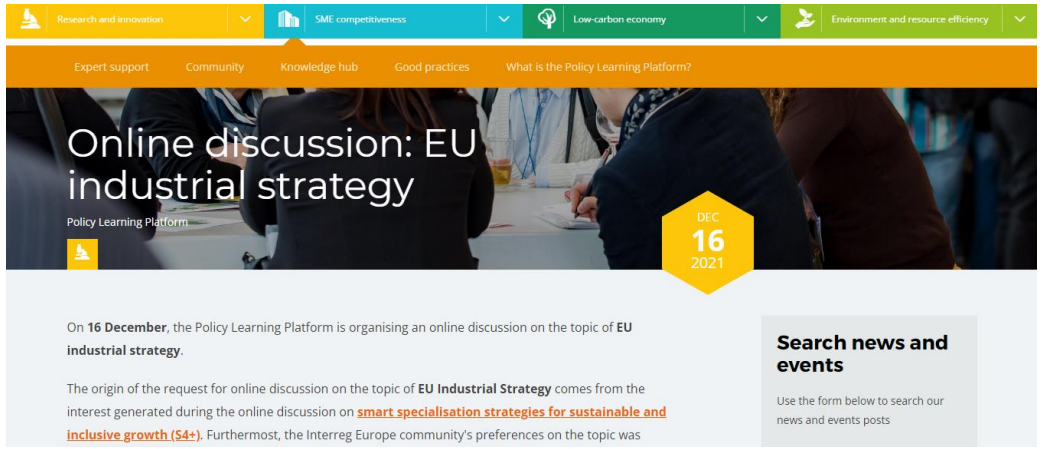
Regions and the EU Industrial Strategy



Richard Tuffs

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16th December 2021

FRIENDS OF SMART SPECIALISATION

Regions and the EU Industrial Strategy

- Europe is embarking on a **transition towards climate neutrality and digital leadership.** The European industrial strategy aims to ensure that European industry can lead the way as we enter this new age.
- https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/european-industrial-strategy_en

Question:

How EU Industrial Strategy affects regional research and innovation policymaking?

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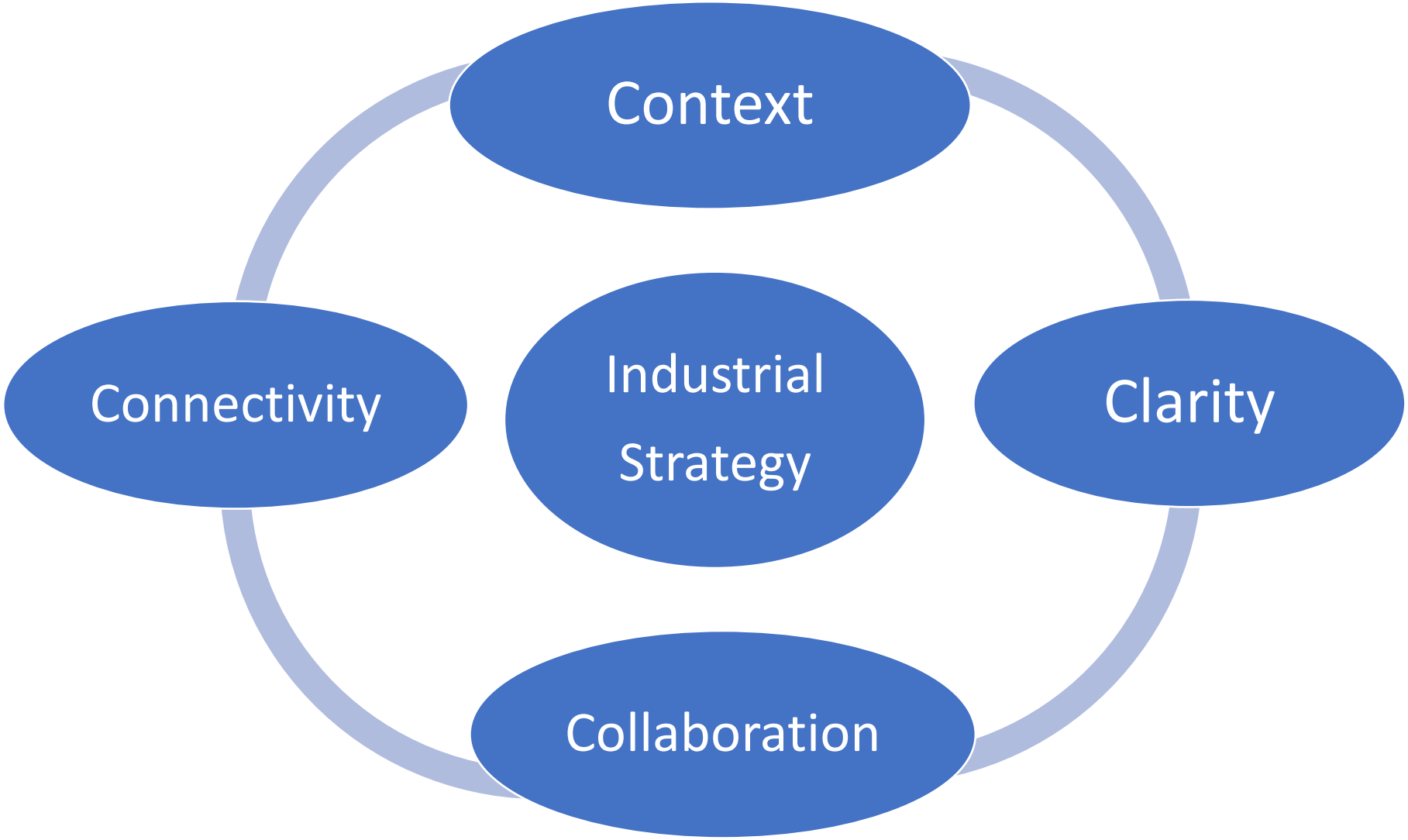
Industrial Strategy and regions



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Context - EU Industrial Strategy

- The **twin ecological and digital transitions will affect every part of our economy, society and industry**. These transitions will take place in a time of moving geopolitical plates which affect the nature of competition…**This is about Europe's sovereignty…**

- The day after the new industrial strategy was presented, the WHO announced the COVID-19 as a pandemic

- The starting point for this update is capturing the real impact of the last year on Europe's economy and industry and linked to **Europe's Recovery Plan**, **NextGenerationEU**

Short-term recovery, long-term prosperity

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Clarity?

- Multiplicity and complexity of policies and instruments
  - *Horizon Europe*
  - *Cohesion Policy*
    - Interregional Innovation Investments Instrument I3 Info Day =143 slides!
- Overlapping policies
- Place v sector
- Governance level
  - *EU / National / Regional / Local*

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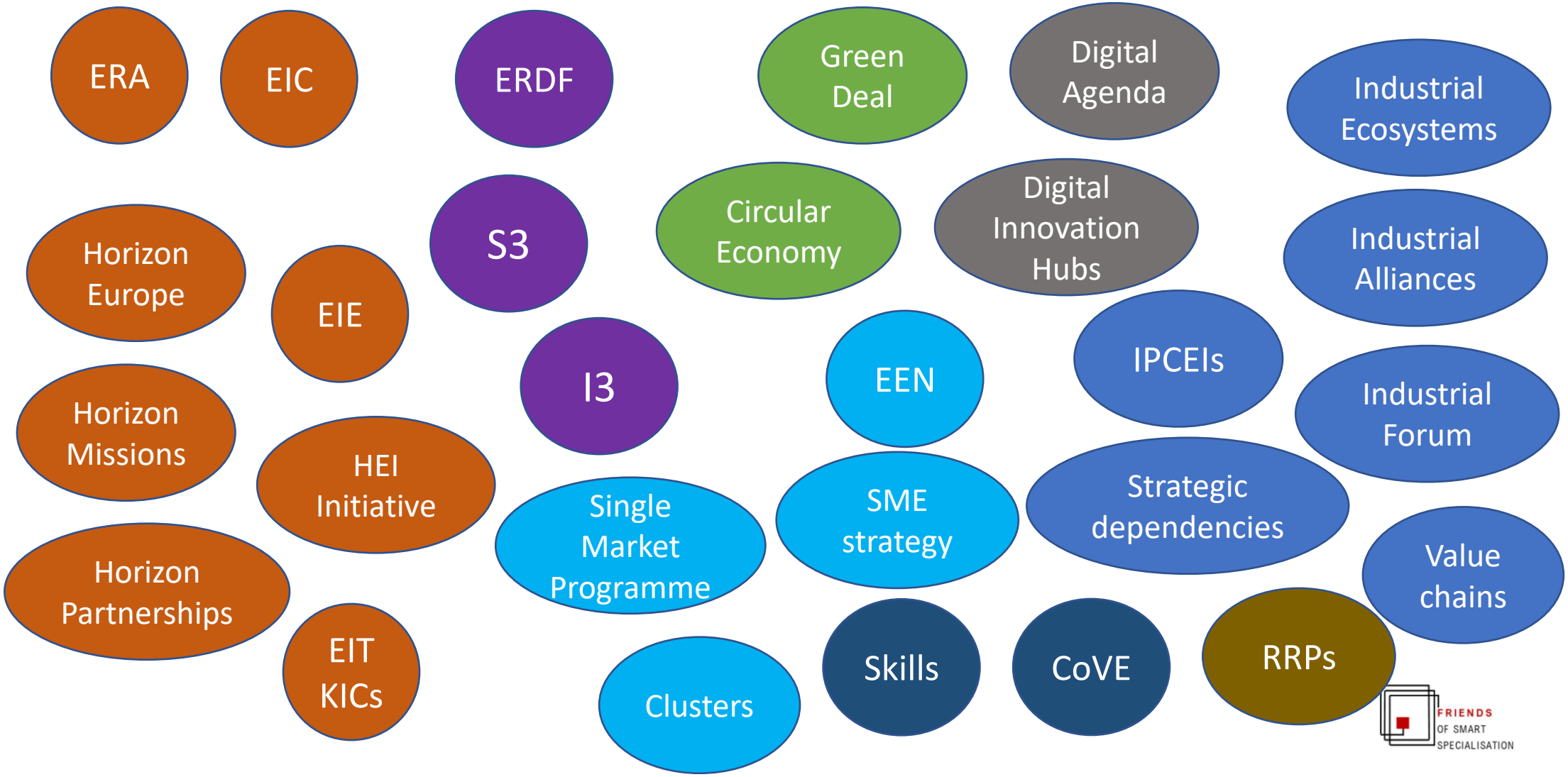
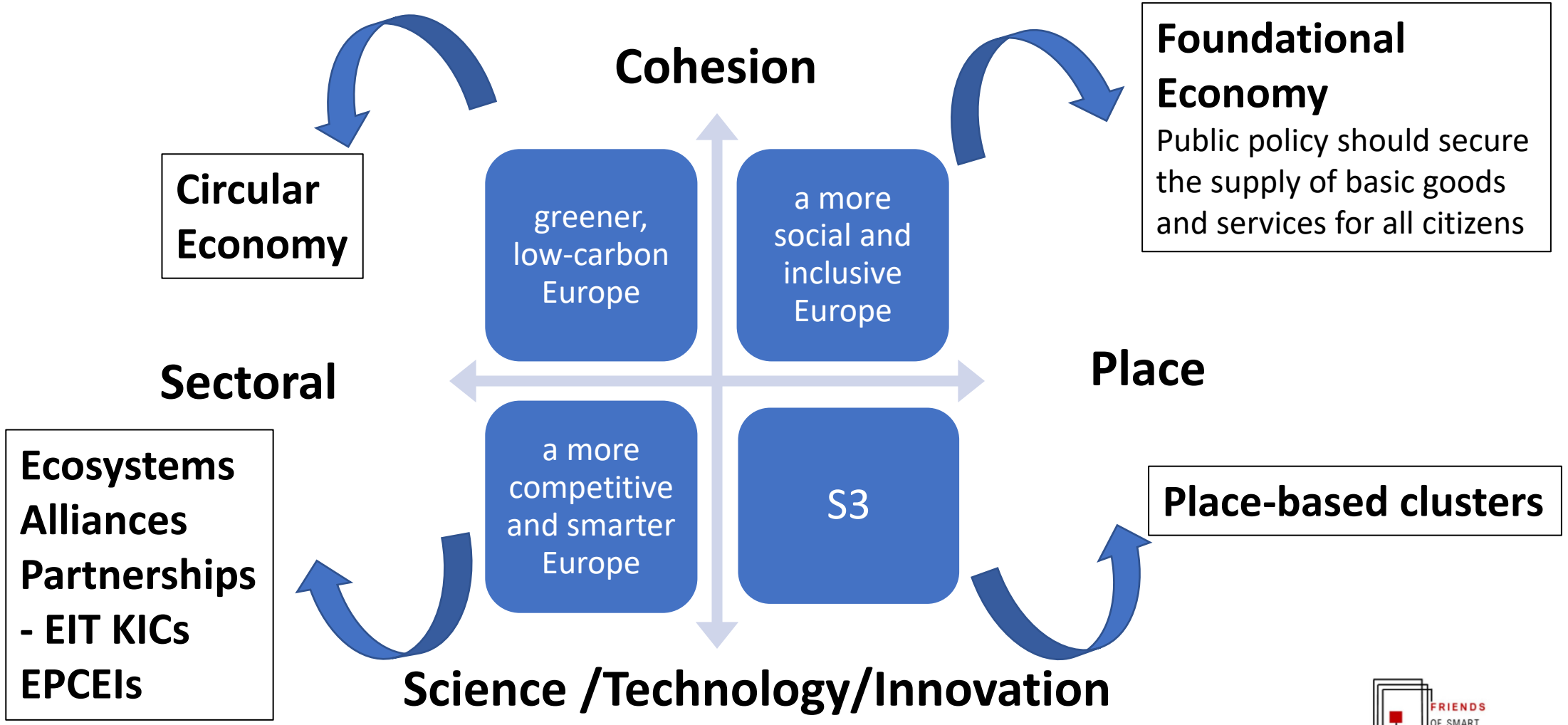
Industrial Strategy – Clarity?



Industrial Strategy and regions



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Collaboration

- **An ecosystem approach**
- As well as focusing on specific technologies, Europe also needs to look closely at the opportunities and challenges facing **industrial ecosystems.** These ecosystems encompass all players **operating in a value chain**: from the smallest start-ups to the largest companies, from academia to research, service providers to suppliers. And they each have their own features.
- Industrial Strategy March 2020

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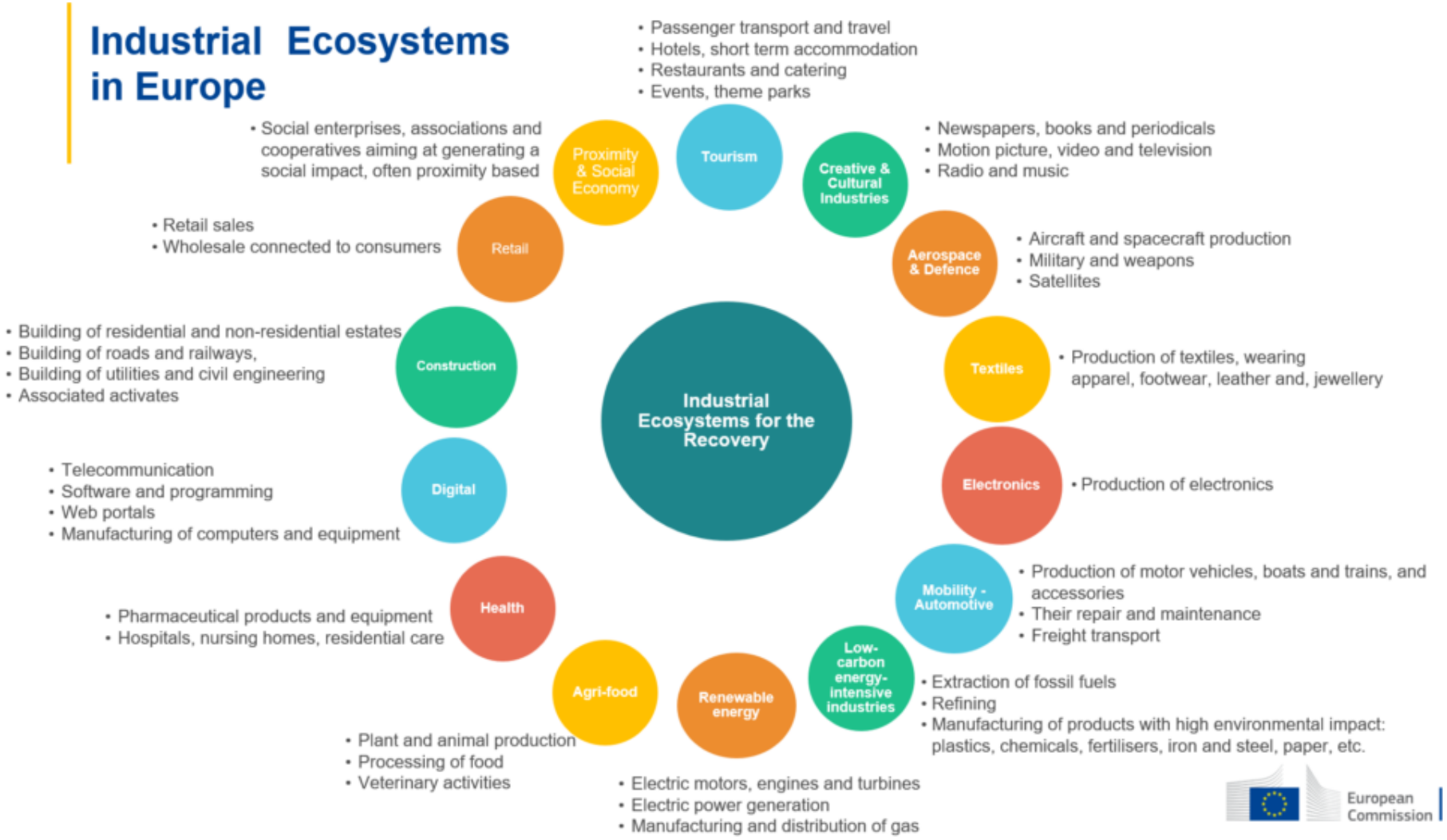
Industrial ecosystems



Connectivity

- Connectivity within the regions and between regions (Interreg-Europe, etc.)
- Place-based approach based on **smart specialisation strategy**
  - *Identifying competitive advantages of regions and investment priorities*
  - *Identifying ecosystem partners /stakeholders companies, HEIs, support groups, EEN, Innovation Agencies…*
- Funding opportunities
  - *Often project based but need to be linked with strategy*

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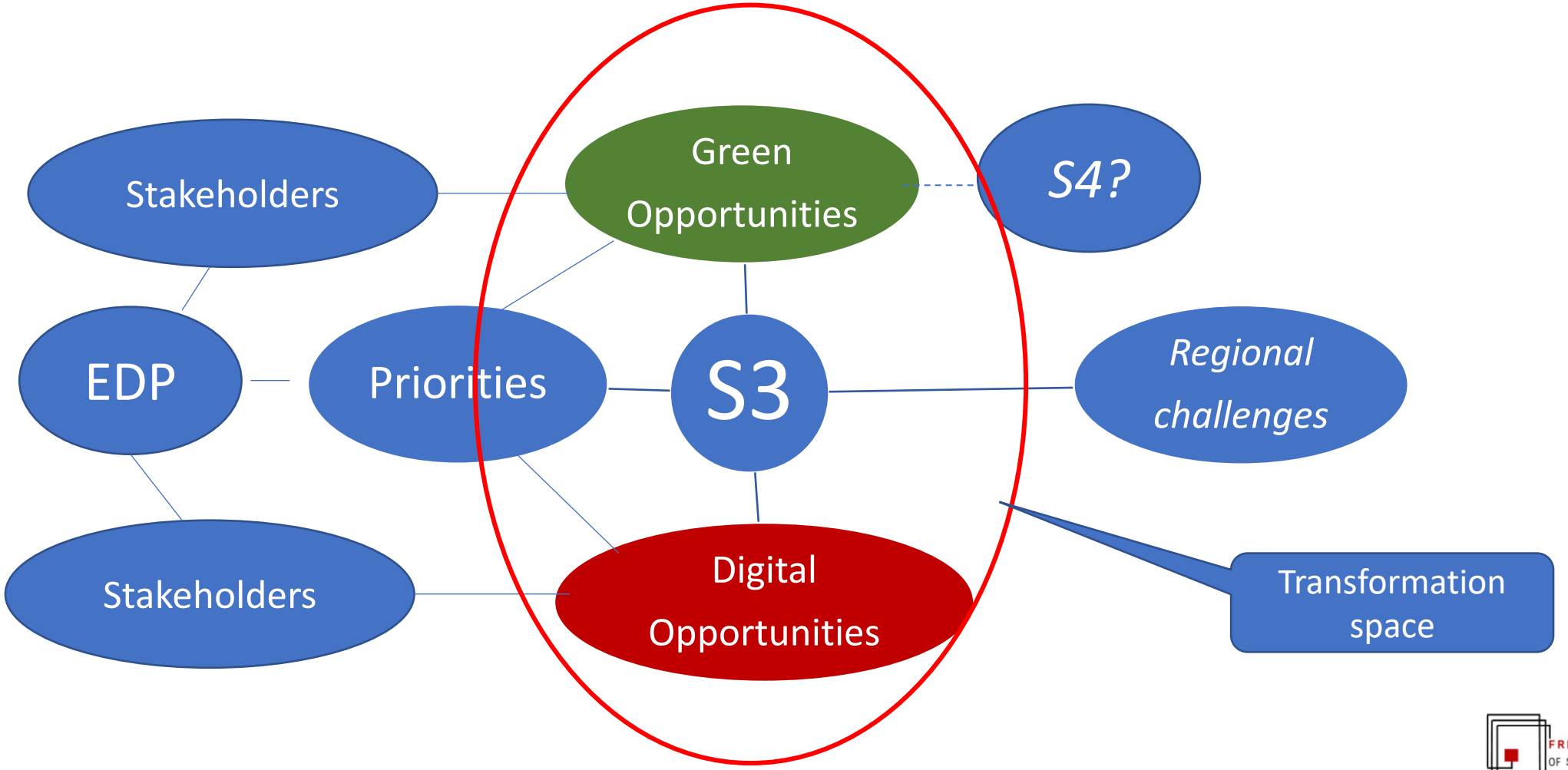
Smart specialisation – link to EU policy



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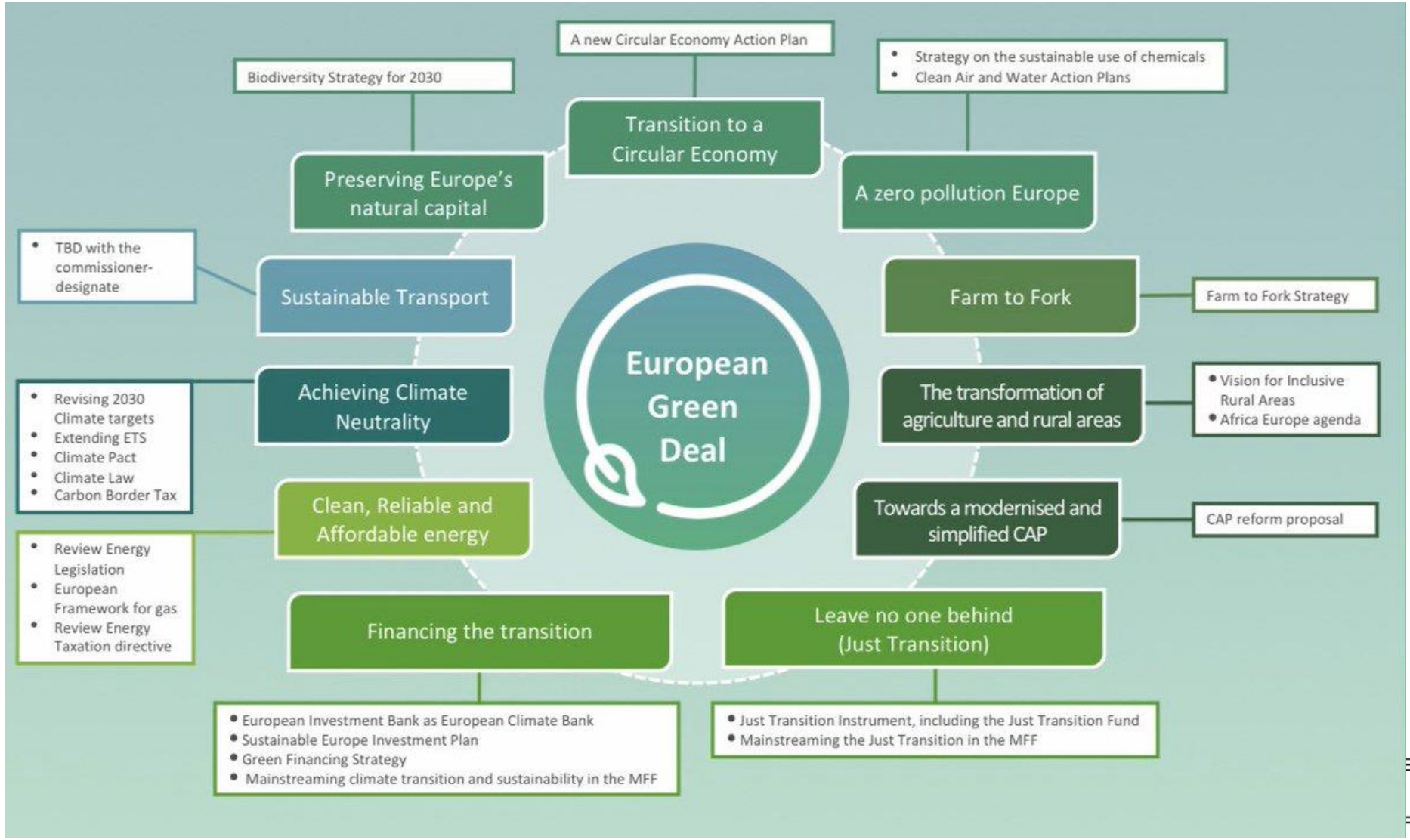
Green Deal



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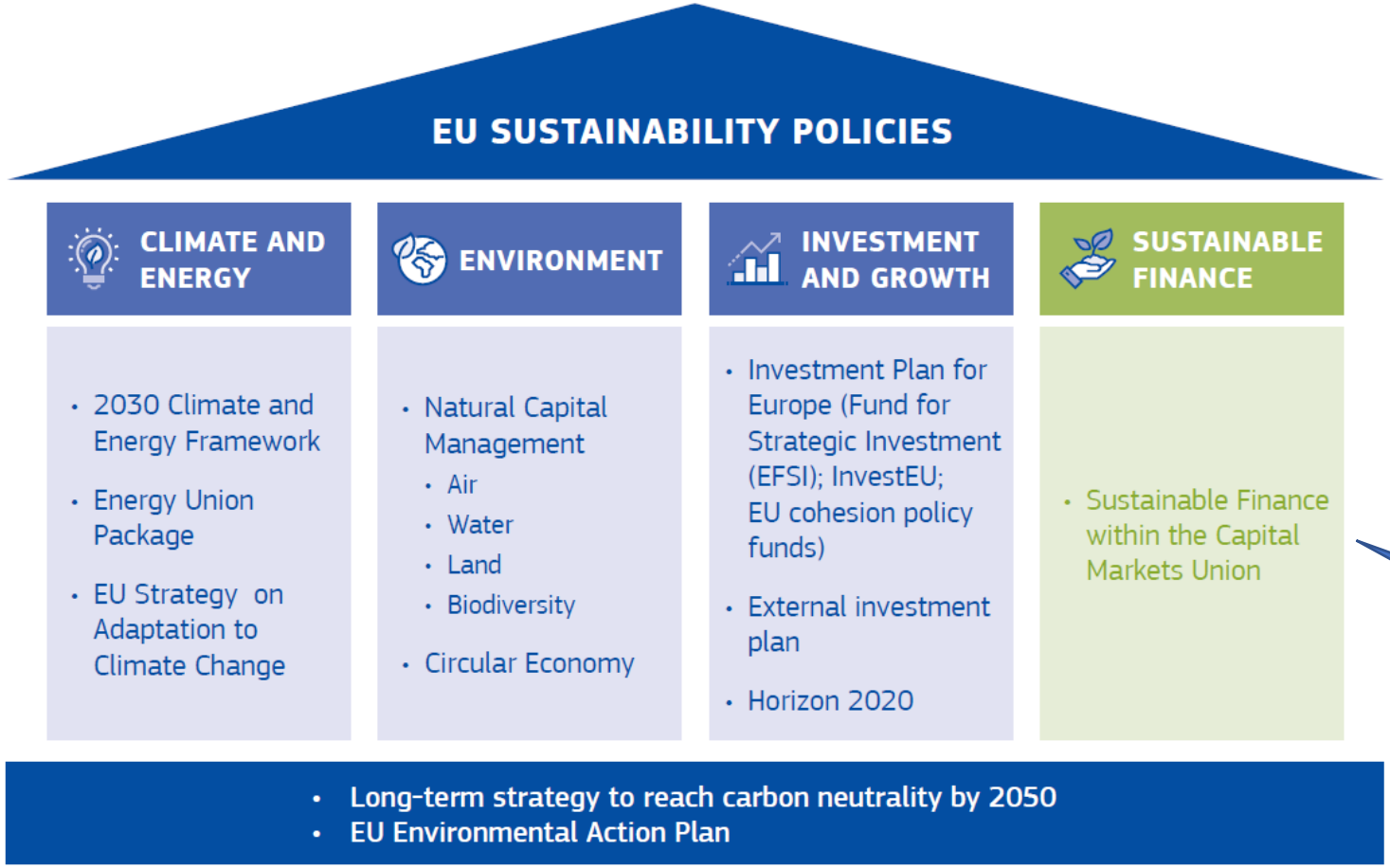
EU Sustainability Policies



The Regulation establishing the **Recovery and Resilience Facility (RRF)** provides that no measure (i.e., no reform and no investment) included in a Member State's **RRP should lead to significant harm to any of the six environmental objectives** within the Article 17 of the Taxonomy Regulation.

See SDGs and ESG

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Digital Compass March 2021

- The potential of digital transformation for **five key ecosystems**
  - ***Manufacturing***
  - ***Health****: introducing more online interaction, paperless services, electronic transmission and access to data –*
  - ***Construction****: the lowest productivity development from all major sectors in the last 20 years.*
  - ***Agriculture****: Agriculture has been identified as one key sector, where digital solutions can help to cut global GHG emissions and pesticide use.*
  - ***Mobility****: digital solutions for connected and automated mobility.*
- Specific attention should be given to **cutting-edge and disruptive innovation (see EIC)**
- SMEs have a central role in this transition with the support of over 200 Digital Innovation Hubs and industrial clusters,

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Path to a digital decade

Skills

ICT Specialists: 20 million + Gender convergence
Basic Digital Skills: min 80% of population

Public Services

Key Public Services: 100% online
e-Health: 100% availability medical records
Digital Identity: 80% citizens using digital ID

Infrastructures

Connectivity: Gigabit for everyone, 5G everywhere
Cutting edge Semiconductors: double EU share in global production
Data – Edge & Cloud: 10,000 climate neutral highly secure edge nodes
Computing: first computer with quantum acceleration

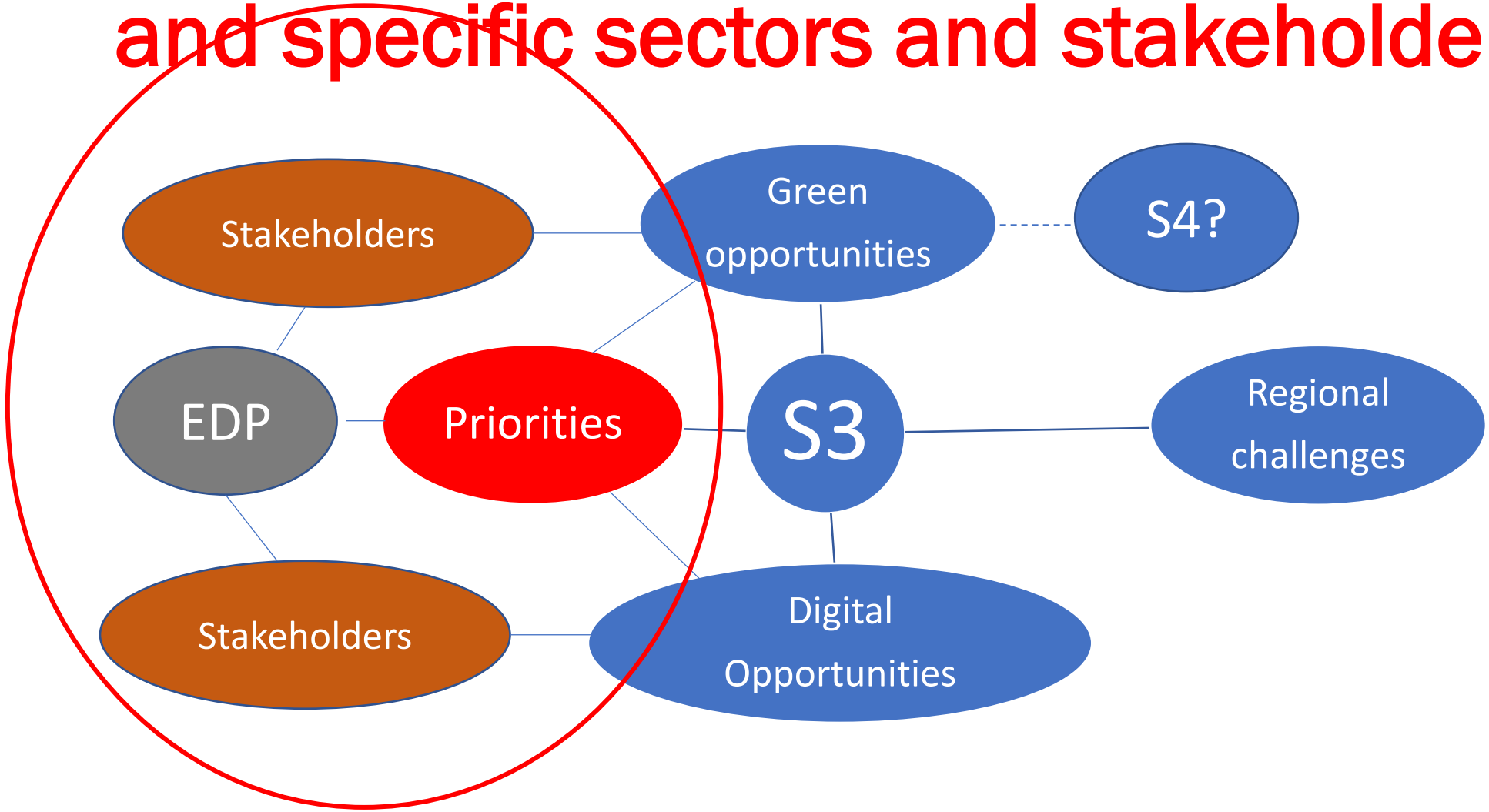
Business

Tech up-take: 75% of EU companies using Cloud/AI/Big Data
Innovators: grow scale ups & finance to double EU Unicorns
Late adopters: more than 90% of European SMEs reach at least a basic level of digital intensity

European Commission

SPECIALISATION

Smart specialisation – key role for EDP and specific sectors and stakeholders



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S3 sectoral priorities and place support

1. **Industrial Strategy opportunities**
   - *Ecosystems*
   - *Alliances – strategic value chains*
   - *IPCEIs*
   - *Partnerships – e.g. EIT KICs*
   - *Horizon Europe - Missions*

2. **SME Support**
   1. *EIC partnerships and accelerators*
   2. *SME Strategy*
   3. *Stronger links to Enterprise Europe Network*
   4. *Digital Innovation Hubs*
   5. *Clusters*

Industrial Alliances

- European Raw Materials Alliance
- European Clean Hydrogen Alliance
- European Battery Alliance
- Circular Plastics Alliance
- European Alliance for Industrial Data, Edge and Cloud
- Industrial Alliance on Processors and Semiconductor Technologies

- **The European Battery Alliance (EBA)** brings together EU national authorities, regions, industry research institutes and other stakeholders in the battery value chain.
- In total, 440 industrial and innovation actors have already joined the alliance.
- EU regions interested in collaboration on battery-related projects can join the Smart Specialisation Platform on Advanced Materials on Batteries .
- (Advanced material for batteries partnership – AMBP)

Industrial Forum

- Contributes to the Commission's work on industrial ecosystems in the context of the recovery, and their green and digital transformation, with a focus on cross-border and cross-ecosystem collaboration by
  - *deepening the systematic analyses of industrial ecosystems presented in the Updated Industrial Strategy and*
  - *identifying cross-border and cross-ecosystem investment needs and cooperation opportunities.*
  - *deliver on **transition pathways in different ecosystems**, starting with priority ones identified by the Commission, namely tourism, energy-intensive industries, construction and mobility ecosystems*
  - *a better understanding of the strategic dependencies and vulnerabilities in the EU economy*

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Industrial Forum - Members

- 27 Member States and EIB and relevant DGs
- **Organisations**: ASD, BusinessEurope, CAN, EuroChambres, EuroCommerce, EuropaBio, EURATEX, CECIMO, CECOP, ACEA, CEMBUREAU, CEFIC, European Clusters Alliance ECA), FIEC, EEB, ERT, ETUC, IndustryAll Europe, Medtech Europe, Orgalim, SMEunited, VTT, The Vanguard Initiative, WindEurope.
- ***Observers**: CoR, EESC*
- **Five Task Forces (TF)**
  - *TF1 on the systematic analysis of industrial ecosystems,*
  - *TF2 on transition pathways,*
  - *TF3 on strategic dependencies,*
  - *TF4 on cross-border and cross-ecosystems investments needs and cooperation opportunities*
  - *TF5 on Advanced Technologies.*

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Important Projects of Common European Interest (IPCEI)

- IPCEIs address important market or systemic failures or societal challenges. They bring together the public and private sectors for large-scale projects…
- IPCEIs can underpin all policies and actions that seek **to achieve common EU objectives, in particular the Green Deal, the Digital Strategy the New Industrial Strategy for Europe and its update, the European Strategy for Data and Next Generation EU.**
- IPCEIs should involve collaborative interactions in terms of number of partners from different sectors, or the involvement of undertakings of different sizes and **cooperation between large enterprises and SMEs,** including start-ups, in different Member States **and supports the development of more disadvantaged regions.**
- R&D&I projects must be of a **major innovative nature** or constitute an **important added value** in terms of R&D&I in the light of the **state of the art** in the sector concerned

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Current IPCEIs

- **Microelectronics** The four Member States France, Germany, Italy and the UK will provide in the coming years up to €1.75 billion in funding for this project that aims to unlock an additional €6 billion in private investment.
- Following the **European Battery Alliance** a recent IPCEI on "**European Battery Innovation**" IPCEI was jointly prepared and notified by Austria, Belgium, Croatia, Finland, France, Germany, Greece, Italy, Poland, Slovakia, Spain and Sweden.
- The twelve Member States will provide funding of up to €2.9 billion over the next few years and be complemented by private investment of €9 billion – three times the public support.
- The IPCEI project will involve 42 companies, including Tesla, BMW, FCA, Northvolt, ElringKlinger, Manz, and many more.
- EU approves next large IPCEI for 'European Battery Innovation' - electrive.com

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EU Strategic Value Chains

The Strategic Forum for Important Projects of Common European Interest identified six value chains as priorities for pooling resources and provided recommendations for action. These key strategic value chains complement three other areas – namely **high-performance computing, microelectronics and batteries** – where large-scale coordinated investments are already ongoing. The identified areas have been prioritised based on their potential **to drive Europe's industrial competitiveness** while helping **reaching the EU's climate ambitions**

COORDINATED INVESTMENTS | ENABLING POLICIES | BROAD SUPPORT FOR R&D

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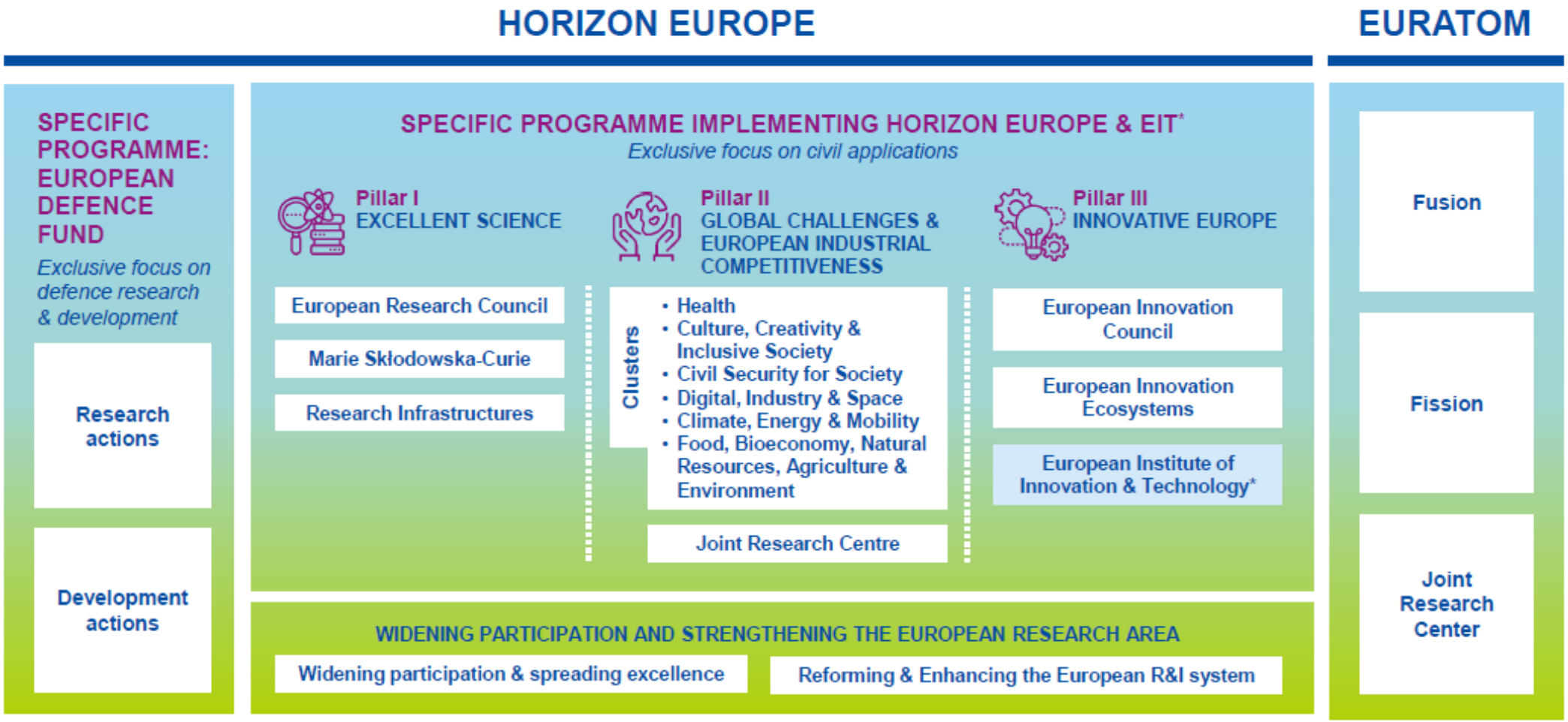
Horizon Europe



* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme

European Innovation Council

- The EIC is EU flagship innovation programme to identify, develop and scale up breakthrough technologies and game changing innovations
- Budget of **€10.1 billion to support innovation from early stage research, to proof of concept, technology transfer,** and **the financing and scale up of start-ups and SMEs.**
- The EIC Fund is a unique entity owned by the European Commission and established to make direct equity investments in companies. The fund
  - *Provides patient capital in the form of equity or quasi-equity (which may also be blended with a grant component) to SMEs and start-ups*
  - *Bridges the funding gap for start-ups*
  - *Aims to crowd in other investors by building a large network of capital providers*
  - *Covers all areas of technology including in **particular health, green and digital**. It aims at achieving "impact" and crowding in other investors.*
  - *Provides Investment Guidelines.*

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European Innovation Council funding

- **Pathfinder**
- **For bold ideas for radically new technologies with high-risk / high gain and interdisciplinary cutting-edge science collaborations that underpin technological breakthroughs.**
- Projects typically involve typically visionary scientists, entrepreneurial researchers and, research organisations, start-ups, high-tech SMEs and industrial stakeholders interested in technological research and innovation and need **partners from at least 3 different countries,**
- **Grants of up to €3 to 4 million support** early stage development of future technologies (e.g. various activities at low Technology Readiness Levels 1-3), up to proof of concept.

- **Accelerator**
- **Supports individual Small and Medium Enterprises (SMEs), in particular Startups and spin-out companies** to develop and scaleup game-changing innovations.
- It provides substantial financial support with
  - *grant funding (non-dilutive) of up to €2.5 million…,*
  - *investments (direct equity investments) of up to €15 million for scale up and other relevant costs.*
- EIC selected companies receive coaching, mentoring, access to investors and corporates…

European Innovation Ecosystems (EIE)

- **INNOVSMES - Partnership on Innovative SMEs**
- Supports innovative SMEs to increase their research and innovation (R&I) capacity and productivity and to become embedded in global value chains and new markets
  - *by supporting innovative SMEs in developing products, processes and services through funding market-led, cross-border, R&I collaborative projects and providing accompanying measures.*
  - *Enabling global collaboration and the commercialisation of new knowledge. It would thereby strengthen the overall* ***resilience of the European innovation ecosystem.***
- **Interconnection of innovation ecosystems**
- Support strategic-oriented long-term programmes of activities (action plans) to enable authorities in charge of public national, regional or local innovation policies and programmes to implement joint activities towards innovation deployment, while tackling challenges at EU, national, regional and local level
- European Innovation Ecosystems (europa.eu)

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Horizon 2020 Missions

Five Missions Areas

Adaptation to climate change, including societal transformation

Cancer

Healthy oceans, seas, coastal & inland waters

Climate-neutral & smart cities

Soil health & food

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Horizon Europe: Partnerships

- There are **49 candidate partnerships:**
- European Partnerships are initiatives where the EU together with private and/or public partners commit to jointly support the development and implementation of a programme of research and innovation activities.
- Partners can include industry, universities, research organisations, bodies with a public service mission at local, regional, national or international level or civil society organisations including foundations and NGOs. Any such organisation, which is willing to commit to the partnership can discuss joining the partnership with the “lead entity”.

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Horizon Europe: Partnerships

Portfolio of candidates for European Partnerships (49)

HEALTH

EU-Africa Global Health
Innovative Health Initiative
Chemicals Risk Assessment
Fostering an ERA for Health research
Large-scale innovation and transformation of health systems in a digital and ageing society
Personalised Medicine
Rare Diseases
One Health AMR

DIGITAL, INDUSTRY AND SPACE

High Performance Computing
Key Digital Technologies
Smart Networks and Services
AI, data and robotics
Photonics Europe
Clean Steel - Low Carbon Steelmaking
European Metrology
Made in Europe
Carbon Neutral and Circular Industry
Global competitive space systems
European Geological Service

PILLAR III AND CROSS-PILLAR

EIT Climate KIC
EIT Health
EIT Manufacturing
EIT Food
EIT InnoEnergy
EIT Manufacturing
EIT Raw Materials
EIT Digital
EIT Urban Mobility
EIT Cultural and Creative Industries

Innovative SMEs

European Open Science Cloud (EOSC)

CLIMATE, ENERGY AND MOBILITY

Transforming Europe's rail system
Integrated Air Traffic Management
Clean Aviation
Clean Hydrogen
Built environment and construction
Towards zero-emission road transport
Mobility and Safety for Automated Road Transport
Batteries
Clean Energy Transition
Sustainable, Smart and Inclusive Cities and Communities
Smart and zero-emission waterborne transport

FOOD, BIOECONOMY, NATURAL RESOURCES, AGRICULTURE AND ENVIRONMENT

Accelerating farming systems transition
Animal health: Fighting infectious diseases
Environmental Observations for a sustainable EU agriculture
Rescuing biodiversity to safeguard life on Earth
A climate neutral, sustainable and productive Blue Economy
Safe and Sustainable Food System for People, Planet & Climate
Circular bio-based Europe
Water4All: Water security for the planet

Euro Com

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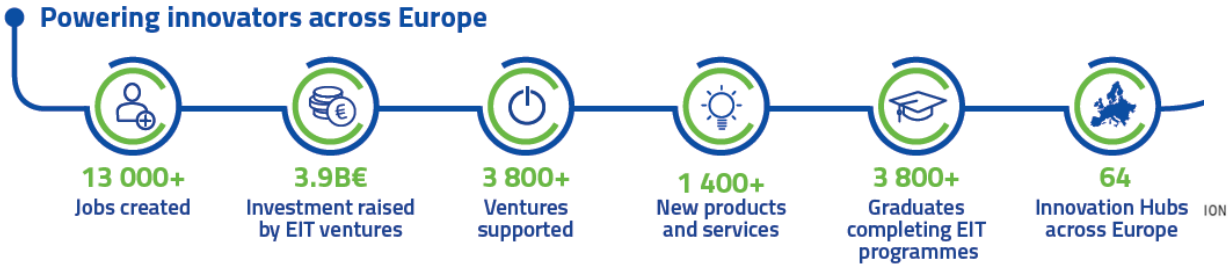
EIT-KICs

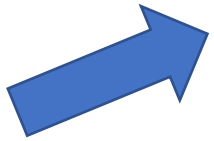
Europe's largest innovation community
2 900+ PARTNERS across Europe
1 796 companies including SMEs
282 cities, regions and NGOs
421 research centres
476 higher education institutions
COMPANIES
UNIVERSITIES
RESEARCH CENTRES
EIT Innovation Community

EIT Climate-KIC
Working to accelerate the transition to a zero-carbon economy
EIT Digital
Driving Europe's digital transformation
EIT Food
Leading a global revolution in food innovation and production
EIT RawMaterials
Developing raw materials into a major strength for Europe
EIT InnoEnergy
Achieving a sustainable energy future for Europe
EIT Health
Giving EU citizens greater opportunities to enjoy a healthy life
EIT Manufacturing
Strengthening and increasing the competitiveness of Europe's manufacturing industry
EIT Urban Mobility
Smart, green and integrated transport


Powering innovators across Europe
13 000+
Jobs created
3.9B€
Investment raised by EIT ventures
3 800+
Ventures supported
1 400+
New products and services
3 800+
Graduates completing EIT programmes
64
Innovation Hubs across Europe

Single Market Programme 2021-2027

- Objectives
  - *Maintain a high level of food safety*
  - *Give even higher protection to consumers*
  - ***Boost the competitiveness of businesses, in particular SMEs***
  - *Improve the governance of the Single Market and compliance with rules*
  - *Produce and disseminate high-quality statistics*
  - *Develop effective European standards*

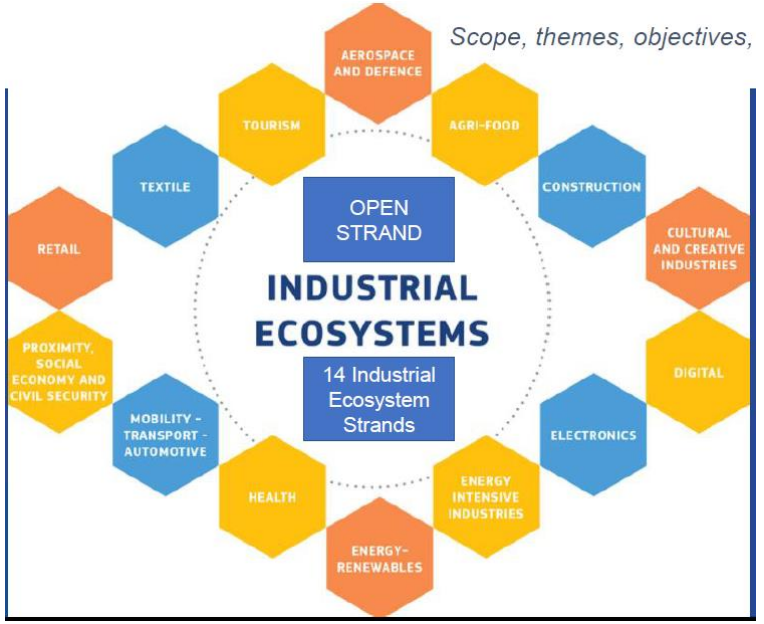


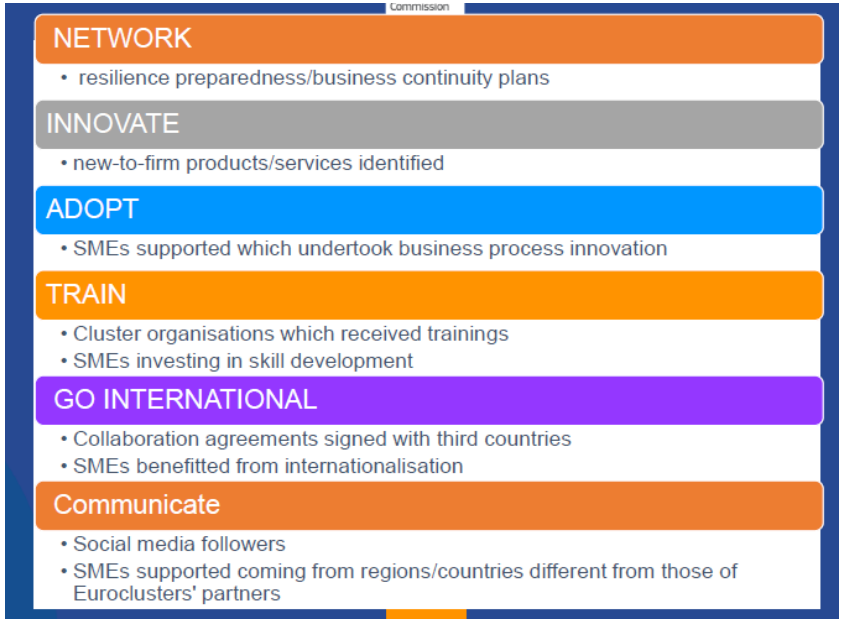
- Provide various forms of support to businesses in particular SMEs:
- Financial support, such as grants and SME loan guarantees under the InvestEU Fund
- Facilitate access to markets and reduce administrative burden
- Support uptake of innovation and address global and societal challenges
- Foster a favourable business environment and entrepreneurial culture.

Via **Enterprise Europe Network** and
Debt and equity financing in 'SME Window' of the InvestEU Fund

Single Market Programme

- Support for cluster initiatives
- Industrial cluster policy (europa.eu)
- **Euroclusters**: - Consortia of cluster organisations or their EU networks teaming up with other types of organisations supporting green and digital transition and building social and economic resilience.
- Budget: €42 million for 30 partnerships across and within industrial ecosystems
- **Enterprise Europe Network**





Enterprise Europe Network - EEN

- The EEN helps businesses innovate and grow on an international scale. The Network is active in more than 60 countries worldwide. It brings together 3,000 experts from more than 600 member organisations
- Member organisations include:
  - *technology poles*
  - *innovation support organisations*
  - *universities and research institutes*
  - *regional development organisations*
  - *chambers of commerce and industry*

- The new Network 2022> will build upon its existing strengths, expertise and achievements and **help EU SMEs in their transition to more sustainable business models** through dedicated sustainability advisers and other sustainability services.
- It will also **facilitate SMEs' digitalisation** by helping them adapt their processes, implement digital technologies and develop new innovative products. The end goal of the new Network is to **boost SMEs' resilience and fully recover** from the COVID-19 crisis.

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New EEN Jan 2022>

- The Network should contribute to the objectives of the SMP by improving the competitiveness and sustainability of SMEs in Europe and promoting entrepreneurship.
- It should do so notably by:
  - *Assisting them to become more economically, environmentally and socially sustainable;*
  - *Supporting their digitalisation and greater resilience to shocks;*
  - ***Supporting their innovation and innovation processes;***
  - *Facilitating their access to the Single Market and third country markets;*
  - ***Helping them to cooperate and where appropriate integrate with local, regional, national and European clusters and industrial ecosystems and global value chains.***
- It should promote EU policies and programmes and, by collecting valuable feedback from SMEs on the effectiveness of EU policies, provide a link between SMEs and EU policy making.

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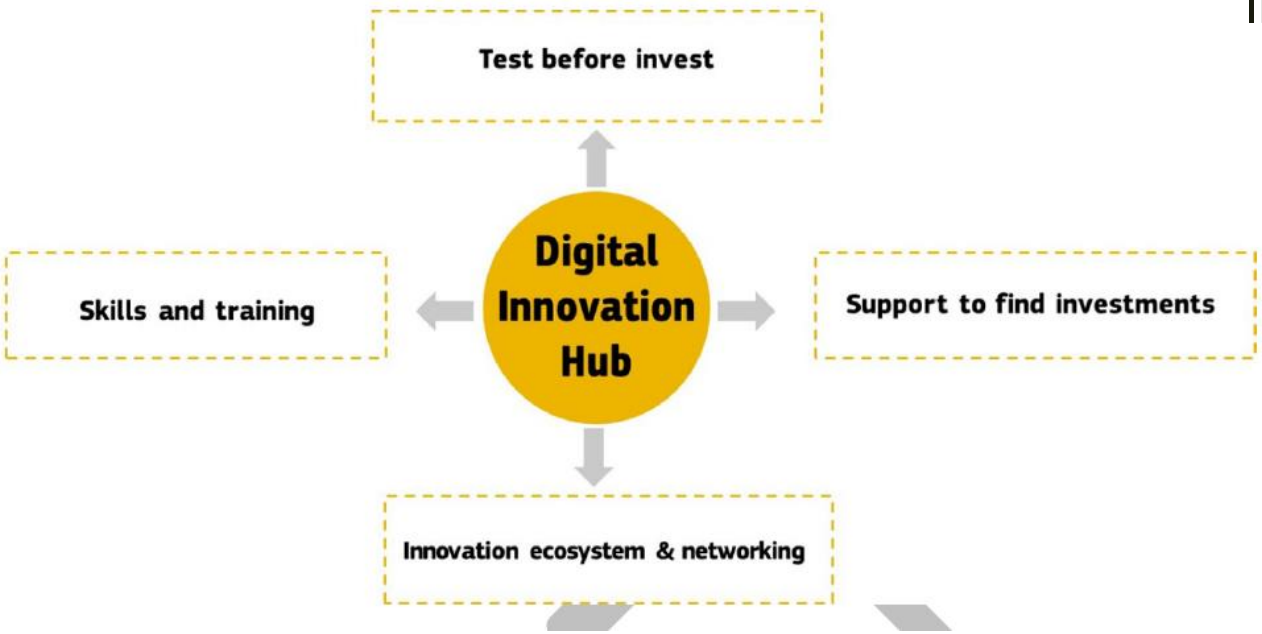
Digital Innovation Hubs



EDIHs | Shaping Europe's digital future (europa.eu)

- ERDF programmes may support Digital Innovation Hubs mainly in four ways:
  - *construction and up-grading via investments in infrastructure, equipment, software and intangible assets,*
  - *research and innovation services for SMEs, including transfer of advanced digital technologies,*
  - *delivering digitalisation services to SMEs and public sector, etc.*
  - ***strengthen the regional and local innovation ecosystems including the participation of DIHs in the entrepreneurial discovery processes for smart specialisation.***

Digital Innovation Hubs

- Enterprise Europe Network (EEN) is the world's largest support network for SMEs
- Many European Digital Innovation Hubs (EDIH) will be based on existing clusters or include organisations that are part of an EEN consortia.
- The SME Strategy also commits to expand Digital Innovation Hubs in connection with Startup Europe and the EEN and provide a seamless service within local and regional ecosystems.
- [Guidance_note_EENEDIHclusters_12032021_FINAL_DGeWIjbwe2VJd1pWb3UagT3oy8g_76992.pdf (europa.eu)]

Interregional Innovation Investments Instrument I3

- The ERDF supports the Interregional Innovation Investments Instrument.
- The Interregional Innovation Investments Instrument shall support the **commercialisation and scaling up of interregional innovation projects** having the potential to encourage the **development of European value chains.**
- The Interregional Innovation Investments Instrument has two strands, supporting equally:
  - *(a) financial and advisory support for investments in **interregional innovation projects in shared smart specialisation areas;***
  - *(b) financial and advisory support, and capacity building for the development of **value chains in less developed regions***
- **InfoDay webinar 9th Dec 2021** https://eismea.ec.europa.eu/events/online-info-day-interregional-innovation-investment-i3-instrument-recording-available_en
- 2021-2022_financing_decision_i3.pdf (europa.eu)

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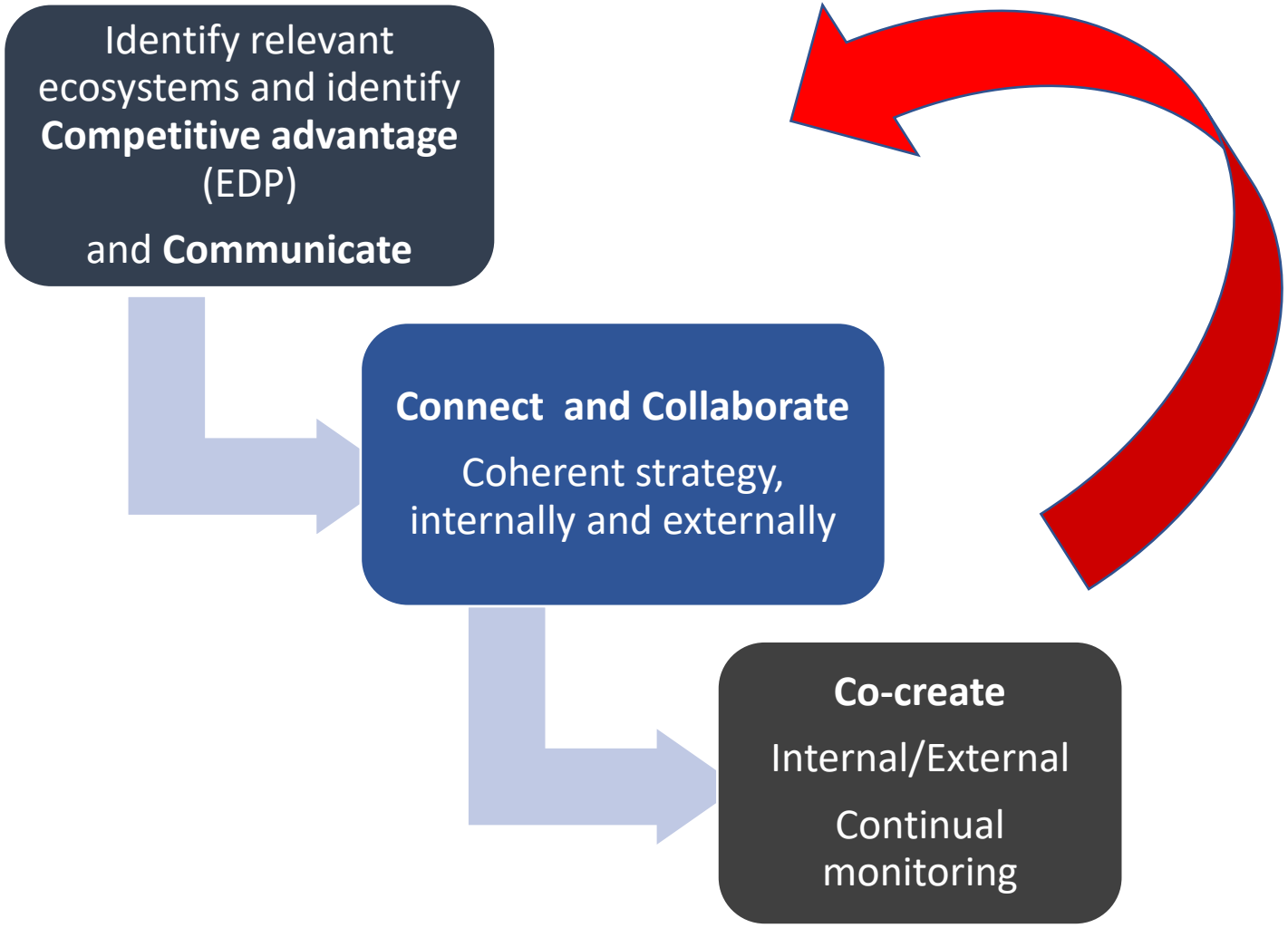
Concluding Cs



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Thanks also to my FoSS colleagues below for their input and advice

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