

BIODEGRADABLE BIOPLASTICS: A VALUABLE TOOL FOR CIRCULAR ECONOMY

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BRUSSELS



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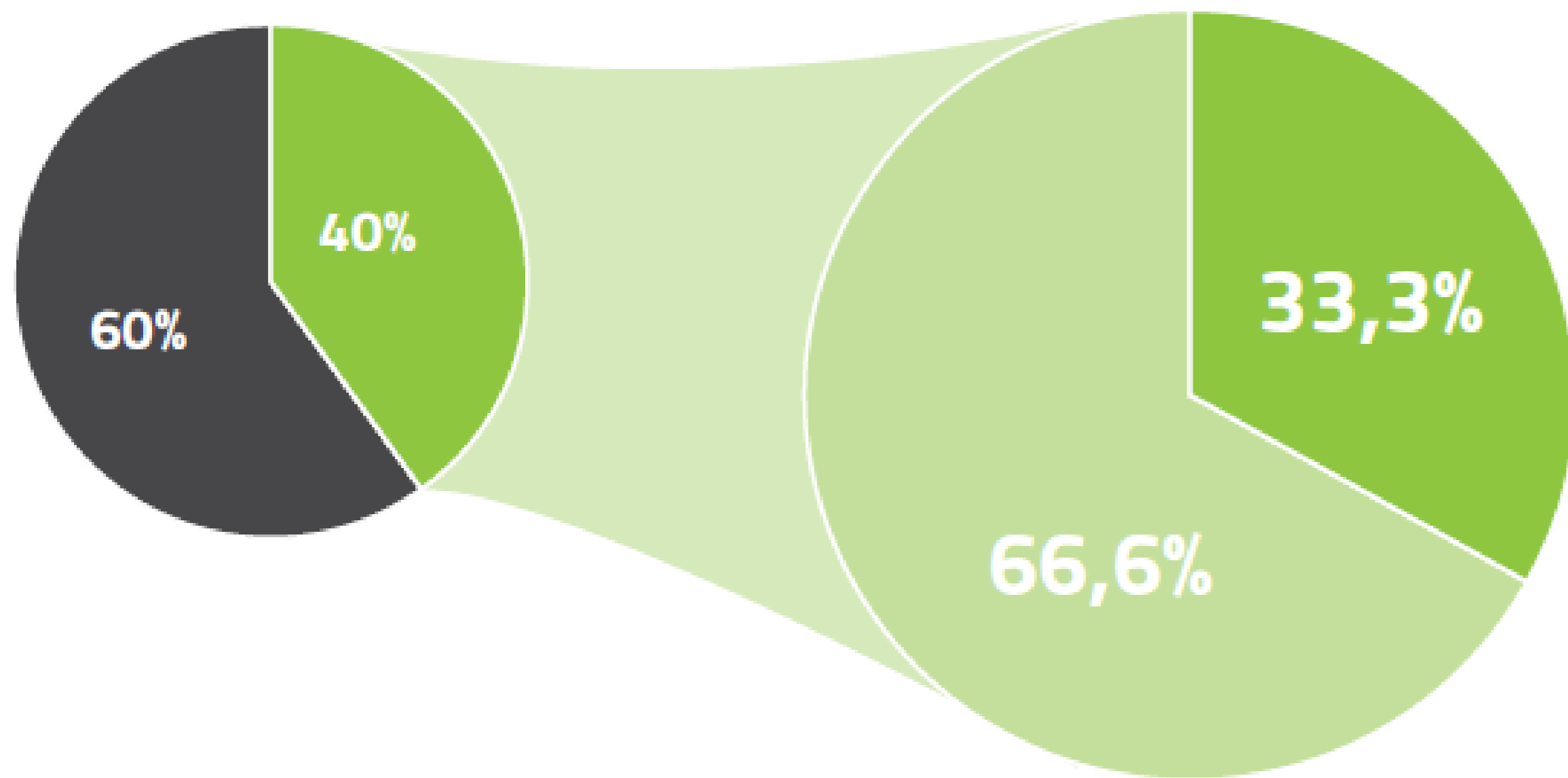
Novamont




BIOWASTE IN EUROPE


TOTAL WASTE

TOTAL BIOWASTE



 potential biowaste in MSW EU28 96 Mt pa

 regular waste

 utilized potential biowaste

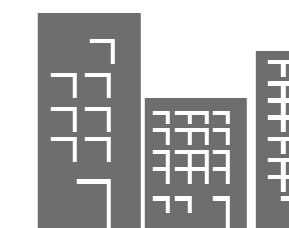
 non-utilized potential biowaste

POTENTIAL DIRECT JOBS IN THE BIOWASTE SECTOR



RURAL AREAS

1 JOB / 1380t biowaste



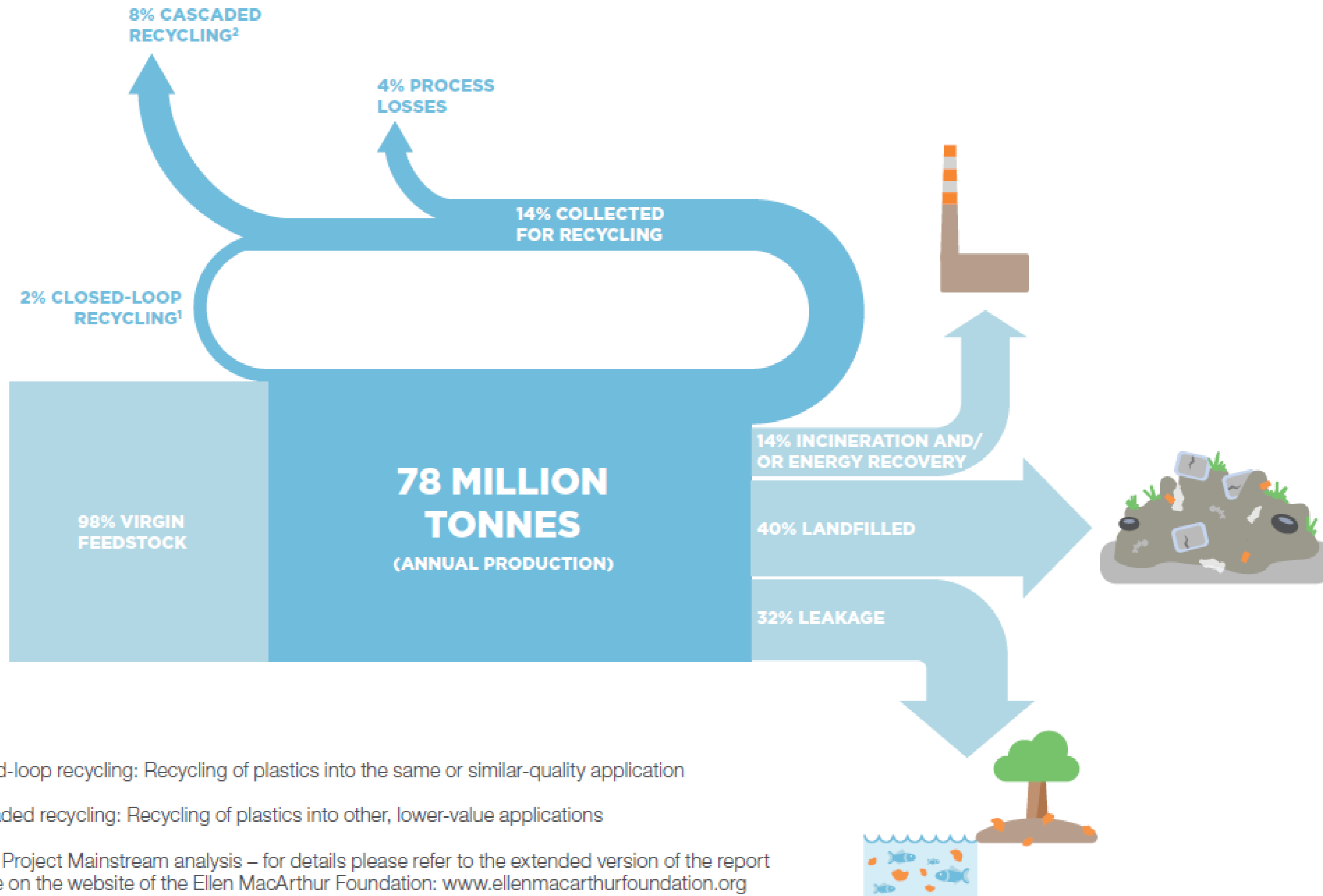
URBAN AREAS

1 JOB / 4500t biowaste



GLOBAL FLOWS OF PLASTIC PACKAGING MATERIALS

ELLEN MACARTHUR FOUNDATION 2016 (2013 DATA)





THE PIONEERING ACTIVITIES ON BIODEGRADABLE SHOPPING AND WASTE BAGS IS AN IMPORTANT CASE STUDY FOR SUSTAINABLE DEVELOPMENT AND CULTURAL GROWTH

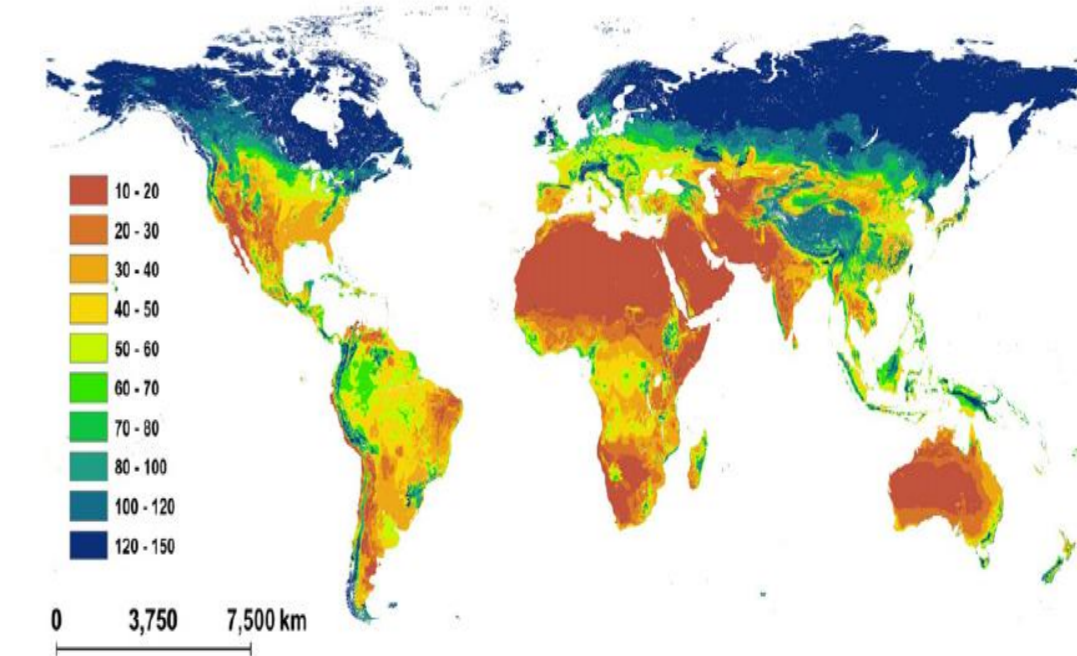
ORGANIC WASTE IN LANDFILL



DEVELOPMENT OF ORGANIC WASTE SEPARATE COLLECTION SYSTEMS THROUGH BIOPLASTICS



COMPOST AS DRIVER FOR SOILS FERTILITY



SOIL C STOCKS OF THE WORLD'S TOPSOIL (0-0.3 m) IN TONNE C PER HECTARE (source: Budiman Minasny *et al.*, "Soil carbon 4 per mille", *Geoderma*, Volume 292, 15 April 2017, Pages 59-86)

- Redesign entire application sectors
- Affect the way raw materials are produced through integration of entire agro-industrial chains
- Modify use and disposal of products
- Extend the experimental activity of research labs to local areas
- Define reliable standards



- TRANSFORMING WORLD-FIRST TECHNOLOGIES INTO FLAGSHIPS
- BIOREFINERIES INTENDED AS BIOECONOMY INFRASTRUCTURES, INTERCONNECTED AMONG THEM AND CONNECTED WITH THE LOCAL AREAS

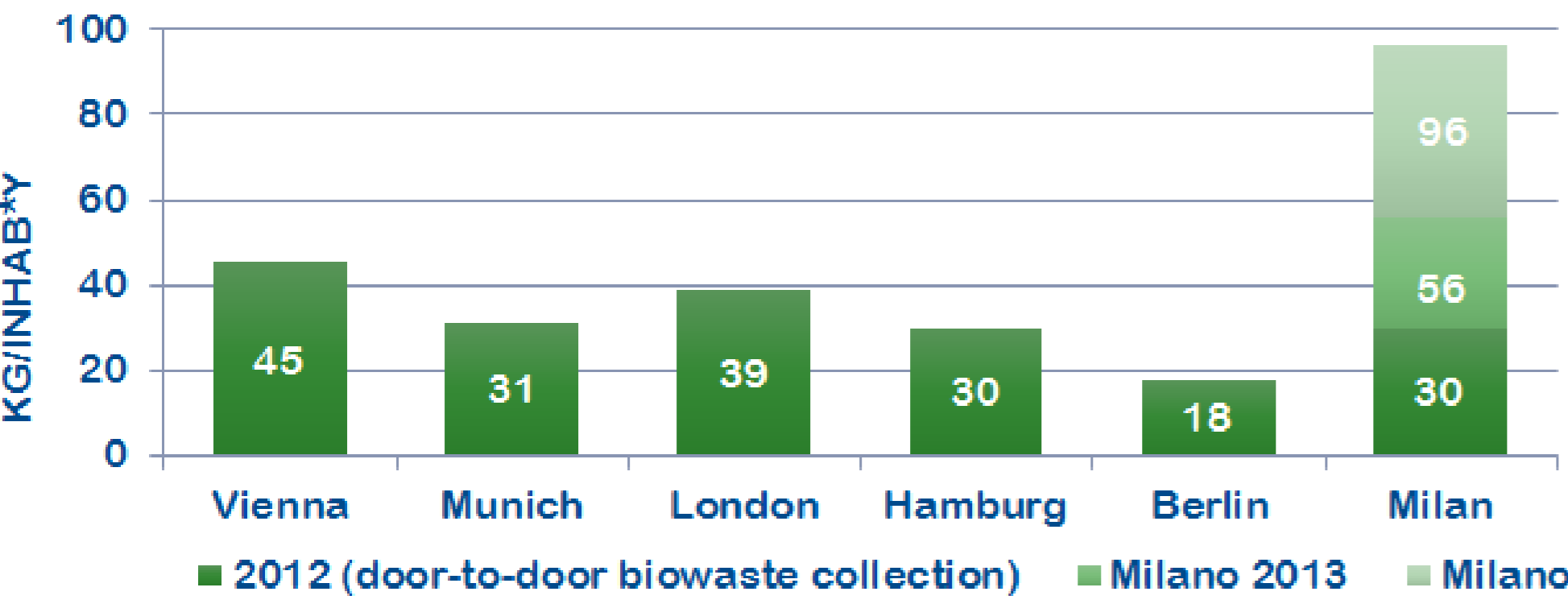
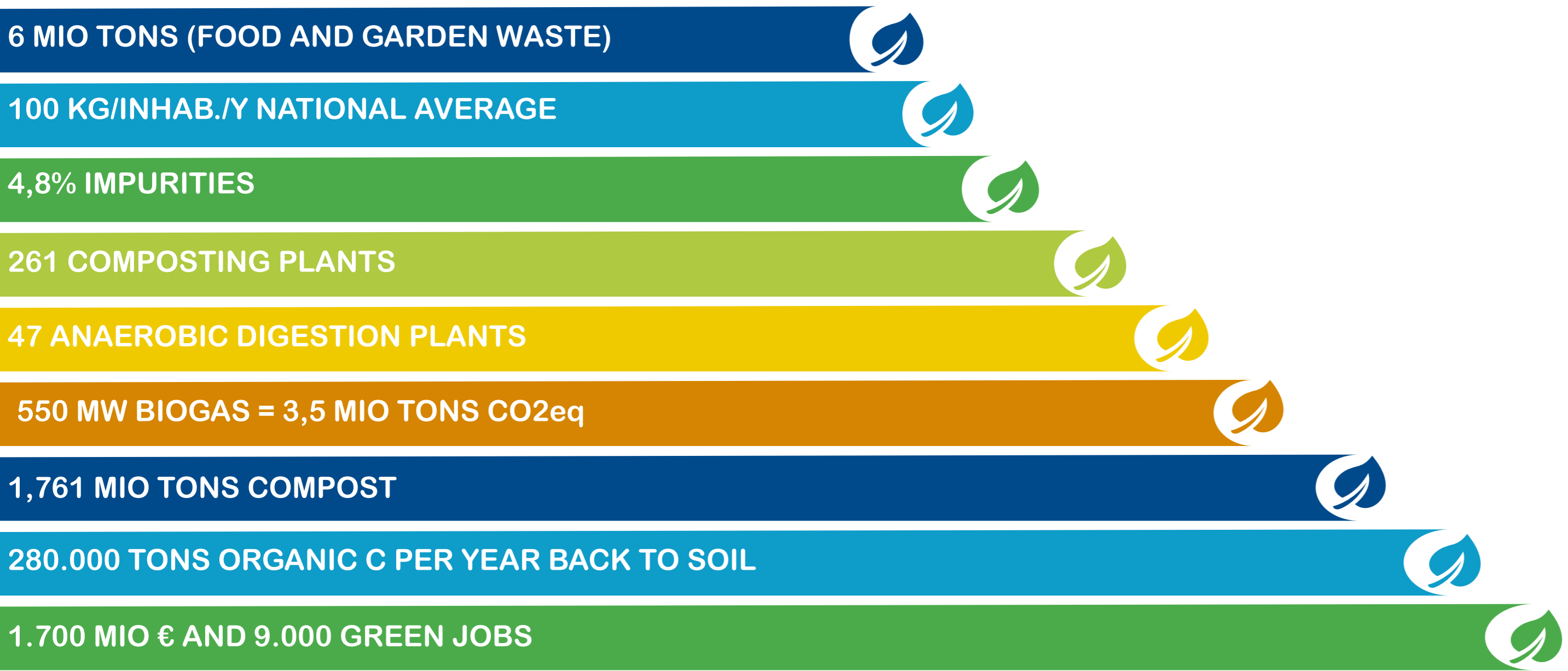
- THROUGH THE VALORISATION OF MARGINAL LAND AND NOT IN COMPETITION WITH FOOD PRODUCTION
- INTEGRATED IN THE LOCAL AREAS AND CONNECTED WITH THE BIOECONOMY INFRASTRUCTURES

- DESIGNED TO TACKLE REAL SOCIETAL CHALLENGES
- ELEMENTS OF A SYSTEM WHICH PROVIDE CONCRETE SOLUTIONS TO PROBLEMS GOING FAR BEYOND THE PRODUCT ITSELF



THE CREATION OF VALUE

ORGANIC WASTE SEPARATELY COLLECTED IN ITALY 2016 – CIC DATA 2016 AND THE CASE STUDY OF MILAN

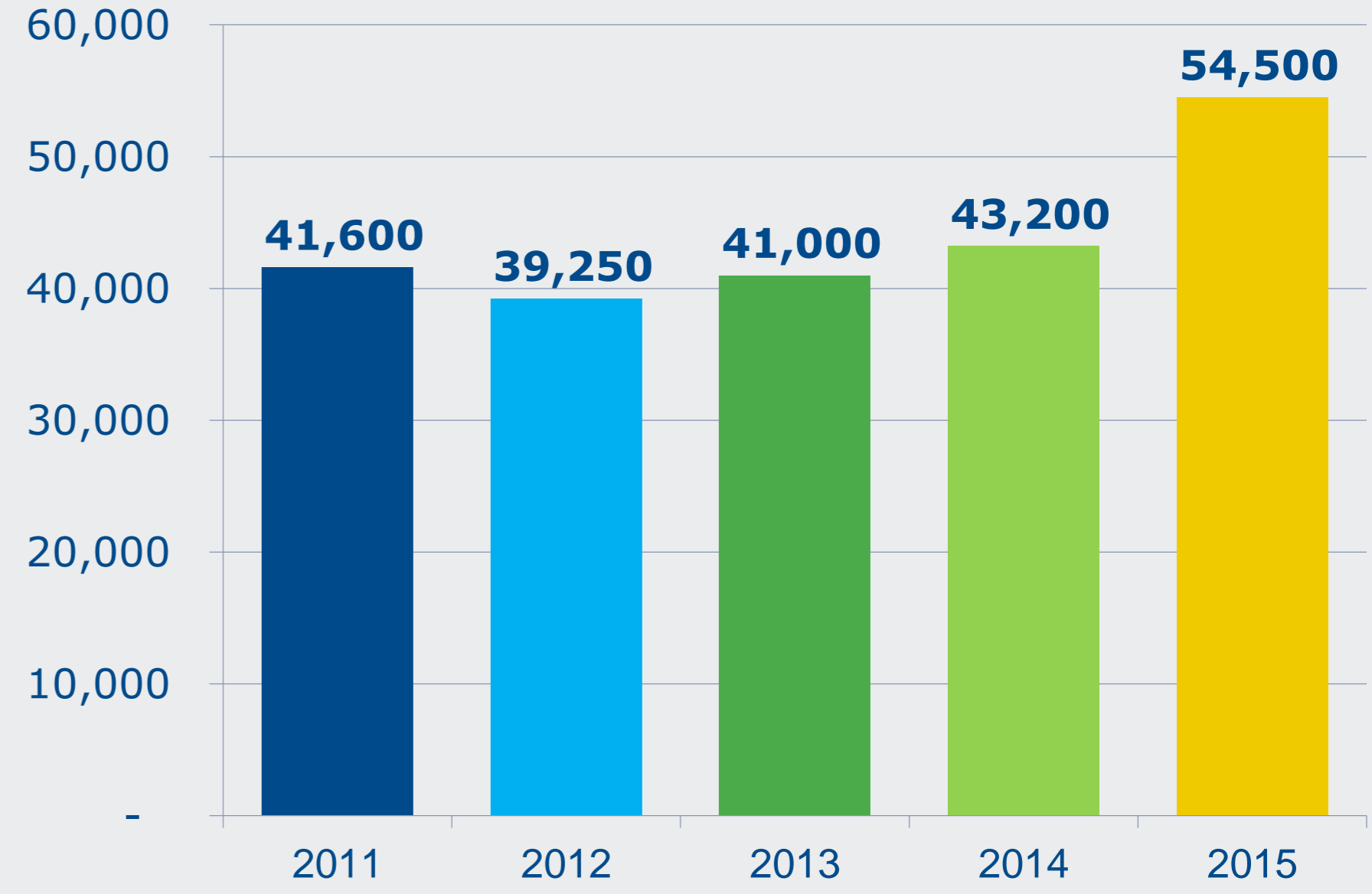


FOOD WASTE COLLECTIONS:
100 KG/INHAB*Y
OVERALL SOURCE SEPARATION RATE: 54%
NR. 1 IN EUROPE

THE ITALIAN VALUE CHAIN OF COMPOSTABLE POLYMERS

- 210 operators
- 2.000 employee dedicated
- 475 milioni euros
- 4 Flagship plants
- An integrated value chain for bioplastics and biochemicals (~500ML Euros investment)

EVOLUTION OF THE NATIONAL PRODUCTION OF COMPOSTABLE MANUFACTS (ton/y)



- Italian carrier bags market: 50% non-compliant carrier bags on the market
- **1.000 tons** of bioplastics = creation of 60 new jobs which means 100.000 potential jobs in the European Union



In the context of the Plastics Strategy Novamont calls on the European Commission to:

- Align the key measures proposed by the **Plastic Strategy** to the legislative measures that will be adopted as a result of the current EU's trilogue on the **Waste Package**
- Continue to develop **European and international standards**: the standards help to verify claims about bio-based products (e.g. biodegradability, bio-based content, recyclability, and sustainability)
- **Support bio-based, biodegradable and compostable plastics** where environmentally beneficial from a life-cycle perspective, by promoting their use through economic instruments or improvement of market conditions for such material
- Include **organic recycling** among the Strategy's building blocks
- **Support research to diversify the feedstock** used for the production of plastics

"The challenge of our millennium is in the balance between the technical means that humanity possesses and the wisdom in how we will make use of them"

UMBERTO COLOMBO

THANKS FOR YOUR ATTENTION

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