieving carbon neutrality by 2050.
- FCC Medio Ambiente has once again joined the **"Sustainable Digitalisation"** initiative. This solidarity initiative, promoted by the Foundation of the Spanish Confederation of Business Organisations (CEOE in Spanish) and Collective Systems of Extended Producer Responsibility (SCRAPS from its acronym in Spanish), consists of **donating electrical and electronic equipment** for its reuse by people from disadvantaged backgrounds in order to reduce the **"digital gap" in Spain**.
- The **AENOR Zero Waste specification** has been **implemented in the Las Tablas building**, headquarters of the FCC Group in Madrid (Spain), with the support of FCC Medio Ambiente, achieving the "towards zero waste" certification, this being a first goal to obtain the "Zero Waste" standard.

FCC Medio Ambiente achieved **a 2.79% reduction** in emission intensity for the period 2019-2021 compared to the 2017-2019 three-year period



Innovation and technology

Throughout 2022 FCC Servicios Medio Ambiente kept on developing innovation projects. For another year, FCC Medio Ambiente upheld the certification of its R&D&I Management System, in accordance with the UNE 166002 standard.

R&D&I projects under development or in launching phase reached an investment of €4.08 million in 2022, an increase of 8.35% over 2021. They are classified into four areas of knowledge:

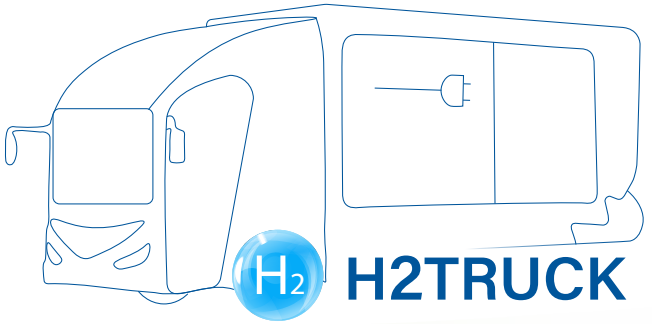
- Vehicles, mobile machinery and facilities
- Management and recycling of waste - Circular Economy
- Information and Communication Technologies
- Sustainable development

Vehicles, mobile machinery and facilities

Projects associated with vehicles and mobile machinery

At the end of 2021, FCC Medio Ambiente was granted funds for the development of a new project for a heavy-duty vehicle for urban service applications with hybrid technology battery-fuel cell powered by hydrogen (H2TRUCK), within the Technology Programme for Sustainable Automotive Technology Programme (PTAS from its acronym in Spanish) in the framework of the funds granted by the Centre for the Development of Industrial Technology (CDTI in Spanish) and supported by the Ministry of Science and Innovation within the Spanish Plan of Recovery, Transformation and Resilience financed by the European Union.

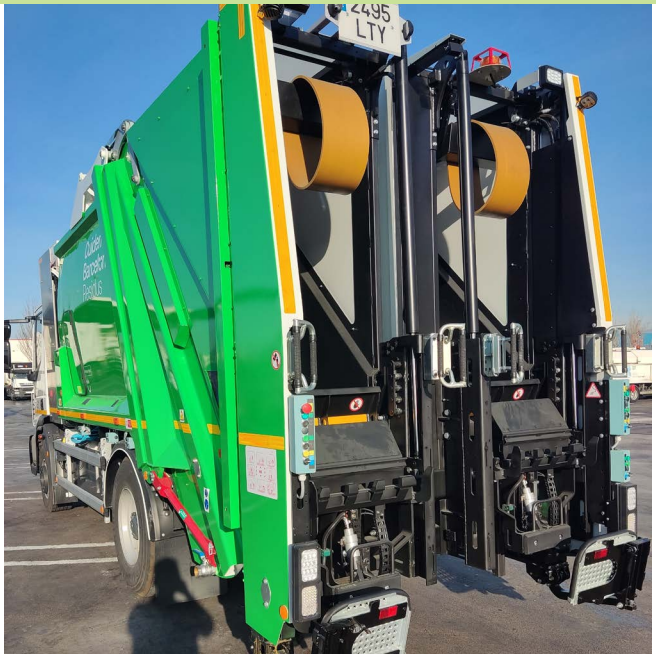
The aim of the project is to manufacture a prototype of side-loading waste collection vehicle with 100%-electric propulsion powered by a hybrid system of hydrogen cell and lithium-ion battery, and to achieve this the project will be carried out over a period of two and a half years.



Funded by the European Union NextGenerationEU

Plan de Recuperación, Transformación y Resiliencia

Fuel cell under test at CNH_2.



All throughout 2022, different tasks of the project have been carried out successfully, including, above all, the characterisation of the fuel cell that will be incorporated in the truck, on the test bench of the National Hydrogen Centre (CNH_2) located in Puertollano (Ciudad Real, Spain).

The study and definition of dynamic, structural and regulatory requirements have also been completed, as well as the propulsion system and the design of the mobile hydrogen compression station that is regarded by the project, which will allow the prototype vehicle to be refuelled and tested at any location. Both the prototype vehicle and the mobile hydrogen refuelling station are expected to be completed in the third year.

On the other hand, throughout 2022, FCC Medio Ambiente has consolidated the new **research projects** launched in the previous year, and nowadays it has the **first series of vehicles** already **in service** in major cities such as Barcelona, among others:

- New rear-loading electric collection vehicle with double-compartment bodywork, of 10 m^3 capacity and very small dimensions on a special narrow chassis 2.2 metres wide. It works in electric mode throughout the collection process and has a self-recharging system for the batteries by means of a Compressed Natural Gas (CNG) engine.

- 100%-electric water-tank vehicle for watering and washing streets, pavements and pedestrian areas on a 2-metre-wide chassis with a Gross Vehicle Weight (GVW) of 18 tonnes, with new generation lithium-ion batteries.

- Compressed natural gas (CNG) collection vehicle, with a 2-metre-wide, side-loading body, on a chassis of very reduced dimensions (2 metres wide and maximum 7 metres long), which allows a legal payload of 5 tonnes of waste and which covers a range of side-loading collectors that did not exist to date.

FCC Environment's first electric collection truck starts driving on Lower Austria's roads

In May, FCC Environment unveiled the new electric waste collection vehicle "Designwerk Mid Cab Collect 6x2R". This new e-truck is not only quiet, but also environmentally friendly and resource-efficient. As one of Europe's leading environmental service providers, with this first electric truck FCC Environment takes a further step towards a sustainable future.

FCC Environment CEE's fleet consists of more than 2,000 vehicles, including this environmentally friendly electric truck, which is already out on the roads of Lower Austria.

The world's first high-power electric drive excavator

In February, FCC Environment took another step towards its ambitious goals in helping the industry meet its obligations of emissions reduction and recycling with the purchase of the world's first high-power electric traction bulldozer, the Cat® D6 XE, which offers up to 35% greater fuel efficiency. The D6 XE's waste handling equipment offers additional features to help protect both the machine and the operator in difficult conditions, with specialised guards, safety bars and seals that help protect the machine from impacts, cloggings and airborne debris. The excavator blades are also equipped with a special grill to increase productive capacity when working in a waste stream.

Projects associated with ancillary equipment

FCC Medio Ambiente has developed an electrically assisted sweeping trolley that helps the operator to move along the daily route, thereby reducing both the time invested and the effort made.

This new trolley is based on an existing 2-bin model, to which a 250 W electric motor has been added, powered by a lithium-ion battery. The operator can activate and deactivate the electric assistance, regulate the speed up to 6 km/h and perform emergency braking. It has a worker presence detection system and connects to the worker's smartphone via Bluetooth, so that it can register its area of operation. It boasts position lights, two at the front and two at the rear, to ensure operator visibility, and incorporates a weighing system in each bin that alerts the operator with a red light in the event of overweight.

Projects associated with facilities

United Kingdom's first waste-sorting retro-adaptive system based on artificial intelligence

FCC Environment and its customer re3, a waste management association of three municipalities (Bracknell Forest, Reading and Wokingham), have installed the country's first retrofittable, artificial intelligence-based robotic waste sorting system at its materials recycling plant in Reading, Berkshire. The waste sorting robot, known as Recycleye Robotics, is capable of performing the physical tasks of identifying, picking and sorting materials at a rate of 55 picks per minute. The smart collection system is based on Recycleye Vision, an artificial vision system that detects all individual elements of the waste streams by differences of material and object. The artificial intelligence system has been installed on the existing plant's conveyor belts and provides full visibility of the waste streams, enabling re3 to improve the efficiency and performance of its sorting processes.

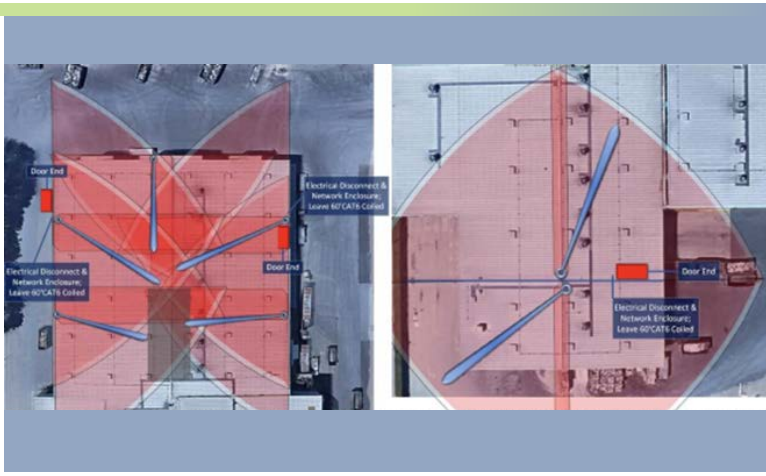
Several innovative technical solutions have been designed for the renovation and operation of the environmental compound in Placer (California):

BeeFoam dust suppression system

Construction and demolition waste plants present the problem of massive dust generation, which can cause visibility problems, serious health risks and even fires. To alleviate this problem and prioritise workers' safety, the design of the new facility includes the innovative BeeFoam dust suppression system, which uses a minimal amount of a mix of water and air to create a foam that adheres to the dust and weighs it down for up to 12 days. The product is biodegradable and the plant will include two spray points, located at the beginning of the lines, with the suppression system to encapsulate and control dust and airborne particles.

GPS volumetric tracking equipment for landfill sites

A volumetric GPS system has been installed on both the compactors and the bulldozer at the Placer County landfill. Volumetric control is designed to track compaction in real time, reduce airspace use, maximise compaction and optimise density in less time. This will eliminate under or overfilling of the landfill.



Fire protection system with temperature detection

FCC Environmental Services has included as a safety feature at the Placer County facility an early-detection fire suppression system called Fire Rover, which allows for faster deployment and more effective extinguishing capabilities. The monitoring equipment is instantly alerted by a heat increase and activates the suppression system, which is designed for fires of all sizes and types, including metal, oil, plastic, agricultural and waste fires. FCC has installed Fire Rover systems at all of its waste treatment and recycling facilities.

Management and recycling of waste. Circular economy

Recovery of critical raw materials from Municipal Solid Waste (MSW)

MINETHIC: Promoting the recovery and valorisation of strategic mineral resources for the green transition

The MINETHIC project carried out by a consortium, which FCC Medio Ambiente participates in, has been subsidised by the CDTI and supported by the Ministry of Science and Innovation of Spain and is co-financed by the Recovery and Resilience Mechanism, in the call for the 2022 "Science and Innovation Missions Programme", of the State Programme to Catalyse Innovation and Business Leadership from the 2021-2023 State Plan for Scientific and Technical Research and Innovation, within the framework of the Recovery, Transformation and Resilience Plan.

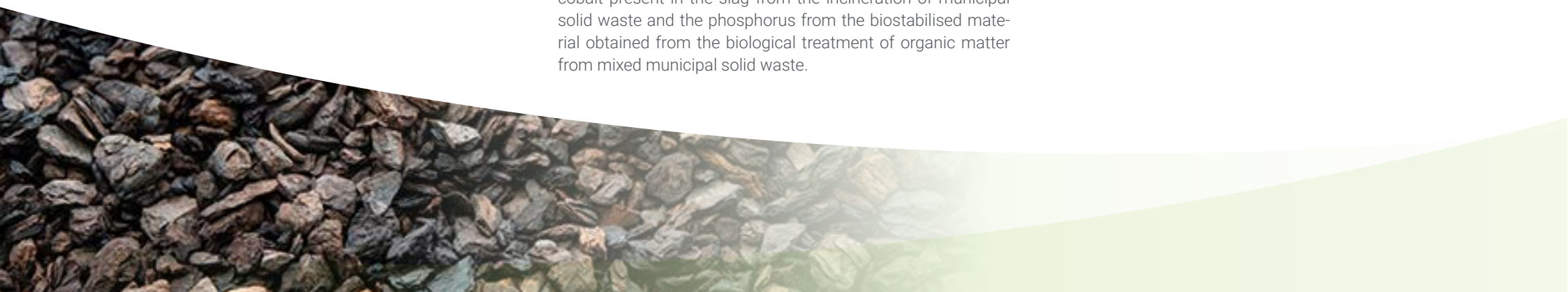
The goal of the project is to research new sources of non-conventional mining raw materials, both industrial and urban, for the Green Transition, covering the entire value chain: pre-treatments to concentrate the materials of interest and eliminate interferents, separation, recovery and purification treatments, and validation of the recovered materials in final applications (permanent magnets, cathodes, catalysts...).

New technologies will be researched to recover and valorise Critical Raw Materials (CRM) from mineral resources, by-products and waste streams, as well as the integration of digital technologies, fostering a sustainable, efficient and local supply of CRM.

FCC Medio Ambiente will extract the phosphorus, nickel and cobalt present in the slag from the incineration of municipal solid waste and the phosphorus from the biostabilised material obtained from the biological treatment of organic matter from mixed municipal solid waste.

minethic®

Funded by the European Union NextGenerationEU



Recovery of slag from MSW incineration

ECO2D4.0: Development of comprehensive road surface solutions using priority waste from the Basque Country, and ecosystem for the functional and environmental monitoring of road infrastructures

Project co-financed by HAZITEK 2022 - Basque Country Business R&D Support Programme, in Spain, in which FCC Medio Ambiente participates and whose objective is to research new applications for waste management, in particular for those materials where there limited ways of recovery, such as ferrosite, incineration slag and foundry sand, although milling refuse and black slags are also included.

New products from digitalised ECO-roads are being developed, analysing the technical and market feasibility of using different community waste streams as secondary aggregate in the design of pavements, developing sustainable layer solutions with the best synergies between materials for the most common scenarios and undertaking the necessary actions in upstream and/or valorisation processes to ensure compliance with functional and environmental specifications at all stages of development.

RSU4HOM: Development of new construction products from the valorisation of municipal solid waste incineration slags

Led by FCC Medio Ambiente and co-financed by the HAZITEK 2022 - Basque Country Business R&D Support Programme. The project is planned to last 30 months, from July 2022 and with a scheduled end date of December 2024.

RSU4HOM aims to minimise the environmental impact generated by the landfilling of incineration slag from two plants in Zubieta (Gipuzkoa, Spain). The aim is to recover this waste and integrate it as aggregates for the manufacture of construction materials (concrete, mortar and precast concrete).

Europar Batasunak kofinantzatua

Cofinanciado por la Union Europea

EUSKO JAURLARITZA
GOBIERNO VASCO

Leading a circular economy for plastic

VALOMASK: Design and development of a sustainable management process for discarded masks (2021-2022)

Project developed by FCC Medio Ambiente and co-financed by the Institute for Business Competitiveness of Castilla y León (Spain) and the European Regional Development Fund (ERDF) to prevent masks from being disposed of in landfills, providing a new solution to one of the major current environmental challenges arising from the context of COVID-19. To this end, a novel plastics treatment process has been investigated, such as pyrolysis and bioconversion of the resulting oil from the thermochemical process, obtaining high added value products such as citric acid and bioplastics. A technological roadmap has also been drawn up for existing optical sorters and artificial intelligence robots, in order to be used in waste treatment centres.

LIFE PLASMIX (LIFE18 ENV/ES/000045: Plastic Mix Recovery and PP & PS Recycling from Municipal Solid Waste) (2019-2024)

Official website of the project: www.lifeplasmix.com

This project, led by FCC Medio Ambiente, is aimed at demonstrating the material recovery of Plastic Mix from municipal waste (PP, PS and EPS) in a semi-industrial plant located at the Ecocentral, Granada (Spain). During this year, the washing line has been commissioned, allowing the first tonnes of recycled pellets from Plastic Mix to be obtained.

LIFE4FILM (LIFE17 ENV/ES/000229 Post-consumption film plastic recycling from municipal solid waste) (2018-2022)

Official website of the project: www.life4film.com

Project carried out by a consortium led by FCC Medio Ambiente and co-financed by the European LIFE programme, whose main objective is to avoid sending plastic film (LDPE) present in municipal waste to landfill or energy recovery through the implementation of innovative recycling on a semi-industrial scale, by means of a recovery line of 11,000 tonnes a year at the Ecocentral in Granada.

During 2022, the line of washing, extrusion and blowing has been set into operation, obtaining the first recycled-film plastic bags.

Leader in renewable energy

FCC Medio Ambiente is determined to converting the "Waste Treatment Centre" (WTC) into a "renewable energy producer". To this end, it has a line of research where it is developing innovative processes for the production of hydrogen and methane by means of biological treatments (bioH2 and bioCH4) from waste, as well as thermochemical processes such as gasification and biogas purification.

FCC Medio Ambiente is determined to converting the **Waste Treatment Centre** into a **renewable energy producer**

Collection lorry powered by biomethane.

Gas station at the Ecocentral in Granada (Spain).

ECLOSION: New materials, technologies and processes for the generation, storage, transport and exploitation of renewable hydrogen and biomethane, generated from bio-waste (2021-2024) MIG-20211071

Throughout 2022, FCC Medio Ambiente carried out research in the laboratories of the University of Valladolid (Spain) with the aim of studying the dark fermentation process using Organic Fraction of Municipal Solid Waste (OFMSW) as a substrate. As a result, a significant amount of hydrogen was obtained out of the total biogas derived in each fermentation.

The development of new, efficient and low-cost polymeric membranes for the separation of biohydrogen mixtures from dark fermentation (H_2/CO_2), and H_2/CH_4 mixtures from synthesis gas purification, has also been completed. During 2023, dark fermentation will be tested on a scale prototype at the Valladolid WTC.

LIFE LANDFILL BIOFUEL (LIFE18 ENV/ES/000256: Integral management of the biogas from landfills for use as vehicle fuel) (2019-2022)

Official website of the project: www.landfillbiofuel.eu

Project co-financed by the European LIFE programme, which aims to demonstrate the technical and economic viability of a solution based on the implementation of new landfill exploitation techniques to improve biogas production and facilitate the recovery of waste gases through the purification of biogas by means of an adsorption process through vacuum pressure oscillation. The gas station has been installed at the Granada Ecocentral (Spain) where the first refuelling with the obtained biomethane has been carried out. During 2022 and 2023, more than 60,000 kilometres will be travelled in order to validate the quality of the biomethane.

Biorefineries

INSECTUM: Recovery of urban by-products and biowaste through bioconversion with insects to generate innovative products in strategic sectors

Project of CDTI's CIEN programme, led by FCC Medio Ambiente, which consists of the implementation of an innovative system for the recovery of urban bio-waste based on its bioconversion by means of insecta into products with high added value for industry (human and animal food, nutraceuticals/pharmaceuticals, fertilisers and chemicals).

FCC Medio Ambiente participates in the conditioning and supply of OFMSW for its subsequent recovery. In order to obtain a dehydrated substrate that facilitates its storage, conservation and transport, a solar tubular dryer has been developed that uses energy from solar radiation to eliminate the moisture from biowaste. In 2022, the dryer was installed and started operating at the Biomethanisation plant in Las Dehesas (Madrid, Spain).

Solar tubular dryer at Las Dehesas, Madrid (Spain).

Creation of new by-products and biomaterials

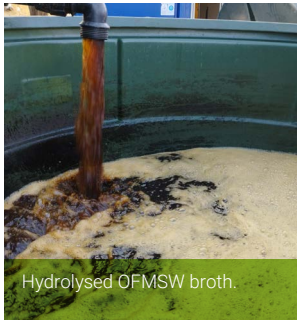
DEEP PURPLE: Domestic Extraction of Emerging Products with Purple Phototrophic Bacteria

Official website of the project: www.deep-purple.eu

Project co-funded by the Bio-Based Industries Joint Undertaking in the European Union's Horizon 2020 Framework Programme for Research and Innovation.

The project proposes a synergistic and comprehensive treatment for the valorisation of three types of bio-waste: organic fraction of municipal solid waste, sludges from wastewater treatment plants (WWTP) and urban wastewater, by means of a multi-platform photo-biorefinery based on phototrophic purple bacteria. This new concept will enable the generation of five new bioproducts for commercial applications in the cosmetics, plastics, construction and fertiliser sectors.


Thermal Hydrolysis Plant.


Hydrolysed OFMSW broth.

Recycling of photovoltaic panels

PV4INKS: Photovoltaic panels valorisation for the formulation of silver nanoparticle inks

FCC Ámbito has launched the PV4INKS project to develop technologies for the recovery of silver contained in photovoltaic panels and its conversion into nanoparticles that can be used directly in the conductive ink industry for electronic applications. The project, which will last three years and in which the company TECNAN and the LEITAT and LUREDERRA technology centres are also participating, has received funding from the State Research Agency, part of the Ministry of Science and Innovation, within the framework of the call for Public-Private Collaboration Projects, co-financed by the Recovery, Transformation and Resilience Plan of the Spanish Government.

PV4INKS will be jointly developed by the Technical Directorate and the Glass Recycling department of FCC Ámbito. At one of its plants in Zaragoza (Spain), the company is installing a specific line for the treatment of photovoltaic panels at the end of their lifespan, which is expected to be commissioned in 2023.

Funded by the European Union NextGenerationEU
Gobierno de España Ministerio de Ciencia e Innovación
Plan de Recuperación, Transformación y Resiliencia

Information and communication technologies

VISION

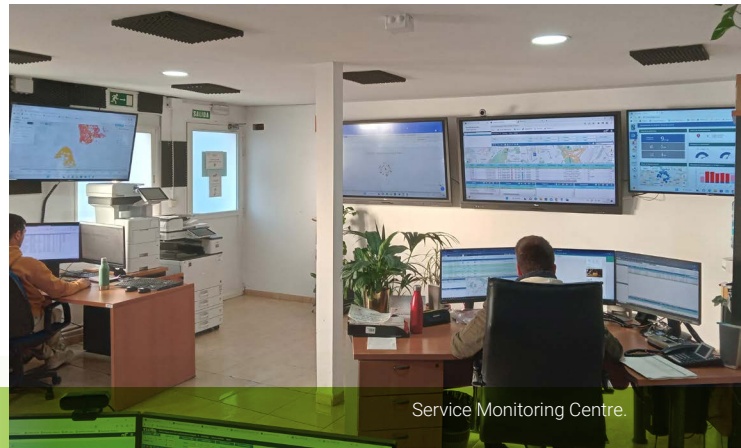
Within the framework of providing services to cities, it is essential to consolidate ICT (Information and Communication Technology) tools or technology systems that allow for the definition of the main challenges and that support the provision of effective, efficient, sustainable and comprehensive services.

In order to store and manage operational, legal and environmental aspects, resources (material and human), validations and services that facilitate the orientation towards excellence at work, it is necessary for them all to be managed jointly through an encompassing system.

FCC Medio Ambiente has developed "VISION – Smart platform for the provision of services to cities" which allows to meet the objectives described, responding to the current requirements of customers and being prepared for future challenges that may appear in the provision of the services.

During 2022, in order to increase the security and transparency of the information managed, and to meet the growing demands of customers, the management system platform has been certified in the Spanish National Security Scheme. As part of the continuous evolution of the system, throughout 2022 the following functionalities and improvements have been developed:

- Calculation of eligibility criteria and alignment of contracts with funding criteria according to the European Union sustainable taxonomy.
- End-to-end waste management and control system for large private producers to ensure "Zero Waste" certification.
- Planning of management audit system for contracts, applying criteria required by the different standards the company works with.
- Inventories and renovation management of public lighting, facilitating the planning, installation and monitoring of the application of energy efficiency criteria.



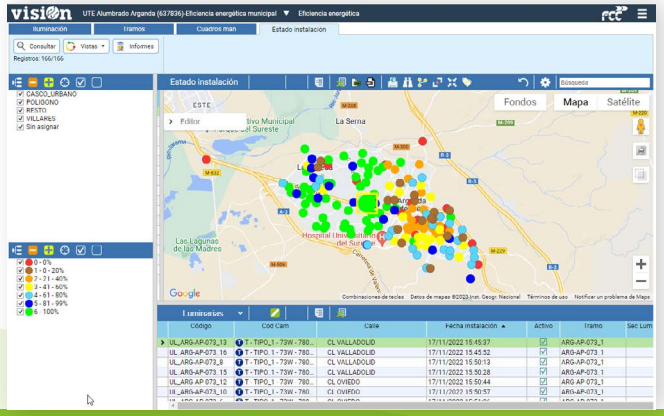
Service Monitoring Centre.

- Dynamic generation of bulky waste collection routes based on received requests, supported by developed optimisation algorithms.
- Control system of user entries and quantities provided by users at recycling centres based on the different criteria of the administrations to which services are provided.
- Improvements in the systems for exchanging information on incidents and requests with municipal systems.
- Direct connection of the VISION platform with the Power BI app for the generation of balanced scorecards, facilitating the exploitation of information by users with different levels of training.
- Assistance in the creation of the Service Monitoring Centre to support contracts with high reporting requirements to customers.
- System for the elaboration of the market study of company's activities with analysis by enterprises, business groups, number of inhabitants, production figures and maturities.
- Deployment of the app for the monitoring of manual sweeping operators with management of route sheets, consultation of routes and generation of incidents.

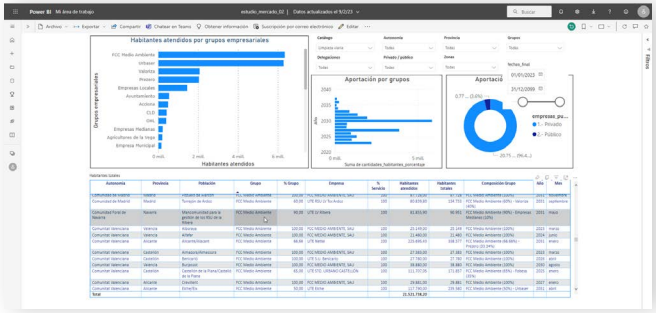
Sustainable development

Bicisendas (Cycle Lanes) Project

FCC Ámbito takes part in the CIEN "Bicisendas" (Cycle Lanes) project, led by FCC Construcción, whose objective is the development of a new generation of sustainable, energy self-sufficient, smart, decontaminating, integrated and safe bicycle lanes which will be modular, produced with sustainable materials and can be custom-designed for the integration of various technologies and according to the needs to be covered. The project will be completed in the second half of 2023.



Energy efficiency lighting control.



Market study of municipal services.

@CDTIoficial