

# **The quest for a theory on the role of the Creative Industry to activate regional development strategies**

Ilaria Vincenza Calò\*, Valeria Greta Cofano, Senour Ahmadi, Diego Antonio Zullo, Maurizio Prospero, Rosaria Viscecchia, Antonio Lopolito, Antonio Stasi

Dept. DAFNE, University of Foggia - Via Napoli 71122 Foggia, Italy

\*Corresponding author: [ilaria.calo@unifg.it](mailto:ilaria.calo@unifg.it)

## **Abstract**

This study aims to understand the innovative role of the Creative Industry (CI) in the elaboration and activation of strategies for regional development by the actors involved in four priority development issues in Apulia Region. The CI is an ever-evolving sector fostering interactions among the various stakeholders in different supply chains. In this regard, two of the four topics addressed refer to some of the main agri-food supply chains, namely the extra virgin olive oil and the processed tomato, while the other two deal with highly relevant issues in the region, such as the reuse of purified wastewater in agriculture and the management of the *Xylella fastidiosa*, which is responsible for destroying olive trees. The Grounded Theory method was applied, an inductive methodology that provides a qualitative approach for the analysis, synthesis and conceptualisation of data in order to build a theory explaining the role of CI in the Living Labs (LLs) activity. This approach allowed the observation and reflection of the concepts raised in the discussions by the stakeholders using three phases. The first phase consisted of transcribing the dialogues among the stakeholders, in order to bring out possible interpretative avenues (open coding), the second of the sampling and collection of data to identify salient themes and interpretative categories (axial coding), and finally, the third of the identification of the relationships between the categories that emerged (concentrate coding), from which a core category was subsequently identified, around which to articulate the study's complete interpretative model. Subsequently, an explanatory theory was developed for each of the four LLs included in the case study, in order to highlight the critical factors underlying the topics, and to define effective strategies of intervention. The activities developed with the LL practice involved university students from various disciplines who, while playing the roles of real actors in the agrifood supply chain (Role Play method), were engaged in four sessions lasting one and a half hours, under the supervision of a moderator. The results showed that the CI, depending on the issue, plays a relevant role in promoting knowledge-sharing among stakeholders, favouring the identification of actions aimed at enhancing the value chain of the product and the regional development of territory. In conclusion, the CI is a component able to stimulate dialogue and

confrontation among stakeholders involved in a complex socio-economic environment and to formulate strategies for regional development according to a holistic approach.

## **1 - Introduction**

Creativity is an ongoing process that, stimulated by multiple social, cultural and institutional factors, produces innovation and change (Al-Mahdawi, 2016). The idea of creativity as an asset has become part of economic policies since the 1990s and, specifically, the concept of CI was firstly documented in 1994 in Australia with the publication of the new cultural policy 'Creative nation'. The report emphasised the importance of culture to national identity and the economic potential of cultural activities and the arts (Moore, 2014).

CI refers to a very broad range of products that includes goods and services originated by cultural industries, with the use of innovative technologies. In fact, CI has developed from cultural industries conceived as forms of cultural production and consumption, characterised by a central symbolic or expressive element. The concept has been disseminated worldwide by UNESCO since the 1980s and its definition has gradually incorporated a wide range of industries: music, art-related industries, writing, fashion and design, media and craft production (Bocella & Salerno, 2016).

It is important to emphasise that, while the term cultural industries refers to industries that combine the creation, production and marketing of creative content of a cultural nature, the CI refers to the context of communication technology which, in recent decades, has been mainly concerned with digitalization and not only culture and culture-based creativity (Moore, 2014).

Culture-based creativity is a fundamental means for industry and institutions to adopt and implement more user-centred strategies. Culture-based creativity is, therefore, a key input for companies or public authorities that want to communicate more effectively, to challenge conventions, and to seek new ways to stand out. Indeed, it contributes to product innovation, branding, human resource management, and communication (KEA, 2009). Therefore, CI plays a key role in global supply chains and stimulates innovations by adding value as an element of social cohesion and acting as an effective tool in the fight against economic recession (Majdùchová et al., 2020).

Regarding the role of CI as a driver of local and regional economic development, there are several contributions reported in the literature (Oakley, 2004; Baum et al., 2009; Correa-Quezada et al., 2018). However, it is worth exploring the role that CI can play in fostering dialogue and interaction between the private sector and public institutions, in a multi-stakeholder interplay context.

Therefore, the aim of the present study is to understand the innovative role of the CI in the elaboration and activation of strategies for regional development by actors involved in four different complex subjects. In fact, since CI is constantly evolving and brings together technology,

intellectual property and knowledge (Ihani et al., 2020), it plays a relevant role in economic terms by fostering the interaction between the various stakeholders in the different supply chains. In this regard, two of the four topics refer to the valorization of two main agri-food chains in Apulia, namely the extra virgin olive oil and the processed tomato supply chains, while the other two are aimed at the mitigation of problems in the management of the collective heritage of the region, such as the reuse of purified wastewater in agriculture, and the management of the health status of age-old olive groves, compromised by the pathology called *Xylella fastidiosa* subsp. *pauca* (CoDiRo strain).

The structure of the present paper is the following. After the introduction, dealing with the overview of the concepts of creativity, cultural industry and creative industry, the second section deals with the presentation of the methodology used for data collection. In the third section, the case studies are presented, while in the fourth section the results are shown. Finally, the last section reports the discussion, and the conclusions.

## **2 - Materials and methodology**

Due to its wide versatility, CI does not yet have a well-defined role and needs further study and investigation. In order to clarify this role, in this study we tried to understand what contribution CI can make in a co-design perspective within the Living Lab (LL) activity in order to elaborate and activate new strategies for the development of the main agrifood supply chains in the Apulia region.

The LL represents a relatively new type of environment for innovation and development in which new information and communication technology solutions are experimented (Følstad, 2008) by involving stakeholders and experts (e.g. farmer entrepreneurs, agronomists, researchers, consumers, distributors, etc.), analysing their interactions and, finally, collecting data on their opinions, expectations, attitudes, etc., which are at the basis of both horizontal and vertical interaction mechanisms.

In fact, LLs 'offer a collaborative platform for research, development and experimentation in real-life contexts, based on specific methodologies and tools, and implemented through specific innovation projects and community building activities' (Gasco, 2017, p. 91). They are characterised by experimentation in real-world contexts and users collaborate to 'create' a desired outcome. LLs have traditionally focused on supporting businesses and creating an innovation ecosystem for the benefit of private companies and public organisations, and lately they have also emphasised the needs of citizens (Ruijter et al., 2020). According to Bergvall-Kareborn & Stahlbrost (2009), an LL is comprehensive of five key components: (i) the environment, which represents the context in which stakeholders interact with each other and reflect real-world situations, (ii) the partners, i.e. the experts and specialists of the issues addressed, bringing their specific knowledge and expertise to the stakeholders and contributing

to provide elements of innovation, (iii) the organisation and methods through which to manage the orderly interaction of participants for both, stakeholders and partners, (iv) the users, i.e. the stakeholders as co-creators or evaluators of the innovation and, finally, (v) the information and communication technology (CI) component that introduces new ways of cooperating and co-creating innovations between partners and stakeholders.

On the basis of these key components, the LLs were carried according to the Role Playing methodology and held at the University of Foggia, as a neutral environment with respect to the balance of representation of the various stakeholders present, were conducted by a moderator in 90-minute sessions. The proposals, formulated collectively in the course of the discussion, were forwarded by a spokesperson, whose final role consisted in presenting the requests that emerged to an external subject, who played the role of a representative of the regional institution (i.e. the Apulia Region). The content of the proposal consisted in the indication of the suggested strategies and the role that the CI would have in promoting them and communicating them to the public opinion of the territory considered (i.e. Apulia Region). At the end of the meetings, a questionnaire was administered to detect the degree of knowledge of the subject under examination before and after participation in the LL and also the level of enjoyment of the experience (agreeableness).

In order to proceed with the processing of the LL outputs, among the various methodologies to be used such as phenomenology, ethnography or netnography, the inductive research methodology of Grounded Theory (GT) (Glaser & Strauss, 1967) was applied in this study.

It provides a qualitative approach for analysing, synthesising and conceptualising data in order to construct an articulated theoretical model to explain the phenomenon analysed in its complexity. The application of this theory in the LL activity (Hawk et al., 2012) allowed the observation and reflection of the concepts that emerged from the stakeholder discussions using three coding stages (Tarozzi, 2020).

The first is the transcription phase of the dialogues and consists of reporting word-for-word the general stakeholder opinions that were recorded during the LL in order to bring out possible interpretative leads. The second is called the focus phase and consists of sampling and data collection to identify salient themes, interpretive categories and to better specify the focus of the survey. In the GT approach, data analysis begins immediately after the first sample is collected. Using the constant comparison method, the data are analysed to gather new insights into the phenomenon under study. This then leads to the third phase known as data conceptualisation, which involves identifying the relationships between the categories that emerged in the second phase, the hierarchical organisation of the themes that emerged and the identification of a core category around which to articulate the study's complete interpretative model.

The analyses conducted were all based exclusively on the questions posed in the LLs and the general opinions gathered from the interactions between the stakeholders. The first step in the GT process applied to the LLs was to develop, therefore, questions appropriate to the role of the

CI that would bring to light new insights on the stakeholders in order to be able to define new communication strategies to foster the development of the agri-food supply chains in the Apulia region. The questions were designed with the help of a review of today's scientific literature focusing, specifically, on the main issues in the area.

Subsequently, an explanatory theory was developed for each of the LLs conducted, to highlight the critical issues of the topics dealt with and how the CI had affected them so that useful strategies could be defined to intervene on them and thus foster regional development.

### 3 - Case studies

The current case studies focus on the region of Apulia, a region located in the south-east of Italy characterised by hot summers and mild winters. Agriculture in Apulia constitutes the most important regional economic driving sector, contributing significantly to its Gross Domestic Product (GDP). The agricultural reality of Apulia is very diverse and ranges from small to larger farms.

With its 1,280,876 hectares, Apulia is the second largest region in Italy (after Sicily), in terms of cultivated hectares, 51% of which are used for arable crops, 41% for woody crops, and the remaining 8% for meadows and pastures.

The most recent ISTAT agricultural census (Tab. 1) shows that the utilised agricultural area (UAA) of the province of Foggia is 497,819 hectares, of which 355,430 hectares are used for arable crops, 26,623 hectares are used for vines, 53,323 hectares are used for woody crops, 371 hectares are used for family vegetable gardens, 62,071 hectares are used for permanent meadows and pastures, and a small part, i.e. 246 hectares, are used for agroforestry woody crops.

Tab. 1 - Land use in Apulia Region (Utilised Agricultural Area, hectares)

Land use of the agricultural unit	Total Agricultural Area (TAA)	Total Agricultural Area (TAA)								
		Utilised Agricultural Area (UAA)	Utilised Agricultural Area (UAA)					Wood arboriculture attached to farms	Forests attached to farms	Unused agricultural area and other area
			Arable crops	Vines	Woody agricultural crops, excluding vines	Family vegetable gardens	Permanent meadows and pastures			
Area										
<b>Apulia</b>	1391031	1287107	653221	107331	419925	3939	102688	818	48644	54461
Foggia	538899	497819	355430	26623	53323	371	62071	246	24681	16153
Bari	283425	264497	117214	17969	108605	698	20010	234	9409	9283
Taranto	155008	137236	57941	23770	45870	465	9189	249	9851	7670
Brindisi	128194	120725	34950	9750	73966	720	1336	38	1699	5730
Lecce	174324	161279	50222	8670	98675	1542	2169	46	1501	11496

Barletta- Andria-Trani	111179	105548	37462	20546	39485	141	7912	3	1500	4127
---------------------------	--------	--------	-------	-------	-------	-----	------	---	------	------

Source: Istat data 2010

The Living Labs, which were carried out at the University's laboratory (neutral environment), focused on four different topics: i) the extra virgin olive oil supply chain, ii) the processed tomato supply chain, iii) the re-use of purified wastewater, and iv) the management of *Xylella fastidiosa* (Tab. 2). In fact, regarding the aspects related to the study case, the olive cultivation occupies 54,800 ha, while that occupied with tomatoes for processing industry in the open air is 14,500 (ISTAT 2022). With regard to the issue of the reuse of purified water in agriculture, the irrigated area of the Apulia region is over 267,000 ha, and specifically the province of Foggia has an area equipped for irrigation equal to 141,000 ha (ANBI - Puglia). Finally, with regard to the issue of *Xylella* management, it can be seen that to date it has caused the loss of around 12,000,000 olive trees equal to 8,000 km<sup>2</sup> (Coldiretti Puglia).

The four LLs were led by a moderator with the specific objective of introducing the topic of discussion, managing the interaction, monitoring the duration of the interventions and ensuring that each stakeholder was able to express his or her personal opinion and at the same time take ownership of the ideas and opinions of the other participants, through a process of contamination. The LLs, organised in sessions of approximately 90 minutes and divided by an intermediate break lasting 15 minutes, were attended by university students from various disciplines who took on the roles of real actors in the agrifood sector, according to the Living Lab Role Playing methodology. In practice, the students' identification with stakeholders took place through the assignment of short, generic descriptions of the roles to be played.

By simulating participation in a real technical round table, the participants shared information and expertise on the topic, while also activating the dynamics underlying the actual technical-economic discussions which could take place among the actors involved in the various supply chains. They exhibited the competent interventions and were able to make proposals for policy intervention (e.g. legislative measures, public funding, support actions).

At the end of each LL, the questionnaire was administered, from which a general positive opinion has emerged. In practice, the participants stated that these activities represent a valuable training opportunity for the students, who found them useful, innovative and capable of combining practice and theory through an in-depth study of complicated problems regarding challenges in the regional and national territory.

Tab. 2 - Overview of the 4 LLs

Topic	1. EVOO - EXCELLENT QUALITY EXTRA VIRGIN OLIVE OIL	2. CANNED TOMATOES - HIGH QUALITY AND SUSTAINABILITY ATTRIBUTES	3. WASTEWATERS - REUSE OF PURIFIED WASTEWATER	4. XYLELLA - REGENERATION OF LANDSCAPES DAMAGED BY XYLELLA INFECTION
N. Participants	12	8	10	9
Roles	Farmer, researcher, Miller, bottler, Large-scale retail trade, Research organisation, Consumer, Creative industry, Consultant	Farmer, Entrepreneur (canning company), Large-scale retail trade, Environmentalist, Researcher, Consumer, Creative industry, Consultant	Water distribution organisation, Water purification organisation, Farmer, Processing industry, Research organisation, Consumer, Large-scale retail trade, Creative industry, Consultant	Farmer North Apulia, Farmer Central Apulia, Farmer South Apulia, Oil miller, Researcher, Consultant, Environmentalist, Tourism Agency, Creative Industry
Duration	90 minutes	90 minutes	90 minutes	90 minutes

Fonte: Authors' elaborations

LL No. 1 "EVOO"- The first Living Lab realised was on the production of excellent quality extra virgin olive oil. The LL involved 12 stakeholders, including two representatives of the creative industry, playing different roles in order to realise/generate a new concept of premium quality EVO oil.

LL No. 2 "Canned Tomato" - The second Living Lab focused on canned tomatoes characterised by quality and sustainability attributes. The LL involved 8 stakeholders, including a representative of the creative industry, who represented the main actors of the reference supply chain in order to identify new communication strategies for an adequate valorisation of the product.

LL No. 3 "Wastewater" - The third Living Lab focused on the co-design for the reuse of purified wastewater in agriculture. The LL involved 10 stakeholders, including a representative of the creative industry, with the aim of identifying and structuring new management and communication strategies to encourage the use of purified wastewater in agriculture.

LL No. 4 "Xylella"- The last of the LLs held concerned the management of the Xylella fastidiosa problem in Apulia. The LL involved 9 stakeholders, including a representative of the creative industry, with the aim of realising an ideal strategy for the regeneration of the landscape affected by the bacterium.

## 4 – Results

The main results of the analysis are referred to the application of the Grounded Theory, on the transcription of the dialogues conducted during each LL, according to the three phases which have been already described: open coding, axial coding, concentrate coding.

Table 3 shows socio-demographic information of the participants such as age, gender and educational qualification. The activities involved a sample of 39 students from the University of

Foggia with an average age of 22.67 years, made up of 25% women and 75% men with a diploma as their level of study.

Tab. 3 - Personal information

SOCIO-DEMOGRAPHIC CHARACTERISTICS	
Stakeholders involved n.	39
Average age	22.67
Female	10
Male	29
Educational qualification	100% High school degree

Source: Authors' elaboration from questionnaire

*Phase 1: Open coding.* The main concepts that emerged during the four LLs, have been identified, through a content analysis of the transcribed recordings. Table 4 reports these concepts, in chronological order.

Tab. 4 - Content analysis of the transcribed dialogues (first phase of GT)

Temporal order of appearance of concepts	LL_1 - "EVOO"	LL_2 - "Canned Tomato"	LL_3 - "Wastewater"	LL_4 - "Xylella"
First	Oil transformation processes must take place within 24 hours	Quality of raw material with high standards, preferably from organic or integrated agriculture	Climate change - environmental improvement, utilisation of a resource is currently underutilised	Adoption of new cultivation systems (intensive and super-intensive) of resistant cultivars adapted for mechanical harvesting
Second	Objective and sensory oil quality characteristics are relevant	Adequate price for farmers, which is appropriate to the product's qualitative and sustainable characteristics	Scarce and/or incorrect information on the use of purified wastewater in agriculture, leading to mistrust among consumers and value chain actors	Awareness-raising campaign to boost tourism using discount packages of olive oil in territory affected by the infection
Third	Information transfer between consumer and supply chain are the key for the valorization	Sustainability in environmental, economic and ethical terms is the key to valorization	Legal obligation for farmers for a correct use of refined wastewater	Creation of video documentaries available on websites, aiming at intriguing individuals who are not fully familiar with the issue



Fourth	Need for a new certification attesting the excellent quality, which is superior to the high quality EVOO	Use of technologies (both at agricultural and industrial processing levels) that reduce environmental impact and waste	Open new alternative uses from agriculture to industrial sector	Opportunity of using the ghostly landscape of the Xylella-affected olive groves as creative resource for films and video makers, to raise the public awareness on the issue
Fifth	...	Dissemination of information through different communication channels, such as commercials, slogans, jingles, social media, events, food and wine fairs	Enhancement of the efficiency of purification processes, storage, and distribution networks	Obtaining regional subsidies to apply the correct agronomic methods and to raise more funds for research, in order to counteract the bacterium and its vector insect
Sixth	...	Need of actions aimed at consumer involvement, information and reassurance, through certifications, regulations, production specifications	New ways of communicating the agricultural products irrigated with refined wastewaters	Involvement of important and well-known companies as testimonials for advertising campaigns

Source: Authors' elaboration

They are consistent with the questions posed by the moderators. In fact, the activities carried out during the LLs effectively replicated both, the decision-making behaviour, and the communication dynamics among the stakeholders. It emerged that each participant was able to express his or her point of view and was able to reach a consensus on a common perspective regarding the main issue, the formulation of strategies, and the proposal for public or private actions.

*Phase 2: Axial coding.* This phase consists of the extrapolation of the key concepts that emerged during the LLs, which are related to the explanation of the potential role of the CI during the interaction of the participants (Table 5).

Tab. 5 - Concepts related to CI (second phase of GT).

Concepts related to CI	LL_1 - "EVOO"	LL_2 - "Canned Tomato"	LL_3 - "Wastewater"	LL_4 - "Xylella"
First series of relevant concepts	Opportunity. Innovative systems for information transfer between	Opportunity. Dissemination of information to consumers, through different communication channels	Need. Requesting more information from actors of the supply	Need. Raising public awareness campaigns to boost tourism

	consumer and supply chain		chain and new ways of transferring it	
First attempt to formulate a theory: <i>"The role of CI in the LL consists in facilitating the interaction of multiple actors and favouring the emergence of latent needs and unveiling opportunities, while involving the public"</i>				
Second series of relevant concepts	Need. Valorisation and communication of an innovative certification system capable of involving several actors in the supply chain	Opportunity. Organisation of food and wine events and fairs	Need. Valorization of the purified water resource within a circular economy system	Opportunity. Using streaming sites to broadcast documentaries to a wide audience
Third series of relevant concepts	...	Need. Valorization of the product and the territory by highlighting its qualitative and sustainable characteristics	Opportunity. Realisation of training events for consumers and stakeholders	Opportunity. Using the ghostly landscape of Xylella-affected trees as a set for films or TV series
Fourth series of relevant concepts	...	...	...	Opportunity. Advertising communication with famous brands
Refinement of the theory, capable to explain the phenomena: <i>"The role of CI in the LL consists in facilitating the interaction of multiple actors, and revealing latent needs and opportunities"</i>				

Source: Authors' elaboration

The logical interpretation of the concepts, activities or processes mentioned within the dialogues allowed us to understand that CI highlighted hidden needs and stimulated new initiatives and opportunities perceived by the participants.

Firstly, we proceed with the interpretation of the first series of similar concepts, which had been highlighted in Table 4. The generalisation of them (see the "first relevant concept" in Table 5), allowed us to proceed with the first attempt of theory formulation, according to the following statement:

*"The role of CI in the LL consists in facilitating the interaction of multiple actors and favouring the emergence of latent needs and unveiling opportunities, while involving the public".*

However, when we verified the adequacy of the theory with the other relevant series concepts emerging from all LLs, we found that the involvement of the public was not always crucial. For instance, in the LL\_3 - "Wastewater", the persons that had to primarily be involved were all the actors of the supply chain. For this reason, we refined the theory, according to the second statement:

*"The role of CI in the LL consists in facilitating the interaction of multiple actors, and revealing latent needs and opportunities".*

*Phase 3: Concentrate Coding.* It consists of a new content analysis on the transcribed dialogues, which was based on the theory found in the previous phase, in order to conceptualise the role played by CI in each LL (Table 6).

Tab. 6 - Conceptualization of the role of CI (third step of GT)

Latent needs and unveiled opportunities emerged	LL_1 - "EVOO"	LL_2 - "Canned Tomato"	LL_3 - "Wastewater"	LL_4 - "Xylella"
Latent needs	<ul style="list-style-type: none"> <li>- Creation of an innovative product, with characteristics of excellence</li> <li>- Setting of parameters defining the excellence quality of EVOO</li> </ul>	<ul style="list-style-type: none"> <li>- Dialogue with public institutions to create a direct link between processed tomato and the identity of the territory</li> </ul>	<ul style="list-style-type: none"> <li>- Information and training to all actors of the value chain</li> </ul>	<ul style="list-style-type: none"> <li>- Collaboration of investors to accelerate the renewal of olive orchards and the recovery of landscape</li> </ul>
Unveiled opportunities	<ul style="list-style-type: none"> <li>- The promotion of the territory leads to the product valorization</li> </ul>	<ul style="list-style-type: none"> <li>- The valorization of the product is a driver to territorial promotion</li> </ul>	<ul style="list-style-type: none"> <li>- Refined wastewaters have an added value with respect to water</li> </ul>	<ul style="list-style-type: none"> <li>- Tourism as a key driver fostering the recovery of the landscape</li> <li>- The ghostly image of the landscape as a symbol favouring the collaboration of private investors in the recovery of the landscape</li> </ul>

Source: Authors' elaboration

The adoption of the theory allowed the emergence of needs and opportunities for each LL. This finding is a valuable result for the stakeholders and policy makers willing to involve the CI in the definition of innovative strategies for the development of Apulia region.

Based on the results, it emerged that the CI, depending on the issue, plays a versatile role by facilitating interaction and promoting information between stakeholders, product and territorial valorisation, and raising society's awareness of the issues addressed.

The results obtained, although derived from simulation systems using the role-play methodology, highlight the potential value of the role played by the CI in decision-making processes.

In detail, the main aspects that emerged per individual case study, related to the innovative role of CI in decision-making processes are:

- for extra virgin olive oil of excellent quality, the CI, grasping the need to create an innovative product with characteristics of excellence defined by specific parameters and

processing methods, makes it possible through the valorisation of the territory to also valorise the product by generating a brand of EVOO of excellent quality.

- for canned tomatoes, the CI makes dialogue with public institutions possible in order to create a direct link between canned tomatoes and the identity of the territory where the raw material comes from and is processed. In addition, it allows for the enhancement of the product characterised by quality and sustainability attributes, guaranteeing its positioning on the domestic and foreign markets, with consequent enhancement of the territory.
- for purified wastewater, the CI allows the dissemination of information to all players in the supply chain on its characteristics (quality, methods, and techniques for irrigation reuse, etc.), underlining the potential added value it possesses compared to conventional water resources, since it is part of a circular economy system capable of creating value for a resource that is currently little used.
- for the management of Xylella, CI plays a necessary role in providing more information through awareness-raising campaigns to receive funds for research into possible cures and tolerant and/or resistant olive trees that can fight the bacterium through the collaboration of investors, thus accelerating the renewal of olive groves and the recovery of the landscape. In addition, CI makes possible the promotion of tourism in the affected area, through travel packages, useful for landscape regeneration and the use of the ghostly environment, resulting from the presence of the olive trees infected by the bacterium, as a set for films and TV series.

In general, the results show that the use of LLs proved useful in gathering data on the issues addressed and highlighted the importance of the role played by the CI within the agri-food sector even though it was not very clear at first. In fact, in two of the four meetings the CI proved difficult for students to interpret, despite the information provided, as there is not yet a complete understanding of the role of the CI. Thanks to the LL and the interaction between stakeholders, it was possible to overcome this gap through the contamination of ideas. The CI based on latent needs, made explicit by the stakeholders during the discussion, revealed new opportunities.

Therefore, CI plays a versatile role by promoting information between stakeholders, product and territory valorisation, and awareness-raising in society, depending on the issue. In conclusion, CI is able to address multiple complex socio-economic issues related to regional development strategies.

Finally, we conducted the analysis of the questionnaire which was submitted to all participants, regarding their assessment of knowledge acquired during the LL experience. In this way, it is also possible to assess the quality of their interaction.

Tab. 7- Questionnaires results

Questions		Data
Knowledge before the media encounter (1-5 Likert scale)		2.85
Knowledge after the meeting (1-5 Likert scale)		4.44
Clarity (1-5 Likert scale)		4.51
Likeness (1-5 Likert scale)		4.77
Duration (1-5 Likert scale)		4.05
Usefulness (1-5 Likert scale)		4.67
Willingness to participate in other LLs	Yes	72 %
	More yes than no	28 %
	More no than yes	0 %
	No	0 %
Willingness to recommend the participation in LL to others	Yes	87 %
	More yes than no	13 %
	More no than yes	0 %
	No	0 %

Source: Authors' elaboration

The respondents stated that LL represents an important training opportunity for the participants, as 93% of them found it useful and innovative (Table 7). It also emerged that they increased their knowledge of the topics by 55%, referred to the initial level. In addition, they stated that the quality of the meeting was high in terms of clarity, enjoyment, duration, and usefulness, showing an average score of 4.5 out of 5. It was evident that the activities were appreciated by most of the participants to the extent that they were willing to participate and to recommend to others in future experiences, regardless if they were referred to different topics.

## 5 – Discussion and conclusion

The literature related to culture-based creativity recalled in this paper shows that CI has enormous potential in stimulating the development and integration of global value chains in innovative and social ways. This makes it a valuable source of strategic information not only for companies aiming at their business development, but also for policymakers aiming at territorial

development through the strengthening of local productions. In fact, the focus of this paper is on the role of CI as a device for identifying regional development strategies. The case studies presented cover four areas related to the agricultural economy: the development of oil and tomato value chains and the solution of territorial problems such as waste water reuse and Xylella disease. It is not simply a matter of identifying development strategies that integrate the knowledge of different stakeholders but is theorising the role of IC in the regional development process.

The use of the LLs and the analysis of their content through the GT made this possible. What has emerged is that the CI has the potential not only to engage stakeholders in an analytical process related to specific issues, but also to bring into focus latent opportunities and needs of the economic and social actors involved in the process.

The relevance of this result lies in the fact that the theory formulation allowed the rationalisation of the bottom-up development process. In fact, we found that it was based on the enhancement of endogenous resources through the integration of external ones to the territory (e.g. public financial support). In other words, the stakeholders were able to perform the analysis of needs and to identify the possible ways of satisfying them.

In the specific analysed study cases, the identification of latent opportunities and needs lead to the definition of the basic elements of possible strategic pathways of development, which were tailored to the local context.

Regarding the role of CI in the LLs aimed at the development of regional policies, we can summarise as follows:

- contamination of ideas of the participants, by enhancing their interaction;
- enhancement of the effectiveness of the information at various levels of the value chain (vertical and horizontal);
- enabling the emergence of stakeholders' latent needs;
- unveiling the opportunities for the development of existing agrifood value chains;
- endowment of the stakeholders with the capacity to foresee new and innovative strategies.

Regarding the possible implications for the future development of regional policies, this study proves that CI may pave the way for innovative approaches for territorial planning, through a more effective involvement of stakeholders with LLs, who are enabled in providing a complex figure of the multiple and interlaced elements and dynamics existing within each territorial system.

The formulation of the theory explaining the role of CI for the enhancement of territorial policies presented in this work is based on a single experience based on the role playing of university students who, while being enough acknowledged in academic terms, they lack the experience in interacting with real stakeholders, whose behaviour is significantly affected by conflict of

interests, caution from past experience, fear for risk of failures. Therefore, further experiences are needed in LLS conducted with real stakeholders operating in the same territorial context.

## Acknowledgements

This work was supported by the Project- “CREATIVE@HUBS” co-funded by the INTERREG V-A GRECIA-ITALIA 2014/2020 CUP B39519000090007 (F.E.S.R.) and by the National Funds of Greece and Italy.

## References

1. Al-Mahdawi, B. (2016). Understanding the Impact of Rewards on Employees' Creativity and Innovation: A Literature Review Study.
2. ANBI PUGLIA - <http://www.anbipuglia.it/aree-irrigue.html#:~:text=Allo%20stato%2C%20su%20di%20una,della%20irrigazione%20di%20279.230%20ettari>
3. Baum, S., O'Connor, K., & Yigitcanlar, T. (2009). The implications of creative industries for regional outcomes. *International Journal of Foresight and Innovation Policy*, 5(1-3), 44-64.
4. Bergvall-Kareborn, B., & Stahlbrost, A. (2009). Living Lab: an open and citizen-centric approach for innovation. *International Journal of Innovation and Regional Development*, 1(4), 356-370.
5. Boccella, N., & Salerno, I. (2016). Creative economy, cultural industries and local development. *Procedia-Social and Behavioral Sciences*, 223, 291-296.
6. COLDIRETTI - <https://puglia.coldiretti.it/news/xylella-infettato-40-puglia-addio-a-21-mln-ulivi/>
7. Correa-Quezada, R., Álvarez-García, J., del Río-Rama, M. D. L. C., & Maldonado-Erazo, C. P. (2018). Role of creative industries as a regional growth factor. *Sustainability*, 10(5), 1649.
8. Fleischmann, K., Daniel, R., & Welters, R. (2017). Developing a regional economy through creative industries: innovation capacity in a regional Australian city. *Creative Industries Journal*, 10(2), 119-138. <https://doi.org/10.1080/17510694.2017.1282305>
9. Gasco, M. (2017). Living labs: Implementing open innovation in the public sector. *Government Information Quarterly*, 34, 90–98.
10. Glaser, B., & Strauss, A. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Mill Valley, CA: Sociology Press.
11. Følstad, A. (2008). Living labs for innovation and development of information and communication technology: a literature review.
12. Hawk, N. , Romine, M. e Bartle, G. ( 2012 ). The living labs: Innovation in real life settings. *The Quarterly Review of Distance Education*, 13 (4), 225 – 231.

13. Ihani, W., Syofya, H., Sari, A. L., Mulawarman, W. G., & Sriyanto, S. (2020). The Role of the Creative Industry in Economic Development. *Journal of Environmental Treatment Techniques*, 8(1), 268-271.
14. ISTAT 2022 - [http://dati.istat.it/Index.aspx?DataSetCode=DCSP\\_COLTIVAZIONI](http://dati.istat.it/Index.aspx?DataSetCode=DCSP_COLTIVAZIONI) (coltivazioni istat.it).
15. ISTAT 2010 Censimento Agricoltura 2010 [http://dati-censimentoagricoltura.istat.it/Index.aspx?DataSetCode=DICA\\_UTILTERRUBI](http://dati-censimentoagricoltura.istat.it/Index.aspx?DataSetCode=DICA_UTILTERRUBI)
16. KEA (2009). Impact of Culture on Creativity, European Commission. Microsoft Word - final\_version\_020709.doc (keanet.eu)
17. Majdúchová, H., & Barteková, M. K. (2020). Innovations in the creative industry entities. In *SHS Web of Conferences* (Vol. 74, p. 02009). EDP Sciences.
18. Moore, I. (2014). Cultural and Creative Industries concept—a historical perspective. *Procedia-Social and Behavioral Sciences*, 110, 738-746.
19. Oakley, K. (2004). Not so cool Britannia: The role of the creative industries in economic development. *International journal of cultural studies*, 7(1), 67-77.
20. Ruijter, E., & Meijer, A. (2020). Open government data as an innovation process: Lessons from a living lab experiment. *Public Performance & Management Review*, 43(3), 613-635.
21. Tarozzi, M. (2020). *What is grounded theory?*. Bloomsbury publishing. DOI:10.5040/9781350085275