RELEVANCIA DE

LA CIRCULARIDAD Y LA EFICIENCIA DE MATERIALES EN LAS CADENAS DE VALOR EN EUROPA

Antonio Novo Guerrero, European Clusters Alliance 24/11/2022









EUROPAKO KLUSTER ALIANTZA

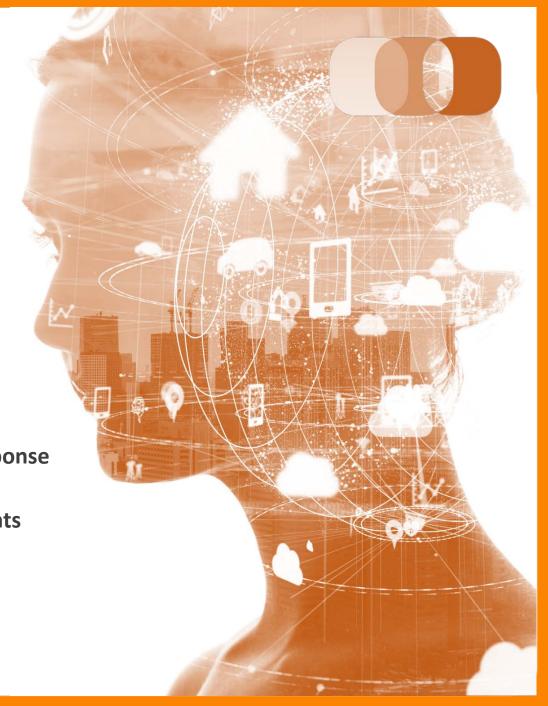
AN EUROPEAN NETWORK OF NETWORKS

Connecting

- 22 national associations of clusters and vertical networks
- representing more than **900 clusters** organisations
- 150,000 of our most innovative businesses

Having representatives in

- EU Industrial Forum
- European Economic and Social Committee
- HERA European Health Emergency Preparedness and Response Authority
- EU expert group for the Interregional Innovation Investments
- EU expert group on clusters...



EU INDUSTRIA FOROA



A FORA TO DISCUSS AND CO-CREATE THE EU INDUSTRIAL POLICY

Five task forces

- 1. Single Market KPIs and Industrial Ecosystems
- 2. Support the development of **Transition Pathways**
- 3. Support the analysis of **strategic dependencies**
- 4. Identify & advise on cross-border & cross-ecosystem investment needs & cooperation opportunities
- Support the uptake of advanced manufacturing processes by EU Industry



https://webgate.ec.europa.eu/fpfis/wikis/display/industrialforum/Industrial+Forum

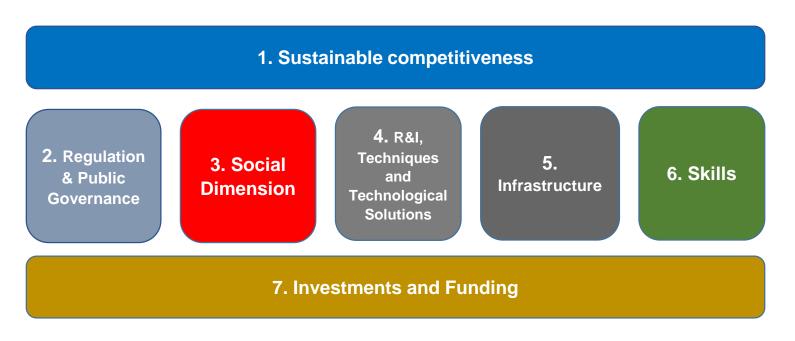




EUSKADIKO ITUN BERDEA PACTO VERDE DE EUSKADI

Task Force 2: Support the development of Transition Pathways

BUILDING BLOCKS

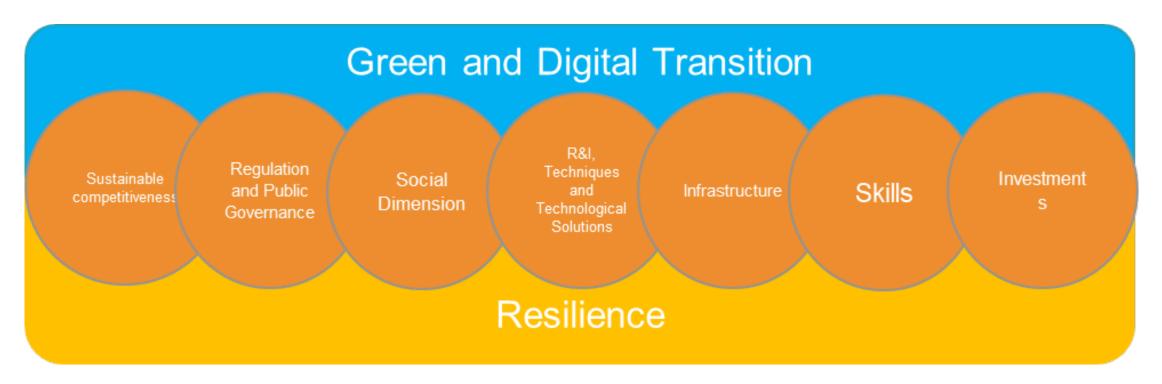






Transition Pathways: horizontal dimensions

CIRCULAR ECONOMY AT EVERY BUILDING BLOCK





An example: draft TP Chemicals - building blocks and topics

Building Blocks	Topics		
	Topic 1: International Competitiveness		
	Topic 2: Reduction of unsustainable dependencies and supply chains vulnerabilities		
1. Sustainable Competitiveness	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		
2. Investments and Funding	Topic 7: Accessto Funding		
3. R&I, Techniques and Technological	Topic 8: Enhancing the conceptualization of new techniques and technical solutions (TRL 1 to 5)		
Solutions	Topic 9: Developing new techniques and technological solutions (TRL 6 to 7)		
Solutions	Topic 10: Deployment of new techniques and technological solutions (TRL 8 to 9)		
4. Regulation and Public Governance	Topic 11: More effective and predictable regulation		
	Topic 12: Vertically and horizontally coherent legislation		
(Legislation)	Topic 13: Effective and efficient enforcement		
	Topic 14: Anticipate long-term needs for Energy and Resource Supply		
5. Access to energy and feedstock	Topic 15: Economically viable purchase of low-carbon energy		
J. Access to energy and recustock	Topic 16: Feedstock Substitution		
	Topic 17: Process and resource efficiency		
	Topic 18: Large-scale electricity and hydrogen infrastructure		
	Topic 19: Development of new sustainable production facilities		
6. Infrastructure	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)		
7. OKIIIS	Topic 24: Sufficient supply of jobs at technical level		
8. Social Dimension	Topic 25: Impact on workforce and consumers		
or occur billionaton	Topic 26: Improve gender diversity and equality in the sector		



An example: draft TP Chemicals – topics and actions

Topic 2: Reduction of unsustainable dependencie	s and supply chains vuli	nerabilities
Actions	Actors	Timeframe
2.4 Increase resource efficiency	'	
Promote the implementation of the cascading prin	ciple ²¹ Industry	S/M
 Apply "energy efficiency first" as a key principle and losses of materials by increasing circularity (3R reduce, reuse, recycle), without hamperi implementation of new low carbon processes electrification, CCU, CCS, etc.) 	principle: ng the Industry	S/M
 Support circular economy and include whole value with use of secondary (new) raw materials (include waste, biobased, CO₂) to close loops, ensure efficiency and to reduce dependencies. 	cl. plastic	S/M
3.3 Support product (re)design	,	
 Invest in harmonised sustainability assessment apparents across the industry including for circular macrombined with lower human and environmental potential 	naterials, Industry	S
 Adopt, implement and adequately enforce the Ecfor Sustainable Products Regulation (ESPR), as panew Circular Economy Action (CEAP) 	_	S/M
Support the uptake of new business models (e.g., the chemical leasing concept within public te engage and/or support projects on Digital Product	ndering, Industry	S/M

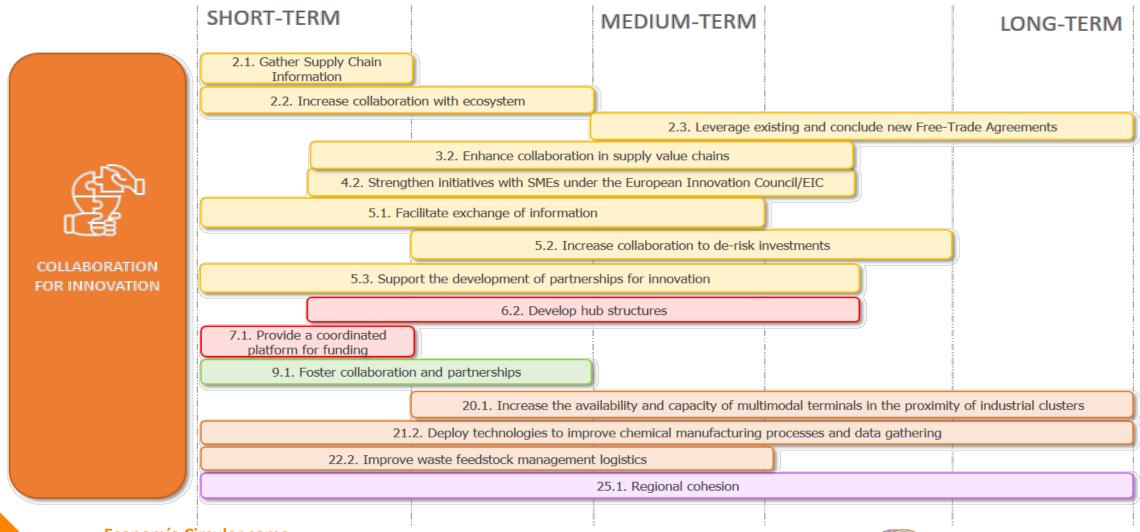
Actions	Actors	Timefram
15.1. Channel investments for low carbon energy		
 Adopt a Social Climate Fund to support small business in the transition (REPowerEU) 	EU/MS	S
Channel investments towards players committed to green transition becoming to become frontrunners using classification tools such as the EU Taxonomy (to delete) (Linked to Topic 6.1)	Industry and EU/MS	S/M
 Reinforce the funding and de-risking measures (e.g., Contracts for Difference, robust investment protection policies) to support the deployment of green and smart technologies and the sourcing of clean energy (up-to demonstration plant and first-of-its-kind plant) – e.g., via the Innovation Fund 	EU/MS	М
15.2. Ensure competitive supply of low carbon energy		
 Develop a strategy for competitive supply of low carbon energy to the EU, taking into account geopolitical factors (REPowerEU); (Linked to Topic 2.3 and Topic 14) 	EU/MS	S
 Reassess electricity markets rules with the aim to make electrification cost-competitive for energy-intensive industries 	EU/MS	S
Implement the EU Solar Strategy to double solar photovoltaic capacity	EU/MS	S/M
 Consider setting up 'go-to' areas for renewables with shortened and simplified permitting processes (Linked to Topic 4.3, 6.3, 10.2, 11.2 and 14.2) 	MS	S/M
15.3. Improve Power-Purchase Agreements		
Publish guidance to Member States on Power Purchase Agreements (PPAs)	EU/MS	S
 Delete the market stability reserve in EU-ETS and release all allowances to the market in order to avoid unnecessary price pressure 	Industry and EU/MS	S
 Establish EU certification and standards for feedstock (addressing energy and chemicals, including hydrogen) 	Industry and EU/MS	S







An example: draft TP Chemicals – roadmaps





An example: draft TP Chemicals – technological roadmaps

EU Initiatives supporting Actions **Technological Transition** (as presented in Building Blocks - Part II) (SET Action Plan) 6.2. Develop hub structures 8.2. Development of Technology Roadmaps 14. Anticipate long-term needs for energy and resource supply 15.1. Channel investments for low carbon energy A) ELECTRIFICATION (4) 15.2. Ensure competitive supply of low carbon energy 15.3. Improve Power-Purchase Agreements 18.1. Enable free flow of energy between countries 20.1. Icnrease the availability and capacity of multimodal terminals in the proximity of industrial clusters 20.2. Improve use of rail transport 6.2. Develop hub structures H₂ B) HYDROGEN 6.3. Manage and convert existing assets 15.1. Channel investments for low carbon energy 15.2. Develop competitive supply of low carbon energy 18.2. Develop a separate hydrogen infrastructure at EU level 4.2. Strengthen initiatives with SMEs under the European Innovation 8.1. Promote safety and sustainability assessment approaches C) BIOMASS 9.1. Foster collaboration and partnerships 16.2. Biomass as an alternative feedstock 19.1. Develop recycling facilities and bio-refineries (and exploit synergies with the chemical industry) 3.2. Enhance collaboration in value chains 3.3. Support product (re)design 8.1. Promote safety and sustainability assessment approaches D) 11.1. Definitions and concepts WASTE 11.2. Methods 16.3. Waste as an alternative feedstock 22.1. Set a regulatory framework for the transport of waste 22.2. Improve waste feedstock management logistics 6.3. Manage and convert existing assets 9.2. Support for development E) CCU & CCS 16.4. CO₂/CO as an alternative feedstock 22.2. Improve waste feedstock management logistics 3.2. Enhance collaboration in value chains 3.3. Support product (re)design 5.1. Facilitate exchange of information 5.3. Support the development of Partnerships for Innovation 6.3. Manage and convert existing assets 17. Process efficiency **PROCESS** 19.1. Develop recycling facilities and bio-refineries (and exploit synergies with the chemical industry) **EFFICIENCY** the proximity of industrial clusters and data gathering

EU Initiatives

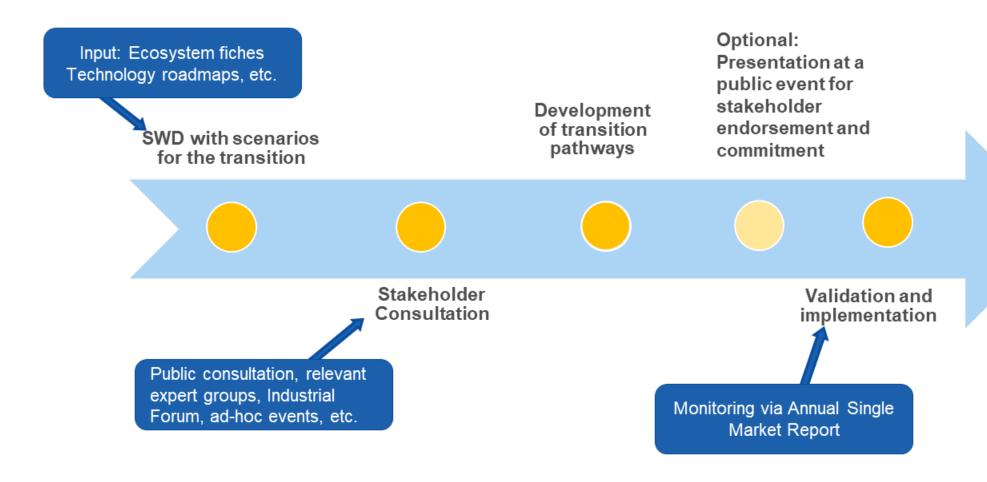
- REPowerEU
- EU Renewable Directive
- **TEN-E Regulation**
- Proposal for a directive on Energy
- European Clean Hydrogen Alliance
- Hydrogen and decarbonised gas market package
- Revision of the Renewable Energy
- INCITE (Under Horizon 2020)
- Hubs4Circularity
- Waste Framework Directive
- Landfill Directive
- Hubs4Circularity
- Sustainable Carbon Cycle

- 20.1. Increase the availability and capacity of multimodal terminals in
- 21.2. Deploy technologies to improve chemical manufacturing processes
- 25.2. Safety and social security of workers

- REPowerEU
- Industrial Symbiosis
- Revision of the Industrial Emission Directive



Transition Pathways timeline





Transition Pathways regata timeline: priority ecosystems

Ecosystem	Staff working document with scenarios	Public consultations	Transition pathway	Public event
Tourism	21 June 2021	Closed on 15 September 2021	4 February 2022 (EN OSS)	EU Industry Days - 8 February 2022
Energy Intensive Industries	21 September 2021	Closed on 26 November 2021	Transition pathway covered by: <u>Masterplan for a competitive transformation of EU energy-intensive industries</u> (2019)	
Chemicals	n.a.	No formal public consultation	December 2022	12 December (tbc)
Mobility	24 January 2022	Closed on 29 April 2022	Q1 2023	-
Construction	14 December 2021	Closed on 28 February 2022	Q1 2023 (EN •••	-

Source: https://single-market-economy.ec.europa.eu/industry/transition-pathways_en



Transition Pathways regata timeline (2)

Ecosystem	Staff working document with scenarios	Public consultations	Transition pathway	Public event	
Proximity and Social Economy	8 December 2021	Closed on 28 February 2022	14 November 2022	14 November 2022	
Textiles	30 March 2022	Closed on 15 June 2022	Q1 2023 (EN ***)	-	
Retail	Q4 2022	Q4 2022	Q3 2023	-	
Agri-food	Q4 2022	Q4 2022	Q3 2023	-	
Aerospace and defence	Q4 2022	Q4 2022	Q3 2023	-	
Renewables	Transition pathway covered by: REPowerEU (2022)				
Health	Transition pathway covered by: <u>HERA (EN IOOO</u>), the revision of the pharmaceutical legislation (2022), the IPCEI for health (2022) and the security of medicines supply under the <u>pharmaceutical strategy for Europe</u> (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 (EN ••• (2021)				
Electronics	Transition pathway covered by: The EU Chips Act (EN IOOO) (2022)				





GREEN AND CIRCULAR CLUSTERS



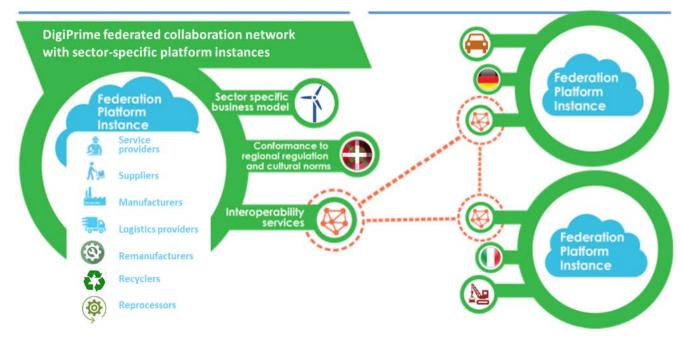
Example of implementation for circular economy





Economía Circular como instrumento para el fomento de la competitividad empresarial

DIGITAL PLATFORM FOR CIRCULAR ECONOMY IN CROSS-SECTORIAL SUSTAINABLE VALUE NETWORKS









Clusters, **Artificial Intelligence and Circular Economy**







UKRAINARI LAGUNTZA







Clusters Helping Ukraine

Are you representing a hospital in Kyiv or a refugee reception centre on the western borders of Ukraine? If you are, please post your needs here so that forum users can respond to you. We know there are many other urgent humanitarian needs that must be met; these are just two examples. Use this...



Clusters Helping Ukraine

Can you provide material, technical humanitarian assistance or jobs to people or organisations impacted by the war in Ukraine? If you can, please post your offers of support here and connect with people who urgently need your help. NOTE: In order to submit a post, you must first Join This Group...



Can you provide transport and/or logistics planning capability to transfer humanitarian assistance from EU Member States to the people of Ukraine, and to Ukrainian refugees in the border countries of the EU? Please use this forum to tell people how you can help. NOTE: In order to submit a post, you...







Antonio Novo Guerrero
Antonio.Novo@clustersalliance.eu
www.clustersalliance.eu

www.basquecircularsummit.eus









