

APRE

Conferenza
Annuale 2023

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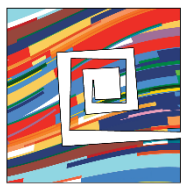
**VERSO UN
NUOVO FUTURO**

14 — 17 NOVEMBRE

EVENTO IN PRESENZA* & ONLINE

*partecipazione in presenza su invito

#aprecon2023



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APRE**brief**

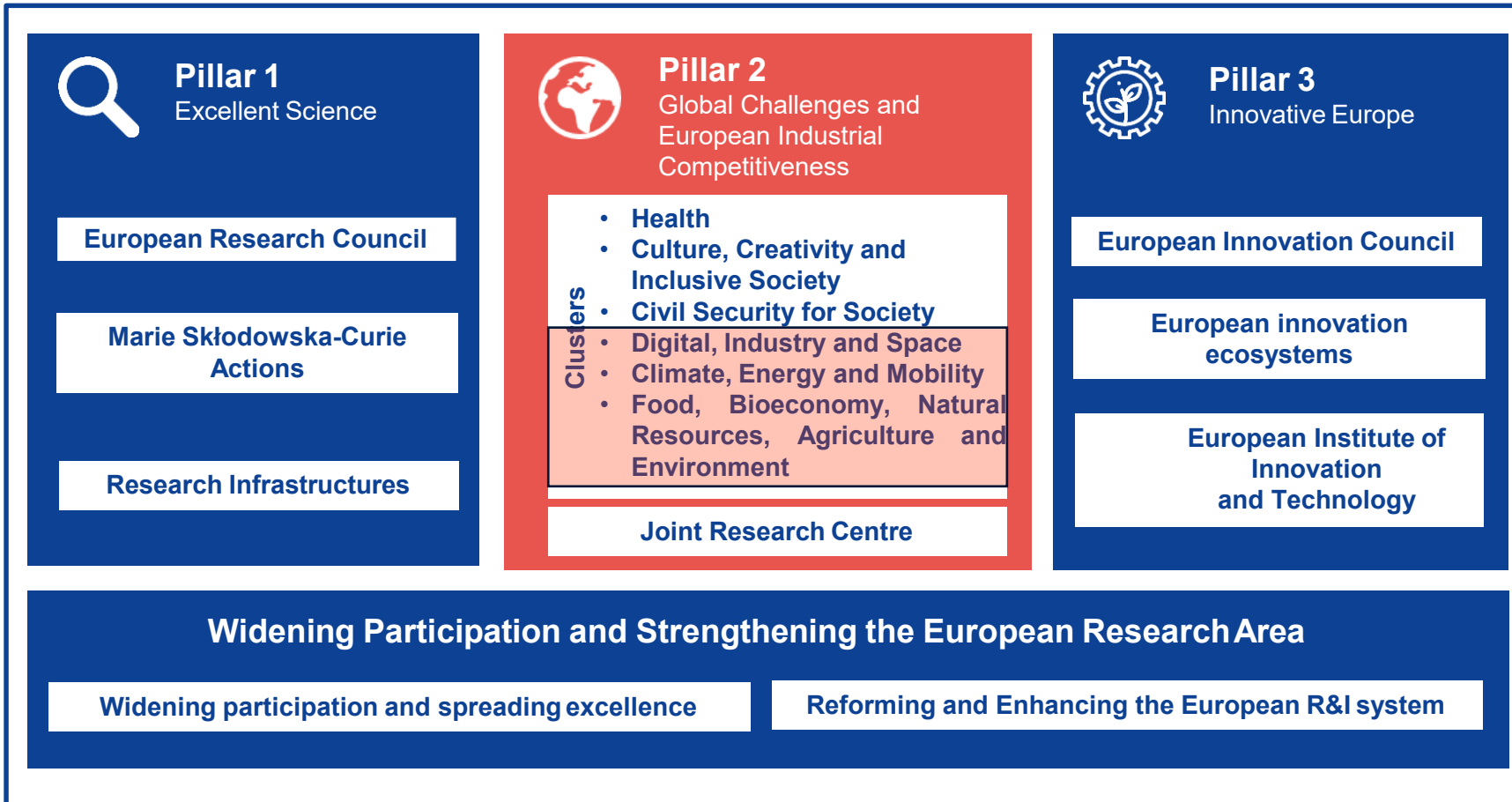
Safe and Sustainable by Design nei topic 2024 Horizon Europe

Serena Borgna - Diego Coglitore

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IL SSBD NELLA STRUTTURA DI HORIZON EUROPE



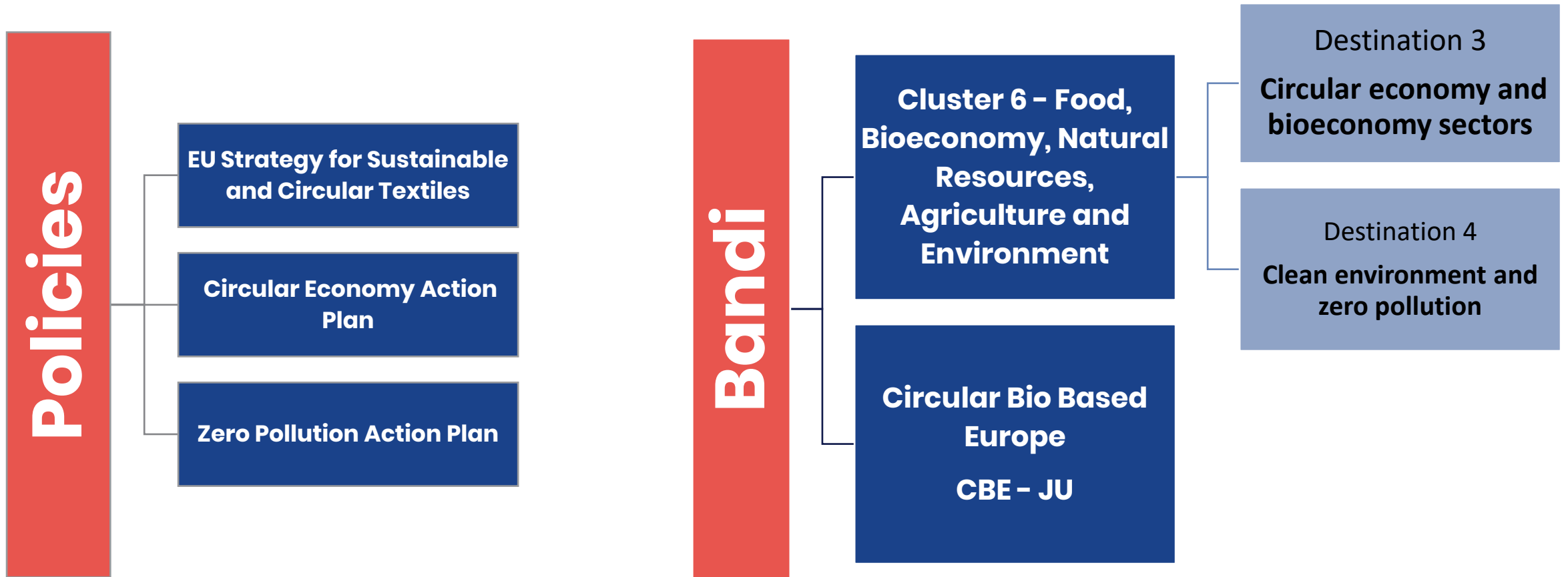
Cluster 4 - Digital, Industry and Space

Cluster 5 - Climate, Energy and Mobility

Cluster 6 - Food, Bioeconomy, Natural Resources, Agriculture and Environment



CLUSTER 6 – Food, Bioeconomy, Natural Resources, Agriculture and Environment





TOPIC BANDO CL6 2024

Scadenza: 22 febbraio 2024

HORIZON-CL6-2024-CircBio-01-3: Innovative circular solutions for furniture

Single Stage	Innovation Action	EUR 10M sul topic EUR 5M per project	<i>Proposals should fully incorporate the Safe and Sustainable by Design (SSbD) approach</i>
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HORIZON-CL6-2024-CircBio-02-1-two-stage: Circular solutions for textile value chains through innovative sorting, recycling, and design for recycling

Two Stage	Research and Innovation Action	EUR 15M sul topic EUR 5M per project	<i>Proposals should fully incorporate the Safe and Sustainable by Design (SSbD) approach.</i>
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HORIZON-CL6-2024-CircBio-01-3



POLICY CONTEXT

Circular Economy Action Plan European Green Deal

- Waste disposal
- Waste incineration

Related impacts:

European industrial sustainability, competitiveness and
resource independence
Consumer and citizen benefits



EXPECTED OUTCOMES

- Increased deployment and demonstrated benefits of advanced digital solutions
- Emergence of new value chains
- Increased recycling rates and upcycling
- Increased uptake of recycled and/or renewable material
- Increased deployment and market uptake of circular design
- Increased reuse, refurbishment and remanufacturing rates and diffusion of new circular business practices
- Increased resource efficiency, causing a measurable reduction in GHG emissions and pollution



HORIZON-CL6-2024-CircBio-01-3



SCOPE

- EU furniture industry predominantly consists of SMEs
- Employs around one million European workers and represents a EUR 84 billion market
- Furniture waste in the EU accounts for more than 4% of the total municipal solid waste stream
- 80-90% of the EU furniture waste in MSW is incinerated or sent to landfill
- Reuse mostly through commercial second-hand shops, social enterprise companies or charities
- Projects should demonstrate and deploy at large scale innovative solutions and designs
- Address the different perspectives of manufacturers, retailers, consumers and civil society organisations



KEEP IN MIND

- Social innovation is recommended
- Joint activities with CCRI projects are encouraged



HORIZON-CL6-2024-CircBio-02-1-TWO-STAGE



POLICY CONTEXT

Circular Economy Action Plan
Textile Strategy
Waste Framework Directive

- Microplastic pollution
- GHG emissions
- Hazardous substances

Related impacts:

European industrial sustainability, competitiveness and
resource independence
Consumer and citizen benefits



EXPECTED OUTCOMES

- Roll-out of systemic solutions for textile sorting, using innovative digital technologies
- Roll-out of feasible solutions for facilitated disintegration to be incorporated in product design, as an enabler for recycling
- Increased uptake of mechanical recycling solutions that deliver competitive, high-quality secondary materials
- Roll-out of thermo-mechanical, chemical and other recycling solutions that are sustainable from a zero-pollution, circular material and energy efficiency perspective



HORIZON-CL6-2024-CircBio-02-1-TWO-STAGE



SCOPE

- Textiles are the fourth highest-pressure category for the use of primary raw materials and water and fifth for greenhouse gas emissions and a major source of microplastic pollution
- Non-textile components or accessories affect recyclability
- Facilitation of the disintegration of textile products
- Collected volumes of post-consumer textile waste are expected to increase by a further 65,000 to 90,000 tonnes per year
- Systemic solutions for sorting
- Separate collection soon mandatory
- Further development of textile recycling technologies



KEEP IN MIND

- Safe and Sustainable by Design (SSbD)
- Digital product passport



AgriLoop: Pushing the frontier of circular agriculture by converting residues into novel economic, social and environmental opportunities

Finanziato sotto il topic: HORIZON-CL6-2022-CIRCBIO-01-05 - EU-China international cooperation on unlocking the potential of agricultural residues and wastes for circular and sustainable bio-based solutions



The 37 partners (half academic/private) of the International AgriLoop consortium aim to extend the agricultural production value of two major players of the global bioeconomy: EU and China, by eco-efficiently upgrading underexploited residues into a portfolio of high added-value bio-products able to generate new bio-based markets or to compete with, and gain market share of, oil- and food crops- based equivalents. **AgriLoop will develop safe-and-sustainable-by-design (SSbD) bioconversion processes integrated in a cascading biorefinery approach to convert a range of agri-residues (from e.g. tomato, soy, straw, potato, brewery, oil, winery and livestock sectors) into plant and microbial proteins, polyesters and other bio-based chemicals to be used for food, feed, health and materials applications, especially by the farming sector.** AgriLoop scientific and technical objectives are to i) improve the recovery of highly functional native molecules from primary and secondary residues and to tailor bioconversion schemes toward microbial proteins and polyesters, for overcoming in a balanced way the limitations related to feedstock complexity, processes eco-efficiency and end-products performances, and in parallel ii) anticipate the complex circularities of such biorefinery to comply with safe and sustainable requirements, guide scientific and technological advances of AgriLoop cascading processes toward end-products tailored to the just necessary (frugal design) and fast track their further adoption as demonstrated in upscaling selected biorefineries schemes. **By strengthening EU-CN cooperation, informing SSbD guidance and opening up new avenues for flexible agri-based value chains,** AgriLoop will increase resources efficiency through reduced discharges of agricultural residues, while taking share of the highly dynamic worldwide markets of alternative proteins and biochemicals (incl. biopolymers) and reducing the cost of agriculture and food system on our environment and health.



CLUSTER 5 – Climate, Energy and Mobility

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**Cluster 5 – Climate,
Energy and Mobility**

**Destination 2 - Cross-
sectoral solutions for
the climate transition**

Batt4EU Partnership

HORIZON-CL5-2024-D2-01-02 | Scadenza 18 Aprile 2024
 HORIZON-CL5-2024-D2-02-02 | Scadenza 5 Sett 2024
 HORIZON-CL5-2024-D2-02-03 | Scadenza 5 Sett 2024

- **HORIZON-CL5-2024-D2-01-02:** Non-Li Sustainable Batteries with European Supply Chains for Stationary Storage
- **HORIZON-CL5-2024-D2-02-02:** Post-Li-ion technologies and relevant manufacturing techniques for mobility applications (Generation 5)
- **HORIZON-CL5-2024-D2-02-03:** Size & weight reduction of cell and packaging of batteries system, integrating lightweight and functional materials, innovative thermal management and safe and sustainable by design approach



TOPIC BANDO CL5 2024

HORIZON-CL5-2024-D2-01-02: Non-Li Sustainable Batteries with European Supply Chains for Stationary

Single Stage	Innovation Action	EUR 21M sul topic	EUR 7M per project
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Develop and demonstrate sustainable and safe non-lithium battery solutions from abundant, non-toxic raw materials, capable of deployment in a large share of stationary energy-storage markets aligning the safety and sustainability assessment with the Commission Recommendation on safe and sustainable by design chemicals and materials

HORIZON-CL5-2024-D2-02-02: Post-Li-ion technologies and relevant manufacturing techniques for mobility applications (Generation 5)

Single Stage	Research&Innovation Action	EUR 15M sul topic	EUR 5M per project
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This topic focuses on delivering a safe and sustainable by design approach for batteries reduced in size and weight which will deliver the performance necessary for mobile applications. The objective is to ruggedise energy storage packs by enlarging the environmental and operational conditions in which they can operate, while maintaining a high level of performance and achieving a reduction in the size and weight of the battery pack

HORIZON-CL5-2024-D2-02-03: Size & weight reduction of cell and packaging of batteries system, integrating lightweight and functional materials, innovative thermal management and safe and sustainable by design

Single Stage	Innovation Action	EUR 16M sul topic	EUR 8M per project
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This topic focuses on delivering a safe and sustainable by design approach for batteries reduced in size and weight which will deliver the performance necessary for mobile applications. The objective is to ruggedise energy storage packs by enlarging the environmental and operational conditions in which they can operate, while maintaining a high level of performance and achieving a reduction in the size and weight of the battery pack. The use of lightweight and multi-functional materials (including, but not limited to, the use of nanomaterials) that are safe and sustainable by design in alignment with Commission Recommendation (EU/2022/2510) and lightweight structures for battery casing. The Commission initiative for Safe and Sustainable by Design will set a framework for assessing safety and sustainability of chemicals and materials and which should be considered as a reference in the proposal.



CL4