



Plastic Circularity Multiplier

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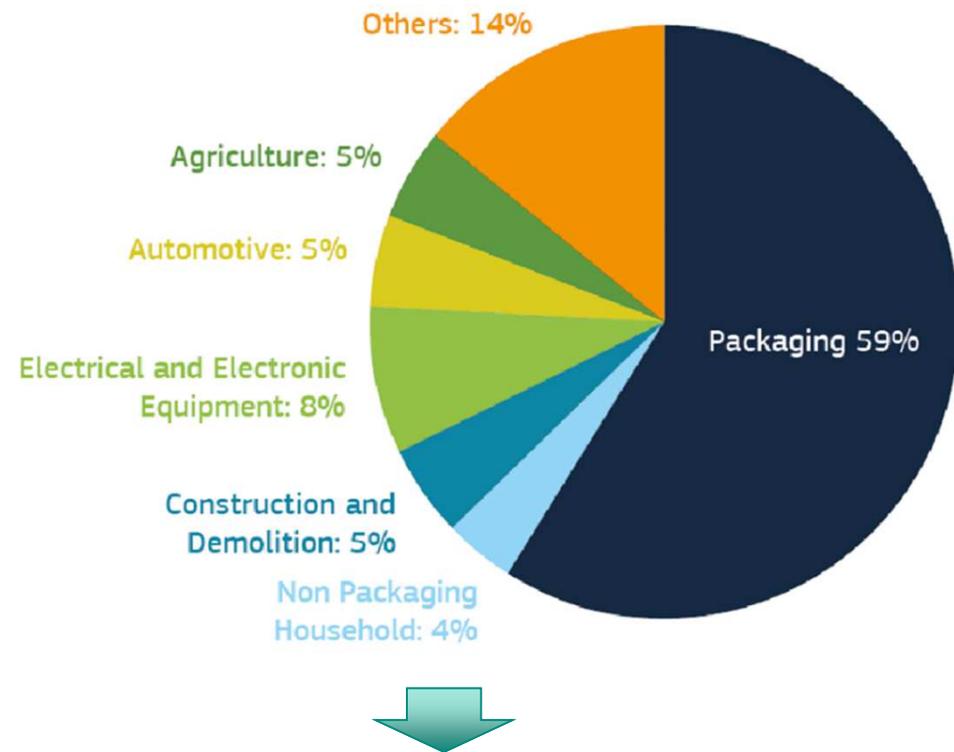
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PROBLEM

- 27.1 million tonnes/year
- Only 31.1% is recycled.
- Economic impact = EUR 11.09 billion
- Environmental impact = 24.99 MT CO₂ heating of 1M houses during 94 years



low quantities collected
low quality (mixed)
low added-value applications

SOLUTION-PLASTICIRCLE

COLLECTION - Develop innovative "smart containers" to increase collection rates of plastic packaging waste.

TRANSPORT - Create cost-effective waste transport system, connected with a cloud platform.

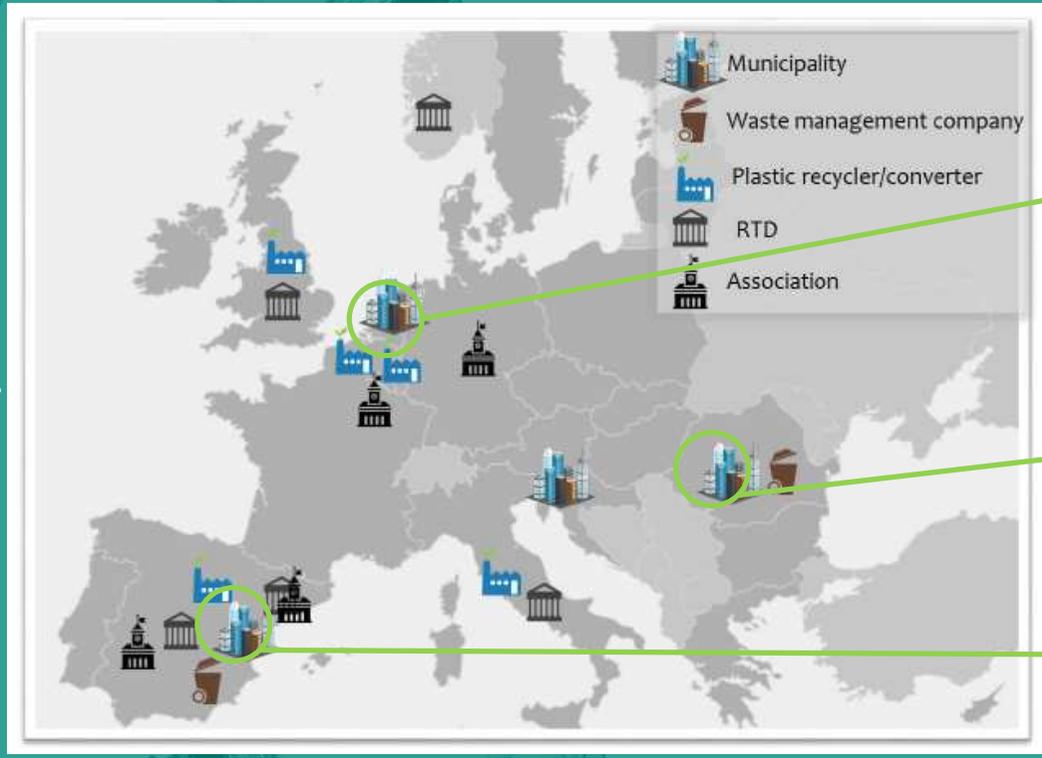
SORTING - Improve plastic sorting using innovative optical technologies.

RECYCLING - Develop new value-added, recycled plastic products



THE PARTNERS

- Research institutes
- Trade associations
- Recyclers
- Waste management
- Municipalities



Utrecht



Alba Iulia



Valencia



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COLLECTION

- Smart containers
- Compensation to citizens



Image: Waste collection bin in Valencia; Credit: ITENE



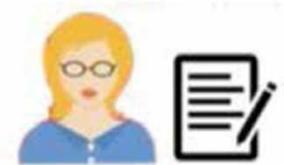
Smart container



Identification



Registration



Characterisation Protocol



Compensation





TRANSPORT

- Filling level measurement
- Route optimisation/traceability



Image: Refuse transport vehicle in Valencia; Credit: SAV



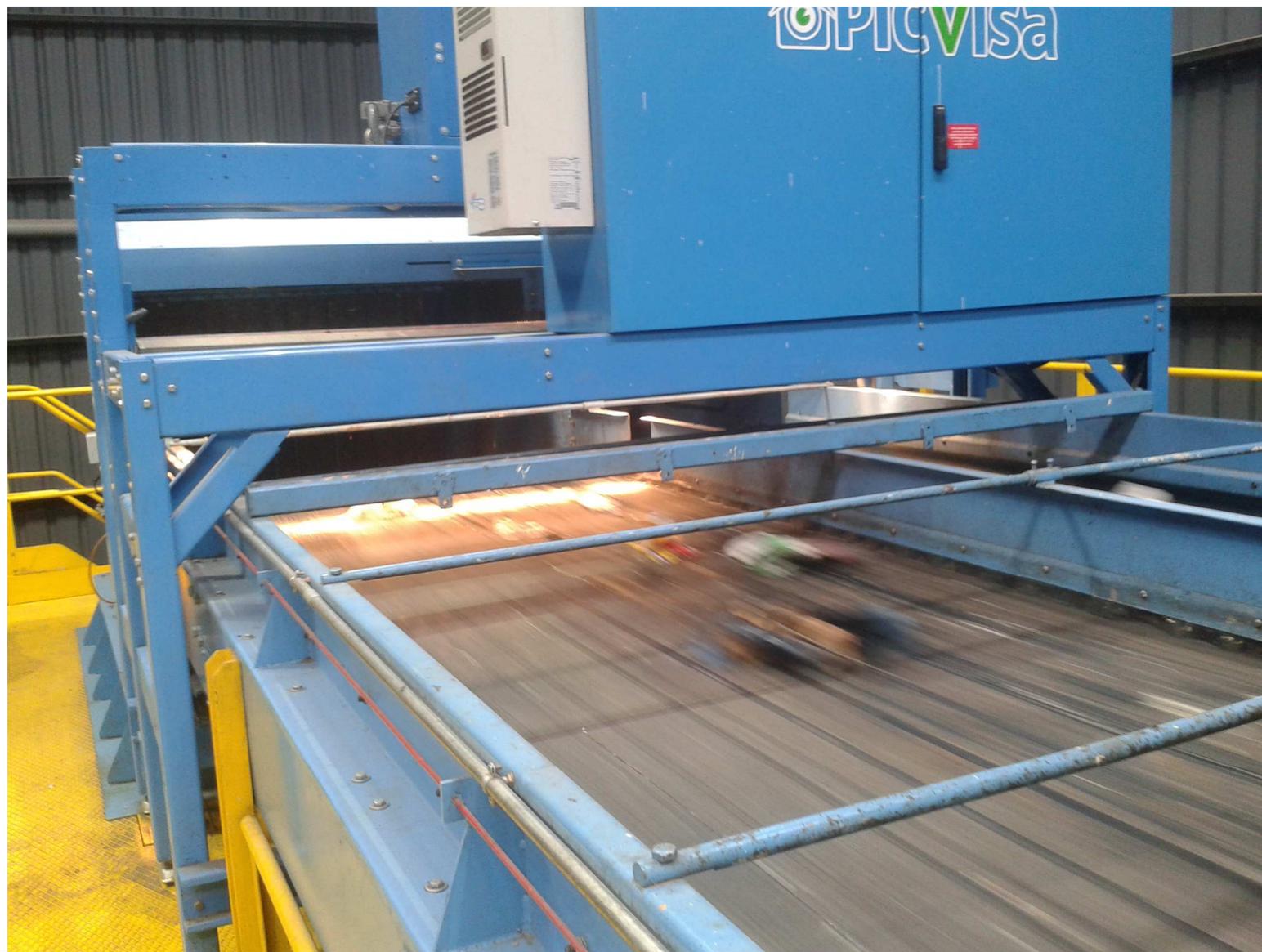
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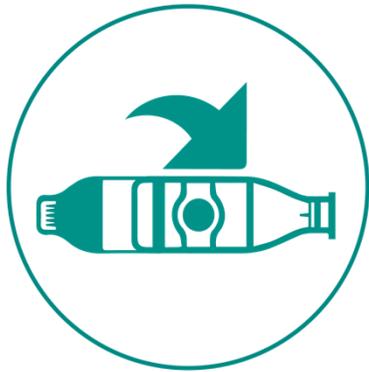


SORTING

- New optical technologies
- Film-stabilising conveyor

Image: Plastics sorting facility; Credit: PicVisa





RECYCLING

- foam boards
- automotive parts
- bituminous roofing membranes
- garbage bags
- roofing felts
- urban furniture/fences



Credit: ITENE



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Image: Alba Iulia

THE PILOT CITIES

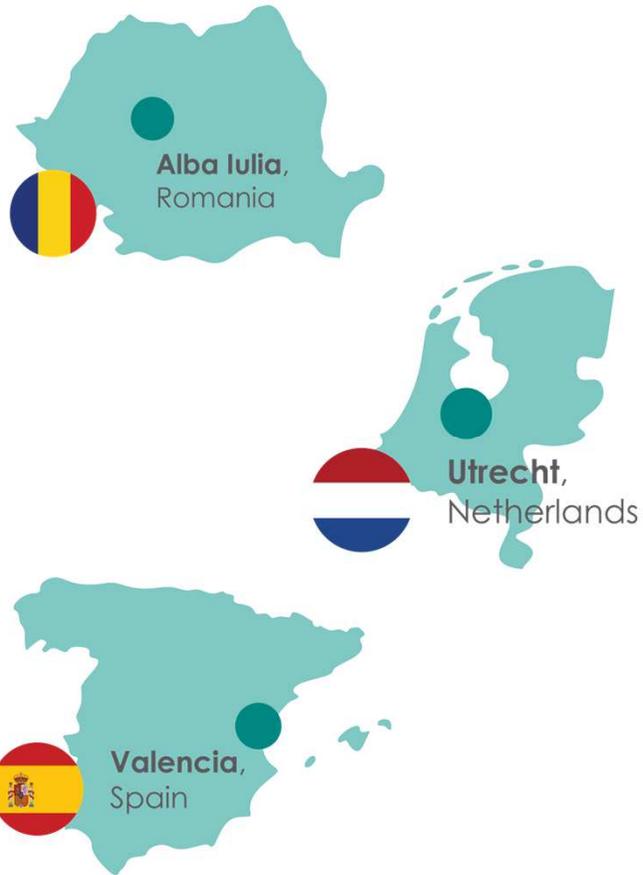


Image: Valencia



Image: Utrecht





THE PILOT CITIES

- **Alba Iulia**, Romania (pop. 74,000); waste collected annually is 600+ kg per household; pilot for total of 600-800 citizens
- **Utrecht**, Netherlands (pop. 345,000); pilot area of 2,000 households + 40 underground containers
- **Valencia**, Spain (pop. 800,000); pilot within San Marcelino neighbourhood with 9,960 people



BENEFITS

Technological

New collection, transport and sorting technologies
Innovative recycled products

Social and economic

New business/ companies
More recycled materials in EU market

Environmental

Reduced landfill and incineration of waste
Reduced use of virgin material



WHERE DO WE STAND?

M1

M41

M48

Achieved results:

- Collection and transport – Technologies tested in pilots (Valencia and Utrecht)
- Sorting – Prototype ready
- Recycling – lab materials ready

Coming months:

- Pilot – closing pilin Alba Iulia
- Sorting – Final prototype
- Recycling – Final products





GET INVOLVED WITH PLASTICIRCLE

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[Project Video](#)



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