State of Art of the CCI Sector in Ljubljana Urban Region

IER, January 2017

Sharing solutions for better regional policies

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Introduction

The Institute for Economic Research has submitted a tender, issued by the Regional Development Agency of the Ljubljana Urban region (RDA LUR) within the Interreg Europe project CRE:HUB – policies for cultural CREative industries: the HUB for innovative regional development. The present study State of Art of the CCI Sector in Ljubljana Urban Region is a result of this tender.

Within this study, the common methodological guidelines, prepared by the University of Latvia, and approved by the project leader – Basilicata Region, were followed. In cooperation with RDA LUR and following those guidelines, the basic structure and content of this study was defined.

1. Key statistics about Ljubljana Urban Region

a. General information

Ljubljana urban region (LUR) coincides with the Osrednjeslovenska statistical region (Central Slovenia), which is one of the twelve Slovenian regions. It is the second largest Slovenian region in terms of size spreading on the territory of 2555 square kilometres, which presents a bit more than a tenth of Slovenia's territory. The population of LUR is over 500.000 – more than a quarter of the total Slovenian population. This is the region with the highest density of population in Slovenia (214 people per square km) even though in European and global terms this is quite a low figure (SURS, 2016).

Registered unemployment in LUR is lower, compared to Slovenian average. Wages in this region are the highest in the country and the region is attractive from the migration point of view. LUR has good traffic connections in all directions and is economically the most developed region. It has the highest GDP per capita in Slovenia - 25.329 euros, and has created 37% of the total national GDP in 2013 (SURS, 2016).

In LUR, there is the biggest concentration of human resources, knowledge, and entrepreneurship, as well as opportunities, whether in capital or in the creative environment. The region's fast growth also brings complications and challenges alongside the opportunities, which have to be solved simultaneously. The city with its suburban settlements and natural environment is more and more intertwined with the inter-city region.

b. CCI statistics

In Table 1 below, key statistics for CCI in Slovenia and in Ljubljana urban region are presented. The definition of CCIs (list of NACE Rev.2 codes) follows the latest study on CCI issued by the European Commission (2016, see p. 282). The statistics were drawn from the final accounts databases. The observation unit is an enterprise registered as a natural person or legal person (micro, small and medium enterprises) which was operating for all 12 months in the reference year and which had at least some turnover in the reference year.

Table 1: CCI statistics

	2009 LUR	2009 SLO	2012 LUR	2012 SLO	2015 LUR	2015 SLO
No. of SMEs in CCI	3.634	8.504	4.624	11.009	4.110	9.828
No. of all SMEs	34.303	102.184	40.427	120.051	36.691	110.338
Share of CCI SMEs in all SMEs	10,59%	8,32%	11,44%	9,17%	11,20%	8,91%
No. of employed in CCI SMEs	6.881	14.291	6.248	13.126	5.862	12.617
No. of employed in all SMEs	113.579	324.309	103.988	305.109	104.224	309.744
Share of employed in CCI SMEs in all SMEs	6,06%	4,41%	6,01%	4,30%	5,62%	4,07%
Total turnover in CCI SMEs	906.996.575 €	1.544.706.056 €	865.356.233 €	1.549.657.675 €	856.270.624 €	1.537.693.281 €
Total turnover in all SMEs	14.316.413.605 €	34.777.380.950 €	15.155.086.374 €	38.075.533.667 €	16.040.126.411 €	40.546.619.732 €
Share of total turnover in CCI SMEs in all SMEs	6,34%	4,44%	5,71%	4,07%	5,34%	3,79%
Exports in CCI SMEs	78.134.295 €	131.248.790 €	113.389.264 €	214.980.547 €	150.718.856 €	294.936.002 €
Exports in all SMEs	2.186.855.046 €	6.430.068.172 €	3.027.913.251 €	9.001.660.713 €	3.753.357.852 €	11.484.988.014 €
Share of exports in CCI SMEs in all SMEs	3,57%	2,04%	3,74%	2,39%	4,02%	2,57%

The major conclusions, that can be drawn from the statistical data, presented in Table 1, are the following:

- The share of CCI SMEs in all SMEs is significantly larger in LUR, compared to Slovenia
- Similarly, the share of employed in CCI SMEs is significantly larger in LUR, compared to Slovenia
- The number of CCI SMEs has significantly increased between 2009 and 2012, however, in 2015 the number of CCI SMEs slightly decreased again
- The number of employed in CCI SMEs has been decreasing since 2009, while looking at all SMEs, this number has slightly increased again between 2012 and 2015
- Total turnover in CCI SMEs in LUR has been decreasing since 2009, while total turnover in all SMEs has been significantly increasing in that period
- CCI companies are generally smaller compared to all industries, since the share of employed in CCI SMEs is significantly smaller than the share in number of CCI SMEs
- CCI SMEs are generally not very export oriented, however, exports in CCI SMEs have been significantly increasing between 2009 and 2015. Furthermore, CCI SMEs in LUR are much more export oriented compared to CCI SMEs in Slovenia.

With regard to the scope of RCKE's activities, all industries, which are defined as creative industries according to the Green paper on KKI (COM, 2010) were selected as of special interest of this analysis: design as a recognised driver of innovation and at the same time the main focus of RCKE's activities, architecture as an industry with great tradition in Slovenia, and advertising. Besides the creative industries, also software&games as a cultural industry was selected, since it is a fast growing industry which can create high added value also in connection with design. In the tables below (Table 2-5), some key statistics for the selected industries are presented.

Table 2: Architecture SMEs

	2009		2012		2015	
	LUR	**SI**	**LUR**	**SI**	**LUR**	**SI**
No. of Architecture SMEs	463	1122	526	1280	488	1137
No. of all CCI SMEs	3634	8504	4624	11009	4110	9828
Share of Architecture SMEs in all CCI SMEs	12,74%	13,19%	11,38%	11,63%	11,87%	11,57%
No. of employed in Architecture SMEs	71554	178641	51610	151749	43837	122481
No. of all employed in CCI SMEs	688054	1429089	624790	1312648	586236	1261695
Share of employed of Architecture SMEs in all CCI SMEs	10,40%	12,50%	8,26%	11,56%	7,48%	9,71%
Total turnover of Architecture SMEs	101.629.546 €	206.013.516 €	69.935.383 €	181.990.730 €	63.674.231 €	141.034.500 €
Total turnover of all CCI SMEs	906.996.575 €	1.544.706.056 €	865.356.233 €	1.549.657.675 €	856.270.624 €	1.537.693.281 €
Share of total turnover of Architecture SMEs in all CCI SMEs	11,21%	13,34%	8,08%	11,74%	7,44%	9,17%
Total exports of Architecture SMEs	3.328.641 €	5.947.609 €	6.236.262 €	24.378.450 €	6.932.172 €	19.437.486 €
Total exports of all CCI SMEs	78.134.295 €	131.248.790 €	113.389.264 €	214.980.547 €	150.718.856 €	294.936.002 €
Share of total exports of Architecture SMEs in all CCI SMEs	4,26%	4,53%	5,50%	11,34%	4,60%	6,59%

Architecture is represented by NACE Rev.2 category 71.11

Table 3: Design SMEs

	2009		2012		2015	
	LUR	**SI**	**LUR**	**SI**	**LUR**	**SI**
Number of Design SMEs	329	793	457	1103	452	1089
Number of all CCI SMEs	3634	8504	4624	11009	4110	9828
Share of Design SMEs in all CCI SMEs	9,05%	9,33%	9,88%	10,02%	11,00%	11,08%
Number of employed in Design SMEs	23557	58750	21584	54485	22384	53084
Number of all employed in CCI SMEs	688054	1429089	624790	1312648	586236	1261695
Share of employed in Design SMEs in all CCI SMEs	3,42%	4,11%	3,45%	4,15%	3,82%	4,21%
Total turnover of Design SMEs	22.244.469 €	51.322.179 €	25.577.814 €	55.825.647 €	27.486.445 €	56.477.242 €
Total turnover of all CCI SMEs	906.996.575 €	1.544.706.056 €	865.356.233 €	1.549.657.675 €	856.270.624 €	1.537.693.281 €
Share of total turnover of Design SMEs in all CCI SMEs	2,45%	3,32%	2,96%	3,60%	3,21%	3,67%
Total exports of Design SMEs	1.542.778 €	3.832.423 €	3.809.304 €	5.212.906 €	3.698.376 €	6.207.781 €
Total exports of all CCI SMEs	78.134.295 €	131.248.790 €	113.389.264 €	214.980.547 €	150.718.856 €	294.936.002 €
Share of total exports of Design SMEs in all CCI SMEs	1,97%	2,92%	3,36%	2,42%	2,45%	2,10%

Design is represented by NACE Rev.2 categories 74.10, 74.20

Table 4: Advertising SMEs

	2009		2012		2015	
	LUR	**SI**	**LUR**	**SI**	**LUR**	**SI**
Number of Advertising SMEs	555	1139	692	1458	580	1194
Number of all CCI SMEs	3634	8504	4624	11009	4110	9828
Share of Advertising SMEs in all CCI SMEs	15,27%	13,39%	14,97%	13,24%	14,11%	12,15%
Number of employed in Advertising SMEs	111109	165380	89515	139164	87522	139132
Number of all employed in CCI SMEs	688054	1429089	624790	1312648	586236	1261695
Share of employed of Advertising SMEs in all CCI SMEs	16,15%	11,57%	14,33%	10,60%	14,93%	11,03%
Total turnover of Advertising SMEs	251.835.493 €	310.760.847 €	247.327.501 €	309.030.615 €	258.589.067 €	317.545.009 €
Total turnover of all CCI SMEs	906.996.575 €	1.544.706.056 €	865.356.233 €	1.549.657.675 €	856.270.624 €	1.537.693.281 €
Share of total turnover of Advertising SMEs in all CCI SMEs	27,77%	20,12%	28,58%	19,94%	30,20%	20,65%
Total exports of Advertising SMEs	24.594.268 €	29.067.833 €	30.662.828 €	38.732.612 €	34.826.065 €	44.614.738 €
Total exports of all CCI SMEs	78.134.295 €	131.248.790 €	113.389.264 €	214.980.547 €	150.718.856 €	294.936.002 €
Share of total exports of Advertising SMEs in all CCI SMEs	31,48%	22,15%	27,04%	18,02%	23,11%	15,13%

Advertising is represented by NACE Rev.2 categories 70.21, 73.11, 73.12

Table 5: Software and Games SMEs

	2009		2012		2015	
	LUR	**SI**	**LUR**	**SI**	**LUR**	**SI**
Number of Software & games SMEs	536	1333	751	1856	639	1552
Number of all CCI SMEs	3634	8504	4624	11009	4110	9828
Share of Software & games SMEs in all CCI SMEs	14,75%	15,67%	16,24%	16,86%	15,55%	15,79%
Number of employed in Software & games SMEs	131755	297761	161873	326684	190666	378428
Number of all employed in CCI SMEs	688054	1429089	624790	1312648	586236	1261695
Share of employed of Software & games SMEs in all CCI SMEs	19,15%	20,84%	25,91%	24,89%	32,52%	29,99%
Total turnover of Software & games SMEs	107.317.095 €	229.777.859 €	142.990.559 €	276.273.797 €	160.666.496 €	322.525.185 €
Total turnover of all CCI SMEs	906.996.575 €	1.544.706.056 €	865.356.233 €	1.549.657.675 €	856.270.624 €	1.537.693.281 €
Share of total turnover of Software & games SMEs in all CCI SMEs	11,83%	14,88%	16,52%	17,83%	18,76%	20,97%
Total exports of Software & games SMEs	14.230.770 €	31.830.766 €	30.875.699 €	61.216.306 €	51.834.961 €	111.434.267 €
Total exports of all CCI SMEs	78.134.295 €	131.248.790 €	113.389.264 €	214.980.547 €	150.718.856 €	294.936.002 €
Share of total exports of Software & games SMEs in all	18,21%	24,25%	27,23%	28,48%	34,39%	37,78%

CCI SMEs							

Software&Games is represented by NACE Rev.2 categories 58.21 + 58.29 + 62.01

From the statistical data, presented in Tables 2-5, the following major conclusions can be drawn:

- The majority of the studied industries (architecture, design and advertising) experienced some decrease in the number of employed in the period 2009-2015, despite the growth in number of SMEs
- Among the studied industries, architecture has experienced the most significant decrease in the number of employed as well as in total turnover between the years 2009 and 2015.
- Software&games industry has, on the other hand, experienced a high growth of employment in LUR as well as in Slovenia. Consequently, the share of employed in software&games (in all employed in CCI) has increased in LUR from 19% in 2009 to 33% in 2015.
- Similarly, there is also an evident increase (almost 50%) of total turnover in software&games industry between 2009 and 2015
- Despite a decrease in the number of employed in design between 2009 and 2015, total turnover in design has still been steadily increasing between 2009 in 2012
- Total exports have increased in all of the four studied industries; the biggest increase in exports has experienced architecture on the national level (by more than 300%)

2. Characteristics of CCI in LUR

In 2015, there was 4110 SMEs in CCI in LUR, which presented 11.2% of all SMEs in LUR. The vast majority of the CCI SMEs were very small, since they employed 5862 people, meaning that the average is 1.4 employed per company. In total, 5.62% of all employed in SMEs in LUR, were employed in CCI SMEs.

Large urban areas and capital city regions dominate the CCI (Power, Nielsen, 2010). Since Ljubljana is the capital and the biggest city in Slovenia, it is no surprise that creative industries are concentrated here. This was confirmed also by the industrial statistics analysis (see Table 1), which demonstrates that the share of CCI SMEs as well as the share of employed in CCI SMEs is significantly larger in LUR than in Slovenia. Furthermore, the occupational analysis of CCI in Slovenia (Murovec, Kavaš, 2010) also confirmed the concentration of CCI around the capital and indicated a preference on the part of creative people to settle in Ljubljana. The concentration of creative people in Ljubljana is therefore main factor behind the development of CCI in this region.

Since Ljubljana is the capital of Slovenia, most national cultural institutions are located here as well. The estimation is that around 60% of all Slovenian cultural events, infrastructure and also people, working in culture, are concentrated in Ljubljana. All the major faculties are located in Ljubljana, and the major firms from other business sectors concentrate here as well. Besides the fact, that Ljubljana is a capital and has solid infrastructural and educational preconditions for the development of CCI, the development of CCI was also fostered by the established system for the support of entrepreneurship (focused on start-ups), which is not focused on CCI, but also includes them. Furthermore, different “bottom-up” initiatives have also been successful, such as for example Poligon (co-working space) or Zavod Big.

Like CCI SMEs in Slovenia, CCI SMEs are not very export oriented in LUR either. However, their exports have been significantly increasing between 2009 and 2015 and exceed the share of CCI SMEs exports in Slovenia. Most of the CCI SMEs would like to increase their internationalisation, but feel hindered by different factors. The most important hindering factors are the lack of finances and the lack of support for the internationalisation.

With regard to the scope and focus of RCKE's activities, architecture, design, advertising and software&games were defined as the most important industries and of special interest for this analysis. Below, each of the selected industries is described.

ARCHITECTURE

Architecture in Slovenia has a rich tradition and can historically be characterised as dynamic and complex. The University of Ljubljana was established in 1919, and within it a department for architecture was founded. Two of the most renowned architects, who left a big impact not only by their work but also by passing their knowledge to other generations of architects, were Jože Plečnik and Edvard Ravnikar.

At the end of the 1990s, after Slovenia gained its independence, the market relations and the structure of investors has changed. Big architectural bureaus decayed, and several new architecture bureaus emerged in Ljubljana at that time, which became well known in Slovenia and also abroad. In the years after 2008, the recession has severely affected construction industry and had a big impact on the architecture as well. The architectural activities almost halved.

Due to its historically based connection with social development, architectural and urban planning and design have been regulated by an extensive and complex legislation. The status of the field and its organisation are not appropriately arranged within this legislation. Also, the state is not setting the best example and does not always appreciate innovativeness and quality or supports overachievements and principles of sustainable development in its public tenders. To address these issues, a new, comprehensive, architectural policy has been proposed in 2016.

In Slovenia, there are two faculties for architecture – in Ljubljana and in Maribor. As already mentioned, the education in this field has a long tradition and is comparable with other EU countries. In the last years, a lot of effort has been put into international cooperation and student exchanges, in order to ensure the influx of fresh ideas, the internationalisation and even higher of quality of the field. There is however always room for improvement, especially regarding the interdisciplinarity and cooperation with other study programmes.

Important support organisations in the field of architecture are: the Architects' Society of Ljubljana - DAL (the AB magazine publisher), Town and Spatial Planning Association of Slovenia – DUPPS, Trajekt, IPOP, the Chamber of architecture and space, Urban planning institute, Architectural museum, several architectural galleries, Zavod BIG (on-line newspaper, Hiše awards), Arhitekst (international symposium Days of Oris), Kubus engineering (professional conference Buildings, Energy and Environment), etc. The greatest national award for the arts is the Prešeren Fund Award, besides that, there are also other recognised awards, such as the Plečnik award, Piranesi awards, Maks Fabiani award.

While there are many architectural achievements which are internationally recognised, the average quality of the architectural projects in the past has been lower and some architectural solutions inappropriate or even illegal, resulting in the gradual devaluation of the built environment due to the uncontrolled interventions of the real estate owners. However, in the last years, the situation is improving and also the perception of architecture in the society is changing to the better. Still, promotional activities are necessary. Better public awareness about the importance of quality architecture could be achieved through articles and contributions in everyday popular media, with the aim to bring architecture closer to the end consumer. Furthermore, architecture needs to be brought closer to the young, by including it in general education of the youngest.

In 2015, there were 488 SMEs in architecture in LUR and they employed 43837 people. Architecture has experienced the most significant decrease in the number of employed as well as in total turnover between the years 2009 and 2015, however, the exports have significantly increased in that period.

DESIGN

The field of design in Slovenia has a tradition, and specific segments of the field had reached their golden eras in the past (congress of the world body for professional graphic designers organization ICOGRADA, 1996 in Bled; congress of the world industrial design organization ICSID, 1992 in Ljubljana) but have later unfortunately lagged behind due to the market and technology changes. Still, different fields of design are relatively well developed. The potential of industrial design as a tool for increasing innovation, competitiveness and quality of life has however not been recognized in Slovenia in the past, not by firms or by the policymakers. Consequently, this sector has long been pushed out of the economic and business debates into the sphere of culture, where it was perceived as art and not as an important activity for the development of new products and services for global markets.

Design has been in and out of policy discussions, and in the last years, it is pushing its way back into strategic documents again. However, the national design policy has still not been accepted, despite the developed proposition. At the moment, a new National design strategy is being prepared. Slovenia has been one of the few European countries which did not have an institution to coordinate the interests of the industry with the national strategic goals and the creative industries. To that extent, the forthcoming establishment of the Centre for Creativity has been the most important step forward.

Part of the responsibility for the current state of design in Slovenia and Ljubljana can be attributed to historical reasons. Slovenian firms were in the past not competing on highly competitive global markets, but on partially regulated 24 million Yugoslavian market and were often operating as subcontractors of multinationals or buying licenses for production and not valuing creativity and intellectual property. Even nowadays, when the conditions have changed, the prevailing opinion in firms is still that design services (industrial design and other) present only an additional cost and not an investment. Many firms are used to waiting for orders and fulfilling them, instead of offering creative products to the end consumer market and creating recognisable trademarks. However, in the last years things have been improving. The Competence Center for Design Management (KCDM) was established as a pilot project of introducing design management into Slovenian firms with the aim to increase competitiveness and added value. KCDM achieved great results and was awarded Design value award in 2016 by the internationally renowned Design Management Institute. There have also been other initiatives for fostering cooperation with firms, for example Zavod Big established its own Design center and within it also the Creative center for wood. Zavod Big is also the organizer of the annual event Month of Design.

There are several educational institutions for design, such as The Academy of Fine Arts and Design, The Academy of Design, Secondary School of Design and Photography and Faculty of Natural Sciences and Engineering (Department of Textiles). In the last years, many of them increased their efforts for approaching the industry and better meeting their needs. The Department for design of The Academy of Fine Arts and Design, has been listed among the 50 best European schools in the field of design for the fourth time (the list is prepared by a jury of 30 members, selected by an acknowledged Italian journal Domus) commission. However, there is still a need for industrial design to be more present in the engineering programmes as well. In Ljubljana, also other institutions for support and promotion of design are located, such as the Museum of Architecture and Design, Regional Creative Economy Center, the International Centre of Graphic Arts, Brumen Foundation (Biennale of visual messages), The Designers Society of Slovenia, etc. Despite their efforts, these institutions and organisations have not been a part of any national, regional or city strategy, and have therefore operated uncoordinatedly so far.

Besides unrecognition of the importance of design, additional problems on the supply market present inconsistent prices, bad respect of the intellectual rights and unqualified individuals who work as designers, which subsequently reflects in a bad image of the design industry. Furthermore, the graduates are left to their own after the studies, which with regard to the described circumstances, means that it takes a very long time for them to become recognized and be able to pass their knowledge to the firms.

Despite not so favorable general picture, there are however several outstanding design achievements. Even though they are few, the firms that understand the importance of industrial design demonstrate a good example of the difference that design can make. In the last years, several firms received the Red dot design award, some of them even more times in a row. Besides that, there are also several individual designers who are internationally recognized, such as Jure Miklavc – product design, Nika Zupanc – product design, Robert Lešnik (VW, KIA, Mercedes-Benz), Lara Bohinc - jewelry, Uroš Belantič - fashion, Tomato Košir - graphic design etc.

In 2015, there were 452 SMEs in design in LUR and they employed 22384 people. There is no clear decreasing trend in the number of employed in design between the years 2009 and 2015. Furthermore, design even experienced growth in the total turnover in that period (see Table 3).

ADVERTISING

The advertising market has been through the process of concentration. The biggest agencies took over more and more clients. Furthermore, the economic crisis resulted in a general decrease of budgets for advertising, which many of the small agencies did not survive. Subsequently, the image of the whole market depends on the deals of the few biggest agencies and on the couple of media with the biggest power. Very strong and long-term partnership relations are present, therefore it is very difficult for the new players to penetrate the market, even if they are innovative and in touch with the latest trends on the market. Foreign suppliers of marketing services present a specific segment of the market. While the majority of them are classified as business consulting organizations, they in fact mostly offer marketing services. The most frequently this is the case of Slovenian branch offices of multinational firms.

The supply side of the advertising market is of course dependant of the demand side. Slovenian companies are mainly defensive – they react to the actions of foreign competition and their trademarks and are not offensively conquering new markets or building new worldwide trademarks. Consequently, the advertising budgets are very limited. The situation regarding the public sector demand is even worse (with some exceptions). The public sector in general does not recognise the need for marketing strategies.

An additional problem on the demand side presents the fact, that the client companies often consider the cost of a campaign as the most important measure of its quality. They fail to understand that a very cheap campaign, which is not effective, is actually a very expensive one. Already before the crisis the pressure on agencies to cut prices was big, in addition, the market concentration pushed the agency provisions towards zero. Therefore, the deals with the media became of crucial importance. The crisis did however have a positive impact on the segment of direct marketing, since the share of the clients who wish to measure the results of its campaigns is increasing and are interested in the pay per effect (click, call,…) options that direct marketing offers.

The most important educational institutions in Ljubljana in this field are the Faculty of social sciences and the Faculty of Economics, which offer marketing and communication programmes. However, since the knowledge, necessary for advertising and promotion, is not so restricted, an important source of advertising and promotion professionals also derives from other study programmes, such as psychology, linguistic studies, philosophy, sociology, culturology, law, statistics, etc.

The most important professional organisations in this field are the Slovenian advertising chamber, the Chamber of business consulting services, Project Management Association, Direct Marketing Association, Marketing association.

In 2015, there were 580 SMEs in advertising in LUR and they employed 87522 people. Despite the fact, that advertising experienced a decrease in the number of employed between the years 2009 and 2015, there was no clear decreasing trend in the total turnover in that period (see Table 4).

SOFTWARE, GAMES INDUSTRY

Software industry has a huge influence on other branches of creative industries due to its inherent cross-disciplinary and cross-sector nature and new ways of producing, trading and communicating. Therefore, all CI branches can benefit immensely by cooperating with software firms. Developed countries recognise the importance of this field and offer support, guidance and extensive R&D funds for it. The application procedures for R&D funds in Slovenia have been criticised by the interviewed firms for being too bureaucratic. Furthermore, interviewees exposed the problem of understanding the applications which contain ideas about the latest and most innovative technologies by the evaluation commissions. They claim that sometimes the lack of knowledge is the cause of opting for more safe alternatives or recognised firms.

While the citizens of Slovenia are interested in the information society and open towards the technological novelties, which enables their quick diffusion, the situation in the Slovenian firms is not the same; they introduce ICT novelties too slowly to improve their competitiveness. The market for SW in Slovenia is very small and mistrustful towards domestic innovative solutions.

On the other hand, the supply market is very crowded and the recession and the financial crisis have increased the competition even further. The Slovenian SW providers lack knowledge about how to turn their products into recognisable trademarks. On the other hand, their advantage is high flexibility and analytical knowledge. The high usage rate of illegal SW still presents a substantial problem for the suppliers. Although the rate of unlicensed SW installation has slightly decreased from 2007 (48%) to 2013 (45%), it still presents 41 million USD in commercial value, according to the estimation of BSA (2014). Since the market in Slovenia is very small, the development of the custom-made applications is very expensive. Therefore, many of the SW firms in Slovenia try to avoid the high development costs and buy licensed SW products which they only adapt and offer to the domestic market. However, since the licence agreements are geographically restricted, this means that those firms cannot export their products and compete on the international market, so they end up caught in their own trap.

The most important support institutions for the SW industry are: the ICT Association, the ICT technological network and Jožef Stefan Institute (which also has its own postgraduate school). Besides that, the most important educational institutions in the field are: Faculty of Computer and Information Science (University of Ljubljana), Faculty of Electrical Engineering and Computer Science (University of Maribor) and Faculty of Mathematics, Natural Sciences and Information Tecnologies (University of Primorska).

The education institutions offer relatively good knowledge base for programming. However, the number of quality graduates is still not high enough to meet the needs for the technological breakthroughs. There is mostly the lack of synthetic knowledge and experts who would have good knowledge of software as well as of a specific line of business. An additional problem presents also the fact that quality programme developers are expensive. Therefore, software firms sometimes, in order to be able to offer competitive price, employ cheaper and less experienced staff, which leaves consequences on the quality of the end product. An important lack of knowledge is also on the side of the client firms and is one of the main causes for the reluctance to implement new SW.

Following the lead of several internationally very successful Slovenian representors in the gaming industry in the past, in the last years, many (mobile) games developers appeared on the market. With only some exceptions in the region, they mainly consist of one-person (occasional) developers. Unlike in most of the SW firms, the gaming developers claim to put the enthusiasm and experience before the formal degree when hiring. Designers and other creative professionals (such as screenwriters, music writers, architects,…) are equally important as programme developers. While the major Slovenian gaming developers outsource many services in other countries and continents, they tend to keep the core team (new technology development, creativity and art) in Slovenia. Above all, they are lacking 3D designers. A study programme for game development is missing in Slovenia. An important support institution in the field is Games Slovenia (Association of Slovenian game developers), which grew out of SloGameDev online community, and offers networking and support to everyone who is, or who wants to be a part of the gaming industry.

In 2015, there were 639 SMEs in software&games industry in LUR and they employed 190666 people. Software&games SMEs experienced a significant growth in the number of employed as well as in the total turnover in the period 2009-2015 (see Table 5).

3. Main stakeholders of CCI in LUR

In the Table 6 below, the list of main stakeholders of CCI in LUR, which was selected by RCKE, is presented. The main stakeholders were selected according to the following justification:

- involvement of the stakeholders, included in the preparation of the Smart Specialisation Strategy
- involvement of all triple helix representatives
- ministries that are directly involved in the project and ministries that prepare the CCI policies
- municipality of the capital city has a strategic document The strategy for cultural development of MOL that involves CCI
- universities, institutions, support environment that cover the sectors of our focus
- initiatives, cooperatives with relevant impact on the territory in terms of our focus areas.

Table 6: List of stakeholders

ORGANIZATION
Government Office for Development and European Cohesion Policy
Ministry of Economic Development and Technology
Ministry of Culture

Ministry of Labour, Family, Social Affairs and Equal Opportunities
Ministry of Education Science and Sport
Municipalities of Ljubljana Urban Region
Municipality of Ljubljana
Intellectual Property Office
Slovenian Regional Development Fund
Slovenian Enterprise Fund
Spirit Slovenia
Academy of Fine Arts and Design
Faculty of Design
Faculty of Electrical Engineering
Faculty of Economics
Faculty of Information and Computer Science
Institute for Economic Research
Museum of Architecture and Design
British Council
City Museum of Ljubljana/ROG Creative Centre
Technology Park Ljubljana
Ljubljana University Incubator
ABC Accelerator
Designers Society of Slovenia
Brumen Foundation
Slovenian Chamber of Architecture and Spatial Planning

Centre for Technology transfer and Innovation (Jožef Štefan Institute)
Punkt Trbovlje
Poligon
Hekovnik
Ferfl
Ping Pong
Tkalka
UAUU
Creative Mornings
Gigodesign
Service8
Mesto oblikovanja
Kikštarter Kamnik
Tkalka
Društvo Pekinpah
Studio Miklavc
Studio Marketing
Halcom
Scapelab

4. SWOT analysis

The SWOT analysis, presented below, is based on information acquired from the desktop research, statistical analysis, interviews, focus groups and a survey of CCI SMEs.

STRENGTHS	WEAKNESSES
Market: - Strong public financing of the cultural sector (culture as Slovenia's national interest) - Internationally recognised individuals and SMEs in some industries Competences and trainings: - Tradition Internationalisation: - Products/services suitable to be sold in the international market Infrastructure: - Critical mass of infrastructure, institutions and firms in Ljubljana - Availability of office/production spaces - Availability of modern technology - Active national professional associations Awareness and promotion: - Established events, awards	General business conditions: - Administrative barriers Legislation: - Unsuitable tax and labour legislation - Unsuitable IPR protection Market: - Small market - Everybody doing everything - Low product/service prices obtained, competition based on price - Low demand for innovative products - Few competent intermediaries - Uneven relations in the value chain - Lack of critical mass (orientation on domestic market only) - Lack of strong trademarks - Heterogeneous quality of CCI products/services Competences and trainings: - Poor marketing and business management skills - Educational system is not fostering creativity - Lack of specialised educational programmes - Lack of interdisciplinarity Financial resources:

	- Lack of appropriate funding opportunities Internationalisation: - Lack of support for internationalisation Infrastructure: - Critical mass of infrastructure, institutions and firms in Ljubljana only - Lack of spaces for networking - Support institutions are not coordinated Awareness and promotion: - Low awareness about the role of CCI - Lack of promotion and efforts to improve the awareness Support policy: - Lack of strategic documents - Lack of support policies - Unsuitable public procurement criteria
OPPORTUNITIES	**THREATS**
- Increasing demand for creative products - Digitalization - Availability of the ICT infrastructure - Cross Cutting Technologies across CI Sectors - Role of Arts and Design as driving forces in Creativity - The rise of Cultural Tourism	- Economic crisis (problems in private sector & lack of public funds at the national and EU level) - Rapidly changing technologies - Fierce competition from other countries - Migration of talents to abroad - Contents are easy to copy - Inconsistent IPR & Copyright systems

	- Socio-demographic factors (migration, ageing) - Trend toward precarisation of labour

5. Regional policy

CCI are included in the **Slovenia's Smart Specialisation Strategy** (http://www.svrk.gov.si/fileadmin/svrk.gov.si/pageuploads/SPS_predstavitve/S4_dokument_2015_october_eng_clean_lekt.pdf), but to a quite limited extent. In the SWOT analysis (p. 6), underutilised potential of culture and creative industries is mentioned as a weakness. On p. 14 it is mentioned that "Culture and creative industries also represent an opportunity as these industries are developing faster than other segments of the national economy". With regard to newly established enterprises, the importance of creative centres is recognised (p. 38), and included as a planned measure within infrastructure. Furthermore, linking CCI with other industries is recognised as an important driver of innovation in also in those branches of the economy where R&D investments are generally low (e.g. traditional industries and services) (p.39). Therefore, to support the growth and development of SMEs, within the infrastructure, the establishment of the Centre for Creativity is foreseen; within financial mechanisms, mentoring for specific target groups such as CCI is foreseen; and within the content-related support, training in various fields including design management is foreseen besides the integration and networking in various areas (e.g. with creative industries).

Within the **Operational Programme for the Implementation of the EU Cohesion Policy 2014-2020** (http://www.eu-skladi.si/sl/dokumenti/kljucni-dokumenti/op_ang_final_web.pdf), the importance of non-technological innovation is recognised, including new business models, internationalisation, user-centred innovation, social innovation and innovation in the field of CCI with emphasis on design (p.22). The Smart Specialisation Strategy preparation process showed that the country needs to work on promoting the use and integration of new knowledge, artistic achievements, cultural and creative industries and on fostering state-of-the-art technologies in order to strengthen the knowledge society and raise the level of innovation and creativity (p.66). The measures for encouraging the innovation processes and associated investment will include investment in non-technological innovation and in sustainable value elements (e.g. intellectual property rights, process and organisation innovation, social innovation, linking of enterprises and cultural and creative industries, new business models innovations), including the promotion of using industrial design in the economy and elsewhere and the development of products and services with own trademarks (p. 69). Within the support for projects for the development of innovations and their testing in practice, support will be given to demonstration projects to showcase and test new solutions for immediate use in practice and to projects demonstrating use (e.g. Living Labs, internet of things, cloud computing, big data, reinforcement of creativity e.g. CreativeHubs etc.) (p. 70). Support under specific objective 1 “Promote the creation and operation of new firms, especially start-ups” will be also given to upgrade of the existing support environment through the development and promotion of modern support services, connecting and management of regional destination organisations at the regional level (e.g. mentoring, training, promotion, enhancing the integration of enterprises and cultural and creative industries, business consulting, including for internationalisation of enterprises) within the entrepreneurial and innovation ecosystem in accordance with the Smart Specialisation Strategy (p. 86). Support under specific objective 2 “Increase the added value of SMEs” will be (among other things) given to growth and development of SMEs with a view to promoting modern elements of achieving added value which are based on creativity and innovation (e.g. establishing links with creative industries, networking of SMEs, and of SMEs and other public institutions to develop new and innovative products and services) (p. 87). An important area, which has been identified as being in need of support in urban areas in terms of land-use efficiency present projects that will – from the very beginning of their implementation – support activities targeting social regeneration and economic recovery in urban areas and creation of new creative and business centres in areas that used to be abandoned (p. 133).

CCI were also given an important role in the **Regional development programme of the Ljubljana Urban Region 2014-2020** (http://www.rralur.si/sites/default/files/rralur/RRP%20LUR%202014-2020%20english%20version.pdf). Based on the recognition of the need and potential for the development of CCI in the region, one of the six defined development objectives is to become the "Region that promotes the development of knowledge, creativity and innovation (p. 80). Growth of regional economic competitiveness is defined as a priority, and one of the two fundamental programmes to achieve it, is promotion of innovation and creativity in companies. The programme will promote new forms of interdisciplinary establishment of ties between CI and other industries as well as the introduction of CI into the development processes of companies, the objective of which is the creation of added value of products and services that are attractive for the international market. There is a certain emphasis within the scope of this measure on the search for new contents for the underutilised urban areas. CI as a new content can assume the role of the driver of urban regeneration, through which creative companies can obtain an affordable production space, which can provide them with faster specialisation and development in terms of entrepreneurship (p.92).

The establishment of the **Centre for Creativity (CZK)**, foreseen in the Smart specialisation strategy and performed under the Operational Programme, will be brought to life very shortly. Centre for Creativity will be co-financed by the European Regional Development Fund. The total investment (ERDF + national funds) will be 10.9 million euros in 6 years. In 2016, the Ministry of Culture confirmed its preparation and implementation to its national public institution Museum of Architecture and Design (MAO). CZK will encourage growth, entrepreneurship, empowerment and promotion of CCI; cross-sector cooperation between CCI and other sectors (businesses, private, public and non-governmental sector, educational organizations, tourism), and various creative groups and individuals in Slovenia, while also fostering international reach and expansion. The aim of CZK will be to develop creative ideas, new, innovative products and services, new business models; enable creative spillovers; promote the use of traditional crafts, skills, technologies, traditions; upgrade Slovenian brands in relation to culture and protected values (eg. cultural landscapes, knowledge, folk traditions...), tourism; and promote the use of new knowledge and the revival of traditional industries.

RCKE and KCDM also present relevant practices, supported by the policymakers, and are further described in the next section.

6. Analysis and identification of main regional experiences and lessons learnt

Below, two good policy (top-down) practices are described – RCKE and KCDM.

COMPETENCE CENTRE FOR DESIGN MANAGEMENT (KCDM)

Competence Centre for Design Management (KCDM) was established in 2013 within the Human Resources Development Operational Programme 2007-2013 and was co-financed by the European Social Fund. It was a pilot project of a design agency Gigodesign which included 19 companies - design companies, consulting companies and companies which develop new products and services, with the aim to improve knowledge and processes in cooperation, increase the value of their brands and improve the position of all companies on the market. The mission of KCDM was to connect ambitious companies to the sources of design management knowledge. KCDM activities focused on following, pooling and passing on knowledge and good practices in the field of design management; training according to the obtained/developed competence model; and on cooperation for establishment, development and implementation of design management strategies.

KCDM achieved great success in the two and a half years of the project duration. The added value of the included companies has increased by 70%, their net profits increased by 245%, and their turnover has increased by 14%. KCDM received a prestigious Design value award in 2016 by the internationally renowned Design Management Institute. In the future, KCDM aims to continue its good practice and include additional companies.

REGIONAL CREATIVE ECONOMY CENTRE (RCKE)

CRE:HUB

IER
Inštitut za ekonomska raziskovanja
Institute for Economic Research

Regional Creative Economy Centre (RCKE) was established within the Regional Development Agency of Ljubljana Urban Region (RDA LUR) in the context of an Interreg Central Europe project Creative Cities. After the project end, RCKE continued and expanded its work. It is still mainly funded through different EU projects, but partially also by RDA LUR. The main aim of RCKE is to train and connect creative individuals from creative industries with companies in other industries, thus creating conditions for achieving business successes based on multi-disciplinary development processes.

As a part of the regional development agency, RCKE plays an important role also in the policy making process, particularly in relation to creative sector. Ljubljana Urban Region is a national front runner in terms of the creative sector share and, RCKE is a leading institution promoting the creative sector at the national level. RCKE has been appointed in the National government group for development of the creative industries and is involved in the direct policy making process at both national and municipal level. At the regional level RDA LUR is in charge of preparation of the Regional development programme 2014-2020, which is the basis for implementation of projects, where creative industries has been given an important role. Their engagement at the international level presents the active approach in policy making process as they are a member of different working groups and initiatives, for example policy cluster in BEDA organisation (Bureau of Design Associations) where they are deeply involved in the shaping of design policies for Europe.

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