

D. 3.5 – Discussion paper on Colombia

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1. Overview of EU-Colombia collaboration

Colombia is a dynamic and open economy ranked as an upper middle income by the World Bank, with a GDP of 292 billion USD and registered a growth rate of 2% in 2016. Major industry sectors in Colombia include: textiles, clothing and footwear; food processing and beverages; oil and mining; and chemicals. PROCOLOMBIA oversees the promotion of non-traditional exports, international tourism and foreign investment; and fosters investment in agribusiness (biofuels, aquaculture, etc.), manufacturing (automotive, cosmetics, building, fashion, etc.) and services (software and IT, outsourcing, tourism, etc.). Colombia is the EU's fourth most important economic partner in the Latin American region. An EU trade agreement with Colombia has been applied since 2013 and as a result of the signing of the peace agreement with the main guerrillas in the country at the end of 2016, Colombia is indeed an important target market for many European companies and therefore also for European clusters.

Trade in goods between Colombia and the EU has had a significant growth since the last ten years and mainly since the mentioned agreement, doubling from \notin 6.4 billion in 2006 to \notin 13.2 billion in 2015. The trade balance has traditionally been in favor of Colombia and recorded in 2015 a value of approximately \notin 206 million.

Colombia presents a stable political environment and favorable economic conditions for commercial exchange. Through its neighborhood with the Pacific Alliance, Colombia presents an interesting platform to enter the Latin America market for a number of companies and sectors. This is an area where clusters can play an active role in exploring opportunities for their members.

But Colombia is also an interesting collaboration partner beyond commercial ties: besides the opening of new markets for their cluster members, enhanced R&D exchange, the organization of common events or widening of network contacts represent some of the priorities for European clusters with regards to Colombia.

Some **EU business networks and cooperation intermediaries exist in Colombia**. In this regard, for example the Delegation of the EU in Colombia, Eurocámaras (partner of EuroChambers) or the different chambers of commerce of the EU Member States in the country. Currently the <u>Enterprise</u> <u>Europe Network</u> does not have a contact point in Colombia.

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1.1. Existing EU-Colombia cluster collaboration

Based on a cooperation agreement signed in 2013 between the Private Competitiveness Council (CPC, abbreviated in Spanish) and the Foreign Trade Bank (BANCOLDEX) through its Development and Innovation Unit (INNpulsa), the Colombian Cluster Network, *Red Cluster Colombia* (RCC)¹ was established, in order to leverage the process of productive transformation of the country from the regions. The RCC adopts Porter's Cluster definition: a geographic concentration of companies, specialized suppliers, service providers, companies in related industries and support institutions (such as universities, regulatory agencies and guilds) that are engaged in the same activities or in closely related activities.

Thus, currently Colombia has an important cluster community, with more than 80 clusters registered in the Colombia Cluster Network, "<u>Red Cluster Colombia</u>", representing more than 21,000 companies, mainly in the sectors of agriculture and agroindustry, energy, manufacturing, health, ICT and tourism. It is also a community considered to be young as very few clusters were created before 2011 and a community spreading quickly marked by a dynamic rate of cluster creation (21 clusters created in 2014 and 2015).

There is an entire **online portal** dedicated to this network which has a detailed cluster mapping tool and provides information on the different clusters, such as sector, number of members, year of creation and contact information, among other aspects. The portal also has a compilation of online documents and resources concerning competitiveness and clusters. This portal is an excellent tool to identify sectors with a significant cluster community, as well as specific clusters. However, it is only available in Spanish.

The majority of the Colombian clusters conduct R&D and innovation activities and some of them are keen to internationalize. However, a **cluster policy for the internationalization** of clusters has not been identified, INNpulsa Colombia is concerned with cluster internationalization, as shown by the organization of a cluster mission to Germany to foster international cluster cooperation, exchange of good practices and internationalization². Similarly, INNpulsa Colombia organized a cluster mission to the TCI Global Conference Monterrey³. No previous actions regarding the establishment of Memorandums of Understanding for cooperation on cluster activities have been identified as already mentioned

C2C international matchmaking events in Colombia have not been identified but some national inter-clustering events have been conducted. In this regard, in 2015 a national meeting of tourism clusters was conducted, as well as another one focused on energy clusters. Although these meetings

³ iNNpulsa Colombia, 2015.

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¹ www.redclustercolombia.com

² Red Cluster Colombia, 2015.



did not include one-to-one meetings, they represented an opportunity for cluster networking and included the participation of some international clusters. It should also be mentioned that iNNpulsa Colombia organized a cluster mission to Germany in April 2015, where Colombian clusters had the opportunity to meet German clusters and companies. No further examples of cooperation between Colombian and EU clusters have been identified.

There is only limited matching between the strategic interests of European Strategic Cluster **Partnerships for going international (ESCP-4i) launched for 2016-2017**⁴ and Colombian clusters. In this regard, Colombia is specifically mentioned as a target country for **only one ESCP-4i project**, <u>PERES</u> in the field of rails (mobility) even if a number of ESCP-4i will target "Latin America", out of the 24 existing ESCP-4i.

BOGOTA CLUSTERS RELATIONS WITH EUROPEAN CLUSTERS

Different activities and cooperation missions between the EU and Colombia have been carried out or will be carried out with regard to Clusters. You will find here bellow examples of different activities held by the Colombian sectors involved, as well as activities to be carried out over the next few years.

• Electric Energy Cluster

In 2016, through the Basque Business Development Agency - <u>SPRI</u>, both the Colombian and the Basque electric power cluster initiative, carried out a business mission to the Basque Country where Colombian entrepreneurs and managers of the energy clusters of Bogotá, Medellín and South West regions visited this community of Spain. The agenda included visits to research centers and Basque companies, and knowledge transfer in "cluster policies" in Europe.

As a result of the good relations that have been forged with the Basque Country, a mission with eight companies from this community took place in Bogotá, Colombia at the end of November 2017.

• Cosmetics

Mission Barcelona: an exploratory mission where an agenda will be developed with the companies of the cluster to know how the European Union market works, tariff and tariff requirements, to get to know possible customers and suppliers and to participate like visitors in the Cosmetorium fair. It is contemplated to do this, in a double way for Beauty Cluster companies to have a similar agenda in Bogota in 2018.

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⁴ https://www.clustercollaboration.eu/eu-cluster-partnerships/escp-4i/first-generation



To this day, the cluster has had Swiss contact to analyze the call for competitive resources and improve the sector needs. Likewise, the Cosmetic Valley has invited the Bogota cluster to participate in the fair "Cosmetic 360" to be held in Paris, to learn the techniques used in the sector on innovation and solutions.

Music

The Music cluster has established contact with some European institutions such as Sound Diplomacy, a private company of United Kingdom; Cluster of Mannheim, Lobster- Pôle of actual musicians from Lyon.

There are several approaches that this cluster has managed to establish today; among them are the Secretary of Culture Recreation and Sports (SCRD) and Sound Diplomacy, to strengthen the theme "City of Music". Additionally, there is an interest to hire a consultant for the development of the economy of the night and to realize the first international event of economy of the night.

For its part, the leader of the Mannheim Cluster was present in Bogota in a mission, invited by the SCRD. During his visit, the Music Cluster initiative was able to talk about his experiences about the work being done within the Initiative.

On the other hand, the leader of the Lyon Cluster and a delegation of the country, were in Colombia during the week Colombia - France exchange and have invited to the Initiative of Cluster of Music to participate in the delegation of Colombia that will go to France.

Software & TI

Some of the entities in Europe that have been approached by the Colombian Software & TI cluster are: Tecnalia España, Competitivenes, GAIA, Barcelona Activa, Generalitat de Catalunya, ACCIO, Barcelona Digital, SPRI Group, Cluster development.

As can be seen, this cluster has been active in the relationship with organizations in Europe and is in the constant search for approaches to develop on topics such as technology transfer and for to make commercial and technological missions.

Engaging with Colombian actors 1.2.

The main reasons for collaboration between clusters / technology centers are because of knowledge transfer.

There are two ways to engaging with a Colombian Cluster:

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European

Commission



- 1) **Red Cluster Colombia**, which serves as an instrument that seeks to facilitate the articulation of the different actors in the country, the knowledge transfers and to ensure synergy between cluster's agendas.
- 2) **Chambers of Commerce** from different cities in Colombia, such as the Bogota Chamber of Commerce or the Medellin Chamber of Commerce, private and non-profit organizations, leading directly the development of Clusters initiatives in each city to which it belongs.

It is worth mentioning that the *Red Cluster Colombia* is not involved in the day to day management of clusters and although Chambers of Commerce are more involved, each cluster has its own autonomy. However, these two entities facilitate collaboration between actors in Clusters.

2. Good practices / Success stories related to cluster cooperation

A number of EU institutions from different countries have already collaborated with Colombian companies. You will find bellow information about some success stories.

2.1. Collaboration Colombia-Germany

Cooperation between Foreign Trade of Colombia and German Federal Ministry of Education and Research

Partners:

- iNNpulsa Colombia
- The Foreign Trade Bank of Colombia (Bancoldex)
- the Germany Federal Ministry of Education and Research

Sectors and subsectors concerned:

- Metal-mechanic sector
- Energy
- Agricultural
- Food and beverage
- Biotechnology
- Health

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European

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Context:

During the years 2014 and 2015, iNNpulsa Colombia and the Foreign Trade Bank of Colombia with the support of the Colombian embassy in Germany have been developing a cooperation program with the Germany Federal Ministry of Education and Research. This program takes the advance methodological support by the BMBF program from InnoRegio3. Under this program, the German Federal Government publishes competitions at a national level to motivate the presentation of innovative projects that strengthen regional clusters.

Objective:

- Promote learning from successful international experiences.
- Connect and generate links between Colombian and German clusters that allow the forging of potential trade, knowledge and technology transfer, innovation, among others.
- Encourage bilateral cooperation between Colombia and Germany in order to exchange knowledge and experiences in the design and development of policies for business development.
- Contribute to the implementation of strategies and initiatives developed by clusters to reinforce cluster competitiveness.

Results/outcomes:

A joint declaration of interest between the Bank of Foreign Trade of Colombia and the German Federal Ministry of Education and Research was signed with the objective of continue the cooperation process.

Technologies, methodologies, experiences, companies and organizations in Germany which can contribute to strengthening companies and clusters have been identified.

More information:

• <u>http://redclustercolombia.com/contenido/mision-colombiana-a-alemania-para-el-fortalecimiento-y-la-cooperacion-entre-clusters/14</u>

2.2. Collaboration Colombia-Spain

According to the commercial office of the Spanish Embassy in Bogota, ICEX, and the Chamber of Commerce of Bogota, there is still no direct collaboration with Spanish clusters. Nevertheless, they are currently working on a Memorandum of Understanding (MOU) between the cluster of cosmetics of Bogota and the cluster Beauty of Barcelona. Through this agreement they are exploring the possibility of carrying out joint actions between the fashion cluster of Bogota and the fashion cluster of Barcelona.

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On the other hand, they work with Spanish entities like Tecnalia, the IDOM Consultants and the Basque Institute of Competitiveness – Orkestra. Nevertheless, at this time, they do not have realized **any concrete action of collaboration with this institutions on cluster issues**.

2.3. Collaboration Colombia-Belgium - Flanders Maritime Cluster

www.flanders-maritime-cluster.be/leden

Activity in 2016: Participation of cluster members at SPINCAM session "Sustainable Ocean based Economy (Blue Economy)" with delegates of Chile, Colombia, Ecuador, Panama and Peru.



The Southeast Pacific data and information network in support to integrated coastal area management (SPINCAM) is a project originally designed to support Chile, Colombia, Ecuador, Panama, and Peru in developing a long-term science-based strategy for the sustainable growth of their coastal areas.

Funded by the Government of Flanders, the project was first approved in 2008 and is currently concluding its second phase. It has been developed since 2009 under the coordination of IOC-UNESCO, through its Marine Policy and Regional Coordination Section with valuable contributions on data and information from the IOC Project Office for International Oceanographic Data and Information Exchange (IODE), and at regional level by the Permanent Commission for the South Pacific.⁵

2.4. EU support for the dairy sector contemplate the conformation of clusters

As part of the commitment of a budget support to the Colombian dairy sector⁶, the European Union is providing technical assistance to improve dairy production in Colombia. It is within this framework that <u>Propaís</u>, the Corporation for the Development of Micro Enterprises has signed an agreement to bring specialized technical assistance to the milk chain in Colombia and contribute to the development and transformation of the sector.

In order to do this, programs that include design and start-up that generates sustainable dairy production systems, confirmation of clusters or dairy conglomerates and public-private consultation, national and regional to promote the development of the Colombian chain.

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⁵ Unesco, 2016.

⁶ Political implementation to improve the competitiveness of the National dairy sector, page 6.



The European Union has identified 7 initiatives of dairy clusters in Colombia that are located in the following regions:

- Atlantico
- Boyaca
- Bogota Cundinamarca
- North and East Antioquia
- Valle del Rio Cesar
- Nariño Putumayo
- Cauca

With the support of supplementary EU support budgets to the dairy sector and at the request of the Colombian Ministry of Commerce, a follow-up will be made to the progress of the cluster initiatives and will identify 1 or 2 projects which will be co-financed with a view to give more significant impact to the competitiveness of the dairy sector.

In this regard, cluster initiatives within the European Union; the European Delegation in Bogotá considers that it would be extremely interesting to be able to establish contacts between clusters in the dairy sector, the energy sector and technologies and equipment for the food manufacture.

The Europe dairy clusters which they would like to get in touch are the following:

- Lactimed Lácteos del Mediterráneo
- Dairy Cluster at The Netherlands at Wageningen Food Valley
- Galicia's dairy cluster
- Emilia-Rogmana region

So far no specific activities have been planned to interact with these clusters, nor in the energy and food equipment sectors, but within the framework of the supplementary support and with the collaboration of the respective European entities they could program one or two other activity in the course of 2018.

3. Opportunities/potential for further EU-Colombia cluster cooperation: thematic focus

This study has currently listed 34 European clusters (see annexes) that cite Colombia as a target partner today. The vast majority of European clusters citing Colombia as a "target partner country" on ECCP are in their overwhelmingly Spanish with 26 clusters from Catalonia (7), Pais Vasco (4), Galicia (3), Asturias government (3), Andalucia (2), Aragón (2), Community of Madrid (2), Valencian

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Community (1), and Murcia Region (1). Other European countries interested in the Colombian market through their clusters are Belgium (2), France (2), Germany (1), Italy (1), Portugal (1) and the Czech Republic (1) Most of them have not started activities and they do not mention official partners in Colombia. From this lot, have noted several organizations that have a little more advanced in the cooperation procedure with Colombia - these are 3 Spanish organizations: <u>Galego</u> (Spanish), <u>FENAEIC</u> (Spanish), <u>ETICOM</u> (Spanish).

When identifying the ESCP-4i (successful cluster networks that the ECCP is helping to internationalize) that cited Colombia as a priority country, there are currently 6:

<u>Acronym</u>	Name	Sector(s)	Targeted third countries	<u>SMEs</u> involved	Countries Involved
<u>CROSSCUT</u>	European Strategic Cluster Partnership on Sustainable Construction	Construction Products and Services INDUSTRIAL MANUFACTURING, MATERIAL AND TRANSPORT>Construction Technology>Materials, components and systems for construction	Chile, Colombia, Mexico, United States	1447	DE(2) SE ES (2) DK PT
<u>EnW</u>	Energy in Water	Environmental Services PROTECTING MAN AND ENVIRONMENT>Environment>Enviro nmental Engineering / Technology	Colombia, Mexico, Morocco, Peru, Singapore, United States	650	NL(2) ES(2) FR(2) GB DK
NATUREEF	Natureef ESCP	Environmental Services PROTECTING MAN AND ENVIRONMENT>Environment>Enviro nmental Engineering / Technology	Brazil, Chile, China, Colombia, Mexico, Peru, Philippines	1232	FR DK DE PL HU ES CZ BG PT
PERES	PERES-Promoting European Rail Excellence outSide EU	Transportation and Logistics INDUSTRIAL MANUFACTURING, MATERIAL AND TRANSPORT>Transport Infrastructure>Railway Transport	Brazil, Canada, China, Colombia, India, Iran, Mexico, Oman, Qatar, Saudi Arabia, United Arab Emirates, United States	150	IT FR

Table 1. List of 6 ESCP- 4i which have Colombia as target country

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<u>REINA PLUS</u>	Renewable Energy Internationalisation ESCP project for European SMEs	Electric Power Generation and Transmission ENERGY>Renewable Sources of Energy>Wind energy	Algeria, Brazil, Canada, Chile, Colombia, Mexico, Morocco, Tunisia, United States	322	AT ES FI PT
SPACE2ID	Space Clusters International Industrial Diversification	Information Technology and Analytical Instruments ELECTRONICS, IT AND TELECOMMS>Telecommunications, Networking>Satellite Technology/Positioning/Communica tion in GPS	Canada, Chile, China, Colombia, United Arab Emirates	757	ES(2) IT(2) BE(2) PL FR GR(2)

Potential sectors for cluster collaboration include sectors such as electrical energy, Software and IT, Business Tourism, pharmaceutical, cosmetics health and clothing, sectors which have expressed their desire to connect with European Union institutions in order to share experiences such as technology transfer developing market intelligence exercises and giving visibility to the industry at an international level, good manufacturing practices and standards for cost reduction and quality enhancement, development process.

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Annex 1: Contacts in Colombia and interesting links

INNpulsa Colombia / Red Cluster Colombia Alejandro Caicedo Torres

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Relevant organizations in Colombia:

- iNNpulsa Colombia, www.innpulsacolombia.com
- Red Cluster Colombia, <u>www.redclustercolombia.com</u>
- Latin America IPR SME Helpdesk, <u>www.latinamerica-ipr-helpdesk.eu</u>
- PROCOLOMBIA, <u>www.procolombia.co</u>
- Programa de Transformación Productiva, <u>www.ptp.com.co</u>
- List of cluster initiatives in Columbia, <u>www.redclustercolombia.com/clusters-en-</u> <u>colombia/lista-de-iniciativas</u>

Links of interest

- <u>Red Cluster Colombia Red Cluster Colombia cluster mapping</u>
- Article on the cluster mission to Germany, 2015
- Programa Rutas Competitivas, Red Cluster Colombia
- <u>Programa de Transformación Productiva</u>
- World Data Bank Colombia
- ELAN BIZ
- Information about the call for the development of binational cooperation projects with Germany for the strengthening of cluster initiatives: <u>https://nodoka.co/es/convocatorias/convocatoria-para-el-desarrollo-de-proyectos-de-</u> cooperacion-binacional-con-alemania-para-el-fortalecimiento-de-iniciativas

Annex 2: flyer CCB event - November 2017

Clusters Conference in à Bogota - November 2017 http://www.tci-network.org/tci2017

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Annex 3: list of 34 European clusters interested in working with Colombian clusters, updated in mid-July 2017)

Name	Country	Region	Sector(s)	Cluster Excellence Label	ESCP-4i Membership
<u>Aclima- Basque Environment</u> <u>Cluster - Asociación Cluster de</u> <u>Industrias de Medio Ambiente</u> <u>de Euskadi</u>	Spain	País Vasco	Environmental Services Environmental Industries Remediation of Contaminated Sites, Recycling, Recovery, Municipal Water Treatment Waste management, Waste collection, treatment&disposal activities, materials recovery & remediation activities, Water collection, treatment & supply	Other Other: EMAS	-
AEI Conocimiento Asturias / Innovative Knowledge Business Association of Asturias	Spain	Principado de Asturias	Communications Equipment and Services, Education and Knowledge Creation, Information Technology and Analytical Instruments Creative Industries, Digital Industries, Mobility Technologies Applications for Health, ERP - Electronic Resources Planning, e-Government Cleaner environment & efficient energy networks (e.g. smart grids), e-Health (e.g. healthy ageing), e-Inclusion (e.g. e-Skills, e-Learning)		-
AFPG - GEODEEP	France	None	Electric Power Generation and Transmission, Environmental Services, Marketing Environmental Industries Energy management, Geothermal energy, Process Plant Engineering Power generation / renewable sources		-



amec urbis	Spain	Cataluña	Environmental Services, Furniture, Transportation and Logistics Environmental Industries, Mobility Technologies Planning and security, Recycling, Recovery, Municipal Water Treatment Automated driverless vehicles, Smart green & integrated transport systems, Waste management	Bronze Label	-
<u>Arahealth</u>	Spain	Aragón	Biopharmaceuticals Bio-pharmaceuticals, Digital Industries, Medical Devices Biochemistry / Biophysics, Pharmaceutical Products / Drugs, Applications for Health e-Health (e.g. healthy ageing), Human health activities (medical services), Biotechnology	Other Other: AEI- Agrupación Empresarial Innovadora (Innovative Business Association, Spanish cluster Iabel from the Ministry of Industry)	-
<u>Asociación Cluster del Naval</u> Gallego (ACLUNAGA)	Spain	None	Metalworking Technology, Transportation and Logistics, Water Transportation Blue Growth Industries Shipbuilding Shipbuilding & ship repair, Transport & logistics (incl. highways of the seas)	AEI National Label	-



<u>ATEVAL-Asociación de</u> <u>Empresarios Textiles de la</u> <u>Comunidad Valenciana</u>	Spain	Comunidad Valenciana	Textile Manufacturing Creative Industries Advanced Textile Materials, Finisher related to Textiles Technology, Woven technical textiles for industrial applications Advanced manufacturing systems, Advanced materials, Textiles, wearing apparel & leather& related products	Other	-
<u>Basque Energy Cluster (Cluster</u> <u>de Energía)</u>	Spain	País Vasco	Electric Power Generation and Transmission, Lighting and Electrical Equipment, Oil and Gas Production and Transportation Blue Growth Industries, Environmental Industries Smart grids, Transmission of electricity, Wind energy Blue renewable energy, Energy distribution, Sustainable energy & renewables	Bronze Label	<u>REINA PLUS</u>
<u>Basque Mobility and Logistics</u> <u>Cluster, MLC ITS Euskadi</u>	Spain	País Vasco	Transportation and Logistics Logistical Services, Mobility Technologies Applications for Transport and Logistics, System and transportation, Logistics Smart green & integrated transport systems, Road transport & related services, Warehousing & support activities for transportation (logistics storage)	Other	-



<u>biomastec</u>	Germany	Stuttgart	Agricultural Inputs and Services, Electric Power Generation and Transmission, Food Processing and Manufacturing Environmental Industries Biogas and anaerobic digestion (AD), Bio-refineries for energy, Biobased materials Power generation / renewable sources, Biotechnology, Waste collection, treatment&disposal activities, materials recovery & remediation activities	Bronze Label Other: Funded by the German Ministry of Economic Affairs and Energy	NATUREEF
<u>Canarias Excelencia</u> <u>Tecnológica</u>	Spain	Canarias	Information Technology and Analytical Instruments Digital Industries, Experience Industries ASP Application Service Providing, Applications for Tourism, Applications for Transport and Logistics Computer programming, consultancy & related activities, Information service activities, Motion picture, video & television programme production, sound recording & music publishing activities	Silver Label Other: AEl	-
<u>Catalan Water Partnership</u> (CWP)	Spain	Cataluña	Environmental Services, Water Transportation Environmental Industries Drinking Water, Industrial Water Treatment, Water Resources Management Water transport & related services, Waste collection, treatment&disposal activities, materials recovery & remediation activities, Water collection, treatment & supply	Bronze Label Other: AEI (Ministry of Industria, Energy and Tourism) and Catalonia Clusters	-



<u>CENTRO ESPAÑOL DE</u> <u>PLASTICOS</u>	Spain	Cataluña	Automotive, Downstream Chemical Products, Plastics Advanced Packaging, Digital Industries, Environmental Industries 3D printing, Composite materials, Plastics, Polymers Chemicals & chemical products, Rubber & plastic products, Social innovation with regard to education, skills & training	Bronze Label Other: AEI - Agrupacion Empresarial Innovadora Española	-
<u>CLÚSTER D'EFICIÈNCIA</u> ENERGÈTICA DE CATALUNYA	Spain	Cataluña	Environmental Services, Lighting and Electrical Equipment Environmental Industries, Mobility Technologies Energy management, Lighting, illumination, Process optimisation, waste heat utilisation Intelligent inter-modal & sustainable urban areas (e.g. smart cities), Electrical equipment, Resource efficiency	Bronze Label Other: AIE (Innovative Business Groups) from Minetur (Spain)	-
<u>Cluster da Madeira e o Deseño</u> de Galicia (CMD)	Spain	Galicia	Forestry, Furniture, Wood Products Blue Growth Industries, Environmental Industries, Experience Industries Solid biomass, Construction engineering (design, simulation), Materials, components and systems for construction Advanced materials, Furniture, Eco-innovations	Gold Label	<u>CROSSCUT</u>
<u>Clúster Digital de Catalunya</u>	Spain	Cataluña	Communications Equipment and Services, Distribution and Electronic Commerce, Information Technology and Analytical Instruments Digital Industries, Mobility Technologies Computer Software, Databases, Database Management, Data Mining, Internet Technologies/Communication (Wireless, Bluetooth) ICT trust, cyber security & network security, Computer programming, consultancy & related activities, Information service activities	Bronze Label Other: Catalonia Clusters	-



<u>CLUSTER DO AUDIOVISUAL</u> GALEGO	Spain	Galicia	Communications Equipment and Services, Video Production and Distribution Creative Industries, Digital Industries Creative products, Creative services, Information and media, society Creative, arts & entertainment activities, Development of regional cultural & creative industries, New media & easier access to cultural contents (e.g. heritage)	Bronze Label Other: Agrupación de Empresas Innovadoras – AEI, by the Spanish Ministry of Industry and Tourism.	-
<u>CLUSTER OF ADVANCED</u> <u>MANUFACTURING OF METAL</u> <u>INDUSTRY IN ASTURIAS.</u> <u>METAINDUSTRY4</u>	Spain	Principado de Asturias	Downstream Metal Products, Metalworking Technology Blue Growth Industries, Digital Industries, Mobility Technologies 3D printing, Jointing (soldering, welding, sticking), Supply chain Advanced manufacturing systems, Smart green & integrated transport systems, Sustainable energy & renewables		-
<u>CREA Hydro&Energy, z.s.</u>	Czech Republic	Jihovýchod	Construction Products and Services, Electric Power Generation and Transmission, Environmental Services Environmental Industries Hydropower, Analyses / Test Facilities and Methods, Water Resources Management Specialised construction activities, Sustainable energy & renewables, Sustainable land & water use	Gold Label	NATUREEF



D.3.5 – Discussion paper on Colombia

ENERGY TECHNOLOGY CONSORTIUM OF ASTURIAS (CONSORCIO TECNOLÓGICO DE LA ENERGÍA DE ASTURIAS, AIE)	Spain	Principado de Asturias	Electric Power Generation and Transmission, Environmental Services Environmental Industries, Mobility Technologies Biogas and anaerobic digestion (AD), Energy management, Waste to energy - other Blue renewable energy, Construction of buildings, Power generation / renewable sources	INNOVATIVE BUSINESS GROUP	-
<u>ETICOM (Asociación</u> <u>Empresarial Eticom, cluster de</u> <u>Economía Digital de Andalucía</u>	Spain	Andalucía	Agricultural Inputs and Services, Distribution and Electronic Commerce, Food Processing and Manufacturing Digital Industries, Experience Industries, Mobility Technologies Agriculture Machinery / Technology, Applications for Tourism, e-Government e-Government (e.g. e-Procurement, e-Participation), Intelligent inter-modal & sustainable urban areas (e.g. smart cities), Computer programming, consultancy & related activities	Agrupación Empresarial Innovadora por el Gobierno de España	-
<u>FEMAC</u>	Spain	Cataluña	Agricultural Inputs and Services Environmental Industries Agriculture Machinery / Technology, Pesticides, Precision agriculture Crop & animal production, hunting &related service activities	Gold Label Other: National Label - Agrupaciones de Empresas Invoadoras, and Regional Label - Catalonia Clusters	<u>NATUREEF</u>
Flanders' Maritime Cluster	Belgium	None	Business Services Blue Growth Industries Aquaculture, Wind energy, Marine Environment Aquaculture, Blue renewable energy, Shipbuilding & ship repair		-

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Fondazione Torino Wireless	Italy	Piemonte	Information Technology and Analytical Instruments Digital Industries, Mobility Technologies Digital Systems, Digital Representation, Applications for Transport and Logistics, Computer Software Intelligent inter-modal & sustainable urban areas (e.g. smart cities), Computer programming, consultancy & related activities, Smart green & integrated transport systems	Silver Label	<u>MobiGoln</u>
GAIAAssociation of Electronic and Information Technologies in the Basque Country	Spain	País Vasco	Communications Equipment and Services, Information Technology and Analytical Instruments, Production Technology and Heavy Machinery Bio-pharmaceuticals, Creative Industries, Medical Devices Electronic engineering, ERP - Electronic Resources Planning, Cloud Technologies Power generation / renewable sources, Information service activities, Machinery & equipment n.e.c.		
<u>Granada Health Technology</u> <u>Park (PTS)</u>	Spain	Andalucía	Biopharmaceuticals, Business Services, Education and Knowledge Creation Bio-pharmaceuticals, Medical Devices Cellular and Molecular Biology, Bioinformatics, Medical Research e-Health (e.g. healthy ageing), Biotechnology, Public health and well-being	Other	-
Groen Licht Vlaanderen	Belgium	Prov. Oost- Vlaanderen	Lighting and Electrical Equipment Digital Industries Internet of Things, Lighting, illumination, Optics Photonics		ELCA4i



<u>HealthTech Cluster</u>	Spain	Cataluña	Biopharmaceuticals, Information Technology and Analytical Instruments Digital Industries, Medical Devices Health information management, Sensors & Wireless products, Medical Technology / Biomedical Engineering e-Health (e.g. healthy ageing), Open data & sharing of public sector information, Human health activities (medical services)	Bronze Label	-
<u>InovCluster - Associação do</u> <u>Cluster Agroindustrial do</u> <u>Centro</u>	Portugal	Centro (PT)	Agricultural Inputs and Services Advanced Packaging, Creative Industries, Logistical Services Food Additives/Ingredients/Functional Food, Food Processing, Food Technology Food, beverage & tobacco products, Biodiversity, Public health and well-being	Gold Label	<u>AdPack</u>
MADRID AEROSPACE CLUSTER	Spain	Comunidad de Madrid	Aerospace Vehicles and Defense Digital Industries Aeronautical technology / Avionics, Aircraft, Space Exploration and Technology Aeronautics, Remotely piloted aircrafts, Space	Silver Label Other: AEI (Ministry of Industria, Energy and Tourism)	<u>SPACE2ID</u>
<u>Madrid Sustainability and</u> <u>Renewable Energies Cluster</u>	Spain	Comunidad de Madrid	Environmental Industries, Mobility Technologies Energy management, Process optimisation, waste heat utilisation, Photovoltaics Bio fuels & energy efficiency, Cleaner environment & efficient energy networks (e.g. smart grids), Power generation / renewable sources	Bronze Label Certified as Innovative Companies Association (AEI) by the Spanish Ministry of Industry and Tourism	<u>SPACE2ID</u>



<u>TECNARA - Aragón IT Cluster</u>	Spain	None	Communications Equipment and Services, Distribution and Electronic Commerce, Information Technology and Analytical Instruments Digital Industries, Experience Industries, Mobility Technologies Applications for Health, Information Technology/Informatics, Internet of Things E-Commerce & SMEs online, e-Health (e.g. healthy ageing), Computer programming, consultancy & related activities	Silver Label Other: AEI- Agrupación Empresarial Innovadora (Innovative Business Association, Spanish cluster label from the Ministry of Industry)	-
<u>TICBIOMED</u>	Spain	Región de Murcia	Communications Equipment and Services, Insurance Services Digital Industries, Medical Devices, Mobility Technologies Health information management, Safety & systems, Sensors & Wireless products e-Health (e.g. healthy ageing), ICT trust, cyber security & network security, Social innovation with regard to health, well-being and elder care	Gold Label Other: National register of AEI	-
<u>VEGEPOLYS</u>	France	Pays de la Loire	Agricultural Inputs and Services Environmental Industries Biocontrol, Precision agriculture, Seed coating Crop & animal production, hunting &related service activities	Gold Label Other: Pôle de Compétitivité	NATUREEF