

# Bioeconomy and food systems

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# Outline

- 1) Food systems : an integral part of the Bioeconomy
- 2) Food systems : at the core of the EU policy agenda
- 3) R&I policies and tools: key to delivering impact
- 4) Co-creating R&I actions : a way to boost impact

# What is the EU's understanding of the Bioeconomy....

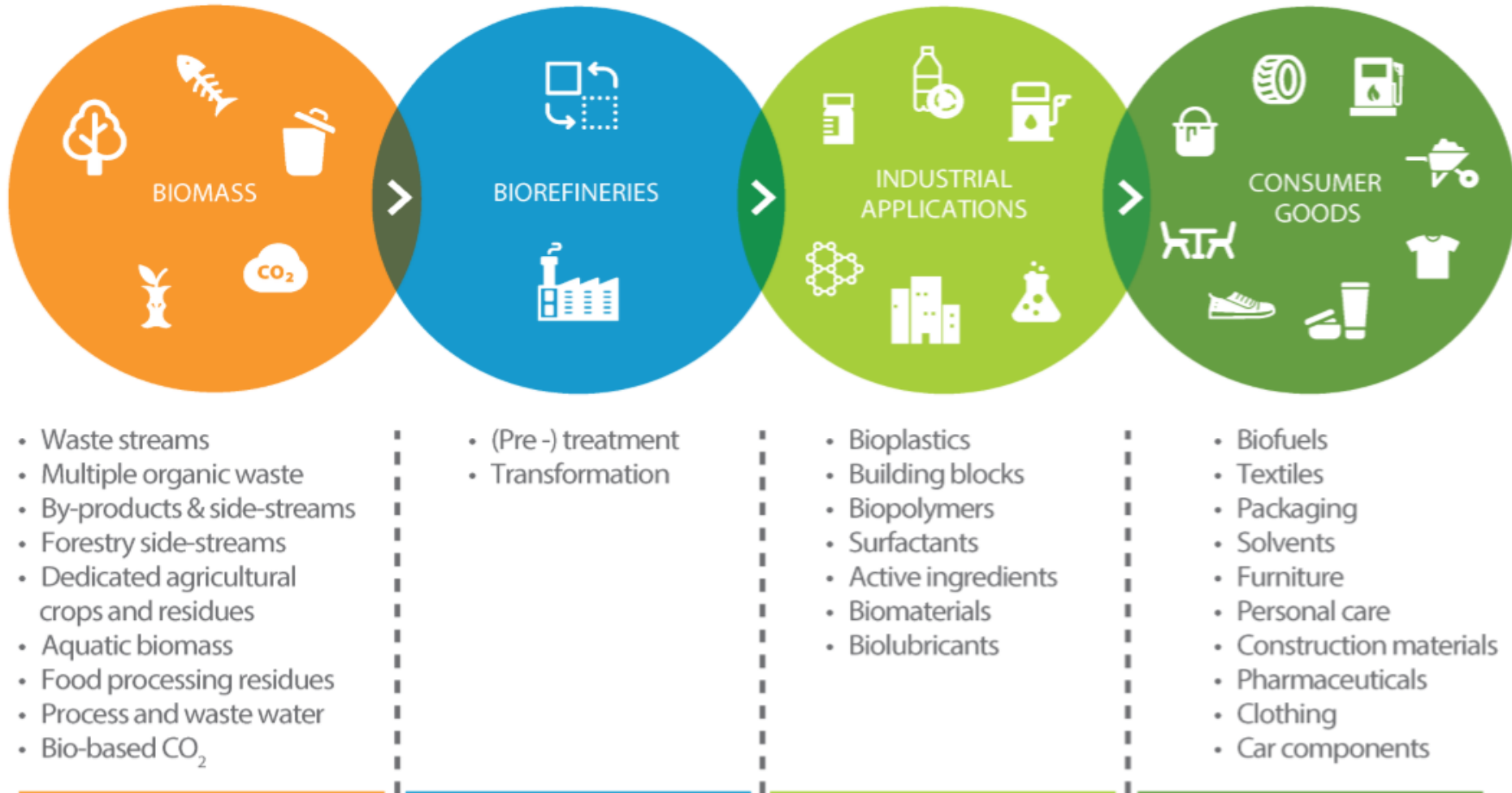
All sectors & systems that use / produce / process / are driven by biological resources

- Ecosystems on land and sea
- Primary production systems - agriculture, forestry, aquaculture / fisheries – incl. waste/side streams
- Food, feed, fibre, bio-based industry, fuels and bio-energy



European  
Commission

# Bio-based industries value chains



Source: [www.bbi-europe.eu](http://www.bbi-europe.eu)



European Commission



## EU BIOECONOMY

European Commission's Knowledge Centre for Bioeconomy

EMPLOYMENT  
(MILLION JOBS)  
**18**

TURNOVER  
(TRILLION EUR)  
**2.3**

VALUE ADDED  
(BILLION EUR)  
**621**

	EMPLOYMENT (MILLION JOBS)	TURNOVER (BILLION EUR)	VALUE ADDED (BILLION EUR)
AGRICULTURE	9.2	380	174
FORESTRY	0.5	50	24
FISHING AND AQUACULTURE	0.2	12	7
FOOD, BEVERAGES AND OTHER AGRO-MANUFACTURING	4.5	1 153	233
BIO-BASED TEXTILES	1.0	103	28
WOOD PRODUCTS AND FURNITURE	1.4	174	47
PAPER	0.6	187	46
BIO-BASED CHEMICALS AND PHARMACEUTICALS, PLASTICS AND RUBBER	0.4	177	56
LIQUID BIOFUELS	0.03	12	3
BIOELECTRICITY	0.01	11	3

DATA 2015



Source: based on Ronzon & M'Barek, 2018  
<https://doi.org/10.3390/su10061745>

## Human capital in the EU Bioeconomy

- ~8.2% of the EU's workforce
- ~75% employed in agriculture, food and drink industry
- High job creation potential, in rural, coastal and urban areas, through the growing participation of primary producers and deployment of bio-based solutions
- In the bio-based industries 1 million new jobs could be created by 2030
- Education and training plays a key role in realizing this potential by providing necessary skills and improving human capacity for bioeconomy

# Farm to Fork Strategy

- Objective: Calling for a transformation of the food systems
  - More sustainable, healthier, climate-resilient food systems, providing new business opportunities for actors in the food systems.
- What will it include:
  - A Vision Paper
  - Targets
  - An Action Plan
- Publication of the Vision Paper and Action Plan:
  - Spring 2020
- Scientific Advice Mechanism: will publish an opinion on food systems also in Spring 2020. The knowledge/information included in this report will feed the Farm to Fork Strategy. 6



# Stimulate sustainable production & consumption from 'Farm to Fork'

- ✓ Primary production (CAP, sustainable aquaculture, organic farming, pesticides, fertilisers, animal welfare)
- ✓ Food processing, distribution, food services (new innovative food and feed products, packaging, environmental footprint...)
- ✓ Consumers' empowerment (food information /awareness/ behavioural change/digital means...)
- ✓ Reduce food loss and waste
- ✓ Combat food fraud
- ✓ International dimension (support global transition)

# FOOD 2030 & pathways of action

## EU policy priorities

(Green Deal including Farm2Fork strategy, CAP, Biodiversity, Circularity, ...)



### R&I priorities FOOD 2030



**NUTRITION** for sustainable and healthy diets



**CLIMATE** smart and environmentally sustainable food systems



**CIRCULARITY** and resource efficiency of food systems



**INNOVATION** and empowerment of communities



## PATHWAYS OF ACTION

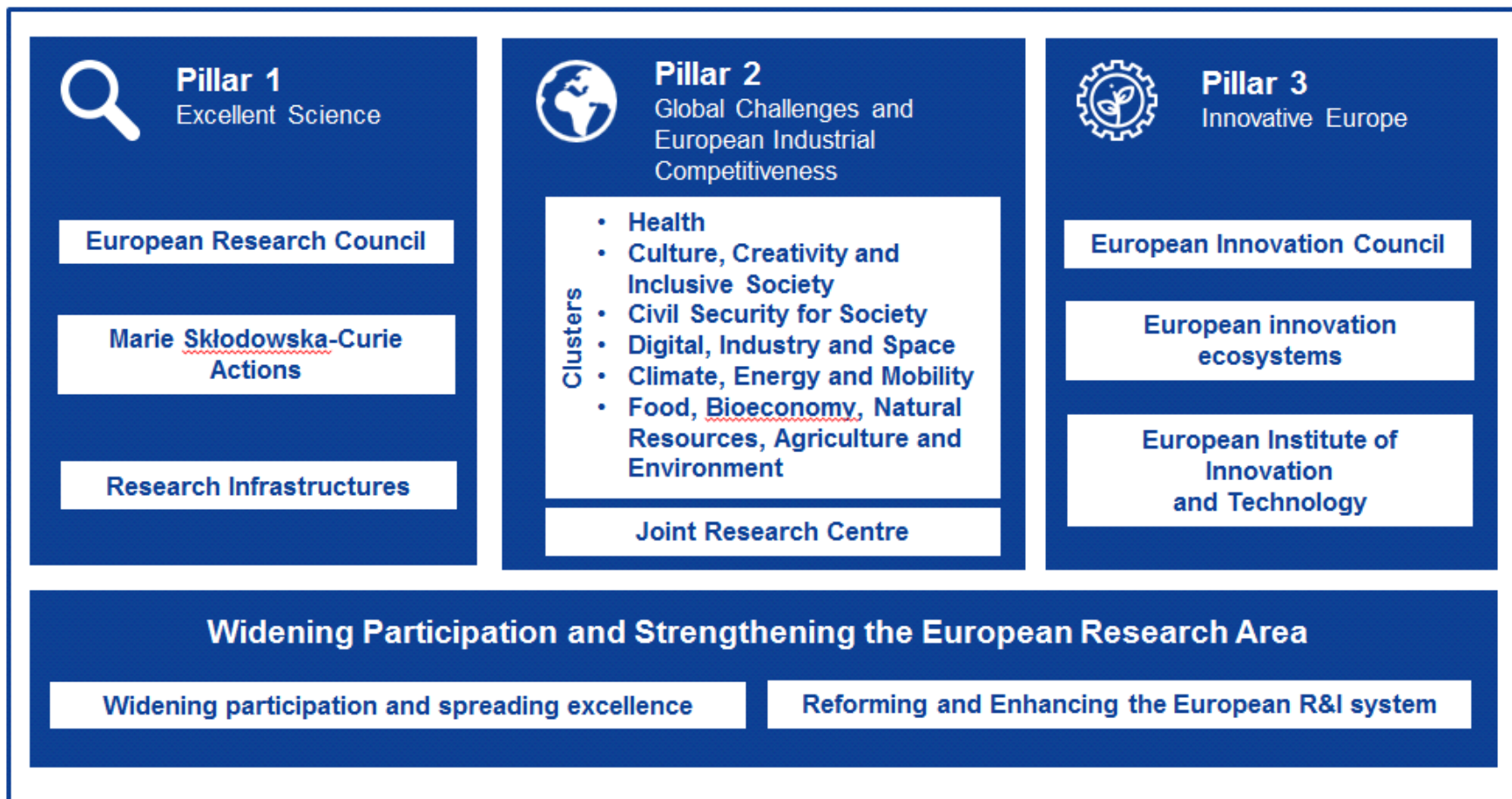
- Proteins and dietary shift
- Reducing food waste
- Personalized nutrition & healthy lifestyle
- Food safety systems of the future
- Food from the oceans & from fresh water
- Urban food system transformation
- Food systems Africa
- Microbiome
- Food & Data
- Governance



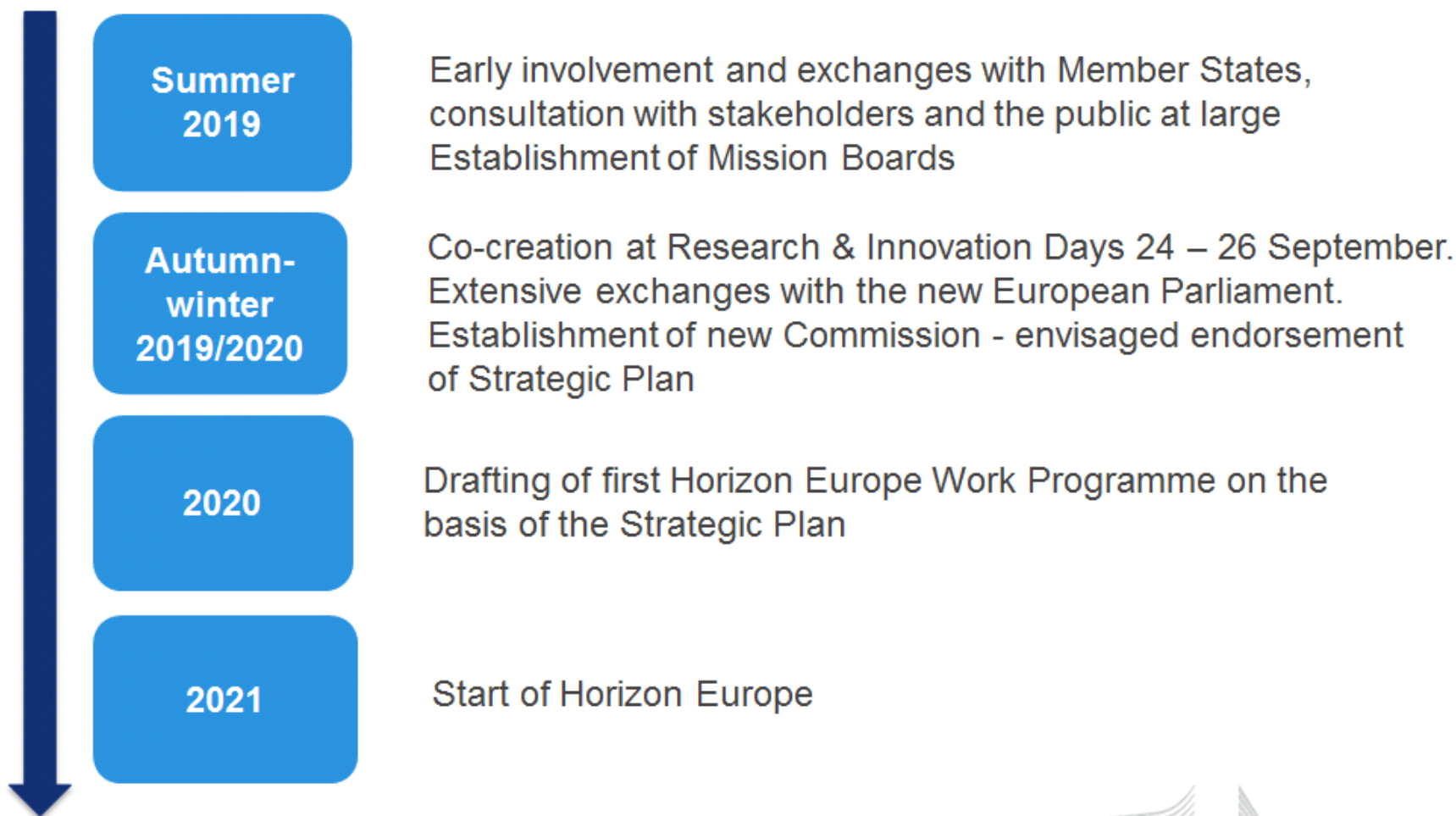
Define R&I needs per PATHWAY of ACTION



# Horizon Europe: Preliminary structure



# Steps towards the first Horizon Europe work programme





- 1) The **European Green Deal and from “Farm to Fork”**: a strong basis for action for transformative change and **future-proved competitiveness** in agriculture and the food system
- 2) **EU’s Research and Innovation policies**: future-proved agricultural production, nutrition and food systems
- 3) **Horizon Europe**: Engage with us in 2020 to boost its impact

# Thank you!



<http://ec.europa.eu/research/bioeconomy>

**#FOOD2030EU**