

RESEARCH AND INNOVATION PROJECTS OF THE SMEs OF THE PIEDMONT AGRIFOOD CLUSTER ON BIOECONOMY, CIRCULAR ECONOMY AND SUSTAINABILITY

SALONE DEL GUSTO Torino, 23 September 2022



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www.poloagrifood.it

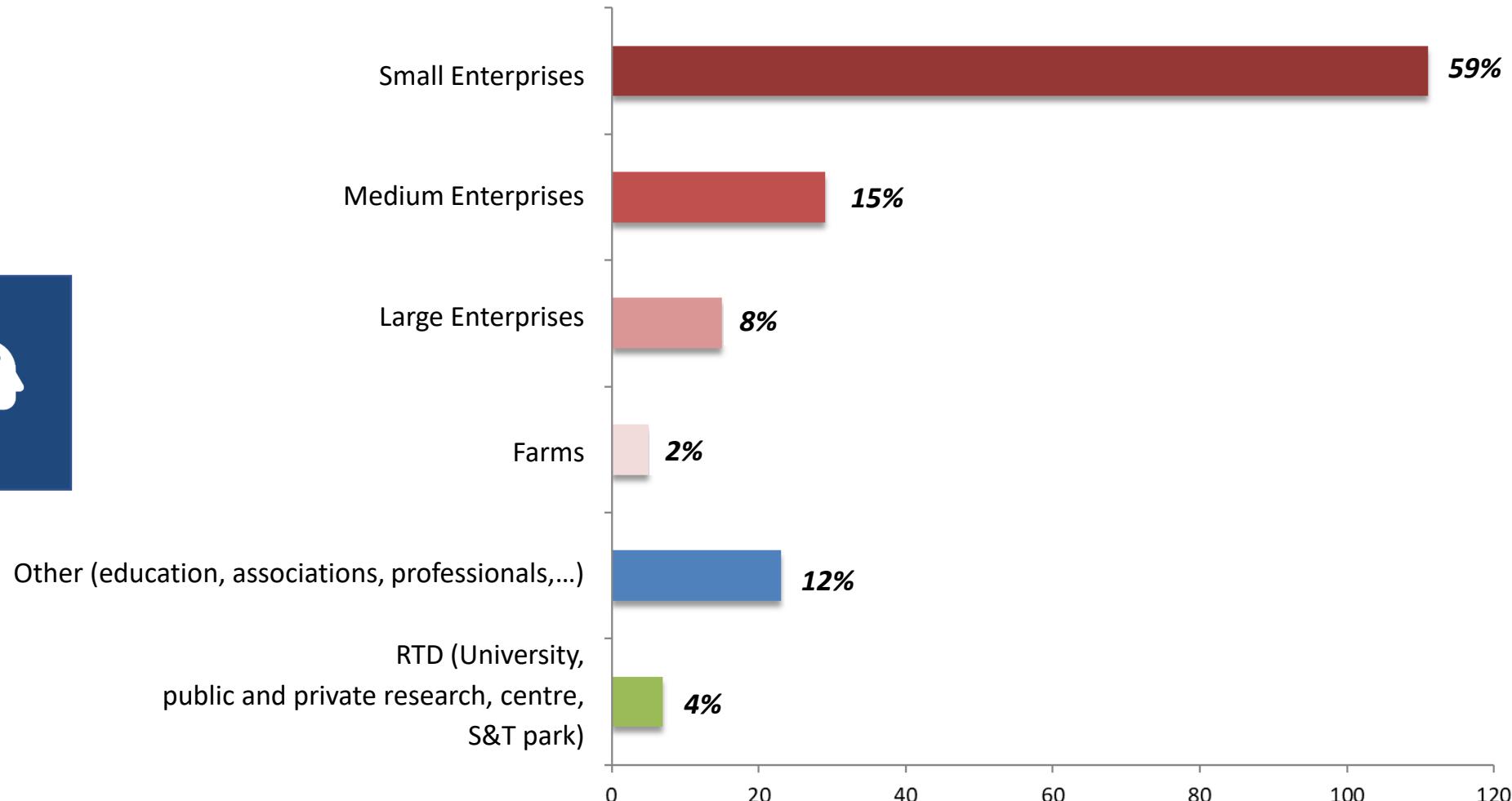


- The Piedmont Innovation Cluster “Polo AGRIFOOD”
- Strategic Research Agenda of the Cluster and circular economy/bioeconomy
- Projects and initiatives of the Cluster in the field of circular economy
- CE and Bioeconomy actors in Piedmont

AGRIFOOD Innovation Cluster of Piemonte Region

- **Network** of F&D industry, research and institutions at regional level
- **Funded in 2009**, renewed in 2016
- **Mission**: to identify the innovation needs of the regional agrifood industry, mainly SMEs, and to support them to innovate their processes and to foster their competitiveness
- Actions for members:
 - R+D+I: project building at regional, national and EU level
 - Fund raising for research and development and technology transfer
 - Services, skills and laboratories focused on innovation and technology transfer in specific areas (e.g. packaging; sanitization; product/process innovation)
 - Organization of/participation to: workshops, seminars, B2B, conferences, training

The Cluster members



190 members of the Cluster

The key F&D sectors in Piemonte

| | | Primary production | Processing |
|--------------------------------------------|---------------------------------------------------------------------------------------|--------------------|------------|
| <i>Wine</i> |  | ✓ | ✓ |
| <i>Meat</i> |  | ✓ | ✓ |
| <i>Dairy</i> |  | ✓ | ✓ |
| <i>Fruits & vegetables</i> |  | ✓ | |
| <i>Cereals (corn, wheat, rice)</i> |  | ✓ | ✓ |
| <i>Coffee</i> |  | | ✓ |
| <i>Confectionery</i> |  | | ✓ |
| <i>Bakery</i> |  | ✓ | ✓ |
| <i>Farming machinery</i> |  | | ✓ |
| <i>Food machinery (process, packaging)</i> |  | | ✓ |

AGRIFOOD Innovation Cluster – the Boards



STEERING COMMITTEE

TRADE ASSOCIATIONS
(agriculture and F&D
industry)



RTD
(Academia,
Research centers)

INDUSTRY
(LEs and
SMEs; ETP Food for Life)



SCIENTIFIC BOARD

AGRIFOOD Innovation Cluster – the Boards



STEERING COMMITTEE



ITS
Agroalimentare
per il Piemonte



University of Gastronomic Sciences
Università degli Studi
di Scienze Gastronomiche



Agrion
Agricoltura ricerca innovazione

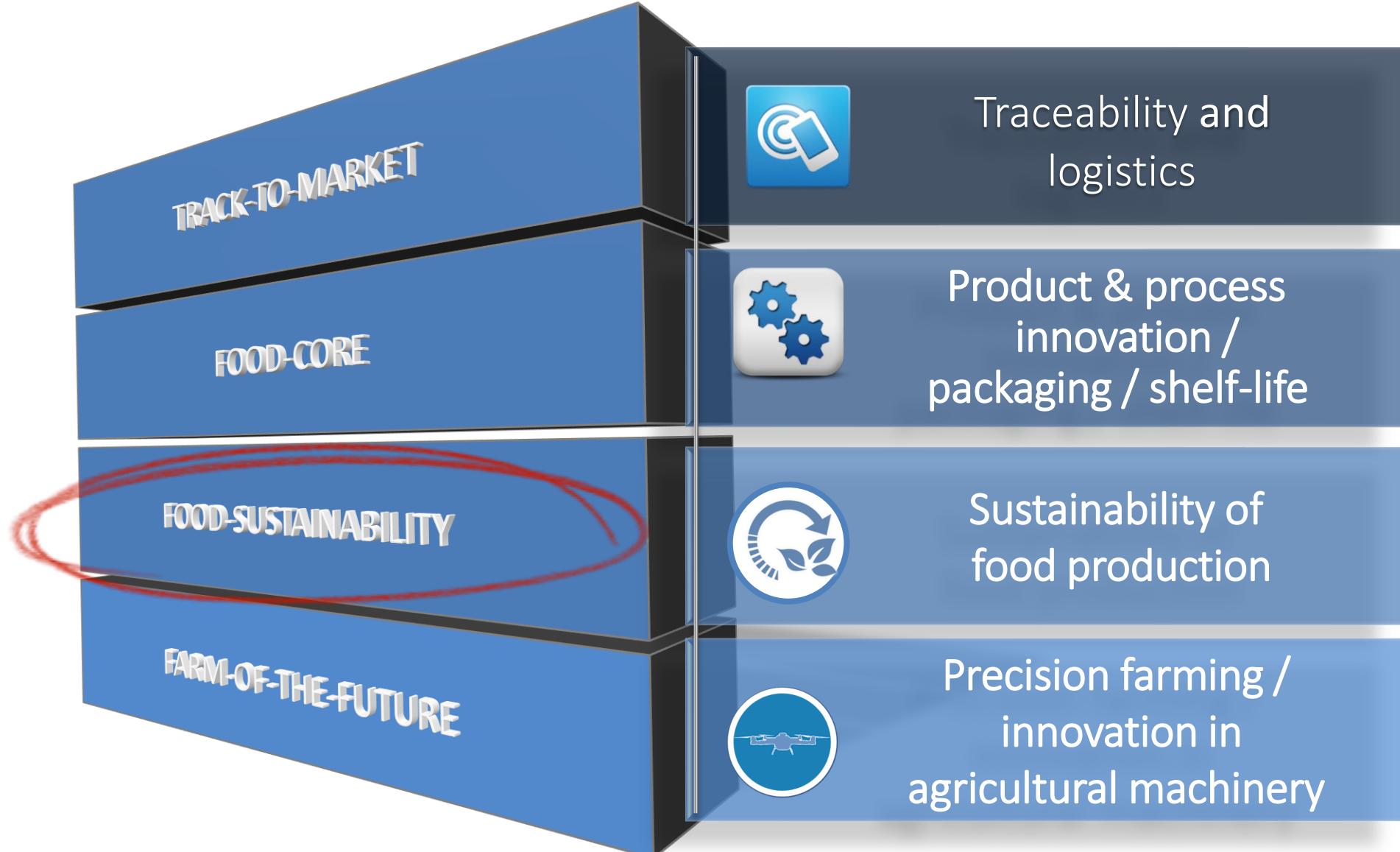


LAVAZZA **FERRERO**
TORINO, ITALIA, 1895

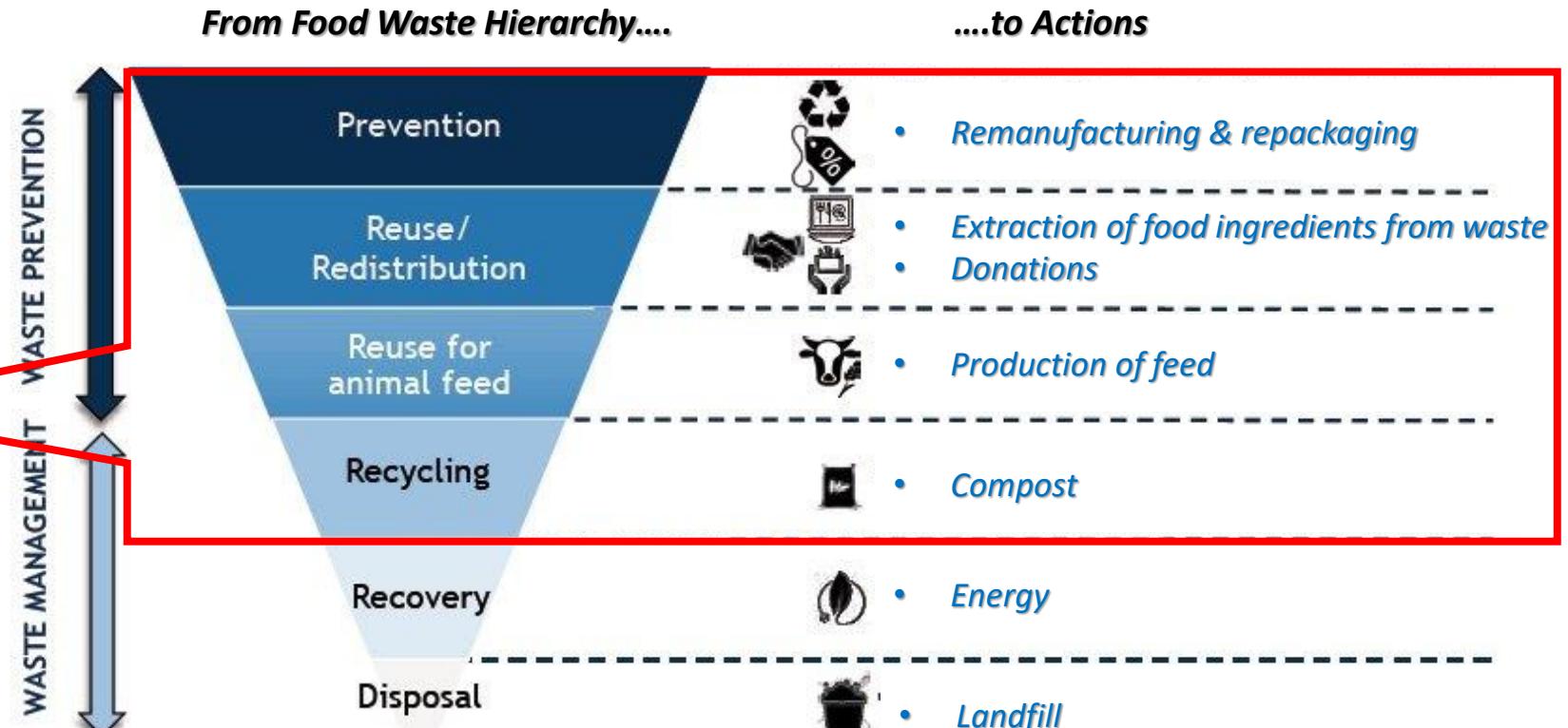


SCIENTIFIC BOARD

Research Agenda



Circular Economy in the Cluster Agenda



Source: Politecnico di Milano "Food Sustainability Observatory" 2018

Circular Economy in the Cluster Agenda

- Recovery and re-use of **waste and by-products** from agricultural and agro-industrial supply chains aimed at the production of value-added products (ingredients for food & feed, cosmetics, energy, etc.)
- Sustainable packaging for food (biodegradable / compostable, recyclable packaging)
- Implementation of traceability initiatives
- Improvement of the sustainability of agri-food chains, also through regional, national and European research and innovation projects
- Organization of dissemination events / workshops / infodays / training courses (ex. Bioeconomy Day, Salone del Gusto, Ecomondo, etc.)



Circular Economy in the Cluster Agenda



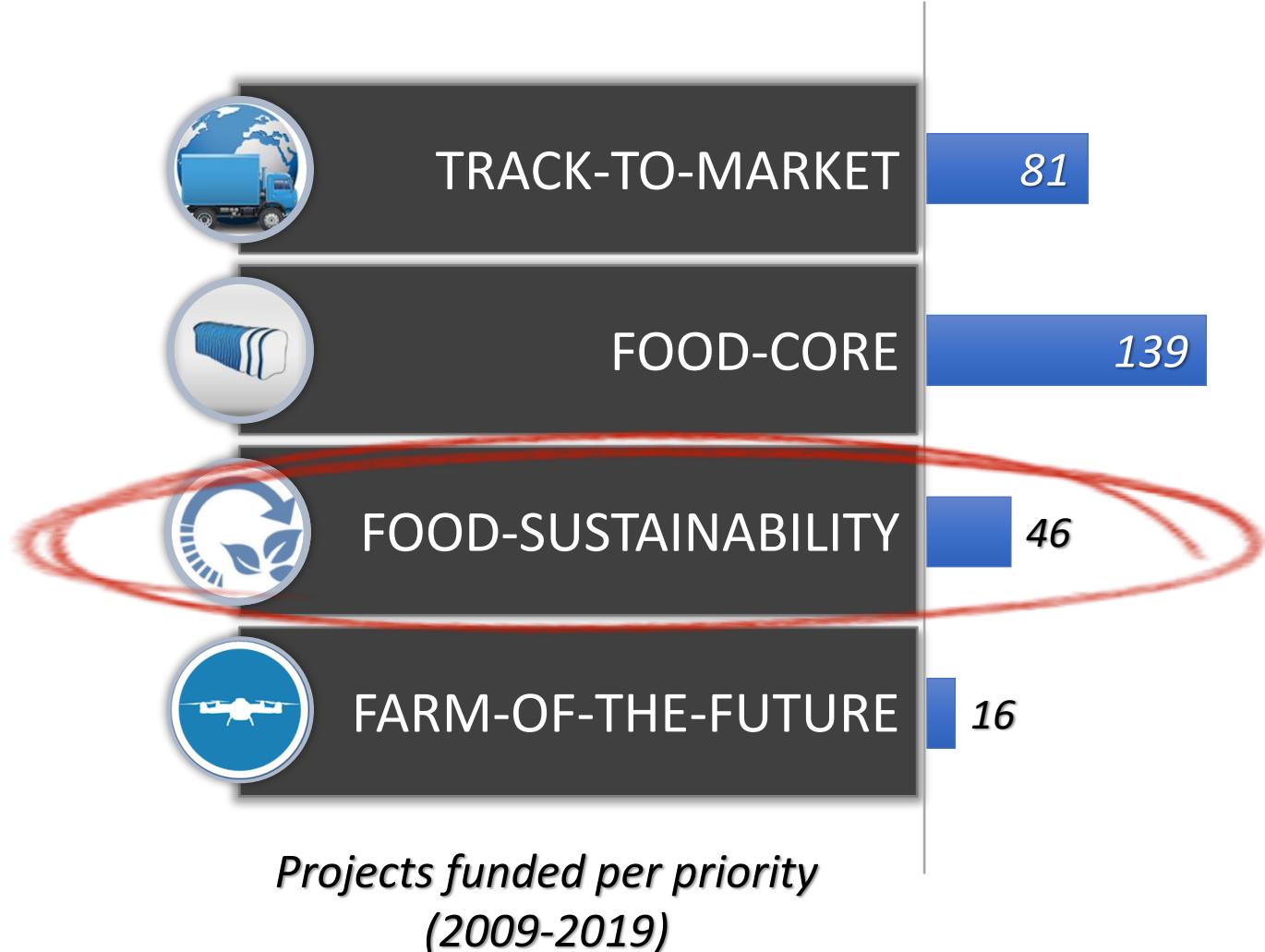
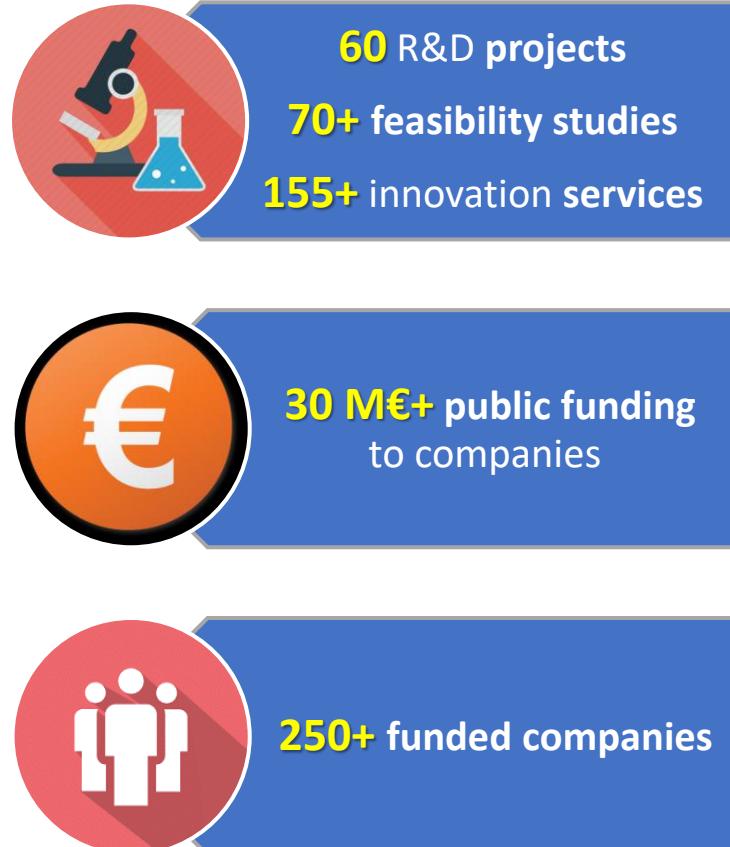
Reduction of waste and energy consumption;
Recovery of by-products

Types of waste:

- Wine Industry → Pomace
- Fruit Processing → Peels, seeds and pulp residues
- Vegetable Processing → Peels, seeds and pulp residues
- Oil Industry → Solid residues, vegetation water
- Milling Industry → Bran, germ
- Dairy Industry → Whey
- Fish Industry → Head, skin, fishbones



Circular Economy in the Cluster Agenda



Project: ECO FOOD



AIM: study and realization of a new product and a new process for **cellulose** containers with barrier film for **packaging** of fatty/dry or acid products in MAP

Feasibility study: NO-MORE-WASTE

AIM: Development of new models of **food surplus management** to reduce food waste in some relevant supply chains in Piedmont: *meat, dairy, fruits & vegetables*.

Project: Innova- EcoFood



AIM: **re-use** of *rice* and *wine* by-products from regional supply chains for the development of new food, nutraceutical and cosmetic products.

Project: SEKAC



AIM: innovative technologies for the **recovery of organic waste** from MSW and agri-food waste to produce high-quality soil improvers/fertilizers/compost for the agricultural sector.

Project: NOVEL-PACK



AIM: Application of **innovative biodegradable, compostable and active packaging** in the food industry.

Project: CdV PET



AIM: Life cycle analysis and **recycling strategies** of PET for food packaging.

Other CE/bioeconomy initiatives

Project



**“Bioeconomy Technology Platform” -
Competitive call funded
by Piedmont Region**

Projects funded 2019-2022

Overall funding: 40 M€

AIM:

Design, technological development and evaluation of innovative "functional" and "healthy" ingredients and food produced and/or enhanced through sustainable solutions based on bioeconomy, biotechnology and green chemistry.

Activities related to innovative techniques for sustainable food packaging.



Industrial research and technology innovation



Collaborative research among academia, large enterprises and SMEs on bio- and circular economy



Knowledge and competence transfer among research actors and industries, along the whole supply chain (farm-to-fork)



To foster competitiveness and job creation along the whole agrifood supply chain

Other CE/bioeconomy initiatives



National Agrifood Cluster (C.L.A.N.)

MISSION: The Cluster C.L.A.N was created to increase and promote the capacity of the agrifood chain, trough the stimulation of innovation, access and exploitation of the results of scientific research activities, collaboration between research companies, institutions and public administration.

PRiORiTIES

- 1.
- 2.
- 3.



Other CE/bioeconomy initiatives

KIC



MISSION: Europe's leading food innovation initiative, working to make the food system more sustainable, healthy and trusted.

Challenges

- Low consumer trust & transparency
- Distorted nutritional habits
- Sustainability
- Fragmented supply chain
- Skills gap
- Limited entrepreneurial culture

- Overcome low consumer trust
- Create consumer-valued food for healthier nutrition
- Build a consumer-centric connected food system
- Enhance sustainability through resource stewardship
- Educate to engage, innovate and advance
- Catalyse food entrepreneurship and innovation

Objectives



Cooperation
with partner
Università di
Torino
(CLC South)

Actors in Piedmont on Circular Economy / Bioeconomy

First movers / SMEs



NOVAMONT

- Field of activity: leading international company in the **bioplastics** and in the development of bioproducts and biochemicals from plant sources, biodegradable and compostable.



- Products: **MATER-BI** products, biolubricants and greases, ingredients for the cosmetics sector
- Field of activity: re-processing of **by-products and waste** from the agrifood industries (ex. almond shells, corn cobs, wood sawdust) to produce **new value-added products** (fibers, flours, granules, biomass fuel)
- Products: precooked food flours, soft vegetable abrasives, cosmetics, raw materials for pharmaceutical and animal feed industry, vegetable materials and fillers for multiple uses



Actors in Piedmont on Circular Economy / Bioeconomy

Start-ups



- Field of activity: **food waste**/cosmetics
- Products: natural, eco-friendly, organic, functional cosmetics and food ingredients, starting from wastes of organic juices produced from ancient cultivars of apples



- Field of activity: **recovering food waste**
- Products: an **APP** connecting businesses with unsold and close-to-expiry fresh products with consumers interested in buying them discounted.
- Field of activity: digital technologies applied at raising public awareness for circular economy and its businesses.
- Products: **APP «Mercato Circolare»**, first app in Italy to connect users and actors of the circular economy; educational and cultural events; consultancy about circular economy.



CONTATTI

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THANK YOU!