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COCO4CCI

TRANSNATIONAL MAPPING REPORT

- POSITIONING OF THE REGIONS IN CENTRAL EUROPE –

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Università Ca' Foscari Venezia

Version 2

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#COCO4CCI

TRANSNATIONAL MAPPING REPORT

- POSITIONING OF THE REGIONS IN CENTRAL EUROPE

Index

ABBREVIATIONS

PARTNERS

BIZ-UP - Austrian partner Business Upper Austria – OÖ Wirtschaftsa gentur GmbH

Bwcon GmbH – German partner

CCIS – Slovenian partner Gospodarsk a zbornica Slovenije

CIKE – Slovak partner Creative Industry Košice

CREARE – Austrian partner Creative Region Linz& Upper Austria Gmbh

CPK – Polish partner Academy of Art in Szczecin

HdM – German partner Hochschule der Medien

RRA LUR – Slovenian partner Regionalna razvojna agencija Ljubljanske urbane regije

SIAV – italian partner Confindustria Veneto SIAV

SBA – Slovak partner Slovak Business Agency

NCC – Polish partner Północna Izba Gospodarcza w Szczecinie

UNIVE – Italian partner Università Ca' Foscari Venezia

CCI – Cultural and Creative Industries

PP - Project Partners'

AVM - Advanced Manufacturing

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Figure 1. The word cloud of the Transnational Report

INTRODUCTION:

Methodology

This report presents the result of a mapping activity developed inside the WP T1 of the INTERREG European Project COCO4CCI – Culture and Creative Industries Cooperation Collider.

The "Transnational mapping report - positioning of the regions in Central Europe" develops the analysis of level of development, the identification of specialization patterns, common challenges, and opportunities of Cultural and Creative Industries within the six partners' countries.

Mapping is crucial for developing appropriate measures and strategies that respond to regional, national, and transnational needs and opportunities. The aim of this WP is to map the regional/national level of development of the CCI sector with a focus on the possibilities to link CCI to advanced manufacturing (AVM) and prepare a roadmap for setting up a transnational CCI cooperation collider network.

To achieve this goal, a structured mapping activity was carried out under the supervision of Università Ca' Foscari Venezia, which involved all project partners from 04.2019 to 10.2019.

Partner name and N°	Abbreviation	Country
1 – Gospodarsk a zbornica Slovenije	CCIS	SLOVENIA
2 Business Upper Austria – OÖ Wirtschaftsa gentur GmbH	BIZ-UP	AUSTRIA
3 – Creative Region Linz& Upper Austria Gmbh	CREARE	AUSTRIA
4 – Creative Industry Košice, n.o.	CIKE	SLOVAKIA
5 – Regionalna razvojna agencija Ljubljanske urbane regije	RRA LUR	SLOVENIA
6 – Bwcon GmbH	bwcon	GERMANY
7 – Slovenská podnikateľsk á agentúra	SBA	SLOVAKIA
8 – Università Ca' Foscari Venezia	UNIVE	ITALY
9 – Hochschule der Medien	HdM	GERMANY
10- Confindustria Veneto SIAV S.p.A.	SIAV	ITALY
11- Północna Izba Gospodarcza w Szczecinie	NCC	POLAND
12-Akademia Sztuki w Szczecinie	Academy of Art in Szczecin	POLAND

Table 1. Project Partners COCO4CCI

Figure 2. Project Partners COCO4CCI

This report is the result of the following activities:

1. The capitalization of existing mappings (performed at national and transnational levels).

2. Based on the existing mappings, preparation of a mapping strategy as a guideline to implement the CCI mapping in the partners' regions.

3. Implementation of the mapping activity with desk research and interviews with CCI stakeholders, by following a quadruple helix approach, identification of strengths and opportunities of CCI in the regions to establish sustainable linkages with AVM.

For the implementation of the mapping, the following method has been used:

- **QUANTITATIVE DATA**

A desk research was conducted using the regional existing mappings and datasets. The aim was to find the main quantitative data related to strengths and trends of the CCI sector as an economic value, n° of enterprises, economic comparisons with other sectors, and KPIs, etc. Through this method, it is possible to have an objective idea about the macro indicators characterizing the CCI sector in each partner's region/country.

- **CODIFICATION**

We promote a desk research about the codification of CCI Sector in each partner's region in order to build a common framework about the definition of Core Cultural economic activities, Creative economic activities

and Creative Driven economic activities. This step has been developed by searching for the main formal codification for CCI used in each region/country and making a match between that approach with the one proposed by the Italian partner as a common guide, from Symbola 2018 guide “Io sono cultura”.

- **QUALITATIVE DATA**

Following the grounded-theory method, **54 Interviews** were conducted with CCI stakeholders representing each partner’s region/country. The interview aimed to extract the following qualitative information from CCI main experts and stakeholders:

CCI Stakeholders					
Italy 	Slovenia 	Slovakia 	Poland 	Germany 	Austria 
Veneto Region Innovation Lab	Centre for Creativity (CZK)	Creative Industry Forum (CIF)	Academy Of Arts In Szczecin	Stuttgart Media University	City of Linz
University of Padova	University of Ljubljana	Association “nova cvernovka”	Cultural institution Opera House	Stuttgart Region Economic Development	Kreativwirschaft Austria
IUAV - University of Venice Architecture Institute	Ministry of economic development and technology	Creative point	Marshal office - Department related to CCI	Public Institution MFG Baden-Württemberg	Industry meets makers
Galileo Visionary District	Ministry of culture Republic of Slovenia	Academy of performing arts (APA)	Non profit organization Miastoholizm (City Holizm)	Startup Code	Chamber of civil engineers, architects Upper Austria and Salzburg
Italypost-Wefactory	Digital Innovation Hub & Fablab Creative laboratories	Slovak Game Developers Association (Sdga)	Non profit organization Oswajanie Sztuki (Taming Art)	Free dance and theater scene Stuttgart	Federal Economic Chamber
Cre-Ta Hub	Kersnikova institute	Fashion Revolution	Trafo Art	Impro theater Stuttgart	Austrian Promotional Bank
Cini Foundation and	Designer Society of Slovenia	Eastcubator	Association Of Polish Architects	Kulturinsel – Room for Creativity	Business Upper Austria
Nordest Foundation	Design biotop	Visit Kosice	Media Dizajn Association	Abertausend – Innovation Agency	
Makerfaire – Art Section	Roglab Muzej in galerije mesta Ljubljane	Municipality of Kosice	Hub - Regional Center Developing Innovations		
Altagamma Foundation	Poligon		Center for CCi in Szczecin		

Table 2. CCI stakeholders per Project Partners COCO4CCI

- Definitions and meanings of the CCI sector;
- Strategic cultural sectors of the region;
- Regional programmes and projects for the CCI sector;
- Existing experiences of cooperation between CCI and AVM;
- Best and innovative practices;
- Challenges and opportunities inside the CCI sector.

As a result of the mapping activities of six (6) regions/countries, local reports are available and ready to be analysed and integrated into a transnational report which will be the bearing column for the final roadmap as a transnational strategy to create a CCI cooperation collider network for cross-sectoral collaboration between CCI and AVM, and the linking up of CCI to innovation processes in the regions.

In this report, main trends, assets, and issues in the six partners' regions will be presented through the aggregate analysis of:

- 6 regional main quantitative data and indicators inherent to the CCI sector of each region/country;
- 6 regional codification for the CCI Sector (core culture and creative-driven);
- 54 CCI stakeholders' interviews, main qualitative data, and conceptualizations.

Creative and Cultural Industries: a framework

To develop the mapping strategy, Università Ca' Foscari Venezia developed a summary of the evolution of the concept of cultural and creative industries. The aim was to have a framework which could serve as a basis for building the common concept for CCI at a transnational level for the future cooperation collider.

The term "creative industries" was used for the first time in 1998 in the report "The Creative Industries Mapping Document" of the British Governmental Department of culture, media, and sport (DCMS) to extend the definition of the cultural sector and follow the structural changes due to the new technologies development. It is important to understand how creative industries developed from the cultural industries because the history of cultural industries is grounded in the industrial revolution in the 19th century. In the 1930s, the term 'cultural industries' was used for the first time, although in a critical way. The Avant-garde of the 1930s debated about the first developments of mass culture i.e. how radio or cinema made culture available for the masses while simultaneously diluting the value of such culture through its artificial reproduction and wide distribution (Moore, 2014).

In more recent time, the cultural and creative industries have become objects of great attention from different areas as economy, politics, and public management (of the cultural areas and development of many countries). The DCMS report showed that the creative industries sector was an important growing component in the British economy as it employed millions of people. According to the document of 1998, creative industries represented the future of the British economy. The same document defined creative industries as "those activities that have their origin from individual creativity, skills, and talent, and have potential to create wealth and employment through the development and exploitation of "intellectual property" and identified thirteen sectors:

- Architecture
- Visual and performing arts
- Craftwork
- Design
- Publishing
- Film, video and photography
- Art and antiques market
- Fashion
- Music
- Advertising
- Computer software and computer services
- Interactive entertainment software (video games)
- Television and radio.

The more recent technological and digital revolution allows the implementation of new tools for production and communication of culture, as well as new cultural activities, bringing us to witness a semantic change

from "cultural" to "creative". The traditional definition of "cultural industries" has evolved into the broader one of "creative industries", to then reach the concept of "cultural and creative industries" (CCI), used by the European Union (EU), which considers the differences between the two categories of activities. Cultural industries are associated with “traditional” sectors such as cultural heritage, visual and performing arts, publishing, music, cinema, radio, television, print and photography, while creative industry category begins to include the new sector of the digital economy such as software and IT services, through different kind of definitions, some of which we report in the following table:

Institution and conceptualization	Categorization
NESTA – UK Government National Endowment for Science, Technology and the Arts	*1. Creative service providers*, who apply intellectual property (IP): advertising agencies, design consultants, architecture, PR, etc.
	2. Creative content producers, who invest capital to produce IP and protect the outputs that are distributed to consumers: theatre companies, publishers, video game developers, record and film companies, fashion designers, television and radio broadcasts, etc.
	3. Suppliers of creative experiences, who sell consumers the right to attend a specific performance or activity: theatre companies, managers of musical performances, artistic-cultural activities, tourist and sporting events
	4. Manufacturers of original creative goods, which are involved in the creation, processing or sale of artefacts, with creative value, exclusivity and authenticity: visual arts and crafts, antiques, writing, design creation, photography, etc.

Nesta categorization is based on four factors related to cultural and creative processes, which are: business model, value chain, market structures, and final products within each group.

	Sector	**Outputs**
UNCTAD United Nations Conference on Trade and Development, 2008	Advertising Architecture TV and radio Design and fashion Movies and videos Interactive media (games, web, mobile)	*Original and creative goods*
		Creative contents
		Creative experiences
		Creative services

	Museums, galleries and cultural heritage Music Visual arts (included handcrafts) Writing, Publishing and press	*Creative simple goods*
		Creative complex goods

UNCTAD classification is based on 6 types of creative outputs possible to reach for 10 industrial categories.

Work Foundation cycle model	1 *Core creative arts*, protected by copyright: arts, entertainment, and visual, literature and music
	2. *Cultural enterprises*, with lower cultural content: libraries, films and museums
	3. *Creative industries*, where expressive value is essential: publishing, recordings, cultural heritage conservation and enhancement services,television and radio, video games.
	4. *The rest of the economy*, companies that exploit the expressive value generated: architecture, design, fashion and advertising.

The Work Foundation cycle model classification distinguishes cultural industries from creative industries. The first ones are oriented more to cultural value creation and the second ones present a higher commercial content referred to an "expressive value" of creative products and services.

UNESCO United Nations Educational, Scientific and Cultural Organization, 2009	*1. Cultural and natural heritage*
	2. *Entertainment and events* (including the production of musical instruments and recording equipment)
	3. Visual arts
	4. Crafts and design
	5. *Publishing* (books and printing)
	6. Audio-visual and interactive media
	7. Architecture and advertising (design and creative services).

The UNESCO Statistical Institute presented 7 categories of cultural activities to assess the economic impact of the CCI sector (companies, employment, and products).

	Category	Sector
KEA European Affairs, for the General Direction of Education and Culture of the European Commission	*CORE CULTURE*	Visual Arts
		Performing Arts
		Cultural Heritage
	CULTURAL INDUSTRIES	Films and videos
		Television and Radio
		Videogames
		Music
		Publishing
	CREATIVE INDUSTRIES	Design
		Architecture
		Advertising
	CREATIVE DRIVEN	Manufacturers of computers, MP3, Mobile telephony, etc.

This last classification, from KEA, distinguishes 3 categories spanning from more cultural intensive to more creative intensive industries (functional output). The last one considers the link between creativity and production. It creates a shared vision at the European level to facilitate the development of policy measures for development.

Core cultural and creative-driven

The KEA approach for classification was followed by the Green Paper of the European Commission of 2010, which defines the cultural industries as "those industries that produce and distribute goods and services that at the moment they are developed, incorporate a specific cultural attribute, use or purpose, regardless of commercial value", while creative industries are "those industries that use culture as an input or have a cultural dimension, although their outputs are mainly functional."

Mapping processes of CCI are being developed in different countries and regions by considering the innovative impetus to the economic development of the creative approach. Three data collection methods on this topic are used at the basis of the main classifications just presented. The first area concerns studies that use new theoretical approaches or methodological applications on "traditional" data coming from surveys, for example, to assess the impact of cultural consumption on recycling habits, energy-saving, or organic food consumption. A second area includes those research works that address "known" issues using experimental data. For example, Nesta foundation created an innovative mapping of the Nesta video games sector by combing the use of official statistical statistics, data from the web, and online job advertisements to identify the highly demanded or required skills in the culture and creative sectors. A third area - perhaps the most experimental one - intends to explore new sources of big data from administrative registers, web, and social media, or other datasets, in order to understand new directions and paths of contemporary CCI.

There are several interesting attempts to use new data and methodologies to understand the value and multiple impacts of cultural and creative sectors. It is necessary to continue along this path because the data could be more appropriate if detected where the phenomena of interest "occurs" in daily reality.

An attempt to bring together different methodologies, considering traditional and innovative aspects, has been made in the study “Io sono cultura” (Symbola, 2018). The study analyses the cultural and creative productive system as the set of productive activities that contribute to generating economic value and employment which are partly related to the cultural and creative sector ‘stricto sensu (**Core culture**)’ and partly to activities that, although not being part of the supply chain, use content and cultural skills to increase the value of their products (**Creative-Driven**). The approach used is close to a new idea of culture, more modern and international, which goes beyond the old conceptualization that focuses only on the conservation and enhancement of the historical and artistic heritage and adds supply chains oriented to the creation and production of cultural content. To this new “cultural” conceptualization, the Creative Driven dimension is added, finding economic activities not belonging to the Core Cultural, but directed to embed culture into innovative processes.

The study identified a classification by incorporating and revising international literature and finding a unique system that allows homogeneous comparisons between countries. In this way, it is possible to trace more clearly the distinctive features of our cultural system. The definition is made possible by using the ‘Istat’ (Italian National Statistical Institute) classification of economic sectors (which incorporates and refines the European Nace) that codified 44 classes of economic activities as the "core" of the Cultural and Creative Production System, in a very clear, understandable, and comparable way.

The component related to Creative Driven, on the other hand, follows another innovative approach. Creative Driven industry, i.e. the presence of cultural and creative processes in different industries - such as manufacturing - can be estimated thanks to the intersection of the sector code with another criterion, related to the presence of cultural and creative professionals.

The intersection between sectors and professionals allows us to quantify the cultural contamination process described above, namely the number and the intensity of the companies that carry out cultural and creative functions outside the Core sectors and that, therefore, contribute to feeding the cultural and creative capital of the country. The methodological approach produces a series of estimates including, above all,

those of added value and employment. In this sense, the methodology proposes an excellent degree of applicability also to the aim of the COCO4CCI project to find intersectoral and crossing elements between the mapped dynamics of the typical Cultural and Creative Industry and the Advanced Manufacturing sector.

The inclusion of the second area is strategic because it allows a better understanding of the pervasiveness of cultural contents within the processes of wealth creation of the country, thus highlighting the interconnections between the cultural and the industrial and manufacturing specializations.

For these reasons, this last categorization supports the idea of cooperation, or at least, continuity between the CCI sector and Advanced Manufacturing sector.

	CONCEPTUALIZATION	
SYMBOLA **Io sono cultura, 2018**	**CORE CULTURE**	Activities of **preservation and enhancement of historical and artistic heritage** (museums, libraries, archives, monuments)
		Non-reproducible activities of cultural goods and services, defined as performing arts and visual arts, synthesized with everything that revolves around live shows (theatres, concerts, etc.).
		Activities related to the production of cultural goods and services according to the logic of industrial repeatability, defined as cultural industries (cinema, radio - TV; video games and software; automation, publishing and printing; music);
		Creative industries related to the world of services (advertising, communication, architecture and design, crafts,).
	CREATIVE DRIVEN	Activities that use cultural and creative content and skills to increase the value of their products. For ex. Fashion, Furniture, Agribusiness etc.

Table 3. CCI Conceptualization, Symbola

Symbola's concept of CCI is considered as the more appropriated to the goal of COCO4CCI programme to build a Cooperation Collider between CCI and Advanced Manufacturing Industries (AVM).

Symbola Creative-driven definition is: activities that use cultural and creative content and skills to increase the value of their products. This definition seems to perfectly fit into a new innovative understanding of CCI especially related to cooperation experience between CCI and Advanced Manufacturing.

For this reason, Symbola concept has also been in the framework used to build the mapping activity for CCI which lead to this "transnational report".

CHAPTER 1
CCI in Project Partners' countries: Trends and assets

According to the European Parliament's report on EU policy for cultural and creative industries (2016), Cultural and Creative Industries (CCIs) represent an extensive economic asset and a valuable source for European countries. Cultural and Creative Industries (CCIs) are central but underestimated tools for economic growth, representing 11.2% of all private enterprises and 7.5% of all employed people. CCI not only contributes to economic indicators but also for intangible value creation considering their capacity to build bridges between arts, culture, business, and, always more often, with technology.

Nevertheless, as the EU report tell us, CCI holds even more potential which could not yet been exploited. In addition, Culture and Creative industries find themselves to face a moment of exponential acceleration of change, made of overwhelming challenges as digital transformation, persistent economic instability, and considerable changes in the regulatory European framework. With the continuous evolution of the cultural and creative sectors, there is an increased need to support the expansion and the skills development of professionals employed, as well as to opening new direction and opportunities through transversal innovation.

Within the six countries participating to the COCO4CCI project, we find a very interesting potential for the growth of the sector, particularly as the main project goal, establishing new partnerships and new market areas with Advanced Manufacturing Sector.

Each Country had the availability of a national or regional report about Culture and Creative Industries economic sector, in most cases, developed by the joint action of statistical institutes and governmental departments such as the Ministry of Cultural Heritage in Italy, Development Agency of the Ljubljana Urban Region, Slovak Innovation and Energy Agency, the Statistical Office in Kraków for Poland, Federal Ministry for Economic Affairs and Energy in Germany, and the KAT – Kreativwirtschaft, Creative Industry in Austria.

Due to the observation of the institutional sections in which the reports have been produced, we can see how the regional and national levels influence the way in which CCI is perceived, considered and implemented in national policies. Considering CCI as part of an economic or development sector, Innovation Agency or cultural heritage, gives it a precise position within a society.

We start by capitalising the existing mapping exactly with the aim of understanding the role CCI plays in the six countries of COCO4CCI with the goal of building a common concept that, without eliminating the differences, leads to developing an innovative conceptualization, through common patterns, that could characterize all of them for further project directions.

Table 4. Existing mapping capitalisation

Italy	Slovenia	Slovakia	Poland	Germany	Austria
					
Document: Io sono cultura **Organization:** -Union Camere - Symbola -Ministry of Cultural Heritage **Year:** 2018	**Document:** State of the Art of the CCI Sector in Ljubljana Urban Region **Organization:** Development Agency of the Ljubljana Urban Region **Year:** 2017	**Document:** Slovak Innovation and Energy Agency Report **Organization:** Slovak Innovation and Energy Agency **Year:** 2014	**Document:** Cultural and Creative Industries in 2014 - 2016 **Organization:** Statistical Office in Kraków **Years:** 2014-2016	**Document:** Report on Creative Industries / Trendbarometer Kreativwirtschaft **Organization:** State Ministry of Economics Baden-Württemberg / Stuttgart Media University **Year:** 2014	**Document:** Austrian Creative Industries Report **Organization:** KAT - Kreativwirtschaft Austria **Year:** 2016 and 2018
		Document: Slovak CCI Status and Potential Report **Organization:** CCI in Slovakia **Year:** 2014			
	Document: Statistical Analysis of the CCI Sector in Slovenia (working title) **Organization:** Centre for Creativity **Year:** 2020 (in progress)	**Document:** CCIs in Kosice, Slovakia **Organization:** CCI in Košice Slovak **Year:** 2018	**Document:** NACE Rev. 2 classification into cultural domains in the area of cultural and creative industries **Organization:** European Commission **Years:** 2014; 2015; 2016	**Document:** 2018 Cultural and Creative Industries Monitoring Report **Organization:** Federal Ministry for Economic Affairs and Energy **Year:** 2017	
	Document: National Programme for Culture 2014-2017 **Organization:** Ministry of Culture of the Republic of Slovenia **Year:** 2013	**Document:** Possibilities of CCI development in Slovakia **Organization:** Innovation and Energy Agency **Year:** 2014			

Economic trends for CCI

Considering a margin of doubt of the reported data and the possible difference into the country coding with respect to which and how many types of industries are considered for the calculation of the economic value, we state that the supply of data from regional reports as satisfactory to understand and underline some relevant elements.

The economic value generated from the CCI sector in the total national economy is:

Italy (only core CCI): 92 billion Euro

Slovenia: 2,96 billion of Euro

Slovakia: 5,7 billion of Euro

Poland: 10,48 billion of Euro

Germany: 15,86 billion of Euro

Austria: 22 billion of Euro

It is interesting to underline that even if there seem to be a large difference in the value created by the CCI sector of 6 countries, they decrease substantially when reported to the "relative value" data, referred to the weight of CCI within each total economy.

Chart 1. Added Value (in Euro)

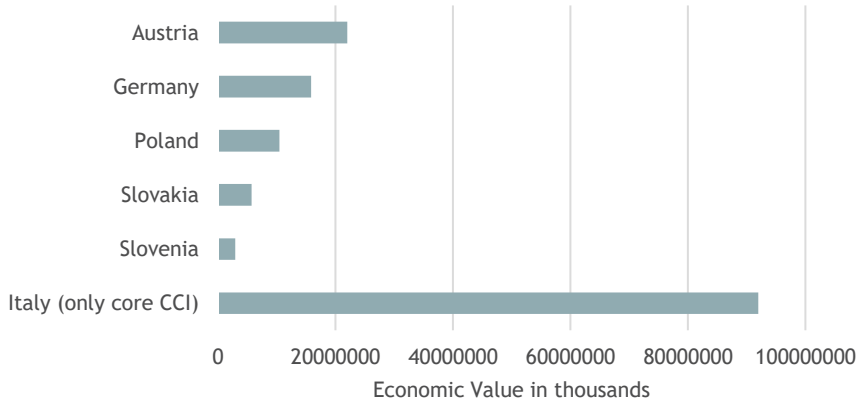
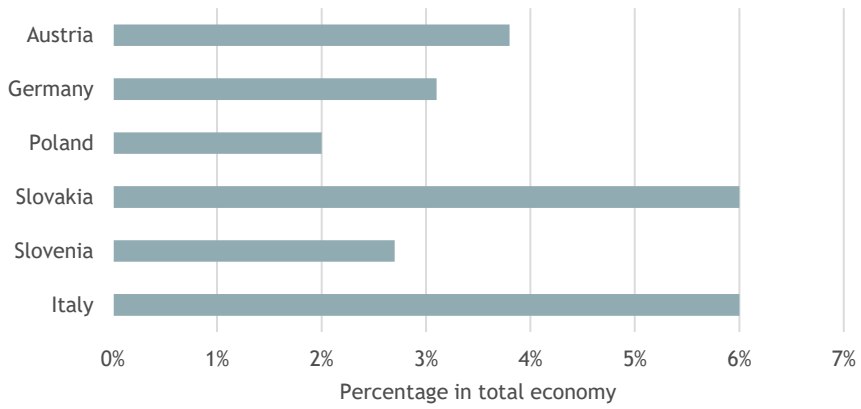
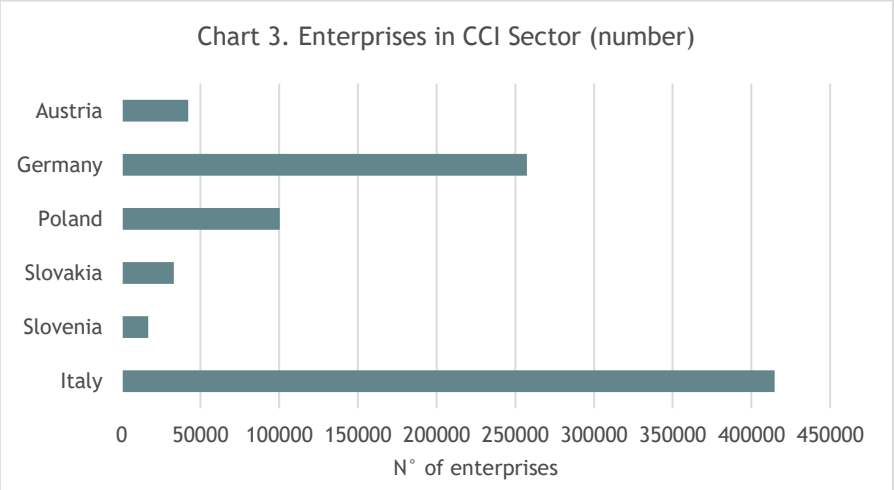
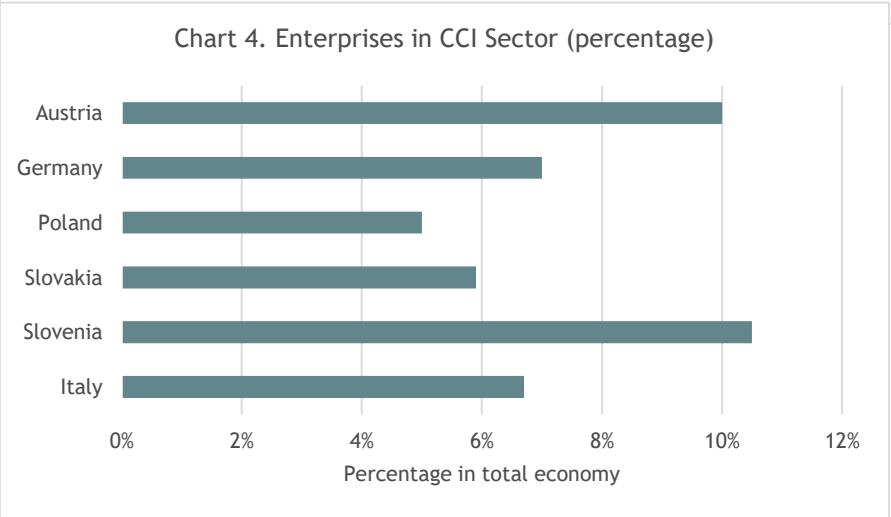


Chart 2. Added Value (percentage)



Enterprises in CCI Sector





The same reflection made for economic value is related to the total of enterprises representing Creative and Cultural Industries within the different formal codes and statistical programmes for each region/country.

The total of CCI is distributed:

Italy (only core CCI): 414.701

Slovenia: 24.062

Slovakia: 33.123

Poland: 100.500

Germany: 257.457

Austria: 42.284

Even if in absolute numbers the primacy is represented by Italy, followed immediately by Germany, when we relativize data within the total n° of enterprises in the country, the situation is less fragmented: all countries has a representativity of CCI business from 6 to 11% (exception made for Poland).

Employees in CCI Sector

From a transnational perspective, also the number of employees in CCI sector has to be observed within the specificity between absolute and relative numbers.

The total number of workers at CCI are following:

Italy (only core CCI): 1.500.000

Slovenia: 36.000

Slovakia: 61.677

Poland: 226.700

Germany: 1.675.287

Austria: 153.000

The primacy in the total number of workers, in this case, is maintained by Germany. Still, as we perceive in relative numbers of the total of workers, almost all regions are positioning between 3-4%, except Italy which surpasses 6%.

Chart 5. Employees in CCI Sector (number)

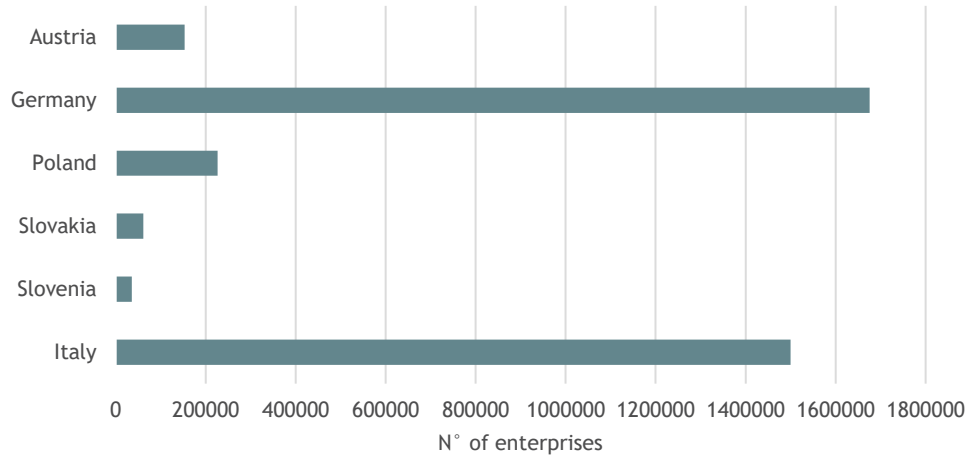
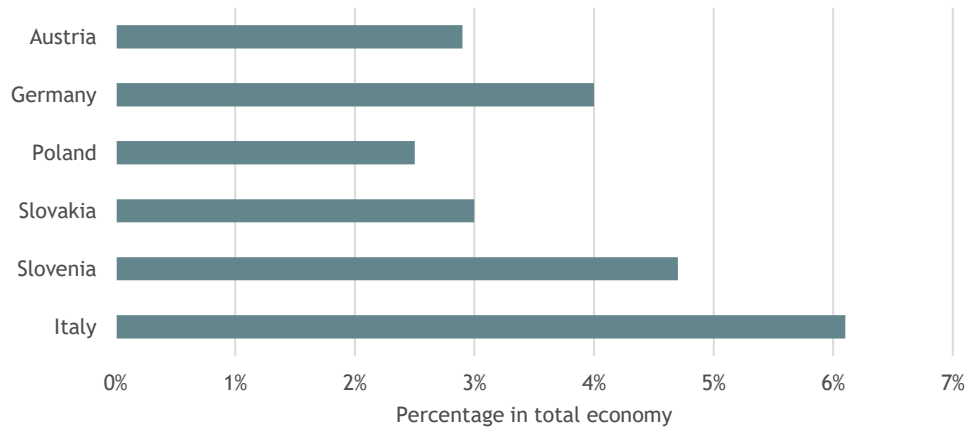


Chart 6. Employees in CCI Sector (percentage)



The final transnational overview of the main economic data related to the CCI in Italy, Slovenia, Slovakia, Poland, Germany, and Austria indicates that this sector has an important role within the national economies. However, much more potential could still be unexpressed.

The economic value of the CCI in terms of the total GDP among the six partners' national economies is 5%, which is perfectly aligned with the European average i.e. 5.3%, as reported by European Parliament's report on EU policy for cultural and creative industries (2016).

The total number of companies classified as CCI in the six partners' national formal codes is 864.564, which represents the 7,6% of total enterprises. Regarding this data, we observe that the average is considerably lower than the European average, which is 11.2%.

The same consideration is related to the total number of employees working in the CCI, 3.632.714 of people, representing 3,6% of the total of employees within the 6 countries, in contrast to the avarege of 7.5% in the European Union.

As it will be presented later, in some projects partners' countries, the CCI sector is facing an annual important growth process revealing new CCI trends and potentials.

However, considering the data emerged by existing mapping in PP countries, it is noteworthy to observe that although the number of companies and workers in the CCI in PP countries represent almost half of the European average, the economic value created falls within the same European average of 5%. This could mean that the value created per company and per person in CCI of PP is stronger and more relevant than the European average.

Economic Value CCI

In total partners' GDP

5%

Total Number of companies in CCI in partners' countries:

864.564

Total Number of employees in CCI in partners' countries:

3.632.714

European average for number of CCI enterprises within the total number of enterprises

11,2%

6 Project Partner countries average for number of CCI enterprises within the total number of enterprises

7,6%

European average for CCI value creation:

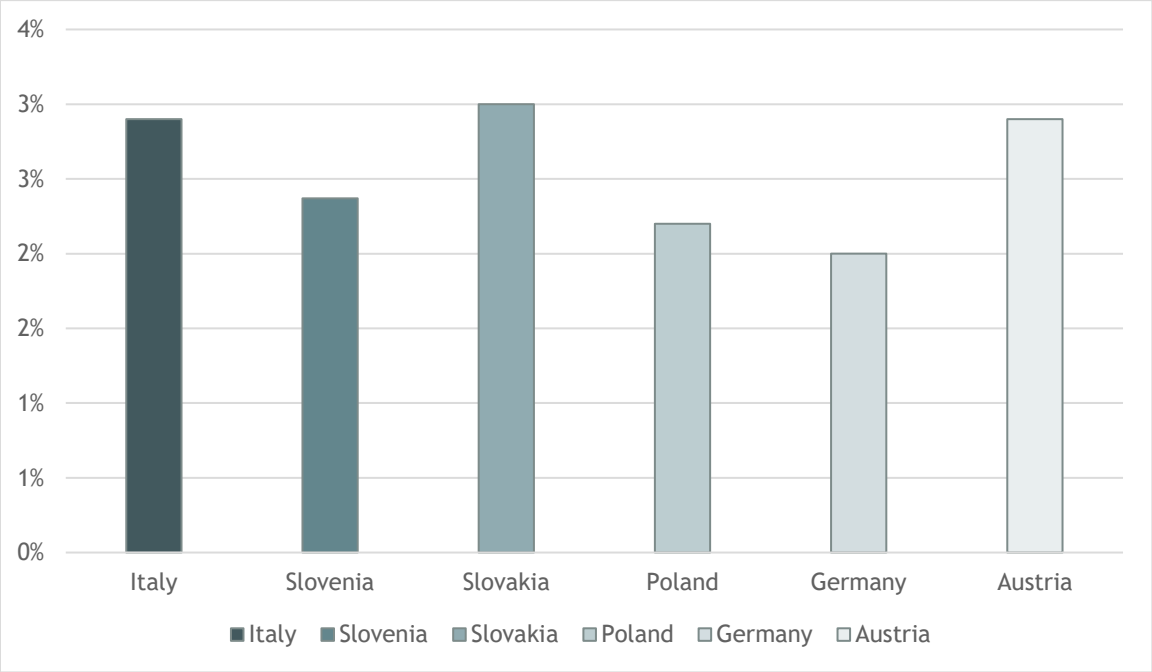
5,3 %

6 Project Partner countries average for CCI value creation:

5 %

CCI GROWTH RATES

Chart 7. CCI value increase



Due to the different data available from different national or regional mapping we compared the value increase of CCI within the project partners' countries, intended as total revenue increase, gross value, or added value. The aim is to have a comparable overview about the increase of the CCI sector in the last few years.

Austrian Creative Idustries' turnover from 2013 to 2017 increased from 21,369 million to 22 million, with an increase rate of 2,9%. Da dato turnover 2013 (report) 21.360 mil

In Italy from 2016 to 2017 the increase has been of 2% of added value and from 2017 to 2018 of 2,9%.

In Germany from 2016 to 2017 the increase has been of 2% of more gross value of CCI.

In Slovenia, the average increase in CCI turnover from 2010 to 2018 has been of 2,37%

In Slovakia CCI is a very dynamic sector. The turnover increase per year has been: 2014 + 6%; 2015 +57%; 2016 -18%; 2017 + 3%.

In Poland the added value and total revenue increase for CCI micro enterprises has been of 4% from 2014 to 2016 and +2.2% from 2015 to 2016. For small and large enterprises instead a little decrease has been observed.

The most relevant sub-sectors of CCI

Chart 8. Italy - subsectors

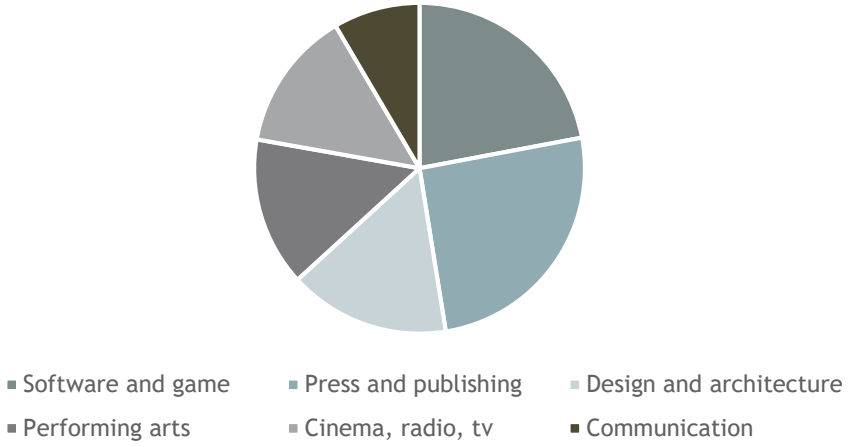


Chart 9. Slovenia - subsectors

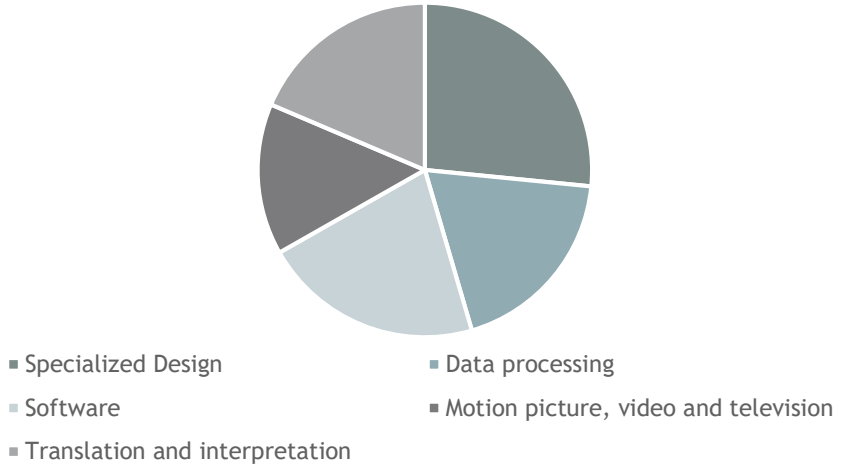


Chart 10. Slovakia - subsectors

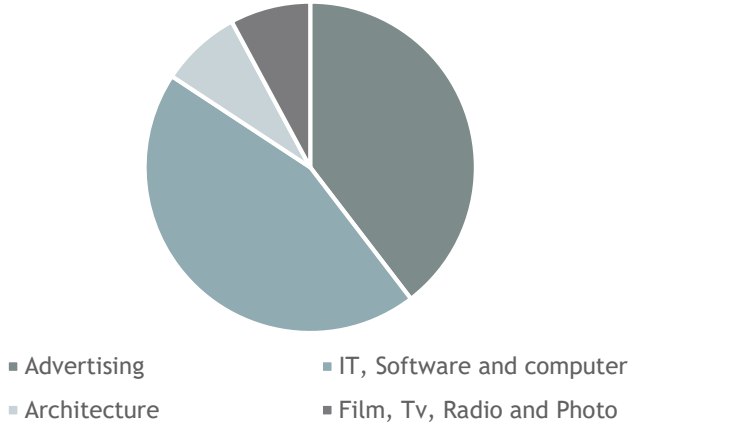


Chart 11. Poland - subsectors

Book and Press
Advertising
Architecture
Visual arts
Audiovisual and multimedia

Chart 12. Germany - subsectors

Design
Press
Software and games
Advertising
Book
Architecture
Music

Chart 13. Austria - subsectors

Books and Publishing
Advertising
Software and games
Market for performing arts

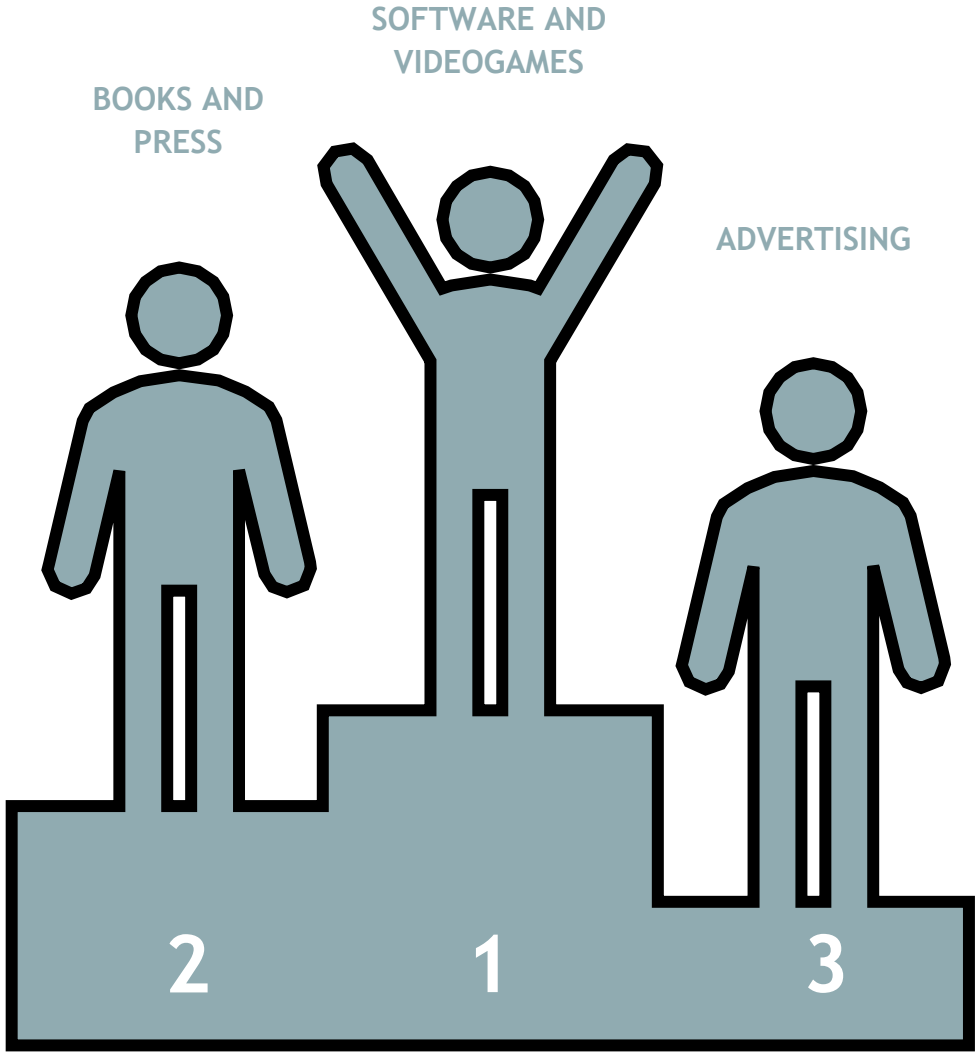


Figure 3. Project parnters' most important subsectors

The most important sub-sectors in CCI within the 6 partners' countries are:

- Software and Video Games industries have the most important value in Austria, Germania and Slovakia and it is the second most important in Italy and Slovenia.
- Books and press is the most important sub-sector in Italy and Poland, the second in Germany and the third in Austria.
- Advertising is the second most valuable sub-sector in Austria, Slovakia and Poland and the third in Germany .
- Design is a big value in Slovenia and in Italy (3rd place).
- Architecture is a valuable sub-sector in Slovakia and Polonia (3rd place).

STRATEGIC AREAS

It is interesting to observe the relationship between the data emerged from the existing mapping on the current most important sub-sectors (per revenue, gross value, or added value increase) with the perception of CCI stakeholders interviewees about the most relevant and strategic areas in their countries.

The interviews made during the mapping process, also bring elements about the specificity of CCI strategical areas, intending strategical as:

- The main cultural area which have high levels of significance within the specific context

- The main market area which represents potentials of growth and cultural significance within the specific context.

By definition, therefore, the information collected are in this case the most culturally and contextually determined: each country, but also each region, own its proper stronger cultural areas depending on their own history, traditions, migratory processes and so on.

Nevertheless, we found some common elements between the 6 project partners which can be a good point for further reflections.

Italy, Poland, Germany and Slovakia shown a specific interest in CCI pertaining to the first area of the definition of CCI within the common concept build, which is ""**activities of preservation and enhancement of historical and artistic heritage**." (See Tables below) By proposing respectively cultural and art heritage, museums and academy of art, theatre and ballet and fine arts as strategical area, they manifest a strong interest in consider the "most classic" definition of CCI as relevant, even within the processual and innovative transformation of the sector.

Italy, Slovenia, Germany and Austria agree in propose respectively **design**, architecture and industrial design as relevant area within the specific context. We will see in the next section why design has such key role in CCI transformation, within the dedicated paragraph.

It is stimulating and worthy of further study the selection of gaming as relevant cultural area in Slovenia and of **marketing and advertising** for Slovakia.

Table 5. Strategic cultural areas					
Italy	Slovenia	Slovakia	Poland	Germany	Austria
Cultural heritage and art	Architecture & Design	Cultural heritage	Academy of Art	Industrial design	Industrial design
Food and agrifood	Gaming	Gastronomy	Museum	Theatre and ballet	Fine arts
Handcraft and Made in Italy design	Cultural tourism	Handcraft and folklore	Incubator of culture	Architecture & Design	

By observing the juxtaposistion between formal relevance of CCI sub-sector within the regional economy and the perception of CCI stakeholders about the most strategical area for CCI, we certainly perceive two elements:

1. the different codification about what is cultural and creative domain
2. the different perception about what is "strategic" in creative and cultural domain

This analysis may allow to start new reflections about the transformative concept of Cultural and Creative industries as a more fluid sector, less closed by definitive borders and more inclined to the transidisciplinary and trans-sectorial approach. Certainly, the formal codification is not enough to understand the real life and processual dynamics of CCI sector within economy, and this combination between data and perception also open up the road to the "creative-driven" category creation.

This reflection is deeped in the third chapter of this report, where the concept from the qualitative data collected and coded is broken down into semantic domains.

Chart 14. Italy

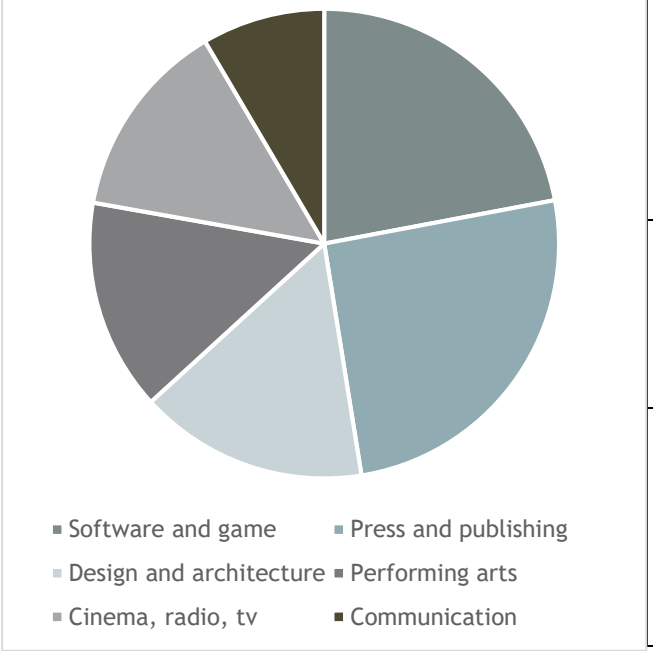
Formal data - relevance of CCI sub-sectors	Perception of CCI stakeholder
	**Cultural heritage and art** 
	Food and agrifood 
	Handcraft and Made in Italy design 

Chart 15. Slovenia

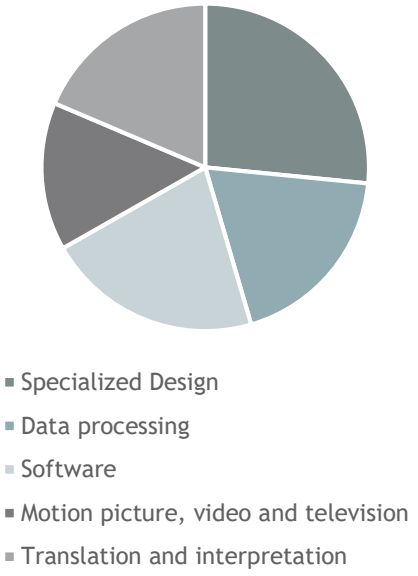
Formal data - relevance of CCI sub-sectors	Perception of CCI stakeholder
	**Architecture & Design** 
▪ Specialized Design ▪ Data processing ▪ Software ▪ Motion picture, video and television ▪ Translation and interpretation	**Gaming** 
	Cultural tourism 

Chart 16. Slovakia

Formal data - relevance of CCI sub-sectors	Perception of CCI stakeholder
	**Cultural Heritage** 
▪ Advertising ▪ IT, Software and computer ▪ Architecture ▪ Film, Tv, Radio and Photo	**Gastronomy** 
	Handcraft and folklore 

Chart 17. Poland

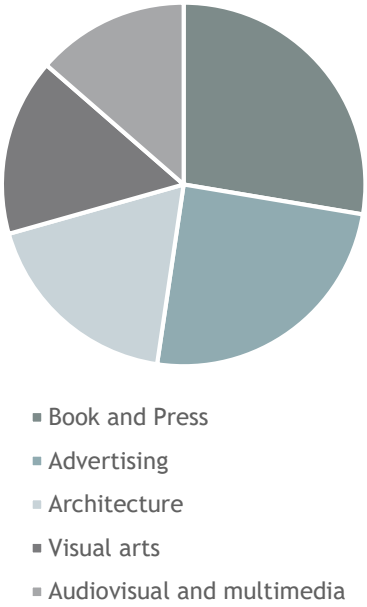
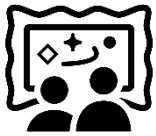
Formal data - relevance of CCI sub-sectors	Perception of CCI stakeholder
	A cademy of Art 
	Museum 
	Incubator of culture 

Chart 8. Germany

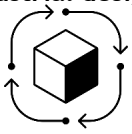
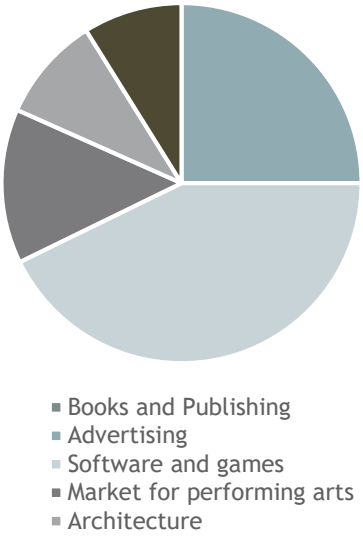
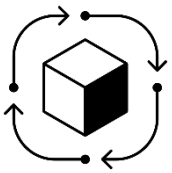
Formal data - relevance of CCI sub-sectors	Perception of CCI stakeholder
	Industrial design 
	Theatre and ballet 
	Architecture & Design 

Chart 19. Austria

Formal data - relevance of CCI sub-sectors	Perception of CCI stakeholder
	**Industrial design** 
	Fine arts 

In the (Figure 5) perception of stakeholders the most strategic areas for the cultural and creative sector of the 6 partner countries are:

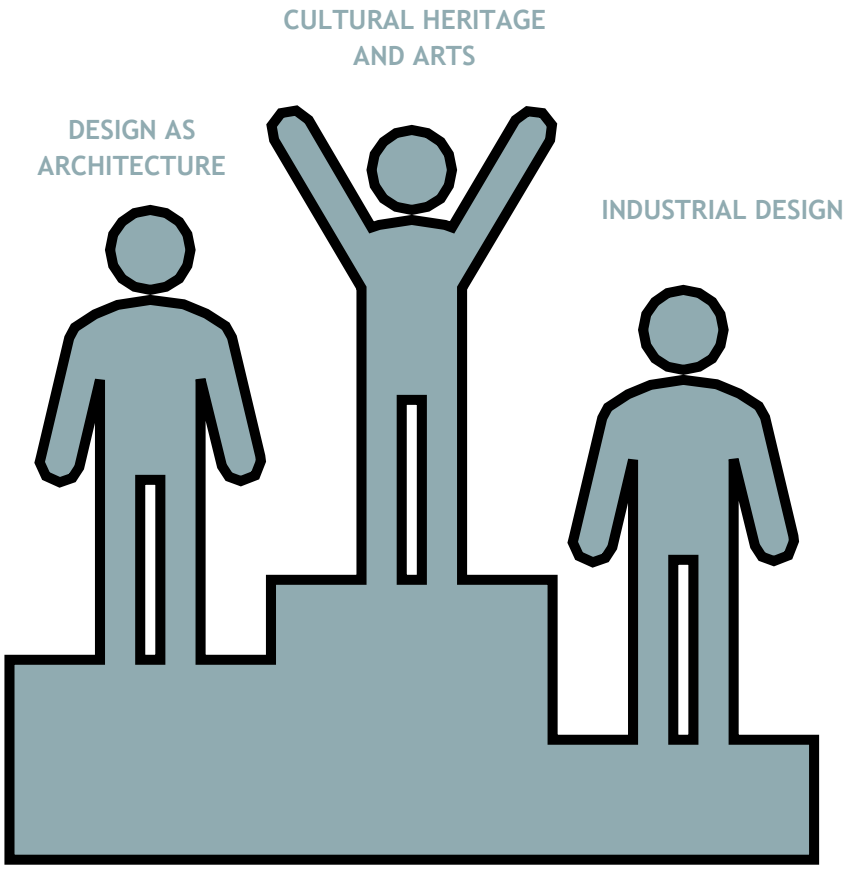


Chart 20. Growth rate of n° of enterprises

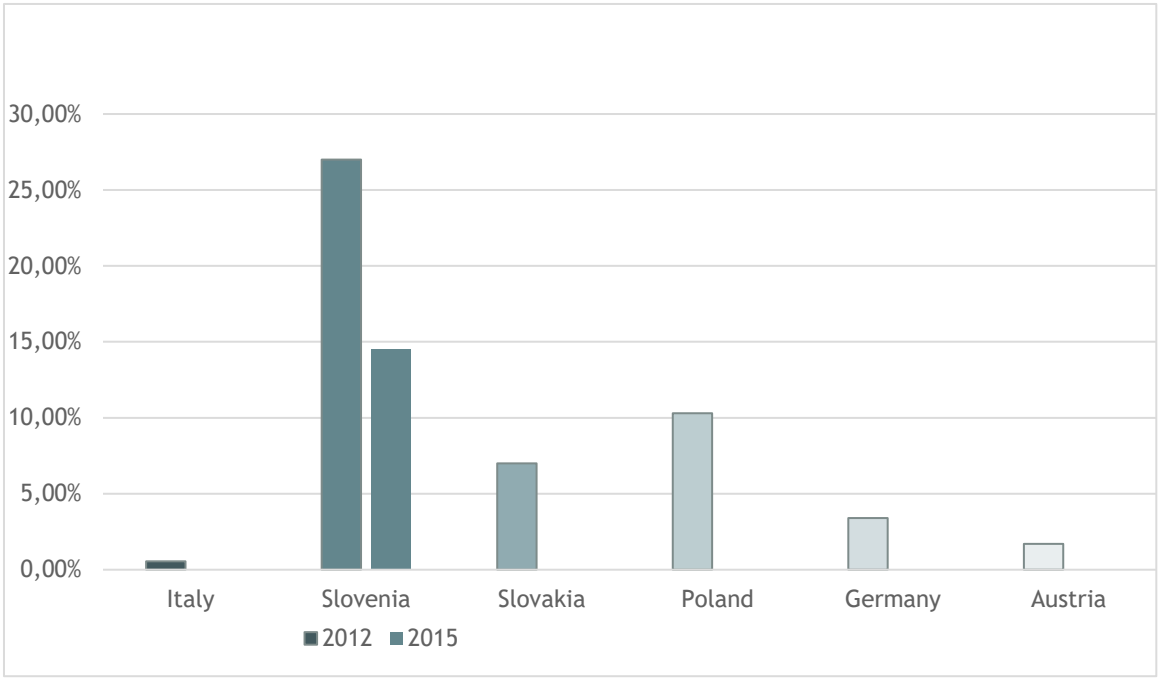


Chart 21. N° of enterprises

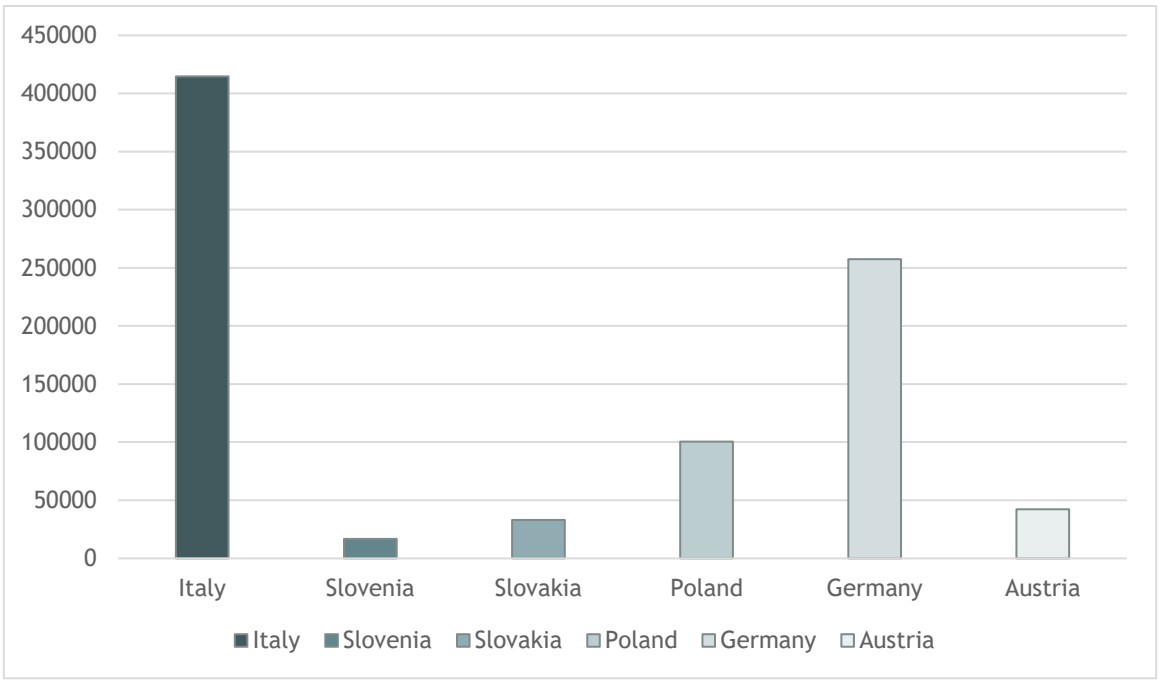


Chart 22. Growth rate of n° of workers

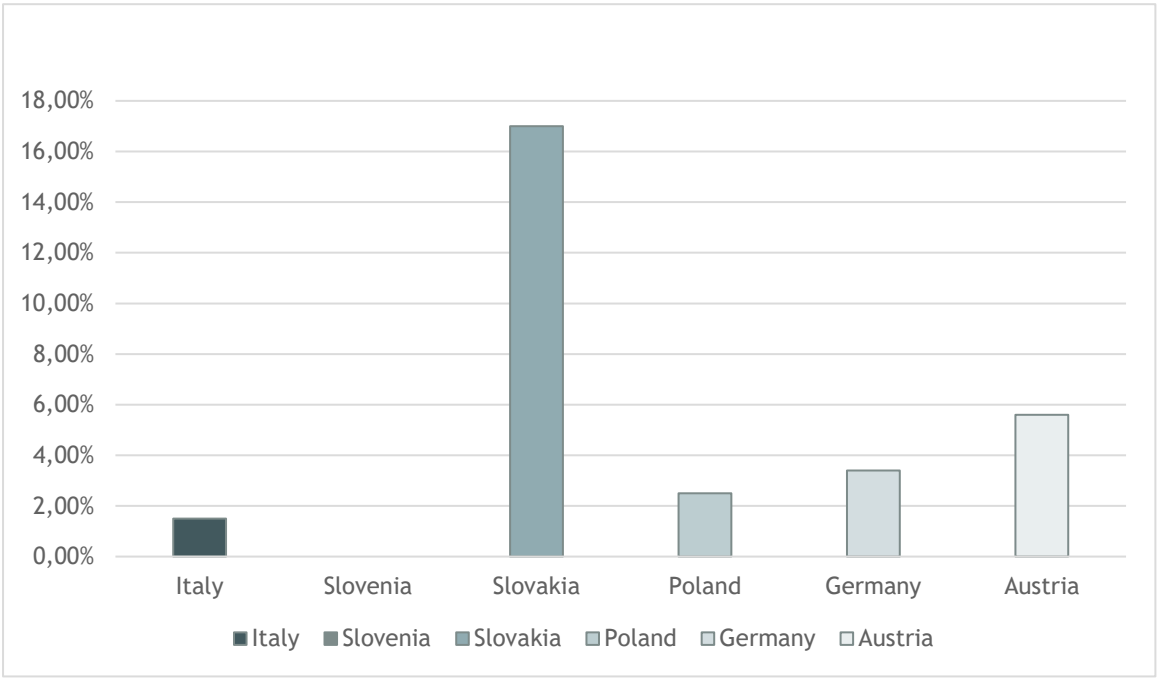
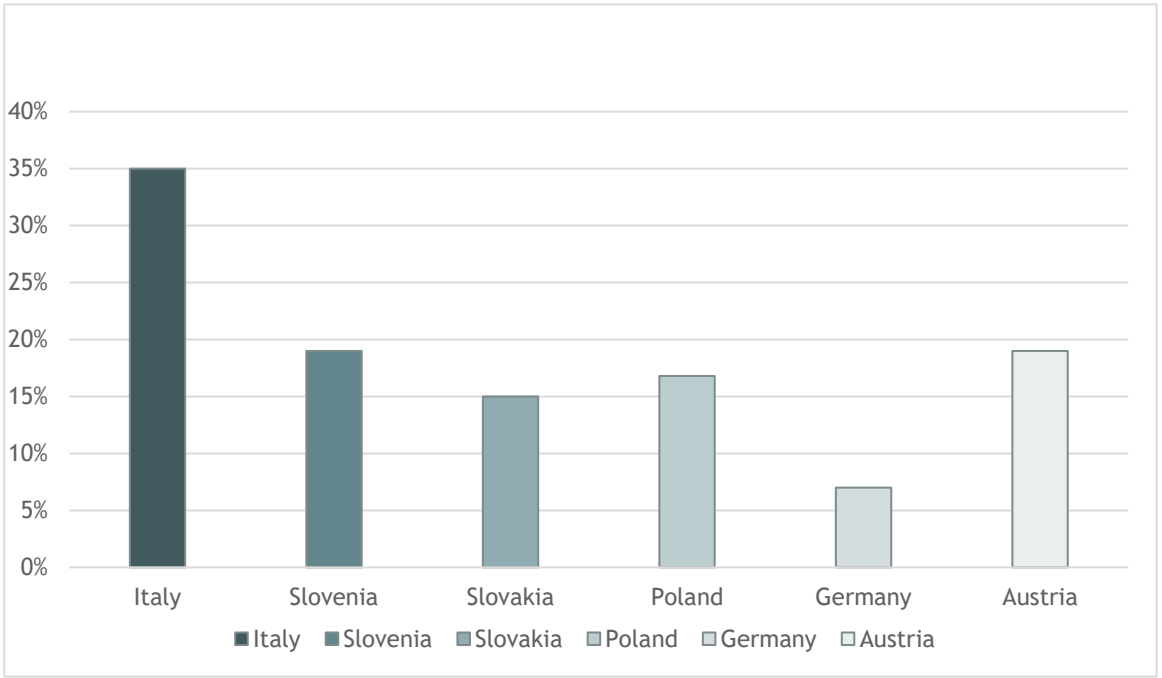


Chart 23. Export rate of CCI



SUMMARIZING CCI TRENDS

ITALY

In 2017 the Cultural and Creative Production System generated 6% of the wealth produced in Italy: over 92 billion euros, thanks to the use of 1.5 million people (6.1% of the total occupied). The sector has grown in terms of added value (+ 2.0%) and employed (+ 1.6%). The geographic areas where the turnover is greatest are those with a strong manufacturing vocation. Culture and creativity have a multiplying effect on the rest of the economy: the entire production chain produces 255.5 billion (16.6% of national added value), with tourism as the first beneficiary. (Io sono cultura Report, Symbola, 2018)
Other key economic indicators/KPIs for Italian CCI are:
Increased employment rate: +48% is the increase in employment of medium-sized industrial companies that invest in creativity between 2016 and 2017 compared to 45% of companies that do not invest in creativity.
With regards to **young employment**, 21% of those employed in the Cultural and Creative production system are in the 25-34 age group, against 17% of peers in the rest of the economy.
Quality of employment: 42.0% of those employed in the Cultural and Creative Production System are graduated against 21.1% of the rest of the economy.
Turnover: The increase in turnover of medium-sized industrial companies that invest in creativity between 2016 and 2017 is 56%, against 49% of companies that do not invest in creativity;
Market innovation: Medium-sized industrial companies that invest in creativity state a product innovation increase by 41% against 32% of companies that do not invest in creativity.
Export: the increase in exports of medium-sized industrial companies that invest in creativity between 2016 and 2017, is 55%, against 43% of companies that do not invest in creativity;

SLOVENIA

The number of CCIs SMEs has significantly increased in LUR between 2009 and 2012 (from 3 634 to 4 624); however, in 2015, the number of CCIs SMEs slightly decreased again (to 4 110). Correspondingly, the shares of CCIs SMEs in all SMEs changed from 10.6% in 2009 to 11.4% in 2012 and 11.2% in 2015. At the national level, the share of CCIs enterprises in all SMEs constituted 8.3% in 2009, and 8.9% in 2015.
Increased employment rate: The number of persons employed in CCIs SMEs has been decreasing since 2009; while looking at all SMEs, this number has slightly increased again between 2012 and 2015: 6 881 persons or 6.1% of the total number of employed in all SMEs (2009), 6 248 persons or 6.0% (2012) and 5 862 persons or 5.6% (2015).
Whereas, the share of CCIs employment in all Slovenia was smaller: 4.4% of the total employment in 2009, and 4.1% – in 2015; CCIs enterprises are generally smaller compared to other industries since the share of employed in CCIs SMEs is significantly smaller than the share in the number of CCIs SMEs. In 2015, SME in the CCIs sector employed an average of 1.4 persons;
Turnover: The total turnover in CCIs SMEs in LUR has been decreasing from 2009 (over 906.9 million EUR; 6.3% of the total turnover in all SMEs) to 2015 (856.6 million EUR; 5.3%), while total turnover in all SMEs has been significantly increasing in that period – from 14.3 billion (2009) EUR to over 16 billion EU).
Export: Like in all of Slovenia, CCIs SMEs in LUR are not very export-oriented. However, their exports have significantly increased between 2009 (3.6% of the total export in SMEs) and 2015 (4.0% of the total export in SMEs) and exceed the share of CCIs SME exports in Slovenia (2.6% of the total export in SMEs). Most of the CCIs SMEs aspire to become more international, however there are different drawbacks, such as lack of financing, and support for internationalisation. (Cre:hub report, 2018)

Germany

The number of companies in the cultural and creative industries (CCIs) has continually grown in Germany since 2009, with 16,000 new companies added over this period. In 2017, the number of companies in the CCIs has accounted for 7.7% of all companies in Germany and their GDP (Gross Domestic Product) amounted to an estimated €102.4 billion (an approximately 2% rise over 2016). The overall contribution of the sector to Germany's GDP is approximately 3.1%.

Other key economic indicators/KPIs for Germany's CCI are:

Increased employment rate: The total number of persons working in the CCIs in 2017 has risen to almost 1.7 million. In 2017, a total of 1,157,683 people worked as freelancers and self-employed persons or as dependent employees (includes both "core" and "marginal" workers). In 2017, the CCIs counted almost 38,000 core workers. Compared with 2009, the CCIs now counts more than 21% more core workers. The number of persons in marginal jobs i.e. a total of 517,604, is comparatively high compared to other sectors and the overall economy.

Revenue growth: The growth in revenue was around €158.8 billion in 2016. The revenue lies at an estimated €158.6 billion in 2017 – 0.1% below the record figure in 2016. Despite this slight decline, revenue from companies in the CCIs is at a very high level and is about 18% higher than in 2009.

Turnover growth: In 2017, around 2.6% of turnover was generated by CCIs in Germany. With an average annual growth rate of 5.1%, the software and games industry recorded the highest development in turnover from 2012 to 2017. Turnover also developed well in the broadcasting and music industries and in the performing arts and architecture markets, growing by over 4% in each.

Innovation growth: Average spending on innovation in 2015/2016 across the whole of the German CCIs was €5.6 billion. This amounts to 3.6% of total spending on innovation by German businesses. Over 70% of this innovation spending was accounted for by the software and games submarket (and more than 99% of this by the software industry). Significant spending on innovation is also made by the press market (7.7% of total CCI spending on innovation) and the broadcasting industry (5.8%). The other submarkets make only a small contribution to the total innovation spending by the German CCIs (film industry 3.2%, advertising market 3.2%, book market 2.7%, architecture market 2.5%, design industry 2.5%, music industry 1.9%). In comparison to 2012/2013 (€4.87 billion), spending on innovation in the CCIs has risen significantly (+15%). The software and games industry recorded the strongest absolute growth, at +€0.52 billion. The innovation intensity of the cultural and creative sector is lower than that of the industrial

sectors, but higher than that of most services sectors, except for the ICT service providers, where the innovation intensity is 5.7%, or a quarter as much again. Overall, the CCI sector attained an innovation intensity of 4.6%.

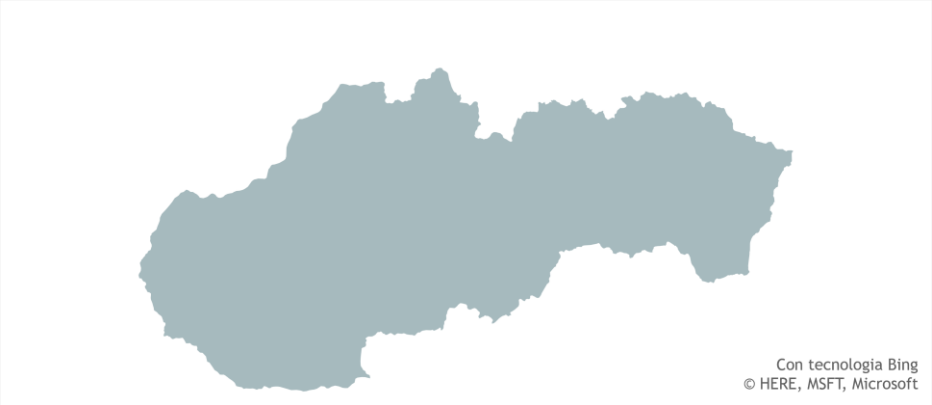
Increase in the number of companies: The number of companies in the cultural and creative industries rose by just 0.1% in 2017, while the number of companies across the economy as a whole grew by 0.7%. The number of cultural and creative businesses has grown by an average of 0.7% per year since 2012. A particularly large increase has been seen in the software and games industry, in which the annual growth rate is 4.1%. Development in the number of companies in the performing arts market (3.3%), the design industry (2.1%) and the film industry (0.8%) was also above average.

Gross value-added: Gross value added in the CCIs rose by 2.0% in 2017. In the economy as a whole, gross value added rose by 3.8%. From 2012 to 2017, gross value added increased by an average of 3.4% annually. The largest average growth of 7.3% was achieved in the software and games industry. However, positive development was also seen across this period in the architecture market (6.5%) and the music industry (5.0%).

POLAND

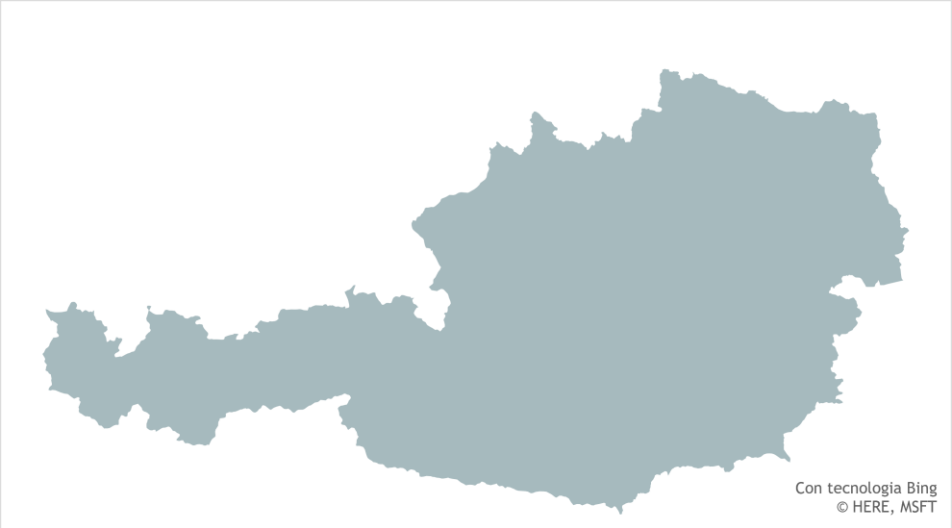
In 2016, there were 100.5 thousand enterprises in Poland belonging to the cultural and creative industries (CCIs), which constituted 5.0% of all non-financial enterprises. In comparison with 2014, their number increased by 10.3%. The most numerous fields in which CCIs were active include: Books and Press (25.4 thousand entities), Advertising (22.7 thousand) and Architecture (16.8 thousand).
Key economic indicators/KPIs for Poland's CCI are:
Increase in the number of employees/workers OR Increased employment rate: Enterprises belonging to CCIs employed 226.7 thousand people in 2016 (a 2.5% increase in comparison to 2014).
Revenue growth: From the years 2014–2016, total revenues exceeded the total amount of costs every year for enterprises belonging to the CCIs.
Turnover growth: The total trade balance of cultural and creative goods and services in the analysed period was consistently positive and increased from 3,576.0 million zl in 2014 to 5,052.8 million zl in 2016. Total revenues among CCIs according to the size of the enterprise are the following: microenterprises 36%, small enterprises 14.1%, medium enterprises 16.7%, and large enterprise 33.2%. In 2016, on the export side, the turnover of trade in cultural and creative goods was higher by 16.8% than the turnover of cultural and creative services. The highest values, both of exports and imports of cultural and creative goods and services, were recorded in the areas of Advertising, audio-visual Arts and Multimedia, and Books and Press (in total around 90.0%, both in exports and in imports).
Gross value-added: In the years 2014–2016, CCIs generated the value-added of approximately 21.8 billion zl on a yearly average. This represented approximately 2.0% of the value-added generated by all non-financial enterprises in the same period of time.

SLOVAKIA



In Slovakia, there are 33,123 enterprises in the cultural and creative industries.
Key economic indicators/KPIs for Slovakia's CCI are:
Increase in the number of employees OR Increased employment rate: The sector employs over 45 thousand people, representing about 4% of total employment in the Slovak Republic. Most companies operating in the CCI area are SMEs, micro-enterprises or people working as self-employed, representing 48.2% of the total number of employees compared to other sectors.
Revenue growth: Total revenues in the creative industries in 2011 increased close to the amount of 5.5 billion EUR, representing nearly 4% of all sales of the Slovak economy.
Turnover: In 2017, 3% of turnover was generated by the CCIs in Slovakia.
Increase in the number of companies: The number of companies in the CCIs rose by 7% in 2017. Majority of companies i.e. 10,357 belongs to the advertising and marketing sector. Next to the line was IT, software and computer services sector with 9,306 companies. 4,236 companies cover Film, TV, video, radio and photo sector, 3,586 Architecture, 2,744 publishing, 2,082 Music, stage and visual arts, whereas 812 Design and fashion design sector.
Gross value-added: Gross value added in the CCIs rose by 26% in 2017.
Export: The export of cultural goods 'by products' produced by CCIs generated €303 million in 2017.

AUSTRIA



In Austria, there are approx. 42,284 creative enterprises. The number of enterprises in the creative industries increased twice as fast in recent years as that in the overall economy. The economic performance (GDP) has risen from 3.5% to 3.8% in the creative industries in the last ten years.
Other key economic indicators/KPIs for Austria's CCI are:
Increase in the number of employees/workers OR Increased employment rate: The number of employees in Austrian CCIs is 108,759. 4.5% of all jobholders in Austria work in the creative industries.
Revenue growth: NA
Turnover: In Austria, CCIs generated an annual turnover of €22 bil – that corresponds to almost 4% of the whole Austrian economic output. The sector of software and games is the strongest, with a turnover of around €7 bil., followed by advertising with around €5 bil. The third strongest sector in the creative industries is books and publishing with almost €4 bil. turnover, closely followed by the market for performing arts (€3 bil.)
Market innovation OR Innovation growth: NA
Increase in the number of companies: The number of companies in the CCIs rose to 41,900. Out of the total, 5,850 belong to Architecture, 4,010 to books & publishing, 1,920 to Design, 9,030 to Advertisement, 3,870 to Film, 1,240 to Music, 80 to Radio & TV, 7,320 to Software & games, and 8,580 to Markets for performing arts.
Gross value-added: The gross value added of Austria's creative industries is 8,660 million euros. This equals 4% of the gross value added to the overall economy. The gross value added of the creative industries has increased by almost 25%, while the overall economy had a plus of only
8%.
Export: In comparison to other sectors such as the services sector (12.5 %), the Austrian creative industries are extremely strong exporters with an average export rate of 19 %. The annual volume of all products, goods and services produced by creative industries is approximately €21 bil. Every fifth Euro of this is generated abroad, which corresponds to around €4 bil (3 billion euros of exports to EU28 and one billion euros of export to international markets (extra EU28)). The sector of software and games provides the greatest exports in the creative industries with around €1.7 bil., followed by advertising with approximately €1 bil.

KEY FINDINGS

- CCI within the six partners' countries demonstrated economic robustness and competitiveness.
- Even if European average for number of CCI enterprises within the total number of enterprises is double with respect to the six project partners countries the value creation in Europe and the 6 PP is equal.
- The value of the sector, the number of companies and the number of workers have positive rates of increase in all 6 project partners.
- The export in CCI has a relevant role.
- Software and videogames, books and press and advertising are the strongest sectors in the 6 PP, from quantitative data.
- Cultural heritage and arts and design as architecture and as industrial design are the most strategic sector, from the perception of stakeholders.

FURTHER DETAILS

The value generated by the CCI also depends on professional profiles.

There are three types of workers that, according to the intersection of sectors and professions, flow into the supply-chains.

1. Professionals carrying out cultural and creative professions within companies acting directly in CCI supply-chain;
2. Support figures, who work alongside the professionals of the culture in performing tasks, always within companies acting in the Core Culture sector;
3. Some actors activate the process of cultural and creative contamination, that is, all those who perform tasks within the boundaries of cultural and creative professions, but in companies outside the Core perimeter of the culture

This differentiation is a key factor in CCI innovative change of framework and important to understand the future cooperation collider between CCI and AVM. This area is proposed here as a need for further research and information within the goals of COCO4CCI project.

CHAPTER 2
CCI: A common transformative concept

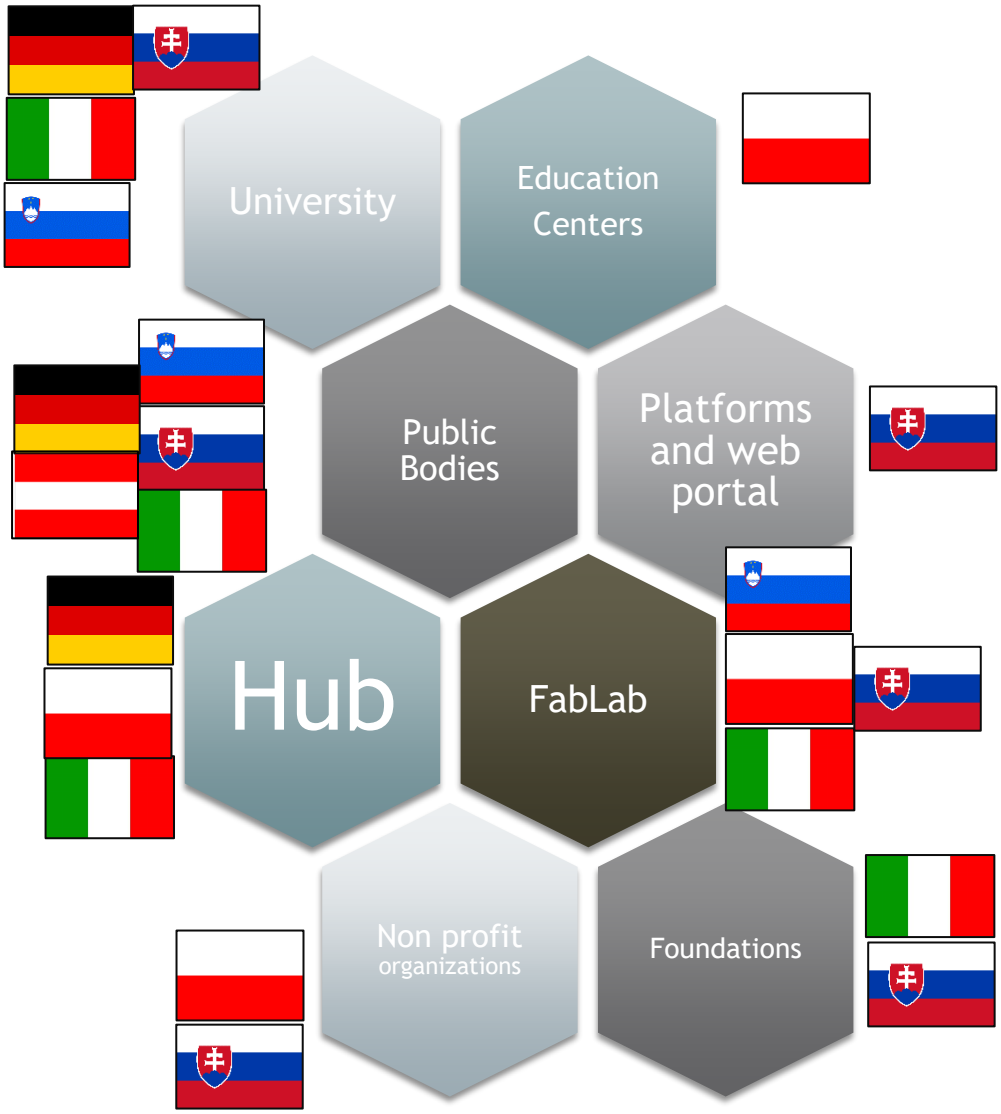


Figure 4. Main types of entities involved as CCI stakeholders by Project Partners'

WHAT IS CCI? FORMAL CODIFICATIONS COMPARED

The mapping activity included desk research about the codification of the CCI sector in each partner's region to build a common framework about the definition of core cultural economic activities, creative economic activities, and creative-driven economic activities. This step has been developed by searching for the main formal codification for CCI used in each region/country and making a match between that approach with the one proposed by Italian partner framework as a common guide from Symbola 2018 guide.
It is important to remark that each country uses a different framework to categorize Cultural and Creative Industries and that the policy choices give sometimes different importance to the domains defined here as "core culture" and "creative". For example, it is useful to specify that Austrian partners own an important amount of data and a great public policy effort[1] on the creative industry domain, while the "core culture" is considered as a differentiated sector.
Four areas make this common definition of Core Cultural sector:

Area#1 is perhaps the most "traditional" conceptualization of cultural domain defined as "activities of preservation and enhancement of historical and artistic heritage".
The mapping showed that it is possible to summarise the common activities in this sector among the six countries as:

- **Libraries and Archives**
- **Museums**
- **Historical sites and monuments managements**
- **Activities of botanical gardens, zoos, and natural reserves.**

Poland reported a more diversified panorama in historical and artistic heritage, including in this area the interesting class of activities related to books and press, which is also the most important in terms of the number of companies. In Italy, museums are the most numerous activities, but historical sites and monuments management are more relevant for number of employees and annual income. In Slovenia, libraries, museums, and historical sites are equally distributed in terms of the number of companies, but libraries represent the sector that has more employees. Slovakia gathers these area activities in a unique class named "operation of arts facilities". In Germany, it is interesting to observe that botanical gardens, zoos, and natural reserves are the most numerous activities and also with the most relevant turnover.

The **Area#2** in the international definition of CCI chosen, includes non-reproducible activities of cultural goods and services, as performing and visual arts. We can state a common codification among countries of this sector in the following groups of activities:

1 The first creative industries strategy for Austria was developed in 2016 in a co-creation process that lasted several months under the leadership of the Ministry of Economy (now Federal Ministry of Digitization and Business Location, BMDW) in collaboration with the Creative Industries Austria (KAT), the Austrian Federal Chamber of Economy (WKÖ) and Austria Wirtschaftsservice GmbH (aws). Review on the Austrian Creative industry Strategy

- Artistic representation or performing arts
- Artistic creation
- Support activities in performing arts
(logistics, stage designers, make-up artists, etc.)
- Management of artistic structures as theatres and concerts spaces

An interesting data in Slovenia is the reporting of amusements and theme parks as a category of performing arts activities. The country also shows an important number of companies within this sector, and above all, an important number of employees related to the group of performing arts, compared to the others of this sector, which is a factor in common with the Italian context.
Poland again reported a diversified domain, including photographic art and specialized design activities. Germany, in Area#2, also demonstrates an interesting economic activity class about cultural education.

Area#3 includes activities related to the production of cultural goods according to logic industrial repeatability, defined usually as cultural industries.
This is the area where all countries presented a very similar structure, probably due to the mass production domain of this sector. The groups of activities commons are OR The groups of common activities are:

- Movies, video and tv production activities
- Tv and radio broadcasting
- Publishing activities of books and journals
- Software and videogames publishing

According to the available data from all countries, the most important sector in terms of n° of companies, employees, and income is software and videogames. This sector also has the high percentage of annual increase in n° of companies, which indicates that a significant change is taking place in this sector.

Area #4 is the core cultural sector that defines creative industry as the world of services related creativity as input, process element or output of the economic activity.
This area also consists of a very similar structure among countries. The following sub-sector activities were reported in each partner's region:

- Architecture and related activities
- Advertising and communication
- Design services
- Photographic activities

Italy and Slovenia also reported the interesting inclusion of data processing and web portals activities as a category in itself and as an important sector in the number of companies and income compared to others in area#4, positioning itself in second place. In Italy, the most relevant category is represented by architecture, as in Poland, while in Slovenia, the most important category in the number of companies and income is advertising, as in Austria. In Germany, the design industry featured by a sub-sector of "industrial design activities", is the most relevant.

Area#5 is the most strategic in the mapping activity process. It represents an attempt to define creative-driven industries, which is also the most probable domain to define the "cooperation collider" elements between CCI and Advanced Manufacturing Industries in the intuition of the project.
Creative driven are economic activities that use cultural and creative content and skills to increase the value of their products.

The most accepted categories related to this definition are, for example, fashion, furniture, agribusiness, and tourism. In our understanding, this definition could be re-designed and re-built by introducing new innovative and contemporary economic dynamic that not only characterize AVM but also its cultural and creative processes.
For this reason, the first attempt to redefine Area#5 classification has been made by mapping (where available) the presence of CCI typical professional in manufacturing industries. **Only Italy, Slovenia, and Germany could access this data in a public statistical institution, showing respectively designers, architects, and product designers as the most numerous professionals working in non-CCI companies**.
This classification will serve as a source to deepen the understanding of contemporary CCI and to build a creative-driven definition in cooperation collider conceptualization.

Table 6. CCI Classification - AREA # 1 Activities of preservation and enhancement of historical and artistic heritage					
Italy 	**Slovenia** 	**Slovakia** 	**Poland** 	**Germany** 	**Austria** 
Libraries and archives	Library and archives activities	Operation of arts facilities	Library and archives activities	Libraries and archives	Library and archives activities
Management of historical sites and monuments	Operation of historical sites and buildings and similar visitor attractions		Operation of historical sites and buildings and similar visitor attractions	Operation of historical sites and buildings and similar visitor attractions	Operation of historical sites and buildings and similar visitor attractions
Museums	Museums activities		Museums activities		Museums activities
			Retail sale of books in specialised stores		
Activities of botanical gardens, zoos and nature reserves	Botanical and zoological gardens and nature reserves activities*		Retail sale of newspapers and stationery	Zoological gardens and nature reserves	Botanical and zoological gardens and nature reserves activities
			Book publishing		
			Newspapers publishing		
			Journals and periodicals publishing		
			News agency activities		
			Translation and interpretation activities		

Table 7. CCI Classification - AREA # 2
Non-reproducible activities of cultural goods and services, as Performing and visual arts

Italy	Slovenia	Slovakia	Poland	Germany	Austria
Artistic representations	Performing arts	Music, stage and visual arts (Sound recording and music publishing activities, Cultural education, Performing arts, Support activities to performing arts, Artistic creation)	Manufacture of musical instruments	Theatre ensembles, own-account-performers and circus groups	Market for performing arts
Support activities for artistic representations	Support activities to performing arts		Performing arts activities	Support activities to performing arts	
Artistic and literary creations	Artistic creation		Support activities to performing arts	Own-account stage/motion picture/radio and TV artists	
Management of artistic structures (theatres, musical concerts, etc.)	Operation of arts facilities		Operation of arts facilities	Organisation of theatre performances and concerts	
	Activities of amusement parks and theme parks		Specialised design activities	Private operation of opera houses/theatre and concert halls	
			Photographic activities	Cultural education	
			Artistic creation activities		

Table 8. CCI Classification - AREA # 3

Activities related to the production of cultural goods according to a logic industrial repeatability, as cultural industries

Italy	Slovenia	Slovakia	Poland	Germany	Austria
Movies, videos, tv programs, music and sound recording and production activities.	Motion picture, video and television programme and music publishing activities	Film, TV, video, radio and photo	Motion picture, video and television programme production activities; post-activities and distribution	Film industry: video and TV programme production/postproduction/distribution, projection	Film industry
Radio and television programming and transmission activities	Programming and broadcasting activities		Sound recording and music publishing activities	Book market: publishing, retail, writers	Radio and tv
			Radio broadcasting	Press market	
Edition of books, periodicals, software and other publishing activities	Publishing of books, periodicals and other publishing activities	IT, software and computer services		Music market: manufacture of instruments, recording, publishing, retail, support, composers	Software and games
	Retail sale of books in specialised stores				
Video games and toys production activities	Computer programming activities	Publishing activities	Publishing of computer games	Broadcasting industry: radio, tv broadcasting.	Publishing and printing
Production of software not connected to the edition	Software publishing			Software and games industry	Music
	Retail sale of newspapers and stationery in specialised stores				

Table 9. CCI Classification - AREA # 4
Creative industries related to the world of services

Italy	Slovenia	Slovakia	Poland	Germany	Austria
Data processing, hosting and related activities, web portals	Data processing, hosting and related activities; web portals			Design industry: Manufacture of jewellery	
	Other information service activities				
Public relations and communication	Translation and interpretation activities		Out-of- school forms of cultural education		
	Cultural education				
Architectural and engineering activities	Architectural and engineering activities	Architecture	Architectural activities	Architecture market	Architecture
Advertising agencies	Advertising and market research	Advertising and marketing	Advertising agencies activities	Advertising agencies	Advertising and communication
Specialized design activities	Specialised design activities	Design and fashion design		Industrial product and fashion designers, graphics and communications designers..	Design
Photographic activities	Photographic activities			Photographers	
	Organisation of conventions			Retail sale of art/antiques; own account visual artists; museum activities.	

Table 10. CCI Classification - AREA # 5

Creative Driven: defined by the presence of CCI professionals in non Cultural and Creative industries

Italy 	Designers	13%	**Slovenia** 	Advertising and PR Managers	8%
	Architects	7%		IT and Communications Services Managers	6%
	Graphic designers	7%		Cultural managers	1%
	Photographers	6%		Building Architects	3%
	Event organizers	5%		Landscape Architects	2%
	Communicators	5%		Product Designers	36%
	Videomakers	3%		Graphic Designers	21%
	Artists	3%		Advertising and Marketing Professionals	18%
	Author, writers, storytellers	2%		Public Relations Professionals	6%
	Video Producers	2%		Software Developers	11%
	Musicians	1%		Database Professionals	15%
	Actors, performers	1%		Librarians	1%
				Journalists	2%
				Translators, Interpreters	3%
				Visual Artists	2%
				Creative and Performing Artists	2%
				Photographers	3%
				Interior Designers	7%
				Gallery, Museum Technicians	4%
				Chefs	2%
				Other Artistic and Cultural Professionals	1%
Germany 	Industrial product and fashion designers	9.924			
	Composers	3.205			
	Video producers	33.065			
	Authors, writers, storytellers	8.943			
	Photographers	20.097			
	Graphic designers	22.167			
	Architects	127.411			

What is CCI? A transformational meaning

"CCI is a fluid sector that must fit very well with the needs of the moment, of the territories, of the entities with which it relates."

Fifty-four qualitative interviews with CCI key stakeholders have been conducted to gain a deep insight into trends and assets in the cultural and creative sector.
The analysis and re-elaboration of these interviews together with the considerations of the various existing mappings, lead us to the conclusion that the CCI sector is changing considerably.
There is no univocal, clear, and concise definition of CCI. Instead, CCI is an open concept and a transformational meaning that strongly addressed all scenarios of global change - markets , technologies, ecosystem, internationalization, global vs. Local, and so on.
We report the trends through which this change is taking place, bringing together the words of the most important CCI stakeholders interviewees among the 6 pp countries and the reflections founded within the existing reports.
Two contextual elements i.e. culture and resilience, must be considered to better understand the CCI trends. CCI is closely related to "culture" meaning, and it is necessary to regard the concept of culture itself as a meaning that has seen, in the last few years, a great changing process.
Culture and the arts have traditionally been recognised, promoted, and preserved to their very intrinsic value, i.e., their status as a symbolic creation at the heart of humanity and resulting from the expression of its creativity. However, in the last decades, a complementary and interrelated approach increasingly recognised culture in new different ways.
Firstly, culture has been the subject of debate and diversification of increasingly transformative approaches by the most important institutions, like UNESCO, and its domination of the concept of cultural heritage. Resuming this approach, UNESCO states that a good or practice, to be considered cultural heritage, must be collectively recognized. UNESCO directs its policies to the manifestations, preservations, communications, collective consciences, the plurality of cultural processes that are importantly changing. Having a look and recording potential assets, the UNESCO convention urges the member states to take on an "idea of a culture with a powerful anthropological matrix, which values the diversity of knowledge and the plurality of their manifestations" (Bertolotti, Meazza 2011: 4).
This approach makes the culture to be considered no more a fantastic "tradition" by revitalizing obsolete and meaningless dynamics (even for those who preserve them) or supporting the idea of a museum by fixing cultural processes in time. But instead, looking at it as a human process that inextricably combines the historical-cultural dimension with the meaning that it assumes in the contemporary world, everyday life, and local steeped in the global. This new approach breaks the concept of culture as the objective practice of "traditional culture" and "authentic" resilience of past traditions, often translated in elitist conceptualizations, opening up to new revolutionary and inedited manifestations of cultural life.
It is important to know and share the process in which culture finds itself changing, to understand it in the light of the important processes that characterize the contemporary society (and market): globalization, the resilience of the local, digitalization, the exponential acceleration of change, etc.
The second important affirmation with respect to culture is the opening, more or less accepted, to its instrumental value, in particular to its contribution to the social and economic development of territories. The role of culture in urban development attracted the attention of scholars since the Eighties. They approached it from the point of view of creative industries which highlight the role of

firms as the generators of innovation and territorial development. Also the concept of 'creative class' was considered, focusing on creative people and professionals who responded to local factors in their urban environment to create transformative experiences.
Consequently, culture has increasingly been used and intended, especially in urban contexts, to achieve particular social and economic goals. This is because, cultural and creative expressions and products are deeply rooted in the territories where they have been created - echoing, incorporating and being inspired by local symbols, traditions, knowledge, materials, and practices – they become a crucial, powerful site-specific resource for territorial development.
Culture is not a solid and unanimous perspective. In some contexts, culture has been considered for a long time as related to a common heritage. As the UNESCO proposition of cultural heritage as human heritage, culture was not understandable or explicable within economic dynamics. It was positioned outside the market logic, and the monetization of culture was seen as an unethical approach. In this sense, understanding culture as having a key role in local development is a new and changing approach, which open up to new opportunities. Discovering the cultural richness of industries, handcraft, manufacturing production is an inedited and revolutionary understanding of the culture and creativity of humans.
As seen, the current context of international cultural relations is changing, making it more challenging for the EU to enhance its cultural policy on the world stage. However, CCI is perceived as a source of development by opening the cultural dialogue and exchanges with political, economic, and environmental challenges threatening societies.
This is also related to the relevant position of the resilience of a culture. Many scholars perceived for long-time globalization as the end of local cultures. This prediction has been denied by the objective emergence of new forms of organization of local cultures, in new and overwhelming ways. The open concept of CCI and its growing interest in local development is a good demonstration of cultural resilience, represented by the important datum, given by Eurostat and Report of the EU commission (2019), telling us that the most of CCI in EU countries between 2008 and 2016, experienced an overall positive growth (+4.3%). That is, during the terrible financial and economic crises, the European CCI have been demonstrating high levels of economic resilience and strong competitiveness, as well as, a high intrinsic capacity to innovate.
This is a further demonstration of the potentials and the strengths of CCI and the reason why, as we conclude by the mapping activity, it is a sector in a process of transformational meaning.

The CCI stakeholders' interviews collected by the project partners were systematized, summarized and then coded by the research team from Università Ca' Foscari Venezia. This coding activity revealed the dynamic and transformative meaning that cultural and creative industries are facing nowadays. The research process allowed to cluster four main issues (table 11) which represents the common trends of CCI stakeholders' answers to the question: "from the point of view of your institution, what is the meaning of Cultural and creative industries?".

The four categories are :

1) Input and skills determining CCI
2) The economic value of CCI
3) Digital innovation
4) Social innovation

From this clustering, in the next session of the chapter, the topics will be deepened in order to better understand the opening of the CCI concept to the new roadmaps of COCO4CCI project.

Table 11. MEANINGS OF CULTURAL AND CREATIVE INDUSTRIES				
Country	INPUT AND SKILLS 	ECONOMIC VALUE 	DIGITAL INNOVATION 	SOCIAL INNOVATION 
	Cre-ativity, it means “to clay”, a good material. The ability to create something new, an object, from artistic design. There is a new meaning of creativity: creative know-how also in manufacturing companies.	CCI companies tell stories, they develop a narration and all the aspects that go beyond the product itself, in order to add value to the industries and deliver it to the customers Every company is cultural good. CCI are able to develop cultural innovative processes and then productive /organizational processes with added value.	CCI is a classical issue, now transforming itself in a substantive way with digitalization. CCI is the union between art and technology. Art was not technical but poetic. Today, artist can be the engine for a new form of economy with AVM.	Cultural activities can help groups of people to better understand the time we are living through, but also our life and our world in general, our society.
	Creativity is the core business approach of CCI.	Creativity as the core business approach for CCI and for competing in the market.		CCIs are both socially aware and profit conscious.
	CCI is made by artistically sentient people. Group pf people who create together. CCI is made by professionals with technological and artistic skills. CCI is an interdisciplinary merge of know-how & solutions.	CCI bring the added value in the form of intellectual property, the result of the creative process is a project.	The culture can provide IT with meaning, while IT can provide culture a new dimension. All CCI have potential for digitalization and new formats which interconnect IT and culture	CCI create a wide-scale social impact through creative products and services.

	CCI refers to the ability to adapt to changes. The concept refers to unique solutions tailored to new needs.	Value is more than only price : Economic activities related to culture and creativity refer not only to its artistic value but also to finding purchaser and making sales.	CCI provide new services and value creation through something more than just technology as a tool.	Human is the crucial ingredient: This is the moment where humans expectations and needs are addressed and CCI with his experience and talent gives an answer to these needs. CCI refers to social and local concept concerning human habits and traditions.
	Creativity is the most important ability to respond to developments that have a high impact. CCI owns a freedom in terms of creative and cultural domain. Without prior definition of exact goals.	CCI means earning money with art, creativoty or culture. Cultural activities mostly claim to be non profit in some way. Creative industries themselves can also have massive economic potential.		CCI means also social entrepreneurship. Here, the economic potential is exploited while social problems are solved. The creative industries also catalyse and drive social innovation processes.
	CCi is made by Interdisciplinarity . CCI is creative thinking combined with bringing things on the ground.	CCI build the creative process to design something unique which is also transferred to the market; the business aspect makes the difference to the Art; In 2 words: CCI is uniqueness and profitability	CCI is changing in the field of digitalisation, because CCI is fast changing and young.	Sustainable thinking and circularity are cross-cutting themes in CCI.

TRENDS OF TRANSFORMATION

THE HUMAN SIDE OF INNOVATION

SKILLS & COMPETENCES

DIGITALIZING CCI

THE ECOSYSTEMIC APPROACH

SUSTAINABILITY

STRATEGIC CULTURAL AREAS

THE HUMAN SIDE OF INNOVATION

"Cultural and creative activities are related to the ability to transform art into a new innovative product."

"The primary output of cultural and creative activities is the development and implementation of new and innovative ideas and the design of products and services."

CCI means innovation. This sentence is the resume of many interviewees' answers to the main question on "what is the definition of Cultural and Creative Industries?
Innovation is one of the main trends in all market sectors. Scholars, entrepreneurs and institutions agree with the idea that the contemporary society is characterized by such relevant changes that fall on the market, making companies' ability to innovate and innovate themselves as a must-have and not only a decorative element.
Innovation is defined as "make changes in something established, especially by introducing new methods, ideas, or products". The three main assets which seem to push to innovation are recognized as:

- the change of perception and relationship with consumers, more and more prepared and aware of what they want to consume and how;
- the technological revolution, where digital tools are resetting all the classic production and consumption assets;
- the sustainability and the social impacts of business activities.

The three conceptualizations of innovation are also identified in the two big contemporary issues, more and more interrelated:

DIGITAL INNOVATION

SOCIAL INNOVATION

These patterns of innovation are related to the ability of businesses in understanding and positioning themselves in the market, in implement digital tools, in changing the production process by green and circular economy logic or by focusing in social needs.
Innovation is an economic and social phenomenon. It involves the community, calls for investments, infrastructures, and dedicated policies. It has a very strong design component that can be planned and it is the result of a specific business strategy.
Therefore, innovation is rarely just related to the right implementation of techniques or technical tools. The most important innovation has always been linked to the "innovation of meaning", that is the ability to interpret an object, a process or a relationship in a new way, suggesting new meanings, models, and new uses compared to those traditionally attributed. In this area, the cultural and creative industry, is protagonist.

> *"The primary output of cultural and creative activities is the development and implementation of new ideas and the design of products and services. The actors in CCI also catalyse meaningful and social-driven innovation processes."*

In this sense CCI, working by producing cultural and creative products or using cultural and creative processes, contain within them all the skills, competences, methodologies, and techniques to build innovation processes of meanings that automatically affect products, processes, market positioning, relationships with consumers, territories, and the environment.
The innovative ability proposed by CCI is not only made of skills, techniques or technical tools.
The most important innovation process has always concerned the ability to understand the human side of change: giving new meanings, symbols, stories and values, answering also to question as - what innovation means for humans? How humans can build positive and good changes for societies? What is the potential of human creativity to build new imaginaries for the future of humankind?
These are questions that nor techniques or technological tools can answer. Even artificial intelligence, or IoT tools, which are promising to change forever the way humans work, cannot respond to creative, moral, and social meaning of the changing societies. This is something only people can manage, and Cultural and Creative Industries, by managing directly and deeply cultural, human and creative processes represent this important face of the medal of innovation. A stakeholder interviewee declares clearly the relevance of CCI as the human-side of innovation:

> *"In CCI, human is the crucial ingredient: it is part of the culture, and everything that happens outside of nature happens in the area of culture.*
> *This is the moment where expectations and needs are addressed to humanity, and only humans with experience and talent can give an answer to these needs."*

SKILLS & COMPETENCES

Some interviewees made statements regarding the nature of the skills and competences of CCI professionals. They stated about the existence of two main issues in typical creative and cultural skills. First, the potential expressed by the typical sector's skills in facing innovation and new applications, due to its openness and flexibility. Second, the need to extend and create a new encounter with the creative application, for example, in technological matter or manufacturing approach.
The first point of view expresses one important strength of CCI know-how which is inherent to its creative process. To go a little more in detail, the report on "Mapping the Competences of the Cultural-and Creative Sectors" (2015) proposes this framework to better understand cultural and creative sector's skills:

Table 12. CCI Skills

ENTREPRENEURIAL SKILLS	CREATIVE SKILLS	SOFT SKILLS
Innovative thinking	Manage and promote Brainstorming	Personal management
Cooperation/Team work	Techniques of Asking "What-If" Questions	Reliability
Communication	Management of role playing	Flexibility/adaptability
Problem solving	Provocation techniques	Writing skills
Sense of initiative	Design-thinking	Communication in other languages
Planning & organizing		
Entrepreneurial Orientation		
Digital skills		
Intellectual property protection		

On the other hand, CCI could not own other skills that are required by new trends and contaminations especially in the area of technology and digitalization. CCI professionals increasingly require a blend of creative, digital, managerial and entrepreneurial competencies, coupled with soft skills to stimulate innovation. The contribution of CCI in developing trans-sectorial soft and creative skills becomes even more critical in the age of Artificial Intelligence (AI) and the automation of work.

"As digitalization is changing manufacturing structures and paradigms, innovation in CCI means to have new skills for technologies adoption and interact with new professionals."

Another statement about CCI skills is about their intangibility. There is a lack of shared methods, tools, techniques, and measures or indicators of quality. This sometimes produces confusion and misunderstanding from those who are not part of the sector. The idea of a qualitative output or the real value of creative processes is not clear as the ones directly measurable in manufacturing activities. This is a challenge for CCI.
The elements in the interviews which recall these issues, the intangibility of the value generated by CCI is meaningful also within the debate between fine arts and applied arts.
The main difference between fine art and applied art is that fine art intends to create beauty and pleasure in looking while applied art is an aesthetic approach to performing a specific duty. Fine arts are generally used in a hobbyist way. Applied arts are intended for the use of in a job. Fine arts are related to the world of "culture" as heritage or as entertainment and applied art to the world of creativity in workflows.
In this sense, the dichotomy between fine arts and applied arts also defines the traditional difference between cultural industries and creative industries. But it seems that CCI, in the words of the stakeholders interviewed, is fighting for a broader definition beyond the dichotomy.

"I would separate here: Cultural activities mostly claim to be non-profit in some way. Entertainment or the creation of works of art are in focus. Creative industries themselves can also have massive economic potential. One example is the entire games industry."

"We need to watch at more cultural processes as generators of economic value, to see culture also as a business, certainly different from others, because of its humanity, but it is not something only intangible and only relied on pleasure or pure entertainment".

This perspective is related to the framework presented in the introduction of this section, where it has been explained how the concept of culture as heritage is not seen pertaining to the market's logics, but only to the human expression and simple pleasure.
Culture and arts in human heritage meaning are often perceived as something which doesn't produce economic value in the same sense as every other business. This is also true for skills and quality indicators within CCI.
This is a struggle featuring CCI: many stakeholders indicate how this misunderstanding inside common sense could lead to underestimating the economic potential of CCI, especially in its innovative and value creation perspective.

"[cultural industries] are true arts – music, performing arts. Creative industries are – film, games, marketing, architecture, fashion"

"CCI is a business which produces values and symbols that give real (economic) value to products."

By looking at the culture through a wider perspective, the practical and daily situation shows a very different context. When culture is presented as something more inclusive, more local, more ecosystemic. It presents a very different scenario.

ITALIAN CASE

The "Padova Food Festival" is an opportunity to give strength and visibility to food culture. During the festival, ten farmers and ten restaurants, both with a certain level of experience and know-how, work together. Every farmer is associated with a restaurant, and they have to develop and cook a dish together by merging local products and restaurants' knowledge to invent something new.

These kinds of events are both cultural, because they support the traditional local food heritage, creative, because they produce something new and economically a good strategy.

KEY FINDINGS

SKILLS

Opportunities

- CCI own unique and proper skills which are more and more required by companies, especially through a transversal approach – soft skills, creative skills, social skills.
- In CCI technical competences are combined with creative competences.
- CCI own attitudinal-relational skills and skills related to the processes of co-production and cross-fertilization, which represent transversal thinking and multidisciplinarity.
- CCI represent the ability to create something new from what already exists in an artistic and meaningful dimension.
- Multiple driven outputs: the combination of technical and functional issues about products and processes and the cultural, social, moral, human inspiration.

Challenges

- There is a lack of new skills and interaction with other areas as technology, digitalization, manufacturing business.
- CCI skills are intangibles and it is difficult to measure their impact, quality and value created.

DIGITALIZING CCI

Nowadays, the creative process is inextricably linked to innovation, especially in the definition of social innovation and digital innovation.
The true meaning of culture and creativity is clearer and related to multidisciplinarity and strongly related to digitalization.
Digitalization is defined as the process of implementation of new technologies, digital tools, within the organizational model and production process in companies.
Digital tools also made inroads into CCI but there is still ample room for experimentation and application.
Current experiences demonstrate what benefits can be brought to the management and enhancement of cultural heritage from a targeted use of digital in order to improve quality of CCI services and expand the audience of users. Although resistance and inertia are quite widespread, the feeling is that the digitalization trend is now, in fact, a reality.
Artificial Intelligence, machine learning applications, Big Data, Internet of Things, Blockchain, robotization, etc. are all technological tools which, in fact, are potentially totally changing processes in a disruptive way.
Even in the case of the diverse "sector" of culture and the factors that limit the unfolding of potential are many inherent in the use of digital technologies, especially infrastructures and competences, as we are going to see later.
The spread of new digital technologies, however, has now reached such a relevance to make their upcoming diffusion more close to all sectors, even in the more impermeable to novelties. As global phenomenon, it is not a matter if the digital tools are produced in national market, in Italy or Germany, or Slovenia, because through the Internet they become immediately available for the most remote of museums and the smallest of cultural associations.
A museum today can access to tools for strategical planning or platform to identify the best solution to promote the digitalised collection. In tourism audioguide downloading, collaborative platform, or touristic app for experiential and interactive traveling are more and more available.
Artificial Intelligence also begins to make its way through interesting experiences, together with virtual and augmented reality which represent important technological advancements and innovations as a growing sector of interest for CCI. Video installations and sensitive environments capable of giving life and offering an immersive experience to visitors of museums or temporary exhibitions are some applications of the exponential development and the diffusion of Virtual Reality and Augmented Reality.
Digitalization is starting to introduce more useful tools to carry out virtual scientific reconstructions, in order to enhance the development of cultural heritage enabling innovative ways of fruition of artistic heritage.
The development of AI has also a significant impact on the CCI as it helps to recommend tailored content. However, the trend towards a data-driven technology industry generates increasing needs in the CCI sector.
How could artistic sensitivity and creativity interact with technical and digital tools?
It is getting clear that digitalization is not a matter of technicalities, but instead a matter of new meanings, stories and ways to think, do and communicate things, then it is clear the centrality of CCI skills in this process.

"We are figuring out how to build new meanings and new stories which can create new value for people and business, by using digital tools, especially big data."

Information systems and software development are needing skills that only cultural and creative industries' professionals own, and viceversa. However, not only in this case, entirely new business models can be created by bringing together digital tools and creative or designing skills, especially in the field of tourism, food, health, services, etc. Technology and digitalization are offering numerous and big new opportunities for developing new business, by combining them with creativity and cultural traditions. Apps and new channels of communication or interaction are opening this new area of opportunities for CCI professionals.

ITALIAN CASE

Digital Agenda

Digital Agenda is a project of Regione Veneto (Italy) focused on innovation, especially in Big Data issues, but our most important concern is about how to make creative use of these new tools to reach a real innovative process for people and business. The big output of this project is to generate new products and digital information utilization to give benefits to citizens.

Veneto 2020 digital agenda works on building and improving digital infrastructures, big data access, and empowerment of people in strategic areas, which are business, agrifood, and cultural heritage.

Creativity and cultural approach is a driver necessary to give to data an objective value based on different topics (companies, health, culture, tourism, food).

This project needs many professionals able to translate data and digital information into creative and narrative tools to have real use: there is a real need for multidisciplinary data storyteller building new products and insights in the digital world. The figure of digital handcraft could better explain this new direction for creativity within digital transformation.

In the Digital Agenda project the cultural tradition is very touched, especially in tourism and agrifood. In Valdobbiadene, Lago di Garda, Verona region, there are foundations, companies, and museumsasking for apps, virtual reality, meaningful data to communicate. The interesting thing is that data is already available but a lack of development of this data and practical use persists.

ITALIAN CASE:

Geostep

Promoted by the Digital Agenda sub-projects, it is a good example of the Montenegro good practice named "Geostep". It is an example of a new business model in the area of tourism by using digital tools.

Geostep is an app which developed a geolocation interactive touristic guide. People can have access to the app and know/guide themselves in an interactional way the touristic and cultural points of interest they know and visit.

ITALIAN CASE

Datapoiesis

It is a start-up that brings together an international group of researchers, artists, designers, professionals, and students in the old structure of Olivetti factory in Ivrea. The group imagines and builds new models, communication channels, an ecosystem of objects, and services for which data and artificial intelligence lead to existence an increased sensitivity to the phenomena of the globalized world.

SLOVAK CASE

Maker Faire

Originated in the USA, the concept of MAKER FAIRE has spread all over the world. A family-friendly festival of invention, creativity and resourcefulness was for the first time organized in Bratislava, Slovakia in November 2019.

Maker Faire is primarily designed to be forward-looking, showcasing makers who are exploring new forms and new technologies. The size of the event is determined by the size of the city where the event is organized. Bratislava held a MINI MAKER FAIR, hosting 80 creative makers from Slovakia, Czech republic, Hungary and Austria.

The interactive event offers the visitors the opportunity to get first-hand experience with technologies and creative manufacturing presented by the makers. Maker Faire is a gathering of curious people who enjoy learning and who love sharing what they can do. Thanks to the event´s nature, new technologies, such as 3D printing, robotics, generative design, as well as examples of creative reuse of waste were made available and popularized among general public.

SLOVAK CASE

Specialized Laboratories

The creative hub Cvernovka in Bratislava intends to develop specialized technological workplaces - “SPECIALIZED LABORATORIES”, equipped with specific technologies and equipment and made available to start-up entrepreneurs that cannot afford to buy the technologies, equipment themselves. Cvernovka would provide CCI access to the space and equipment at a discounted rent. While there are some private FAB LABs (providing technologies such as 3D SCANNER or CNC cutter) in the city, more professional labs are missing. This project should be supported by academia, the private sector, and public administration.

ECOSYSTEMIC APPROACH

"An important challenge in this positive panorama is about scarce homogeneity and big fragmentation of creatives and strategic marketing industries. It is a sector growing fast, generating a fragmented world of SME, which creates confusion on the offer on the type of partner companies can choose and why, also with some problems related to ethical issues. It is a historical cyclic phase of growth and then cleanliness, where we must look to positioning by advancing in quality and reputational level."

The creative sector in the six project's countries has a big potential, but it is also vulnerable. This is largely due to the heterogeneous political, commercial and cultural environment in Europe as well as to the very nature of the economy for cultural products.

European CCI feature a strong independent sector mainly composed of micro and small entities (95%) according to the Austrian Institute for SME Research and VVA Europe (2016). The small size of the CCI operators is a very unique characteristic that enables them to adapt to new market situations, innovating with new content and experiences in film, video games, music, visual or performing arts.

The small organisation of the CCI means that collaboration is a common practice, for example, with other creative disciplines and sectors to combine resources. The fragmentation of the sector also reflects the diversity of cultures and languages in the EU.

However, such fragmentation brings multiple challenges for the European CCI, not only for the transfrontier circulation and distribution of works, but also in defending the interest of independent creations against large international corporations. Fragmentation limits the ability of the sectors to organise itself as a unique body and thereby to speak with a common voice to defend the collective interests and to improve economic and social conditions.

Furthermore, although new digital tools allow CCI to get involved in activities along the value chain, they mostly do not have the scale and capacity to take full advantage of these opportunities, and to engage in big research and development projects. This is due to fragmentation.

The mosaic format of CCI can be a real fragility. Some fragmented sub-sectors are for instance increasingly confronted with a concentration phenomenon. This particularly applies to sub-sectors that are highly impacted by digitization and the platform economy, the most knows are the cases of audiovisual, music and publishing if we consider the aggressive entries of Netflix, Spotify or Amazon.

> *"From a global perspective, an innovation ecosystem must be as diverse as possible. Art, creativity and culture are very important players in the complete ecosystem in my opinion. This means that I would rather think about how I can create such an ecosystem on a global level; how I can integrate the creative economy into a startup community? In classical creative and cultural economy we usually don't find any business models that earn a lot of money, but how can I still keep the attractions in the city centre? This is where the EU or the state must address its funding policy.*

The mosaic composition is also severely challenged by a market for cultural products highly volatile, dependending on uncertain and fast-changing fashion and trends. Some sectors are strong "hit-driven" (like music) others depend strongly on local languages and cultures because they are usable only in specific contexts. Products are marketed for local audiences with different languages but competing with international products with global appeal.

This reality is less marked in the case of sub-sectors such as design, fashion, or visual arts, for instance, especially in all the new business opportunities given by digitization.

> *"In Veneto region creative processes are carried out by fragments. Cultural entrepreneurship is fragmented, not cohesive. Individual companies make their own piece, but without territorial connection."*

> *"Sectors (CCI) are fragmented – multiple non-connected small enterprises, lack of mapping"*

> *"Finding a recipient (for CCI) is difficult - more sophisticated. It is difficult in the context of acting with culture and art. This is not an academic or university city. Szczecin is becoming a peripheral city."*

Nevertheless, **fragmentation**, as a threat or a challenge for the CCI sector, can also **become an opportunity** within the transformative process the sector is facing. Many projects and cases show this trend. Build ecosystemic approaches is a new strong trend for the CCI sector, especially when it is connected to the innovative ecosystem. This ecosystem is built upon a strong, cohesive knot between companies, trainers, social partners and public decision-makers.

The composition of CCI sector, made by 95% os SMEs, could be also seen as a strength if the different "fragments" find a way to connect to each other and to create productive relationship and exchanges. The ecosystemic approach emphasizes the interaction between the CCI professionals or enterprises and the larger social contexts, observing them as interrelatedness and interdependency. A rich superstructure made of fragments deriving from diverse fields, areas and competences, but creating a unique body.

Again, the innovative and digital approach can help in the creation of the ecosystem. Online platforms, business networks and hubs or co-working spaces are already the most used experiences to enable contact and growth of the cultural and creative sector.

GERMAN CASE
Sandbox

The Sandbox's goal is to accelerate start-ups in the Creative Industries by providing mentoring, seminars, a network plus co-working. The main issue is to take a standardized set of tools to validate a business idea, starting with Problem solution fit. The whole range of support and qualifications offered at the Sandbox are tailored to the specific needs of start-up teams and young enterprises from the creative industries. The support is divided into the areas of qualifications, market access and networking. In seminars and coaching, the participants receive intensive support in the development of their business model and the implementation of the project. In terms of content, the focus is on providing basic knowledge (for example on project management, financing and marketing). So far, more than 30 teams have taken part in this program.

SLOVENIAN CASE
Future Architecture Platform

Future Architecture is the first pan-European platform of architecture museums, festivals and producers embracing a wide range of emerging talents. The Future Architecture platform introduces and celebrates innovation, experimentation and the ideas of a generation that will design the architecture and build Europe's cities in the years to come. It promotes European innovation, architecture, culture, knowledge and social capital through a single common platform.

Actors:

20 organisers from 16 countries are creating a pan-European programme, tour emerging creators and present their ideas at exhibitions, conferences, lectures and workshops, in books and on the web.

Goals:

• highlighting the emerging generation of talents in various disciplines and explore and share their ideas about the future of cities and architecture;

• making complex issues of architecture comprehensible to everyone, and promoting a more sustainable living environment;

building a Future Architecture European Quality label, which recognizes organisers who work with aspiring emerging talents and show their commitment to the platform objectives.

GERMAN CASE

Platform 12

An experimental space, serving researchers as a creative playing field, a place for reflection, a setting where people can work untrammelled by corporate structures. As an essential feature, Platform 12 contains a permanent collaboration with Akademie Schloss Solitude, in the framework of which artists of various disciplines engage with the company as indirect observers and initiators, to exchange ideas with researchers and work on their own and joint artistic projects. The fellowship is meant to encourage artists and researchers to explore new ideas and to shape future-oriented concepts together. The main focus is not necessarily the production of a specific artistic work, but the encounter and process of dialog in itself.

“I firmly believe that Bosch needs to build a new ecosystem for the future. To me that also means that we can’t do this on our own. We need friends, we need allies to work on these systems with us, to bring along facets of their own that we cannot contribute ourselves.”

SUSTAINABILITY

In the current socio-economic context, culture, knowledge, and cognitive skills have become the main value generators not only to improve the productivity of an increasingly complex and competitive economic system but above all as sources of creative energies for finding sustainable growth solutions. But why the reference these new forms of capital should not be merely ornamental, we should, first of all, understand the functioning and impacts of the production processes of (new) culture and creativity. Some CCI actors are pioneering ways to reduce their carbon footprint - at festivals or in the fashion Industry, for example. However, a growing concern that still needs to be addressed is represented by the union between creativity, culture, and sustainable and social impacts of the economy.
We found this element clear also in some interviews with stakeholders CCI made in the six COCO4CCI project partners' countries as a clear connotation of best practice.
Social innovation and digital innovation, growing within the context of Corporate Social Responsibility, show great potential for the growth of sensitive, responsible, and positive business experiences, characterized by innovative thinking..

"For example, CCI could mean social entrepreneurship. Here, the economic potential is exploited, and on the other hand, social problems are solved.

Culture and creativity are the center of the processes of individual, entrepreneurial, institutional and territorial regeneration. If culture increases awareness of who we are, facilitates the relationship with others and activates collective participation, creativity promotes innovative ways of approaching, define and solve problems. Also the most complex: from dialogue between cultures to search for innovative solutions to make our development model more sustainable, to the creation of new opportunities of work for the new generations, to solve social needs, and so on.
But what can cultural organizations, artists and operators in the sector do to participate in the construction of more sustainable models for development?
To build artistic-cultural systems capable to read the current ecological crisis and the climate change and become a vehicle for solutions? There are different ways to go along the supply chain of the CCIs on the path to sustainability.
First and foremost, the contribution that the world of art plays through the search for new ideas and meanings aimed at obtaining greater awareness and involvement of civil society to these issues is urgent, both in the search for possible solutions and in their implementation.

"I would love to get in touch with different AVM. I dream with a project (it is a ready project, but never implemented) where I design and make shoes made with recycled pieces. We can look at the environment through design. In AVM companies there is so much

waste. I could buy production waste and design beautiful shoes. It is a fashion trend, I know, taken for granted, but it is a big universe to be explored. This is a pearl I should talk about with experts."

SLOVAK CASE

Fashion Revolution

Clothing accounts for between 2 % and 10 % of the environmental impact of EU consumption. This impact is often felt in third countries, as most production takes place abroad.

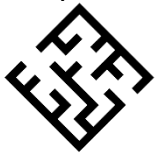
Fashion Revolution – is an initiative consisting from designers, academics, writers, business leaders, policymakers, etc. working together with the aim to increase the transparency and sustainability of the ways clothes are sourced, produced and consumed.

New trends in the fashion industry such as upcycling are becoming a driver of changeIn line with the mission of the world-wide movevemt, the main goal of the Fashion Revolution Slovakia is to raise awareness and teach people/ textile designers to change their practices.

In Slovakia, the efforts to reduce the negative environmental impacts of the industry has been seen as a value and necessity for a long time. §However so far only in the form of a small initiative and an online platform for hand-made products producers, gathering mini brands. FASHION REVOLUTION has been working in education via connecting the individuals, businesses, raising awareness and motivating companies and consumers to responsible ways of production and consumption.Fashion Revolution - new trends in the fashion industry as a driver of change

Design and Sustainability (e.g., upcycling) are starting to be a trend, and they teach people/designers to change their practices. Excess of textile and textile waste has already begun to be perceived.

In Slovakia, this aspect has been seen as a value and necessity for a long time, however so far only in small an online platform for hand-made products producers, gathering mini brands. FASHION REVOLUTION has been working in education via connecting the individuals, businesses, raising awareness.

Table 13. Challenges in CCI Sector					
Italy	Slovenia	Slovakia	Poland	Germany	Austria
Division and confusion between fine art and applied art 	Communication problems 	Lasting cooperation 	To retain human capital 	Different mentality between artist and business 	Awareness of CCI 
Creativity is not perceived as economic value 	Inappropriate measurable indicators 	Inappropriate measurable indicators 	Lack of financial resources to invest 	Recognize CCI as a relevant economic factor 	Creative innovation is treaded equally to technological innovation in funding schemes
Fragmentation of CCI Sector 	Fragmentation of CCI Sector 	Lack of strategies for CCI Sector 	The context is getting more sophisticated 		

Public Sector difficult to change 	Lack of cohesive policies 	Administrative barriers Excess of bureaucracy 	Policies understanding CCI sector changes 	Conflict between creativity and bureaucracy 	
	Lack of competences 	Lack of competences 			Need for more capacities of CCI 

Table 14. Opportunities in CCI Sector					
Italy	Slovenia	Slovakia	Poland	Germany	Austria
New connections between CCI and AVM	Establishment of educational programmes	Cross-sectoral cooperation, creation of a Platform	Networking with SH	Give more competence to creative people	Awareness on the power of cross-sectoral innovation partnerships
Context of changes, especially Digitalization	Context of changes, Global competition	Change of mindsets	Attempt to define CCI standards	Global innovation claim for creativity	Creativity is a driver for transformation
Structural funds for innovation	National development strategy	Ecologycal innovations	Cross-sectoral approach in public policies	The region recognize CCI as relevant sector	Inclusion of creative innovation (not only technological) in funding systems

Table 15. Main regional/national CCI programmes					
Italy 	Slovenia 	Slovakia 	Poland 	Germany 	Austria 
Fablab 2015 18 fablab centres, university, training institution, citizens, businesses; 2 mln euros funding; Activities which involve citizens and businesses with the aim of fostering the development of a digital culture and creativity.	**Centre for Creativity 2017-2022** Interdisciplinary platform that connects and develop Slovenia's cultural and creative activities, forging stronger ties between the CCS and the business, science, education.	**Slovak Arts Council -** Programme focused mainly on cultural sector	**Horizon 2020** International scientific and artistic project on how visual technologies function in different cities, countries and continents.	**Initiative Kultur-** the Center of Excellence for CCI, but also awards such as "Kultur und Kreativpiloten", and a market development program of the federal government.	**National Creative Industries Strategy 2016** In addition to its own support services for creative workers at regional or local level, the creative industries at federal level were integrated into the Austrian RTI strategy.
InnovationLab - 2019 4 quadruple helix approach; 7 mln euros funding; Activities which involve citizens and businesses with the aim of fostering the development of a digital culture and creativity.	**Competence Centre for Design Management** potentials and benefits of design management to Slovene companies initiated in 2012.	**Slovak Audiovisual Fund -** Programme focused on audiovisual industry	**Regional Operational Programme** Academy of Art Activities: Department of Painting and New Media, 3 majors, 7 specializations, Ph.D. nominations; main partners: Marshal Office, Trafostacja, National Museum in Szczecin; investments: 3 galeries,	**Everlab** services for the publishing industry in order to help them with issues like digitalization. Partners are the WRS, Stuttgart Media University, Börsenverein, Medien und Filmgesellschaft Baden-Württemberg.	**AWS Call Creative Solutions** Federal Ministry for Digitization and Business Location and Austrian Promotional bank will fund Small and medium-sized enterprises (SMEs) with a grant of up to 200,000 euros for the innovative solution of problems.

			two periodic events, publishing house.		
POR FESR 2014-2020 Plan for social and economic growth in the sectors of industrial development, the digital agenda, the environment and innovation. 600 mln funding	**PKP – Creative path to knowledge 2013/15** programme that targets students who wish to participate in "small research projects" focused on creative and innovative solutions to practical challenges in the corporate sector. 7.9 mln	Support provided by the **Ministry of Culture** via the Operational programmes: call supporting establishing creative centres and demand for creative activities.	**Interreg for Region of Baltic Sea** Creative Ports. Internationalisation of the CCI in the Baltic Sea Region		**AWS Impulse Program** Grant for the development and implementation phase of innovative projects in the context of the creative industries
The Veneto Art Superintendence Programme Research and mapping activity to create and give value to corporate museums	**MCRUK – National networks of research centres for creative arts – 2019/22** Co-creation, participation and networking by several existing research centres in the fields of science, art, technology and economy. 9 mln.	Support provided by the **Ministry of Economy** via the Operational programme through 2 agencies (SIEA - a national project aiming at the development of CCI, focusing on CCI sectors Architecture, Design and Advertising) and SBA – providing complex support to existing and potential entrepreneurs	**National Center of Research and Development** GameIn; activities: game development, design audits		**SKU Programme** of the Province of Upper Austria to stimulate cooperation for the implementation of cooperative research and development projects and for the implementation of cooperative organisational projects at Upper Austrian enterprises (SKU)
		Slovak Design Centre			

CHAPTER 3
Cooperation Collider Emerging

"Every company is a cultural good"

The statement, mentioned above, reports a very clear trend found in several interviews in 6 region's partners which is appropriately linked to the main objective of COCO4CCI to build a concept of cooperation collider between cultural and creative industries and advanced manufacturing.
The statement "every company is a cultural good" expressed the intrinsic connection between business and cultural process, and will be discussed deeply in this last chapter.
In the Symbola framework for cultural and creative industries, we made an effort to understand and explain better the last classification area for the CCI (Area#5), related to the definition of creative-driven industries. This area has been presented as the most strategic in this mapping activity process.
It represents an attempt to define creative-driven industries, which is also the most probable domain to define the "cooperation collider" elements between CCI and Advanced Manufacturing Industries in the intuition of the project. Creative driven are economic activities that use cultural and creative content and skills to increase the value of their products.
The most accepted categories related to this definition are, for example, fashion, furniture, agribusiness, and tourism. However, in our understanding, this definition could be re-design and re-build by introducing new innovative and contemporary economic dynamics that characterize AVM and its cultural and innovative processes by including economic activities already heavily involved as:

- **Creative process for new digital tools and datamining**
- **Marketing and communication for manufacturing - value-oriented, storytelling and re-branding**
- **Strategic consultancy for manufacturing - re-design processes, business theatre, business culture, etc.**

For this reason, the first attempt to redefine Area#5 classification has been made by mapping (where available) the presence of CCI typical professional in manufacturing industries. Only Italy, Slovenia, and Germany could access this data in a public statistical institution, showing respectively designers, architects and product designers as the most numerous professionals working in non-CCI companies.
This classification will be an object of deeping the knowledge of future studies to build a creative-driven definition in "Cooperation Collider" conceptulization.
By definition, creative-driven companies are those companies capable of aligning business aspects with a cultural and/or creative proposal, redefining, and sometimes enhancing their competitive advantage. A possible phenomenon thanks to the interaction, effective, between actors with different abilities and competencies (in primis creative) but also due to receptive organizations, because they are guided by equally creative and visionary leaders, proposing new "mind-sets".
Within Symbola framework, creative-driven production takes shape in different and sometimes complementary ways through original production/distribution of outputs or through organizational processes that adopt a creative mindsetat a systemic level.

In an in-depth analysis of Symbola "creative driven" concept, prof. Zurlo (2017) proposes the observation of two trends in creativity, very useful for the approach sought in this report:
"Beyond the boundaries of the organization we find, not new but unedited in terms of methods and protagonists, a creative tension within the productive ecosystem, in the constellations of value that support companies. In this framework, creative-driven production takes shape in different, sometimes complementary ways: through original production/distribution outputs or through organizational processes that adopt, at a systemic level, a creative mindset. On the one hand, innovation and creativity go beyond the traditional focus on the product/service, to verticalize, within the organization and in the supply chains of these sectors; on the other hand, we can observe the slow horizontal movement of creativity, as a strategic asset, in sectors that, sometimes with prejudice, we have often perceived as extraneous to this sphere. In this framework, a possible model of reading tends to identify three significant, certainly not exhaustive, trajectories of the phenomena mentioned." (Zurlo, 2017)
The two trends referred to in the Symbola document are the two possible directions to create the cooperative and collaborative links between CCI and AVM that should be pursued.

VERTICAL TREND

Manufacturing companies are asked to rethink their traditional focus on products and services:

- they need to innovate them overall by giving a new value, which is fundamental to create competitive advantage.
- they need to re-think their product, by creating new services, pre and post-sell relationships, or "servitization" processes
- they need to re-think their brand positioning, creating meaningful products/services/relationships with customers through communication and new narratives.

HORIZONTAL TREND

The slow horizontal movement of creativity, as a strategic asset, in sectors that we have often perceived as extraneous to this sphere, especially technology and digital domain, but also for food and agrifood or tourism.

- This new bridges open a new area of business full of potential.
- Particularly interesting for a cooperation collider concept, horizontal trend represent the predisposition to create new business models
- New mindsets where culture and creativity are no more enemies of manufacturing logics, but instead, mutually necessary.

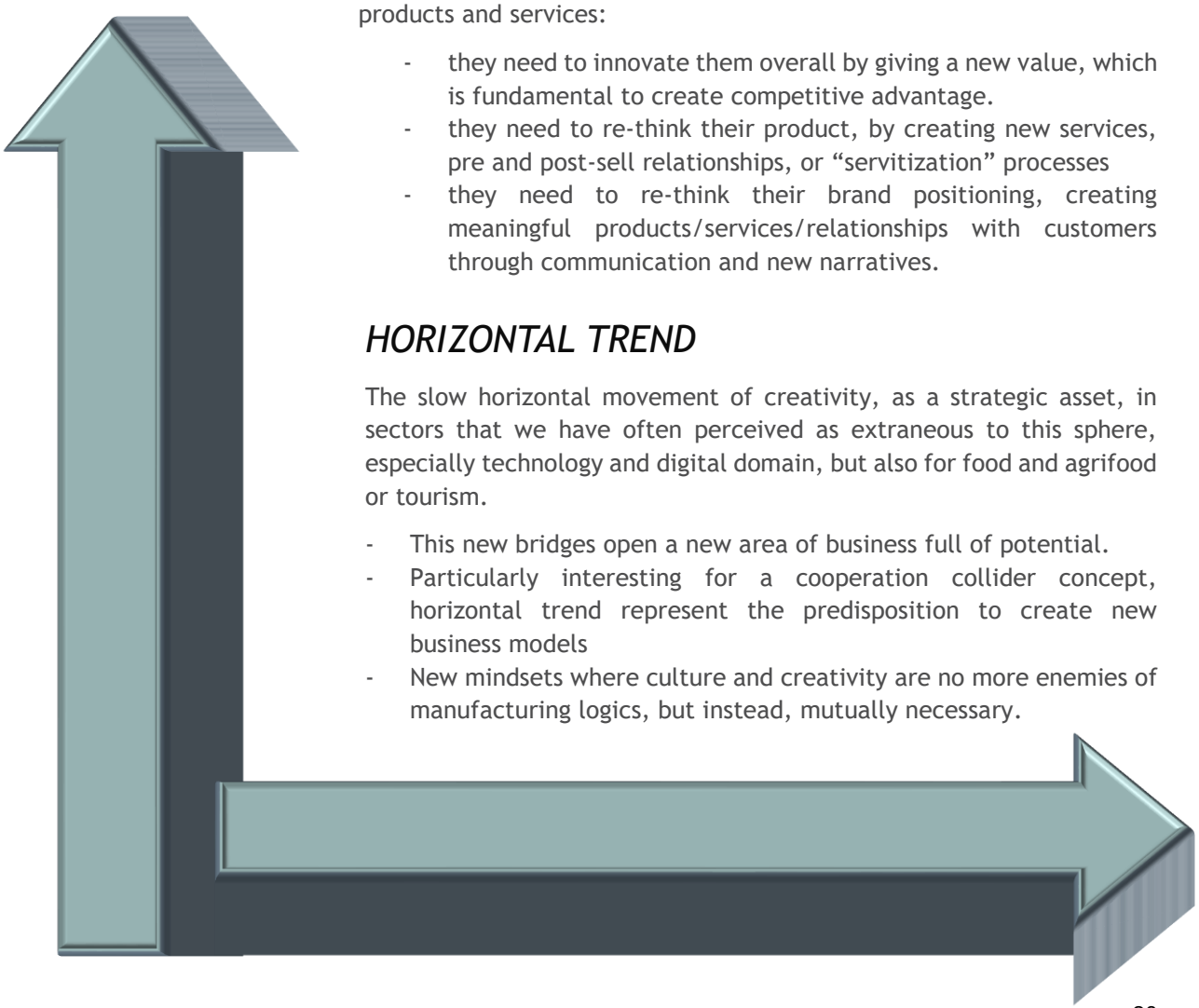


Table 16. MEANINGS OF CREATIVE DRIVEN ACTIVITIES	
Country	**KEY WORDS: INNOVATION, NEED, NEW**
	Creative driven means creative process as inextricably linked to innovation process. It means generating new ideas, made of technology, prototyping and, above all, there is a need of new contacts with local manufacturing companies. All manufacturing companies are actually very creative. Creative driven are companies that can valorise the ability to introduce and propose innovations, through creative activities. Manufacturing industry is creative driven. Manufacturing processes are cultural and creative. It is a new horizon of contamination between culture and manufacturing through new profiles of interaction.
	Creative driven companies are related tot the need of innovation. We don't use this definition.
	Creative driven economic activities require creative skills and artistic inputs to be made. Integral part of creative driven industries is to have a product that is mainly created by the own new means that also carries some sort of artistic, creative or design value.
	Creative driven concept needs a clear policy. There is a need to create a new policy which will integrate SMEs operating in the creative driven industries. The aim is to have programs which will help to increase cooperation between CCI representatives and creative driven SMEs. The main benefit from this cooperation would be to retain these industries in the region.
	Creative driven process is think outside the box, to put creative thinking inside processes, to move away from the classic cultural-creative sector definition. Creative driven companies have links to the creative industries, but are essentially more technologically oriented. Creative players and companies are the key to innovation and progress within enterprises, cities and the whole society.
	Creative driven is a suitable bridge builder – between CCI and AVM. It means to have both creative and economic thinking. It helps to take new paths, new way of thinking.

ASSETS FOR COCO

ALIGNING INTERESTS

DESIGN, COMMUNICATION AND SERVICES ARE THE OPEN WINDOWS

TECHNOLOGY IS THE OPEN DOOR

CONCLUSIONS & ROAD-MAP

ALIGNING INTERESTS

Cultural and Creative Industries and Advanced Manufacturing Industries must to know each other.
Many interviews among the six regions of COCO4CCI report a great lack of knowledge from the apparently two distant way of doing business connoting CCI and AVM.
Some stereotypes, partial knowledges or misunderstandings have led the representatives of the two sectors to firmly believe that CCI and AVM have different goals, interests, languages and models.
They seem to think to each other as diametrically incompatible systems. Nevertheless, these declarations are often reasonable and well motivated through concrete experiences, sometimes they are the result of misunderstanding. The mentions below perfectly express the misunderstanding often in place.

"Many creatives aren't attracted by business affairs. They have other triggers, not money/a business model. However, often it needs business skills/a business mindset to make an idea bigger, you also need money and time. So, sometimes creatives would need to think more business-oriented in order to make their ideas successful.

"In many cases, creativity is considered a cost by SMEs, that are often focused only in production aspect.
In other words, companies don't understand the value of creativity, especially in terms of profits."

"The biggest challenge is to validate more people. There are many good ideas from creative professional and most of them are not pursued, because are not business modulated."

“They speak different languages (CCI and AVM). It is important to find mutual appreciation, understanding each other and the other approaches existing to the same solution.”

„Business Theater and Coaching, could be the tools. CCI IN AVM? Theoretically, all industries are affected by it. The main question is whether the companies want to get involved in other methods, or want to try something. Experiential education is already familiar to some, but is it also possible to engage in the cultural sector?“

KEY FINDINGS

- **CCI is a value, not a cost**
- **The innovation goal as common interest**
- **The complementarity of skills**
- **To align language, creating new mindsets**
- **Create opportunities to meet and understand each other in a practical way**

CCI is a value, not a cost for AVM

As seen, many interviewees stated that it is difficult to non CCI companies to understand the economic value of creativity and culture. Most of stakeholders of the project partner's countries indicated clearly as the biggest challenge for CCI to be understood as generator of great economic value.

This is partly due to the traditional dichotomy between "tangible" and "intangible" which characterized for a long time "manufacturing" and "creativity" or "business" and "culture". This consequently bring to the perception that for a manufacturing company it is more important everything related to the core business as "producing goods", while everything not strictly related to this it is, using the words of the stakeholders, "a loss of time and money", a cost.

But everything in today market is pointing to a change of that paradigm which take place substantially in the two trends seen before.

The vertical trend ask to manufacturing companies to rethink their traditional focus on products and services, and to innovate them by giving them a new creative values, uses, functions, symbols. Achieving this objective does not mean developing aesthetic, secondary stratagems, but reviewing the substance of the value chain to increase competitiveness, market presence, turnover. Culture and creativity become means to create symbolic and monetary value.

The horizontal trend of creativity, as a strategic asset, in sectors that we have often perceived as extraneous to this sphere, allows not only to revise the strategic assets of some businesses, but to build totally new business models with high potential value,both again, symbolic and monetary.

These two possible trajectories are the pillars to rethink the complementary role of CCI and AVM in contemporary context.

The innovation goal as common interest

Both the trajectories presented, could be a starting point for cooperation between CCI and AVM, as emerged from the mapping activity, especially because they are a first attempt to align the supposed different interests and goals.

If CCI use creativity and culture as input, process or output of its economic activity, and AVM use functional, technological and technical aspects to produce goods in a core business model oriented to profit, innovation requires all these elements. They are complementary, mutual and interrelated aspects for the same goal: the success of business.

Certainly, also both CCI and AVM have a lack of competences and resources pertaining to the other system. Some interviews pointed out how CCI sometimes present a lack of entrepreneurial strategy or of a clear and scalable business model, while AVM cannot understand which kind of value or narratives or communication its products needs in order to differentiate themselves and survive in high competitive markets.

To create opportunities to CCI and AVM understand how the lack of one could be filled by the other, or even to produce new business models, could be the best way to finally create a bridge of common interest between them.

The complementarity of skills

As natural consequences the complementarity between CCI and AVM in creating new innovative business models or added value to existing products, fall also into the need for complementary skills and competences which correspond to each one.

As mentioned also in the previous chapter, interviews and other studies about CCI competences revealed the lack of new competences raising up from the market challenges. This is also true for AVM experts and professionals, which may not have all the range of creative and cultural or social skills.

Dichotomies are strong also in skills definition, even if a movement towards transversal competence is more and more required.

Hard and soft; Technical and creative; Functional and semantical; processual and social; and so on are some distinctions used to refer to different mindsets and competences.

In order to create cooperation processes between CCI and AVM a work need to be done in skills and competences. Watching to the information collected by the mapping activity, there are two possible perspective on it:

- The need for training for both CCI and AVM professionals in transversal competences (the creative in AVM processes and the manufacturers in creative and cultural skills)
- The need to create interdisciplinary teams able to communicate and work for a common goal

To align languages, creating new mindsets

Creating new transversal skills or new interdisciplinary teamwork lead to the opportunity to think and build in a practical framework the **new mindsets** required by the cooperation collider conceptualization. New mindsets are intended as new ways people think, interpret, react, cope, expect, process, interact and communicate.

Create new mindsets means to enable people to leave the comfort zone, made of traditional business structures defined by defined role, functional department, routine task implementation and enter into a nonconformist, agile, human-centered design process.

New mindsets require the effort to sharing knowledges and to find all the potential of tacit knowledges which every professional could offer. It also needs to experiment creative workflows or interactions, by accepting the error and the risk as normal element to reach innovative outputs.

Create opportunities to meet and understand each other

CCI and AVM need to meet and know each other by comparing themselves and work together to an aligned interest, very concrete and practical. Many interviewees pointed out that is the extreme importance to know each other by having a concrete goal and not a theoretical or philosophical one.

ITALIAN CASE

Galileo Visionary District

Galileo Visionary District is a Scientific and Technological Park, which combines four main types of activities:

1.Education (with the higher-education design institute “Scuola Italiana Design”)

2.Research & Development (with strategical support for companies)

3.Start-up (with “Start Cube”, the academic incubator of Padua)

4.Social Innovation (with business consulting on themes like corporate social sustainability)

Furthermore, it maintains an institutional value for each of these activities.

They develop different projects related to design institute “Scuola Italiana Design”, during which a company can visit the school and hold a briefing session with the students, who then can work on the defined goals, like they were in a real design studio, by designing concepts and presenting them to the company.

AUSTRIAN CASE

Industry Meets makers

Industry meets Makers is an open innovation community building format that aims to initiate new collaboration models between the top industry and the creative, young maker scene in order to make the resulting innovation and business potential fruitful for both sides. The current core concept essentially consists of the fact that top industrial companies invite briefings in future technology areas such as robotics, AI, 3D printing, industry 4.0, IoT, Big Data or Blockchain and innovative "makers" - startups, SMEs, freelance developers, designers, pupils, students and hobbyists - to solve these together with them within the framework of an approximately six-month period of getting to know each other and co-creation in such a way that, ideally, a successful, joint follow-up project based on this can then be launched.

DESIGN, COMMUNICATION and SERVICES AS THE OPEN WINDOWS

The close link between creativity and economic development was clearly stated in the European Commission Green Paper. Here creativity is presented as the lifeblood of the knowledge economy and results in the input of aesthetic processes, design and technological innovations and also in the true added value of the processes in place, giving more than positive impact on the quality of the products, thus increasing, at the same time, the level of competitiveness of the economy.

The effort to understand how cooperation between CCI and AVM could work is facilitated from suggestion made by the interviewees and also other recent studies. Virtuous practices of innovation are revealing some pioneering process of collaboration, already firmly hired by big and multinational companies.

The first of them is design as re-thinking practice of business strategies to create value. The second one is the definition of servitization as "a process of building revenue streams for manufacturers from services." (Baines et al, 2017). The last one is in business communication area, intended as rebranding or construction of narratives and value proposition to the market. These are recognized as three method or practices which represent perfectly a worthy area for cooperation collider concept.

Design has been presented by the interviewees as one of key element within CCI, regarding not only the specific economic activity (interior design for instance), but widely the method and process which characterize cultural and creative business.

> *"We are a creative company, because we use creativity and also design, as a business tool. We have an Anglo-Saxon approach on it, where creativity is conceived to create value, an approach less humanistic and more technical, based on expression of skills typical of creativity which results in design tools."*

In this sense, design represents the skills, method and processes used by many professionals of CCI in their "production process" or value chain.

In the Anglo-Saxon tradition, as specified by the interview, design is a concept much more sophisticated compared to the traditional definition in other context, as the Italian one, where design is strictly related especially with aesthetic processes, resulting in "forms" and not substantial processes.

The anglo-saxon meaning of design is specified as an "applied art" – as well as, for example, architecture or photography -; it is distinguished from the "fine arts", the pure arts, like painting, dance or music.

Notwithstanding a common aesthetic quality ("art"), design also has a component of necessary utility that is lacking in the pure arts, which they can be "beautiful" without necessarily being "useful".
Design is a practical artistic method which could be applied to products (tables and chairs, precisely, or cars, smartphones etc.), and in this case it falls under what is called "Industrial design". But it is also applicable to immaterial objects, such as a website (web design), or to processes such as training (instructional design) or human-machine interaction (interaction design). More than a specific area, in short, design is an approach to so many possible areas, representing the most open and strong potential of CCI methods to innovative processes and business solutions.
This is especially because of its “technical” conformation, different from the pure creativity, which can interface with many different other logics. Design is the ability to project. Making design means, literally, to make a project, to give life to processes in order to build value and this is applicable to very different contexts and outputs.
Not as pure coincidence, interviewees indicated design thinking method as the cultural and creative process which is already used and understood by AVM.

“Despite high economic performance I do not find adequate, creativity is considered only as an aesthetic thing. In the last 10 years, however, this concept changed including creative thinking into processes […] What we do is a reinterpretation of a design agency. Not just the delivery of a finished product, we are involved much earlier in the processes.”

“From the more traditional Italian concept of creative, related to fashion and aesthetic design, the Italian concept of creativity is based on a proposal of skills and values limited, in which we do not identify ourselves, because we also work on different skills, more technical, more concrete, more more interfaceable with innovative processes and other products”

SLOVENIAN CASE

Brumen Foundation

With the Brumen Biennial of Slovenian Design – the central event in the field of visual communication design in Slovenia – and the Brumen awards – the highest national professional recognitions in visual communication design – the Brumen Foundation's international jury awards excellent Slovenian designers, top quality of Slovene visual communication design and clients that recognise design as an important competitive advantage. The foundation is named after Jože Brumen (1930–2000), Slovenian pioneer in the field of visual communication design.

The Brumen Foundation is headed by the management board, comprised of seven members including the president of the Foundation. The board of trustees is comprised of representatives of the Brumen Foundation, the founding company Riko d.o.o. and two independent designers.

Goals:

•Encouraging a critical reflection of visual communication design

•Promoting excellence in design and awarding exceptional projects, their authors and the businesses investing in design

•Organising exhibitions, publishing catalogues and monographs relating to the exhibited authors

POLISH CASE

Foonka

The flagship product of the hayka® brand is bedding. We will find in it not only a substitute for summer adventure, but also several intriguing creatures and objects. There are mice, a moth, a lost button, a needle ... Like hay. These elements make hayka® bedding arouse so much emotion and joy.

In addition, thanks to hidden elements, each bedding set is different. The printed fabric goes to the sewing room, where it is cut into pieces corresponding to different sizes of pillowcases. It is at this stage that individual products are created and thanks to the ladies working in the cutting room, some find a lost button on their cushion, while others find a moth. It all depends on when in the pattern the pillowcase falls out. This is amazing because the probability of finding two identical hayka® bedding sets is virtually impossible.

The main assumption of the brand was that the products were 100% polish, from design, through fabric and printing, to packaging. After long weeks of searching, we managed to develop the production process in such a way that the final product could clearly indicate "designed and made in poland". The bedding is made of 100% cotton with a satin weave. Both fabric and print have the oeko-tex standard 100 certificate.

POLISH CASE

Sylwia Majdan

Sylwia majdan is a polish fashion designer. A graduate of economics at the university of szczecin and the academy of fine arts. W. Strzemiński in łódź. Her passion for design translated into a profession that she does. In 2004, she showed her collection for the first time and became a semi-finalist at the prestigious new look fashion oscars. In his ateliers he creates unique designs, but as everyone says, there is something for everyone. Her unusual world of fashion is full of shades, feminine shapes and sexy styles. Her look at the cut and great tailoring make sylwia majdan brand associated with the highest quality and elegance. The best quality fabrics and creations that have been created for years emphasize the beauty and femininity of the figure.

ITALIAN CASE

Bonotto Company

This company has faced the dangerous transformation of the Italian industrial textile sector, a sort of production apnea that has viewed gain and mass production as the most important qualities, by creating the unique composition between art and manufacturing goods. The artisans who work in the company are in constant contact with high-level designers and artists and artworks.

The company propose today a product unique and with high added value famous all over the world.

The company image and storytelling is known as a good practice of sensitivity and vision between entrepreneurial spirit and the world of culture and art.

The company has its own Foundation which works as cultural and art promoter in many directions, participating in the growth of the sector, of art and of its own product.

GERMAN CASE

European Design Days

The "European Design Days" and the "Directory of Creative Service Providers in the Stuttgart Region". The European Design Days are an initiative of the European regional network ERRIN. The main task of the ERRIN Group Design & Creativity is to promote and establish design as an important and valuable instrument for promoting innovation. In order to make the added value of design accessible to a wider audience, the EU Design Days were launched in 2012. Examples from different regions were used to illustrate the possibilities and ways in which design processes and methods can be successfully implemented. The event is an important meeting place for designers, SMEs, policy makers, representatives from universities and the European institutions. The Stuttgart Creative Region is firmly involved in the planning of the Design Days via the Brussels office of the Stuttgart Region and regularly provides speakers and panelists from the region. In this way, the creative region is presented on a European platform and at the same time receives valuable suggestions from creative professionals from other regions.

The second "open window" enabling the collaboration between CCI and AVM is represented by **servitization** trend. Baines (2017) distinguish three levels of services that can be offered by manufacturers:

Base services – goods and spare parts

Intermediates services – product repairs, maintenance, overhauls, helpdesks, training, condition monitoring

Advanced services – customer support agreements, outcome contracts.

We observe cases, also very well known, in which native digital enterprises have completely revolutionized an entire sector through the servitization, completely transforming products and goods into services. This is possible only because of the dissemination of digitalization, but also to creative re-design of business models.

In cultural industry sector many companies became case study of servitization process.

The music market has experienced years of crisis, not because music wasn't important anymore, but because consumers started to prefer digital music to CDs. This shift from material support to downloading a file was preferred because of its flexibility and the customization it offers: the customer can choose to buy a single track without being forced to download the entire album. The next step was taken by platforms such as Spotify and Deezer, which, thanks to their innovative method, made listening to music exclusively a service increasing sales exponentially.

The same process took place in the movie and television entertainment market. Netflix is the platform that forever revolutionized and changed the way we enjoy and receive visual content thanks to a high level of technology and a totally new product strategy, made of services.

Amazon, in addition to the upheaval in the world of distribution and retailing, is moving farward another important and recent trend. Amazon's Audible marks the transition that many consumers are making from buying and reading books to listening to stories. This new trend is supported by changing lifestyles and the ability to enjoy content in very different ways thanks to technology, but also the creative dimension of a new set of possibilities.
Certainly these are the most important and well-known cases, but the service revolution in manufacturing industry touches the most diverse areas and becomes more and more open thanks to new technologies. From tennis rackets that, thanks to IoT, tell the user about their performance to bicycle sharing in urban spaces, all products in all sectors are potentially “servitizables”. This is an important area of experimentation and innovation between creative techniques, design, new cultural lifestyles and the functions and technical characteristics of manufacturing goods.

Lastly, **communication is another trend** which promise good interaction between CCI and AVM. Communication and marketing are anymore only strategy to analyse market demand and to sell a product, they are getting more and more value oriented, trying to customize and personalize customers’ needs as much as possible. Communication today must have a human and value centered approach pervading also other strategic processes related especially to business culture, identity and reputation. The brand becomes the fundamental lever for building a continuous and solid relationship with the market. The target is increasingly sought out and more and more companies work on "communities", also more and more communication is done on desires and less on needs.
To increase this specificity, the branding activity will be even more strongly focused on the social field. So the social and cultural dimension, the ethics of companies, their location in the world, environmental sustainability and so on are increasingly becoming distinctive factors of belonging for the public.
In this sense, communication campaigns are characterized by very creative approaches to unprecedent method: as storytelling, social network platform presence, podcasting, use of video, images and art expression in many ways; and unprecedent topic – as social or environmental impacts, political positions, territorial issues, educational dimension, and so on. This new way to tell the company and to build narratives for a large community, made of different stakeholders, not only customers, is requiring more and more interaction between cultural and creative world and manufacturing.
Also in communication area, digitalization is being pervasive. Digital marketing and big data related to artificial intelligence power of calculation are opening the way to new important trends and assets.

TECHNOLOGY AS THE OPEN DOOR

"Technology represents a new world and opportunity for both CCI and manufacturing and they need each other to go to this direction."

Digitalization has already made its great entry into societies, lifestyles, markets and businesses.
A first area of penetration of digital technologies concerns improvement of organizational processes, planning and supply-chain to simplify and make more efficient production work. Technology pervades also the offer and characteristic of products, it becomes more and more "servitization": from owning a product to use the service related to this product. Technology transforms operational production lines, and interaction with – and among - customers.
The biggest concern for every advanced manufacturing company or any company which is developing a digitalization path is to avoid the trivialization of technological tools. The big danger in introducing technologies not included in an overall strategy, is their transformation into useless gadgets unable to provide any added value or experience. The digital strategy of organizations is a matter of economic resources but also and maybe overall of new mindsets, skills and abilities to manage change in order to create new values.
In this sense, cultural and creative professionals are more and more required because of their predisposition to understand changes, to build emotional experiences and to drive design processes into real value creation. It also works in digital transformation of products, services and processes.

The observatory of Industry 4.0 of the Politecnico of Milan in Italy, indicates as the main trends of the digitalization processes in manufacturing production and supply chain processes:

Manufacturing Big Data and Industrial Internet of Things
Specialization of methods and tools to process a large amounts of data on manufacturing and supply chain management. The data can therefore come from IoT systems connected to the production layer (for example sensorized and connected machines), or from the exchange between IT systems for the planning and synchronization of production and logistics flows. Manufacturing Big Data includes the application of new techniques and tools for Data analytics & visualization, Simulation and Forecasting, to highlight information hidden in the data and its effective use to support rapid decisions.

Additive Manufacturing (3D printing)
Additive Manufacturing is the set of all technologies and production processes starting from digital models. The use of 3D printers for prototyping - and increasingly frequently for the production of spare parts, for example - is a clear example of additive technology. It starts from a 3D CAD model that is divided into layers by an integrated system (or online) in the printer or in the machine that deposits the materials according to the stratification defined to manufacture the product. In some cases the use of this production technique is even the only possible solution due to the limitations that traditional techniques have.

Advanced Automation
Many advanced processing techniques and tools are improving production results in terms of quality and time. These include high-speed machining, multi-axis capability, robotics and laser scanning. Productivity has improved, for example, due to the high quality tools for complex parts, models for reuse and high speed roughing for faster production. At the same time, quality is improved with superior surface finishes, collision check / avoidance and imported surfaces, solid or mesh.

Advanced HMI (Human Machine Interface)
This is the recent development in wearable devices and in the new man / machine interfaces, for the acquisition and / or transmission of information in vocal, visual and tactile format. The Advanced HMI includes well-established systems, such as touch displays or 3D scanners for the acquisition of gestures, and more innovative and bidirectional solutions, such as augmented reality viewers to support operational activities and operator training. Researchers consider devices with a prevalent data acquisition function (e.g. wearable device for measuring environmental and safety parameters) in the Internet of Things basin, and those with innovative components in the interaction between operators and mechanical and IT systems in the Advanced HMI field.

Datamining
The set of techniques and methodologies which have as object the extraction of useful information from large amounts of data through automatic or semi-automatic methods. Datamining is often defined as the new era for creativity.
An interviewee in our mapping activity indicates how professionals in datamining need to be “artists”, or “artisans” in the digital world, able to give images and stories about the world, coming from digital world, in this case Big Data world.
The Data Scientist, who is a candidate to be the artist of a new era, must to go beyond the surface to see what is hidden behind the data. Digging into the Datamining, their options and possibilities, bringing out an answer, asking new questions: this is the creativity that is needed to drive the potential of Big Data.
Technical, cultural and semantic skills are required together with the Data Scientist, giving life to one of the first future professions typically build on transversal knowledges and new mindsets.

These digital trends, applied to products, processes or communication open a significant world for new ideas, applications, experiences and possibilities in business, for both CCI and AVM. However, to generate real added value requires multidisciplinary and innovative abilities.

“Now we are working a lot on InnovationLab project. Its focus is on innovation, especially in Big Data issue, but our most important concern is about how to make a creative use of this new tools in order to reach real innovative process for people and business.

The big output of this project is to generate new products and digital information use to give benefits to citizens, and creative professionals are needed and we must have them in this project."

One of the most important path through which cultural and creative industries cooperation with advanced manufacturing could work is through the innovation of business models, however, this will be the main object for the future work within the COCO4CCI project.

Some of the experiences reported in the interviews during the mapping process are related to pioneering form of interaction and teamwork between **artists** and technology experts.

ITALIAN CASE

Maker art

Maker Faire as the official most important event of innovation is building an important section which let the artists work with companies in the Hi-Tech sector: the idea is to make artistic residences in the Tech Firms. In fact, MakerArt is a project that aims to investigate the relationship between contemporary creativity and new technologies through the creation of synergistic and integrated paths between selected international makers and artists. Therefore, the goal is the realization of a real exhibition of interactive installations able to involve the audience. And not only that, but also to represent the many different ways of interpreting the culture of technological innovation.

-The project manages to create the increasingly close relationship between man and machine, by creating artistic residence in Tech Companies

-It leads to enhancing the ethical and humanistic elements of technological innovations, thanks to the collaboration between art / ethics and engineers.

-It leads to reconsider a new art economy, no longer as a world for elites, but as a engine for horizontal social growth.

AUSTRIAN CASE

Robotic Woodcraft

Robotic Woodcraft is an interdisciplinary research project funded through the program for arts-based research of the Austrian Science Fund that investigates the craftsmanship of the future. Today, robotic arms have become indispensable for many branches of industry and their falling prices; along with new, accessible software, robots are becoming increasingly relevant to the creative industry, especially crafts- men, architects, and designers.

The idea of the Robotic Woodcraft project was not to consider robots to be fabrication machines that make up the last part of a design to production workflow, but to treat them as integral design tools and multifunctional interfaces that allow us to move from a digital environment into physical space.

This required a change in design thinking, as we do not create a digital model that is then fabricated, but instead design an entire customized robotic fabrication process. Coupled with dynamic, parametric design software, having control over the entire process enables mass-customization, making it possible to offer customizable, individualized objects with the same efficiency as mass production.

The interdisciplinary team believed that this intelligent, customizable, local production will be the key to the craftsmanship of the future. The choice does not have to be made between traditional woodworking and automation, in- stead the collaboration between robots and craftsmen will be crucial, building upon the individual strengths of each partner.

Achieving that goal required a collaborative effort between different disciplines. The Robotic Woodcraft project involves master craftsmen, as well as mathematicians, architects, and designers, collaborating closely with the industrial designers of Lucy.D, as well as the roboticists of the Association for Robots in Architecture, thus bringing together a deep knowledge of the material, i.e. wood, with geometric understanding, expertise in robotics, as well as design skills.

ITALIAN CASE

Re:humanism

A technology consulting firm announces the first edition of the Re: Humanism contest. The contest is proposed as a means of investigating the advent and diffusion of Artificial Intelligence technology in the world of contemporary art. Particular areas of interest within AI are meaningful connection between art, philosophy and :

Natural Language Processing

Machine Learning

Robotics

The context has been a success. Artists presented interesting artwork with reference in AI and ethical, moral, philosophical use of AI technologies. 120 proposals from all over the world were presented, made with a great artistic depth. Art as a collection of profound reflections, they have shaken souls. This is a big example on how creativity and innovation must to stay together.

SLOVENIAN CASE

Kersnikova Institute

Kersnikova Institute is a non-profit and non-governmental cultural organisation, founded by the Student Organisation of the University of Ljubljana, and serves as an institutional frame for three progressive venues: Kapelica Gallery, a world renown platform for contemporary investigative arts, the hacker space Rampa, where relations between society, science, technology and art are being reconsidered, and the inspirational laboratory BioTehna, which focuses on the artistic research of living systems. Over twenty years of daily activities have resulted in hundreds of unforgettable moments and experiences, which have given the contemporaneity form and meaning. Kersnikova Institute is due to its strong programme focus marked on the maps of the most interesting international centres dealing with contemporary investigative arts, science and cuttingedge technologies.

SLOVENIAN CASE

konS Platform

The konS – Platform for Contemporary Investigative Art project aims to promote breakthrough artistic creations and establish a production environment where art ideation can be translated into recommendations for the innovation of better, safer, more sustainable and ethical products and services. By promoting excellence in artwork, konS wants to create an inspiring environment for creators of the future among children and young people, and for decision-makers and professional stakeholders involved in the creation of new technological applications and social innovations. Partners in the konS project consortium include nine Slovenian intermedia organisations.

Table 17. Cultural or creative processes identified in AVM					
Italy 	Slovenia 	Slovakia 	Poland 	Germany 	Austria 
AVM are protagonist of cultural and creative processes thanks to their ability to **develop products which are in fact cultural and creative goods**.	**Design thinking**	AVM are affected by the way of thinking, **abstract thinking, creativity** has so little tangible necessary **for innovation**	There are no support programs for cooperation between creative and traditional industries. There is a lack of dialogue and knowledge between CCI and AVM .	All AVM companies also have to deal with creative issues, such as **marketing, advertising, brand development, product design**, architecture, or communication.	CCI is a forerunner in work and **value creation systems**
A central role is played by **digitalization and industry 4.0** in generate more innovation in creative and cultural processes within AVM.	**UCD - User Centered Design**	**Holistic approach** - thinking in a wider context	**Small R&D projects** and little money available for SMEs doing innovation.	**Design thinking**	**Creative approaches** and ways of thinking will thrive innovation in AVM
Artists in companies, surpassing even the most accepted presence of designers. Many AVM in the technology sector are creating residency programs for artists	**Social innovation Grow your own (as next step from digital transformation)**	**Technology** penetration between people and their adaptation to other sectors allow more creative processes	Program for the Competitiveness of Enterprises and SMEs 2014-2020. The main objectives of the program are: strengthening the competitiveness and sustainability of EU enterprises; fostering entrepreneurial culture.	**Differentiating products and creating user experiences** is a creative process in AVM.	**Trial and error approach** of the creative industries

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