

Presentation of the MyReplast Industries Plant NextChem Business Strategy

12 June 2019

A view of Earth from space, showing the horizon and city lights at night. The text is overlaid on the image.

BECAUSE
THERE
IS NO
PLANET B



GREEN CHEMISTRY IS NOT A FLAGSHIP PROJECT

IT IS NOT
A
WINDOW
DRESSING

IT NEEDS
ENTREPRENEURS
&
INDUSTRIALISTS

IT NEEDS
SCALE
&
INDUSTRIALIZATION



IT NEEDS
END TO END
VALUE
CHAIN
APPROACH

INNOVATION IS NOT JUST R&D,
IT IS ABOUT CONNECTING DOTS

MAIRE TECNIMONT CONTRIBUTION TO GREEN ACCELERATION

**TECHNOLOGY AND
EXECUTION EXPERTISE**

SCOUTING & PIVOTING

INDUSTRIALIZING

COMMERCIALIZING

**ACCELERATE THE RAMP UP
OF THE INNOVATION**

**PORTFOLIO
MANAGEMENT**

**NATURAL HEDGE OF
INNOVATION VOLATILY**

ECOSYSTEM DRIVEN

**2-WAY FINANCIAL ENABLER: TO RAISE
FUNDS AND TO EMPLOY GREEN CAPITALS**

**THE INNOVATION
PLAYER OF CHOICE**



WHY MAIRE TECNIMONT

* Data are based on corporate analysis
** Completed

PETROCHEMICALS

30%

MARKET SHARE IN
POLYOLEFIN
PLANTS

50%

MARKET SHARE IN
LDPE
PLANTS

Since 1970



MORE THAN

200

POLYETHYLENE AND
POLYPROPYLENE
PLANTS **

FERTILIZERS

54%

MARKET SHARE IN
LICENSING UREA
PLANTS
TECHNOLOGY
(#1 worldwide)*

34%

MARKET SHARE IN
LICENSING UREA
GRANULATION
TECHNOLOGY
(#2 worldwide)*

Since 1924



172

AMMONIA AND
UREA PLANTS**

OIL&GAS REFINING



WELL RECOGNIZED LEADERSHIP
IN LICENSING HYDROGEN
TECHNOLOGY AND IN
LICENSING SULPHUR RECOVERY
AND TAIL GAS TREATMENT
TECHNOLOGY



WORLD CLASS TRACK RECORD
IN LARGE GAS TREATMENT
PLANTS AND REFINERY
PROCESS UNITS

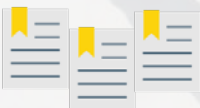
Since 1971



MORE THAN

250

HYDROGEN AND
SULPHUR RECOVERY
UNIT PROJECTS**



~1,300
Cumulated Patents

Strong commitment
to technology development

€50 MLN

INVESTED IN
INNOVATION

70

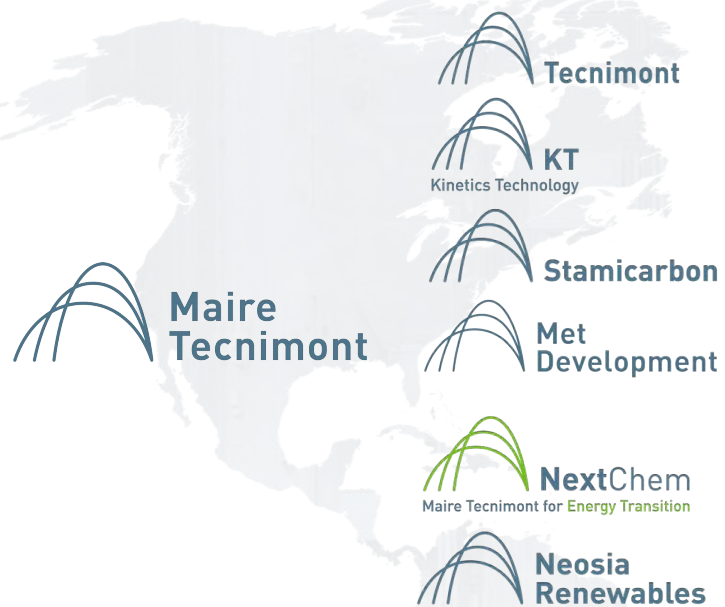
R&D
PROJECTS

In Green Acceleration
(last 5ys)



MAIRE TECNIMONT GROUP

OPERATING COMPANIES



HYDROCARBONS

GREEN ENERGY

PRESENCE IN THE WORLD

~9,300
EMPLOYEES &
PROFESSIONALS

50
OPERATING
COMPANIES

45
COUNTRIES

FY 2018 RESULTS

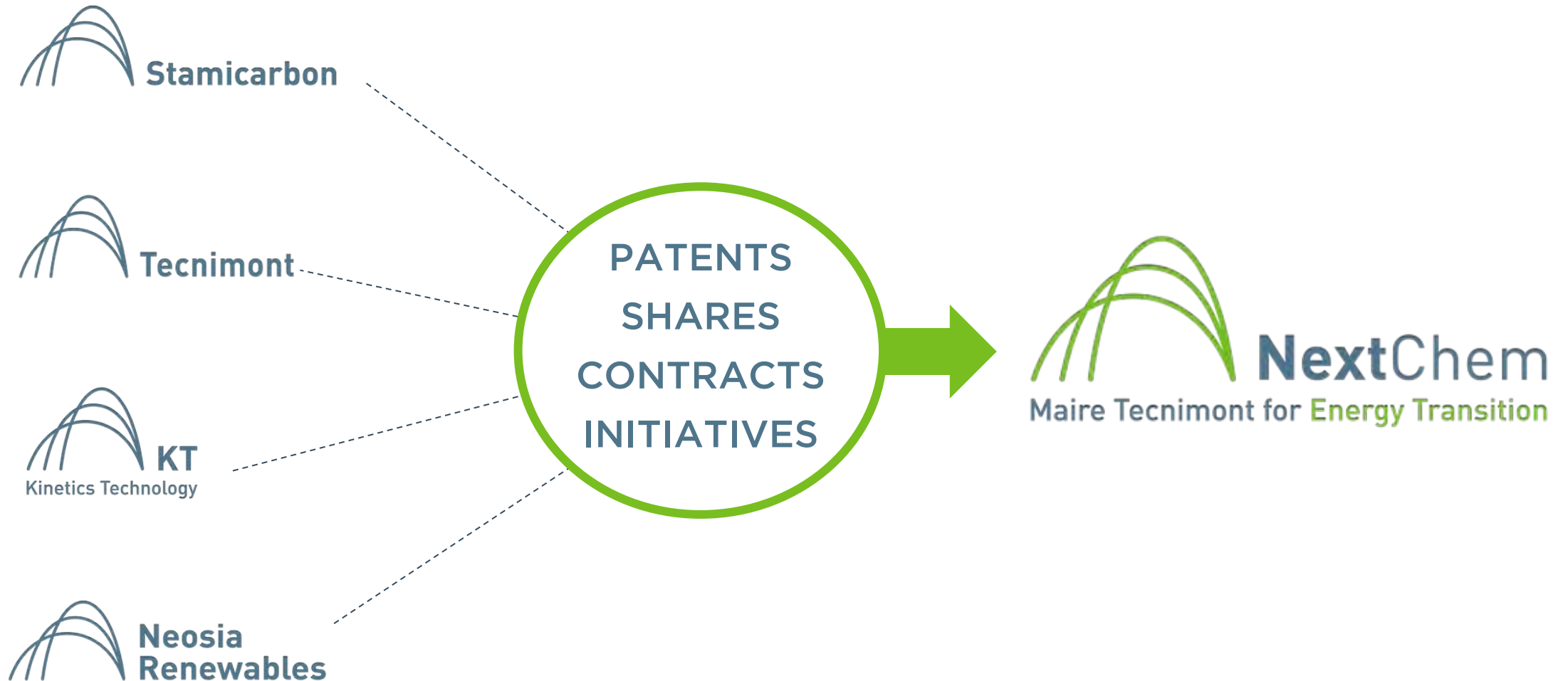
€3.6 BLN
REVENUES

€205 MLN
EBITDA

€6.6 BLN
BACKLOG



TRANSFER OF MAIRE TECNIMONT GREEN PERIMETER IN NEXTCHEM





NEXTCHEM AT A GLANCE

NEXTCHEM IS AN INDUSTRIAL PLAYER ALREADY PROFITABLE

8

**CONTROLLED
COMPANIES**



60

EMPLOYEES



€23MLN

NET WORTH





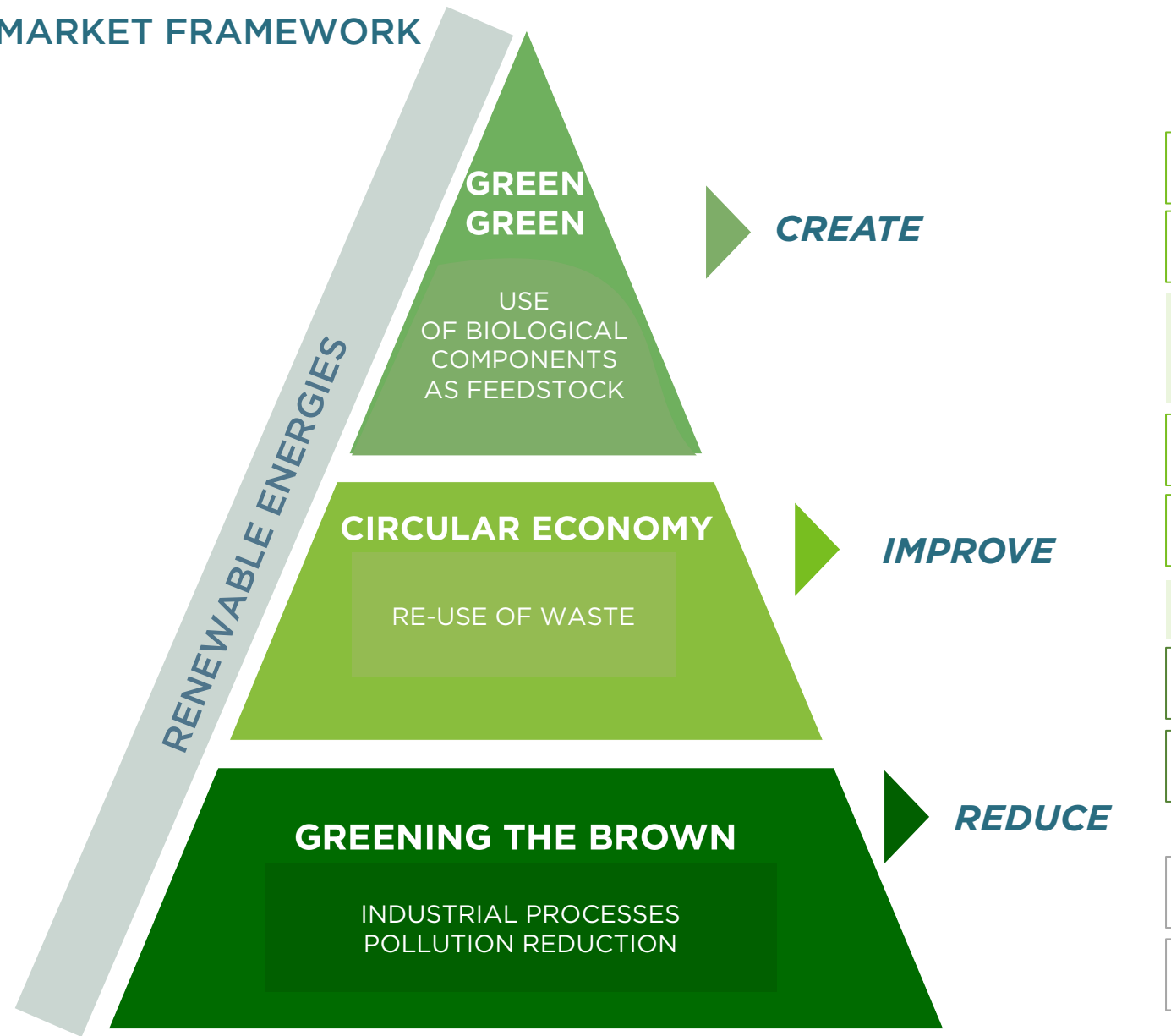
5 ENERGY TRANSITION MACRO TRENDS

NEW FEEDSTOCKS	<div></div> <div></div> <div></div>	Bio-feedstock as raw material Waste as feedstock
NEW PLASTICS	<div></div> <div></div> <div></div> <div></div>	Recycled No Fossil Feedstock
GAS EXPLOITATION	<div></div> <div></div> <div></div>	Gamechanger in the transport fuel Renewable natural gas
ELECTRIFICATION	<div></div> <div></div> <div></div> <div></div>	Renewable electricity as a feedstock Storage of renewable energy
CO ₂ CAPTURE	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	Zero emission Reutilization



AREAS OF NEXTCHEM ACTIVITY

MARKET FRAMEWORK



KEY INDUSTRIES

BIO-FUELS
BIO-POLYMERS
PLASTICS RECYCLING
WASTE TO CHEMICALAS/FUELS
ENERGY EFFICIENCY
CO ₂ REDUCTION
RES TO CHEMICALS
RES TO FUEL



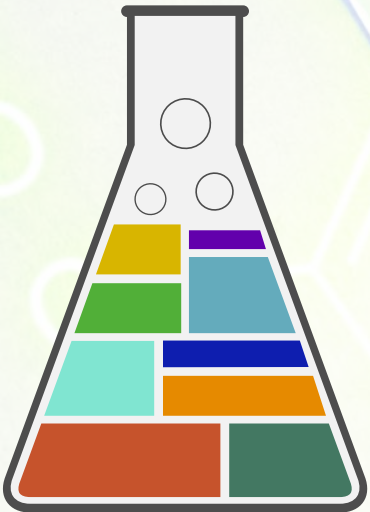
NEXTCHEM ADDRESSABLE MARKET

~40 BN

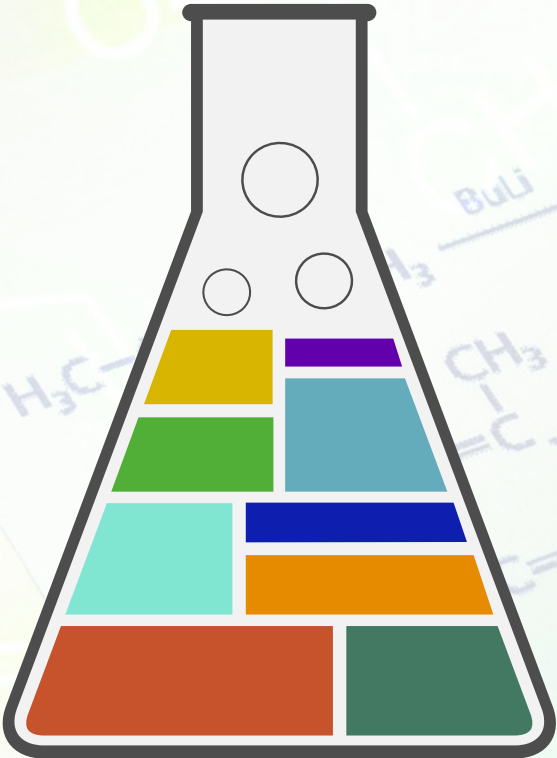
> €120 BN

CAGR 2018 - 2025

>15%



2018



2025

- | | | | |
|--|-------------------|--|----------------------------|
| | Fertilizers | | Biopolymers |
| | Biochemicals | | Solar CSP |
| | Enzymes | | 2G Biofuels |
| | Plastic recycling | | Carbon footprint reduction |
| | Other MSW | | |



NEXTCHEM MAIN INITIATIVES

DEVELOPMENT
TIMELINE

2019-2020

2021-2023

> 2023

GREENING
THE
BROWN



POWER TO
CHEMICALS

RENEWABLE ENERGY
TO CHEMICAL & FUELS

CIRCULAR
ECONOMY



RECYCLING

MECHANICAL RECYCLING

INTEGRATED RECYCLING
(MECHANICAL AND CHEMICAL)



WASTE TO FUELS
AND CHEMICALS

FUELS

CHEMICALS

GREEN
GREEN



BIO-FUELS

1ST GENERATION

2ND GENERATION TO 3RD GENERATION

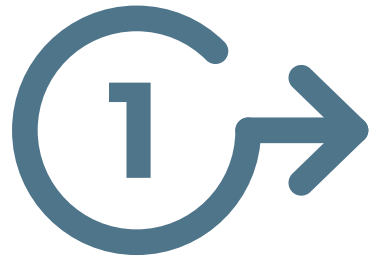


BIO-POLYMERS

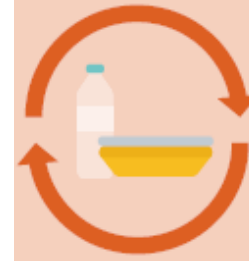
HIGH VALUE APPLICATIONS



NEW PLASTIC ECONOMY: THREE CONVERGENT STRATEGIES TO DRIVE THE PROGRESSION



WASTE PLASTIC AS NEW
FEED-STOCK THROUGH
MECHANICAL AND
CHEMICAL RECYCLING



REDESIGN PLASTIC
PRODUCTS TO MAXIMIZE
RE-USE AND RECYCLING



VIRGIN PLASTIC FROM
RENEWABLE FEEDSTOCK

NEW BIO-MOLECULES

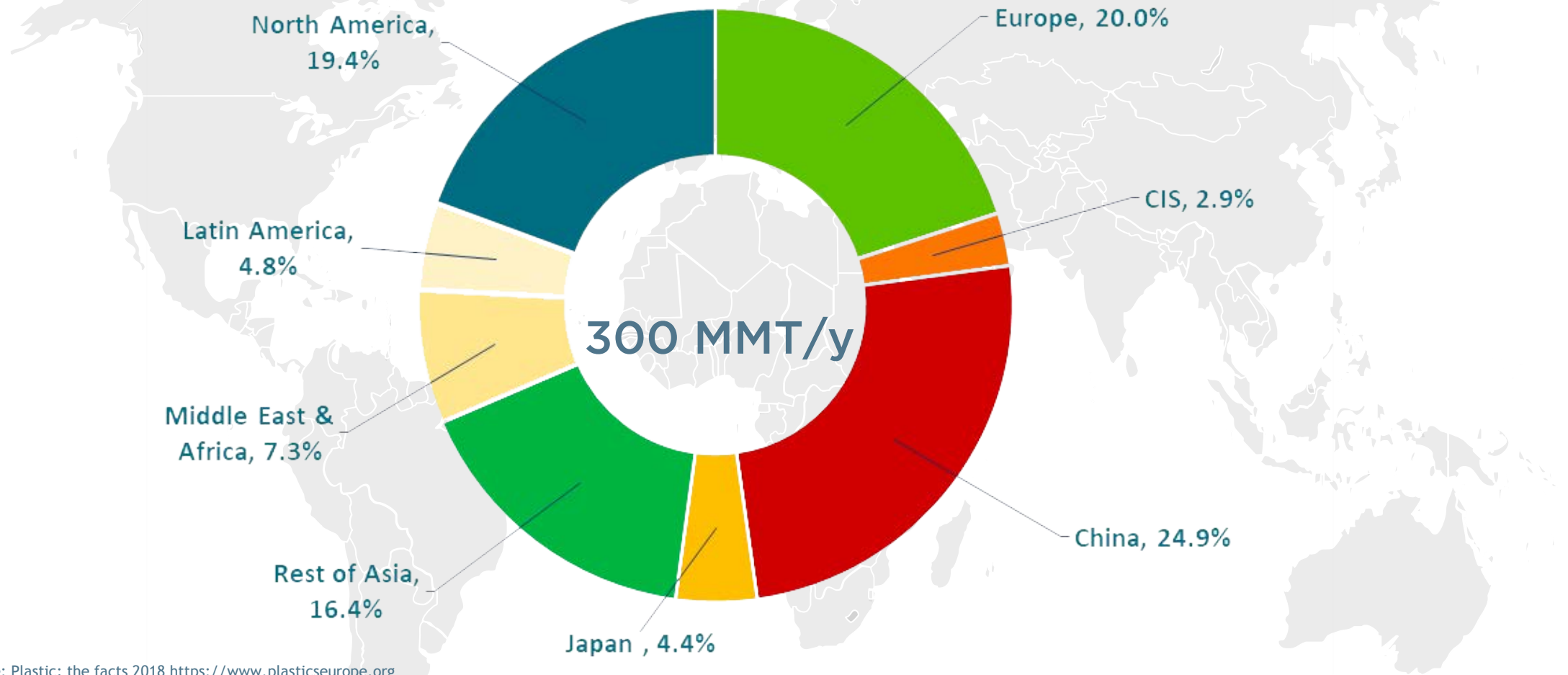


**NEW
PLASTIC
ECONOMY**



PLASTIC MATERIAL PRODUCTION

Europe imports significantly more of its virgin plastic production
Recycling is the way to use waste in order to reduce resource dependency



Source: Plastic; the facts 2018 <https://www.plasticseurope.org>



INTEGRATED TECHNOLOGY FROM SORTING TO COMPOUNDING



ADVANCED SORTING

Sorts all ranges of plastic materials, being PP, HDPE and LDPE, followed by PS, ABS and PA the major polymers of interest



HIGH EFFICIENCY PROCESS

Mechanical Sorting, Grinding, Washing and Color Separation

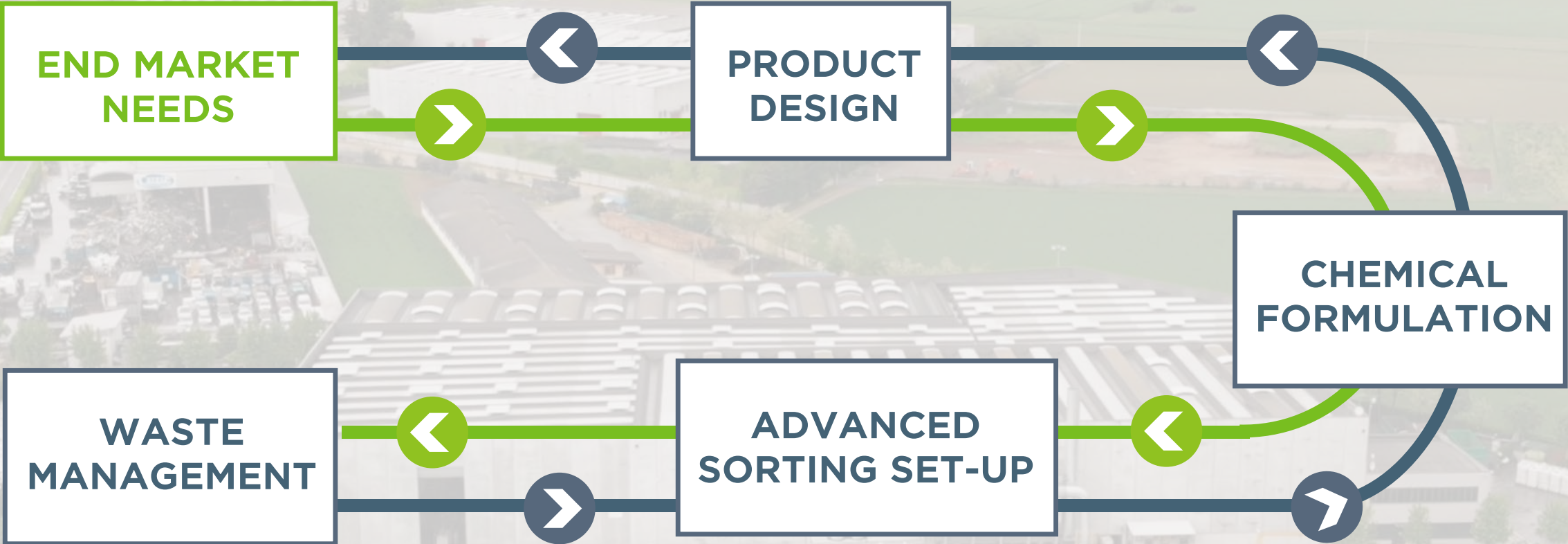


UPCYCLING PROCESS

Finishing plastic flakes to be upgraded into higher quality material by extrusion and compounding technologies



REVERSE APPROACH: FROM PRODUCT DEVELOPMENT TO WASTE MANAGEMENT



 **DESIGN**

 **PRODUCTS**



KEY FIGURES MYREPLAST PLANT

95%

SELECTION
EFFICIENCY



100k m³

Landfill Saved
per YEAR



40Kta

PRODUCTION
CAPACITY



1MLN PEOPLE

Plastic consumption
per YEAR



8.5Kta

CO₂
REDUCTION






270k

Oil barrells saved
per YEAR



BREAKING NEWS

ENI AND MAIRE TECNIMONT SIGN AGREEMENT TO INTRODUCE NEW TECHNOLOGY THAT TRANSFORMS NON-RECYCLABLE WASTE INTO HYDROGEN AND METHANOL


eni.com   **@eni** 

Eni and NextChem - [@MaireTecnimont's](#) green chemistry subsidiary - will assess the technical and financial impact of the new technology, which could be implemented at Eni's industrial sites in Italy [#circulareconomy](#) bit.ly/2MyM5m2

 Traduci il Tweet

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 **NEXTCHEM WILL CONVERT SOLID URBAN WASTE AND NON-RECYCLABLE PLASTIC THROUGH GASIFICATION**

 **ENI IS CO-DEVELOPER. THIS WILL ALSO PROVIDE A TANGIBLE EXAMPLE OF THE CIRCULAR ECONOMY**

Eni and Maire Tecnimont to introduce new technology: from non-recyclable waste to hydrogen and methanol

Forbes

Trasformare i rifiuti in nuova energia. Eni e Maire Tecnimont hanno la soluzione

di **Forbes.it**
La redazione di Forbes.



(Shutterstock)

Trasformare i rifiuti in nuova energia, idrogeno e metanolo. È l'obiettivo congiunto di Eni e Maire Tecnimont (attraverso la propria controllata per la chimica verde NextChem), che hanno sottoscritto un accordo di partnership per lo studio e realizzazione di una tecnologia di conversione, tramite gassificazione ad alta

la Repubblica  

Economia Finanza  Segui su   

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HOME MACROECONOMIA **FINANZA** LAVORO DIRITTI E CONSUMI AFFARI E FINANZA OSSERVA ITALIA CALCOLATORI GLOSSARIO LISTINO PORTAFOGLIO

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ENI con Maire Tecnimont per conversione rifiuti non riciclabili in idrogeno e metanolo

Accordo di partnership attraverso la controllata di Maire Tecnimont per la chimica verde NextChem

10 giugno 2019 - 08:04

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(Teleborsa) - Trasformare i rifiuti in nuova energia, idrogeno e metanolo. È l'obiettivo congiunto di ENI e Maire Tecnimont (attraverso la propria controllata per la chimica verde NextChem), che hanno sottoscritto un accordo di partnership per lo studio e realizzazione di una tecnologia di conversione, tramite gassificazione ad alta temperatura e a bassissimo impatto ambientale, di rifiuti solidi urbani e plastiche non riciclabili per la produzione di idrogeno e metanolo.

NextChem valuteranno sinergicamente dal punto di vista tecnico ed economico l'applicazione della tecnologia, che potrebbe essere realizzata in siti industriali di ENI in Italia. In particolare, il Gruppo del cane a sei ha già manifestato l'interesse a valutare il progetto "Waste to Hydrogen" nella bioraffineria di Venezia, a Porto Marghera, e già avviato lo studio di fattibilità in collaborazione con NextChem.

