



*Accelerating towards a circular economy transition.  
Our mission and vision*



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ELLAKTOR GROUP

## Our Mission and Vision



### MISSION

Leveraging our people's unique expertise, we deliver high – quality infrastructure, energy and waste management projects, we foster circular economy innovative solutions while enhancing our alternative energy footprint, creating value for our shareholders, our employees and the Greek Economy and Society



### VISION

Leading the way to a contemporary, innovative, safe, sustainable future

# ELLAKTOR GROUP

## Our Mission and Vision





# HELECTOR SNAPSHOT

## At a glance

»

Ellaktor's Waste Management Arm - Leading position in Greece & SE Europe

»

Fully integrated Waste Management company providing vertical solutions that span throughout the waste management sector

»

Expertise in the design, construction and operation of waste management and waste - to - energy projects

»

Only Greek company holding patented state - of - the - art technological "Know-How" with worldwide recognition

»

Significant growth prospects in Greece (new projects pipeline > € 1.5 bn and abroad

»

Solid profitability, "healthy" balance sheet and high liquidity allowing to pursue investment & growth opportunities

»

International Presence (Projects undertaken in seven countries) >1000 Employees

»

Recurring revenues from operations (~ €80mn.)



## WASTE MANAGEMENT

- ▲ Operating infrastructure in Greece, Cyprus and Germany
- ▲ More than 900kta under treatment in 7 facilities
- ▲ € 68mn revenue in 2021 (estimate) high EBITDA margin and recurring profitability
- ▲ Medium to long term contracts



## WASTE TO ENERGY

- ▲ More than 34MWe of landfill biogas exploitation under operation
- ▲ Attica plant – one of the largest in Europe
- ▲ New investments in additional 1.2 Mwe Expected to be completed by mid 2022.
- ▲ Favorable statutory framework (FIT € 94/MWh – FIP € 106/MWh)
- ▲ € 22mn (in 2021) in recurring revenue (post BEAL repowering)



## ENVIRONMENTAL CONSTRUCTION

- ▲ Successfully designed & delivered the largest Mechanical Biological Treatment (MBT) plant in Europe for the treatment of Municipal Solid Waste in Sofia, Bulgaria which includes biodrying (aerobic treatment) and recovery of recyclables and secondary fuel (SRF)
- ▲ Successfully designed, delivered and operating the 1st integrated waste management facility in Greece (Western Macedonia) which is at the same time the 1st waste management PPP in the country
- ▲ Successfully designed, delivered & operating the 1st waste management facility in Cyprus which was the 1st facility worldwide recovering significant quantities of recyclables from mixed waste

# HELECTOR OVERVIEW

## Vertically Structured Group

FULLY INTEGRATED GROUP PROVIDING VERTICAL SOLUTIONS THAT SPAN THROUGHOUT THE WASTE MANAGEMENT SECTOR



CUSTOMIZED SOLUTIONS BASED ON THE REQUIREMENTS OF THE CLIENT, THE NEEDS OF THE REGION AND THE COMPOSITION OF WASTE TO BE TREATED

# Waste Management Value Chain

FRONT - END



RECYCLING

- ▲ 1st priority in waste hierarchy
- ▲ Recovery of recyclable materials
- ▲ Reservation of resources for the production of new materials
- ▲ Reduction of emissions

CORE PART



TREATMENT

- ▲ Treatment of the organic fraction of waste
- 2 MAJOR APPROACHES
- ▲ Biological treatment for the recovery of useful by-products
  - ▲ Incineration
  - ▲ Treatment results in residual fractions

END PART



DISPOSAL

- ▲ Activity that relates to the handling of the residual fractions of waste treatment & recycling; mainly landfilling
- ▲ Disposal activities include accompanying infrastructure such as leachate treatment
- ▲ Mass incineration is considered a "disposal" activity production of new materials
- ▲ Reduction of air emissions

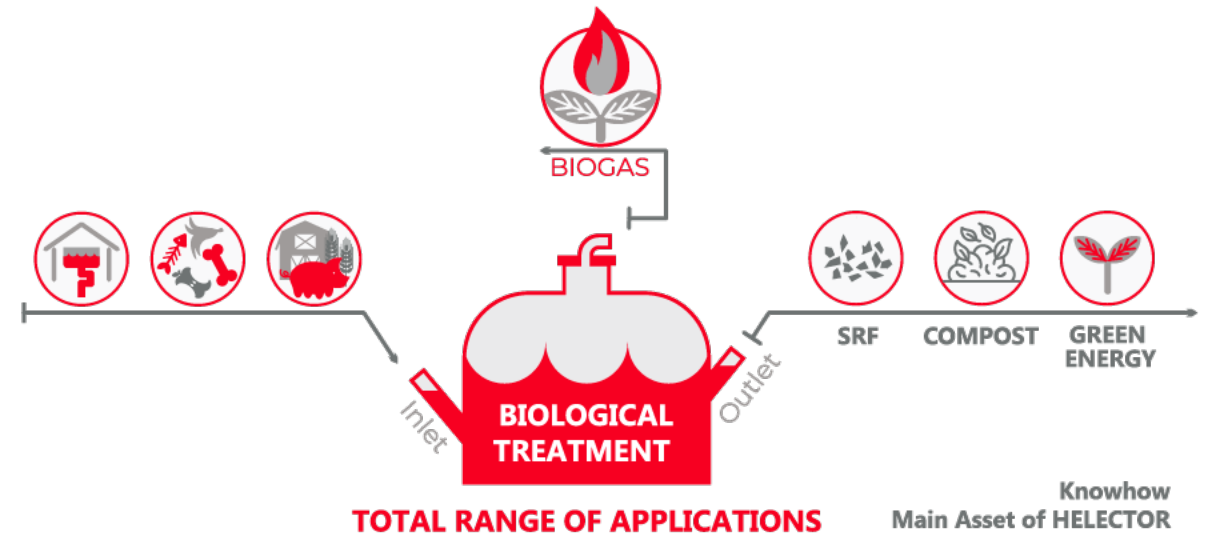
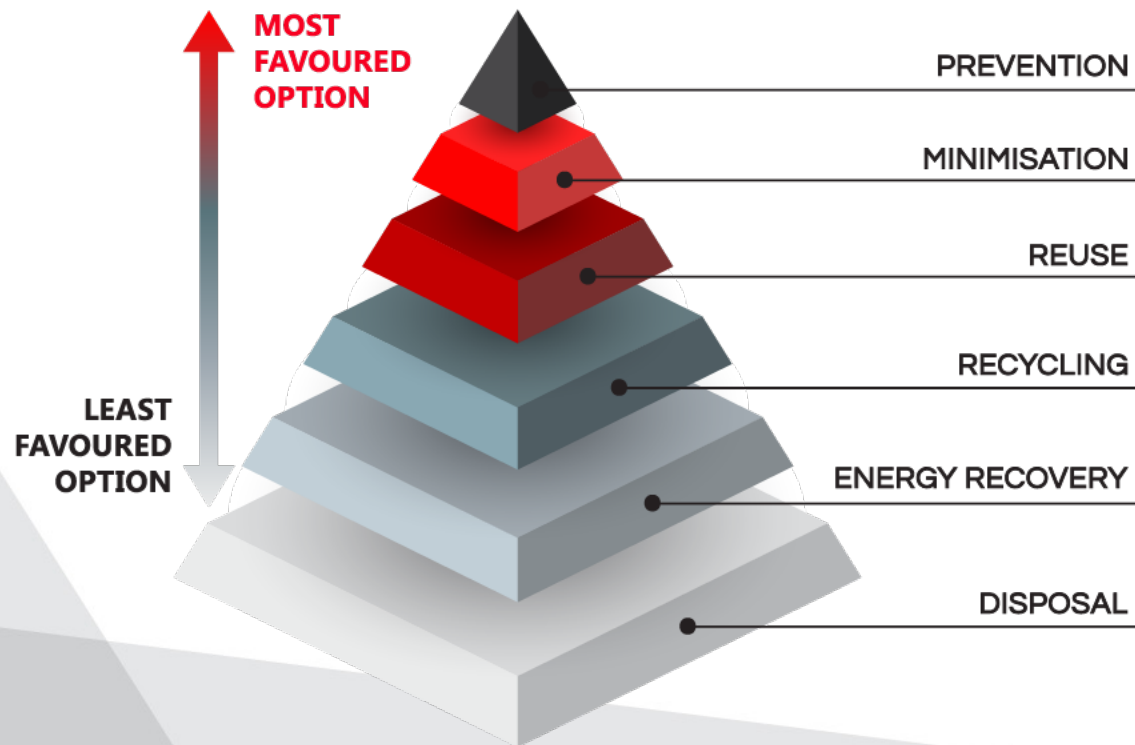
# Recycling Mechanical & Optical Sorting

- 
- SCREENS**
- BALLISTIC SEPARATORS**
- OPTICAL SEPARATORS**
- EDDY CURRENT SEPARATORS**
- MAGNET SEPARATOR**
- FERROUS METALS**
- RESIDUALS**
- ORGANIC FRACTION**
- PAPER**
- ALUMINUM**
- PLASTICS**

## SPECIALIZED KNOWLEDGE

### Helector's passport to the future

The knowhow possessed by HELECTOR and through its subsidiary, HERHOF GmbH, for the production of alternative fuel, compost and biogas, offers a comparative advantage to the Company, as shown in the following graph.

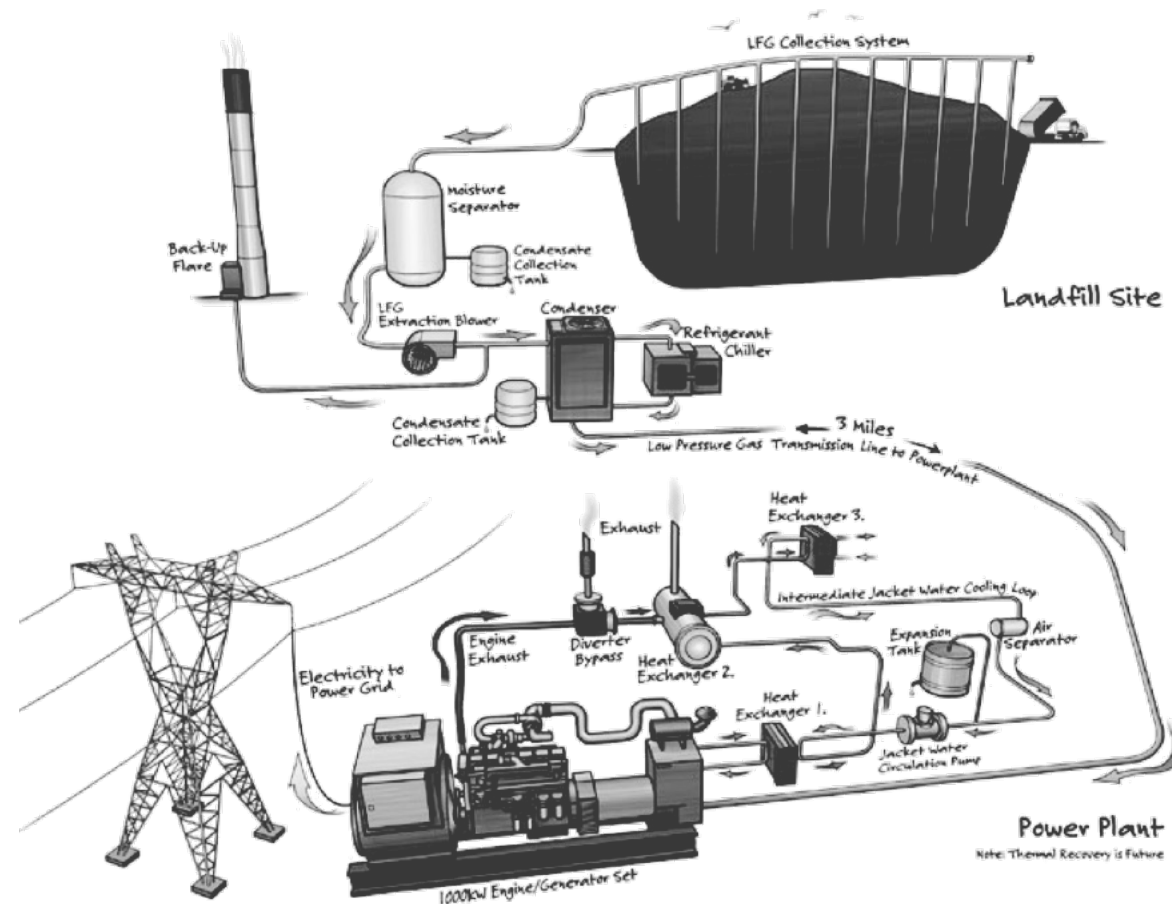


## ACTIVITY OVERVIEW

### Waste to Energy

### Landfill gas exploitation

- ▲ Helector has vast experience in energy utilization of landfill gas
- ▲ Installed capacity of  $\approx 34$  MWe
- ▲ Its portfolio includes one of the largest plants in Europe
- ▲ Load & efficiency factor  $\sim 85\%$
- ▲ Favorable RES framework with grid absorption priority, 20 year PPA and € 94 / MWh (following "New Deal" arrangement) while FiP framework @ € 106/MWh



# ACTIVITY OVERVIEW

## Disposal



CLINICAL WASTE

- ▶ Helector has constructed and operating under a service contract Greece's only clinical waste incinerator with an annual capacity of 12.000 tons
- ▶ In operation through Helector since 2007
- ▶ Additionally, Helector holds a 60% stake in Aposteiosis S.A., a sterilization plant with a capacity of ~ 4 k. tn p.a.



CONSTRUCTION  
AND  
RESTORATION OF  
SANITARY  
LANDFILLS

- ▶ Helector has constructed the biggest landfills in Greece & Cyprus including the Attica & Thessaloniki Prefecture landfills
- ▶ Total landfill capacity constructed exceeds 30 mn m3.
- ▶ Helector operates sanitary landfills including support services for the Athens region landfill serving more than 4 mn inhabitants



LEACHATE  
TREATMENT  
PLANTS

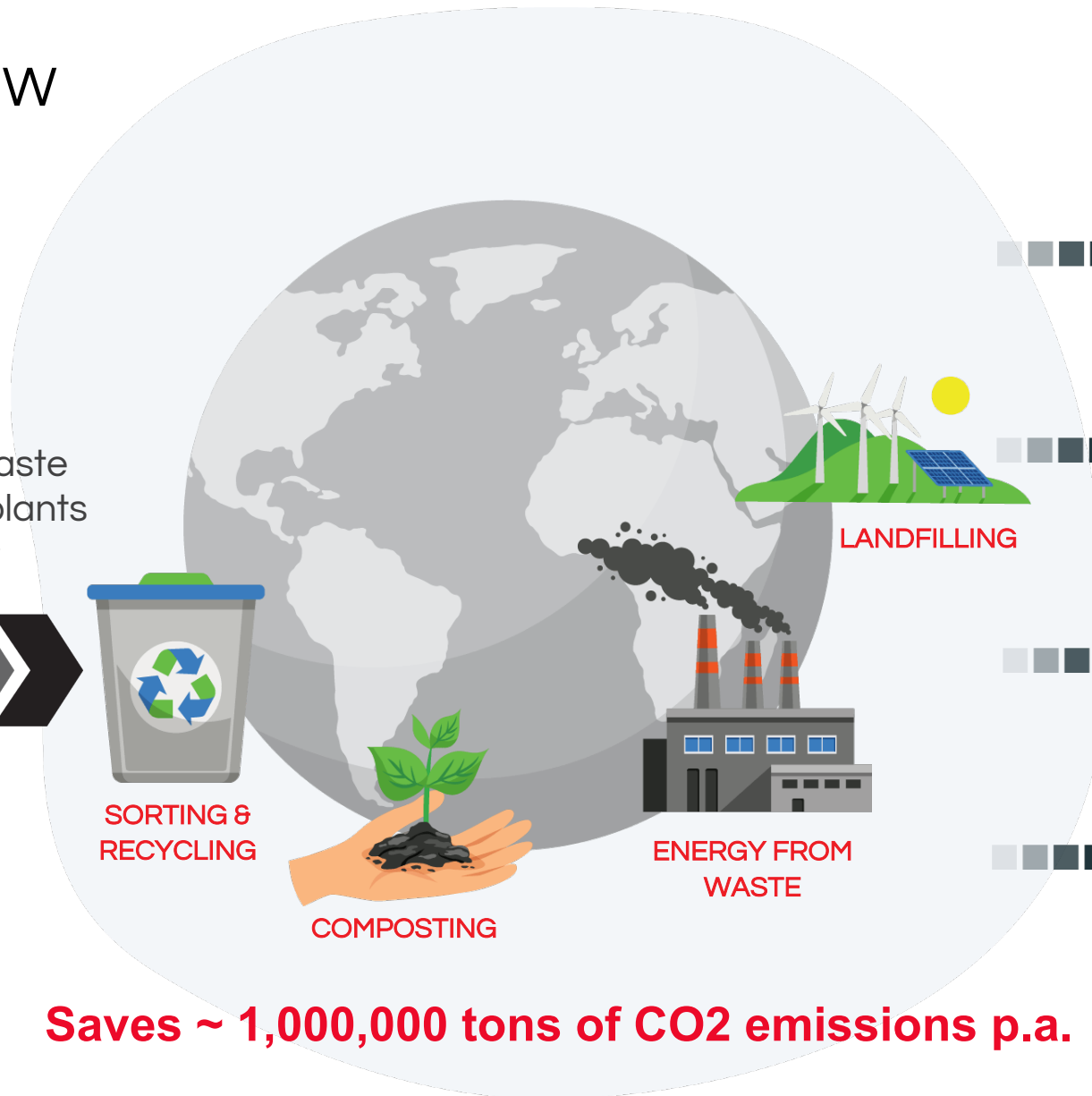
- ▶ Helector has vast experience in the design, construction and operation of leachate treatment plants, as accompanying works to sanitary landfills
- ▶ Experience includes the biggest such plants in Greece & Cyprus
- ▶ Leachate plants use the most sophisticated and modern treatment technologies

## ACTIVITY OVERVIEW

### Through Projects Implemented So Far Helector...

▲ ...treats over 900.000 t/a of waste through its waste treatment plants in Greece, Cyprus & Germany

▲ ...undertakes the operation and/or provides support services for landfill facilities (~ 2mn tons p.a.)



Annual energy  
Production of  
~ 220.000 MWh

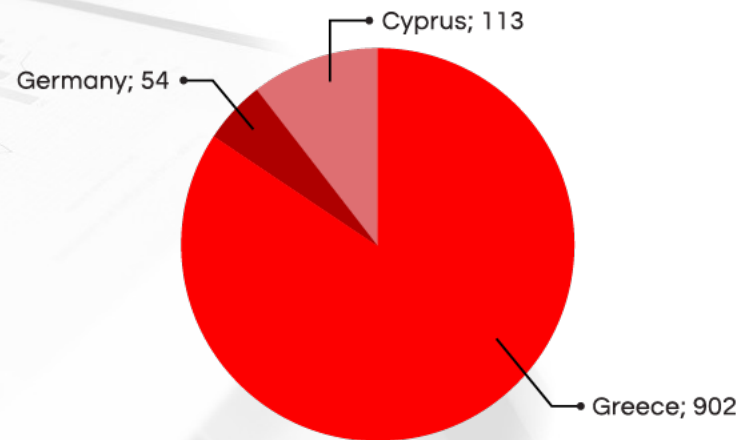
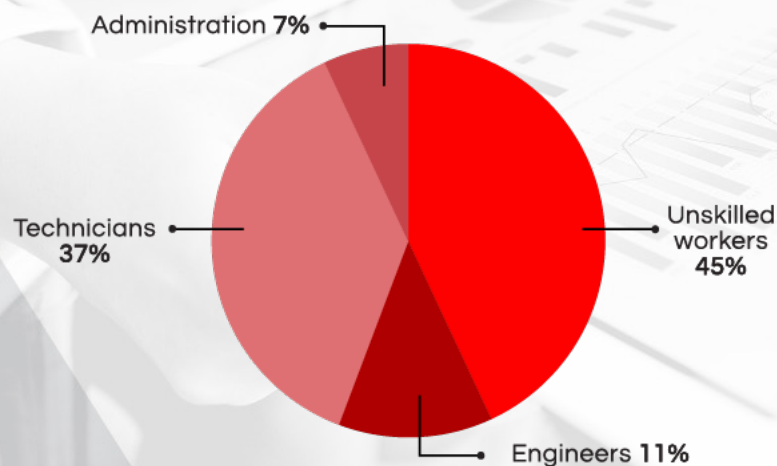
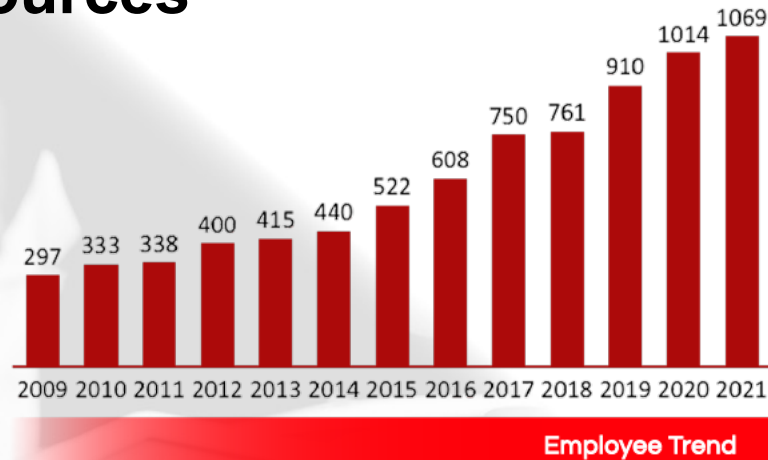
Annual recovery ~  
87.000 tons of  
recyclable material

Annual recovery of ~  
60,000 tons of CLO

Annual recovery of ~  
55.000 tons of high  
quality secondary  
fuel (SRF) and  
additional  
~ 100,000 tons RDF

# CORPORATE OVERVIEW

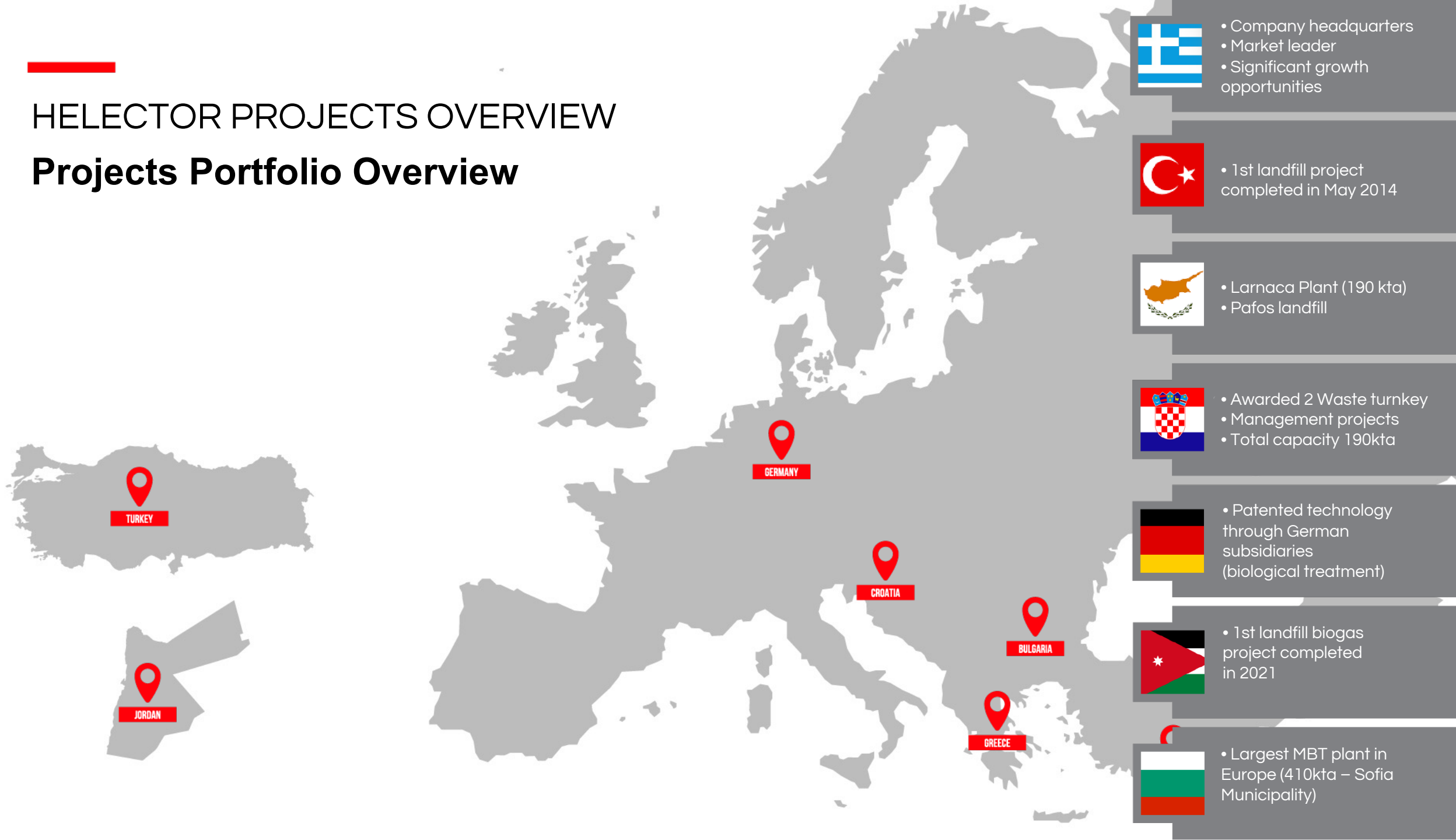
## Human Resources



- ▲ Helector's total personnel amount to 1.069 people (31/12/2021) presenting significant increase even during the Covid-19 crisis
- ▲ Helector's growth is based on its experienced and highly skilled personnel which constitutes a prerequisite in waste management sector

# HELECTOR PROJECTS OVERVIEW

## Projects Portfolio Overview



# HELECTOR PROJECTS OVERVIEW

## Projects Portfolio Overview

### CONSTRUCTION EXPERIENCE \* (concluded projects) so far include:

- ▲ 13 Mechanical Biological Treatment (MBT – aerobic treatment) facilities ~2.2 mn tons p.a.,
- ▲ 16 Anaerobic Digestion (AD) plants ~240k tons p.a. capacity,
- ▲ 3 landfill biogas power plants >32MW capacity,
- ▲ 1 hospital incinerator 12k tons p.a. capacity,
- ▲ 2 Material Recovery Facilities ~175kta p.a. capacity
- ▲ 12 landfills (> 30mn cubic meters)  
8 leachate treatment plants

#### MAJOR WASTE MANAGEMENT SERVICES CONTRACTS

MBT plant, Residual Landfill & Transfer Stations – Kozani, Greece (100%)

- 120kta capacity
- 1st integrated waste management facility in Greece
- 1st waste management PPP in Greece (Design, Financing, Construction & 25y Operation) – PPP
- Total investment amounted to € 48mn (inc VAT)
- Operations commenced June 2017



Design, construction & operation of MBT plant & Residual Landfill – Larnaka, Cyprus (100%)

- The only operational waste management plant in Cyprus 190kta capacity
- Design, Construction and Operation
- Operations commenced in April 2010



Design, construction & operation of the hospital waste incinerator – Athens, Greece (70%)

- 12kta nominal capacity – currently operating at ~ 4kta
- Operating under service contract



Operation of a hospital waste sanitization plant – Volos, Greece (60%)

- 4kta currently operating at full capacity
- Private investment



Operation of MBT Plant Attica Greece (70%)

- 250,000 tons / yeat capacity under operation service contract



Material & Glass Recovery Facilities

- 55.000 tons/year capacity regarding packaging waste in two facilities (Attica & Lamia)
- 50.000 tons/year capacity regarding glass residuals in two facilities (Athens & Thessaloniki)



Mechanical biological treatment plant – Osnabrueck, Germany (100%)

- 90,000 tons/year capacity
- Operations commencement in February 2006



#### EXISTING LANDFILL BIOGAS WTE PLANTS

Cogeneration Plant – Attica, Greece (50%)

- One of the largest Cogeneration Plants worldwide and largest in Europe at 25 MW installed capacity
- In operation since 2001 operating close to full capacity
- Overall investment - €36m



Cogeneration Plant – Salonica (Tagarades), Greece (100%)

- 5 MWe installed capacity – currently operating at 2MW
- Overall investment ~ € 8mn



Cogeneration Plant – Salonica (Mavrorachi), Greece (100%)

- 3,5 MWe installed capacity
- Overall investment ~ € 4mn



\* Additional pipeline already under construction – additional capacity ~ 1,2 MWe

# HELECTOR PROJECTS OVERVIEW

## Waste Treatment– Major Landmark Western Macedonia PPP



### KEY DATA

% participation	100%
Nominal Capacity	120kta (Over 600kt treated so far)
Guaranteed tonnage	90kta
Overall Investment (exc VAT)	~ 44 mn
Own Funds	~ 17 mn
Residual Target (contractual)	~ 36%
Recycling Target (contractual)	~ 12% (Over 80kt recovered so far)
Operation commencement	10/6/2017
Operational tenure	25 years
Personnel	135

▲ The project has been financed through EIB & Jessica

▲ EPC Contract undertaken by HELECTOR and was completed within the specified time framework of 24 months

▲ The project includes the construction & operation of a Mechanical Biological Treatment (MBT) plant, of a residuals' landfill as well as Kozani Transfer Station as well as the operation of 9 already operational transfer stations

▲ The operation is undertaken through an SPV (EPADYM SA)

▲ Technological application: Recyclables recovery & compost (CLO) production

# HELECTOR PROJECTS OVERVIEW

## Major Projects Abroad



- Design and Construction of a Mechanical–Biological Treatment (MBT) Plant for processing waste and production of Refuse Derived Fuel
- Project type: EPC
- Capacity: 410.000 t/a
- Contract value: ~ € 85mn
- Co-financed through European Commission (~ 70%) and EIB funds (~ 30%)
- Products: Metals and other Recyclables, SRF and Compost (Herhof application)
- Project undertaken by: JV Helector – Aktor
- Commissioning started September 2015

Bulgaria - Sofia



- Project type: Concession Contract
- Capacity: 105.000 t/a
- Start of early operation in February 2006 - 17 years of operation contract
- The plant uses technologies of mechanical separation for the recovery of metals & aerobic treatment of the organic fraction for the production of secondary fuel - SRF (Stabilat®).
- Investment Cost: ≈ € 30 mn

Germany - Osnabruck



- 2 projects awarded in Croatia (the first 2nd generation projects in the country)
- Project type: EPC
- County Waste Management Centre Mariscina" Primorsko- Goranska County,
- Capacity : 100.000 t/a
- County Waste Management Centre Kastijun" County of Istria"
- Capacity : 90.000 t/a
- Contracts' value: ~ 50mn
- Both projects delivered (2017 & 2018)
- Type of Product produced : metals and SRF (both plants)

Croatia – Mariscina & Kastijun



- Project type: EPC
- Capacity: 31 t/a of presorted MSW (organic fraction / kitchen & garden waste)
- Contract value: € 10.1 mn
- Installation includes 8 dry fermenters (Look technology) as well as 6 composting boxes (Herhof application)
- Plant delivered in 2017

Germany - Heppenheim



- Project type: Design, construction, partly finance & operation
- Capacity: 190kta treatment plus ~ 70kta disposal
- Operation started on April 2010
- Investment Cost: ≈ € 65 mn of which € 42 mn were financed by the Cypriot Government
- The plant uses technologies of mechanical and optical separation to recover recyclable materials
- The organic fraction undergoes aerobic treatment for the production of like output (CLO)
- 113 employees

Cyprus - Larnaka



- Project type: EPC & Operation
- Contract value: ~ € 20mn
- Design, build and restoration of the sanitary landfill and operation of the gas recovery facility and power generation system at the existing Ghabawi landfill, Amman - Jordan
- Project includes the restoration of the existing landfill cells, installation of biogas supply network, construction of a 6MWc cogeneration plant and 2 year operation
- HELECTOR holds 50% in the project

Jordan - Amman

# HELECTOR PROJECTS OVERVIEW

## Major Projects Greece



Waste – to – Energy

- BEAL – Ano Liosia, Attica
- Design, financing, construction and operation
- The largest biogas power plant in Europe
- Capacity: 24 MW
- Total investment of  $\approx$  € 36 mn
- In operation since 2001 (phased development)



Waste – to – Energy

- Tagarades, Thessaloniki
- Design, financing, construction and operation
- Capacity: 5 MW
- Total investment of  $\approx$  € 8mn
- In operation since 2007



Waste – to – Energy

- Mavrorachi, Thessaloniki
- Design, financing, construction and operation
- Latest plant developed
- Capacity: 3.52 MW
- Total investment of  $\approx$  € 4.2mn
- In operation since August 2020



Recycling

- Design & Construction of 2 Material Recovery Facilities (MRF) treating packaging waste in Fyli & Koropi Municipalities
- Capacity: 100.000 & 75.000 t/a respectively
- Industrial & packaged waste treatment
- Recovery of recyclable products (paper, cardboard, plastic, metals, RDF)
- Operation of 2 MRF with a capacity of 55.000 tons/year of packaging waste
- Operation of 2 Glass recycling facilities with a capacity of 50.000 tons/year



Disposal – Clinical Waste Incinerator

- Design, construction & operation of the hospital waste incinerator in Athens, Greece
- Capacity: 12.000 t/a
- 9 years operation contract signed in 2007



Disposal Landfill & Leachate treatment Construction (& operation)

- Vast experience in the design and construction and restoration of sanitary landfills and adjacent leachate treatment plants of a total capacity exceeding 30mn m3. Core projects are considered the following:
- Ano Liosia, Total capacity 8,5 mn tons
- Fyli, Total capacity 14 mn tons
- Mavrorachi, Total capacity 4,8 mn m3
- Tagarades, Total restored area 190.000 m2

## Key Take Away Points

- ▲ **Vertical integration** – Helector structure allows for increased flexibility in services & solutions provided allowing activity in all aspects of waste management and ability to cater the most demanding needs
- ▲ **Know - how** – Valuable know – how in a wide spectrum of waste management activities (recycling, biological treatment, disposal, energy from biogas, leachate treatment)
- ▲ **Patented Technology** – Worldwide competitive technology
- ▲ **Growth** – Strong growth prospects with attractive economics especially in the geographical area of interest. The necessary waste management infrastructure in Greece requires investments exceeding € 1.5 bn in the following 5-year period. Moreover, additional opportunities exist in the wider geographical area of interest by utilizing the worldwide patented technology
- ▲ **Regional Footprint** – Aiming to a key player role in the geographical area of interest
- ▲ **Expansion through investments** – Helector has invested approximately €120mn in the projects that have undertaken (including investment and support of German subsidiaries)



**HELECTOR**  
MEMBER OF ELLAKTOR GROUP