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IMECAL

Working for a circular bioeconomy
at local and regional level

26 June 2018

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**URBAN BIOREFINERY: ADVANCED BIOETHANOL,
BIOPRODUCTS AND BIOENERGY FROM ORGANIC
MUNICIPAL SOLID WASTE**

INDUSTRIAS MECÁNICAS ALCUDIA S.A.

- Metal mechanical company funded in 1979.
- High technological capacity.
- Experience in petrochemical and refinery sectors.
- 25.000 m² of facilities. 180 employees.
- Semi-industrial plant PERSEO Bioethanol®.



About 100 Mt of municipal biowaste is generated every year in Europe.

Only about a third (30 Mt) of this was separately collected and composted and/or digested ([European Compost Network \(ECN\)](#))

Waste Framework Directive

Demand of sustainable and competitive biowaste treatment processes

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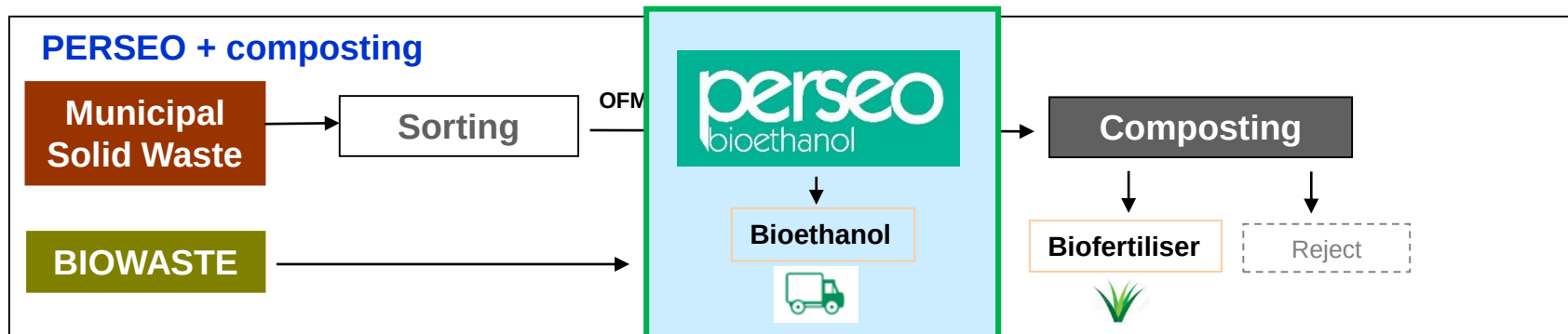
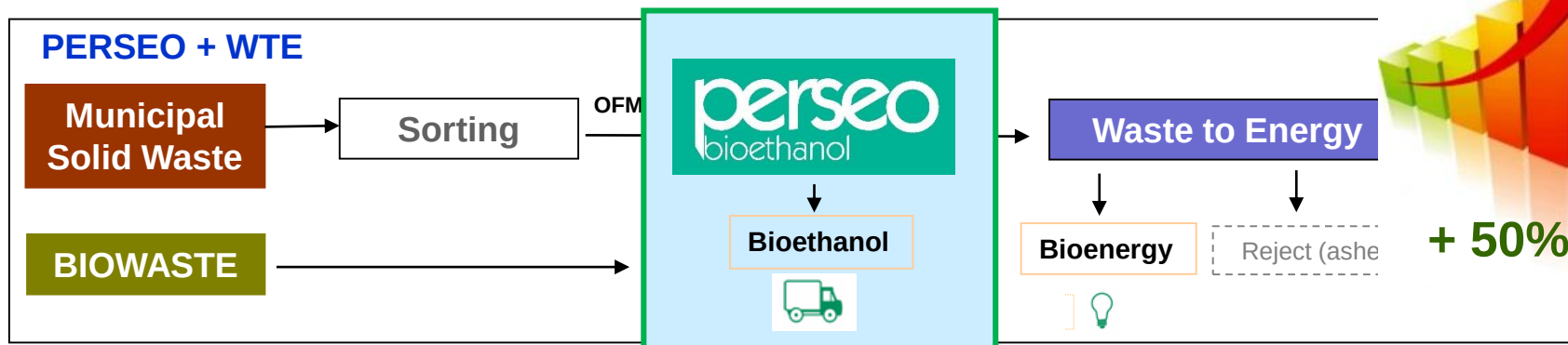
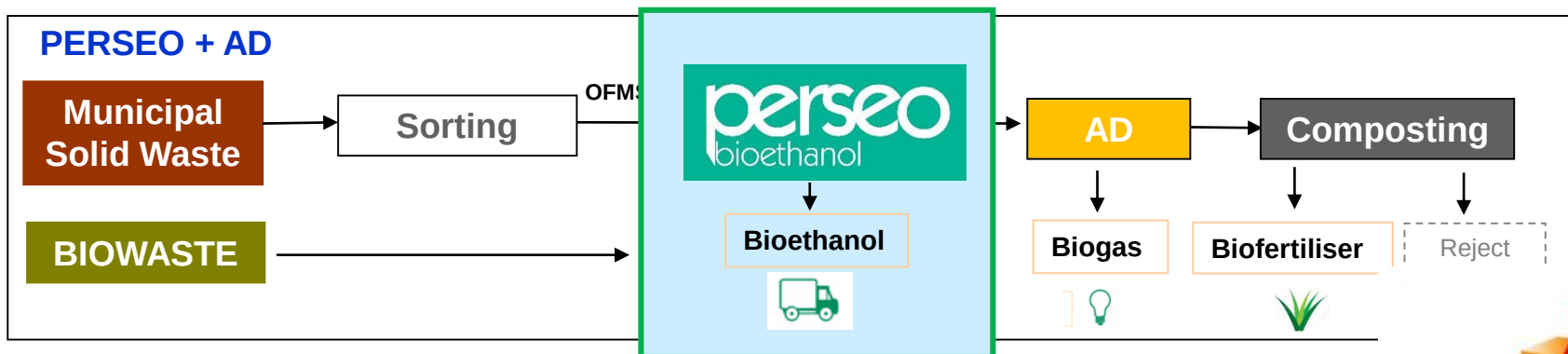


Biotechnological process:
Transform the organic fraction of municipal waste into
advanced bioethanol, bioproducts and bioenergy.



PERSEO Bioethanol® Process

*From sorted OFMSW



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✓ **The Process is Real, Feasible, Replicable and Profitable.**

✓ **Proven Pre-industrial process.**

Pilot plant 25 t/d from 2007.

Technology:

- Simple biotechnological process.
- Compatible with the existing MSW treatment facilities.
- Better economical results than current MSWT

International projects:





Demonstration of an integrated innovative biorefinery for the transformation of Municipal Solid Waste (MSW) into new BioBased products (GA 745785).

**Project Budget: 15 M€ (Grant 10.9 M€).
4 years project (6/2017 – 5/2021)**

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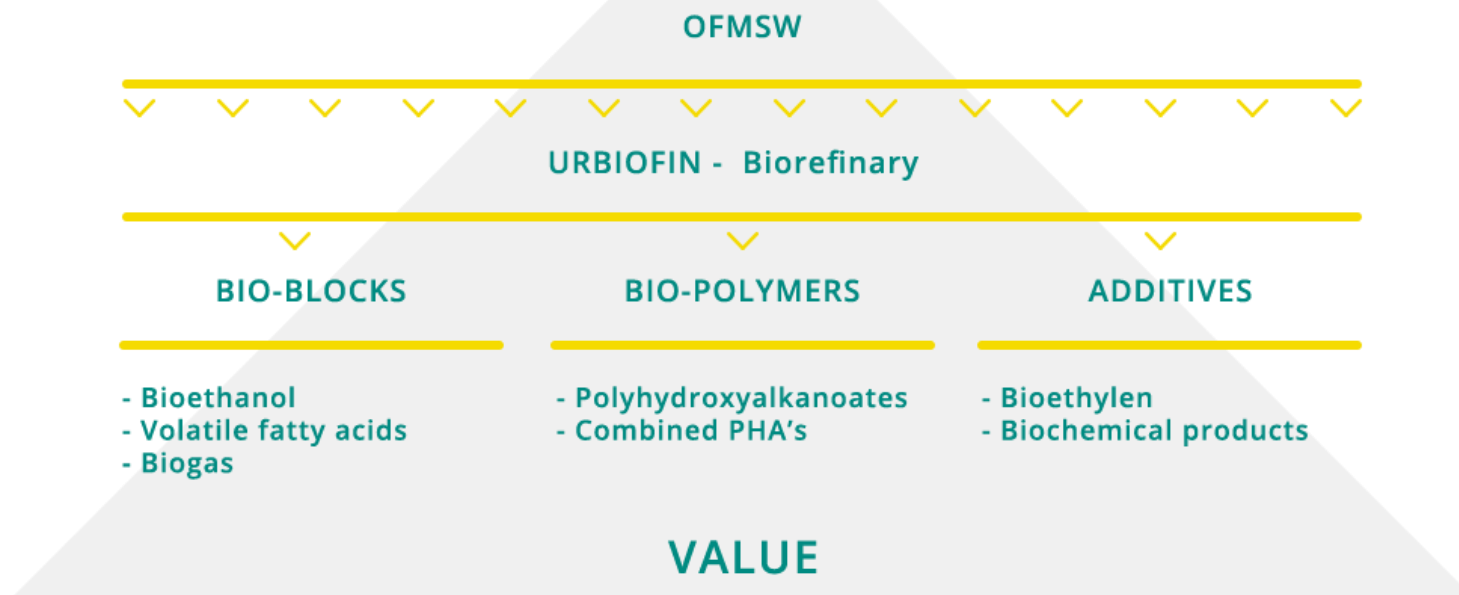
Landfill
Composting
Anaerobic Digestion

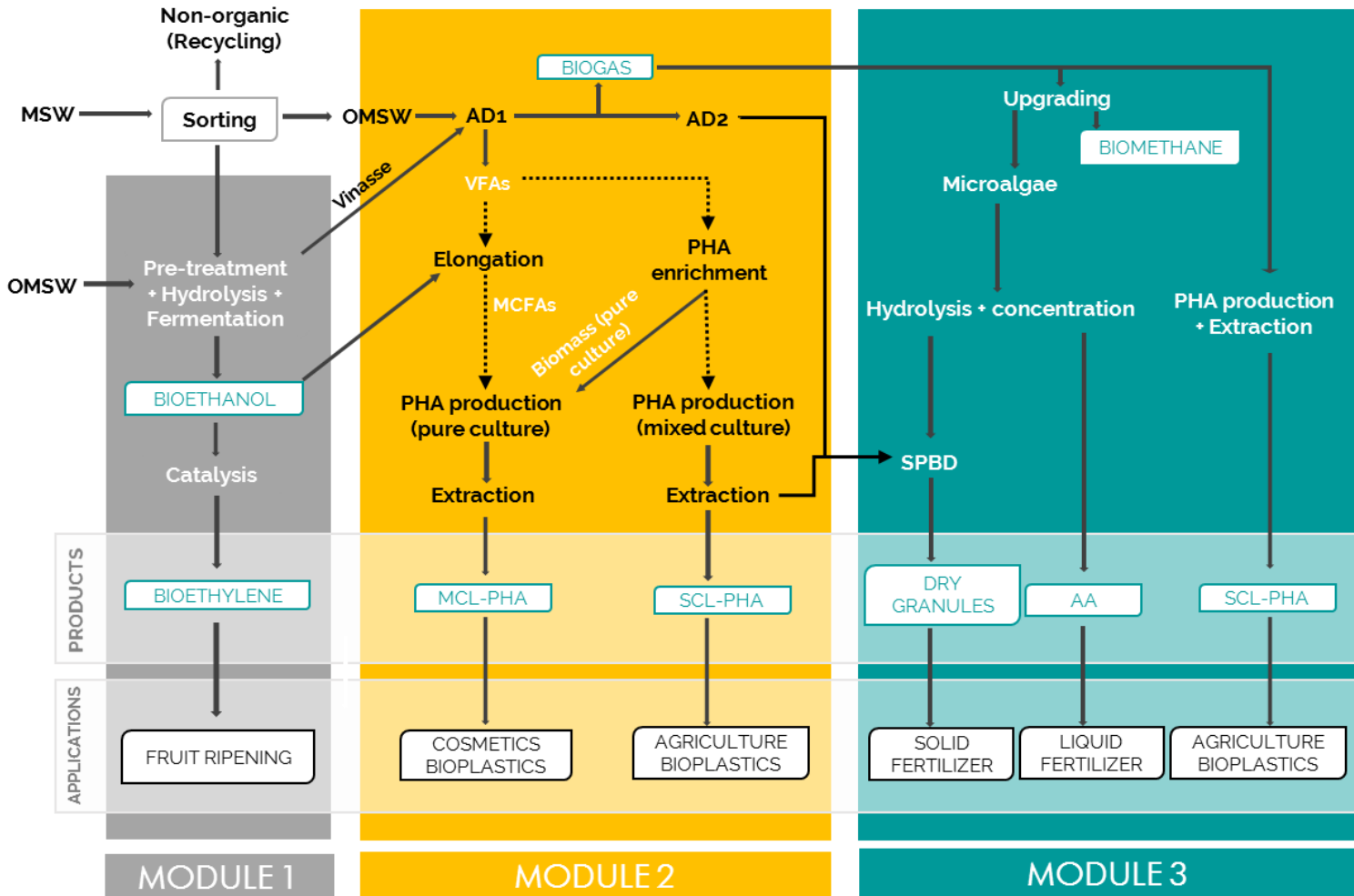


**Most sustainable
and profitable
MSW management
model**



Biorefinery





Benefits of an urban biorefinery:



Profitability

Higher annual benefits,
when compared to current
MSW technologies



Versatility

Versatility to treat different
fractions of waste to obtain
maximum added value and
profitability



ZERO WASTE

Improvement of the performance
through the **use of by-products
generated** in their own
processes – **landfill diversion**



Bioresources

**Reduction of fossil
resources**
dependence in energy
and products.



Circular Economy

Evolution towards the
path of the bioeconomy
defined by the EU.

Waste is a resource:
Circular economy.



Sustainability

Boost competitiveness,
foster sustainable
economic growth and
generate new jobs

Thank you for your attention!!



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<http://www.imecal.com/perseo>