SPRING

Italian Circular Bioeconomy Cluster

INTRODUCTION TO THE BIOECONOMY IN ITALY: CHALLENGES AND PERSPECTIVES

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Director

SPRING Cluster

SPRING is the Italian circular bioeconomy cluster

Founded in 2014 in Italy

SPRING's **mission** is to build interconnections between different sectors of the bioeconomy, helping to address environmental, social and economic challenges with a systemic and multidisciplinary approach.

We work to *make the circular bioeconomy happen*

SPRING national network

+171 members

Geographical distribution:
47% in the North of Italy
32% in the Centre of Italy
21% in the South of Italy
+ 7 international members

Categories:

- SPECIALIZED SERVICES
- RESEARCH
- BANKING AND FINANCE
- AGRICULTURE AND FORESTRY
- REGIONAL CLUSTERS
- INDUSTRY
- ASSOCIATIONS
- UTILITIES

SPRING international network

Memorandum of Understanding

- 5 MoU signed with EU Clusters/organizations
- 2 MoU signed with extra-EU Clusters/organizations

European Bioeconomy Clusters Alliance

- SPRING is the promoter and co-founder along with other 13 clusters

European BioBased Industries Consortium (BIC)

- Full industry member of BIC in the SME Cluster category

9 European projects

European Commission

Circular Bio-based Europe Joint Undertaking

EBCA European Bioeconomy Clusters Alliance

European Cluster Collaboration Platform

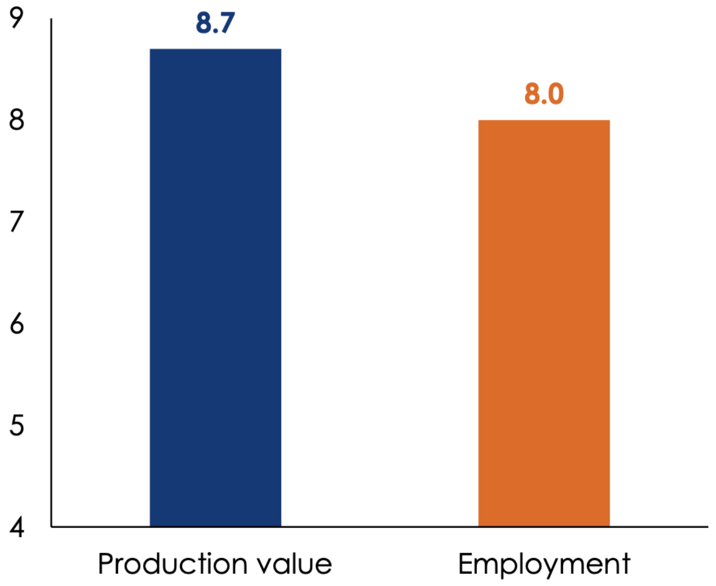
Bio-based Industries Consortium

BIOECONOMY IN EUROPE

The Bioeconomy in the EU27: more than EUR 3,000 billion in 2024

- **For the first time** the **value of the Bioeconomy for the EU27** has been estimated
- In 2024 the value of the European Bioeconomy's output is estimated at **EUR 3,042 billion, employing over 17 million people**

Weight of the EU27 Bioeconomy on the total EU27 economy (%, 2024)



Source: Intesa Sanpaolo elaborations from various sources

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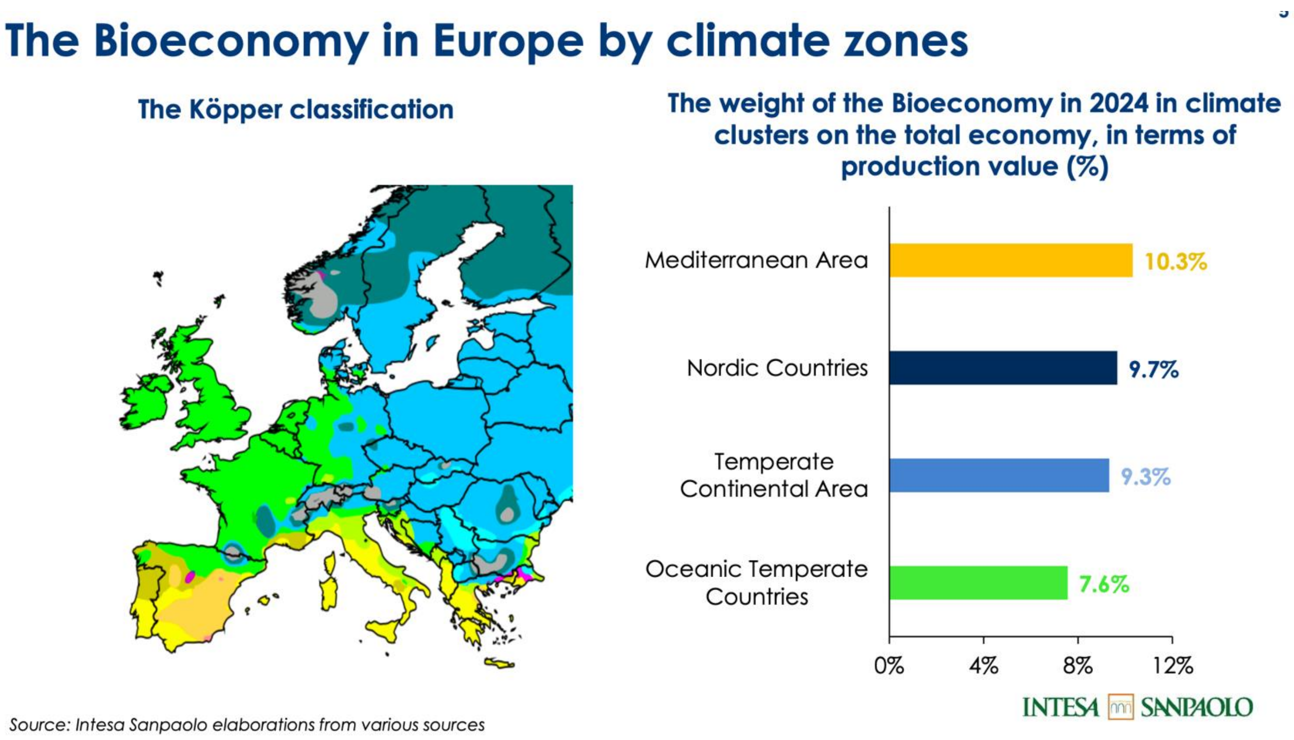
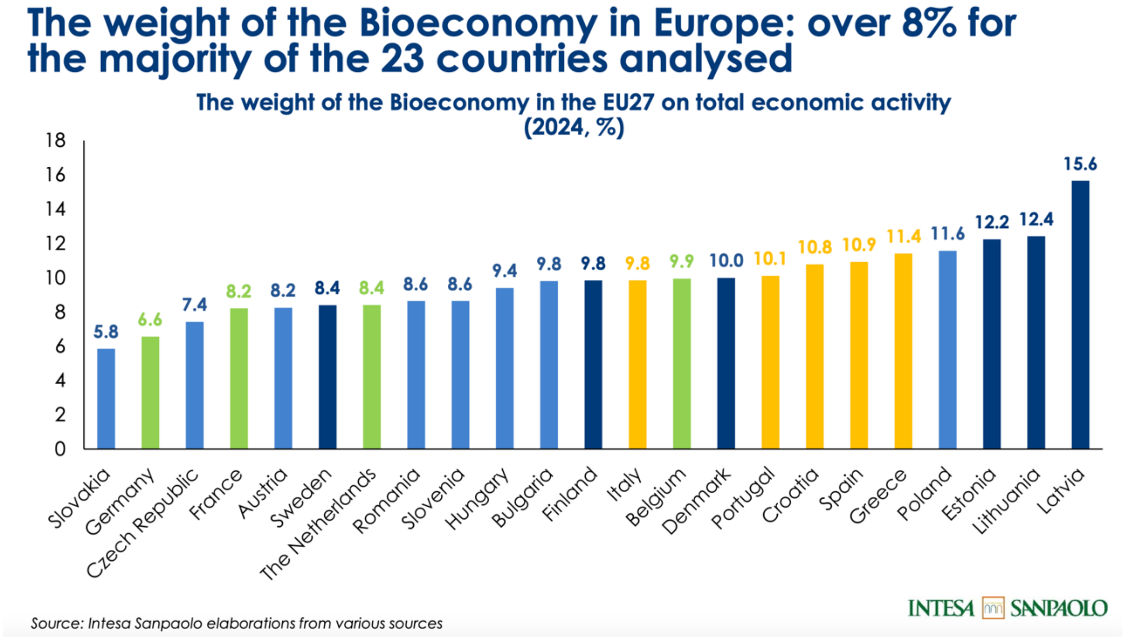
BIOECONOMY IN EUROPE





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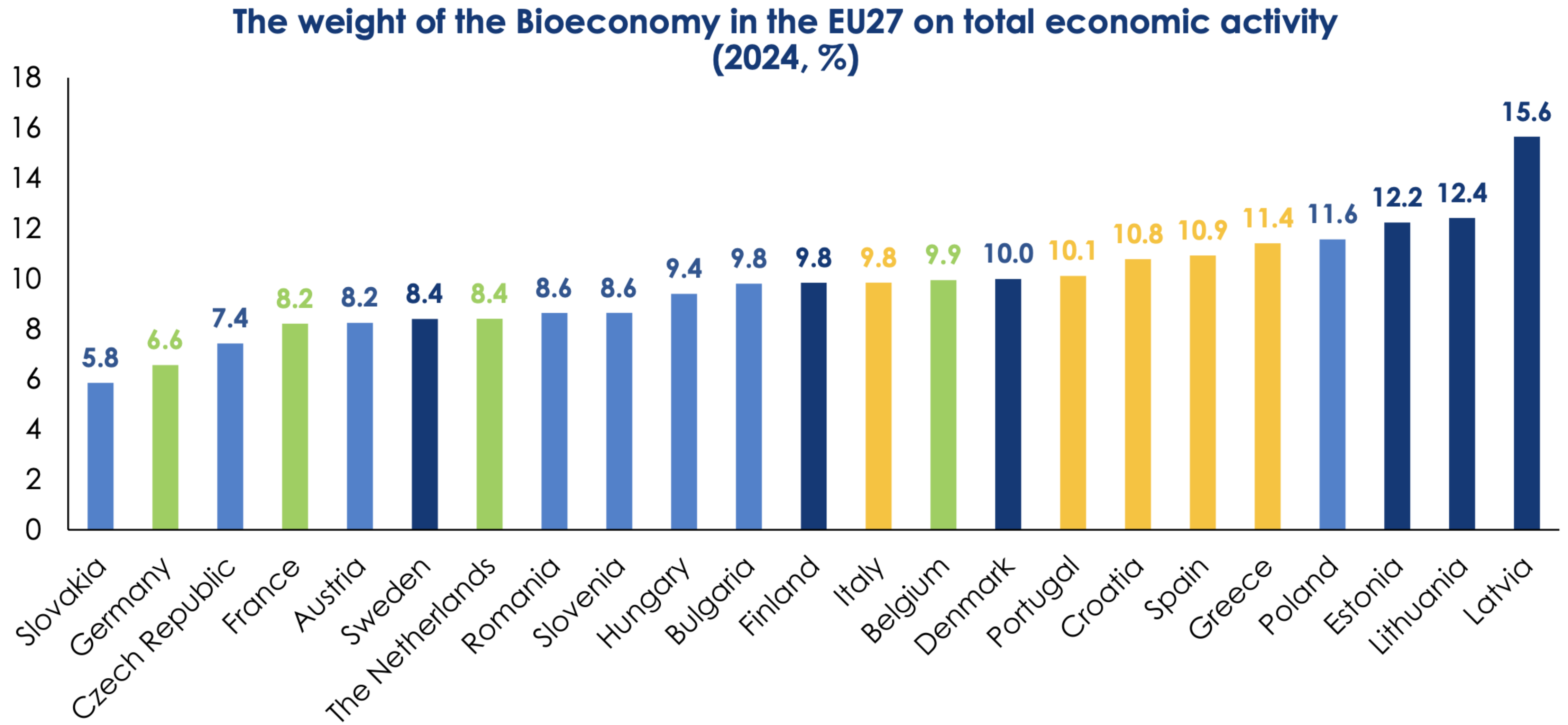
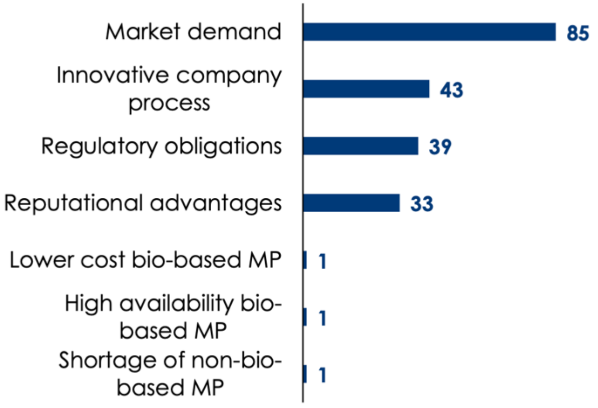
The weight of the Bioeconomy in Europe: over 8% for the majority of the 23 countries analysed



BIO-BASED INDUSTRIES

The choice to use bio-based inputs

Factors that determined the introduction of bio-based inputs (%; more than one answer possible)



Bio-based inputs are used to achieve market **competitiveness**, **innovation** and compliance with regulatory obligations.

Source: Intesa Sanpaolo survey of companies in the plastic packaging sector (2024)

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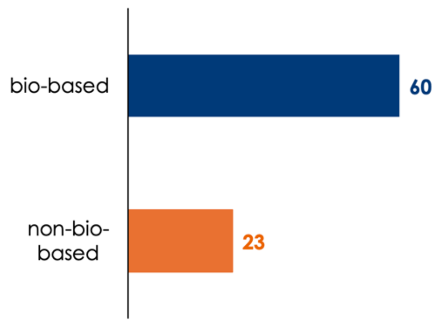
Use of bio-based inputs will grow in the future

- **23% of companies** that do not use bio-based raw materials **intend to introduce** such inputs into their production processes.
- **60% of bio-based companies will increase** their use of such inputs.
- As many as 68% of the companies that use bio-based inputs marginally state that they will expand the use of such resources.

Companies that will increase/introduce the use of bio-based inputs in the next three years (% respondents)



Note: Percentages calculated on total responses, including "don't know".
Source: Intesa Sanpaolo survey of companies in the plastic packaging sector (2024)

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BIO-BASED INDUSTRIES

Companies' production and strategic choices are closely linked to the regulatory framework

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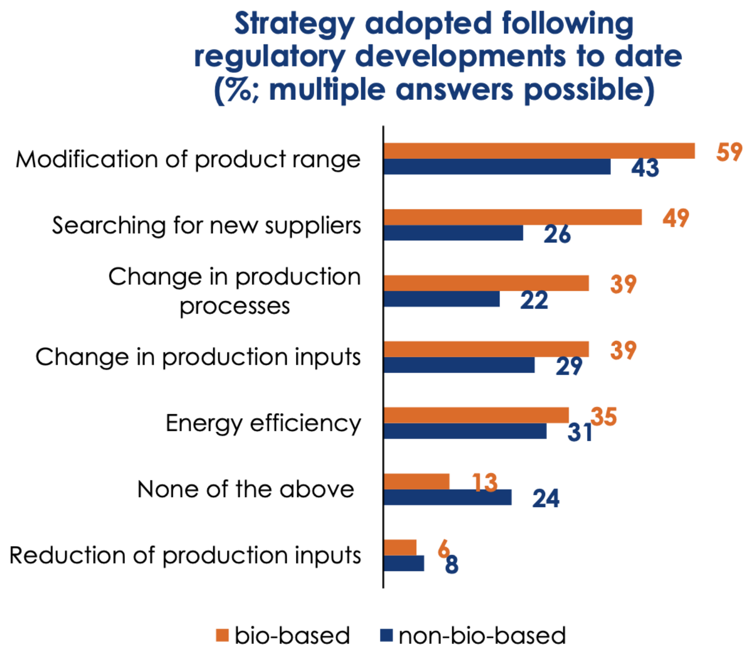
- **Bio-based companies appear to be more sensitive and responsive** to the introduction of new regulations.
- The main lever activated by companies concerns the modification of the **product range**, a strategy implemented by 59% of bio-based companies and 43% of non-bio-based companies.



Source: Intesa Sanpaolo survey of companies in the plastic packaging sector (2024)

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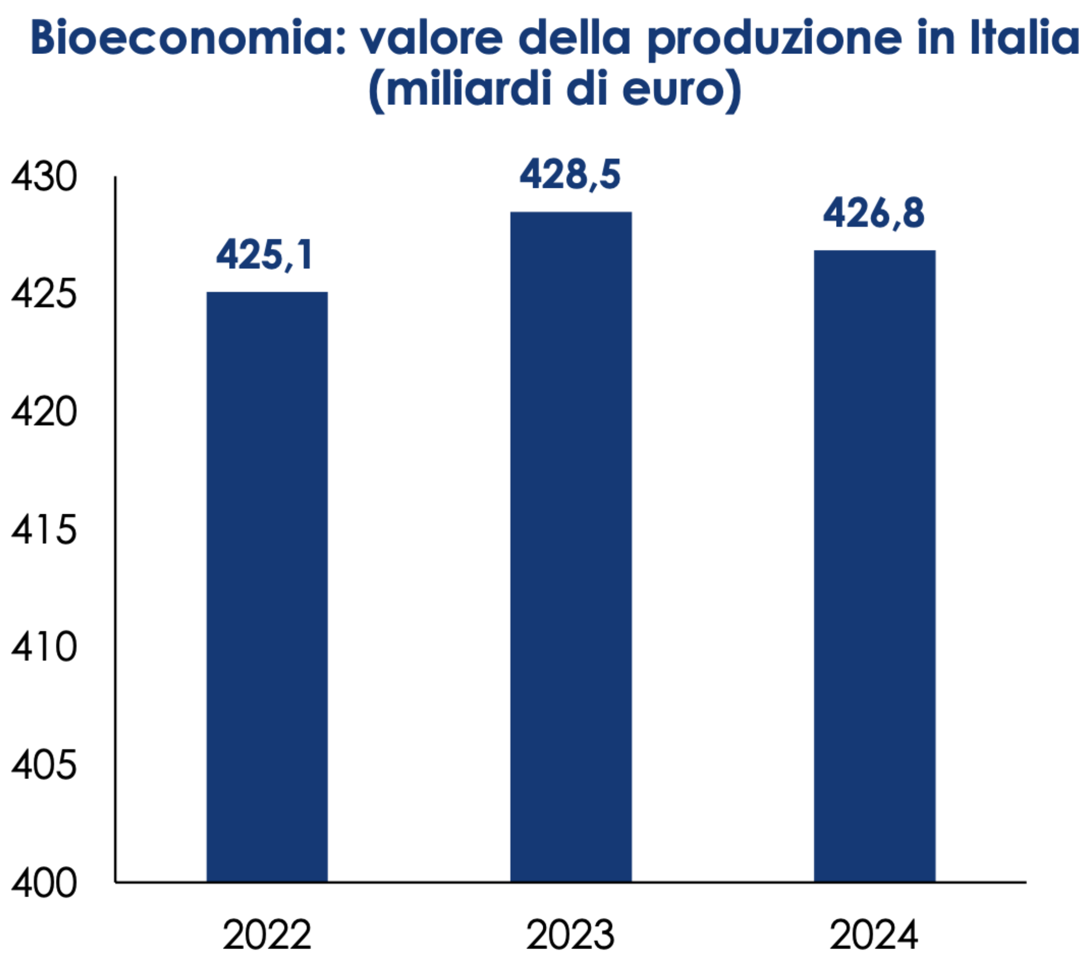
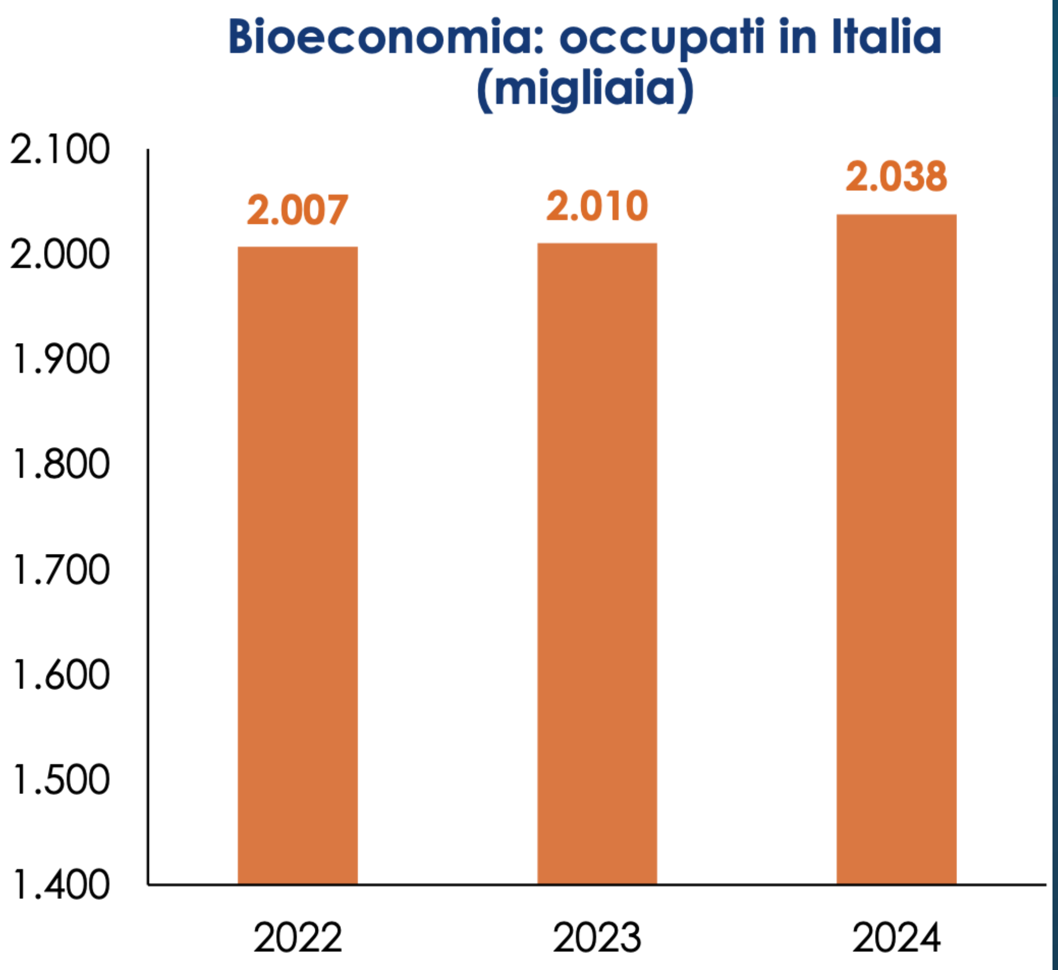
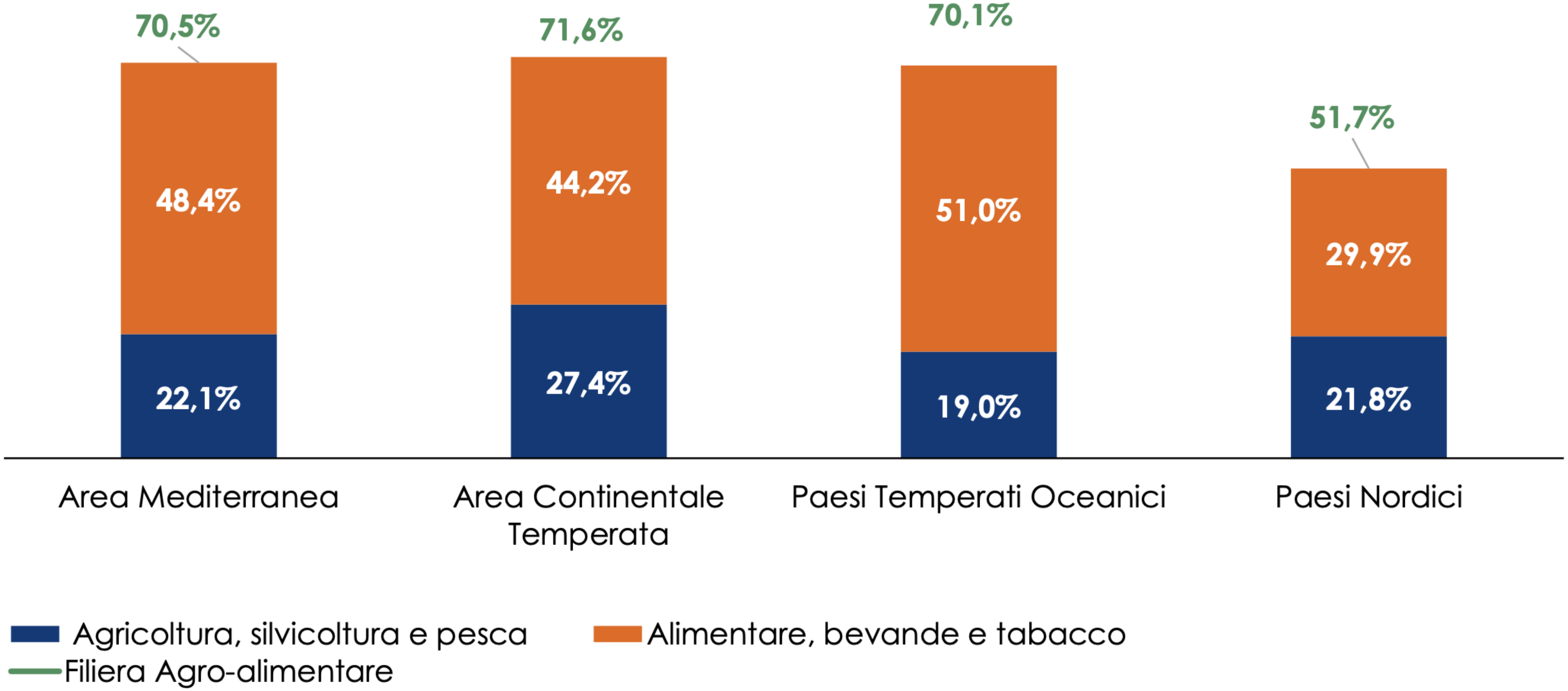
Bioeconomia in Italia nel 2024: 426,8 miliardi di euro e più di 2 milioni di occupati...





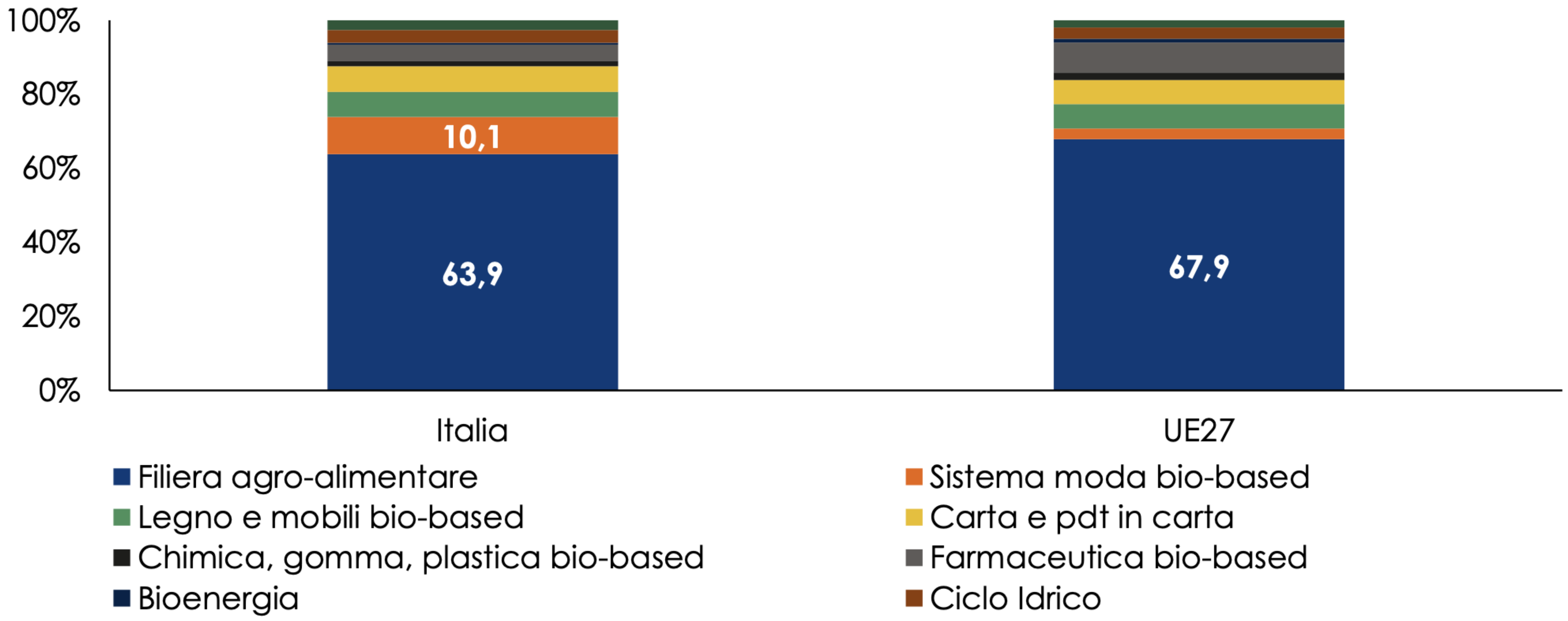
La rilevanza della filiera agro-alimentare in Europa

La filiera agro-alimentare nei diversi cluster climatici
(incidenza % sul valore della produzione della Bioeconomia, 2024)



La Bioeconomia in Italia a confronto con quella UE

La composizione % della Bioeconomia per settore (valore della produzione, 2024)



Fonte: elaborazioni Intesa Sanpaolo da fonti varie

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La Bioeconomia come opportunità per la valorizzazione e l'inclusione delle Aree Interne

Aree Interne

Distanza da grandi agglomerati urbani

Carenza di infrastrutture e servizi (istruzione, salute, mobilità)

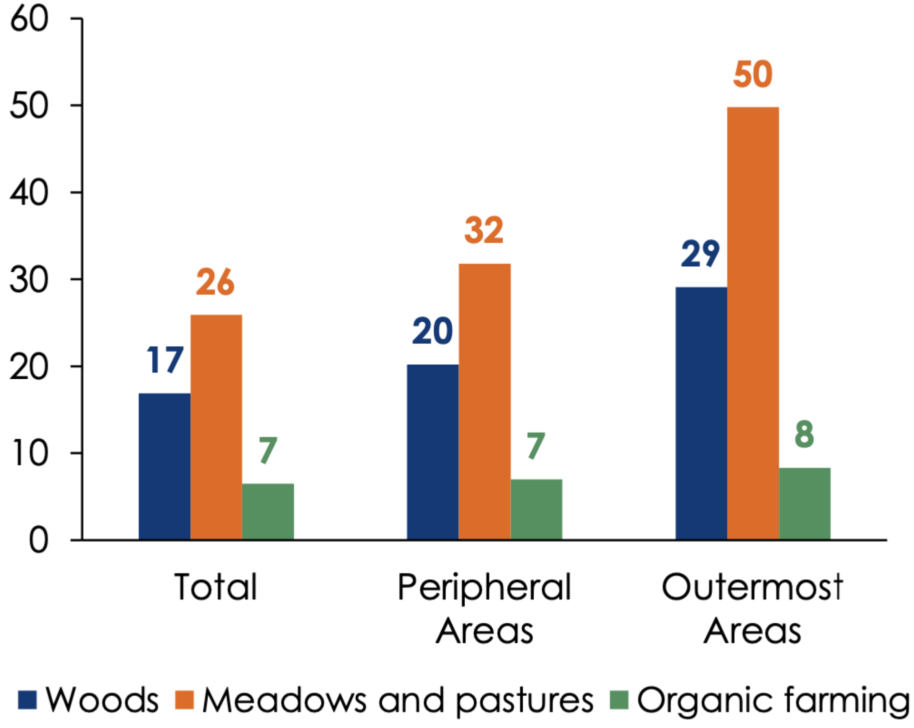
Presenza di grandi ricchezze naturali e paesaggistiche

- La rilevanza del **settore agro-forestale**, la ricchezza in termini di **biodiversità**, l'importanza delle **filiere locali** sono elementi distintivi delle Aree Interne e che possono diventare driver di sviluppo di un'economia sostenibile in chiave bioeconomica.

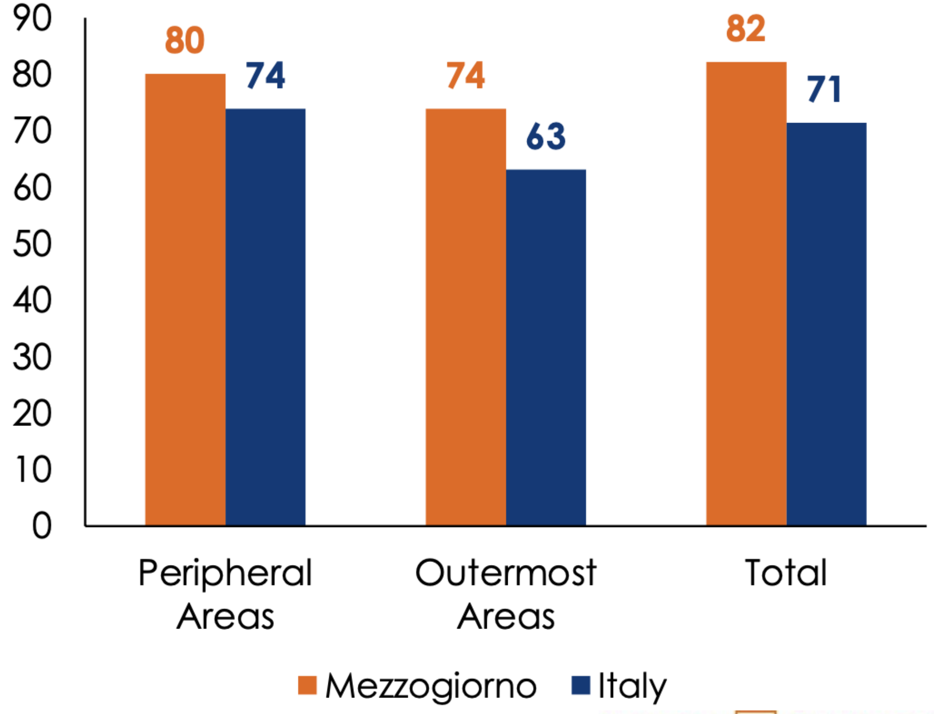
- La **Bioeconomia** offre un modello di crescita coerente con le **vocazioni delle Aree Interne**.

Biomass and biodiversity: the potential of the Inland Areas of Southern Italy

Share (%) of farms in the Mezzogiorno by type of territory



Share (%) of farms by type of territory with permanent crops (comparison between Mezzogiorno and Italy)



Source: SRM elaborations on Istat data

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IFIB TORINO STATEMENT

IFIB 25

International Forum on Industrial Biotechnology and Bioeconomy

TORINO STATEMENT

Introduction: A mandate for leadership, competitiveness, social inclusion and resilience

It is now widely recognized that the circular bioeconomy represents a real global opportunity to regenerate territories and promote innovation, connecting multiple value chains. It is no coincidence that it has been included in the Clean Industrial Deal (CID), officially presented by the European Commission last February.

Strategies alone are not enough to govern processes; hard law is needed. Much of the Circular Bioeconomy sector's lack of development is attributable to the lack of adequate governance tools and to the paradoxes generated by the application of rules designed to limit traditional sectors. One example is bio-based and biodegradable bioplastics, which even today—almost twenty years later—are not only undervalued but, in some cases, even blamed for problems they help solve, such as the generation of microplastics.

Beyond regulatory challenges, EU Member States should further support cutting-edge technologies and projects, regardless of their origin, for the benefit of Europe as a whole, creating a diverse and resilient network.

IFIB Torino Statement – a competitive, inclusive and resilient future for the EU. It's a now or never

The 2025 IFIB Torino Statement builds on the successful recognition of circular bioeconomy and looks ahead to the decisions that the EU must now take through the policies and initiatives currently in process. A key opportunity exists for societal and industrial transformation within the sustainability and safety ambitions that make Europe a global figurehead.

We believe that biobased products derived from integrated biorefineries must be recognized as an integral part of the complex systems to which they belong, to unleash their full value and transformative potential. If treated as isolated products, according to the logic of conventional sectors, their regenerative potential is compromised. We want Europe to provide a coherent legislative systemic framework through which innovation can thrive and mature, and the industry can invest to build capacity, adaptability, and long-term resilience to meet Europe's needs.

We need an institutional and cultural paradigm shift. Too often, regulations designed for traditional sectors are applied to emerging ones, limiting growth and discouraging investment in Europe. We hope the upcoming EU Bioeconomy Strategy Review will be opportunities for this transformation.

The global race to lead in biotech and bioeconomy is on, and Europe's competitors are running, and running fast. **We risk losing an enormous strategic asset for Europe as a whole in terms of competitiveness, highly skilled jobs and economic growth, income opportunities for farmers, fishermen and foresters, local communities and regions, local supply chains, not to mention the sustainability of these technologies**.

We have (at least) two valleys of death in Europe:

1. **Financing to scale** and 2. **Regulation** which slows down all approval processes and either kills our startups or force them to move out of Europe. And the second valley is deeper and longer than the first - and also impacts it.
   Unclear regulation and years of waiting scares off investors. **We need both a broad and bold Biotech Act which includes all biosolutions and an ambitious Bioeconomy Strategy which paves the way for the bio-revolution as promised by Commission President Von der Leyen.**

   We will not move forward with just complaining and we do also need to appreciate the advantages of a European model where consumers feel safe and trust in our democracies and regulatory systems is still fairly high. This is also good for industry. There are also quite a few "low-hanging fruits". Two examples: Data is key - **we need dedicated NACE codes for bioproducts and biorefineries of circular bioeconomy and also enough competent people to evaluate applications in EU institutions like EFSA. And we need those institutions to have a mandate so that they or someone else with expertise can actually help SMEs applying.**

   Finally, we still really need to practice to speak about all of the great biosolutions and circular bioeconomy in language people from outside the sector understands.

A full recognition of the circular bioeconomy must be based on the following key points:

i. **NACE codes for biorefineries**, as the U.S. are doing for their classification system. This would help to distinguish and valorize the peculiarity of our sector removing some obstacles that hamper the valorization of secondary raw materials.
ii. **Recognize the contribution of bio-based products** to the transition into legislative acts, including incentives for bio-based products and / or mandatory bio-based content requirements, promoting European integrated supply chains that are already in place and are driving significant transformations in the production, use and end-of-life.
iii. **Promotion of bio-based, biodegradable and compostable products that do not accumulate in soil and water**, as well as those that support the collection and treatment of organic waste. This includes the development of adequate infrastructures for the treatment of organic waste and the production of quality compost.
iv. **Promotion of the sustainable use of biomass for bioeconomy**, setting criteria in line with those contained in the Renewable Energy Directive.
v. **Support the scale-up of existing technologies at industrial level**, especially in the recovery of by- and co-products from the different process steps exploiting the synergy with the agricultural sector and leveraging investments.
vi. By the end of this year the European Commission will present the new EU Bioeconomy Strategy. It is absolutely needed to have together with the Strategy an **Implementation Action Plan** and create synergies between the Circular Economy Act, the EU Biotech Act and the Circular Bioeconomy Regulatory Framework, with the aim to have also the **EU Bioeconomy Act.**

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Together to build a sustainable and bio-based future

Join the change

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