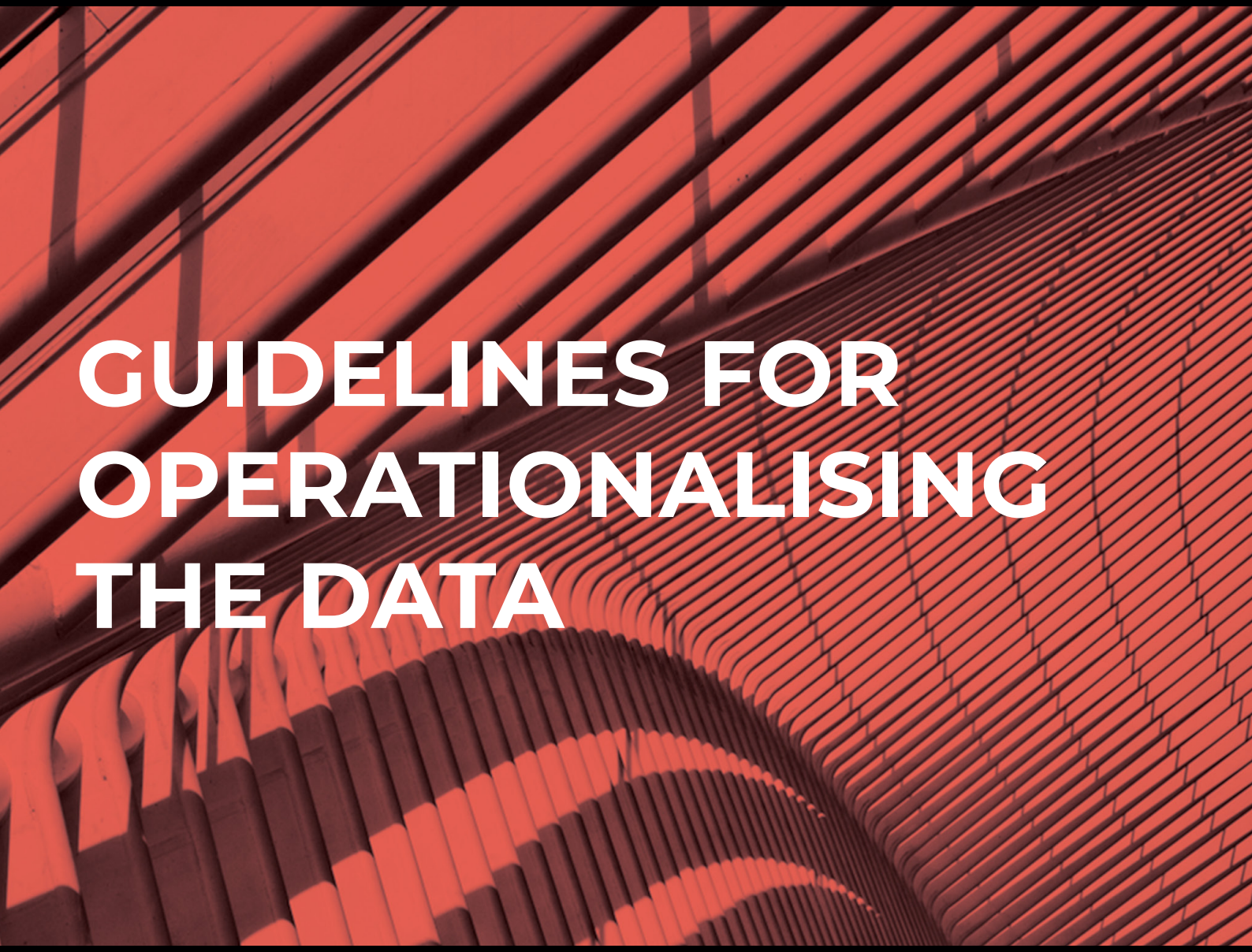
DISCE

DEVELOPING
INCLUSIVE
AND SUSTAINABLE
CREATIVE ECONOMIES



# GUIDELINES FOR OPERATIONALISING THE DATA

A Horizon 2020 project by:

UNIVERSITY OF TURKU

TRANS EUROPE HALLES

GSSI
GRAN SASSO SCIENCE INSTITUTE

culture & media agency europe, AISBL
CUMEDIAE

KING'S College LONDON

STOCKHOLM SCHOOL OF ECONOMICS
SSE RIGA

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 822314

# GUIDELINES FOR OPERATIONALISING THE DATA

| | |
|---|---|
| **Project number:** | 822314 |
| **Project name:** | Developing Inclusive and Sustainable Creative Economies |
| **Project acronym:** | DISCE |
| **Deliverable number:** | D2.2 |
| **Deliverable name:** | Guidelines for operationalising the data |
| **Work Package:** | WP2 |
| **Responsible partner:** | GSSI |
| **Author:** | Chiara Burlina, Gran Sasso Science Institute |
| **Type:** | Report |
| **Due date:** | Revised version submitted in September 2020 |

# Executive summary

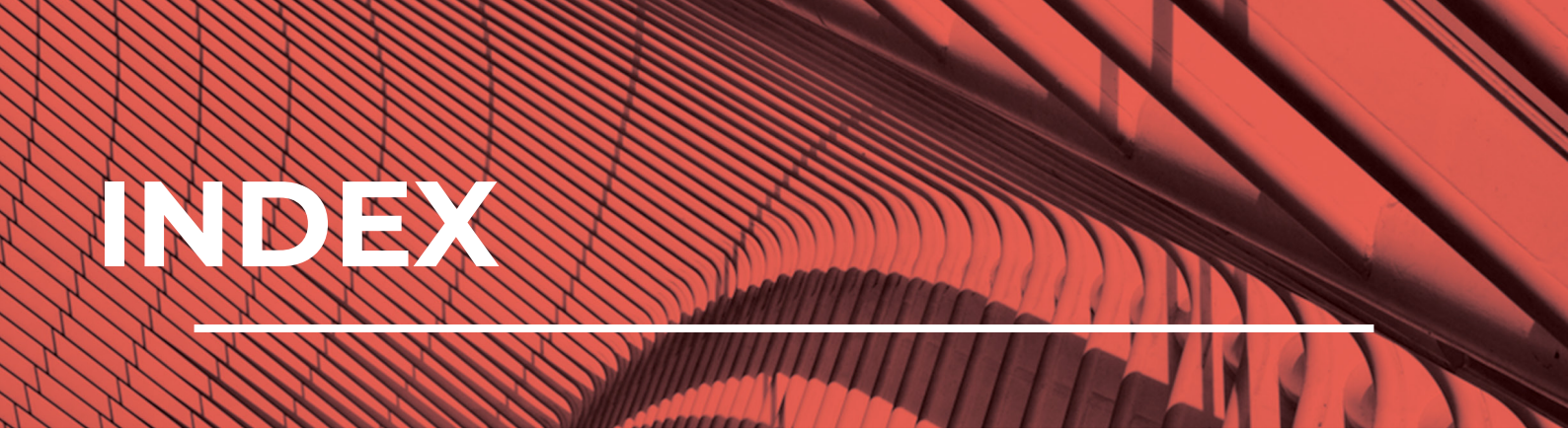
Among the goals of the *Developing Inclusive & Sustainable Creative Economies* (DISCE) project, and in particular for what concerns WP2 main objective, is the need to collect quantitative data and improve the state of the art of the creative ad cultural industries (CCIs) statistical definition. To reach this goal, the quantitative strategy adopted by the WP2 is based both on secondary and primary data collection process.

For what concerns secondary data, WP2 analyses a set of indicators at country, regional (NUTS2), province (NUTS3) and city level. This procedure allows both academics and policy makers to have a consistent overview of all the available data related to several aspect of CCIs, such as: cultural venues and facilities, cultural participation and attractiveness, creative and knowledge-based jobs, and so forth. Moreover, this phase covers not only different characteristics of CCIs, but also information about their components (i.e. supply, culture consumption, tourism, education) and socio-economic and institutional variables. These latter have been included to provide a detailed description of the CCIs contexts (UNESCO, 2019). The time span of the analysis is from 2000 to 2018 and it covers all the CCIs in EU-28 countries. Another source of secondary data is represented by firm level indicators. According to the NACE2 classification codes of CCIs presented by the

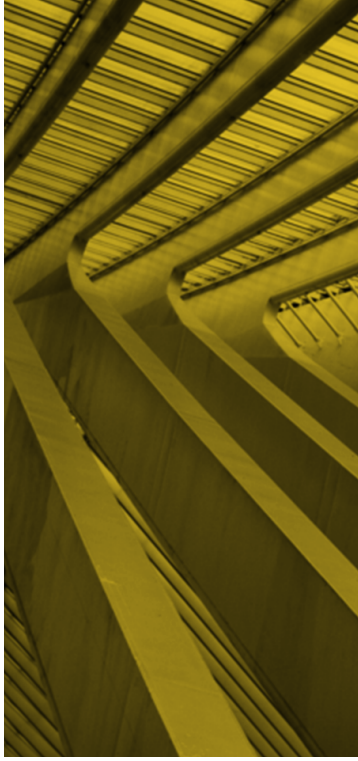
UNCTAD report (UNCTAD, 2008), firms' information (both financial and structural) are analysed in a ten year time span to better understand the evolution of these enterprises over time, and their role in enhancing local economic development.

Secondly, WP2 analyses primary (individual level) data, in particular for what concerns the responses collected through interviews and workshops. The aim is to build a comprehensive database on the main variables of interest. In collaboration with the other researchers, geographical analysis through maps and network-analysis will allow to develop *ad hoc* representations to draw a complete picture of the CCIs at the actual state and give a feedback on the dependency between CCIs and the concentration of economic activities within the territory. Moreover, a consultative stakeholder survey will be launched in collaboration with WP3, WP4, WP5 and WP6 to will validate the results gathered during the regional case studies.

Within the end of the project, WP2 will have an exhaustive data collection with at least three levels of analysis: territorial (macro-level), firms (meso-level), and individuals (micro-level). For each of these three levels, the focus will be on data concerning productivity, value added, employment, social and institutional characteristics, trust, inclusivity and sustainability. The wide-ranging data collection will eventually allow to redefine the definition of the sector and will provide a more comprehensive identification of stakeholders for future research in the field. Furthermore, the analysis of CCIs and their role in society will determine a better understanding and mutual support both from the policy makers and curatorial perspectives.



# INDEX



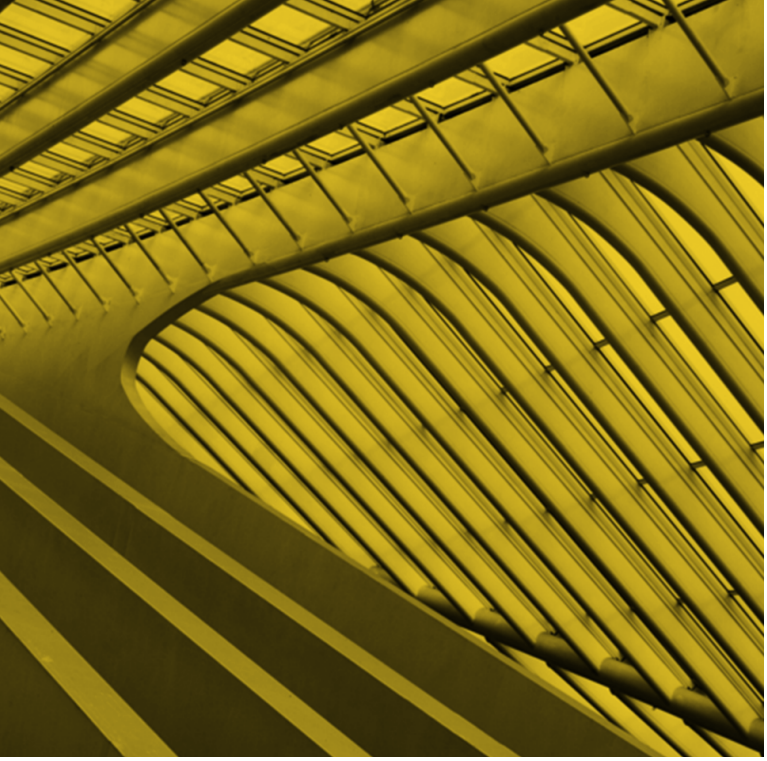
# 1. Different methods to measure CCIs

According to the CCIs literature, there are very different aspects to consider when measuring these industries (Banks & O'Connor, 2017; Ortega-Villa & Ley-Garcia, 2018). The first issue concerns the direction of analysis: from one side it could be demand-driven, when the focus is the impact of cultural industries on economic growth; on the other side is product-driven when it considers the factors (geographical, institutional, social) that affect the CCIs development (Potts, 2011; Towse, 2011; UNESCO, 2009).

Regarding the output side, among the most common variables are employment growth rate and value added or GDP. Cerisola (2018) and Piergiovanni et al. (2012) have studied the effects of different creative components on employment and value added for Italian provinces. Both studies show that there exists a positive relation between province growth and the presence of CCIs. Crociata et al. (2018) investigate the spatial evolution of the creative workforce and the economic growth associated to CCIs for several regions in Europe in the pre-crisis period. Their findings support the idea that some regions attract and maintain higher percentages of creative employees, following a clear spatial pattern across Europe. The empirical analysis reveals that the surrounding environment plays an important role when looking at the development and growth of CCIs.

Thus, are creative industries that drive economic growth, or is the relationship the other way around? The study by Marco-Serrano et al. (2014), try to solve this question by analysing regional European data for ten years between 1999 and 2008. In their study, they proxy economic growth through regional income generation and the contribution of CCIs is represented by the number of employees in those industries. Their findings reveal that the relationship exists in both ways, as far as CCIs attract skilled workforce and qualified human capital that in turn positively affect the economic growth of the European regions (Marco-Serrano et al., 2014).

Another aspect that deserves attention due to the aim of the DISCE project is the sustainability and tolerance related to the CCIs framework (KEA & PPMI, 2019). Boschma



and Fritsch (2009) study the regional distribution of the creative employees for seven European countries, with respect to tolerance and openness behaviours. Their findings support the relation between these two concepts, in particular for areas characterised by high-skilled workforce, which contributes to higher regional growth rates and higher degrees of tolerance. Along the same vein, Bagwell (2008) develops a case study on six jewellery clusters in the City Fringe area of London to better understand local economic development and social inclusion aspects. In this area, the prevalence of ethnic minority groups is a driver for inclusivity purposes of creative industries, along with the development of qualified human capital and public support.

Besides human capital (Marrocu & Paci, 2012) and market structures (Comunian, Chapain, & Clifton, 2010), it is interesting to investigate which are the factors, that might play a role in the creation of CCIs. Taking the local and regional perspective as the unit of analysis, Chapain and Comunian (2010) highlight four categories that affect the development of CCIs in two cities/regions in UK: personal dimension, operational sphere, networking aspects and regional infrastructures. The assets of these two areas, in particular the size and infrastructures play a fundamental part in attracting creative firms. The role of network has been stressed also by Drda-Kühn and Wiegand (2010) for what concerns small towns in rural areas in Germany. With respect to Chapain and Comunian (2010), where the unit of analysis was influenced by the power of the large metropolitan city of London, the case of Altenkirchen shows an environment where CCIs are still at their preliminary stages. Here, the enabling factors are represented by the strong presence of networks which connect public administration, tourism industry, business communities and local cultural community. The importance of network and cluster initiatives is supported by the study conducted in Italy and Spain by Lazzeretti et al. (2012). The authors find similar patterns as in the UK for Spain, where cultural industries are located close to big cities, while in Italy they are dispersed along the territory. These results are explained through the importance of urbanization economies (Lorenzen & Frederiksen, 2008), which are denser in Spain than in Italy.

As reported in previous studies, there is no clear consensus on which is most appropriate way to measure CCIs and which is the representative unit of analysis (Markusen, 2013). However, throughout the DISCE project, the goal is to define a exhaustive taxonomy that will be complementary to the existing literature, with some innovative elements as the sum of different approaches, such as the ecological approach (Gross & Wilson, 2020), and special attention to the themes of inclusivity and sustainability (Soini & Dessein, 2016)  The next section reports some of the variables, at different unit-level, that mainly describe CCIs from a quantitative viewpoint.

# 2. Guidelines for operationalising the data

## 2.1 Data collection process

The DISCE project is set to improve and enhance the growth, inclusivity and sustainability of the CCIs across EU. In doing so, it is essential to develop a more comprehensive and systematic understanding of CCIs (KEA, 2018). A key step towards this direction consists of providing robust evidence about CCIs' definitions and measurement by using available statistical information in relation to the literature presented in the previous section.

Following the theoretical background presented in DISCE approach (Crociata, 2019), data operationalisation starts with the creative and cultural categories presented in the UNCATD classification (UNCTAD, 2008), and a set of indicators that comprehends innovation aspects, geography and spatial economics, and institutions. The logic behind the data collection is devoted not only to provide a descriptive profile to the creative and cultural sector, but also to empirically test unexplored paths to study this phenomenon.

According to the level of analysis, different sources were exploited to collect information. At the Country level: The World Bank, UNESCO, the United Nations Development Programme (UNPD), European Commission and EUROSTAT, UNCTAD, OECD, The Quality of Government Institute (University of Gothenburg), the International Council of Museums (ICOM) and the World Economic Forum were the main data sources. Some of them, like OECD and EUROSTAT, present data at regional (NUTS2) and province (NUTS3) level, that are merged with information from the National Statistic Offices to have finer grain observations. Moreover, National Statistic Offices is an interesting source for what concerns city level data. Some of these big cities (Berlin, Paris, Florence, Barcelona, Budapest to cite some of them) are the focus of a recent report by the European Commission (2019), where variables on creative and cultural cities are accompanied by other indicators of inclusivity and tolerance at city level.

The procedure to collect all the aforementioned data comprehends four different steps:

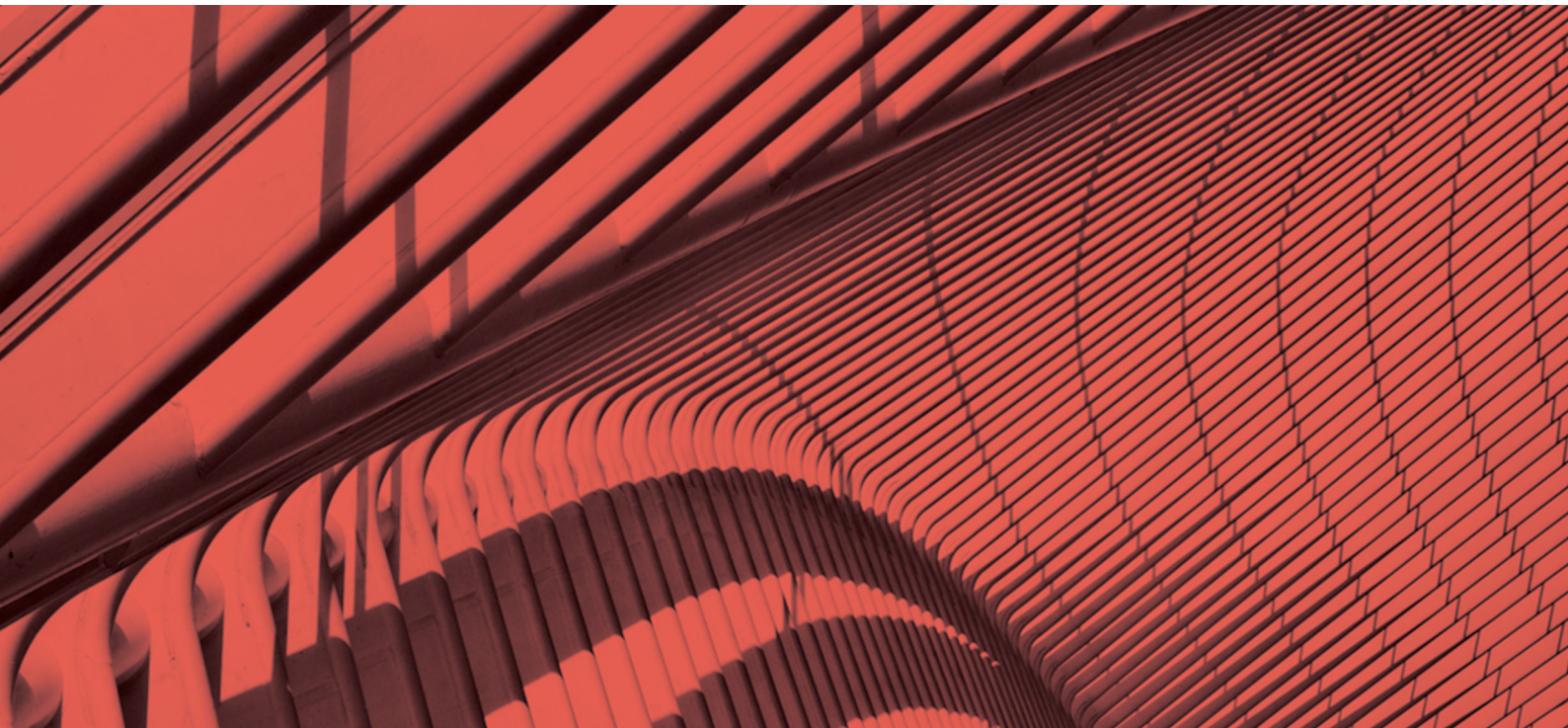
**1.** Mapping information. The first step consisted of mapping all the available sources of quantitative data concerning CCIs at both national and local level across European countries, through web scraping and in-depth report analysis.

**2.** Collecting quantitative data. The second step consists of collecting the statistical data and indicators for CCIs according to the classification defined by European Commission. The information gathered covers the different sectors of CCIs and its components (i.e. supply, culture consumption, tourism, education). Moreover, socio-economic and institutional variables have been gathered in order to provide a detailed description of the contexts where CCIs are developing. Data has been collected and systematised in a database including regions' names and NUTS codes as well as all the variables of interest and their metadata.

**3.** Adding other variables. A third step consisted of adding to this first data collection strictly focusing on CCIs other dimensions that are currently considered as related to them and those that we would like to link to CCIs in the next future, e.g. Well-being Index (OECD), Regional Innovation Scoreboard (European Commission) and EU Social Progress Index (European Commission).

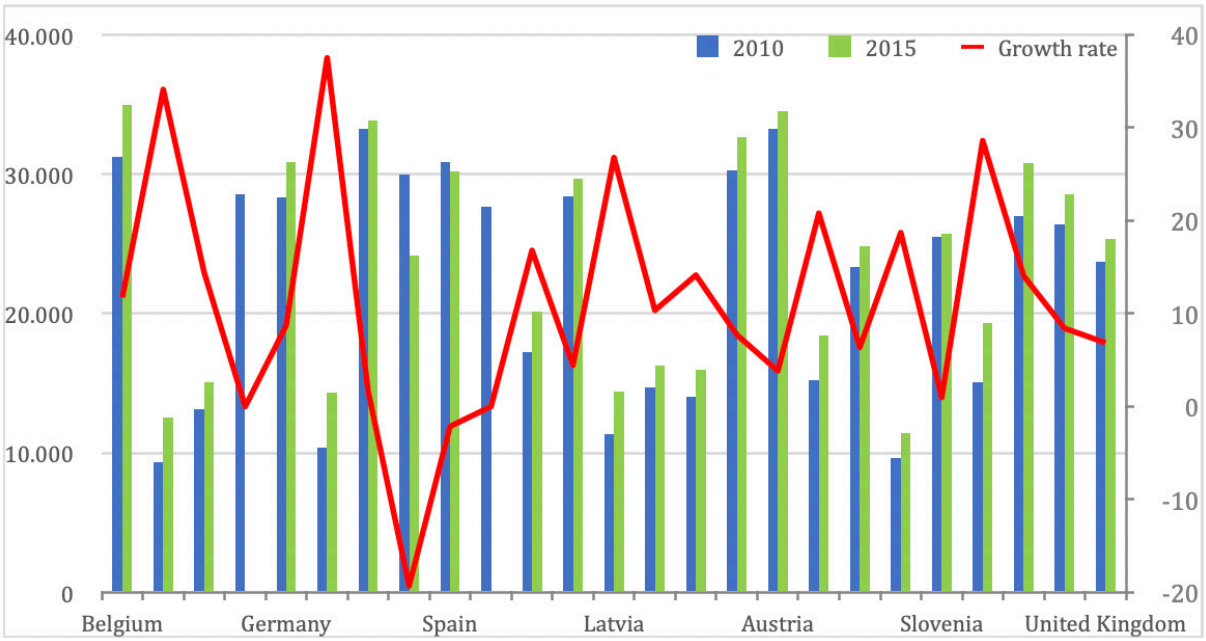
**4.** Sharing information. A fourth step consisted of sharing the knowledge regarding the geographies of NUTS 2 and NUTS 3 regions as well as the quantitative data collected with all the project partners in order to create a first common understanding concerning our contextual data.

Figure 1 reports an example of data extracted from the EUROSTAT database. The bars represent the mean consumption expenditure of private household on cultural goods and services at country level in 2010 and 2015. This variable can be considered as a proxy of the participation to cultural activities over the total of household spending. This information is important to be included in the database as it determines the link between creative and cultural supply and the individual consumption. Therefore, it is relevant to understand how much people are willing to invest in cultural



goods and services and their propensity to contribute to cultural development in their countries. For example, among the countries involved in the DISCE project (i.e. Sweden, Finland, UK, Italy, Hungary, Latvia, Belgium and the Netherlands) Belgium is the one more willing to spend in creative and cultural activities. Moreover, in terms of growth rates between 2015 and 2010, Latvia shows an increase in the mean expenditure of more than 26%. Overall, the eight countries under consideration show an increase in the average expenditure of about 11.75%, which is line with the average of the rest of Europe.

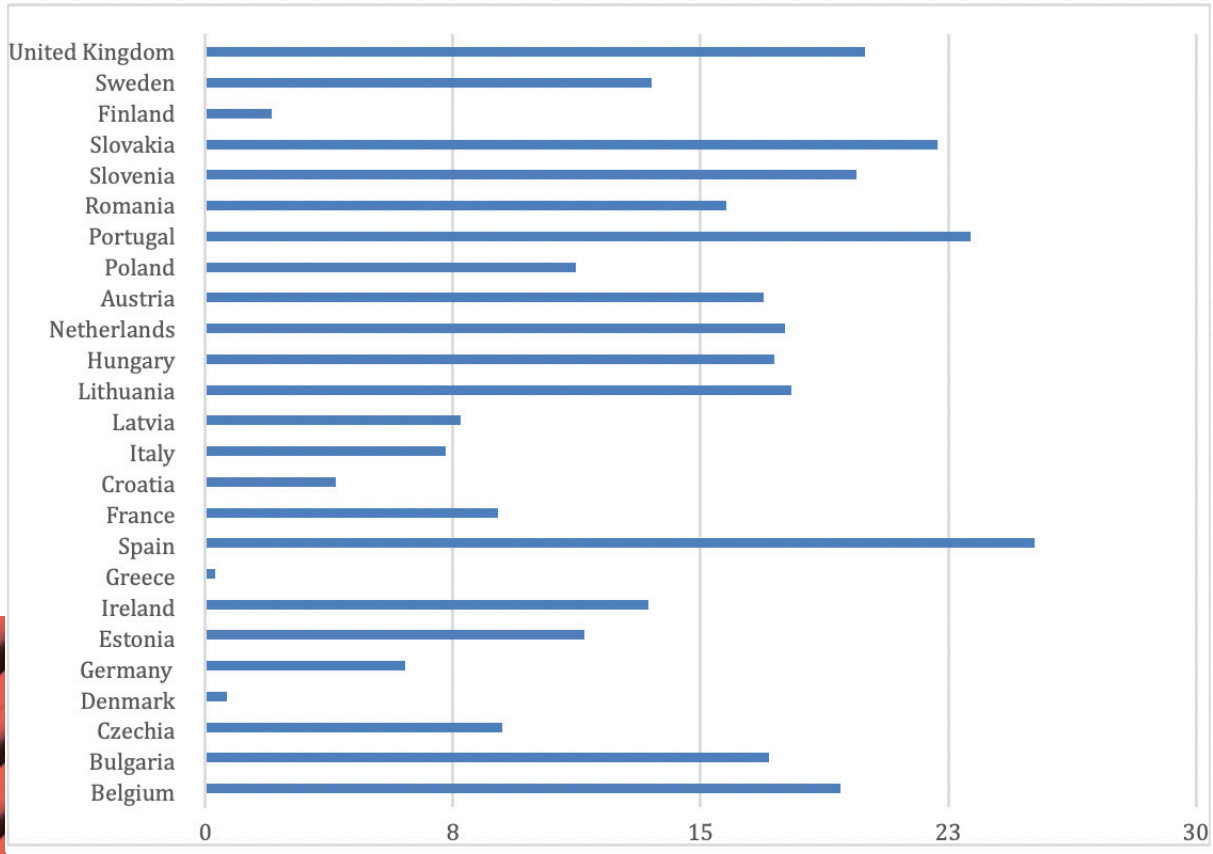
**Figure 1.** Mean consumption expenditure of private household on cultural goods and services in PPP (EUROSTAT – cult_pcs_hbs).




Another important variable to consider from the demand side is the workforce employed in creative and cultural sectors. Figure 2 reports the growth rates of cultural employment between 2011 and 2019. The bars represent the total aggregates of the main creative categories, such as: printing, publishing, programming, recording, libraries, videomaking, and arts. As it is possible to note from Figure 2, the employment rates are positive, revealing that the CCIs are hiring and growing in importance for the period under scrutiny. Within the DISCE project, for the eight countries under scrutiny, Belgium and UK are the best performing ones, with an increase of people employed in the creative and cultural sectors of more than 19% in 2019 with respect to 2011. On the opposite situation is Finland, which reports the lowest growth rate of only 2% in the same period. Despite these three countries, the group's members are quite homogenous, with an average growth rate of about 15%.

Cultural employment becomes a relevant factor for the DISCE project as it reflects how much a country is willing to invest to promote new working places related to this sector. An extensive review of the literature on the creative workforce and an in-depth analysis of statistical data are provided in collaboration with WP3.

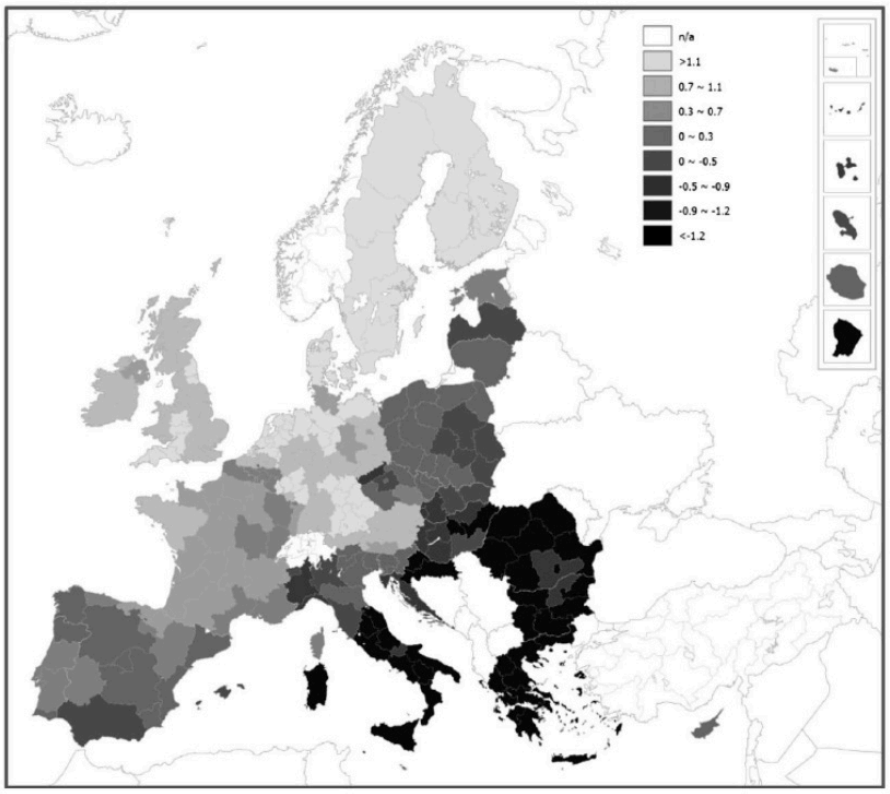
**Figure 2.** Growth rate of cultural employment in %, between 2011 and 2019 (EUROSTAT – cult_emp_n2).




Other territorial characteristics are considered in the statistics for CCIs regarding geographical and institutional aspects. As far as institutions are tightly connected to the creative and cultural industries, is it possible to note from Figure 3 how regions with a better quality of government do not always coincide with those ones where the employment rates in CCIs are growing or where people are more willing to spend for culture. In fact, the darker is the colour in the map, the lower is the quality of government. For example, in countries like Sweden where the quality of government is high (the indicator[1] takes value of 80), the employment growth rate was high too. On the other hand, Hungary shows a poor quality of government (about 24) but a remarkable increase in the average growth rate of the creative and cultural employment sector. Italy, which is characterised by a very bad institutional situation especially in the South, has a high level of mean expenditure for cultural goods, higher than that one in Finland in 2015 (see Figure 1). Therefore, the relation between creative and cultural variables and other territorial characteristics will need further investigation through the individual data collection to better understand how the creative and cultural community feels about the country's characteristics and infrastructural endowments.

1 The European Quality of Government Index reported in the figure refers to year 2017, and is a composite indicator that takes into consideration not only the perception of the quality of public services, but also the level of corruption, and the impartiality of institutions (Charron et al., 2019).

**Figure 3.** The European Quality of Institution index in 2017 (Charron, Lapuente, & Annoni, 2019).




## 2.2 Firm level analysis

Secondary data are analysed for creative and cultural enterprises, to have a snapshot on the state of the CCIs in the last ten years. During this phase, National Statistical Offices and Bureau van Dijk databases are exploited to collect financial and structural information about cultural and creative companies. In addition, georeferenced data are extracted to map the distribution of firms across Europe.

The final database comprehends all the CCIs' firms in Europe from 2009 to 2017, belonging to the Nace Rev. 2 (EUROSTAT, 2008) codes following the Guide to Eurostat culture statistics (EUROSTAT, 2018) reported in Table 1.

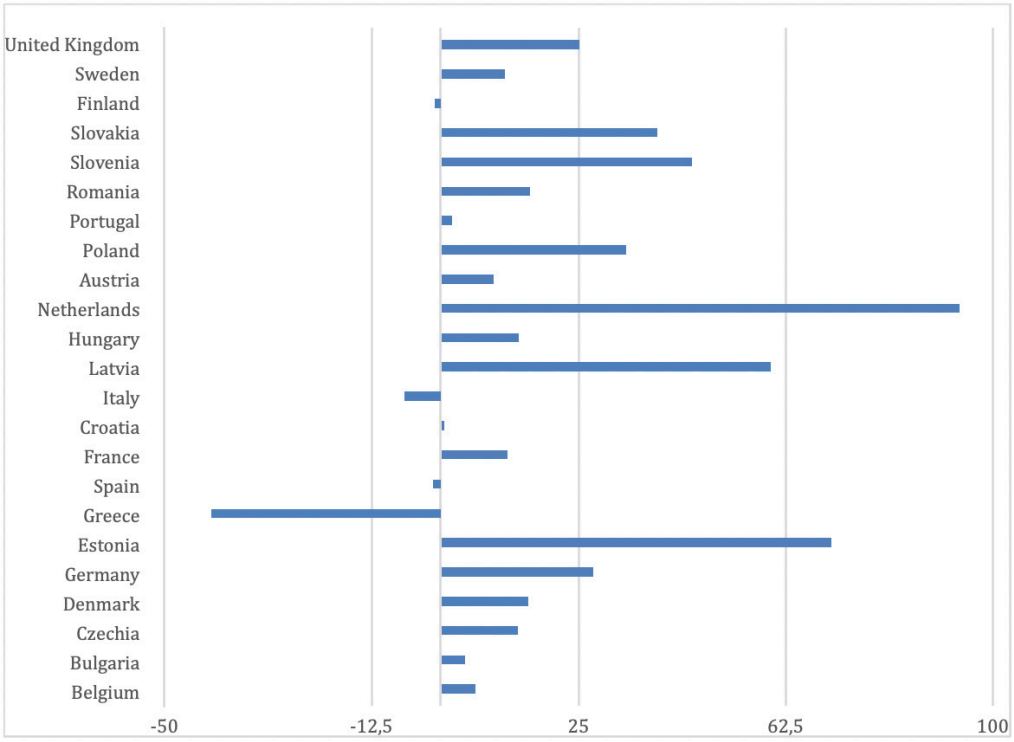
**Table 1:** Nace Rev. 2 codes for CCIs.

| Code | Description | Code | Description |
|---|---|---|---|
| 18.11 | Printing of newspaper | 71.11 | Architectural activities |
| 18.12 | Other printing | 71.12 | Engineering activities and related consultancy |

| | | | |
|---|---|---|---|
| 18.13 | Pre-press and pre-media services | 72.11 | Research and experimental development in biotechnology |
| 18.14 | Binding and related services | 72.19 | Other research and exp. development on natural sciences and engineering |
| 18.2 | Reproduction of recorded media | 72.2 | Research and exp. development on social sciences and humanities |
| 58.11 | Book publishing | 73.11 | Advertising agencies |
| 58.13 | Publishing of newspapers | 73.12 | Media representation |
| 58.14 | Publishing of journals and periodicals | 74.1 | Specialised design activities |
| 58.21 | Publishing of computer games | 74.2 | Photographic activities |
| 58.29 | Other software publishing | 90.01 | Performing arts |
| 59.11 | Motion picture, video and television programme production activities | 90.03 | Artistic creation |
| 59.2 | Sound recording and music publishing | 91.01 | Library and archives activities |
| 60.1 | Radio broadcasting | 91.02 | Museum activities |
| 60.2 | Television programming and broadcasting | 91.03 | Operation of historical sites and buildings and similar visitor attractions |
| 62.01 | Computer programming activities | 91.04 | Botanical and zoological gardens and nature reserves activities |
| 62.09 | Other information technology and computer service activities | 93.21 | Activities of amusement parks and theme parks |
| 63.91 | News agency activity | 93.29 | Other amusement and recreation activities |

From Figure 4 it is possible to observe the overall growth rates of the number of firms in each country from 2010 to 2017, considering the creative and cultural industries belonging to the NACE codes reported in Table 1. While the number of employees is increasing in all the European countries (Figure 2), the same cannot be pointed out for the growth, in terms of numbers, of creative and cultural enterprises. For example, in Spain and Finland, the number of firms has slightly decreased for the period under scrutiny, while Greece have been through a massive decline.

**Figure 4.** Growth rate of cultural enterprises in %, between 2011 and 2017 (EUROSTAT – cult_ent_num).




However, looking at Figure 5 and 6, where the percentages of total turnover and value added are reported respectively, the UK is the best performing Country despite the gross number of enterprises has increased less than in the Netherlands.

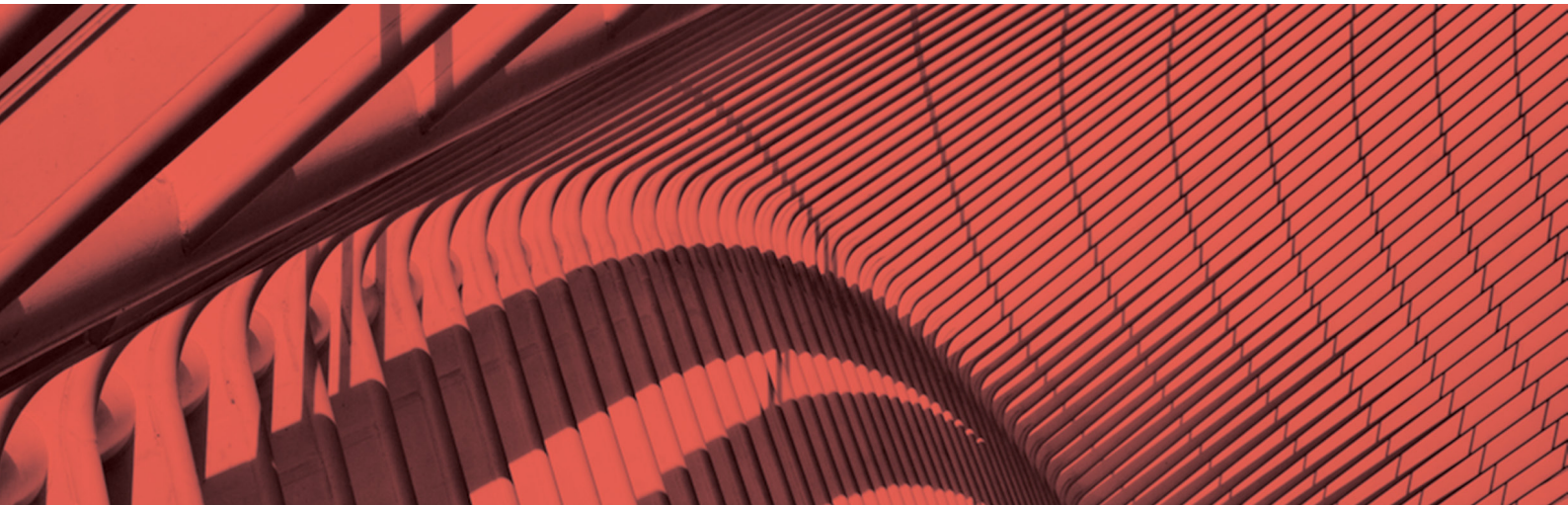
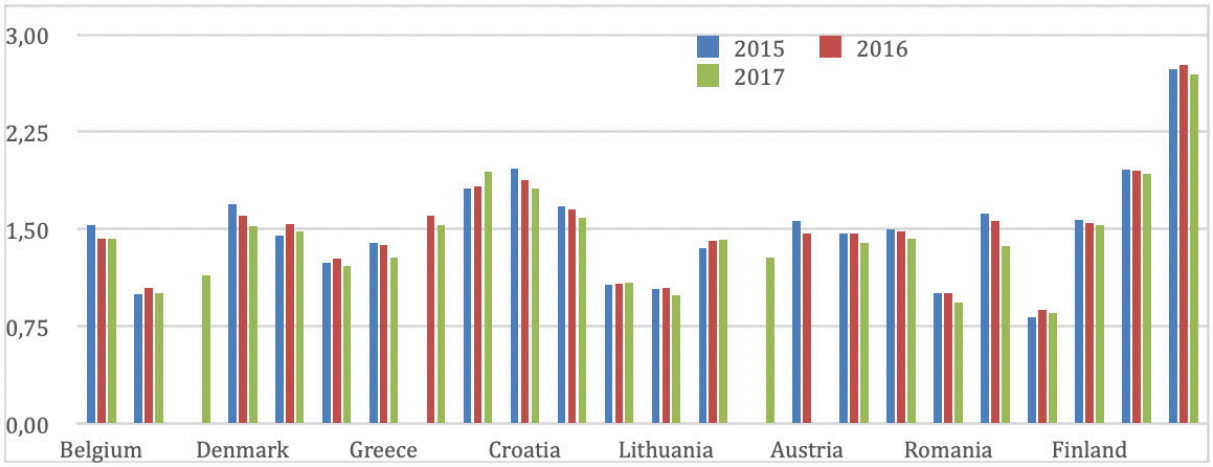
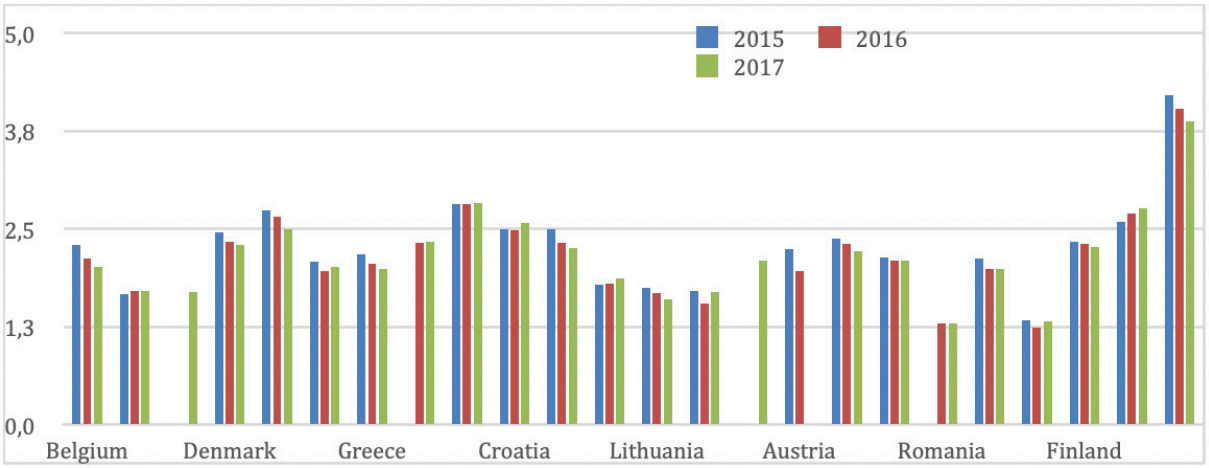


**Figure 5.** Turnover in % of cultural enterprises, between 2015 and 2017 (EUROSTAT – cult_ent_val).




On the contrary, Spain that has the most significative increase in the employment growth rate (in Figure 2), show a decrease in terms of enterprises and turnover (Figure 5), but an increase in the value added (Figure 6), which might be linked to industries producing goods and services of high value (Burlina & Di Maria, 2020).

**Figure 6.** Value added in % of cultural enterprises, between 2015 and 2017 (EUROSTAT – cult_ent_val).




Having these additional firm-level data merged with local-level data (for example the Quality of Government and infrastructures), the accessibility to cultural venues and the degree of inclusivity and sustainability, will ensure a very in-depth analysis of the creative and cultural economy at the current stage of development.

## 2.3 Individual level data

The collection of interviews will give additional information on different typologies of creative and cultural aspects that do not emerge from secondary data, in particular at the individual or community level. Among the proposed questions, the aim of WP2 is to understand how practitioners and associations define creativity with respect to inclusivity, sustainability, and growth. At the end of the interview period, answers are analysed taking into account the characteristics of each city and country were the interview took place.

The data is then combined with the European Social Survey (ESS)[2] directed by the University of London within the European Research Infrastructure Consortium Forum. The aim of this survey is to collect information at the individual level on personal and social well-being, social capital and social trust, social exclusion, education and occupation, among the other themes. This survey is conducted every two years and target persons aged more than 15 years for 38 countries in Europe. The inclusion of this survey will enrich the DISCE data collection process, in particular for the well-being individual characteristics and the social inclusion and exclusion feelings. These latter are quite difficult information to find at the regional level, therefore individual level data are more appropriate to be included in the analysis.

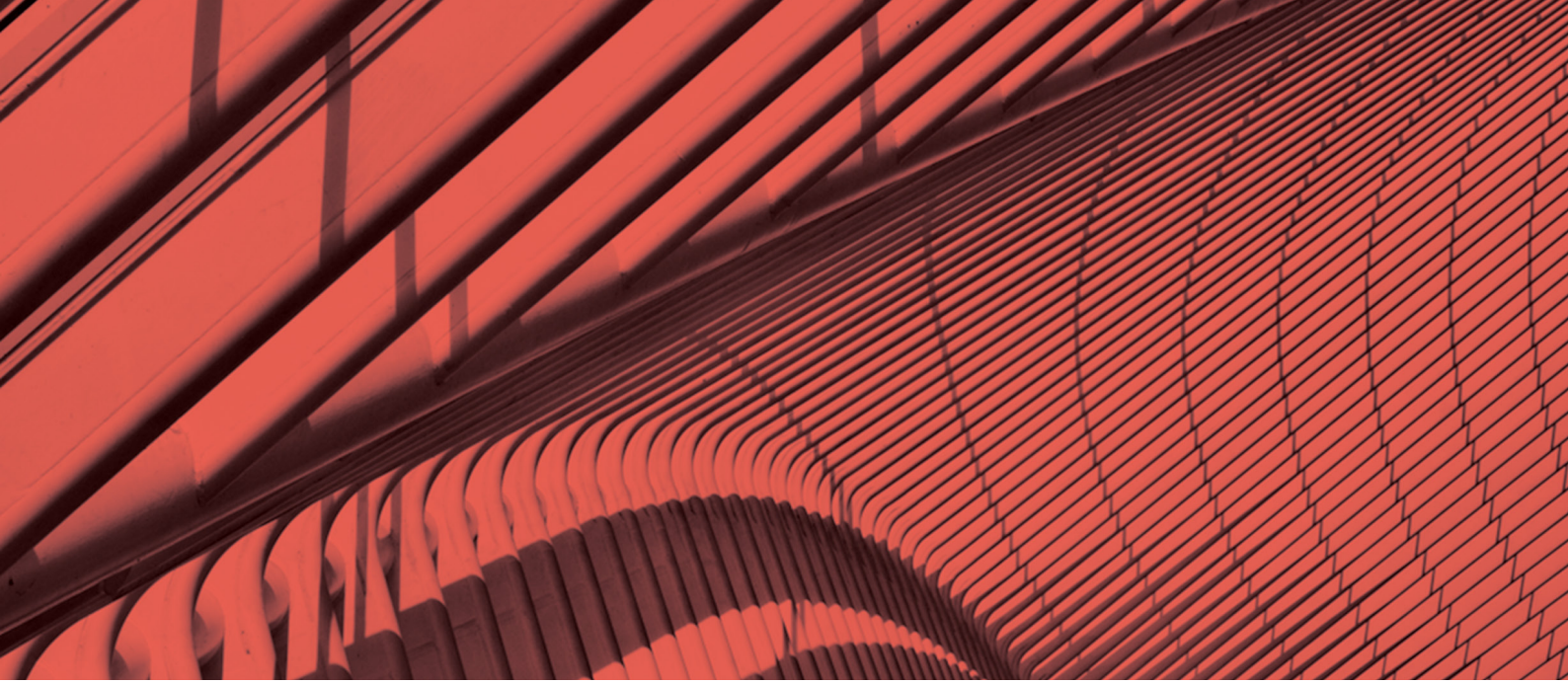
For what concerns the case study framework, in each city/case study, inhabitants have been invited to participate to heterogenous workshops. The next paragraph reports a brief description and the main conclusions of the four workshops for what concerns the inclusivity and sustainability aspects.

*DRESDEN*

The first vis-à-vis event of the DISCE project took place in Dresden in May 2019. The aim was to familiarise participants of the new and innovative DISCE project and its goals in enhancing the cultural development, sustainability, inclusiveness and growth of the Cultural and Creative Industries in Europe. For what concerns the WP2, of some socio-economic data at NUTS2 and NUTS3 level were presented in order to delineate the characteristics of the selected areas as case studies setting.

Additionally, the first co-creation lab was organised including different stakeholders and organisation, with the purpose to stimulate, in a very proactive and interactive way, heterogenous categories of people, from policy makers, to entrepreneurs, artists and academics. The intrinsic aim was to reflect about the effect of culture and creativity within the inclusivity and sustainability dimensions. This, in turn, will lead to the development of ad-hoc policy recommendations and strategies to strengthen the economic role of the creative and cultural sector. By working individually and also in groups, with a focus on learning as a sustainability strategy, participants had to understand how a cultural organization could share and create knowledge in strategic planning and cultural policy at individual, organisational and community levels. Finally, the last activity was how to introduce and embrace learning in their organisation from different perspectives. All the different forms experimented in this prelimi-

2 For an in-depth analysis of the survey, please visit: https://www.europeansocialsurvey.org



nary workshop help to understand how knowledge spillovers and aggregation might help to investigate the inclusivity and sustainability aspects related to the overall creative and cultural sector.

*TIMISOARA*

The second event has been organised in Timisoara in November 2019. In this session, researchers were already focus on their tasks. In particular, the main objective for WP2 was to understand how different stakeholder of the CCIs sector perceive inclusion and sustainability. The workshop was aimed to understand which categories are relevant to define these two concepts. This workshop was important for WP2 to better understand which might have been good indicators/measures/proxies for the statistical analysis. The main take away was the need for a thorough review of data and statistics available at EU level and for their homogenization in order to produce both cross-country analyses and a clear state of the art of the sector within each country.

*ENSCHEDE*

The last two physical meetings took place in December 2019 and February 2020 in Enschede, before the COVID-19 pandemic. During the first visit in Enschede, a workshop has been organised targeting the local Armenian community, with the purpose to investigate how a minority feels in the cultural and creative environment of a city. This event was important for WP2 not for what concerns the data collection per sè, but to expand the vision on what does it mean to be sustainable and inclusive. However, more relevant from a statistical point of view were the workshop and the visioning groups that have been organised in February. The audience was composed by artists and creative class, and they were very keen on responding to questions related to sustainability, inclusivity, and growth. However, the workshop has given a satisfying overview of how many different elements have to be considered in order to identify a clear and shared definition. From this viewpoint, and for the data collection process, this workshop has widened the boundaries of the topics to be included when talking about sustainability and inclusivity, but at the same time it highlights once again how difficult is to delineate clear boundaries between these interconnected topics (Dessein, Soini, Fairclough, & Horlings, 2015; Duxbury, Kangas, & De Beukelaer, 2017).

# 3. Conclusion

This report has provided the description and the main sources to operationalise data on CCIs, with a multi-level perspective. First, the main distinction is related to the source of information. When secondary data are concerned, statistics rely on international and national sources, as well as territorial and firm level.

For primary data, their collection is provided via individual interviews and collective workshops. For the data, the main categories of creative class belonging to the UNCTAD classification are taken into consideration. Moreover, some interviews were target to those who had collaborated or had some connections with CCIs.

The complementarity of these different interviewees allows to implement the existent taxonomy (Crociata, 2019), adding other relevant information for the empirical analysis. In fact, having such diversified primary data, from one side increases the sample's heterogeneity, but on the other side, enhances the quality and the variety of information. Therefore, a stratified data collection enables researchers and policy makers to have a broader overview of the set of information characterizing the creative and cultural sector, and it constitute the main novelty of the project for what concerns the statistical part.

Both from an academic point of view and from practitioners' side, there is still a little ambiguity within the identification of CCIs. Among the aims of the DISCE project would be to overcome this issue proposing better and clearer definition strategy. Thus, WP2 and the other WPs are involved to delineate the main components to identify CCIs, and validate the theoretical framework through ad-hoc indicators.

This report intends to place the bases for an in-depth analysis of the data concerning not only the main variables related to creative and cultural sectors, but also a broader overview of geographical, demographic, and institutional indicators that characterise the environment where CCIs are located (as reported by the tables and figures in the previous sections).

One important result from the initial analysis, is that creative and cultural sector should take a relevant role in the development and wealth of the entire national and European economy. Moreover, CCIs would be the drivers of the re-qualification and re-birth of some urban and rural areas across Europe. Within the DISCE project, and throughout the intensive effort put in place by each WP, is the purpose to delineate guidelines and policy advices to enhance the sustainability and inclusivity of the creative economy, supported by innovative statistical and theoretical definitions concerning creative and cultural sectors from different standpoints. Finally, the diversification of the data collection tools will be able to broaden the analysis and lead to innovative ways to better understand the weaknesses of CCIs and face future emergencies.

# REFERENCES


**Bagwell, S. (2008).** Creative clusters and city growth. *Creative Industries Journal*, 1(1), 31–46. doi: 10.1386/cij.1.1.31_1

**Banks, M., & O'Connor, J. (2017).** Inside the whale (and how to get out of there): Moving on from two decades of creative industries research. *European Journal of Cultural Studies*, 20(6), 637–654. https://doi.org/10.1177/1367549417733002

**Boschma, R. A., & Fritsch, M. (2009).** Creative Class and Regional Growth: Empirical Evidence from Seven European Countries. *Economic Geography*, 85(4), 391–423. doi: 10.1111/j.1944-8287.2009.01048.x

**Burlina, C., & Di Maria, E. (2020).** Manufacturing and value-added dynamics in global value chains: the case of Italy. *Competitiveness Review,* 30(4), 457–470. https://doi.org/10.1108/CR-10-2019-0100

**Cerisola, S. (2018).** Creativity and local economic development: The role of synergy among different talents. *Papers in Regional Science*, 97(2), 199–215. doi: 10.1111/pirs.12254

**Chapain, C., & Comunian, R. (2010).** Enabling and Inhibiting the Creative Economy: The Role of the Local and Regional Dimensions in England. *Regional Studies*, 44(6), 717–734. doi: 10.1080/00343400903107728

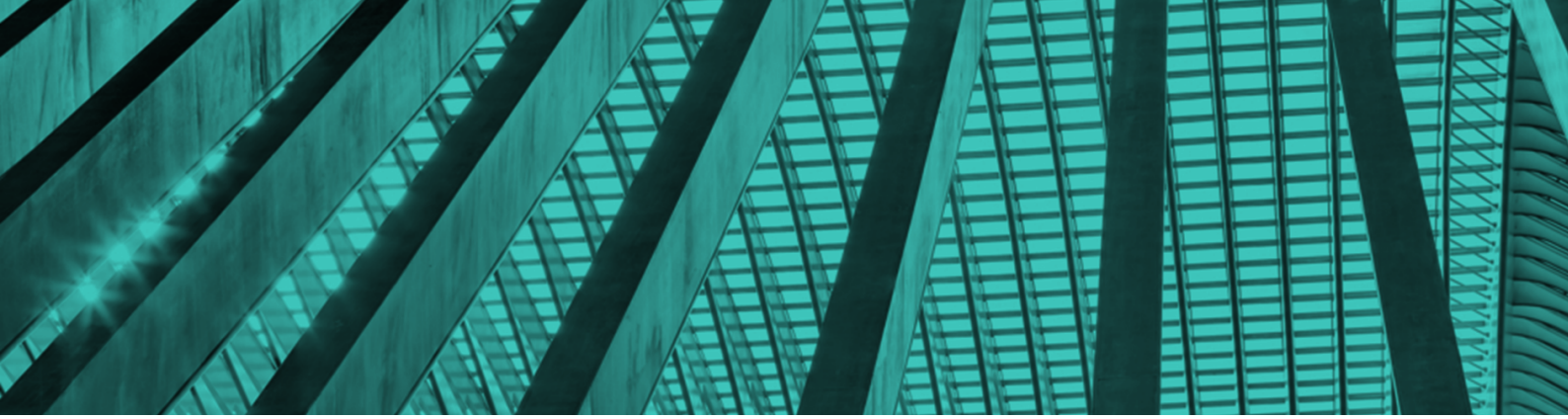
**Charron, N., Lapuente, V., & Annoni, P. (2019)**. Measuring quality of government in EU regions across space and time. *Papers in Regional Science*, 98(5), 1925–1953. https://doi.org/10.1111/pirs.12437

**Comunian, R., Chapain, C., & Clifton, N. (2010).** Location, location, location: exploring the complex relationship between creative industries and place. *Creative Industries Journal*, 3(1), 5–10. doi: 10.1386/cij.3.1.5_2

**Crociata, A. (2019).** Measuring creative economies: Existing models & the DISCE Approach., 1–15. Retrieved from https://disce.eu/wp-content/uploads/2019/12/DISCE-Report-D2.1.pdf

**Crociata, A., Agovino, M., Russo, A., & Quaglieri Domínguez, A. (2018).** Creative Workforce and Economic Development in Precrisis Europe: Main trends and causality relationships. *International Regional Science Review*, 41(4), 448–479. doi: 10.1177/0160017615607054

**Dessein, J., Soini, K., Fairclough, G., & Horlings, L. (2015).** Culture in, for and as sustainable



development: Conclusions from the COST Action IS1007 I*nvestigating Cultural Sustainability*. (J. Dessein, K. Soini, G. Fairclough, & L. Horlings, Eds.). Finland: University of Jyväskylä.

**Drda-Kühn, K., & Wiegand, D. (2010).** From culture to cultural economic power: Rural regional development in small German communities. *Creative Industries Journal*, 3(1), 89–96. doi: 10.1386/cij.3.1.89_7

**Duxbury, N., Kangas, A., & De Beukelaer, C. (2017).** Cultural policies for sustainable development: four strategic paths. *International Journal of Cultural Policy*, 23(2), 214–230. https://doi.org/10.1080/10286632.2017.1280789

**European Commission. (2019).** *The Cultural and Creative Cities Monitor*. Luxembourg. doi: 10.2760/257371

**EUROSTAT. (2008).** *NACE Rev. 2*. Luxembourg.

**EUROSTAT. (2018).** *Guide to Eurostat culture statistic*. Luxembourg. doi: 10.2785/45136

**Gross, J., Comunian, R., Conor, B., Dent, T., Heinonen, J., Hytti, U., ... Wilson, N. (2019).** DISCE Case Study Framework. *DISCE Publication*, 1–37.

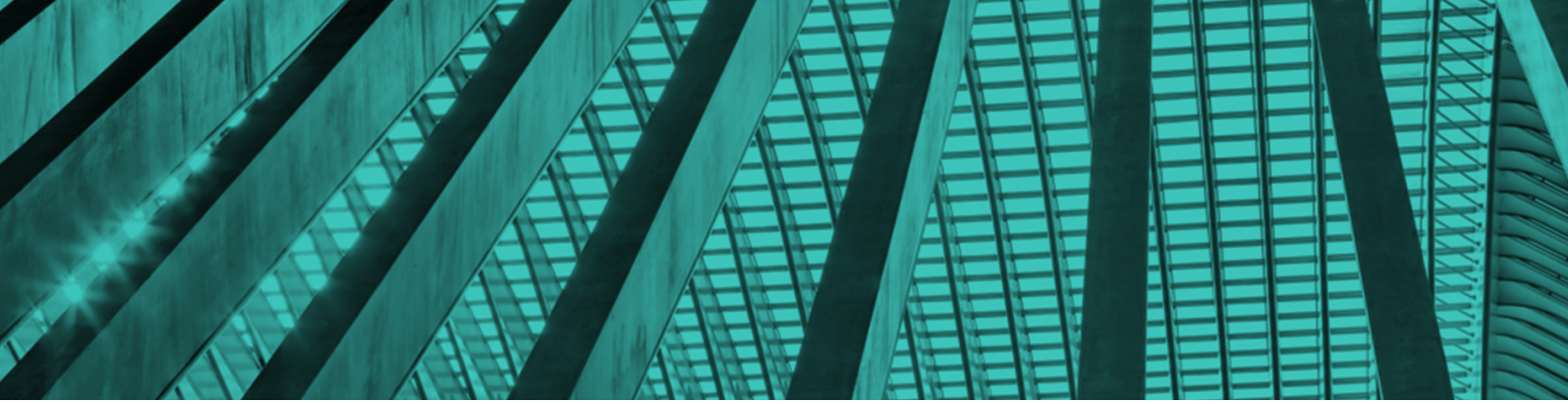
**Gross, J., & Wilson, N. (2020).** Cultural democracy: an ecological and capabilities approach. *International Journal of Cultural Policy*, 26(3), 328–343. https://doi.org/10.1080/10286632.2018.1538363

**KEA. (2018).** *Reserach for the CULT Commitee - Creative Europe: Towards the Next Programme Generation.* Brussels. doi: 10.2861/079399

**KEA & PPMI. (2019).** *Research for CULT Committee - Culture and creative sectors in the European Union – Key future developments, challenges and opportunities*. Brussels.

**Lazzeretti, L., Capone, F., & Boix, R. (2012).** Reasons for Clustering of Creative Industries in Italy and Spain. *European Planning Studies*, 20(8), 1243–1262. doi: 10.1080/09654313.2012.680585

**Lorenzen, M., & Frederiksen, L. (2008).** Why do cultural industries cluster? Localization, urbanization, products and projects. In P. Cooke & L. Lazzeretti (Eds.), *Creative cities, cultural clusters and local economic development* (pp. 155–179). Cheltenham: Edward Elgar.: Edward Elgar Cheltenham.



**Marco-Serrano, F., Rausell-Koster, P., & Abeledo-Sanchis, R. (2014).** Economic development and the creative industries: a tale of causality. *Creative Industries Journal*, 7(2), 81–91. doi: 10.1080/17510694.2014.958383

**Markusen, A. (2013).** Fuzzy concepts, proxy data: why indicators would not track creative placemaking success. *International Journal of Urban Sciences,* 17(3), 291–303. doi: 10.1080/12265934.2013.836291

**Marrocu, E., & Paci, R. (2012).** Education or Creativity: What Matters Most for Economic Performance? *Economic Geography*, 88(4), 369–401. doi: 10.1111/j.1944-8287.2012.01161.x

**Ortega-Villa, L. M., & Ley-Garcia, J. (2018).** Analysis of Cultural Indicators: A Comparison of Their Conceptual Basis and Dimensions. *Social Indicators Research*, 137(2), 413–439. doi: 10.1007/s11205-017-1588-2

**Piergiovanni, R., Carree, M. A., & Santarelli, E. (2012).** Creative industries, new business formation, and regional economic growth. *Small Business Economics, 39*(3), 539–560. doi: 10.1007/s11187-011-9329-4

**Potts, J. (2011).** *Creative industries and economic evolution*. Cheltenham: Edward Elgar Publishing.

**Soini, K., & Dessein, J. (2016).** Culture-Sustainability Relation: Towards a Conceptual Framework. *Sustainability*, 8(2), 167. https://doi.org/10.3390/su8020167

**Towse, R. (2011).** *A handbook of cultural economics.* Cheltenham: Edward Elgar Publishing.

**UNCTAD. (2008).** *Creative economy.* Geneve.

**UNESCO. (2009).** *Framework for Cultural Statistics*. Montreal: UNESCO Institute for Statistics.

**UNESCO. (2019).** *Culture | 2030 indicators*. Paris: United Nations Educational, Scientific and Cultural Organization.