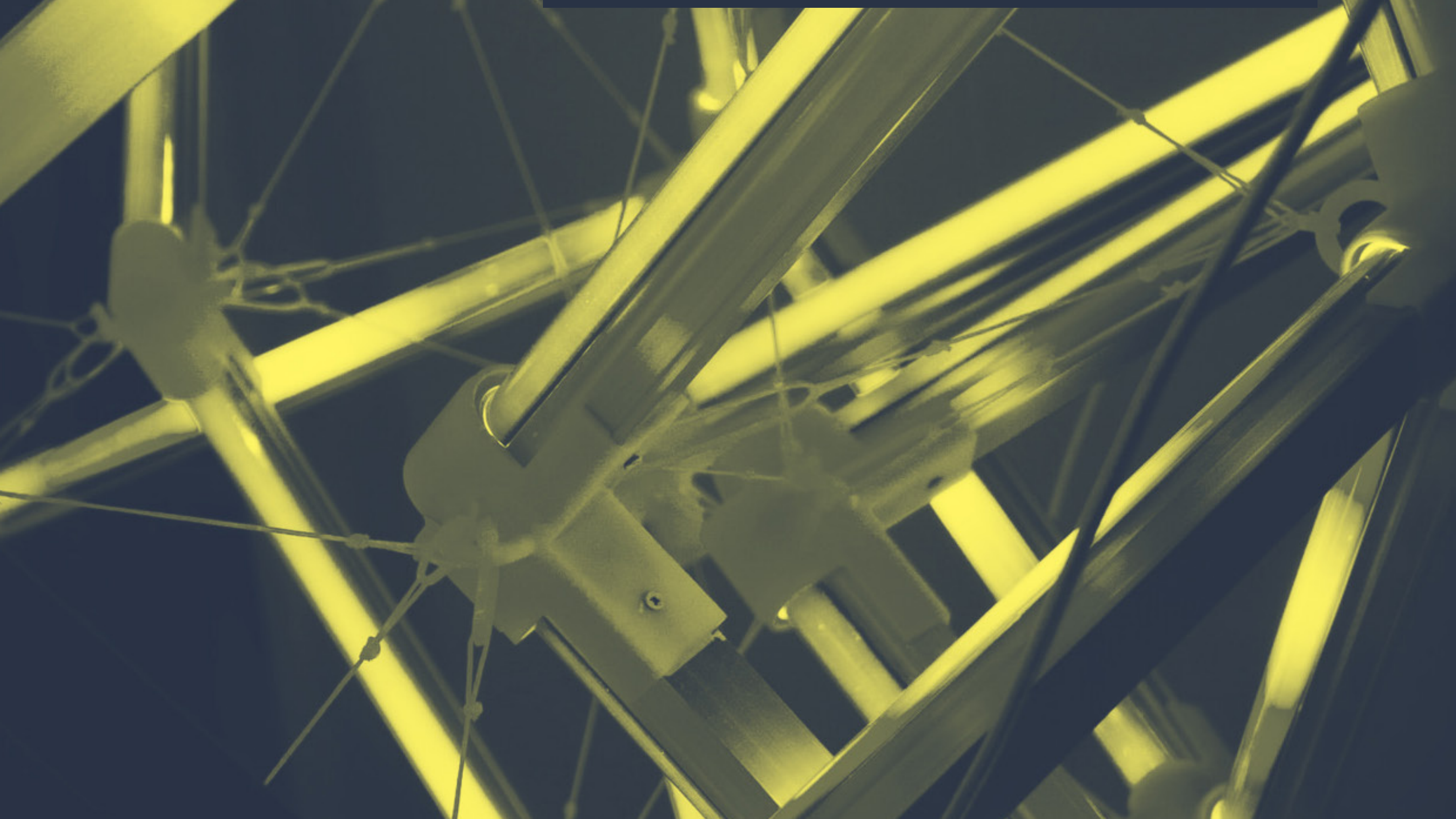
POLICY BOOKLET

RegionArts
Interreg Europe

MAPPING THE ECOSYSTEM

Activities Linking ICT and Art

European Union
European Regional Development Fund



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Foreword

During the last decade, there has been an increasing recognition of the importance of artistic and creative processes as catalysers of innovation, something particularly noted in areas such as Information and Communication Technologies (ICT) that intersect in many fields with artistic processes. Recognising this importance, public authorities at regional, national and EU level have been trying to bring together ICT and artists communities to explore new ways of working. Nevertheless, there is still a clear need for improvement. Firstly, in many places, support to the creation of links between arts, ICT and entrepreneurial spirit for the promotion of successful business innovations will require new policies and actions, as most of policies available today are conceived for an information and knowledge age (often even for an industrial age) that is no longer predominant.

Successful innovators in sciences and technology strongly benefit from artistic skills, something that nowadays is particularly noted in an area such as Information and Communication Technologies. Arts do not just prettify or make technology more aesthetic; they often make it possible in the first place. Despite this recognition, it is commonly accepted that innovation has not yet tapped into the full potential and diversity of artistic talent across Europe. For a more vibrant, competitive ICT-driven economy, it is important that ICT experts, researchers and business adopt creative and artistic visions, or at least work with people who have these qualities. In this regard, integrating arts in ICT when arts are ICT based in themselves will not be enough.

The ultimate aim of RegionArts is to promote the competitiveness and innovation of companies through the integration of, and synergies, between ICT and artists.

RegionArts partners are convinced of the need of integrating the Cultural and Creative Industries (CCIs) with ICT for SME innovation and competitiveness. As regional authorities, business development agencies and creative clusters, they have been working on promoting these cross-overs for the last years. But it is not an easy task. By helping partners in the design and implementation of public regional and local development programmes on this field, and by finding effective ways to promote synergies and crossover between these two worlds, RegionArts will promote new collaborations and the increase of SMEs introducing an innovation.

In this policy booklet, we share the lessons learnt from the project activities on the mapping of regional ecosystems and activities linking ICT and Art, providing, for each region an example subset of the CCI/ICT ecosystem.

Glosary

Arts

Creative activity resulting from the expression or application of human creative skill and imagination, such as fine arts: drawing, painting, sculpture; performing arts: music, drama, dance, circus; graphic and audio-visual arts: photography, cinematography, music production, radio and TV production, printing, and publishing; design; craft skills; etc.

CCI

Cultural and creative industries: cultural and creative sectors are comprised of all sectors whose activities are based on cultural values, or other artistic individual or collective creative expressions.

ICT

Information and communication technologies: technologies for gathering, storing, retrieving, processing, analysing, and transmitting information.

Innovation character

(focus on the role of non-technological innovation) promote meaningful, human-centred innovation in the ICT world.

Organizations (types)

Policy Makers; Associations; Incubators; Clusters; Universities; Research Centers; Networks; etc.

Initiatives (types)

Policies; Support Programmes; Events and Festivals; Awards; Grants; Funding; etc.

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01 Introduction

During the last decade, there has been an increasing recognition of the importance of artistic and creative processes as catalysers of innovation. Scientific and technological skills alone are not sufficient anymore. Successful innovators in sciences and technology strongly benefit from artistic skills, something that nowadays is particularly noted in an area such as Information and Communication Technologies (ICT). Arts do not just prettify or make technology more aesthetic, they often make it possible in the first place.

During the last years, public authorities at regional, national and European level have been trying to nurture links between arts and in the ICT sector through different public interventions. Nevertheless, there is still a clear need for improvement. Firstly, in many places, support to the creation of links between arts, ICT and entrepreneurial spirit for the promotion of successful business innovations will require new policies and actions, as most of policies available today are conceived for an information and knowledge age (often even for an industrial age) that is no longer predominant.

Despite this recognition, it is commonly accepted that innovation has not yet tapped into the full potential and diversity of artistic talent across Europe. Moreover, if the digital economy of Europe is to prosper over the long term, its full and diverse artistic base must be effectively engaged. For a more vibrant, competitive ICT-driven economy, it is important that ICT experts, researchers and business adopt creative and artistic visions, or at least work with people who have these qualities. In this regard, integrating arts in ICT when arts are ICT based in themselves will not be enough.

RegionArts partners are convinced of the need of integrating arts in ICT for SME innovation and competitiveness. The consortium blends the experience of two main type of partners:

- **Regional and/or local development agencies or departments (KEPA Business and Cultural Development Centre, ENTER Koprivnica, ART-ER Stock Joint Consortium, Molise Region) focused on promoting the competitiveness of SMEs and innovation;**

- **Organisations focused on promoting the role of arts and non-technological innovation as a catalyser of innovation (Porto Design Factory, Baltan Laboratories, University of Lapland), while collaborating closely with their public administration towards this aim.**

Together, the RegionArts consortium is exploring how to design effective relevant support programmes promoting the integration of artists in ICT projects. By helping partners in the design and implementation of public regional and local development programmes on this field, and by finding effective ways to promote synergies and crossover between these two worlds, RegionArts will promote around 140 new collaborations in total (around 20 per region), i.e., 20% of the beneficiary SMEs introducing an innovation by 2022. The objective is to improve the implementation of Structural Funds/other funds in partner regions, through adapting or designing one support scheme in each region for the promotion of collaborations between artists and ICT companies.

02 Mapping Methodology

The concept of the innovation ecosystem is receiving attention worldwide. Governments and industrialists are keen to foster innovation ecosystems to systematically cultivate favourable environments and encourage local innovators to create knowledge and capture business value. In particular, innovation ecosystems require specific attention when faced with fast-developing emerging industries that closely link science, technology, arts and business.

The methodology considered four phases of work, which were then specifically adapted for the individual context of each region. The initial step included the collection of data from each one of the regions in the project, with the goal to quantify the share of Arts and ICT activity in the region.

After this step, the project partners surveyed who were the organizations and initiatives which were providing support to Arts and ICT, including from policy makers to individual artists, art galleries to research centres, museums to donors, policies to events, or accelerators to awards.

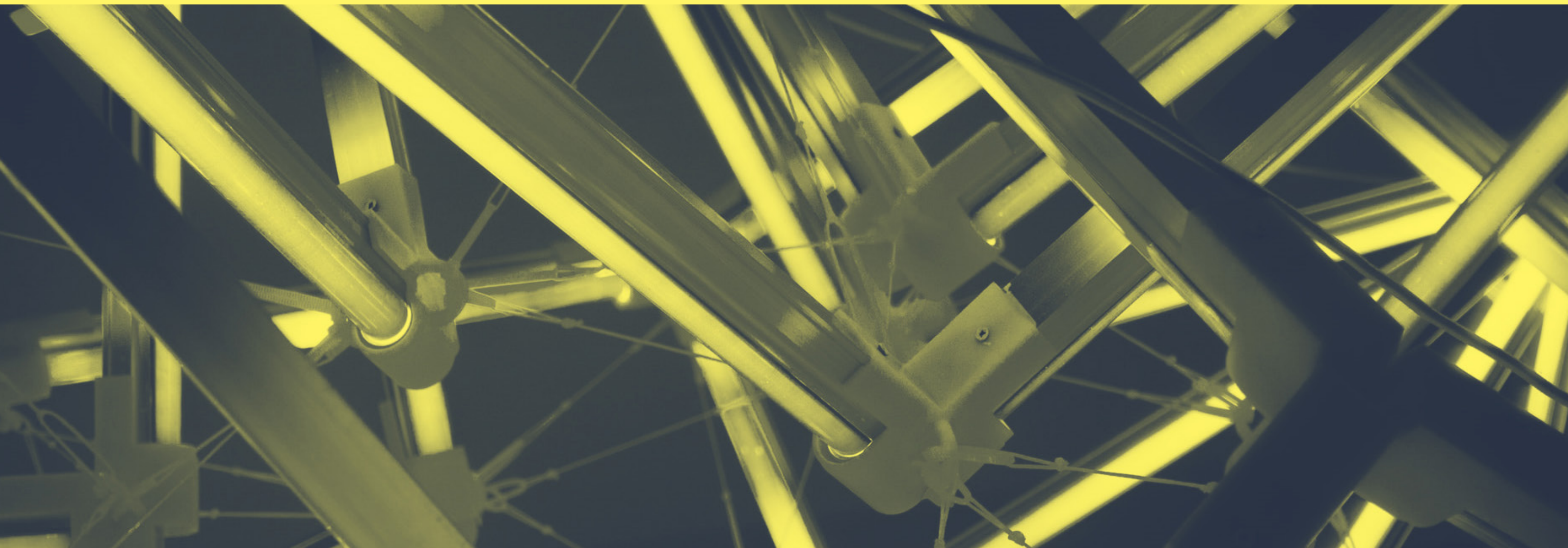
Using this knowledge, mapping co-creation sessions were organized in meetings with relevant stakeholders, to examine the strengths and weaknesses of the ICT/CCI ecosystem and brainstorming policy actions to tackle the weaknesses and build on the strengths. The result of these sessions allowed to complete the initial mapping.

The final phase was devoted to investigating potential collaborations within the ecosystem. Again using co-creation sessions, it is possible to learn where stakeholders want to go, why they would want to collaborate and have some information for potential match-making.

This policy booklet shares the lessons learnt in the application of the methodologies in the RegionArts mapping of the regional ecosystems, and the specific challenges found in each one of the regions. For each region it also provides an example subset of the CCI/ICT ecosystem.

The methodology used in the project used a framework to investigate the innovation capacities of a multi-layered ecosystem that involves arts, ICT and innovation, when considering two core attributes of the ecosystem: the integrated value chain and the interactive network.

03 Regional Ecosystems



North Region (Portugal)

Analysing the Scene

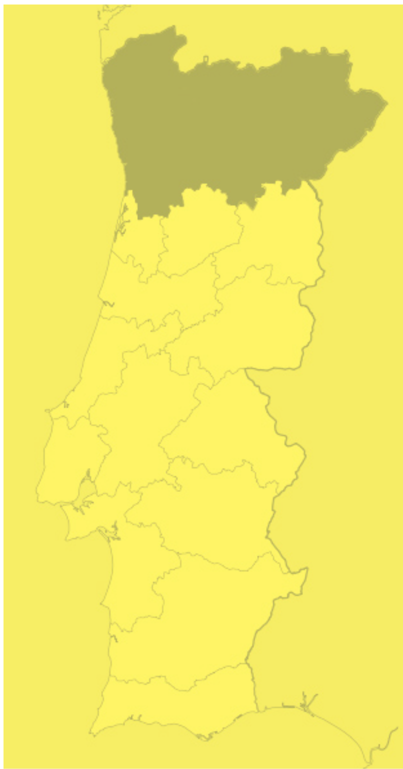
Cultural and Creative Industries (CCI) of Northern Portugal are seen as having the potential to leverage, modernize, and make more competitive the traditional sectors of the economy, such as textiles, footwear or furniture more competitive. This seems to be a decisive factor of its importance in the North of Portugal with regard to the necessary reconfiguration of its model of economic, social and cultural development.

CCIs are also a relevant contributor to the differentiation and growth of the tourism sector, as well as to the valuation of the identity, heritage and culture of a region on a symbolic plane in globalized modernity. The CCIs are also fundamental reading and intervention keys for the crossing of new languages and artistic and cultural communications, since they potentiate the restructuring of the production systems and the forms of dissemination of the products, being a clear space of technological innovation, but also cultural and social.

There is a concentration of cultural and creative activities that follows the centrality of the social, economic and cultural development

The creative sector is an important contributor to Portuguese GDP, with 3.6% of GDP corresponding to 6.7 million euros (values of 2016), and 120 thousand jobs. In sum, the cultural and creative activities tend to assume, in the context of the knowledge economy, as undisputed levers of wealth generation, job creation and the attractiveness and competitiveness of local and regional economies. And the North Region takes a large share of this market, with 25.6% of the sector. The number of CCI companies has been increasing in northern Portugal, with the largest number of companies in the graphic arts and publishing group (printing, editing, and distribution of newspapers, magazines, books, etc.), followed by advertising, architecture, and drawing (graphic and industrial, very focused on jewellery design).

There is a concentration of cultural and creative activities that follows the centrality of the social, economic and cultural development, showing that they tend to take on a dynamic context of the knowledge economy as undeniable engines of wealth generation, job creation and attractiveness and competitiveness of the local and regional economy. Apart from the Porto Metropolitan Area, some sectors are taking shape and weight in the cities of Trofa, Santo Tirso (Invest Santo Tirso Empreende and Fábrica de Santo Thyrso) and S. João da Madeira (Sanjotec and Oliva Creative Factory), resulting from a recent / emerging dynamic of culture and creativity clustering, which is fundamental to anchor this development to the wider space of the Porto metropolis. At the same time, in response to a crisis in the textile industry, the city of Braga was able to reinvent its economic fabric with the birth of a technology cluster that paved the way for a new era of technology companies, digital communication



studios, laboratories and research centres in the world, robotics, games, multimedia and media arts. These are only examples of a thriving sector.

Concerning the ICT sector, in 2018 the North Region had more than 5 thousand enterprises, employing more than 30 thousand people, and generating a total revenue of almost 4 thousand million €. From these companies about 70% are SMEs. In particular, the city of Porto has recently become a central hub for ICT, promoting and making Porto and the North Region as a global technological centre of excellence. One example is the Porto Tech Hub (PTH), a not-for-profit association of tech companies that was created by three well-established tech companies, each one with strong connections to Porto: blip, CRITICAL Software and Farfetch. The goal of PTH was to develop and grow the city's thriving tech scene to capture the imagination of the many talented individuals that the city plays host to, bringing businesses and people together to celebrate the power of technology. The association promotes a variety of initiatives and events throughout the years. It is designed to explore how technology can be used to develop individuals, businesses and the wider community in Porto.

Strengths

- Dynamic context of the CCI's activities as an engine of wealth generation, job creation, and attractiveness.
- Dynamic ICT sector, and attractiveness of North (in particular, the Porto area) to international technological companies
- Dynamic entrepreneurship environment, with a growing ecosystem of startups, scale-ups, accelerators and incubators
- Response to economic crisis by reinventing the business models through the investment in technology clusters that led to a new era of technology companies resulting in a thriving sector.

Weaknesses

- Regional and Nacional market size and low purchase capacity, leading to a high dependence on internationalization, tourism, and foreign investment attractiveness.
- Lack of access to communication and bureaucratic democratic processes which result in challenges concerning the promotion of collaboration between different sectors, and of facilitating the access to support and funding opportunities.
- Difficulties of commination between sectors, lacking effective approaches to bridge ICT and artists.

Opportunities

- Potential of Arts and ICT to leverage, modernize and thus, bringing more competitiveness and innovation to the regional economy.
- Differentiation through an innovative approach, combining Arts and ICT, to the diverse heritage and culture identity of a region on a symbolic plane in globalized modernity.
- New European and Regional Framework Programs, which can potentially bring seed funding for innovation in Arts and ICT.

Threats

- Global competitiveness and fast pace in the technology sector development and innovation.
- Low capacity of investment and economic strength of the national/ regional SMEs, when compared with other EU countries, can represent challenges of bringing, in an effective way, new products to the market and the business scale up capacity.
- Uncertain tourism sector, with high dependence of external factors for its growth and sustainability.

The Mapping Process

For the methodology we have developed a framework to investigate the innovation capacities of a multi-layered ecosystem that involves arts, ICT, and innovation, when considering two core attributes of the ecosystem: the integrated value chain and the interactive network.

The first approach was to collect statistic data to quantify Arts and ICT SMEs in Portugal's North Region. On the other hand, we have conducted a survey to identify organizations and initiatives that support Arts an ICT innovation. To identify strengths and weaknesses of our ecosystem we have organized a workshop with our local Stakeholders, a mapping co-creation session that allowed us to do a swot analysis. The results of this analysis were systematized in a map / diagram that allows an overall understanding of the ecosystem.

The concept of the innovation ecosystem is receiving increasing attention worldwide. Governments and industrialists are keen to foster innovation ecosystems to systematically cultivate favourable environments and encourage local innovators to create knowledge and capture business value. Innovation ecosystems require specific attention when faced with fast-developing emerging industries that closely link science, technology, arts, and business. The methodology applied needed to create a framework to investigate the innovation capacities of a multi-layered ecosystem that involves arts, ICT, and innovation, when considering two core attributes of the ecosystem: the integrated value chain and the interactive network.

One of the main challenges we have identified about the integration of Arts with ICT, is the resistance to more organized formulas of relationship with the market, as with other knowledge production domains, symbolic knowledge also requires brokers and a structured and specialized brokerage activity to establish bridges between those who produce this knowledge and who applies it from an economic or entreprise point of view.

Another challenge refers to communication. Many of the funding opportunities which could be use dot promote this integration are disseminated in a jargon which precludes understanding from the creative sector. At the same time, artistic performances are usually promoted as economic agnostic, precluding the sensing of opportunities to scale. This needs to be tackled with effective communication approaches which understands the difference in culture and perception in both worlds.

Looking forward

Following the mapping work carried out, it is possible to enhance the current creative attractiveness factors of the region, reinforce the notoriety and dynamics of its creative places, diversifying the current offer, and seize the main opportunities and trends identified. A few factors are identified in this process.

The clustering phenomenon evident in the Historic Centre of Porto, which should be a fundamental support in this agenda, clearly assuming itself as the centre of a Creative Region under construction. Increasing the vitality, dynamism and confidence of the city and the region is the result of the success of this regeneration process which must increasingly be based on the excellence of its cultural heritage and the dynamics of its cultural and creative tourism.

The possibility of enhancing the symbolic character of the ongoing urban renewal, which could be a fundamental piece in the marketing of the region's creative brand, due to the unique possibilities it offers in the fusion of heritage with contemporary cultural expression.

The excellence of the conditions and infrastructural resources associated with the existing culture in the Porto Metropolitan Area, whose new focus will focus on optimizing its management and network programming, seeking that the specific opportunities of each place serve the regional creative economy;

The existence of an extensive Atlantic coast conducive to the development of activities related to tourism and leisure. These conditions are not only landscape, but also related to the distinctive character of these places and their traditional economic activities (such as the hotel and gastronomic offer, for example). The creative and economic potential of cities with these characteristics is untapped. Hence the possibility of developing a pilot project for a city with these characteristics.

The development of a pilot project for a creative city of industrial characteristics is considered relevant.

The process of transforming the region's productive base through the replacement of traditional industries suggests two opportunities. On the one hand, the industrial architectural heritage presents possibilities of regeneration that converge with the development of the Creative Industries, namely in the provision of large spaces and distinctive character, conducive to the development of activities with special space needs (performing arts, for example). On the other hand, the development of traditional industrial sectors involves strengthening their potential relationship with some creative sectors, namely design and fashion design. Given the potential for growth and innovation that Creative Industries has in revitalizing the industrial, social and infrastructural fabric, the development of a pilot project for a creative city of industrial characteristics is considered relevant.

Emilia-Romagna Region (Italy)

Analysing the Scene

The Emilia-Romagna regional system is strongly focused on the productive dimension and is extremely dynamic from the point of view of the research for innovative and competitive solutions. The industrial ecosystem is composed of around 405,000 enterprises (Unioncamere, 2018), which means around 1 enterprise every 10 inhabitants, employing 1,84 million people. According to the regional S3 classification, Knowledge Intensive Enterprises are 23,500, while Cultural and Creative Industries are around 58.000.

A study carried out by the Emilia-Romagna Economic Development Agency shows a high propensity to micro size, both in terms of employees (1-2 employees) and turnover (under 50,000 €), and a majority composed by individual companies and freelancers, which together account for over 70% of the total.

In recent years, the digital economy structurally transformed the regional industry and, in the next years, it will keep transforming the whole industrial landscape. In particular, as regarding CCIs, internet and the digital revolution itself have dramatically changed several dynamics. Just to make a few examples: copyright protection, the mechanical reproduction of the work of art, distribution, scalability and, more in general, business models, are all issues that need to be addressed according to the new perspectives given by the digital revolution. On the other hand, CCI industries represent a key player to ignite non-technological innovation and boost "traditional" industrial sectors, thanks to their capacity to increase the value and bring to light the hidden potential of their products. This is particularly true when CCIs can count also on technological competences.

Despite that, cultural and creative professionals tend to overlook the effects of technologies rather that exploiting them as an asset, and this is particularly true in Italy. Several regional measures have been directed to support CCIs organizations in understanding and making the most of the advantages stemming from key enabling technologies, focusing in particular on ICT.

This challenge – how to integrate new technologies and creative/artistic competences into industrial processes – is nowadays at the core of the Emilia-Romagna regional innovation policy.

To reach this goal, the regional strategy identified specific areas of intervention and traced technological developments trajectories related to:

- creative processes and new business models: creativity as one of the pillars of innovation and

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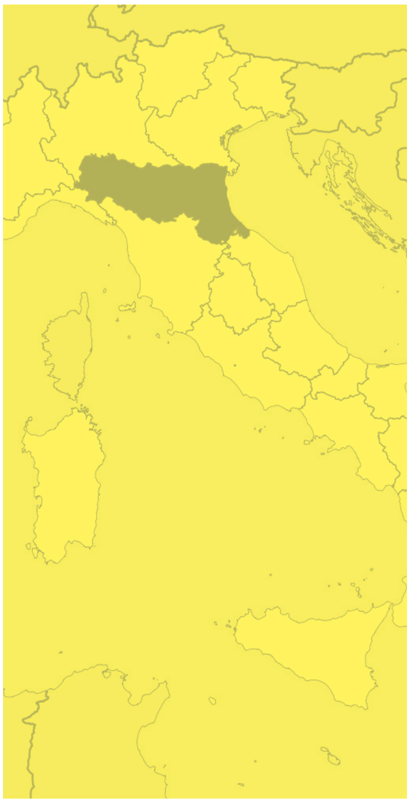


application of creativity in new production processes, new products, new materials, new services and new businesses;

• digital communication and new targets: development of technologies and competences for creating, managing and selling new contents, innovative formats, multimedia tools.

Strengths

• Fertile entrepreneurial ecosystem
• S3 already focusing on CCI/ICT interaction
• Presence of regional Clusters committed to this challenge
• Presence of a large number of research institutions focusing on CCI/ICT
• High number of institutional and non-economic players committed to this challenge
• Several panels already working on this challenge (e.g. working groups within Clust-ER Create which set specific objectives to innovate the sector)

Weaknesses

• Lack of leader corporates/enterprises.
• Difficulty for small/micro enterprises to approach innovation processes
• Policy measure fragmented: lack of an integrated strategy
• Lack of specific measures supporting organizational aspects (i.e. horizontal management models) lack of specific research competencies for the exploitation of the interactions between CCI/ICT
• Lack of educational offer focused on beneficiaries needs (e.g. managerial and business competencies)
• Lack of culture as regards open innovation practices

Opportunities

• Several initiatives (open innovation programs, residencies for artists, business matches, EU projects) to be exploited to boost collaboration
• New regional programming period to be designed (2020/2027)
• New EU program period (greater attention to CCI also within Horizon Europe)
• Launch of new institutions at the local level whose mission matches with CCI/ICT interaction

Threats

• Difficulty of mutual understanding between all players (institutions, creatives, artists, entrepreneurs, researchers)
• Difficulty of integrate in the Action Plan the several decision makers involved in this challenge, both vertically (regional and local players) and horizontally (policy makers dealing with research, innovation, economic development, culture)

The Mapping Process

The mapping analysis was necessary to assess who are the main players to be involved to draft an Action Plan able to support the building of new and effective measures to support CCI/ICT cooperation and their capacity to bring innovation to the industrial ecosystem. Key stakeholders are the regional Clusters Create (Cultural and Creative Clust-ER) and Innovate (Service Innovation Clust-ER), which have been directly involved in drafting the preliminary list of the various actors to be listed. This exercise capitalized on several actions already carried out:

• Analysis by the ER Economic Development Agency "Orange Economy in Emilia-Romagna: CCI, Cultural policies, creative enterprises, social impact" in 2018;

• The participation of the Emilia-Romagna Region in other European projects dealing with CCIs (ex. Creative Growth, Creadis3);

• The participation of ART-ER in several initiatives, dealing with CCI, as the EU network RICC (Regional Initiative for Culture and Creativity);

A second step for the mapping exercise was carried out within the regional Local Stakeholder Group. In the first meeting, held in November 2018, members were requested to answer to a questionnaire to design the map of these interactions. Feedback and results were gathered and then presented for a final validation during the second LSG, held in May 2019. Main difficulties were linked to:

• Sector: mapping CCIs remains an open topic. Data and classification may vary according to different sources of data;

• Interaction: it is difficult to understand which entities are to be included in the mapping, since creativity is, by nature, disruptive, as it subverts the order with which we classify and look at things.

Looking forward

The vibrant regional ecosystem, made up of different actors, realities, world-class businesses, is a breeding ground for technological and non-technological innovation, creative ideas and new inventions. These players and the Emilia-Romagna Regional Government itself are committed to making this territory more and more innovative and competitive by fostering connections between research centres and enterprises and creating networking opportunities inside and outside the region.

The strategic factors that should be taken into account when defining policies and future measures to boost innovation and competitiveness are the following:

• Digitalization and materialization: CCIs are often characterized by intangible goods and values which, nevertheless, should be communicated effectively to target groups and be able to reach the physical market

• Partnership: every actor on the market is part of a value chain made up of other actors (public entities, companies, laboratories etc) playing an important role in the final delivery of a product/service. This is especially true for SMEs which often do not have all the necessary competences in-house and need to be involved in open innovation and joint processes. Research centers are, in this sense, relevant players.

• Scalability and internationalization: growth, scalability, reproducibility have always been an issue for Italian SMEs, particularly for CCIs, which should rethink their business in order to replicate and transfer to the public the added value of their offering. Technology solutions can play a pivotal role in supporting these processes and facilitate the scaling up and the access in foreign markets.

The networking activities and the Action Plan developed through RegionArts will support ART-ER and the Local Stakeholder Group

• Process/product uniqueness: the production process discovery brings added value to the product (e.g. Made in Italy). Integrating ICT solutions could truly increase positive impacts in terms of visibility and distinctiveness for regional enterprises.

ART-ER institutional role is to support the Emilia-Romagna Region in implementing and monitoring policies and measures for sustainable growth, innovation and knowledge, connecting heterogeneous ecosystems (as those belonging to Arts and ICT).

According with its mission, the networking activities and the Action Plan developed through RegionArts will support ART-ER and the Local Stakeholder Group in addressing this challenge within the current programming period and, more important, in designing the next measures and an integrated strategy for 2020-2027.

Noord-Brabant Region (Netherlands)

Analysing the Scene

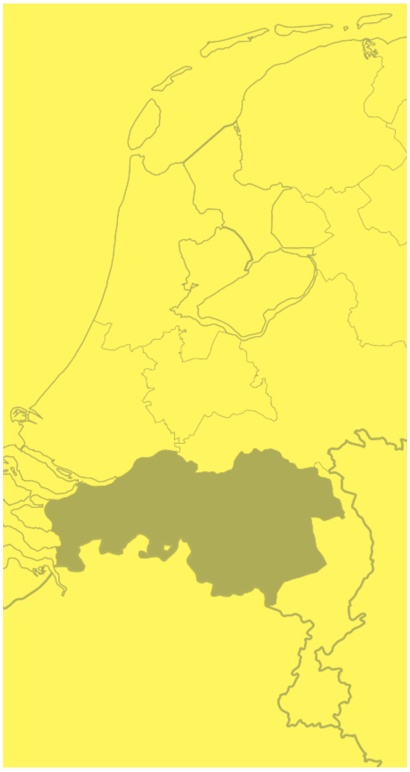
The focus of the analysis is in the Eindhoven area, where both the creative and the technological sector are highly developed and active. Historically built largely in parallel with the growth of Philips and currently with a.o. Eindhoven University of Technology and the High Tech Campus, the technological sector is a big part of the city's identity and a lot of citizens are working or involved in it. The region is known for its innovative strength and its integral and multi-disciplinary way of working. The region excels at developing high-tech machines, systems and products. Due to the high amount of highly educated citizens and the expertise in technology, the region is also referred to as the Brainport region. Together with Airport Amsterdam and Seaport Rotterdam, Brainport Eindhoven is nationally recognized as one of the three biggest economic pillars.

Next to the technological sector, the creative sector is a big part of the region's identity. The internationally renowned Design Academy Eindhoven is based in the city. In several creative hotspots, such as Strijp-S and Sectie-C, creative studios cluster together. Once a year Eindhoven is the international hub for design during the Dutch Design Week and every year in November Eindhoven is all about Light Art Festival GLOW.

Within the city (among clusters, policy makers and companies) the added value of interconnecting the creative and technological sector is recognized. The city brand of Eindhoven is Technology, Design and Knowledge (TDK). There is a strong belief that combining these skill-sets and working in multi-disciplinary projects brings the new perspectives that we need to face future challenges. Organisations and initiatives such as Baltan Laboratories, Dutch Design Foundation, De Kazerne, MAD, STRP and many more focus on facilitating and initiating these cross-overs. However, there is also still a lot of room for improvement when translating the ideology and belief into concrete activities. The three pillars (Technology, Design and Knowledge) are individually well developed and successful. Also, there are numerous activities whereby one sector reaches out to the others. For example, design reaching out to technology or technology to design. But when it comes down to structurally connecting the three at the very basis of an activity or organization, there are still no substantial references. And also, it is not a given in policy instruments and their implementation.

This mapping analysis combines previous maps made of the creative sector and the technological sector. Giving us insight in the potential for cross-over collaborations in the field of Art and ICT. Defining the potential for cross-overs, provides us with a set of selected policies, organisations, actors and initiatives on whom we can focus and zoom in to investigate what they'll need from policy instruments, to support them in collaborating with other sectors.

There is a strong belief that combining these skill-sets and working in multi-disciplinary projects brings the new perspectives that we need to face future challenges.



A sign that in Eindhoven the interconnection of the creative field with other disciplines is important, is the structure of the municipal organisation. In Eindhoven, economy and culture are joined in one department. Also, Stichting Cultuur Eindhoven has an impulse program called Programme Creative Industries (PCI). The ambition of this programme is to realise innovative projects and activities in the field of the creative industries. One of the side-goals is to give more visibility to the value of the creative industries, to create solutions for challenges we face today.

Strengths

• City with intriguing and relevant history and a strong on-brand city-marketing
• Fertile ground for artistic collaborations
• Expertise of the city in design and technology
• BrabantStad collaboration (between cities and the province) with the aim to remain one of Europes top 5 knowledge and innovation regions

Weaknesses

• Fragmented nature of the involved actors
• Initiatives and organisations are sometimes in competition with each other for a limited audience or for funding and financial support
• Competition tends to bring a fear for sharing (knowledge, resources and ideas), which should be at the basis of structural collaborations

Opportunities

• Initiatives such as Creative Ring Eindhoven
• Ambitions for a Design Museum for the Future to be based in Eindhoven
• Crossovers such as E-Culture, Art-Science and Art and Technology are hot.
• The value of incorporating artists and creatives in other disciplines in order to find solutions for (societal) challenges is acknowledged

Threats

• More cities are focusing on art-science/ art-technology cross-overs nowadays.
• Since the region is already ahead in innovation and cross-sectoral collaboration, it may overlook opportunities and lack incentive for improvement and progress.

The Mapping Process

While creating this Art-ICT ecosystem map of Eindhoven, we chose to use a combination of previous maps made of the region. This were the following studies: Regioprofiel Noord-Brabant, from 2018, and a map of the Art-Science ecosystem in Eindhoven (2015). We added the results of a first survey scanning for potential among participants of our first Local Stakeholder Meeting in Eindhoven, in November 2018. We combined these results and re-categorised them for the project.

The main challenge in mapping is that there are a lot of different maps available for the region, which use different ways to categorise actors. Another main challenge was that the maps available do not include a lot of ICT actors. In addition, the Dutch Chamber of Commerce and the Central Bureau for Statistics (CBS) do not use a separate SBI-code for ICT businesses. Therefore, it is extremely complex to build a complete map of the Art-ICT-Innovation ecosystem. The main importance of the mapping for the region is to scan for potential for crossovers between different disciplines.

Looking forward

Baltan Laboratories strongly feels the potential within the region to incorporate the arts and the creative sector in other fields and sectors that are thriving in the Brainport region, one of them being the ICT sector. These innovative sectors are key in finding solutions we face as a society today. Combining expertise and knowledge is necessary to tackle the societal challenges of today, may it be in creating a more inclusive society, facing environmental challenges or socio-economic challenges. For this, an open-minded community that is not afraid of working together is key.

The regional partner notes more and more willingness from both the art, creative and technology sector to work together and benefit from each other's expertise. Policy makers could help accelerate this process of cross-overs with tools that support cross-sectoral collaboration. Stating the importance of cross-sectoral collaboration in policy instruments, both within and outside of the cultural field.

An open-minded community that is not afraid of working together is key.

Kentriki Macedonia Region (Greece)

Analysing the Scene

Central Macedonia is a unique land with a long history and continuous human presence from Prehistoric times. As such, it holds an important advantage of cultural tradition and artistic activity for thousands of years.

Especially Thessaloniki, the capital of Central Macedonia, the second largest city of Greece and the Cultural Capital of Europe in 1997, has a long tradition of intense cultural activity. As testified by the existence of dozens of museums, theatres and artistic multi-purpose facilities, concert halls, outdoor sculpture and its music heritage, Thessaloniki produces strong and inclusive culture.

On the other hand, Information and Communications Technologies (ICT) is identified as one of the sectors with a particularly decisive role in the activation of the advantages of the economy of the Region of Central Macedonia towards innovation, competitiveness and extroversion. Due to its dynamics and synthesis (existence of a critical mass of ICT companies – mostly newly established ones – in Central Macedonia activating in specialised knowledge areas), ICT sector contributes to the movement towards developing new knowledge and innovation intensive enterprises, not only in the ICT sector itself but also in all linked business sectors supported by ICT, especially since there is a significant room for applying technological innovations. The RIS3 strategy of the Region of Central Macedonia highlights the multi-level importance of ICT sector setting its empowerment for further development through the use of innovative tools and through the enhancement of intersectoral connection and cooperation.

This need to intersectoral cooperation is reflected in RIS3 as a specific strategy to create a mass of cooperation and innovation activities by exploiting synergies in the fields of creativity, culture, tourism and production. The sector of Art & Design is clearly linked to ICT sector and, in order to further empowering this cooperative innovation and interconnection between these two sectors, programmes for supporting innovation, creativity and design are developed.

''Strengthening research, technological development and innovation'' and ''Enhancing access to, and use and quality of, ICT'' are funding priorities of the Operational Programme of Central Macedonia 2014-2020. Special emphasis is put on:

- Developing of ICT products and services, of ICT applications in other sectors (e.g. e-culture).
- Strengthening new businesses in ICT industry with particularly innovative ideas.

The sector of Art & Design is clearly linked to ICT sector and, in order to further empowering this cooperative innovation and interconnection between these two sectors, programmes for supporting innovation, creativity and design are developed.

• Creating an innovation ecosystem where ICT rendering services shall mostly serve the local demand.

• Stimulating investment plans of enterprises in the secondary sector and in tourism – culture sector for introducing processes and organizational or promotional innovations, supported by ICT.

Until now, there has been an activation to create and fund structures for the development of ICT sector focusing on innovative ICT activities and linked sectors. However, in most cases, there were ICT integrated in Arts.

The mapping analysis is important, in order to tackle the fragmentation of initiatives taken in Art/Creative Industries and ICT sector in the region, bring them together and assess their challenges and needs.

The survey conducted led to some interesting findings regarding the ecosystem of arts/creative industries and ICT. The main challenges and needs are presented below, after having elaborated the data collected:

• **Public awareness** – Attract wide audiences, address their needs and everyday contact with people, especially in times of difficulty.

• **Funding** – Access to funding opportunities and development of new financial instruments.

• **Extroversion** – Develop synergies by networking and cooperating with relevant stakeholders, promote activities and disseminate information through media channels.

• **Sustainable results** – Need to develop and apply research programmes (especially related to ICT), difficulty in cooperating with multiple actors and

There has been an activation to create and fund structures for the development of ICT sector focusing on innovative ICT activities and linked sectors

achieving sustainable results.

• **Local business** – The size of the enterprises in the region (most of them micro, small and medium and family companies) and their mindset (resistance to change, seeking only for funding).

• **Efficiency restrictions** – Limited sources in funding and human resources, bureaucracy and administrative burden in public administration.

The survey also allowed to understand the needs (useful services and support) in order of priority:

1. **Access to finance** – information in funding opportunities

2. **Access to collaboration opportunitie**s – Internationalisation & matchmaking – Networking and information sharing

3. **Access to new markets** – Capacity building & Training – Organisation of conferences/events – Showcasing of products/services

4. **Technical support** – Awards & prizes – Coaching & Mentoring

5. **Incubation** – Commercialisation/Marketing – Business Acceleration

Strengths

• Wide cultural product by a variety and large number of CCI organisations
• Existence of research organisations in Central Macedonia
• Existence of adequate number of educational organisations / programmes
• Well-trained and expertised human resource in CCIs & ICT sectors

Weaknesses

• Lack of synergies and extroversion
• Lack of deep knowledge of CCIs & ICT sectors – the two sectors are not really aware of each other – segmentation
• Ineffective promotion of the regional cultural product and related initiatives as a whole
• Research not linked with business sector
• Lack of research focusing on linking CCIs & ICT and of specialised interdisciplinary programmes
• Lack of financial instruments for small and micro business
• Inadequate information and training about funding opportunities

Opportunities

• Perspectives to create innovation in the region
• Availability of low-cost means, infrastructure and specialized services for the support of cultural activities
• International participations through local/regional organisations
• RIS3 enhances synergies between CCIs & ICT in Central Macedonia
• Funding opportunities through national and regional Operational Programmes
• New ideas initiating new private entrepreneurial proposals and seeking for funding

Threats

• Administrative burden in public administration (bureaucracy, complex procedures)
• CCIs & ICT actors not participating in policy making
• The regional strategy and policy does not reach the bottom (local) level
• Mindset of local businesses (resistance to change, seeking only for funding)

The Mapping Process

The methodology was based on the combination of primary and secondary research, so as to derive as much and valid data on the ecosystem. For the collection of primary data, a questionnaire was elaborated and sent to a shortlist of organisations in the region of Central Macedonia activating in the fields of Art – ICT – Innovation. This online survey was carried out after the first meeting with the relevant stakeholders within RegionArts project, where the representatives of the participating organisations were informed about the project and engaged in its activities- including the mapping analysis.

The desktop analysis comprised the review of RIS3 strategy and of the Operational Programme of the Region of Central Macedonia, as well as the exploration of other available sources of information regarding initiatives, projects, reports and publications on arts/creative industries, ICT and innovation in the region.

The main challenge while conducting the primary research was to succeed to get a satisfactory representative sample of all types of the relevant organisations activating in the fields of Art – ICT – Innovation, which we finally managed to do so.

Moreover, the results regarding the ecosystem's mapping and the SWOT analysis were also reviewed, validated and enriched during the second meeting and interactive workshop with the stakeholders.

Looking forward

As derived by the survey conducted and the sessions conducted, the two main challenges that the ecosystem's actors are facing are: a) funding and b) networking. The Business and Cultural Development Centre (KEPA) acts as an Intermediary Managing Authority of funding programmes and is also one of the main stakeholders in the region of Central Macedonia holding a wide experience in networking and project implementation at local, regional, national and European level. Thus, KEPA intends to contribute to raising awareness regarding the value of incorporating creativity to ICT projects among business intermediaries, to initiate programmes assisting ICT SMEs in integrating art into business models/ products/ services and to facilitate synergies between ICT companies, artists all the actors within the relevant ecosystem.

As for the local actors, they should accept their role in achieving the mutual goal for the activation and further development of the ecosystem by offering the proper facilitation in enhancing synergies and new initiatives amongst its stakeholders. Furthermore, one common bottom-up policy should be developed based on the needs of the citizens and of all the related stakeholders and business sectors.

Lapland Region (Finland)

Analysing the Scene

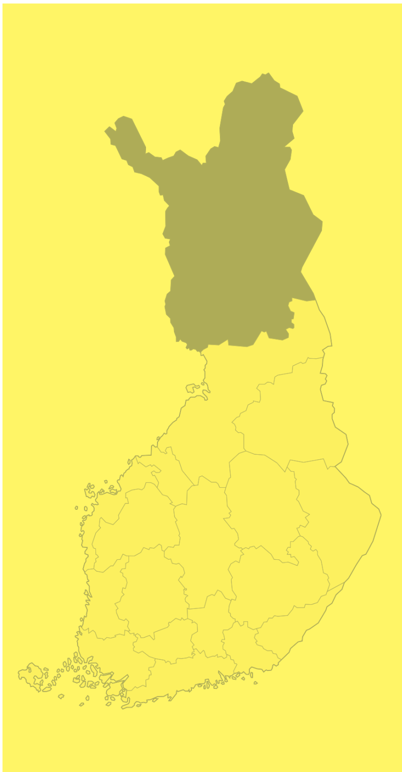
Lapland is the northernmost region in European Union located mostly north of the Arctic Circle. Whereas Lapland is the largest region of Finland covering 1/3 of the country, it is also the most sparsely populated area in whole Europe. These extreme conditions make Lapland a truly unique setting for living, let alone business. Biggest economic areas of Lapland are on natural resources (forest) and tourism industry. Here lies also innovation potential for emerging industries.

The targeted policy instrument of Region Arts in Lapland is European Regional Development Fund (ERFD), Programme for Sustainable Growth and Jobs 2014 - 2020, Priority axes 2. Producing and Using latest information and knowledge. Specific objectives of the priority axes are development of the centres of research, expertise and innovation based on regional strengths, strengthening innovation and competitiveness of SMEs in domestic and foreign markets, developing solutions based on renewable energy and energy-efficient solutions. The operational programme is implemented through Lapland Regional Programme coordinated by Regional Council of Lapland.

In general, networking, collaboration, internationalisation and innovations have been a core mission in regional development of Lapland to be able to improve competitiveness both in national and international level. During the respective programming period, projects have emphasised strengthening of innovative cooperation and building of learning environments as an infrastructure for innovations. The aim has been to bolster Lapland's strong livelihoods and education, as well as to promote entrepreneurship.

The status of arts ICT in Lapland Finland is rather two folded. There have been long-term research and education expertise on both with relatively strong national and international collaboration. Yet the current business sector is very small. On arts, there is respective education and research under Lapland University Consortium (LUC) by University of Lapland and its Faculty of Arts and Design producing 1/3 of designers in Finland with a master's degree. Lapland University of Applied Sciences (LUAS) complements arts education by its degree programme in culture and arts as does Sámi Education Institute providing education and research on handicrafts. ICT research and education are provided by LUAS by its degree programmes in general ICT. Lapland Training Centre REDU has also undergraduate programme in ICT. In general, Lapland education and research activities have prioritised investments to development and innovation environments. According to this, there is relatively strong RDI operation with several development environments including activities related to arts and ICT collaboration.

Lapland education and research activities have prioritised investments to development and innovation environments



Strengths

- Relatively strong educational and research basis
- Existing cluster collaboration and public infrastructure
- Support from smart specialisation strategy Support from national design policy and digital strategy
- Available public funding Small size of companies as an agile advantage
- 'Small circles' offer easy access to regional and national stakeholders.

Weaknesses

- Ecosystem based too much on small, mostly micro-sized enterprises: lack of RDI resources
- No clear integration or collaboration model for arts/design and ICT sector
- Lack of evident potential and market attractiveness
- SMEs access to public funding and international markets
- Lack of startup ecosystem
- Lack of promotion/ networking events
- 'Small circles': lack of diversity, local competition
- Sparse population and long distances

Opportunities

- Interest in collaboration
- Many initiatives for wider RDI collaboration and support under development
- Strong tourism and natural resources industrial sectors: offer great potential for implementing ICT and arts
- Synergy, innovation and growth potential with the cross-cutting nature of arts and ICT
- Awareness of sustainable development private entrepreneurial proposals and seeking for funding

Threats

- Companies and supporting organisations not realising the multi-disciplinary innovation potential on adequate level to commit for actions
- Short sighted collaboration interest: local competition
- Regional strategies are not realised as an actions beneficial for SMEs Implementation of new technologies and innovations
- No clear and balanced model for collaboration for every stakeholder to gain benefit
- Lack of labour

However, the serious business focused on creative activity is very limited and it is not very well acknowledged or is seen misrepresented. In ICT sector, Finland is considered one of the world's leading countries. Yet, this doesn't reflect well in Lapland as the ICT business is mainly focused south of it. This is linked a greater challenge of business and labour markets being narrow in general due to sparsely populated area (with only 3,3 % of population of Finland) and besides education the population flowing southwards to bigger cities. In general, 96 % of companies in Lapland region are SMEs. The arts represent only slightly over 4 % of the total companies in the region being mainly focused on performing arts, artistic creation (handicrafts, artists), advertising agency activities and photographic activities. All of these are SMEs, most micro businesses and sole traders. The ICT sector represents only slightly over 1 % of the total companies being focused almost solely on computer programming activities and operating more around public sector, education and research. Also, ICT companies are mostly micro businesses. So are current arts and ICT intensive businesses few and mostly SMEs.

The Mapping Process

To map the ecosystem, both quantitative and qualitative methods of data collection from different sources were utilized to form an extensive image of the ecosystem. Quantitative statistics on arts and ICT companies was gathered from two national statistics offices based on national standard industrial classification TOL 2008 (based on EU industrial classification NACE Rev. 2). This was complemented with a survey for respective regional operators including companies and supportive organizations. There was also a workshop arranged for local actors including companies, research and education plus other supportive organizations. The aim for this was to get a deeper insight to the needs but also potentials and general thoughts regarding the collaboration.

The initial challenge for the mapping was that there was very little reliable, up to date knowledge for the needs regarding specially Lapland. In the actual mapping process, the greatest challenge was to get actors involved. For the workshop, diversified actors were reached based on the technical areas but the regional coverage as well as the number of participants left room for improvement. With the survey there was a similar issue, especially with the number of respondents, but it provided better regional coverage. The combination of these allowed a good initial outcome for the mapping.

Joint projects in Lapland are led and implemented mostly by public authorities or development centres. During the operational programme 2014-2020, the main projects in Lapland combining ICT and arts focused on establishing the relative development environments under Lapland University Consortium. These include development environments of Technology and Natural Resources sector and centre of arts and design expertise. Most of the actions are related to the creation of infrastructure, which acts as a basis for the cooperation of ICT and arts. Practical projects include creating and using new technologies with a distinct focus on smart mobility and service solutions in national and international collaboration. The use of natural resources and its innovative exploitation through virtual technology as well as game technology and experience-based tourism have also been funded projects during recent years. In general, the Arctic is one of the expertise areas in projects according to the smart specialisation approach.

In Finland Design Policy (and its combination to ICT) have been developed to focus more on cooperation with industry. ICT and Digitalisation challenges are also prioritised in the territorial development strategies and implementation. In Lapland Arctic Smartness (RIS3 implementation) is the main driver widening the operational environments and decreasing boundaries of industries. Arctic Smartness approach have had a goal to enhance clusters' capability to participate in different networks, which have possibilities to increase innovativeness and open new sources of cooperation as well as finance. The arts is linked to the Arctic Design Cluster, which is one of the five clusters that implements RIS3 in the region. Arctic design cluster have long-term experience of design in the arctic: design with a focus on arctic but also to extreme conditions in general; conducted in practice through e.g. service design, product design, textile design, interaction design and applied virtual arts. The cluster itself is yet in initial phase and focus is on establishing the best model for practice and expanding the network.

Other smart specialization cluster of Lapland, Arctic Development Environments, is strongly linked to the combination of arts and ICT. Under this the development environments aim to build a comprehensive regional system for emerging innovations and businesses, through product and service development, commercialisation of products and building value-chains to gain synergy and offer better access for companies. Three main environments strongly linked to ICT and arts include software engineering laboratory, research entity on ICT and construction, centre of arctic arts and design expertise and centre of excellence in cold climate engineering (involving ICT).

Looking forward

Main challenges in Lapland are long distances, sparse population and micro-sized enterprises as well as lack of networking possibilities. Lapland's focus will emphasise two main issues; incentives of actions and exploitation of networking. There is now a remarkable chance for local actors to collaborate more with local SMEs for example through joint project or other joint activities. Lapland will support potential, innovative interaction and collaboration between arts and ICT as well as with other areas of businesses by events and utilizing remote technologies. Actions are kept strongly linked to the regional smart specialisation strategy through Arctic Design Cluster as part of the operation of arctic design centre (ARCTA Arctic Art & Design Labs) in close collaboration with other clusters and RDI environments. That being said, companies should also have a more increased role in the system not only using but also offering services in cooperation. Based on ecosystem mapping, there is a chance to identify enterprises willing to develop their RDI operations. By further mapping their interest and needs for incentives to commit for collaboration, it is possible to plan activities and innovative solutions meeting the needs of businesses.

Because most of the RDI environments in the area are coordinated by educational institutes and activities led by public authorities, there is an evident gap of knowledge and collaboration between small-sized enterprises and public institutions. There is also some competitive mindset between companies operating in small markets. To address these challenges and fulfil the unused potential of the arts & ICT, it is crucially important to create a well-structured and transparent collaboration model with integrated support measures offering effective networking possibilities and easy access to funding instruments. This can be achieved only by designing it in cooperation with the regional actors and companies.

Lapland will support potential, innovative interaction and collaboration between arts and ICT as well as with other areas of businesses by events and utilizing remote technologies

Continental Croatia Region (Croatia)

Analysing the Scene

Today's state of art is such that solo artists, first of all fine artists, cannot normally make money only from art (most of them), but have to decide to work in some of the industries where their pronunciation is not complete. Their presence is most noticeable in marketing departments, graphic department, PR, digital content creation and other places. In addition, artists are in most cases subcontracted for the job they perform and their contribution is not recognized as important. Often this sector is misunderstood and is inclined to attack in the sense of criticism by politics, employers and peoples. The ICT sector in Croatia in the last decade is the fastest growing sector and the export promoter which employs more than 28,000 people. The problem that exists is that there is not enough educated population that could work. In this sector leading mobile operators, software companies, digital marketing agencies, computer programming companies and others. Although the indicators and tendencies of good Croatian ICT industry are still lagging behind the EU average.

This type of analysis has enabled us to ascertain what is the actual situation about this type of cooperation in practice. Without analysis we would not get information that there were positive examples but they were stimulated on their own initiative. This type of analysis is also needed to establish the ways of thinking of those to which the project relates. A mapping analysis could find out which spheres of interest groups saw the potential of cross-sectoral cooperation. By using some other method, it would not be possible to determine the current state of affairs as well as critical areas such as lack of co-operation, where they would be run, testing laboratories, and others, that are crucial to achieving co-operation between the two sectors. The results of the analysis set the foundations for further work and a guide that can create further activities.

So far we held several stakeholder meetings and disseminate results of the project on local and national level. We invited and involved ICT sector and artists. Some of our stakeholders, who were participating on EoEs are relevant for influencing on policy making at national level, and others are involved in projects that include cross-sectoral cooperation. City of Koprivnica and ENTER Koprivnica finished a project of building an Incubator of creative industries where variety of services are available in order to foster cooperation between IT companies and artistic sector. We often use this project also for better dissemination of results and promotion of project activities.

The results of the analysis set the foundations for further work and a guide that can create further activities.

Strengths	Weaknesses	Opportunities	Threats
• Developed cultural scene • Developed the ICT sector • Openness to co-operation between the sectors	• No funding measures that would adequately fund such cooperation • Prejudices of one sector to another • Lack of education about the benefits of such cooperation • Lack of cooperation space • Lack of events where the two sectors will meet and connect • Complex patenting / protection of ideas, products	• Establishing a competence center • Possibility of commercializing products or services that are created by co-operation • Interests in Interdisciplinary Cooperation • Interests in exploring new directions beyond their own actions • Interests in participating in educational programs that merge sectors	• Collaboration will not result in innovative products or services • Authorities will not recognize such initiatives as worthy of funding • Disagreement in opinions / differences will adversely affect the performance and results of the project • The question of ownership over innovation and patents • Marketability of Innovation

At the national level there are several projects and examples that support the inter-sectoral activities of ICT and artists. It is important to point out that examples of co-operation are not encouraged and recognized by government bodies but by universities, associations and private companies and artist. The results of the co-operation are: a joint elective course attended by students of the areas of art, science and technology at several faculties, organized a lot of workshops, projects and events.

In the European Union, there is a recognized need for cooperation between two seemingly incompatible sectors with the aim of creating innovations. There are also initiatives in other countries that encourage cooperation, but Croatia is unfortunately not among them. Despite the above, in the EU this is a new area and it is still working on it.

The Mapping Process

For the analysis of the existing situation, the methodology used included creating a questionnaire to artists, associations, companies and institutions closely related to the ICT and art sector. Second used method was a focus group in which the respondents according to the guidelines came to concrete conclusions. In the questionnaire, 52 responses were collected, of which 25 were from the ICT sector, 11 from the art, 12 mixed sectors (subjects that deal with ICT and art), and 4 public organizations / institutions. All participants answered on 16 questions in the questionnaire. A focus group meeting was held in Zagreb at the Academy of Fine Arts. The number of participants who participated is 9, and come from associations, IT companies, the Academy of Fine Arts and others.

We used these methods because they were a logical solution because it is possible on a easy way get answers from a large number of participants. We managed to find out all the answers and opinions that could not be read out of the questionnaire through the focus group. The questionnaire gave the topic box and insight into the current situation, and the focus group deepened and responded to more areas such as what is missing and that's not only financing, what are the views of both sectors and so on.

A few challenges were found in the mapping process. The first challenge was related to the questionnaire and how to find the interested participants at all, gain their attention and attract them to answer on the asked questions. Further, the responses collected were not as well explained as expected. More precisely the answers were yes or no in the majority of cases and that they did not have enough of financial support and promotions for cooperation between sectors. Another challenge was that respondents were not familiar with the cooperation of the two sectors, and if they are, they were not from the aspect of creating innovation. If they are unfamiliar with co-operation, it is more difficult to work because there is no understanding and knowledge of how to achieve it. Regarding Focus group, the first challenge was to avoid answering an equal number of representatives from both sectors. In that case, there would be an overcoming of an opinion, which did not want to happen. Another challenge was that the participants were too conventional and would not be willing to cooperate or if they were their motive for it would be personal improvement and progress. One smaller challenge has been to gather stakeholder to one place at a certain time in as many numbers as possible.

Looking forward

The project work will continue through stakeholder meetings to share the knowledge from exchange of experiences. Form the beginning of the project, stakeholders have been involved, who are decision makers in all activities. Even if policies cannot be easily changed, with the influence, advice and good examples provided, it is possible to contribute to the development of state-level strategies and policies through talks and meetings with stakeholders, through stimulating the creation of innovations that arise from collaboration between artists and the IT sector. Due to good relationships with the local community, awareness of the importance of collaboration can be shared, future events can be promoted and potentially participate in their creation. Furthermore, it is important to participate in meetings and workshops initiated and funded by governments and local bodies that encourage and educate them to create new ideas through cross-sectoral cooperation.

The community is actually the bearer of consciousness about whether this co-operation is good or not. If the community does not recognize the value and the need for such co-operation, the innovative solutions that will be created will not be supported and have the expected effect. It is therefore extremely important for the community to be aware of the importance of cross-sectoral cooperation and the many benefits it carries. A community that has recognized the importance can initiate event maintenance that will further stimulate collaboration and generate new ideas. Furthermore, the community, as it is already the case in Croatia, organizes events and projects aimed at influencing the consciousness of society individually through associations and individuals. In the end it all begins and ends with the community. It is important to monitor the impact of the community and guide it through marketing activities to achieve the desired effect.

Decision makers should be more opened to listen the advices, cooperate and take into the account some suggestions

The role of the local actors, which are mainly civil organizations and private ICT firms or artists who are successful and already cooperate together, is to raise the awareness among their colleagues, share the experience, helping in finding the common language between ICT and artists etc. These local actors would also have to be involved in suggesting new activities for the measures/calls for the decision makers (Ministries, regional or local makers) and on the other hand, decision makers should be more opened to listen the advices, cooperate and take into the account some suggestions.

Molise Region (Italy)

Analysing the Scene

Molise is the second less populated among Italian Regions. The territorial extension and the inhabitants have small numbers (4,460 km2 for about 306,000 inhabitants), as well as entrepreneurship. On the other hand, the potential of naturalistic and historical-artistic beauties, of traditions and creative abilities of Molise is great. The traces of history have generated a very rich heritage of material and immaterial cultural assets, especially of the following types:

Archaeological, as the most important prehistoric archaeological sites in Europe, testimony of an intense frequentation of human groups ranging from the Lower Paleolithic to the Bronze Age, the archaeological areas of Roman and Samnite periods, the monumental complexes of the Benedictine culture and the Middle Ages, public museums, libraries;

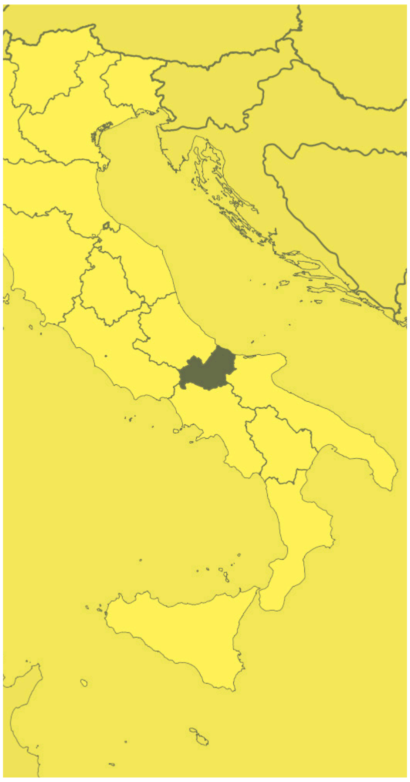
Landscape, that presents a wealth of castles, villages, natural parks, sheep tracks;

Anthropological – Ethnographic – Demographic, an heritage made of crafts and ancient crafts, music, songs and folk dances, festivals and folk traditions, local museums, traditional costumes, transhumance, dialect and linguistic minorities, ancient flavors;

Visual arts and performing arts, such as theaters, cinema, radio and TV, with entertainment, films, video games, as well as design, fashion and creative driven activities.

Considering this wealth of cultural assets and activities, Molise Region has included within its ROP ERDF/ESF 2014-2020 a series of actions that could promote integration between ICT and the arts.

The results of the analysis set the foundations for further work and a guide that can create further activities.



Molise ROP is financed mainly by the ERDF and can rely on a financial endowment of about € 105M. The Programme covers all the region and, even if changes are expected after potential financial remodeling (September 2018 EC request), it is structured around the following Priority Axes (PA):

- PA1 (€23M): Improvement and promotion of research, technological development and innovation;
- PA2 (€11M): Access to services related to ICT;
- PA3 (€33M): Promoting productive systems competitiveness;
- PA4 (€20M): Support for energy efficiency and the use of renewable energies;
- PA5 (€14M): Protection and promotion of the natural and cultural heritage.

Strengths

- Intact naturalistic and environmental heritage
- Irrelevance of crime phenomena and good social climate
- University presence and good interaction experiments between the Department of Agriculture, Environment and Food and the territory
- Progressive affirmation of research structures related to Health Sciences
- Agrifood chain with potential for development and presence of typical products with high competitive differential
- Artisan vocation
- Simplified institutional relations
- Easy reading of economic and social phenomena

Weaknesses

- Poor entrepreneurial culture
- Poor endowment of telematic infrastructures
- High percentage of elderly population and demographic dispersion
- Lack of coordination and propensity of local actors for participatory and cooperative actions, and insufficient Business services
- Lack of skills and professionalism adapted to the needs of the area
- Very low tourism flows
- Didactic/research structures not able to connote the territorial system as self-sufficient
- Low number of graduates in technical-scientific disciplines
- Modest size of the internal market

Opportunities

- National and regional incentives for R&D and business development
- Development of cultural sector and of environmental and rural tourism market
- Specializations in the food sector
- Investments in infrastructures
- National legislation favorable to the creation of business networks
- Reduced impact of national industrial development on the environmental and social structure of the territory
- Dynamicity of ICT companies compared to those of other sectors

Threats

- Depopulation of minor municipalities
- High fixed costs per unit of residents for the operation of public facilities
- Increasing migratory trend of young and qualified human resources (“brain drain”)
- Reduced numerical consistency of available intelligences
- Strong competition from the neighboring tourist regions
- Decreasing investment flows

Within the ROP is established the RIS3 Strategy, Regional Research and Innovation Smart Specialization Strategy that regards all European regions and guides the development policy towards innovation based on the specific characteristics of the territory, through a process of entrepreneurial discovery “from below” and supported by strategic information on regional resources, the challenges ahead, the competitive advantage and the excellences of the territory.

The Mapping Process

Molise Region supports its policy on Research and Innovation mainly through ROP 2014-2020 based on actions dedicated to RIS3 implementation, actions that contribute to strategy implementation and actions coherent with the RIS3.

The study of the territory and of the regional ecosystem, recalled with the RIS3 and with the actions undertaken at European level, is updated and implemented, for RegionArts, with a specific focus on the project sectors.

An accurate mapping analysis becomes the essential tool to know, in percentage terms, the number of institutions / companies and the growth / wealth produced by the Art and ICT sectors.

Molise Region is carrying out its analysis through four fundamental activities, closely related, so as to bring out all the potential beneficiaries (artists, companies, organizations of different nature) and the complex of relationships among them.

Main phases
1. Selection and analysis of sector indicators (culture and creative industries, ICT)
2. Mapping of companies
3. Inventory of stakeholders and of the main organizations in public and private sectors
4. Census of projects

The use of Telemaco, the Infocamere service that collects all the data of Italian entrepreneurship, was essential for the realization of the first two analysis activities, those currently concluded: the selection of the sector indicators through the ATECO codes (Italian translation of the NACE codes of Eurostat), the mapping of enterprises in the cultural and creative industry and the study of updated data of the Chamber of Commerce also to quantify the impact in terms of employment or contribution to GDP. The sectors and professions have been mapped to the fourth digit of the Istat CP2011 classification.

The activation of an online survey allowed the collection of information relating to the main organizations in public and private sectors and integration projects between art and ICT.

The study of the territory and of the regional ecosystem, recalled with the RIS3 and with the actions undertaken at European level, is updated and implemented, for RegionArts

Looking forward

The Molise Region is working very intensively for the creation of a favourable environment for collaborations between the various public and private actors operating in the sectors of interest for RegionArts.

At the moment the experiences of connection between policy makers, artists, entrepreneurs, researchers, developers are sporadic and occasional. With the project activities a dialogue was started between the officials of the regional offices of the Ministry of Cultural Heritage and Activities, the professors of the University of Molise and research centres, representative of professional associations, in particular Architects and Engineers, some representatives of Municipalities, Schools, Organizations and Cultural Associations.

With the project activities a dialogue was started between the officials of the regional offices of the Ministry of Cultural Heritage and Activities

The final objective is to create a structured operational network able of stimulating institutions towards shared and feasible solutions that allow the use of culture and creativity as a driver for social and economic innovation and as a stimulus for research and investments in the field of technology and innovation.

04 Conclusions

More and more cities, regions and countries across Europe are seeking to develop their creative potential to enhance the competitiveness and sustainability of their economies. In Berlin, 18,750 companies in the creative sector are responsible for € 8,100 million. In 2016, 6.9% of Amsterdam's jobs belonged to Creative Industries, a sector also responsible for the regeneration of key areas of the city. In London, Creative Industries is the second largest sector and the third largest employer, second only to the financial sector.

What these cities have in common is that they have placed Culture and Creativity at the top of their political agendas, linking them to other areas such as education, urban planning and SME support. The success of the Creative Industries in a city or region is almost always linked to the dynamism of its creative clusters. These small but extremely flexible local networks often flourish in environments where artists, businesses, arts schools, scientists and cultural organizations are encouraged to communicate, collaborate and cooperate.

Cities with greater cultural, heritage and historical density, due to their specificities and diversity, are better prepared to develop these clusters successfully, attracting investment, producing wealth and improving the quality of life of their populations. Many have realized this and invested in the formation of solid and vibrant creative clusters.

The economic return of this bet comes from several sources:

- **Direct revenues to the local economy from spending on cultural and creative products and services by residents and visitors, especially cultural tourists;**

- **Indirect revenue through spending in other upstream and downstream sectors: restaurants, hotels and transport. For example, it is estimated that the Edinburgh Festival contributes € 180 million annually to the Scottish economy, representing 2,900 jobs and the value of its communication return is € 15 million;**

- **Direct and indirect effects on employment, often contributing to the replacement of lost employment in other sectors;**

- **Benefits for urban regeneration through diversification of local productive base.**

The importance of Creative Places as fundamental pillars for the development of regions creative economies are therefore increasingly decisive and unavoidable. Creative Places are the platform on which different actions and support for the development of the creative economy are based, and their potential for attractiveness (talent, business, tourism) develops in parallel with their creative potential.

It is therefore fundamental to address how this can be achieved: to promote entrepreneurship, business incubation and supporting services, such as internationalization opportunities and intellectual property protection; how to maximize the benefits of new technologies in the creative economy by introducing innovative business and organizational models; how to develop a commissioning role and partnership projects. A necessary condition is to assume a role of key creative broker between education / training institutions and cultural institutions, between creators and investors, business and market, establishing partnerships and networks and promote cross-over among creative sectors. Activities need to inform (and engage) the wider community about the economy and creative ecosystems, promoting events, publications, etc. This maximize the role of creativity in the global economy of the region, contributing to increasing the overall levels of knowledge, innovation and development.

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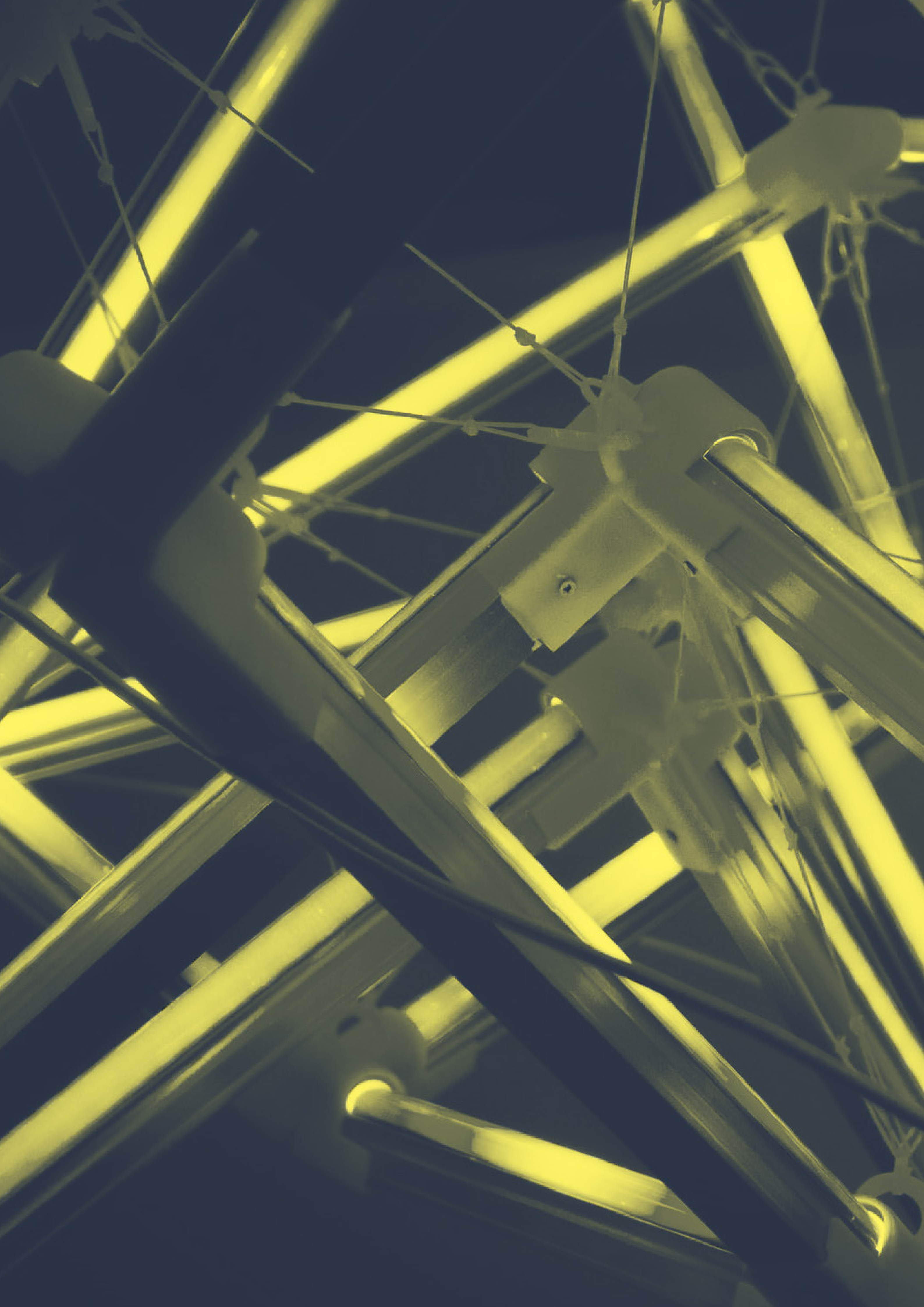

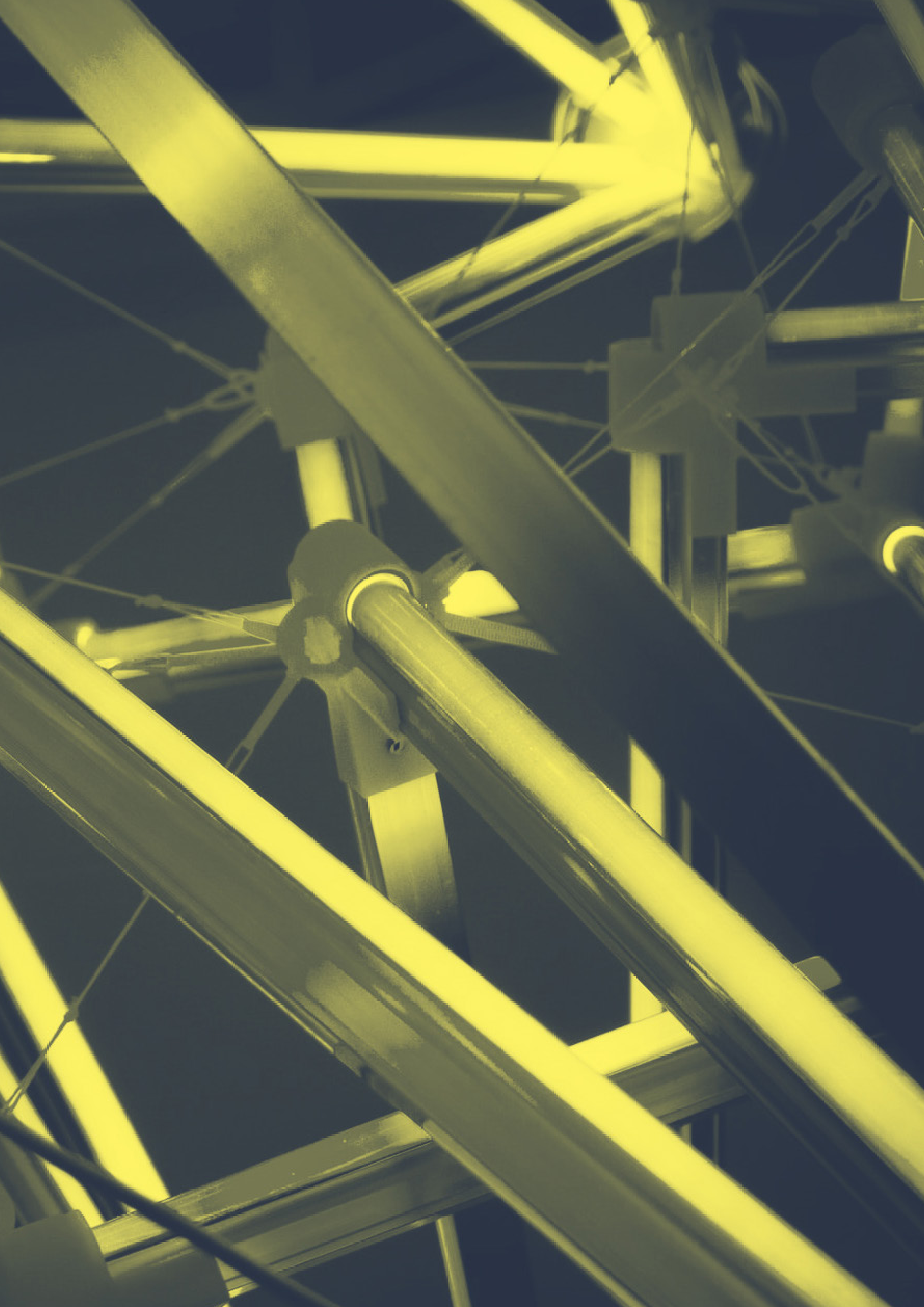

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Activities Linking ICT and Art

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