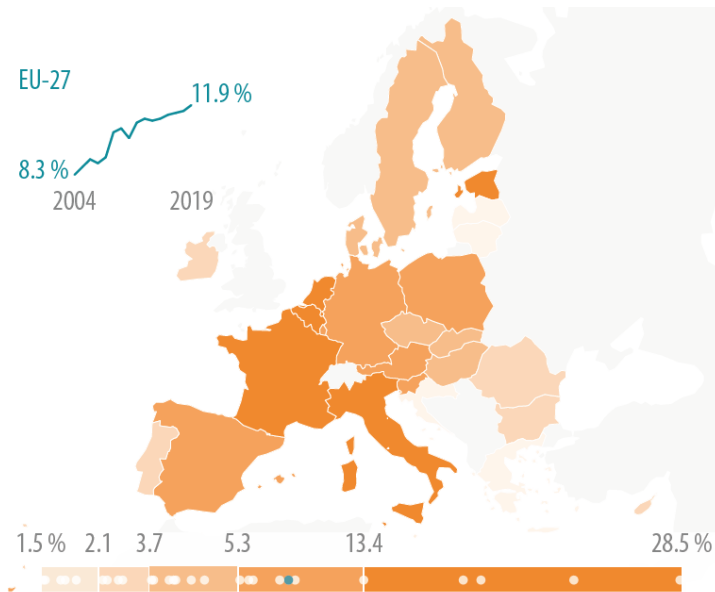


EU CIRCULAR ECONOMY & BIOECONOMY IN NUMBERS



Circular material use rate (% , 2019)

Recycling rates

🎯 EU targets

| | | |
|-------------------|--------|--------------|
| Construction | 88 % | 🎯 70 % |
| Packaging | 66.3 % | 🎯 70 % |
| All waste | 56 % | |
| Municipal | 47.3 % | 🎯 60 % |
| Plastic packaging | 41.5 % | 🎯 55 % |
| e-waste | 38.9 % | 🎯 55/70/80 % |

2030 targets, except construction (2020) and e-waste (2018 onwards) with different targets depending on the category.

[European Parliament](#). Living in the EU: Circular Economy



614 billion euro of EU added value (4,7% of the EU-27 GDP)

17.5 million employees (9% of the EU-27 labour force)

up to 95% emission savings from agricultural residues upcycling

2.2 trillion euro of turnover

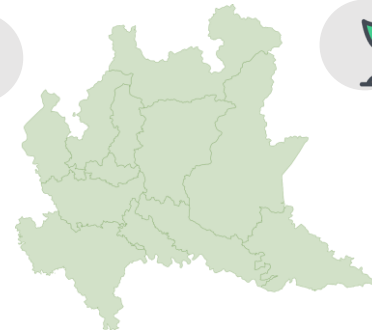
9 billion euro for bioeconomy investments

[European Commission](#). Value of the EU bioeconomy – the latest figures

43,000 employees



200 companies enhancing second-generation **agri-food by-products** to obtain biobased products



50 billion euro of turnover



500 million euro industry's invested in R&D activities 2014-2020

Gatto F. et al, 2021, [Sustainability](#)

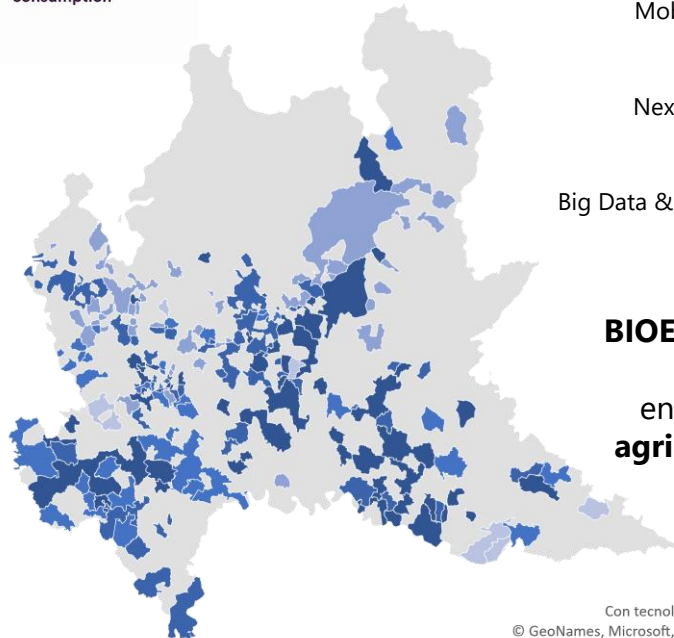


ARTIFICIAL INTELLIGENCE IN LOWERING THE ENVIRONMENTAL FOOTPRINT

THE TECHNOLOGICAL EVOLUTION OF THE PRIMARY SECTOR

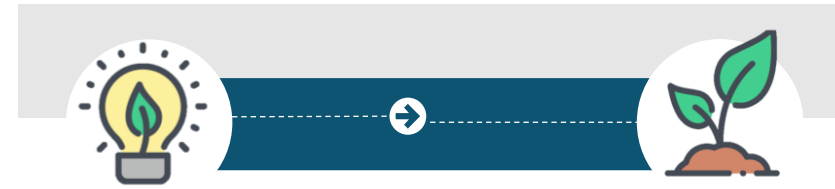


- Agro and bio-based food and feed
- Bio-based chemicals and pharmaceuticals
- Biofuels and bio-based electricity
- Biopolymers and bioplastics (including bio-based textiles)
- Manufacturing of wood and paper



Con tecnologia Bing
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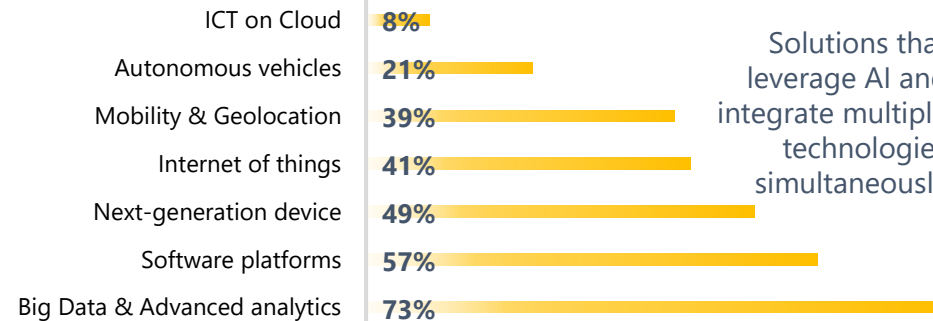
Gatto F. et al, 2021, [Sustainability](#)



Global smart agriculture market value 3.5 billion euro (turnover)

Italia smart agriculture market value 100 million euro (turnover) 2,5% of global value

SMART FARMING TREND IN ITALY



Solutions that leverage AI and integrate multiple technologies simultaneously



48% Land's mapping / crops monitoring



42% Field activities control equipment



35% Precision farming

BIOECONOMY IN LOMBARDY BY APPLICATION

enhancing second-generation **agri-food by-products** to obtain biobased products



Regione Lombardia
Cluster Tecnologici Lombardi