

S3 Community of Practice
presents

S3 FORUM

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Parallel session 1: S3 and industrial transition



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Parallel session 1: S3 and industrial transition

- **Pirkko Taskinen**, Director of OIA Water Ecosystem & SuperIoT, University of Oulu, Northern Ostrobothnia, Finland
- **Claire Nauwelaers**, Independent Science, Technology and Innovation Policy Expert
- **Luis Goñi Navarro**, Regional Strategy Director, Sodena Development Agency of Navarra, Spain
- **Marek Przeor**, Policy Officer, DG GROW, European Commission

Moderator : Yari Borbon, S3 CoP Secretariat

ICT OULU

Industrial Transition of ICT sector
in Oulu Region, Finland

Pirkko Taskinen



Credits: Tero Suutarinen / Oulun kaupunki

Oulu-region is the Nordic tech hub

THE ARCTIC CIRCLE



OULU 65°01'N, 25°28'E

FINLAND

HELSINKI

NORWAY

SWEDEN



250 000 in habitants

Oulu Region



1 in 3 people have

a university degree

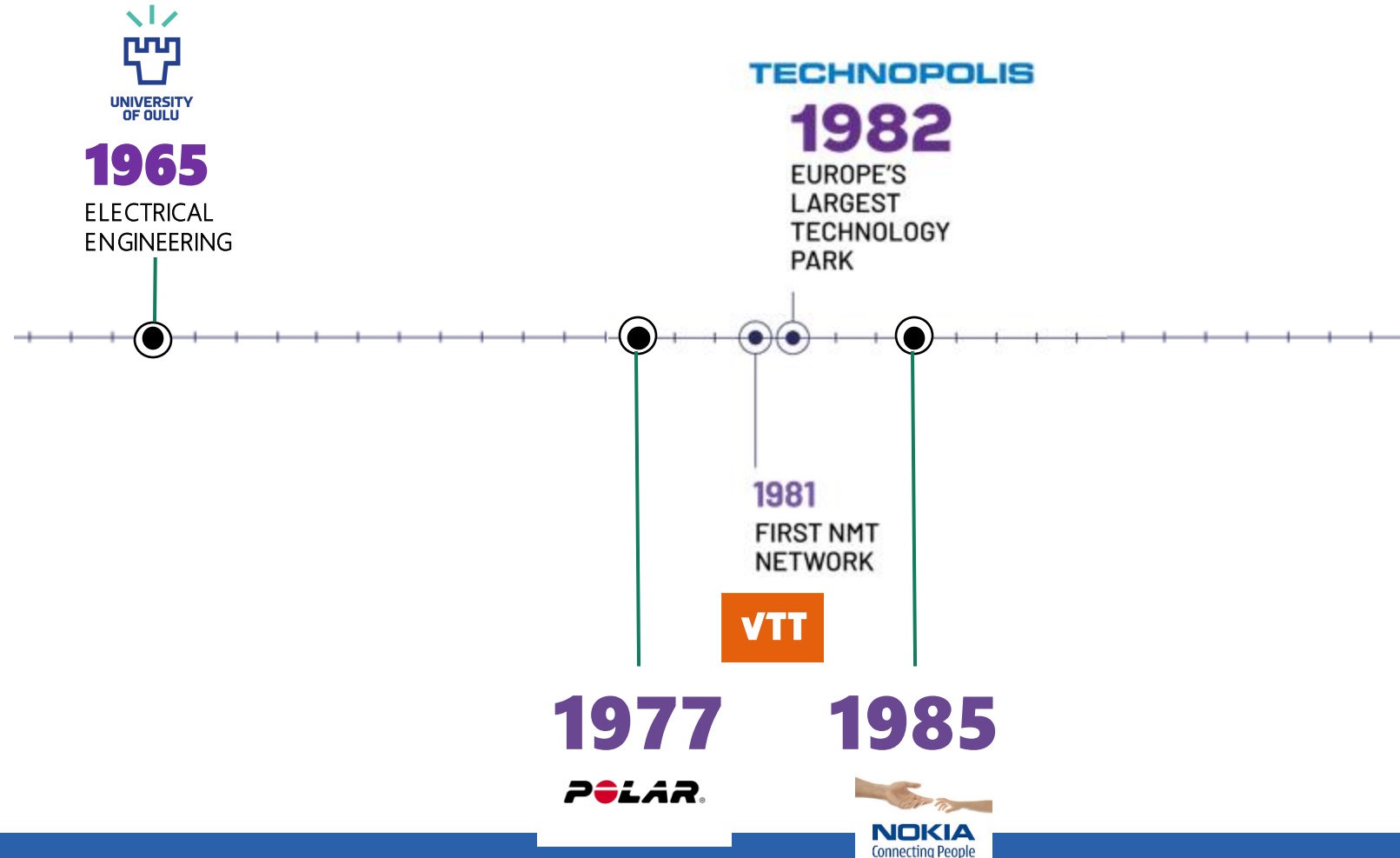


#1 in R&D

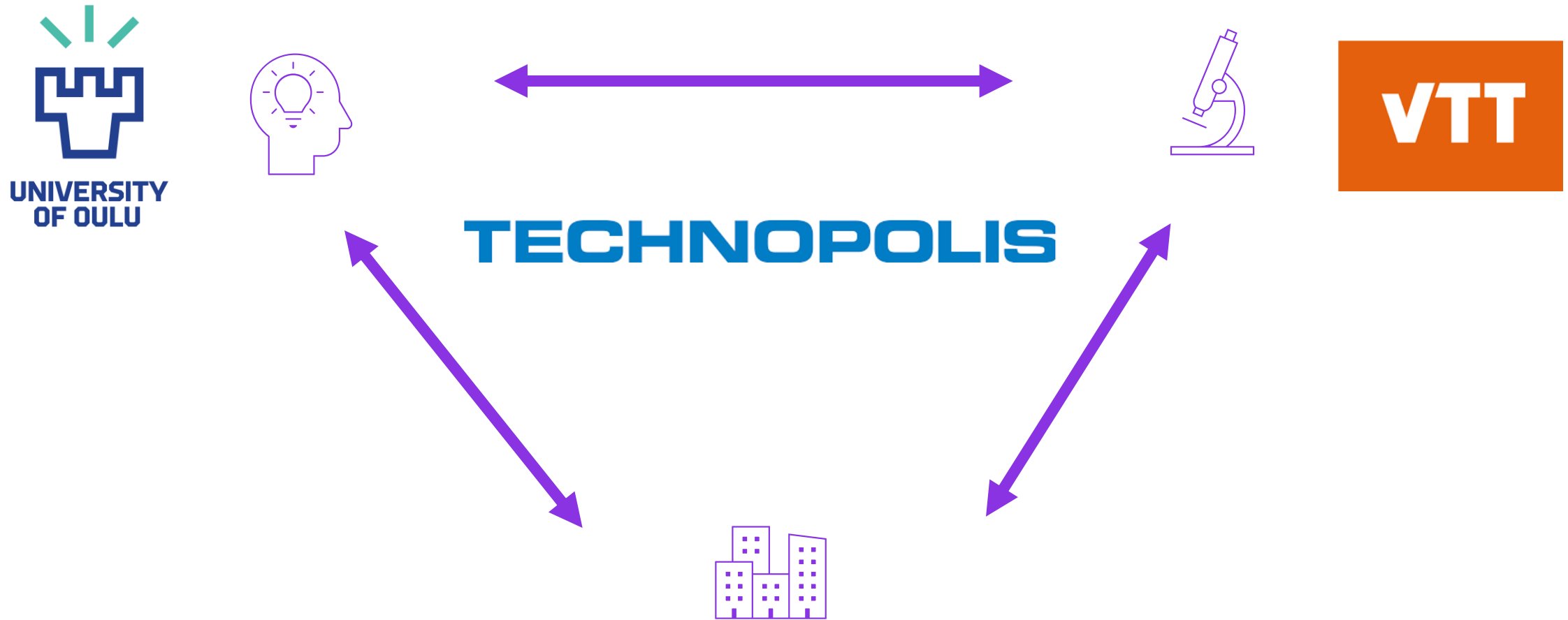
investments in Finland

Among the top in the EU

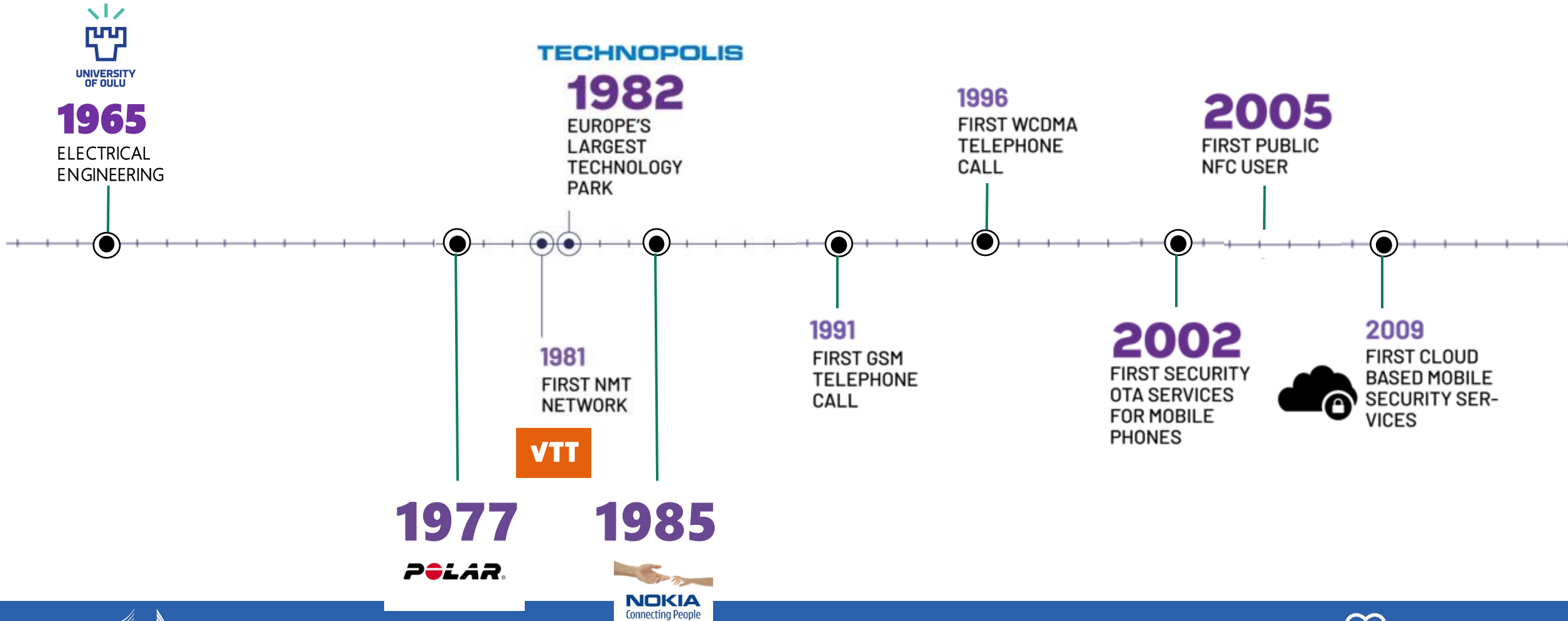
The start of ICT in Oulu in the 1980s



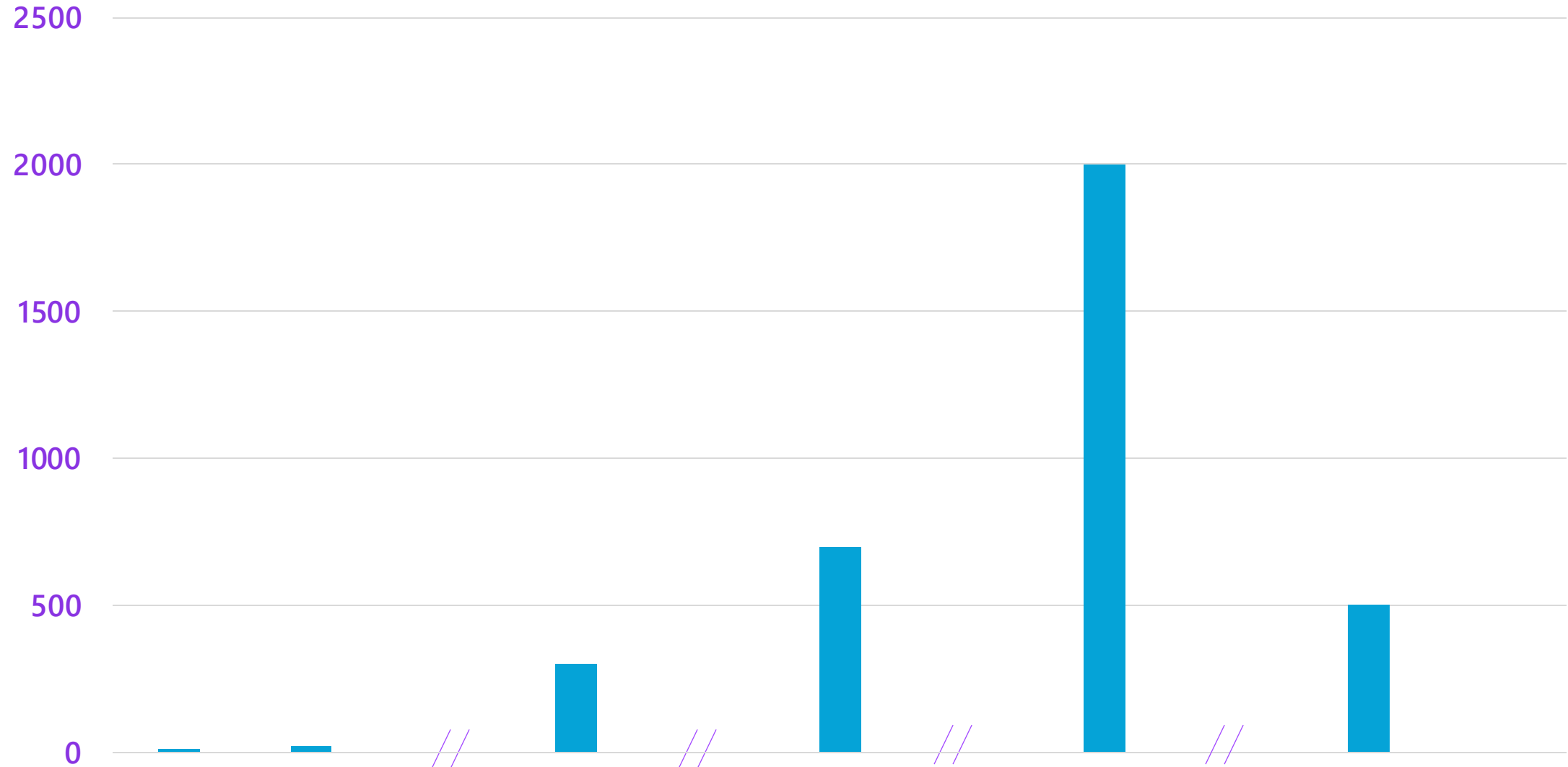
Baseline for ICT OULU in the 1980s



ICT growing



People working for Nokia Mobile Phones (NMP)



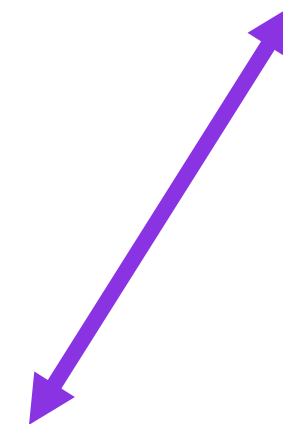
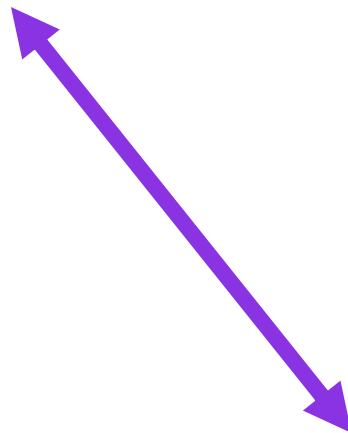
New start from the baseline



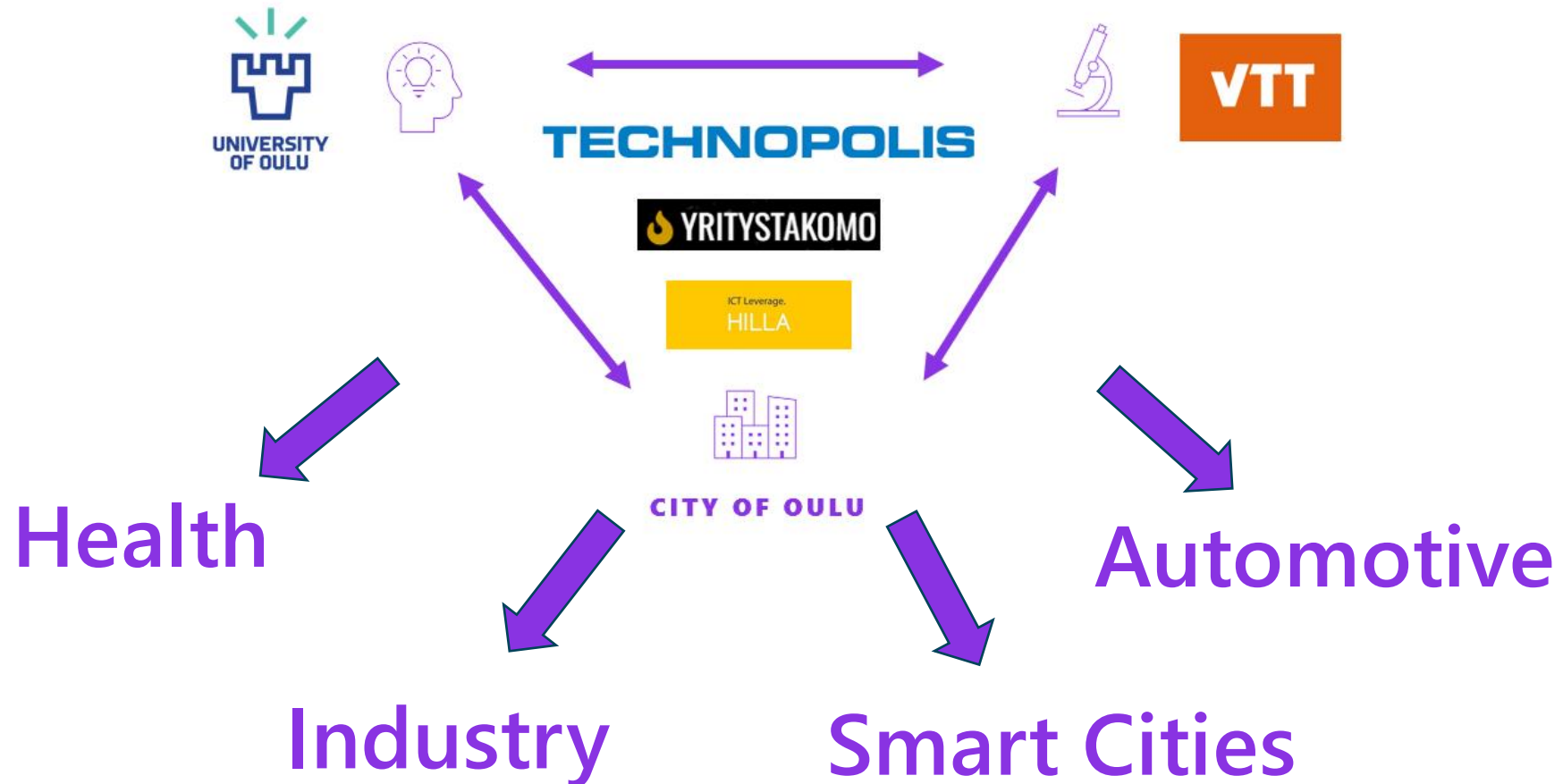
TECHNOPOLIS



CITY OF OULU



ICT growing to different verticals



1965

ELECTRICAL
ENGINEERING

OULU is the PIONEER of the WIRELESS WORLD

OULU'S TRACK RECORD IN THE WIRELESS WORLD

TECHNOPOLIS

1982

EUROPE'S
LARGEST
TECHNOLOGY
PARK

1981

FIRST NMT
NETWORK

1992

FIRST GSM
BASE STATION



1991

FIRST GSM
TELEPHONE
CALL

1996

FIRST WCDMA
TELEPHONE
CALL

2005

FIRST PUBLIC
NFC USER



2002

FIRST SECURITY
OTA SERVICES
FOR MOBILE
PHONES

2009

FIRST CLOUD
BASED MOBILE
SECURITY SER-
VICES



2015

PLANNING AND
IMPLEMENTATION
OF TWO 5G TEST
NETWORKS

2012

WORLD'S
FIRST PRINTED
INTELLIGENCE

2016

OYS TESTLAB
5G TEST
NETWORK

2018

6G FLAGSHIP
251 M€ FUNDING

2020

1ST
6G RESEARCH
CENTRE
IN THE WORLD

2019

OULU AUTOMOTIVE
CLUSTER
ESTABLISHED



2022

RADIOPARK &
FUTURE HOSPITAL
OYSTER
CONCEPT
DEVELOPMENT



UNIVERSITY
OF OULU

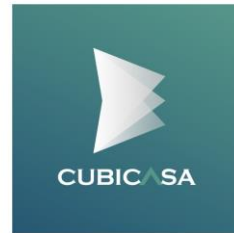


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Generalitat de Catalunya
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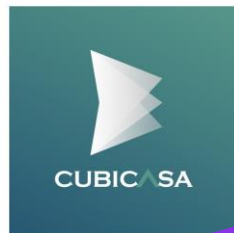
COMMUNITY
OF PRACTICE



Find more ICT companies in Oulu region:

<https://oulu.com/ict/companies/>





SMEs employ more than Nokia Phones and subcontractors in the 2010s



Find more ICT companies in Oulu region:

<https://oulu.com/ict/companies/>



Oulu-region is the Nordic tech hub

1 000

tech companies

25 000

professionals

1 000

new talents annually

THE ARCTIC CIRCLE



OULU 65°01'N, 25°28'E

HELSINKI

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SWEDEN

FINLAND





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Lessons learned from
DG Regio Pilot Action for
Regions in Industrial
Transition



Claire Nauwelaers

Independent Science, Technology and Innovation Policy expert

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Joint project with **Richard Harding**

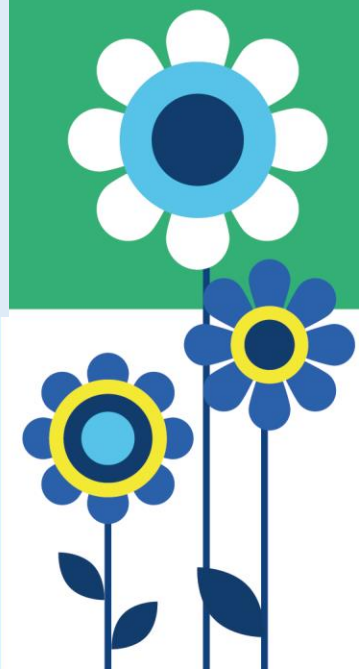
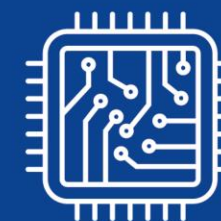
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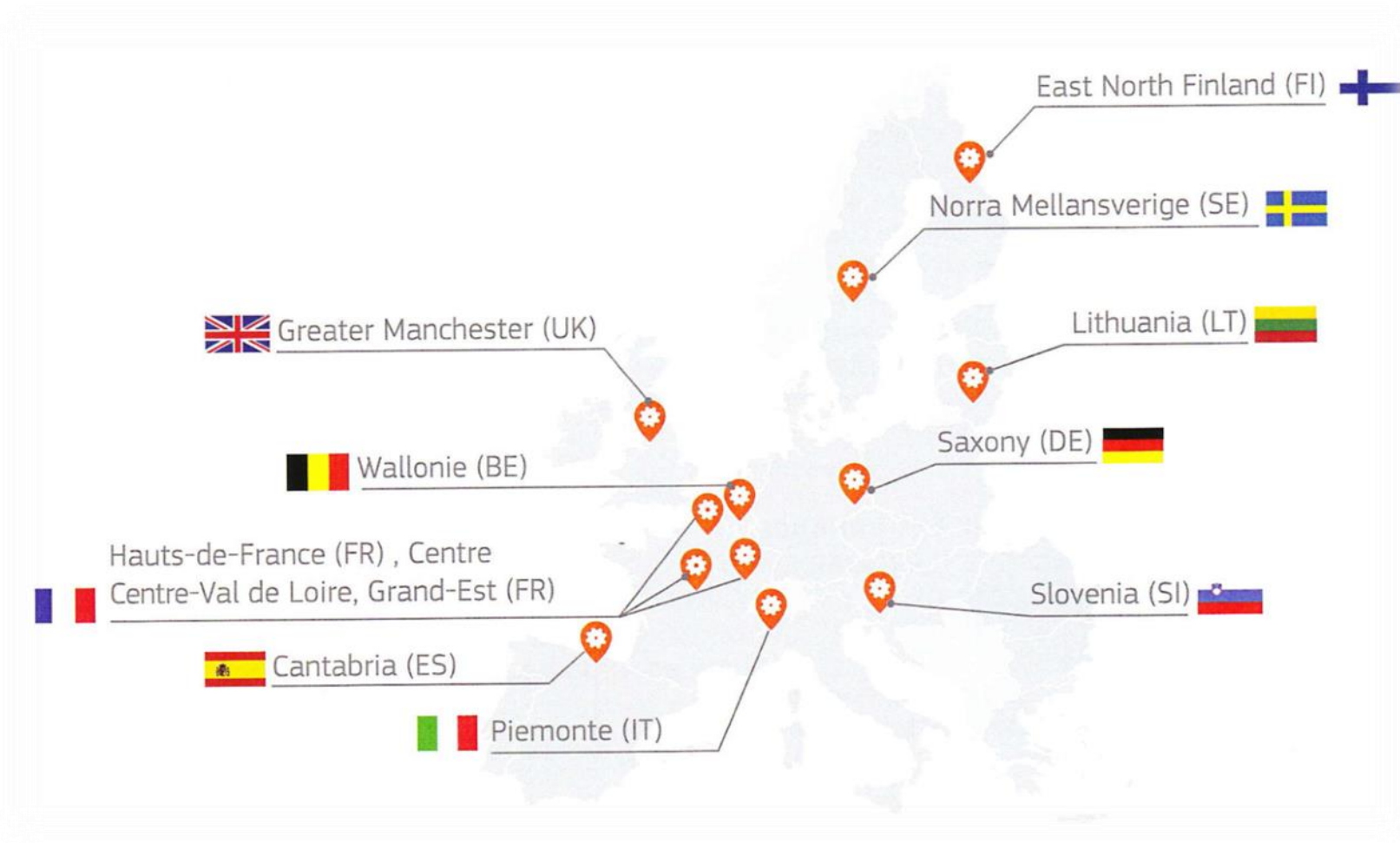
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The 12 regions in the DG Regio Pilot action

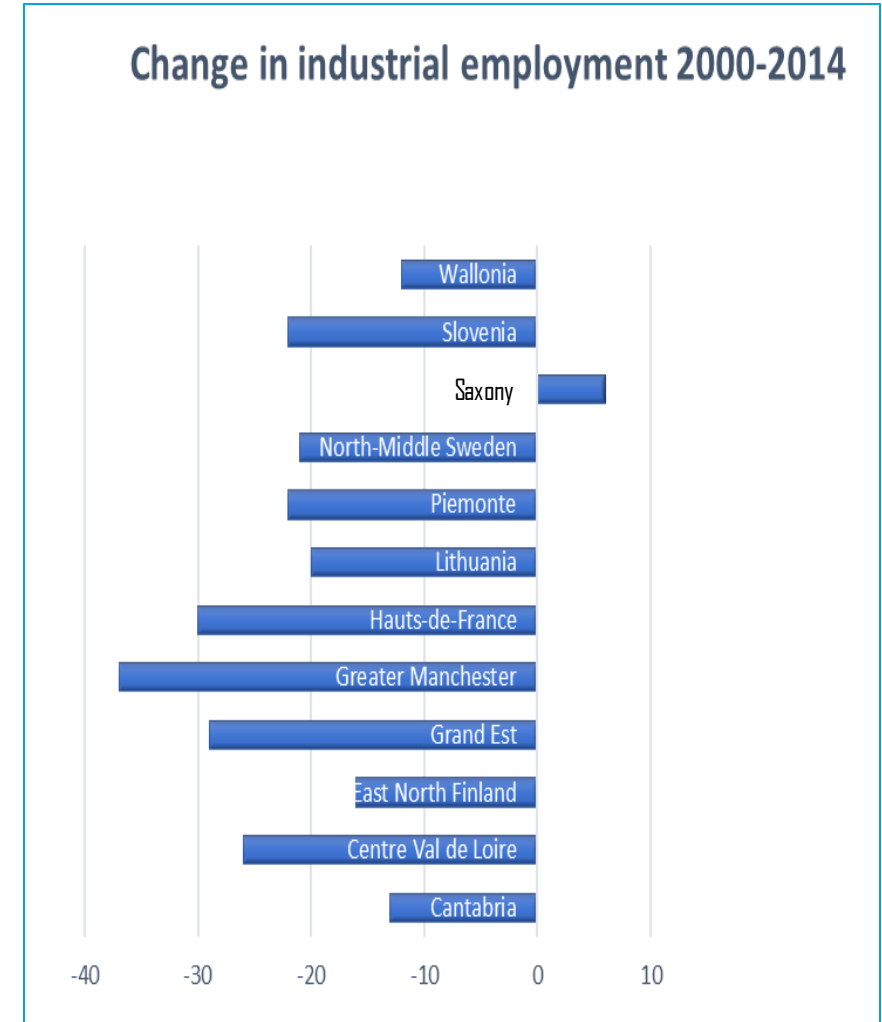


Source for this presentation: Harding Richard and Claire Nauwelaers (2020), *European Commission Pilot Action: « Regions in Industrial Transition »: lessons from the Capitalisation phase*, report to DG Regio.



Common development problems of the Pilot Regions

- **Deficit of attractiveness** as ‘second-tier’ regions: talent, companies, research, technologies and investments
- **Dual economy syndrome:** small ‘pockets of excellence’ versus large less innovation-aware segments : urban/rural territorial fracture
- **Divided society:** deep and growing divide between skilled and less-skilled
- **Path-dependency:** both in industrial ecosystems and policy frameworks





Activities deployed over 2018-2020

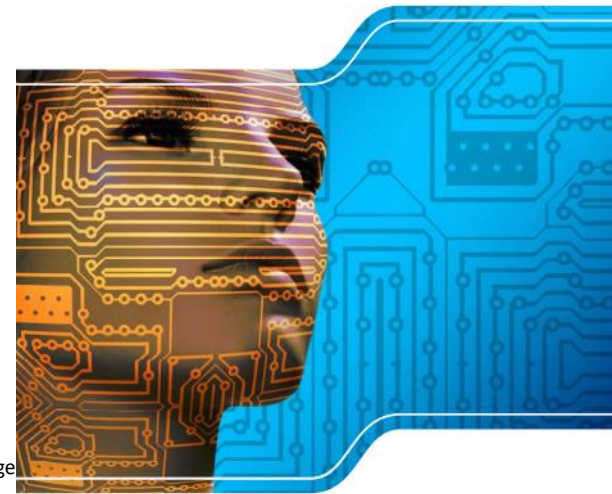
1. OECD peer review exercise 2018
2. Workshops by European Observatory for Clusters and Industrial Change (EOCIC) 2019
3. **Central activity:** Pilot Regions' experiences with 'enhancing' Smart Specialisation Strategies (S3) 2018-2020
4. Development and launch of €300K High Impact Action (HIA) in each Pilot Region 2019-2021





Lessons from Pilot action on enhanced role of S3 for industrial transition

- 5 Lessons on a new **frame** for industrial transition
Towards challenge-driven innovation policy
- 7 Lessons on new **action** for industrial transition
New S3 policy tools and enhanced governance



Saxony – Innovation Strategy cover page



Lessons on a new frame for industrial transition Towards challenge-driven innovation policy

1. Industrial transition = societal transformation
2. Challenge-driven S3 priority domains
3. Tackling dual economy/society syndrome
4. Changing role of regional authorities
5. Increasing sense of urgency



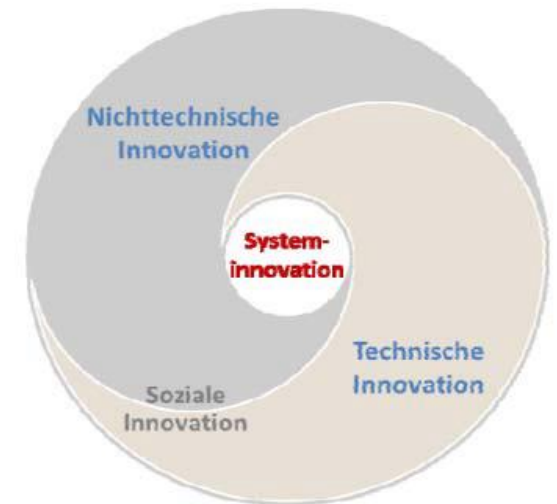
1. Industrial transition = societal transformation

Human-centred Industrial transition

- **Five key challenges:** Jobs for the future - Broadening and diffusing innovation - Promoting entrepreneurship and private sector engagement - Transition to a low-carbon and circular economy - Promoting inclusive growth
- Challenges to be addressed in an **integrated** way across policy domains: RTDI, industry, education, environment, social etc.
- Yet **incomplete integration in practice**, due to different policy governance structures across domains
- **Inclusive growth** - most elusive for many regions, yet also the most crucial challenge (*inherent tension with a 'strengthening the strengths' approach?*)
- Innovation to solve **societal problems** and achieve **societal goals**

Greater Manchester HIA

The Good Employment Charter has inclusive growth at its heart - directly targeting low-income, low-productivity sectors: e.g. hospitality, retail, caring etc.



Saxony - Integration of innovation dimensions in enhanced S3 context



2. Challenge-driven S3 priority domains

Applying existing competences, technologies, assets in areas of societal importance

- From technology-based to double perspective “**technologies-challenges**” - e.g. paper/pulp to bio-economy (NM Sweden); mechatronics to health (Piemonte)
- **Circular economy = transversal driver** (EN Finland, Piemonte, tested in Wallonia HIA)
- Two directions evident for S3 priority domains:
 - **Narrowing down:** more fine-grained specialisation areas (Slovenia, Hauts-de-France)
 - **Broadening:** too strict definition of S3 areas acts against the transformation goal (Lithuania); less sectoral and more user-centric (Wallonia)

Piemonte – in line with S3 priorities, the ‘Environment Park’ mission has shifted from urban regeneration infrastructure, towards being a catalyst for clean technology specialisation in SMEs. It operates as both physical innovation space and cluster – also involving local utilities and companies in the construction sector



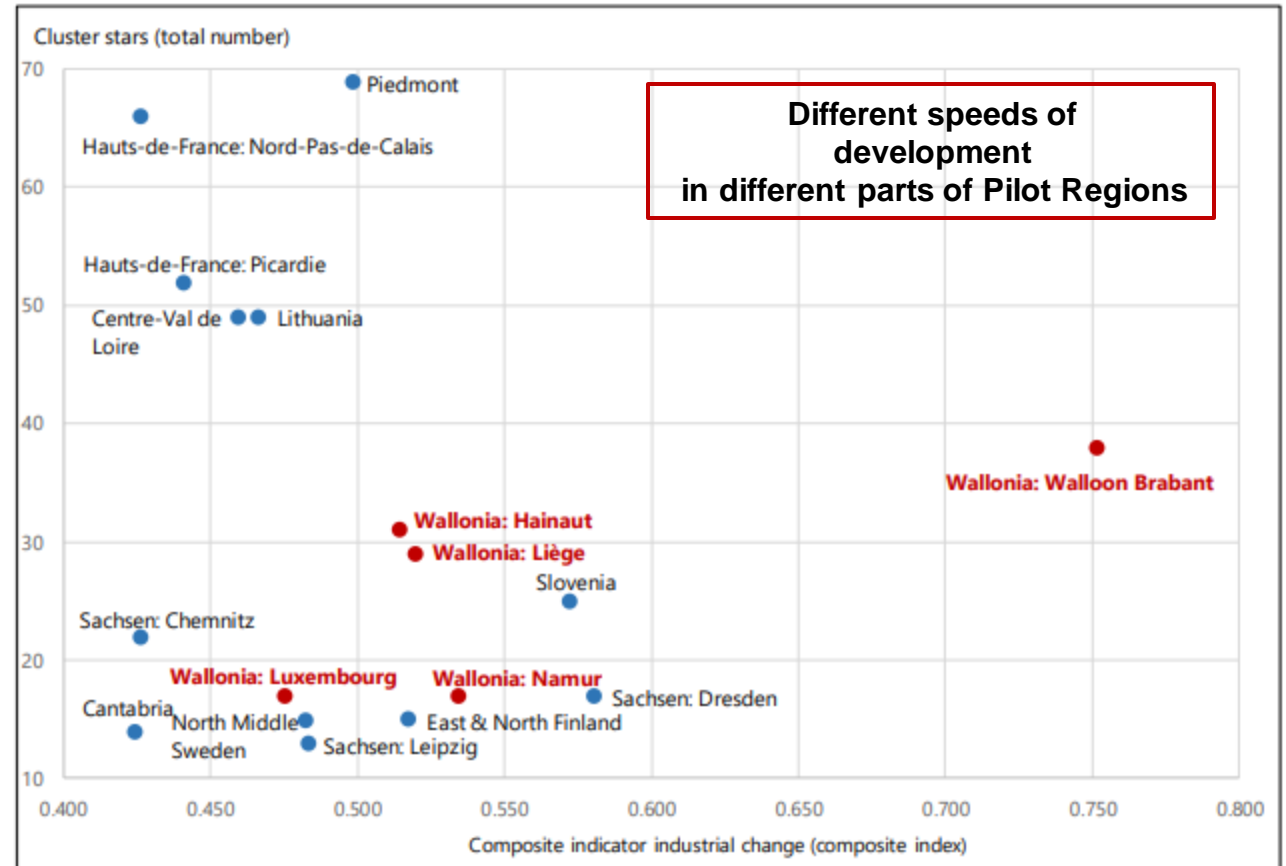


3. Tackling dual economy/society syndrome

- **Redistribution approach**
dedicated envelopes: compatible with open innovation?
versus
- **Empowering actors**
tailoring programmes to potential in less dynamic areas

Cantabria – with flourishing urbanised coast and poor depopulated rural hinterland – focuses HIA experiment on traditionally lower-skilled actors in the rural agri-food sector

Figure 4: Composite indicator industrial change (total index) and cluster stars (total) for pilot regions



Source: EOCIC, based on various data sources and own calculations



4. Changing role of regional authorities

- **New skills for regional authorities:** facilitating co-creation with stakeholders
- **Empowerment** of regional authorities through their work on S3: strategic involvement provides credibility and legitimacy
- **Risk-taking** in public bodies
- **Creativity and competence** in regional development organisations, agencies, clusters...
- Risk of disconnection with **OP Managing Authorities** ('spend imperative'...)

North Middle Sweden - HIA

Challenge Lab approach requires important skills in regional authorities. They are key players in engaging a diverse range of stakeholders, across three Counties, to work together on addressing complex systemic challenges related to energy transition and resource efficient society





5. Increasing sense of urgency...

Crucial dilemma for the Pilot Regions with regard to the time perspective

- **System transition** implies cultural transition and takes time
 - policy action needs to take a long-term perspective
- Yet there is a new **social urgency** and no time to waste:
 - quick wins are needed too

Strategic imperative: combining long-term deep change dimension with tangible short-term wins



Source: www.delitsdopinion.com

Urgency is a new perspective for innovation policy to arise from the Pilot Action, emphasized by many Pilot Regions: e.g. the rise of the 'Gilets jaunes' in Hauts-de-France and increasing tendencies towards populist/right-wing politics generally



Lessons on new action for industrial transition New S3 policy tools and enhanced governance

6. Skills beyond acquisition of technologies
7. Broadening and diffusing innovation
8. Implementing international value chain approaches
9. Building more effective innovation support systems
10. Experimenting, learning, scaling up and mainstreaming
11. EU Cohesion Policy fit for purpose?
12. Monitoring and evaluation in a transition context



6. Skills beyond acquisition of technologies

Creating the capacity for change

- Shortage of relevant skills a major bottleneck to industrial transition in all Pilot Regions. Key skill sets increasingly rapidly **obsolete**
- Legacy of **strong engineering and technical skills**: lower accent on managerial skills - creativity - attitudes
- Need **more accessible and agile forms of re-skilling**
 - closely linked with evolving needs of the economy
 - major challenge to boost lifelong learning
- **Digitalisation beyond technology** - must pay consideration to:
 - public acceptability
 - individual creativity / capacity to learn
 - transition management in companies

Slovenia – Use of ESF to reform vocational training institutional structure

Piemonte – ‘Apprenticeships for Higher Education and Research’ with large companies proved successful beyond expectations, now increasingly experimenting with SMEs (co-funded by ERDF and ESF)

Centre Val de Loire HIA – Central focus on SME management skills for digital transition



Source: <https://www.ifrath.fr/chi/>



7. Broadening and diffusing innovation: new momentum and wider scope – strong linkage with inclusive growth

Target	Policy Direction
Competitive SMEs: from excellent product makers to out-of-the-box innovators	Boosting capacity of SMEs to tap into business opportunities of digitalisation
Less innovation-aware SMEs	Enhanced focus on SMEs absorptive capacities and human resources; broader innovation concept; pro-active support (Hauts-de-France HIA and Centre Val de Loire; Wallonia HIA; Grand Est - large scale industry diagnoses; Lithuanian Innovation Centre...)
Innovation closer to the market	Enhanced focus on higher TRL levels (ENF HIA; Lithuania...)
SMEs in less developed areas	Fostering innovation in activities of special importance for the territories left behind (Cantabria HIA and ENF HIA...)
Multi-National Corporations	Developing linkages between local SMEs and MNCs (EN Finland HIA, Co-creation approaches in NMS involving MNCs, supporting agglomeration dynamics around MNCs in Piemonte...)
Universities/Research institutes	New role to support innovation; open labs; partnerships in competence centres (Politecnico Torino third mission, open labs in Lithuania, S3-oriented Cooperative research programme in Centre Val de Loire...)



8. Implementing international value chain approaches

A major expectation from S3

- **Internationalisation and inter-regional cooperation** = strategic goals in all S3
- Regions = **strong innovative nodes in international value chains**
- Actors in regions team up with players with **complementary** expertise and assets outside of the region
- However - responsibilities, structures and means (budgets) are usually tied to **places seen as self-contained entities**
- Strong interest in **EU programmes** and **cooperation platforms**

EN Finland - maximising potential of the wood value chain a dominating concern throughout the Pilot Action

Slovenia HIA - extending support from neighbouring countries

Grand Est - Innovation hub for automobile sector crosses border with Germany and Belgium

Arctic investment platform - in preparation under INTERREG for Northern Sparsely Populated Areas (NSPA)



9. Building more effective innovation support systems - An 'ecosystem' view across the entire policy mix

Complementarity along TRL

- **Wallonia:** industrial pilots and demonstrators at high TRL
- **Saxony:** living labs, experimental innovation zones
- **Piemonte:** Projects for industrialization of research (Strumento IR²) (TRL 5-8)

Coverage of enterprise life cycle

- **Centre Val de Loire-Piemonte:** filling gap in supporting scaling up of new enterprises

Performance-driven funding models

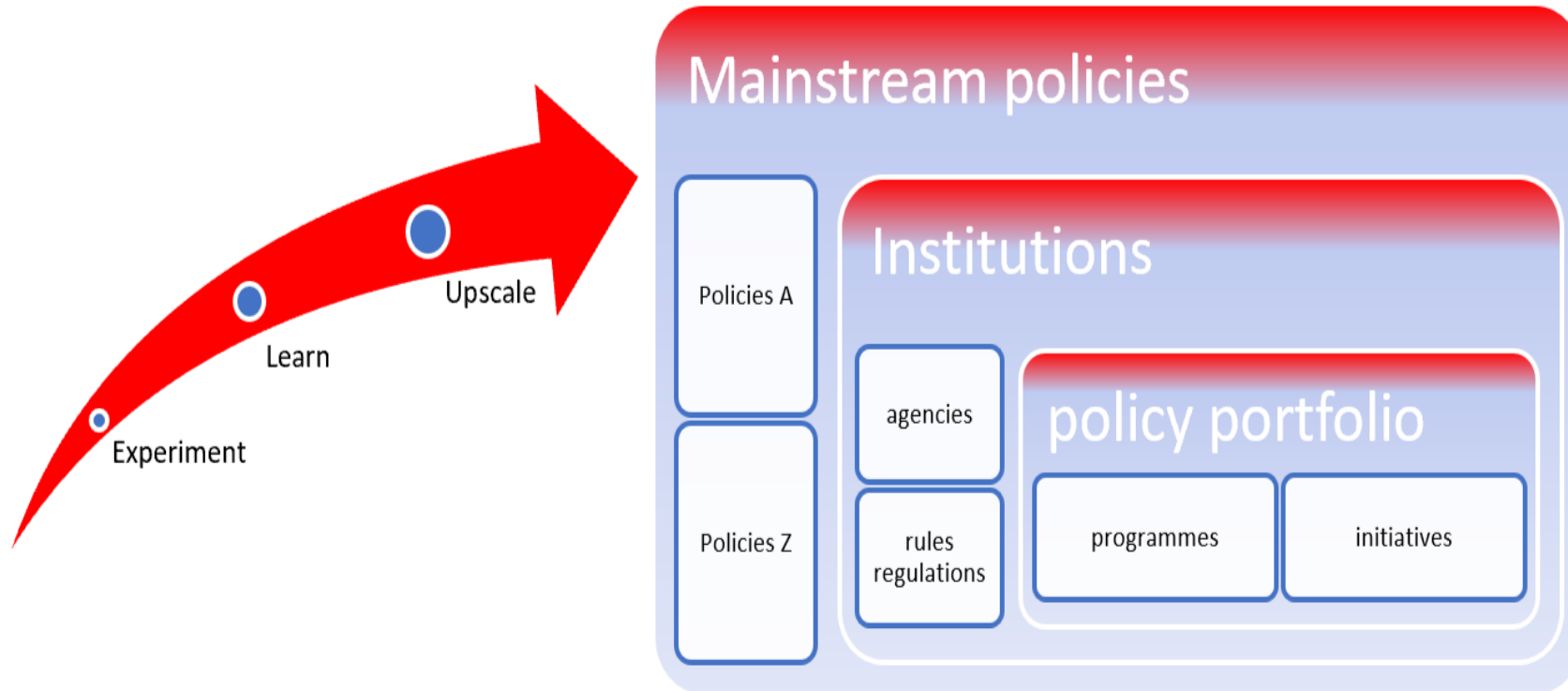
- **Piemonte-Slovenia:** clusters seeking to reorient the logic of their support from a sectoral towards a challenge-based approach

Reducing fragmentation between instruments

- **Slovenia:** tailored "policy packages"
- **EN Finland and NM Sweden:** cross-regional instruments



10. Experimenting, learning, scaling up and mainstreaming - New policy discovery processes



Lithuania HIA - addressing an entirely unexplored policy area - circular economy. Experimental in the domestic industrial context - strong learning component.

Cantabria HIA - the experimental tool for stimulating innovation in rural areas is a risky one; if successful it will be incorporated into the regional Accelerator programme.

Wallonia HIA - testing new ways to mobilise cluster power, through a challenge-based approach. Replicable for integration into cluster missions.



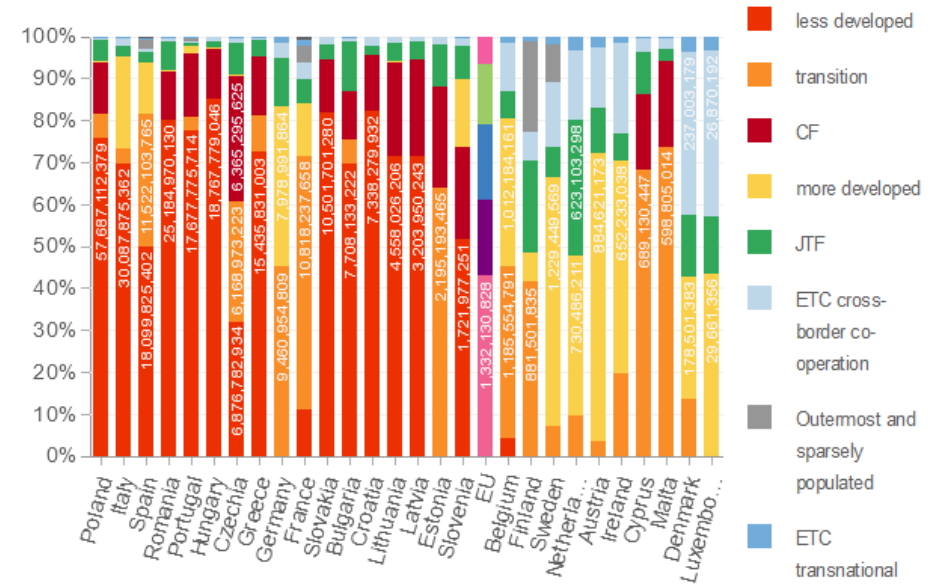
11. EU Cohesion Policy fit for purpose?

- **Circular economy focus**, under **PO2**, also relevant for enhanced S3
- **ESF+** may ‘support’ ERDF in PO1, but must be **programmed under PO4**
- Strong interest in **I3** to encourage development of **European value chains – feedback to main OP?**
- **HOWEVER** - No visible encouragement of **experimentation**, or related ‘right to fail’...
- Substantial scope for suitably responsive **Financial Instruments** in 2021-2027
- Standardised **indicators** unfit for transition-oriented efforts
- **Fragmented programming** ERDF, ESF, EARDF and Interreg

Many actors in the Pilot Regions complained at the time needed to apply for and obtain financial support for S3-related investments from ERDF or ESF - as well as the complexity of domestic procedures. ESF is bypassed altogether in some cases!

2021-2027 - Goal: Investment in Jobs and Growth - Initial EU allocat...

Use the filters to right to compare allocations by MS.



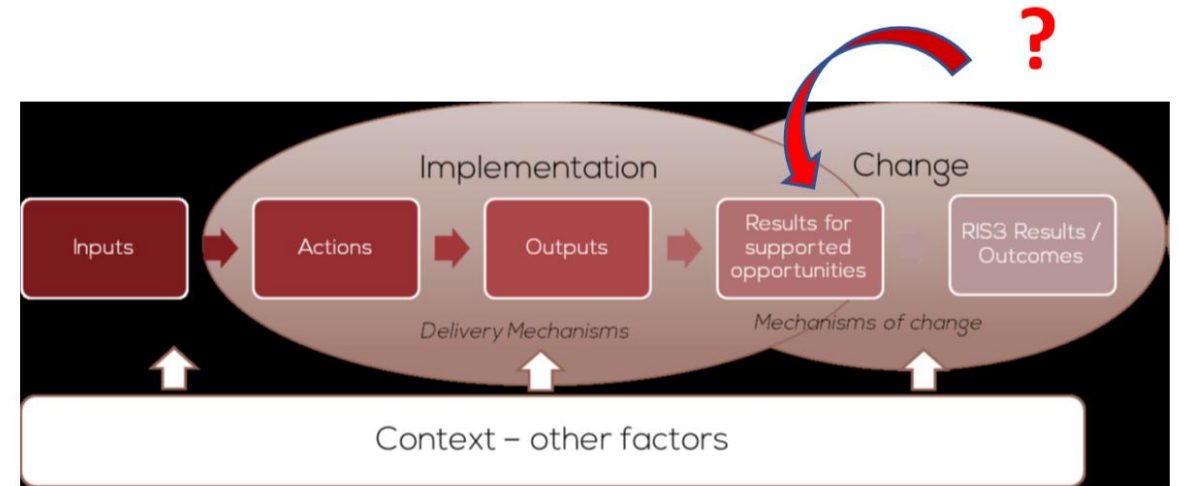
Source: https://ec.europa.eu/regional_policy/funding/available-budget_en



12. Monitoring and evaluation in a transition context: work in progress - Capturing transformative power of strategy?

None of the Pilot Regions have fully transition-oriented M&E systems in place for enhanced S3 scenario. However, many have work in progress in this area. What is needed?

- Capturing low-hanging fruit: better organised **monitoring data**
- New “**transition indicators**”, bridging the gap between traditional outcome indicators and internationally comparable context indicators
- **Formative evaluations** to elucidate impacts of interventions



Source: Centre Val de Loire presentation

Lithuania – monitoring review by STRATA of supported specialisations

Saxony and Centre Val de Loire – external evaluation of S3 domains

Hauts-de-France – novel use of multi-dimensional ‘big data’ on companies (ASTRIDE)

Piemonte – monitoring review and thematic evaluations (IRES)

NM Sweden – to combine project data with structured learning

Thank you !

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Joint project with **Richard Harding**

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Sharing experiences of
a new industrial transition policy

S4 and the case of Navarra "Pilots"



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Commission



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de Catalunya

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Sharing experiences of a new industrial transition policy

S4 and the case of Navarra “Pilots”

S3 Forum Barcelona

Luis Goñi Navarro



«Navarra shall be the wonder of the world»

(W. Shakespeare)



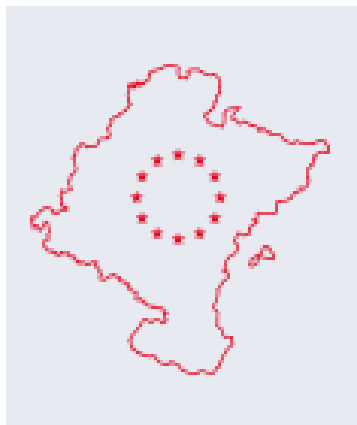
675.000 people
10.391 km²



Industrial economy
(30,7% GDP)



Innovative región
(RIS 2023 Strong)



European
Commission



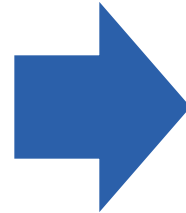
Generalitat de Catalunya
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From S3 to S4: Strategic Framework Change



How to create a competitive region by developing our business and technological strengths around sectors

2015-2021



How to contribute to the Green Deal and SDGs with our local capacities creating new business opportunities

2021-2027

A natural evolution with some adjustments

- Work on thematic priorities defined by the region's capacities (deepening of sectoral strengths).
- Focus on global economic competitiveness, great importance of technological and export capacities.
- Creation of specific public instruments to support the development of sectors.
- Triple helix governance and public-private participation at different levels and in different plans.
- Promotion of clusters to develop sectoral strategies and the detection of new projects.
- Working on opportunities arising from the two transitions (sustainable and digital diversification)
- Systemic impact: increased focus on territorial challenges, intersection of sectors, and demand
- Coordination of public instruments and multi-departmental actions to multiply impact
- Variable coalitions for transformation according to themes and objectives beyond CTE actors
- Search for local experimentation projects for the development of innovative capacities
- Interregional collaboration to position our companies in new value chains



Aligned with ambitious recent EU strategies

European industrial Strategy

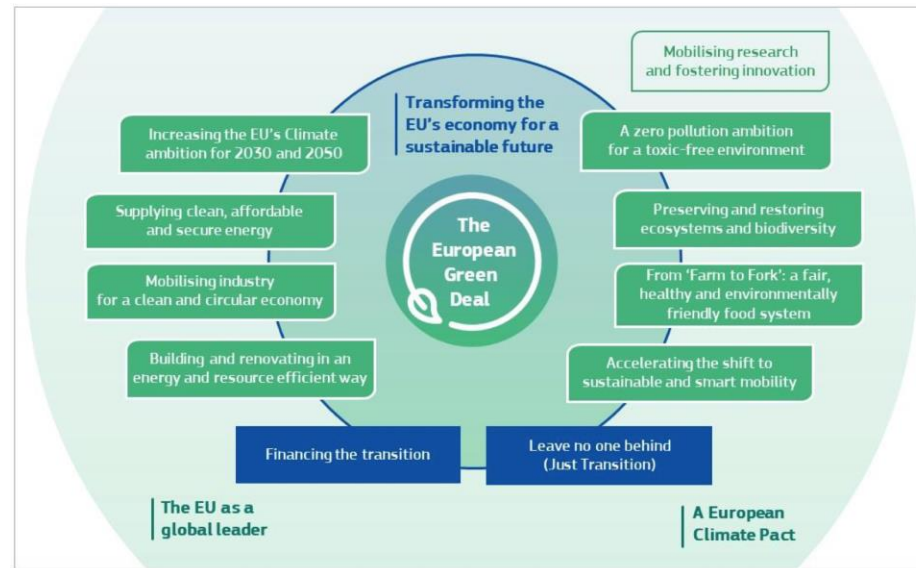
14 industrial ecosystems

137 high-dependency products



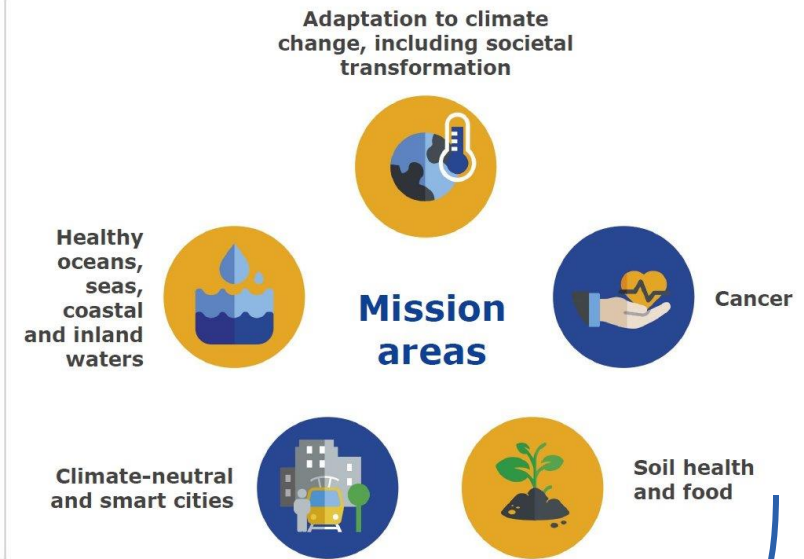
European Green Deal:

1st carbon neutral continent



Horizon Europe:

clusters & innovation missions



and taking advantage of Next Gen EU funds



Vision 2030

Navarra as a European benchmark in the transition to a **sustainable** and digital economy committed to the **territory** and **people**

Economic growth

Environmental protection

Social & territorial cohesion

Regional dashboard: final goals

The S4 dashboard measures the achievement of the overall S4 objectives from a regional point of view through macro indicators.

The first part shows the final goals in terms of prosperity and social wellbeing, as well as indicators to measure the green and digital transition

	Base point	Goal 2025	Final goal 2030
Final Goals			
GDP per capita Percentage compared to the European average (GDP in PPS). EU27 = 100%	111 % Year 2019	115 %	120 %
At-risk-of-poverty rate (%) % of population at risk of poverty	7,7 % Year 2019	6 %	5 %
Wealth distribution EDW Index (Equal Distribution of Wealth)	29,6 Year 2019	28	26
Unemployment rate % Unemployment rate in the active population	9,0 % T4-2019	7 %	5 %
Green Transition			
Reduction of GHG Emissions Total GHG emissions reduction over 2005 levels	-14,74 % Year 2018	-32,5 %	-45 %
Industrial waste % industrial waste reduction based on 2010	23,9 % Year 2019	-11,4 %	-13 %
Renewable energies % RES-E contribution to final energy consumption	21,41 % Year 2019	40 %	50 %
Energy intensity Final energy consumption over GDP (TOE / constant euros 2008)	90,7 Year 2019	65	56
Digital Transition			
Ultra-fast broadband % of population with 100 Mbps coverage or more	81,2 % Year 2019	93 %	100 %
Digital Administration % people who use the internet to interact with the administration	59,0 % Year 2019	75 %	95 %
Digital skills % individuals with digital skills above basic	37,4 % Year 2019	60 %	95 %
Digital Companies % of companies using cloud computing services (of all companies with internet access)	22,1 % Year 2019	40 %	95 %

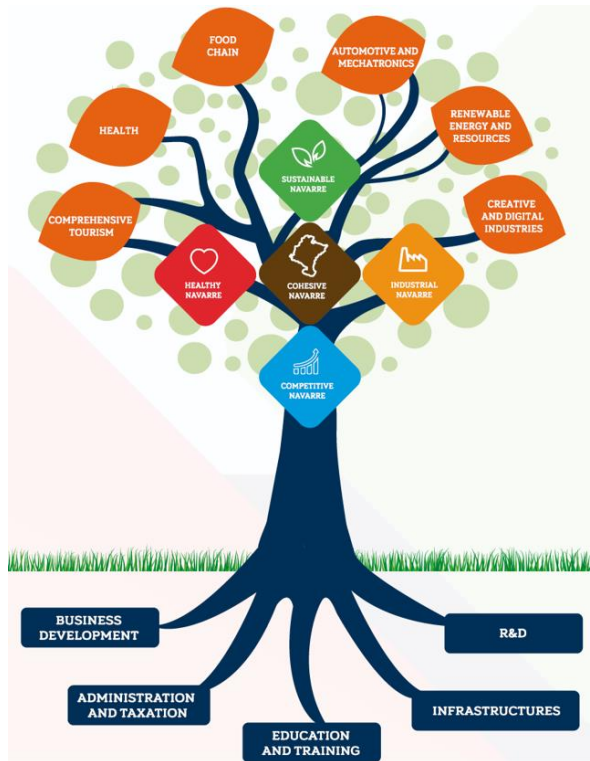
Regional dashboard: intermediate goals

The S4 dashboard measures also the evolution of the main factors of competitiveness defining targets for each indicator for the years 2025 and 2030, pursuing the major changes that must occur in the region in the medium/long term:

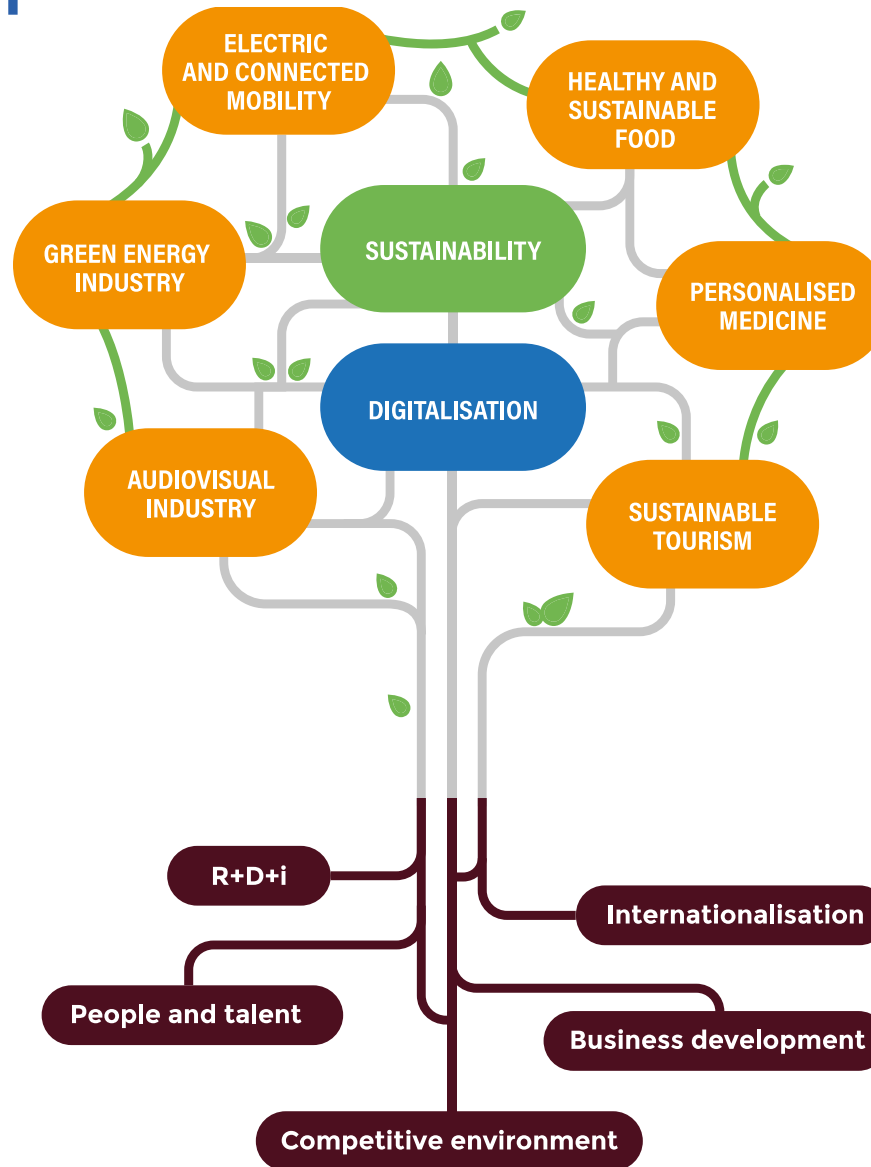
- research and innovation
- internationalization
- business development
- people and talent

	Base point	Goal 2025	Final goal 2030
R+D+i			
Investment in R+D+i (GERD) % investment in R+D+i over GDP (GERD)	1,70 % Año 2019	2,6 %	3 %
R+D Personnel % R+D personnel (FTE) / employed population	1,75 % Año 2019	1,9 %	2 %
Public budget in R+D+i % Public investment in R&D promotion on the PGN	1,45 % Año 2020	1,6 %	2 %
Regional Innovation Scoreboard RIS Rating	Moderate RII-2019	Strong -	Strong+
Internationalization			
Exports Volume of Navarre exports (€ M)	10.205 Year 2019	11.000	12.000
Regular exporters Companies that have exported in 4 consecutive years	965 Year 2019	1.100	1.200
Exporting companies No. of companies that export	2.931 Year 2019	3.100	3.300
Exports outside Europe % of the economic value of exports to countries outside the European continent	25,6 % Year 2019	30 %	35 %
Business Development			
Business size No. of companies with more than 50 employees	445 Year 2019	580	660
Labor productivity Average productivity in the region (euros / worker)	68.850 Year 2019	74.000	80.000
Entrepreneurial Activity Rate % initiatives with up to 3.5 years of market life out of the 18-64 year-old population	5,20 % Year 2019	5,7 %	6,2 %
Regional Competitiveness Index Position among the most competitive regions in Europe	165 Year 2019	140	120
People and Talent			
NEET rate (%) % of population 15-24 years that neither work nor study	8,5 % Year 2019	7 %	5 %
Continuous training Population 25-64 years participating in continuous training	13,0 % Year 2019	16 %	20 %
Higher graduates % population 25-64 years with higher education	47,1 % Year 2019	50 %	55 %

S4 Thematic priorities



2015



Working in transformation

Six traditional sectors “in transition”.
From supporting agrifood industry to healthy and sustainable food (e.g.)



with green and digital transition everywhere

Two ‘cross-cutting’ priorities, that affect every business segment



Focus on the digital and sustainable business niches

S4 Thematic priorities



Vision 2030



Focus



ELECTRIC AND CONNECTED MOBILITY

Navarra is a key player in the production of new systems for electric and connected mobility, with a sustainable value chain, integrating its capacity in renewable energies, and being recognised as an innovative region for experimentation.

- Development of products for the connected and autonomous electric vehicle
- Remanufacturing and recycling of components
- Urban mobility and integration into energy networks



HEALTHY AND SUSTAINABLE FOOD

Navarra is a reference region within Europe for healthy and sustainable food, especially vegetables; developing high quality products, and harnessing and respecting the natural resources of the territory.

- New plant-based products
- Development of alternative proteins
- Industrialisation of organic production
- Recovery of by-products



GREEN ENERGY INDUSTRY

Navarra is a leading region in Europe for its industrial contribution to the energy transition, through the design, development, and production of innovative green energy solutions.

- Smart energy systems
- Energy storage
- New power generation technologies
- Recycling of wind turbine components



PERSONALISED MEDICINE

Navarra is at the forefront in Europe for personalised medicine, with a competitive health sector capable of bringing to market innovative and accessible solutions to healthcare challenges.

- Development and production of customised prevention, diagnosis, and treatment solutions
- Big data and artificial intelligence applied to clinical care
- Healthy nutrition and well-being



S4 Thematic priorities



SUSTAINABLE TOURISM

Navarra consolidates its status as a unique leading tourist destination, promoting sustainable tourism based on its natural, cultural, gastronomic, and social strengths, facilitating territorial cohesion, and international openness.

- Exemplary sustainability of tourist destinations and resources
- Digital personalisation and tourist services
- Local friendly tourism



AUDIOVISUAL INDUSTRY

An audiovisual industry in Navarra that, through the creation and development of its companies, competes in the international market, setting itself apart through its talent, innovation, and the richness of its regional environment.

- Strengthen Navarra companies with the capacity to take on large projects
- Improve the positioning of the territory as a location for film shoots and audiovisual activity
- Digital animation and video games niche



GREEN TRANSITION

Navarra is an exemplary region in terms of its transition to a sustainable production system and efficient use of resources, reducing its impact on the environment, with new business models based on bioeconomics and circularity

- Implementation of the circular economy in all the links of the industrial value chain
- Emission neutral production processes



DIGITAL TRANSITION

Navarra boosts productivity by developing and implementing digital solutions based on data economics, process automation, and advanced manufacturing technologies.

- Digitalisation of production processes
- Mechatronic product development
- Artificial intelligence and data economics



The case of wind-mill components' recycling a whole-of-government approach in Navarra...

STRATEGY

- S4, Energy Plan, Circular Economy Action Plan
- Ecosystem organisations (Circular + Cluster + Sodena support)

REGULATION

- Changes in permits and administrative requirements to speed-up repowering of the first wind farms

GRANTS

- R&D calls: for “energy transition alliances” foster technology testing and adoption for circular processes

FUNDING

- 15% tax cuts to fixed asset investments in circular wind energy projects

...plus other good development “ingredients”

BUSINESS COLLABORATION

Energyloop: 2 multinational companies with regional agency support services

Renecycle: 9 companies (some from the local energy cluster) + EIT InnoEnergy

TERRITORIAL COHESION

Both plants located outside the capital city area, in two different rural and rather peripheral zones: Lumbier and Cortes

USE OF LOCAL DEMAND

Navarra pioneer wind-farms of the 1990's (second in Europe) were a perfect place for experimentation of repowering and life-extension projects

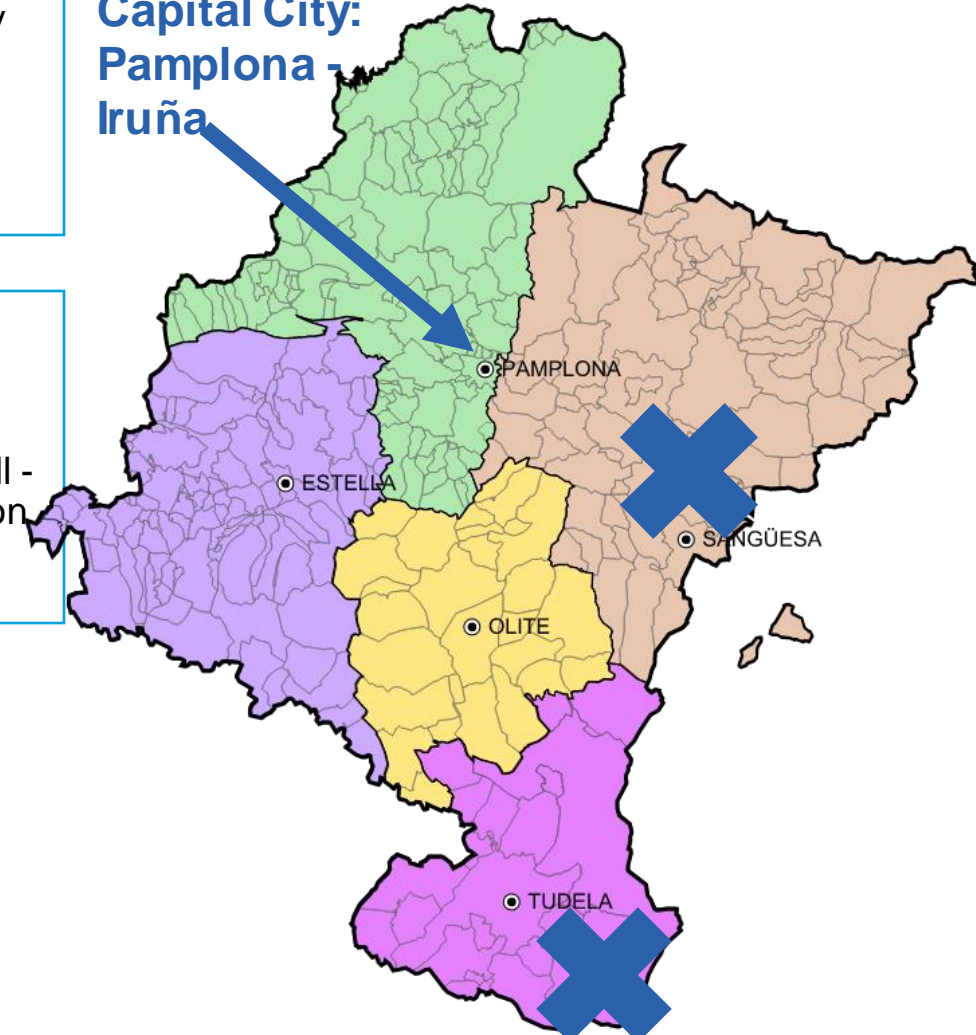
MULTILEVEL FUNDING

Navarra blade recycling plants projects gained 60% of the national Next-Gen call - 8,14M€- (1st and 3rd biggest projects), on top of regional grants

MULTIPLE VALUE RESULT

- + **Economic:** 24,7 million euros of investment, and 200 direct employments announced
- + **Environmental:** Circular solutions for old local energy farms
- + **Social:** employment in rural less – developed areas

Capital City:
Pamplona -
Iruña



S3 Community of Practice
presents

S3 FORUM

#S3Forum

Parallel session 1: S3 and industrial transition
Marek Przeor, Team Leader – Cluster Policy
DG GROW, European Commission



#S3Cop

The size of the single market



EC12 (1) in 1993
348.4 million citizen



EU27 in 2021
447.2 million citizen



EC12 in 1993
5 760.1 billion € GDP



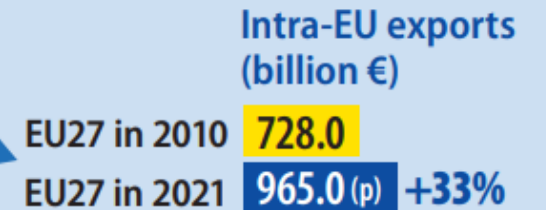
EU27 in 2021
14 522.3 billion € GDP

30 years

Free movement of goods



Free movement of services



Free movement of capital



Free movement of persons

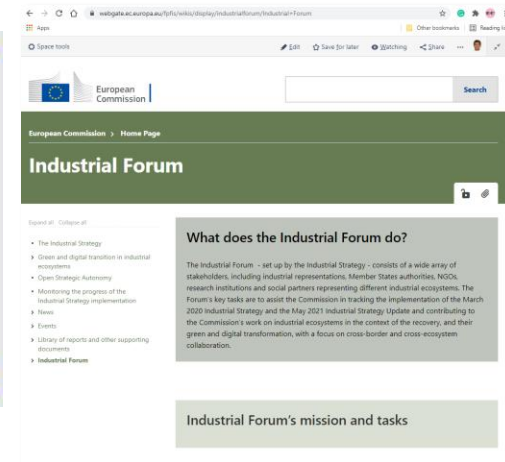


The EU's Updated Industrial Strategy

May 2021

1. Strengthen **Single Market resilience**
2. Accelerate the **twin green and digital transitions**
3. Analyse and address **strategic dependencies**
4. Boost **clean tech production**

Industrial Forum to advise on the industrial strategy implementation



GROW-INDUSTRIAL-FORUM@ec.europa.eu

Current status

INPUTS

Existing ecosystem analysis

Technology roadmaps

Members' input

Draft transition pathways

LINK TO

Clusters

Alliances

IPCEIs

Networks

Expert groups

Skills Roundtables



TF1 ERT, DigitalEurope
GROW.A1, GROW.A4



TF2 Portugal, ECA
GROW.D2, GROW.I3, GROW.G3



TF3 France, Denmark
GROW.A1, GROW.A4



TF4 ECA, DigitalEurope
GROW.C1, D2



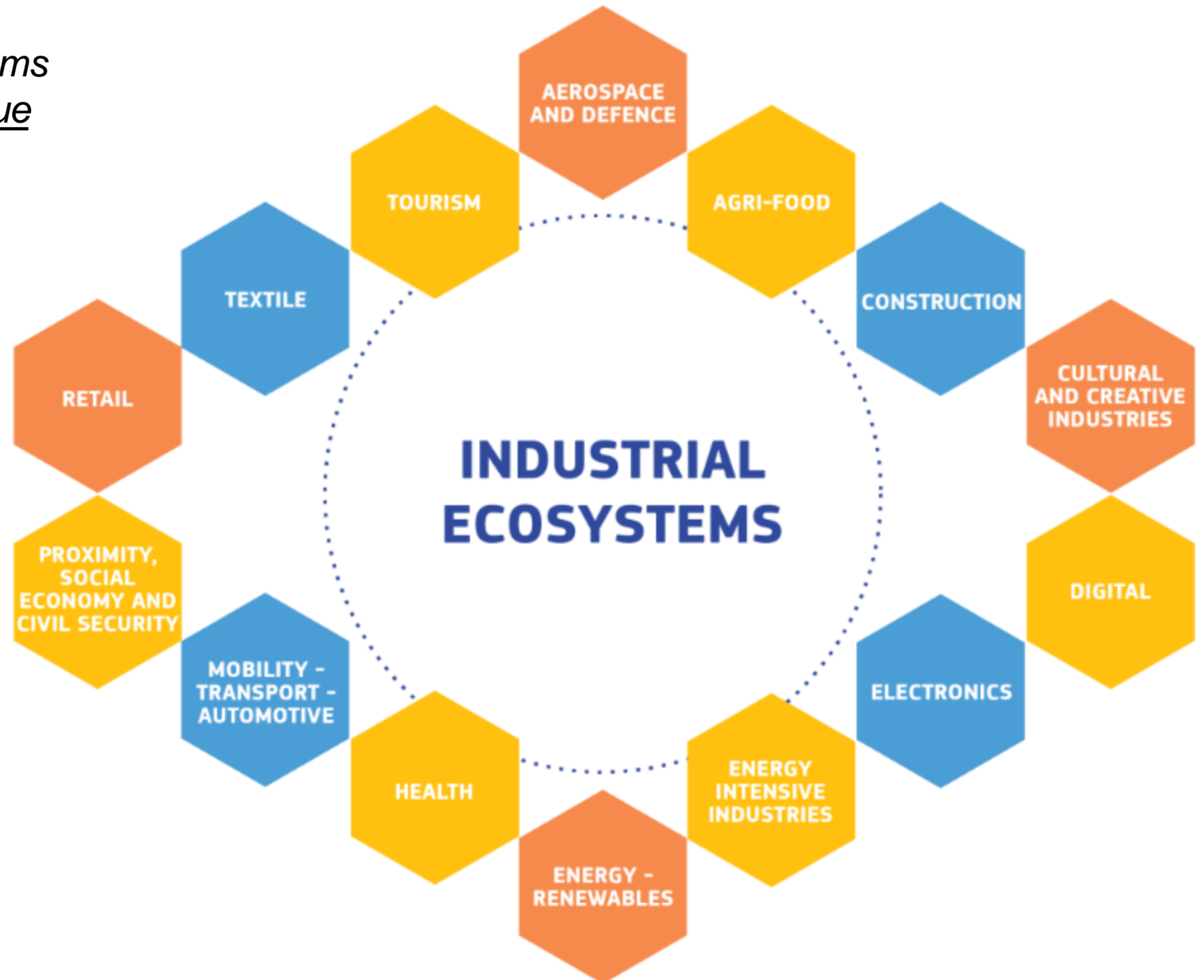
TF5 Orgalim, CECIMO
GROW.G3, GROW.H2

Industrial Ecosystems

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*

*(...)the Commission will systematically analyse the different ecosystems and assess the different risks and needs of industry as it embarks on the **twin transitions** in a more competitive world.*

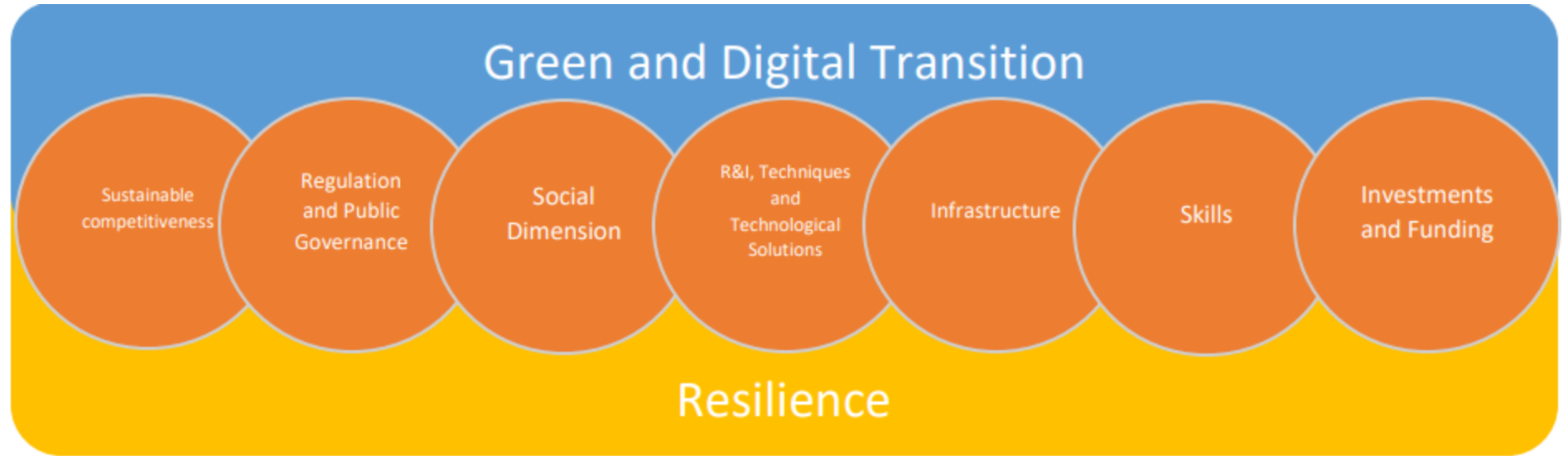
*(...)In doing this analysis, the Commission will work closely with an inclusive and open **Industrial Forum***



Transition Pathways - Concept

Goal: an action plan for the **twin transition and resilience of industrial ecosystems** that eventually will lead to project pipelines, co-created by the European Commission, Member States and relevant stakeholders

Building blocks:



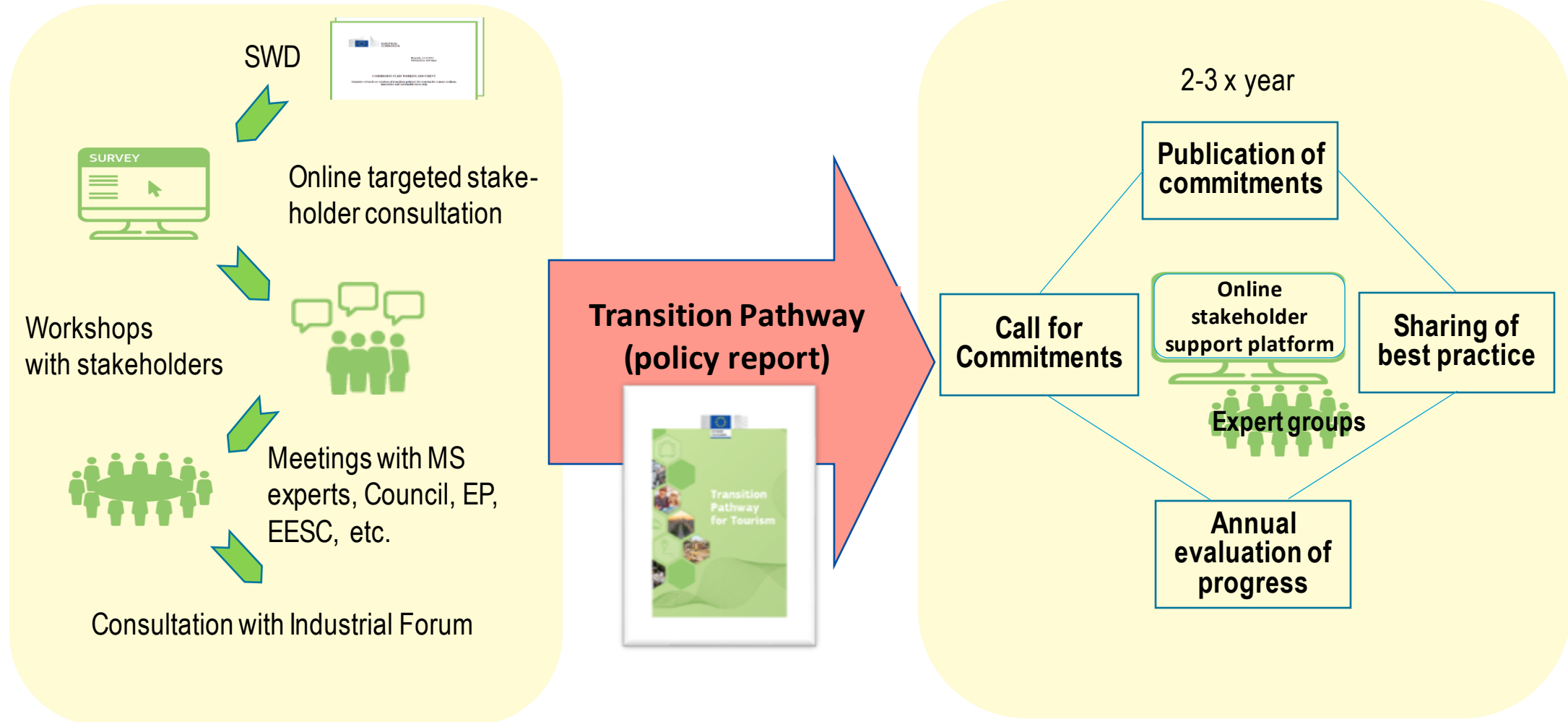
Taking into account: relevant inputs such as **ecosystems analysis**, **digital compass** and **fit for 55 targets**, **industrial technology roadmaps** and inputs from stakeholders such as relevant expert groups and the **Industrial Forum**

Industrial ecosystems: given to ecosystems and sectors that urgently need to transition to remain competitive, like **energy-intensive industries** and **construction**, as well as to sectors heavily affected by the crisis, like **tourism** and **mobility**

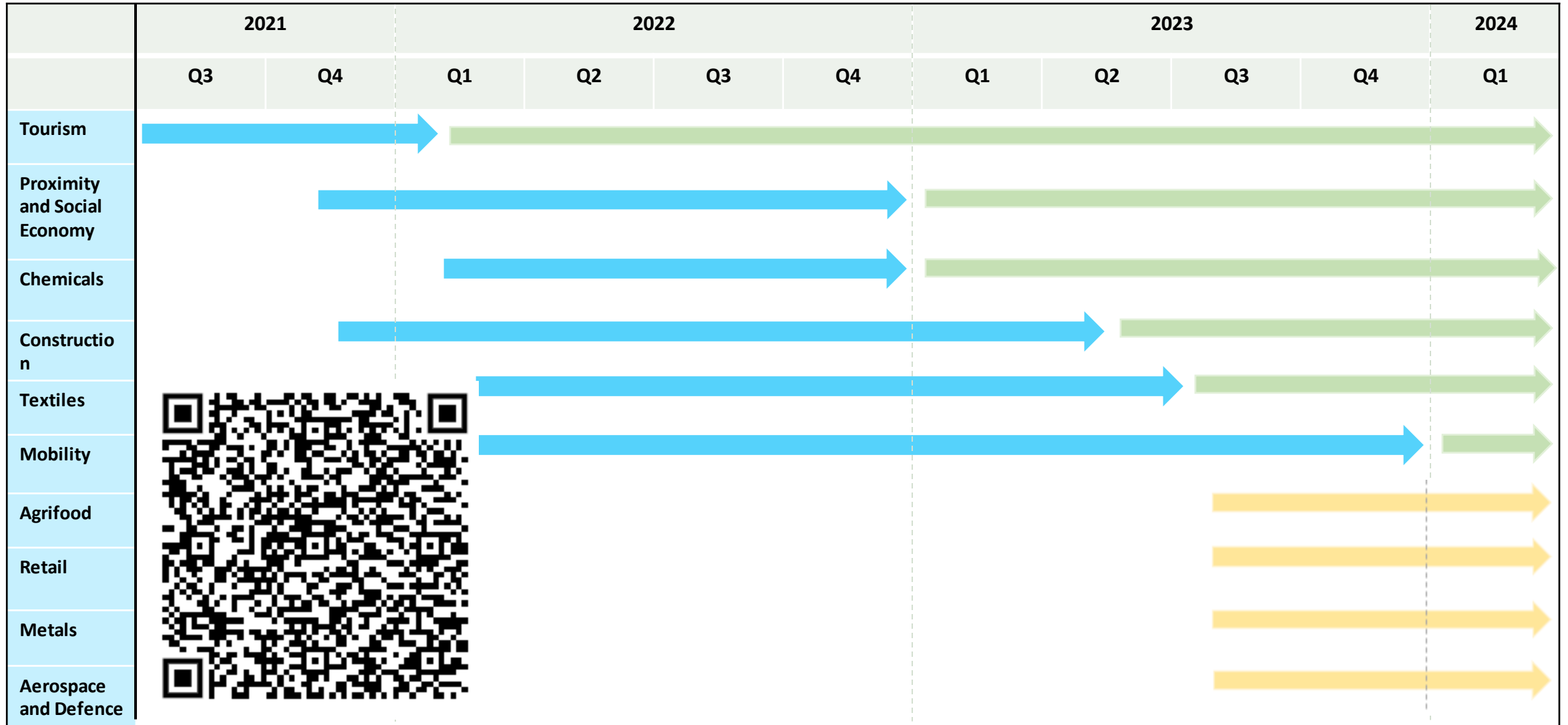


- PRIORITY #1
- PRIORITY #2
- PRIORITY #3
- PRIORITY #4

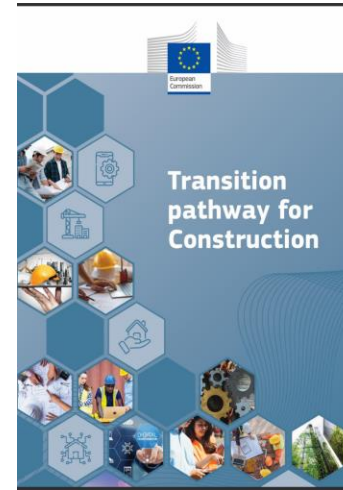
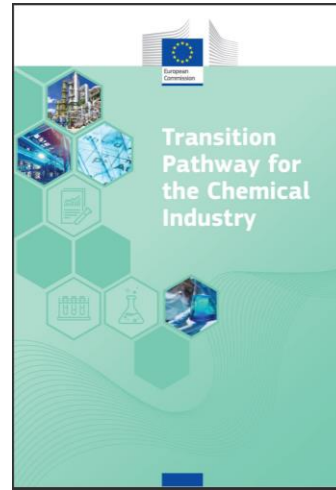
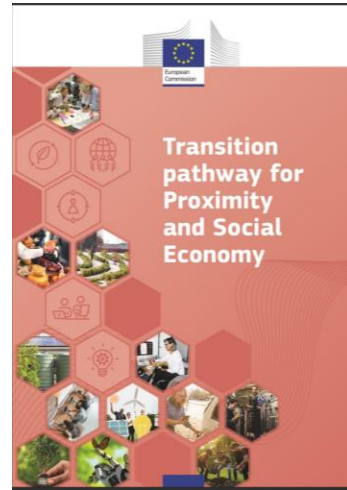
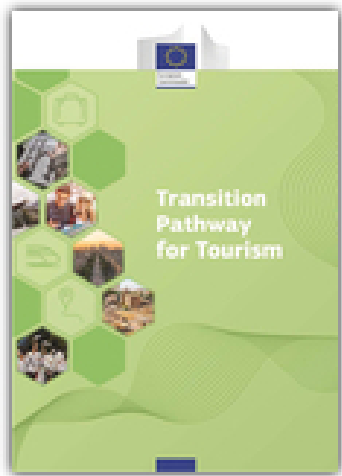
The collective exercise



Transition pathways - timeline



Five Transition Pathways published



Five Transition Pathways in progress

Mobility

Agrifood

Retail

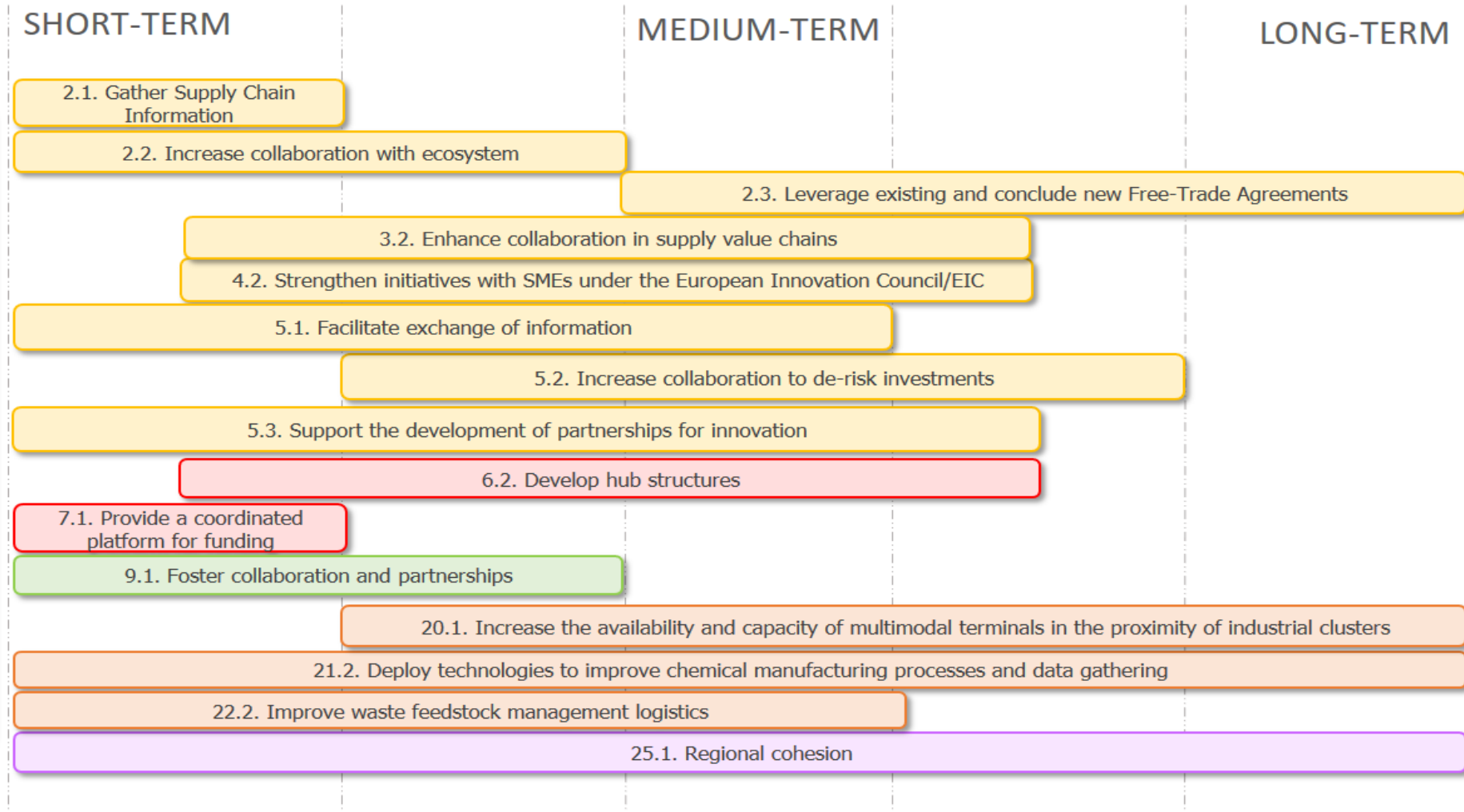
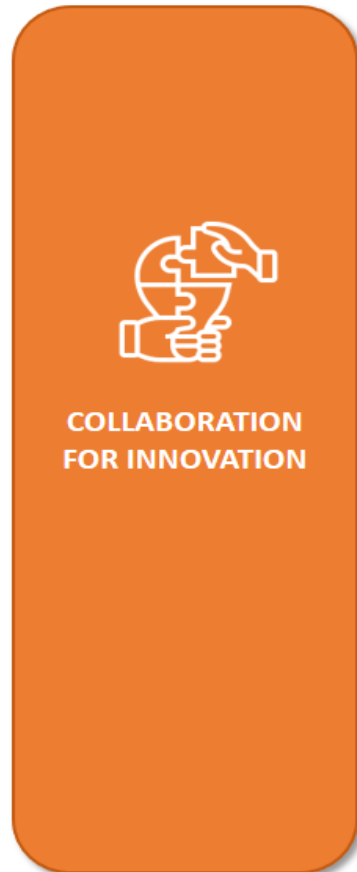
Metals

Defence

Example: Building blocks and topics Chemicals

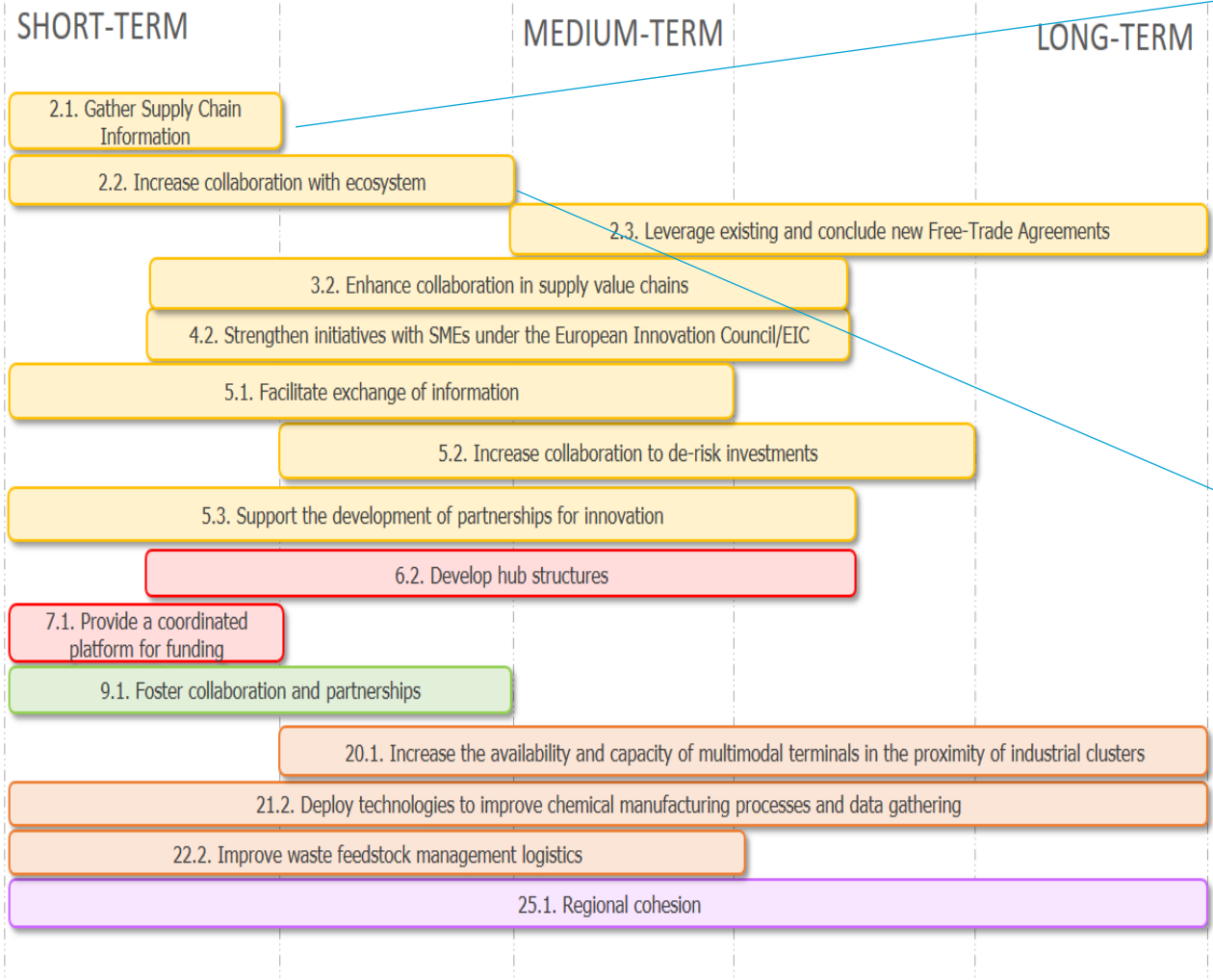
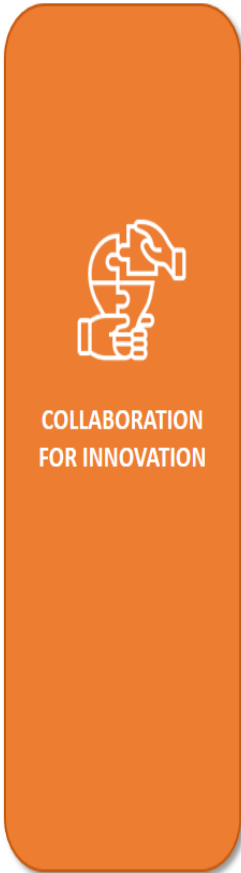
Building Blocks	Topics
1. Sustainable Competitiveness	Topic 1: International Competitiveness Topic 2: Reduction of unsustainable dependencies and supply chains vulnerabilities Topic 3: Safety and Sustainability Topic 4: Innovation and growth of SMEs Topic 5: New synergies
2. Investments and Funding	Topic 6: Fund for Green Investments Topic 7: Access to Funding
3. R&I, Techniques and Technological Solutions	Topic 8: Enhancing the conceptualization of new techniques and technical solutions (TRL 1 to 5) Topic 9: Developing new techniques and technological solutions (TRL 6 to 7) Topic 10: Deployment of new techniques and technological solutions (TRL 8 to 9)
4. Regulation and Public Governance (Legislation)	Topic 11: More effective and predictable regulation Topic 12: Vertically and horizontally coherent legislation Topic 13: Effective and efficient enforcement
5. Access to energy and feedstock	Topic 14: Anticipate long-term needs for Energy and Resource Supply Topic 15: Economically viable purchase of low-carbon energy Topic 16: Feedstock Substitution Topic 17: Process and resource efficiency
6. Infrastructure	Topic 18: Large-scale electricity and hydrogen infrastructure Topic 19: Development of new sustainable production facilities Topic 20: Sustainable transport of raw materials and chemical products Topic 21: Deployment of digital technologies Topic 22: Circularity: recycling and reuse infrastructure
7. Skills	Topic 23: Education (reskilling/upskilling the workforce) Topic 24: Sufficient supply of jobs at technical level
8. Social Dimension	Topic 25: Impact on workforce and consumers Topic 26: Improve gender diversity and equality in the sector

Example Roadmap 1: collaboration for innovation



SUSTAINABLE COMPETITIVENESS	ACCESS TO ENERGY AND FEEDSTOCK
INVESTMENTS AND FUNDINGS	INFRASTRUCTURE
R&I, TECHNIQUES AND TECHNOLOGICAL SOLUTIONS	SKILLS
REGULATION AND PUBLIC GOVERNANCE	SOCIAL DIMENSION




Examples of topics and actions



Topic 2: Reduction of unsustainable dependencies and supply chains vulnerabilities

Actions	Actors	Timeframe
2.1. Gather Supply chain information		
<ul style="list-style-type: none"> Undertake a strategic foresight exercise for the chemical industry with a specific focus on EU open strategic autonomy¹ 	Industry and EU/MS	S
<ul style="list-style-type: none"> Undertake risk assessment and prepare management plans for potential disruptions of global supply chains, also in relation to climate change impacts and strategic dependencies 	Industry	S
<ul style="list-style-type: none"> Map EU chemical supply chains and (future) strategic dependencies to anticipate new vulnerabilities and develop mitigation strategies 	EU/MS	S/M
<ul style="list-style-type: none"> Establish incentives to ensure continued manufacturing of critical chemicals in Europe and to ensure no substantial price fluctuations due to shortages 	EU/MS	S/M
<ul style="list-style-type: none"> Apply end-to-end supply chain transparency through the Sustainable Product Initiative² 	Industry	S/M
<ul style="list-style-type: none"> Assess necessity for, build up and maintain strategic stocks 	Industry and EU/MS	S/M
2.2. Increased collaboration within ecosystems		
<ul style="list-style-type: none"> Increase collaboration with all partners of an ecosystem to secure raw material access 	Industry and EU/MS	S
<ul style="list-style-type: none"> Secure long term supply contracts for critical minerals/metals, while assessing and accounting for any environmental and socio-economic implications for the critical raw materials and their long-term sourcing plans 	Industry and EU/MS	M
2.3 Leverage existing and conclude new FTAs		
<ul style="list-style-type: none"> Start or reinforce international (regulatory) economic cooperation (e.g., making use of OECD and WTO mechanisms), especially with the EU's most important trading partners; Prevent potential market access barriers (e.g., related to the use of waste as feedstock) <i>(Linked to Topic 1.1 and Topic 13)</i> 	Industry and EU/MS	M
<ul style="list-style-type: none"> Consider opening further third markets to increase raw materials and technology availability, and to expand exports <i>(Linked to Topic 14.1)</i> 	EU/MS	M/L

5 other strategies considered as transition pathways

Ecosystem	Staff working document with scenarios	Public consultations	Transition pathway	Public event	Call for commitments and initiatives
Energy Intensive Industries	21 September 2021	Closed on 26 November 2021	Transition pathway covered by: Masterplan for a competitive transformation of EU energy-intensive industries  (2019)	-	-
Renewables	Transition pathway covered by: REPowerEU  (2022)				
Health	Transition pathway covered by: HERA  (2020), the revision of the pharmaceutical legislation (2022), the IPCEI for health (2022) and the security of medicines supply under the pharmaceutical strategy for Europe  (2020)				
Creative and Cultural Industries	Transition pathway covered by: European media action plan  (2020)				
Digital	Transition pathway covered by: The digital decade compass and policy programme  (2021)				
Electronics	Transition pathway covered by: The EU Chips Act  (2022)				



30 Euroclusters
started work in
September 2022

171 partners

**23 different
countries**

Activities:

1. Networking
2. Innovating
3. International
4. Adopting
5. Training
6. Outreach



Almost 1500 cluster organisations registered at the ECCP:
www.clustercollaboration.eu



EUROPEAN CLUSTER COLLABORATION PLATFORM

Strengthening the European economy through collaboration

We gather and animate EU cluster organisations to:

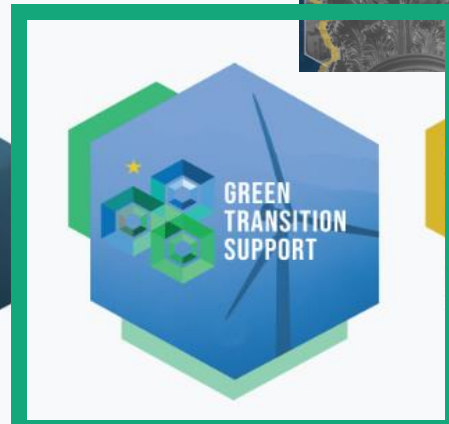
- lead the green transition
- accelerate digital transitions
- build resilience



Our services

The services of the European Cluster Collaboration Platform to support your work

www.clustercollaboration.eu



Save the Date: European Cluster Conference

The next European Cluster Conference is around the corner!

When? **7-8 May 2024**

Where? **Brussels – Square**

What? **Panel discussions, parallel sessions, participatory leadership, workshops, matchmaking, site visits, 70 booths in exhibition**

Registrations soon possible at:

www.clustercollaboration.eu

or

europeanclusterconference2024.eu (soon)



Industry Alliances

Batteries
(2017)
GROW

Circular
Plastics
(2018)
GROW

Raw
Materials
(2020)
GROW

Clean H2
(2020)
GROW

Data Edge
Cloud
(2021)
CNECT

Low Carbon
Fuels (2022)
MOVE

0 Emission
Aviation
(2022)
(DEFIS)

Solar PV
(Dec 2022)
GROW

Semicon
(??)
CNECT

COPIA network

Who?

- Alliances network + SG, ENV, RTD, TRADE, COMP, ENER, EMPL, EAC + more units in "Alliance DGs"

What?

- Exchange experience
- Inform, update
- Harmonise, coordinate, achieve coherent approaches
- Increase visibility, spread higher level messages

How?

- Meetings 3 times/year (last: 05/23)

Support Alliances

Who?

- People dealing with the Alliances

What?

- Issues specific to each Alliance/ groups of Alliances
- Follow main developments, concerns, obstacles / Alliance
- Highly appreciated support to the 1 or max 2 rapporteurs managing each of the Alliances

How?

- Bilateral and small group meetings, every day discussions, exchanges

Link to other fora and industrial policy tools

- IPCEIs / upcoming IPCEI forum
- Industrial Forum
- Clusters / EEN ?



Enterprise Europe Network

599

Organisations

57
Countries

Activities & Priorities



Sustainability



Digitalisation



Single Market



Research and innovation



Access to finance



Start-ups & scale-ups



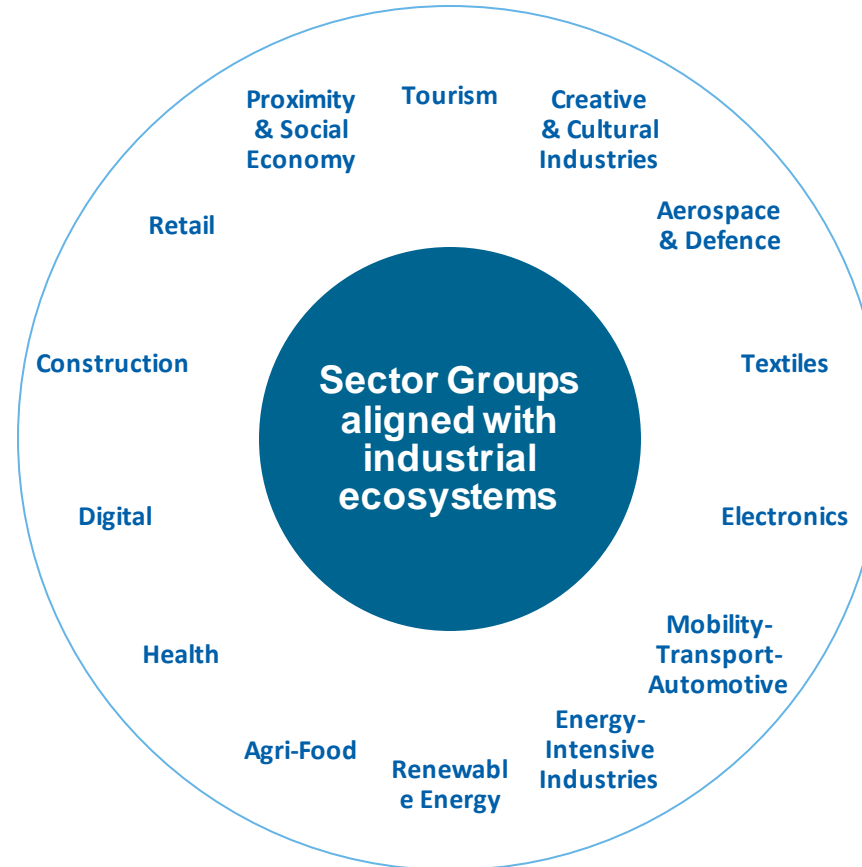
Business Partnering



Internationalisation

Resilience

Skills



Focus for the next years

1. The Core remains the Core – e.g. SM30
2. Consolidating the new services – e.g. collaboration with EDIHs and digital clusters
3. Pivoting to new needs – e.g. Energy Efficiency Action
4. Strengthening the quality – e.g. synergies with other networks
5. Selling the product – e.g. EEN15 campaign



https://ec.europa.eu/growth/industry/policy/cluster_en
<http://www.clustercollaboration.eu>



[@EU_Growth](#)
[@Clusters_EU](#)

[ECCP's European Cluster Panorama and Policy Toolkit - YouTube](#)



Thank you !

marek.przeor@ec.europa.eu



Thank you !

#S3Cop



European
Commission



Generalitat
de Catalunya