Boosting European Games Industry

Recommendations for 10 European Regions to Boost their Digital Gaming Industry

Based on the Boo-Games European Regional Analysis of the Video Games sector

INTERREG IVC
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REGIONS OF EUROPE SHARING SOLUTIONS

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Abstract

The BOO-Games project aims to support policymakers in understanding the economic importance of the digital gaming industry. This is done by sharing knowledge between regions, the creation of a good practice guide and the implementation of these good practices in two up-and-coming regions (Malta and Sofia) that are interested in creating a more robust gaming industry.

The aim of this document is to give a first glimpse of the findings the BOO-Games project has gathered. The first section, 'Growth in the Digital Gaming sector', will provide you with a short overview of the European digital gaming industry and its current and future potential.

The second section, 'Putting Regions on the Map: Overview of the Regions', starts off with the innovation performance of the regions including - the West Midlands (UK), Baden-Württemberg (DE), Ile-de-France (FR), Asturias (ES), Umbria (IT), Piedmont (IT), Utrecht (NL), Malta (MT), Sofia (BG) and Salzburg (AT), using the European Union's Regional Innovation Scoreboard (RIS)[1]. This is followed by an overview of the global gaming industry, including the positioning of current European players, and finally an inventory of each region participating in the BOO-Games project. The inventory includes a general scan of which measures and actors are currently available per region. This inventory has been created using the input from the regional analysis and thematic seminars held in Asturias and Perugia.

The third section, 'Challenges', shows an overview of the top three challenges each region is faced with when asked about measures needed to create and/or boost the regional gaming industry. These results are derived from interviews and an online questionnaire that were part of the BOO-Games regional analysis.

The fourth section, 'Recommendations', includes a map of the participating regions in the project and the top thee recommendations identified by the BOO-Games partners for their region, using their knowledge of the region, along with the results collected via the regional analysis. These are illustrated with quotes and/or statements from interviews with regional stakeholders.

BOO-Games is a project under the INTERREG IVC Programme. INTERREG IVC provides funding for interregional cooperation. Its aim is to promote exchange and transfer of knowledge and best practices among European regions. It is implemented under the European Community's Territorial Cooperation Objective and financed through the European Regional Development Fund (ERDF).

The overall objective of the INTERREG IVC Programme is to improve the effectiveness of regional policies and instruments. A project builds on the exchange of experiences among partners who are ideally responsible for the development of their local and regional policies.

The areas of support are innovation and the knowledge economy, environment and risk prevention. Thus, the programme aims to contribute to the economic modernisation and competitiveness of Europe.

This research has been supported through the INTERREG IVC Programme of the European Union.

[1] http://europa.eu/rapid/press-release_MEMO-12-834_en.htm

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Growth in the Digital Gaming Sector

"Europe (possibly with the exception of France) needs to grasp emerging opportunities to better position itself and its industry if it wants to reap the benefits of the video game business"[2]

This section will focus on the overall growth in the global digital gaming sector and the potential current and future opportunities for the European gaming industry. As de Prato et al (2010) wrote, it is important to "make policymakers recognize video games as a legitimate industry providing opportunities for industrial growth"[3] in order to maintain a competitive edge and create added value in European regions.

Overview of the Creative Industries in Europe

Estimates regarding the economic contribution and employment from the cultural and creative industries (CCI) in the EU-27 range from 2.6%[4] (2003) to 3.3%[5] (2006) to 4.5%[6] (2008) of GDP. Employment estimates range from around 5 million[7] to 6.7 million[8] to 8.5 million[9] people working in CCI. This equates to around 3% of the total employment in the EU.

Additionally, between 2000 and 2007, employment in the creative industries grew by about 3.5% per year compared to about 1% for the EU-27 economy as a whole during the same time period. The 'creative industries' includes a rather diverse group of creative subsectors, and as one might expect, they grow at quite different rates.

The definition of UK's Department for Culture, Media and Sport is commonly used when defining the term and reads, "those industries which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property"[10].

The following 13 subsectors fall under the definition used: advertising, architecture, art and antiques, computer games, crafts, design, designer fashion, film and video, music, performing arts, publishing, software, TV and radio[11]. Even within the subsectors, it appears that nearly all growth comes from a very small percentage (under 10%) of creative businesses. For example, a recent study found that software, computer games, and electronic publishing, account for just below half of these fast growing businesses[12].

The European Commission has acknowledged that "the cultural and creative industries are important drivers of economic and social innovation in other sectors" and that the "creative industries are not only innovators themselves but have also been an important driver for innovation".[13 14]

An effort was made by the European Cluster Observatory to identify the linkages between innovation levels (measured through patent applications) and relative levels of activity in the cultural and creative industries (measured by CCI employment relative to total employment in the region)[15]. While a relationship was identified using these proxies, it was not a direct one and requires further investigation in order to serve as a firm basis for innovation policy-making.

Similarly, by analysing available innovation and CCI growth data, definite conclusions are unable to be drawn regarding the relationship between CCI sectoral growth and innovation levels. While these metrics were not able to prove or disprove the logical assumption that there is a positive relationship between CCI activity and innovation levels, this points to the fact that such a relationship is simply not captured by existing CCI and innovation metrics.

This is partly due to the only partial overlap between innovation in CCI and innovation as measured through patent data and the Regional Innovation Scoreboard (RIS)[16]. As the 'Priority Sector Report: Creative and Cultural Industries' indicates, much creative content and work cannot be protected by patents and traditional innovation measures do not fully capture innovation conducted within the creative and cultural industries[17].

Overview of the Digital Gaming Industry in Europe

The digital gaming sector is an important and rapidly growing part of the creative industries. As such, it is important that this industry is aggressively supported at the European level. Zackariasson and Wilson (2012) indicate that some policy options for the provision of such support include:

- Taking steps towards the development of a single digital market;
- Easier access to funding;
- Standardisation of middleware;
- The development of skills;
- The collection and standardisation of statistical information[18].

European game companies are ubiquitous across the supply chain, with the exception of the console segment, which is dominated by the U.S. and Japan. Additionally, there are very few major game publishers in Europe, although there are a number of video game developers, particularly in the UK, France, Germany and Scandinavia. However, the larger developers are located in the U.S., Canada and Japan. Clearly, there is room for the improvement of the current European digital game industry.

This can be done if it can take advantage of the evolving trends in the sector: The emergence of online gameplay has, and will continue to have, a massive impact on the sector. This is particularly important for game distributors who are being removed from the digital gaming value chain due to direct digital distribution of content, making developers and publishers the central pillars of the future digital game market. This affects a number of linkages in the traditional digital game supply chain, including the manufacturing of physical discs, the distribution infrastructures and retail gaming operations.

In addition to this, the demanding nature of digital games at present means that they push the technological envelope in a number of domains and can benefit areas of R&D as well as be a creative lab for e-services and allow for innovative spill-overs. Given the potential of this industry to widely contribute to the economy as a whole, and improve the economic competitiveness of the EU economy, a greater policy focus would be well-placed[19].

If European digital games companies could increase their competitive footing through public support measures, the European Games Developer Foundation (EGDF) predicts that by 2016 the current employee base in Europe could double from 25,000 people in 2011, to between 50,000 and 60,000 in 2016. While Europe is strong in terms of creative potential, it does not fully exploit its strengths and as a result, only holds a global market share of 5% (2011). However, with the right measures in place, this share could be doubled by 2016 and reach 20% by 2025[20].

Games could represent a new source of growth for the European economy but many regions are still missing adequate policies and funding schemes which could sustain this market. Therefore the development of strong digital and interactive media strategies should be high on the agenda throughout Europe.

[2] De Prato, G., Feijoo, C., Nepelski, D., Bogdanowicz, M., and Simon, J.P. (2010). Born digital/grown digital. Assessing the future competitiveness of the EU video games software industry. JRC Scientific and Technical Report, 24555 EN. Retrieved from htpp://ipts.jrc.ec.europa.eu/publications/pub.cfm?od=3759. Cited in Zackariasson, P., Wilson, T. (2012). (Eds). The Video Game Industry: Formation, Present State, and Future. (p.129) Routledge. UK.

[3] De Prato, G., Feijoo, C., Nepelski, D., Bogdanowicz, M., and Simon, J.P. (2010). Born digital/grown digital. Assessing the future competitiveness of the EU video games software industry. JRC Scientific and Technical Report, 24555 EN. Retrieved from htpp://ipts.jrc.ec.europa.eu/publications/pub.cfm?od=3759. Cited in Zackariasson, P., Wilson, T. (2012). (Eds). The Video Game Industry: Formation, Present State, and Future. (p.240) Routledge. UK.

[4] The Impact Of Culture On Creativity: A Study prepared for the European Commission (Directorate-General for Education and Culture), June 2009.

[5] European Competitiveness Report 2010, European Commission DG-Enterprise and Industry, 2010.

[6] Building a Digital Economy : The Importance of Saving Jobs in the EU's Creative Industries, TERA Consultants, 2010.

[7] The Impact of Culture On Creativity: A Study prepared for the European Commission (Directorate-General for Education and Culture) June, 2009.

[8] European Competitiveness Report 2010, European Commission DG-Enterprise and Industry, 2010.

[9] Building a Digital Economy : The Importance of Saving Jobs in the EU's Creative Industries, TERA Consultants, 2010

[10] Creative Industries Mapping Document 2001, U.K. Department for Culture, Media and Sport, 2001.

[11] These are the subsectors included in the U.K. Department for Culture, Media and Sport definition. http://www.idea.gov.uk/idk/core/page.do?pageId=11136366

[12] Anyadike-Danes, M., Bonner, K., Hart, M., Mason, C. Measuring Business Growth: High-growth firms and their contribution to employment in the UK, NESTA, October, 2009.

[13] An Integrated Industrial Policy for the Globalisation Era Putting Competitiveness and Sustainability at Centre Stage. European Commission COM (2010) 614.

[14] European Competitiveness Report 2010, European Commission DG-Enterprise and Industry, 2010.

[15] The European Cluster Observatory: Priority Sector Report: Creative and Cultural Industries, Europe Innova Paper No. 16, April, 2011

[16] http://europa.eu/rapid/press-release_MEMO-12-834_en.htm

[17] The European Cluster Observatory: Priority Sector Report: Creative and Cultural Industries, Europe Innova Paper No. 16, April, 2011

[18] Zackariasson, P., Wilson, T. (2012). (Eds). The Video Game Industry: Formation, Present State, and Future. Routledge. UK.

[19] Zackariasson, P., Wilson, T. (2012). (Eds). The Video Game Industry: Formation, Present State, and Future. Routledge. UK.

[20] Game Development and Digital Growth, European Games Developer Federation, 2011

Putting Regions on the Map: Overview of the Regions

Regional Innovation Scoreboard

The Regional Innovation Scoreboard (RIS)[21] mirrors the Innovational Union Scoreboard[22] by applying its national level methodology to the regional level. This consists of 12 indicators for 190 regions across the EU as well as Croatia, Norway and Switzerland. The objective of the Regional Innovation Scoreboard is to comparatively assess the innovation performance across these regions.

The RIS has been used as an indicator in an attempt to cluster regions in terms of maturity. Even though it does not have a direct link with the gaming industry, it can act as an indicator of differences between regions. As such, interviewees per regions were asked how innovative they thought their region is, and to indicate where they would place their region using the Innovation Scoreboard.

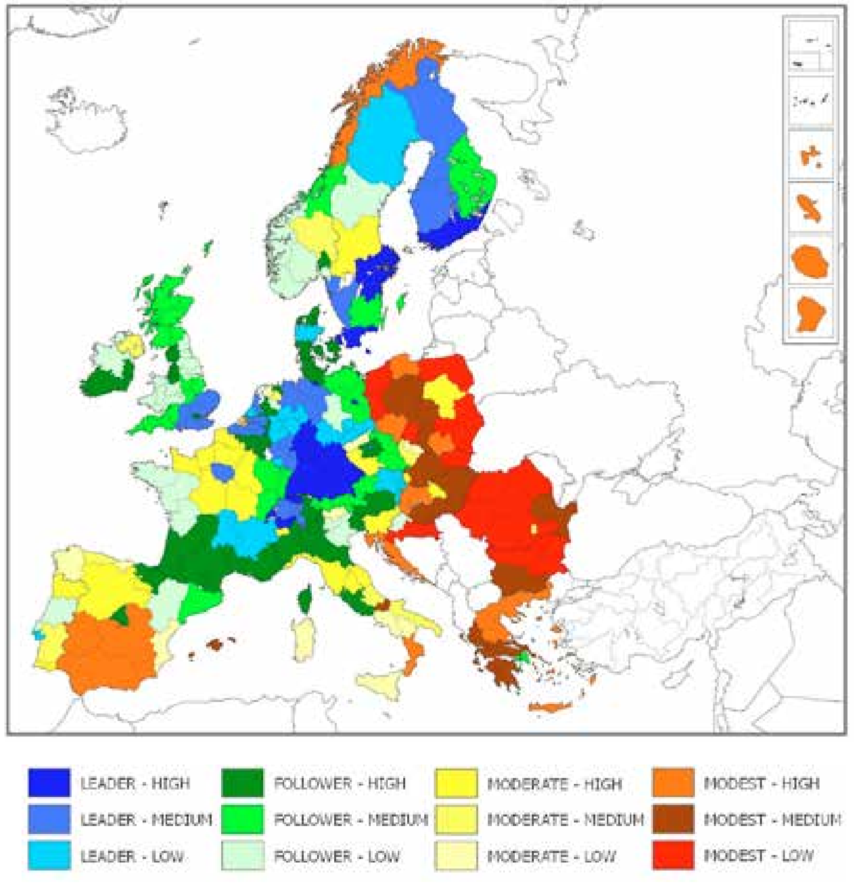

Table 1. Placement of Regions according to the Innovation Scoreboard

Innovation leaders

(high, medium or low)

Baden-Württemberg - **high**
Utrecht - **medium**
Ile-de-France - **medium**

Innovation followers

(high, medium or low)

Piedmont - **high**
Salzburg - **medium**
The West Midlands - **low**

Moderate innovators

(high, medium or low)

Umbria - **high**
Asturias - **medium**
Malta[23]

Modest innovators

(high, medium or low)

Sofia - **medium**

**** Important information:***
Data used for the "BOO-Games Regional Analysis Report"[24] which was written in 2012 have been taken from the IUS 2011. During the development of the current document, data from the 2012 Region Innovation Scoreboard is used.

[21] http://europa.eu/rapid/press-release_MEMO-12-834_en.htm

[22] http://europa.eu/rapid/press-release_MEMO-12-834_en.htm

[23] Malta is not included in the Regional Innovation Analysis. According to the Innovation Union Scoreboard it is a moderate innovator.

[24] BOO-Games Regional Analysis Report. Retrieved from: http://www.boogames.eu/uncategorized/boo-games-regional-analysis-report/

The Games Industry Landscape

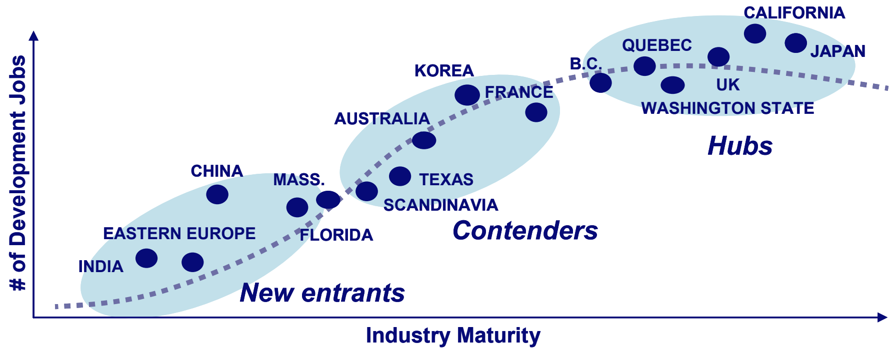

Figure 2. Digital Games Industry Landscape[25]

Figure 2 is an illustration of the current industry landscape. Three distinct 'types' of players with similar levels of maturity and size are identified. These are: new entrants, contenders, and hubs. Below is a short description of each type of player.[26]

Regional Hubs are: regions that have been active in the gaming industry for over 15 years. Entry into the games industry has been facilitated due to proximity to a major technological innovator (Nintendo in Japan, Microsoft in Washington State). Critical mass has been reached, hosting at least 3,000 game development jobs.

Regional Contenders are: later entrants to the digital game industry that have developed scale and/or competitive advantage to position themselves on the international scene. Success has been linked to pursuing a specific niche.

Regional New Entrants are: recent entrants in the digital game industry who chose this industry based on size and potential for growth. Active steps have been made to create a niche in the market. Some of these entrants have advantages such as lower labour costs; however critical mass and global relevance still need to be achieved.

Even though figure 2 has a broader more global perspective, it can be useful to map the regions and see under which criteria they would fall. When it comes to critical mass and scope, regions cannot compete on their own. The strength of the European (and regional) gaming industry lies in the large amount of SMEs with a reputation for both technical and creative innovation[27] and the emerging networks which need to be created or maintained. Using the above criteria, most regions would be classified as 'regional new entrants' and 'contenders', with the exception of Ile-de-France and the West Midlands which lean more towards 'regional hubs'.

Aspects which can contribute to the development of a successful digital game region are as follows: critical mass of companies and consumers, public funding, private investment incentives, investment in infrastructure and R&D, industry exposure and visibility, industry collaboration, and cluster development.[29]

Growth commonalities are apparent, regardless of the size and maturity of players in the regional landscape. At a European level, comprehensive support for the games industry as part of an inclusive strategy to develop and support the European software industry or media industry has not been an important part of explicit policy, even though this need has been recognised within parts of the Commission.

Support can be provided by supporting the development of skills needed in the game sector and identifying the gap between actual skills and needed skills. Other types of support could include actions to support research, facilitate technology transfer, the development of middleware, industry standards, international export support and access to capital as part of programmes on ICT for competitiveness and industry.[29] A more comprehensive overview of types of support measures is provided in Table 2.

Support area	Types of actions
Support to the videogame industry	Support to industry in the form of tax credits Programmes of education and training of professions to work in digital games production. Regional and National policies to provide multi-dimensional structural support to the videogame industry.
Research and development	Funding of basic and applied research on digital games and all related technologies. Funding for research on digital game culture
Support for serious and applied games industry and use	Funding of development and innovation of digital games in a range of applied sectors including social inclusion. Funding and supporting use of digital games in education. Funding of 'serious games' and simulations especially for and by the military. Public procurement of games to stimulate innovation and industry
Regulation	Regulation of content Regulation of consumer markets
Leadership	Championing the digital games industry Leading the development and use of digital games approaches in applied domains.

Table 2. Policy support Measures for Video games and Serious Games[30]

[25] SECOR Consultancy Ltd. (2008). Ontario 2012. Stimulating growth in Ontario's digital game industry. Retrieved from http://www.google.nl/search?client=safari&rls=en&q=Stimulating+Growth+in+Ontario's+Digital+Game+Industry&ie=UTF-8&oe=UTF-8&redir_esc=&ei=dx-nUay8OsiA0AWO1YCgAw

[26] SECOR Consultancy Ltd. (2008). Ontario 2012. Stimulating growth in Ontario's digital game industry. Retrieved from http://www.google.nl/search?client=safari&rls=en&q=Stimulating+Growth+in+Ontario's+Digital+Game+Industry&ie=UTF-8&oe=UTF-8&redir_esc=&ei=dx-nUay8OsiA0AWO1YCgAw

[27] Zackariasson, P., Wilson, T. (2012). (Eds). The Video Game Industry: Formation, Present State, and Future. Routledge. UK.

[28] SECOR Consultancy Ltd. (2008). Ontario 2012. Stimulating growth in Ontario's digital game industry. Retrieved from http://www.google.nl/search?client=safari&rls=en&q=Stimulating+Growth+in+Ontario's+Digital+Game+Industry&ie=UTF-8&oe=UTF-8&redir_esc=&ei=dx-nUay8OsiA0AWO1YCgAw

[29] Stewart, J. & Misurca, G., (2013). The industry and policy context for digital games for empowerment and inclusion: Market analysis, future prospects and key challenges in videogames, serious games and gamification. (p. 73). Retrieved from http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=6099

[30] Stewart, J. & Misurca, G., (2013). The industry and policy context for digital games for empowerment and inclusion: Market analysis, future prospects and key challenges in videogames, serious games and gamification. (p. 73). Retrieved from http://ipts.jrc.ec.europa.eu/publications/pub.cfm?id=6099

	West Midlands	Baden-Württem.	Île-de-France	Asturias	Umbria	Piedmont	Utrecht	Malta	Sofia	Salzburg
OVERVIEW 1 National games association in place?	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
OVERVIEW 2 Number of games companies per region	22	Around 35 games companies	264	24 Business projects contacted by CEEI Asturias	0	Around 3 game companies	Around 35 game companies	6 game companies	Around 15 game companies	18
OVERVIEW 3 Main types of games produced	Console/ pc, serious games, mobile games, online games	Browser games, mobile games, MMO, single player	All types	Serious games, mobile games, single & multi-player, simulation, social games	N.A.	serious/ applied games and online games	All types, with a good	MMO, social games, freemium games, point-and-click advent games	browser, console, mobile games	mobile, online, pervasive and serious/ applied games
OVERVIEW 4 Regional facilities focused on helping entrepreneurs/ the creative industries?	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🔴	🟢
OVERVIEW 5 Is there an regional game-related incubator?	🟠	🟠	🟢	🟠	🔴	🔴	🟢	🔴	🔴	🔴
ACCESS TO KNOWLEDGE 1 Are there Universities or other Educational Institutes who teach ICT Courses?	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
ACCESS TO KNOWLEDGE 2 Are there Universities or other Educational Institutes who have specialised game-related courses or degrees?	🟢	🟢	🟢	🟢	🔴	🔴	🟢	🟢	🟠	🟢
ACCESS TO KNOWLEDGE 3 Are there Research Institutes (other than Universities or other Educational Institutes) present?	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
ACCESS TO KNOWLEDGE 4 Cross-sectoral Collaboration in Place/ Networks in Place?	🟢	🟢	🟢	🟢	🔴	🟠	🟢	🟢	🔴	🟢
FESTIVALS 1 Are there regional activities focused on gaming?	🟢	🟢	🟢	🟢	🔴	🔴	🟢	🟢	🔴	🟢
FESTIVALS 2 Are there national activities focused on gaming?	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
ACCESS TO FINANCE 1 Are subsidies available specifically catered to the gaming sector?	🟢	🟢	🟠	🔴	🔴	🔴	🟢	🟢	🔴	🔴
ACCESS TO FINANCE 2 Are tax exemptions/ breaks available for the gaming industry/creative industry?	🟢	🔴	🟢	🔴	🔴	🔴	🔴	🟢	🔴	🔴
ACCESS TO MARKET 1 Is access to market perceived as favorable for game companies?	🟢	🟠	🟢	🔴	🟢	🟠	🟠	🟢	🟠	🟢

Table 3. Inventory of the Gaming Regions

Challenges

Broad types of policy support measures and initiatives have been outlined in the previous section. These also reflect the challenges faced by the digital gaming sector, as indicated by the European Games Federation.[31] Europe is the second largest games market in the world, but unlike the US and Japan it has few global publishers. A White Paper drafted by the European Games Federation in 2005 suggested that Europe's advantage lies within independent studios whose existence is increasingly threatened by market conditions[32]. The opportunities open to independent studios to function as profitable bodies in the market are being challenged by:

- high barriers to entry
- human resource shortages
- Europe's independent studios are fragmented (a fragmented sector)
- rising costs
- global competition
- increasing power of platform holders
- poor access to new technology
- reduction in opportunities to create new IP
- lack of market/industry data
- finding technology and business development strategies

These challenges are echoed below. Results derived from interviews and the BOO-Games surveys suggest that these needs are still prevalent in the current climate.

Top Three Challenges per Region derived from Interviews

Results from all ten regions are provided in Table 3.[33] The top three action points differ per region and per stakeholder interviewed. However there are some commonalities.

All regions except Asturias and Salzburg, mentioned access to finance as a top three need.

Creating awareness of the added value of the games industry was mentioned by seven regions as a top priority (The West Midlands, Piedmont, Asturias, Sofia, Baden-Württemberg, Malta and Salzburg).

Network and cluster development was mentioned by all regions that are currently lacking a specific games-related cluster or incubator in their region. These regions are: Piedmont, Umbria, Baden-Württemberg, Malta and Salzburg. Sofia does not have an incubator but did not mention this as a top three need. Interestingly, Utrecht also mentioned network/cluster development a top three action point. This reflects Utrecht as a region that is still developing its digital games ecosystem, as it is still a young industry.

Research and education was mentioned as a top priority by the West Midlands, and as a top three priority by Utrecht, Asturias, Sofia, Baden-Württemberg, Malta, and Ile-de-France. Regions who still in their infancy, and more developed regions see the need to foster research and education to ensure the presence of skilled professionals and the establishment and maintenance of innovation in their region.

Access to market was mentioned by Umbria and Asturias as the second action point and Ile-de-France as the first.

Creating **policies and regulations** catered to the game industry was mentioned as a top three action point for the West Midlands and Salzburg.

[31] European Game Developers Federation (2005). Policy Issues on the future competitiveness of the European Video Game Industry. White Paper – Draft 2 Retrieved from developerfront.com/wp content/uploads/2012/04/WhitePaperFinal.doc

[32] European Game Developers Federation (2005). Policy Issues on the future competitiveness of the European Video Game Industry. White Paper – Draft 2 Retrieved from developerfront.com/wp content/uploads/2012/04/WhitePaperFinal.doc

[33] For more detailed answers per region, please refer to section 5 'Perceived Needs in Appendix B: Interview Results'. Retrieved from http://www.boogames.eu/wp-content/uploads/2013/04/Boo-Games-Regional-Analysis-Report.pdf

Top Three Challenges per Region derived from the Questionnaire

Table 3 provides an overview of the ranking of the top three answers per region. Six regions answered the question, 'What are the most important action points for your region. Please choose three in order of priority: a) creating awareness for the added value of the games industry, b) creating policies and regulations catered to the game industry, c) access to market and other opportunities, d) access to finance, e) network/cluster development, f) creating and sustaining research & educational programmes'.

'Access to finance' remains the main obstacle for all regions. All topics were rated as perceived obstacles for sustaining or boosting the games industry. Looking more closely at the ranking, it is interesting to note that having 'a supportive regulatory framework' was mentioned by Umbria, Baden-Württemberg and Sofia as one of the top three obstacles. These regions differ in their stage of development, where Baden-Württemberg is an innovation leader, Umbria a moderate innovator and Sofia a modest innovator.

'Access to knowledge' was mentioned as one of the top three challenges for Utrecht, Umbria and Asturias. This is also interesting to note as Utrecht does have educational institutes and networks which specifically cater to the games industry, whereas Umbria does not have specialised game-related courses or regional game-related networks. Asturias is starting to have some game-related courses but does not, as of yet, have a specific game-related network in the region. Results from the interviews could shed more light on why Utrecht mentions this as one of the main challenges. It could be for instance, that as Utrecht also specialises in applied/serious games, knowledge about how to develop these games still needs to be strengthened across sectors, as creating an applied/serious game involved complementary expertise.

The **'access to market'** indicator was mentioned by Utrecht, Piedmont, Asturias and Baden-Württemberg as important. Umbria and Sofia did not rate this as one of its top three challenges.

'Access to business support' is seen as one of the top challenges in Utrecht, Baden-Württemberg and Sofia. It is not mentioned in the top three by Umbria, Piedmont or Asturias. Utrecht has access to specialised business support catered to the gaming industry in their regions, whereas Baden-Württemberg, Umbria, Piedmont and Asturias have access to general business support in their region. It could be that more developed regions are more aware of the importance of access to business support or expect more from their network organisations.

Seemingly for regions that are still developing their game industry, **'access to knowledge'** or **'access to market'** are seen as bigger hurdles than 'access to business support'. The exception is Sofia, who also mentions 'access to business support' as a priority. This may be due to the fact that Sofia lacks both a supportive regulatory framework and business support, whereas both Utrecht and Baden-Württemberg have certain support structures already in place.

	The West Midlands	Baden-Wurttemberg	Île-de-France	Asturias	Umbria	Piedmont	Utrecht	Malta	Sofia	Salzburg
Priorities from Interview										
Awareness	3	1		1		2		1	3	1
Policies & regulations	2									2
Market			1	2	2	3				
Finance		3	2		1	1	1	2	1	
Network/cluster development		2			3	3	2	3		3
Research & Education	1	3	3	3			3	2	2	
Priorities from Questionnaire										
Access to finance		1	1	1	1	1	1	1	1	1
Access to knowledge				3	3		2			
Access to market		3		2		3	2			
Access to business support		2					3		2	
Access to R&D and technology						2				
A supportive regulatory framework		3			2				3	

Table 3. Top Three-Challenges/Action Points per Region

Recommendations

This section includes a short description of the Regional Innovation Scoreboard ranking on a regional, and at times national, dimension. The section follows with top thee recommendations identified by the BOO-Games partners for their region, using their knowledge of the region, along with the results collected via the regional analysis. Recommendations are backed up by various sources such as quotes or statements from interviews of regional stakeholders, survey results, and desk research. Below is an illustrative overview of the regions taking part in the BOO-Games project.

Figure 3. Map of the Participating BOO-Games Regions

United Kingdom: The West Midlands

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According to the Regional Innovation Scoreboard, 2012, the West Midlands is an **innovation follower (low)** with an above average innovation performance with respect to the EU-27.

Relative strengths are human resources, open, excellent and attractive research systems, finance, support, linkages, and entrepreneurship. Relative weaknesses include a lack of inward investments in firms and ownership of intellectual assets.

High growth is observed for innovative SMEs collaborating with others. A strong decline is observed for the sales of new products. Growth performance in human resources, open, excellent and attractive research systems, firm investments and linkages and entrepreneurship is well above average.

The video games and visual effects industries play to the UK's twin strengths in creativity and technology. British ingenuity has given the UK a head start in two sectors that have rapidly become ubiquitous in peoples' lives, from mobile phone games to 3D film blockbusters. At over £2 billion in global sales, and growth of an explosive 16.8 percent between 2006 and 2008, the UK's video games sector is bigger than either its film or music industries, as well as its visual effects industry, which is the fastest growing component of the UK's film industry.

High-tech, knowledge-intensive sectors, such as the video games sector are major generators of intellectual property. As such, these industries have all the attributes the UK needs to succeed in the 21st century. Compared to the video games sector in general, UK has always been in the top 3 in Europe, with Germany and France. The West Midlands region was the first region in Europe to develop a serious games institute and as a result it is seen as a leader in Europe.

Top Three Recommendations

Find the Best Fit & Give them the right Skills

1a. Addressing the skill gaps between the skills level needed for the video games industry jobs/career and the inadequate curriculum currently offered in UK schools.

1b. In particular more effort should be made along the lines of design and development of video games and mobile applications.

The West Midlands possesses a multitude of higher education, continuing education and other agencies to support the sector. Even though such courses exist, specific attention to promoting the potential of the gaming industry and informing schools about future job opportunities in this sector is not currently available. The main challenge is to inform new talented graduates about the opportunities the sector can offer as well to make sure that an adequate supply of courses are set up in schools, universities and professional training agencies.

Through a focus group organised within the context of BOO-Games, participants mentioned the difficulties in accessing the correct business skills needed in order to become a video games entrepreneur. Too often, a great video games developer would know how to make a great game and develop a brilliant design etc., but this person does not know how to transfer this one game into a business, protect the IPR and develop a viable business. Interviewees felt that a much effort needs to be made in order to support the sector, and that the games sector needs a different approach from other sectors.[34]

Potential responsible stakeholders:

- The Department of Education is responsible for the development of the educational curriculum in the UK, but this can also be addressed by universities if they offer the right courses to support both video games creation as well as entrepreneurial skills.

Where's the money?

2. Supporting Video Games Entrepreneurs to finance their project through easier grant/funding schemes at different stages of their development.

Access to finance is always mentioned through interview responses, but through the focus group, a more in depth discussion took place where the respondents felt that even though access to finance could be eased by funds, bureaucracy, time and the conditions attached to a grant or a fund would outweigh the advantages. Most people involved in a particular project are quite passionate about their games and would happily invest money into the development stage. However it is once the product is almost ready for market that support should be given; this is the stage when commercial knowledge and access to talent becomes a challenge.

Participants in the focus group felt that the current business support and generic mentoring offered is not appropriate for the sector. Too often, the business skills needed do not correspond to the need of the video games sector, and as a result, the focus group felt that there is a lack of industry experts that could contribute towards the success of new entrepreneurs. In general, an independent video games developer feels isolated as they start their project off as a passion project and are not always aware of the market potential that could be generated if the right commercial approach is taken.[35]

Potential responsible stakeholders:

- Local Enterprise Partnerships
- Creative England
- Universities and Business Support Agencies

Connect the Dots

3. Business support that is tailored to the needs of the UK video games industry. This should be supported by the public sector through cooperation with appropriate networks and clusters.

The focus group participants indicated that since the disappearance of the regional development agency, no public sector agency has been able to follow on and officially support the creative cluster. The West Midlands, even though quite active in the video games sector, does not have an official cluster or network dedicated to the video games sector.

Current business bases such as the Chambers of Commerce as well as business support dedicated to the sector, such as incubators, should be equipped to support the growing demand. The government as well as games associations (TIGA) should support marketing for the sector and promote the potential for growth.

The sector, though present in the region, has seen a skills gap between the professionals needed and the current graduate pool. Some work should be done with the support of the public sector in order to sensitise schools and children at a younger age by introducing computer science as well as the design/development elements also needed for the game sector.

The universities in the West Midlands have also been very active in supporting the sector with their academic research and their science or Technology Park. A series of dedicated departments and institutes have also been developed such as: the Serious Game Institute at Coventry University, Birmingham Science Park, BCU's Gamer Camp, Wolverhampton's Games Department, Birmingham University's Digital Hub and the HIT Team.[36]

Potential responsible stakeholders:

- Creative England
- Local Enterprises Partnerships to support clusters and sector activities in the region

[35] BOO-Games Regional Analysis Report. Under section SWOT Analysis The West Midlands. Retrieved from http://www.boogames.eu/wp-content/uploads/2013/04/Boo-Games-Regional-Analysis-Report.pdf

[36] BOO-Games Regional Analysis Report. Under Appendix B: interviews section 1.1.3. Retrieved from http://www.boogames.eu/uncategorized/boo-games-regional-analysis-report/

Germany: Baden-Württemberg

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Of the ten regions analysed within the BOO-Games project, Baden-Württemberg is ranked highest on the EU's Regional Innovation Scoreboard, and classified as an **innovation leader (high)** (innovation leader, innovation follower, moderate innovators, modest innovators).

On a national level, with respect to the digital game industry, Germany is a leader in new technologies, new engines, drivers and servers used for online gaming as well as new business models.

However, the regional game industry in Baden-Württemberg is often regarded as an innovation follower or a moderate innovator by stakeholders within the region. Most of the actors interviewed do not believe that the region in the South-West of Germany is currently leading innovation in the games sector.

Furthermore, on a regional level, more specific support would be beneficial, as Birgit Roth, former Director of Public Affairs of BIGPOINT states, "I would say that Baden-Württemberg is doing well but it is still not among the most innovative. The good thing is that the region has already got public funding, but there is still too much focus on animation and film."

Nowadays it is generally recognised that the industry constitutes an important economic driver, as the game industry is now fully established as an important part of the entertainment industry. This makes it easier for games companies to obtain access to finance and receive public support. However, the general public in Baden-Württemberg still seems unaware of the existence of a games industry within the region.

Top Three Recommendations

Together we are stronger.

1. Strengthen networking activities by providing support for common marketing activities for digital gaming companies at the most relevant events for the industry (i.e. the Gamescom Fair in Cologne).

The BOO-Games survey found that only half of the respondents felt that networks are in place to promote the games industry within the region. This suggests a need to maintain visibility of the game sector through the use of, for instance, location marketing activities.

Potential responsible stakeholders:
- MFG Innovation Agency for ICT and Media of Baden-Württemberg
- Baden-Württemberg Connected - bwcon, a network of High Tech companies
- Wirtschaftsförderung Karlsruhe

Let's 'Gamify' the Economy.

2. Strengthen the synergies among the games industry and other branches, valorising games as key technologies for other industries. The important role technologies developed within the games industry can play in other sectors, must also be underlined.

The BOO-Games survey indicated that thirty-eight percent of the respondents find that the games industry is not connected to other sectors where games could provide innovative solutions to societal problems.

"Due to the High Schools of Art, the Centre for Arts and Media, the Karlsruhe Institute of Technology and many of the other high schools, the setting to be [an] innovation leader is pretty good. What I miss is a cross-link to the other related industries like comic book art, film, animation - which I know from my background in Berlin, can contribute very well to development and innovation in the games sector."
Axel Schmidt, *Director of Corporate Communication of the Gameforge AG*

However there are examples where cross-sector collaboration does happen, as "Baden-Württemberg has some innovative companies and I would say we are one of them. We have started something, which did not exist before developing a training environment for the state police. They are developing with us a simulation to train police officers." Markus Herkersdorf co-founder of TriCat

Potential responsible stakeholders:
- GEELab Europe http://www.geelab.rmit.edu.au/
- Baden-Württemberg Connected – bwcon, a network of High Tech companies

Help Me Help You.

3. Set up of a regional games network which is supported by a public institution but driven by experts within the sector.

The BOO-Games survey underlined the need to stimulate partnerships between businesses, public institutions and the games sector. Seventy-two percent of the respondents agreed with this statement. More than half of the respondents (55%) agree that public sector investment is not sufficient to establish or sustain the games industry in Baden-Württemberg. The importance of creating and sustaining regional networks, working together with partners from different backgrounds and with complementary expertise, (such as public institutions and expert knowledge), is key to increase the chance of success for start-ups and SMEs.

Potential responsible stakeholders:
- MFG Innovation Agency for ICT and Media of Baden-Württemberg
- Wirtschaftsförderung Karlsruhe
- Cyberforum Karlsruhe
- BIU - Federal Association of Interactive Entertainment Software e. V.

France: Ile-de-France

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According to the Regional Innovation Scoreboard, Ile de France is an **innovation leader (medium)** (innovation leader, innovation follower, moderate innovators, modest innovators), and is the leading region in France regarding the gaming industry.

The Ile de France video games industry is seen as particularly innovative due to the high concentration of video game production, hosting actors of all sizes, working on all platforms and all types of games. It has a particularly rich ecosystem, both in terms of its economic contribution (over a hundred developers and publishers of video games which have created around 3,000 jobs), and educational contribution (30 schools). Moreover, game developers in the region benefit from the high density of other cultural or digital industries, such as cinema, special effects or animation.

Top Three Recommendations

Let's grow!

1. Maintain and develop the digital gaming environment in the Île-de-France region by promoting the existence of business clusters, incubators, and public and private initiatives to stimulate digital gaming start-ups and SME's.

Joint projects with other enterprises and education/research institutes are vital for keeping up with recent trends and innovations. Incubators offer good orientation for start-ups, but they should provide specific coaching in the games sector. The Region encourages multidisciplinary clusters and sectorial networks related to the video games sector and provides grants for the organization of events related to digital content and video games. Examples of such events are: Game Connection Europe, Futur en Seine, the Digital World Festival, and Game Paris.

Potential responsible stakeholders:
- Region Île-de-France (Economic development department)
- Local government agency: DIRECCTE
- Regional Agencies: PREDA, Centre Francilien de L'Innovation, La Fonderie

Help companies succeed!

2. Develop general and financial support to enterprises: giving support to innovation, international development, and capital funding.

The BOO-Games online survey indicated that companies consider public subsidies, crowdsourcing, tax incentives, venture & equity funds, business angels, and self-financing as the most relevant instruments for the development of the digital games sector.

The French government, the regional and local authorities, as well as the main professional organisations develop policies and support instruments concerning access to finance, to help the stakeholders of the national and regional video game industry to stay competitive on a global level .

Special programmes have been set-up by the Ile-de-France region to help companies[37]: for example PM'Up[38], the Regional fund for the promotion of innovation (AIMA[39], Innovative project development grant), the Paris Region Entreprises[40], or programmes developed for capital funding[41].

As part of the provision of aid at a national and regional level, the BPI Public Investment Bank has been reorganised to facilitate access to finance for companies.

Potential responsible stakeholders:
- Region Île-de-France (Economic development department)

A source of inspiration!

3. Maintain and stimulate innovation through the existence of business and competitiveness clusters.

France's 71 innovation clusters (competitiveness clusters) unite researchers and manufacturers from the same industry in a region and showcase the diversity of France's key sectors[42].

The Ile-de-France Region supports competitiveness and business clusters, including Cap Digital and Capital Games, helping for instance start-ups and SMEs to stimulate the emergence of collaborative and, above all, innovative projects in the video game industry in the Region.

Capital Games, Cap Digital and the Paris Region Innovation Centre (Centre Francilien de l'Innovation) work together to boost creation and inspiration in Ile-de-France (Paris Region).

Many national and regional universities, schools, R&D centres and companies have benefited from incentives due to their participation in national collaborative R&D projects.

Potential responsible stakeholders:
- State level and Region Île-de-France (Economic Development Department)
- Centre Francilien de l'Innovation

[37] Regional Economic and Innovation Development Strategy (Stratégie Régionale de Développement Economique et d'Innovation SRDEI): http://saisie-www.iledefrance.fr/sites/default/files/srdei_publication.pdf

[38] PM'Up: http://www.iledefrance.fr/aides-regionales-appels-projets/pm-up

[39] AIMA, Innovative project development grant : http://www.iledefrance.fr/aides-regionales-appels-projets?title=aima&target=All&term=All&type=All&=Rechercher

[40] Paris-Région Entreprises : http://www.iledefrance.fr/fil-actus-region/paris-region-entreprises-va-aider-pme-decoller

[41] Capital funding: venture capital through regional funds which it holds shares (eg Ile-de-France Capital, OSEO loan guarantee and equity loans): http://www.iledefrance.fr/action-quotidienne/entreprendre

[42] BOO-Games Regional Analysis Report. Retrieved from: http://www.boogames.eu/uncategorized/boo-games-regional-analysis-report/

Spain: Asturias

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According to the Regional Innovation Scoreboard, Asturias is a **moderate innovator (medium)** category (innovation leader, innovation follower, moderate innovators, modest innovators). Interviewed respondents highlighted that the region of Asturias has made efforts in recent years to support and foster innovation in order to capitalise on the innovation through the creation of innovative companies. In this sense, regional stakeholders, including technology centres, research departments, clusters and other innovation actors work hard and focus on setting-up and consolidating technology-based companies in the region.

The creative and cultural industries in Asturias have been promoted on a regional level in recent years. Examples of such promotional activities are: the publication of the "White Paper on Cultural Industries", and several singular initiatives linked to brand new cultural infrastructures such as Laboral[43] or Centro Niemeyer[44 45]. The Regional Mapping of the Creative Sector in Asturias, a report developed within the EU-funded project CREATIVE GROWTH, confirms the enormous potential of the ICT sector for the Asturian economy, which is considered an essential prerequisite for the development of the gaming industry in the region.

Top Three Recommendations

Specialised sectors require specialised support.

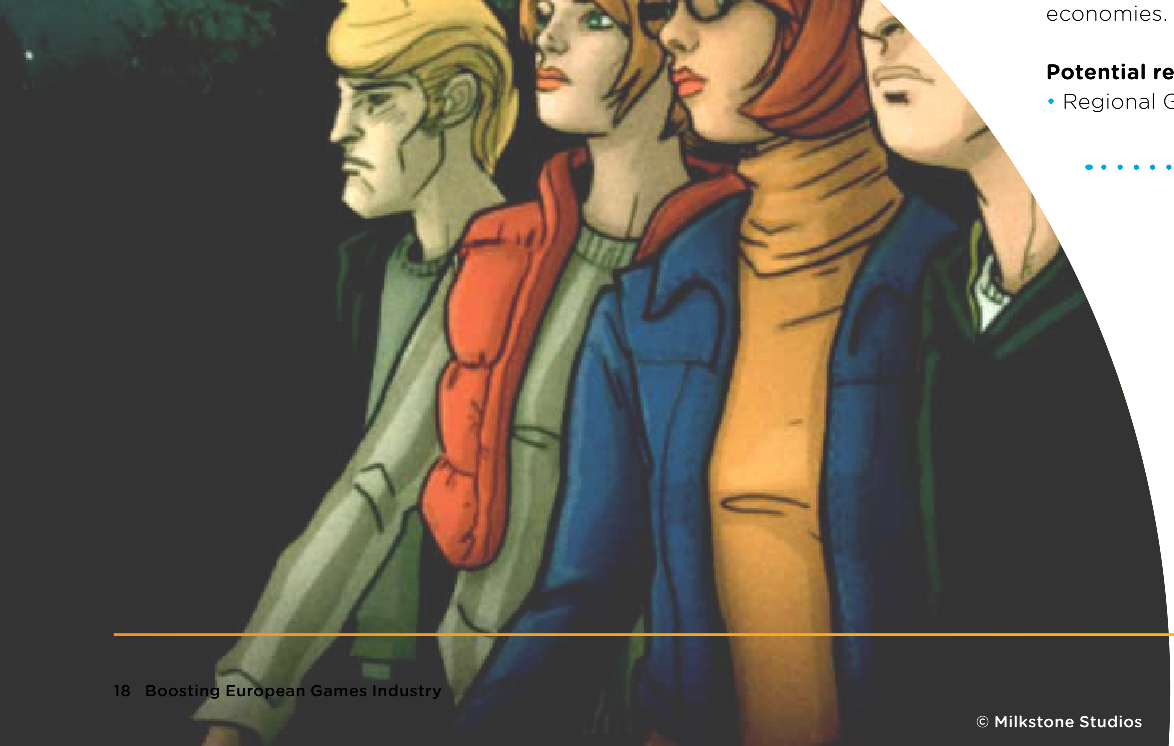
1. Enhance the business support services in the development of business projects and start-ups in the digital and video games sector.

In Spain there are no incubators specialising in video games. However as the video game sector is part of the creative and digital industries, respondents agree that such Incubators should also take the lead in supporting these entrepreneurs.

According to the survey and interviews, the majority of stakeholders in Asturias agree that providing support instruments to help grow the games sector, should be led by CEEI Asturias as an incubator specialised in innovation, with the help of other stakeholders. There is a strong feeling that the structuring of the games sector could primarily (but not uniquely) rely on entrepreneurs and young professionals and companies. Structuring the games sector could help revitalize the economic context and create leverage for establishing SMEs.

Initiatives such as GAMELAB[46], a video games festival initiated and held in Asturias for its first 6 editions, provide added value to the video games sector as they increase its visibility and create awareness of its potential for regional and national economies.

Potential responsible stakeholders:
- Regional Government



I'm ready to Invest

2. Investment readiness: promoting and establishment of appropriate lines of financing for the sector.

Creative sector companies and entrepreneurs face difficulties in accessing finance – both private and public – in order to start-up or grow. The multi-layered reasons for this have been analysed and discussed by thematic working group "Access to Finance"[47]. It established that obstacles to access to finance may be found with both the creative industries and the financiers.

In addition to facing structural challenges, creative sector companies lack knowledge of existing financial instruments and skills in attracting investors. They also often fail to articulate the growth potential of their ideas, products and services vis-à-vis investors.

On the other hand, the financial community including private investors and Business Angels, as well as certain public entities, lack the ability to identify and evaluate the intangible assets that often reside within creative sector companies and their projects. They also find it difficult to assess the risks related to investing in creative projects.

The thematic working group report identifies certain investment schemes in the Creative Growth participant regions, which can also be used to help creative businesses. On the other hand, it also identifies a range of areas where business support organisations can help creative entrepreneurs to become 'investment ready'.

At a regional level, some innovative public intermediaries have set up creative industries funds – often with the assistance of regional banks. Moreover, intermediaries sometimes provide a multitude of related services such as coaching, mentoring, networking and business training schemes which are meant to increase creative sector companies' 'investment readiness''.

However, these kinds of interventions remain scarce and more exchange of experience and knowledge between regions on the issue would be beneficial.[48]

Potential responsible stakeholders:
- Regional Government

I'm good, now what?

3. Capitalization of talent: entrepreneurial and business skills and competences development in order to meet the sector's new challenges.

Apart from a demand for a specialized offer of degrees and courses on video games by the University of Oviedo, one of the main perceived needs is linked to specialized qualifications for games human resources, as well as entrepreneurial and business skills for games promoters. More specifically, the skills required by video game entrepreneurs in order to obtain access to finance or manage a company are needed. The need for networking activities in order to promote the video game sector through business cooperation, and the support of a community of public and private stakeholders, is significant.

Potential responsible stakeholders:
- CEEI Asturias

43 http://www.laboralcentrodearte.org

44 http://www.niemeyercenter.org

45 http://www.asturias.es/Asturias/descargas/PDF%20DE%20TEMAS/Cultura/libro_blanco_industrias_culturales.pdf

46 http://www.gamelabacademy.com/

47 See Creative Growth Thematic Working Group Report "Access to Finance" http://www.creative-growth.eu/

48 BOO-Games Regional Analysis Report. under section Asturias: Access to Finance. Retrieved from: http://www.boogames.eu/uncategorized/boo-games-regional-analysis-report/

Italy: Umbria

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According to the Regional Innovation Scoreboard, the performance of Umbria is located in the **Moderate innovators - high** category (innovation leader, innovation follower, moderate innovators, modest innovators). Interviews with Umbrian SMEs have shown that innovation in this region has been and still is strictly connected and related to regional policies. Up to now, the main innovations have mainly been carried out by medium sized enterprises. Umbria is now aware of the potential of innovative companies, and the region is planning to create a specific innovation cluster to help companies contact each other to share costs and collaborate on projects.

Top Three Recommendations

Where's the Money?

1. Access to specific dedicated finance / funds are needed.

Although there are a number of different incentives available for start-ups or companies who want to invest, ranging from location, to employment, to finance, these are essentially aimed at companies in general; the only incentives with specific targets are those focused on young entrepreneurs and/or women's entrepreneurship. There are no tax incentives benefiting the gaming sector, even on a national level. A recent bill may provide some tax benefits, but has yet to be enacted into law.

Potential responsible stakeholders:

- Umbria Region: lrossetti@regione.umbria.it

Let's Share and Connect

2. A dedicated cluster / incubator focused on the gaming industry.

During the interviews, it was pointed out that Umbria currently lacks a well-defined gaming sector or cluster. Many also asked for a dedicated incubator where logistical support and consultancy services could be obtained.

There are many companies involved in gaming related sectors (ICT, video, multimedia, web, etc) in Umbria. People interviewed are part of these sectors (biggest have been chosen) and showed great interest in the potential of gaming. All of the respondents have expressed doubts about the possibility of creating, in the mid-term, from scratch, a game sector in Umbria similar to those in England, France or Canada, but most have identified huge potential in the field of Serious Games. This area requires less capital investment and a relatively lower level of technical skill; companies with these profiles can be found fairly easily within our region.

Many have pointed out the potential of cross-sector relationships, for example with tourism, the medical and educational sectors. Most of the people interviewed also underlined the need to strengthen these intersectoral relationships as the development of products in the Serious Gaming sector requires a close and intense collaboration between different sectors.

During the interviews, the current lack of interrelation between companies and Universities was also underlined. There is also a weak public sector presence in terms of investment, and an absence of media support for promoting the potential of the gaming industry.

Potential responsible stakeholders:

- University of Perugia/ Faculty of Engineering

Google and onine tutorials are not the Only Answer

3. Specific university courses

Many of the respondents reported a lack of facilities specifically dedicated to the game sector and training courses in this field. Many respondents recognized that specific game-related incentives (both financial and tax incentives) could be very useful and underlined the importance of training courses specifically structured to support this developing arena.

Potential responsible stakeholders:

- University of Perugia: liotta@diei.unipg.it

Italy: Piedmont

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According to the Regional Innovation Scoreboard, Piedmont Region is an innovation follower (high) (innovation leader, innovation follower, moderate innovators, modest innovators). The national game industry in Italy, as well as the regional game sector Piedmont, is under development. Piedmont's video game producers are typically software houses or working in the field of interactive design, which also produce video games or applications. According to the interviews, Piedmont is perceived as an innovator in many fields, particularly ICT and the creative industries.

Top Three Recommendations

I want to Grow

1. General support to enterprises in business development, emphasising the economic potential of the video game sector.

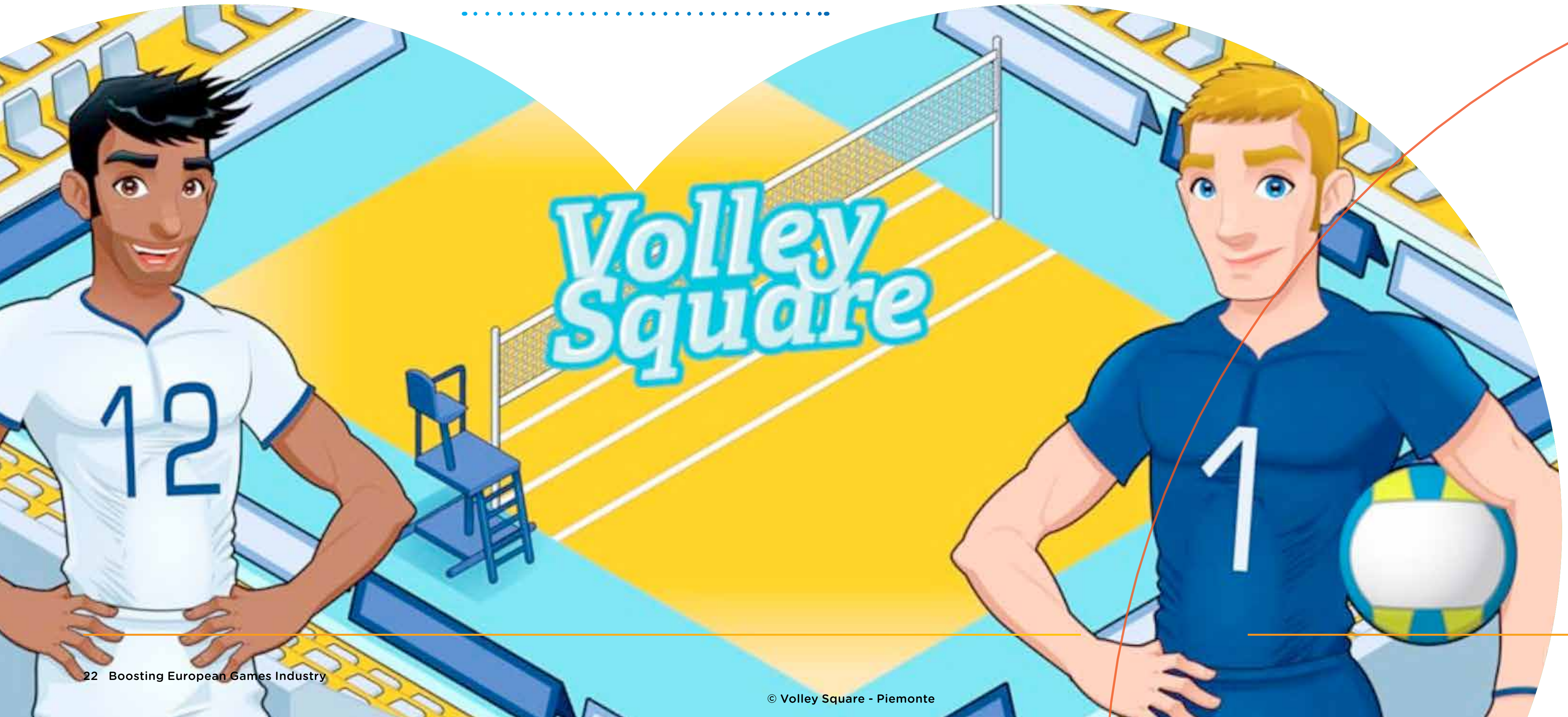
The majority of respondents to the online survey declared that there are minimal connections between video game companies in the region, except for companies that are involved in one of the regional innovation clusters that also have that function.

A cluster dedicated to gaming is necessary. The region and public institutions in general should create a hub, invest money in it, collect the best experience of the region and promote game development, especially in the field of disability and/or educational video games that would produce this hub.

Currently, the only experience identified as an informal hub or network is View Conference[50], an annual meeting between local industry experts and worldwide experts working in the video games industry. More work is needed in order to promote this conference at a local level as a meeting point for people already working in the video game sector

Another location which can be mentioned as a potential hub is the incubator of the Politecnico di Torino called Treatabit[51]. Treatabit is exclusively dedicated to internet projects. The incubator provides coworking spaces, opportunities for training and networking, and some small companies are emerging that makes games for mobile and social networks.

Potential responsible stakeholders:
- Regional Government
- Bank Foundations
- I3P innovative enterprises incubator
- Torino Piemonte Animation Cluster
- View Conference
- VRMPP - Virtual Reality and Multi Media Park



Share the Wealth: We are also part of our region's cultural heritage

2. Enhancement of the culture of games as a key component for the development of all communication sectors; equalise gaming in comparison with other creative and cultural sectors, and not considering digital games solely as entertainment.

Working on the concept of edutainment and serious games and attempt to use videogames to explore areas such as environmental sustainability and health is of key importance. The cultural heritage sector and city marketing could benefit from the use of video games, as well as from multimedia in general.

Potential responsible stakeholders:
- Regional Government
- Torino University
- Torino Polytechnic
- Fondazione Musei
- Publishers

I want to grow now cut me some slack

3. Tax incentives for enterprises who invest in the creative and in video game industries.

Tax benefits for private investors to invest in the creative sector would be useful for the games industry as well as programmes to help enterprises to become "investment-ready". The best solution for the Italian situation is probably the replication and adaptation of measures that have been deployed in France and in Canada by the public actors. These policies have led to a much greater development of this sector in both countries compared to the current situation in Italy.

The tools used could include investment in the production chain of video games in order to incentivise the industry and make it stronger and tax legislation specifically designed for this kind of targeted production.

Potential responsible stakeholders:
- Regional Government
- TELCO
- SIAE
- SMEs Associations

[51] HTTP://VIEWCONFERENCE.IT/

[52] HTTP://WWW.TREATABIT.COM/

Netherlands: Utrecht

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According to the Regional Innovation Scoreboard, Utrecht is an **innovation leader (medium)** (innovation leader, innovation follower, moderate innovators, modest innovators). Utrecht's game companies are relatively small, restricting scale advantages. However, Utrecht is the second largest region (behind Amsterdam), if one considers the number of game companies that have settled in the region. Together with the positive climate of education and research on games, and the availability of educated employees, Utrecht can be seen as innovation follower with regard to digital gaming.

Nevertheless, it can also be argued that the applied/serious gaming industry of Utrecht can be graded as an innovation leader. At least twelve of the thirty-three game-related enterprises in Utrecht are involved with applied game design. Applied games are a relatively new and upcoming sector in the game industry. Besides this, there also is a considerable amount of education and research focussed on applied/serious games.

Top Three Recommendations

Where's the Money?

1. Access to finance

"I think the two major things [are] getting the right people and getting funding," Marc Overmars, Utrecht University; "They [small start-up companies] just start at 'I want to make beautiful things' and then think 'oh crap we forgot to eat'." Christel van Grinsven (Taskforce Innovatie Utrecht) and Derk van Wingeren (Utrecht Province).

"For example one of the things I notice is that many of these companies start and they need money and they want somebody to fund the project. And nobody is going to fund a project or company that never created a project before. Now I could imagine that I want to fund the company, because I believe in them and trust the people. So I invest in the company and getting a share in the company I could imagine being willing to do that. And that they don't want to because it is their company. And that type of attitude makes it very difficult to attract funding and many of them don't want funding because they want to be in charge of their own company." Marc Overmars, Utrecht University

Potential responsible stakeholders:
- CLICK NL
- Dutch Game Garden
- Chamber of Commerce
- Agentschap NL

Network growth/collaboration

2. Network growth/collaboration

Communication was seen as one of the biggest challenges for game companies. More specifically, having a long-term vision of where the company will be going, understanding and manoeuvring within the playing field. This can be done by "understanding exactly how the system works, how you can change the system" and benchmarking and combining knowledge on a regional, national, European and international level." Marinka Copier, Utrecht School of the Arts (HKU)

Potential responsible stakeholders:
- A collaboration between the:
- DGA (Dutch Games Association)
- Dutch Game Garden
- TFI (Taskforce Innovation Utrecht)
- Utrecht Region and Province
- Research Institutes such as Utrecht School of the Arts (HKU) and the Utrecht University (UU)
- The national Government

Do I really need to wear a tie?

3. Access to business skills (entrepreneurial skills, long-term vision, branding, etc).

The biggest challenges faced by game enterprises in Utrecht were as follows:
i) for entertainment companies, funding and access to publishers,
ii) for serious/applied game companies, finding clients to spend money on a game and creating something which fits the needs of the company,
iii) for start-ups, having entrepreneurial skills within the company is still an issue.

Acquiring entrepreneurial skills can be tackled by making companies aware of the added value of such skills and looking into how a match can be found between game designers and people interested in marketing and business management. These skills can already be introduced during their studies via for instance, internships, alumni coaching, etc. This is something that is still in need of attention. Jan-Pieter van Seventer, The Dutch Game Garden

Access to capital and lack of business skills were mentioned as being the biggest challenges faced by start-ups and SMEs. Working in an interdisciplinary context was also mentioned as important. Interestingly, the interviewee also mentioned that access to capital and working across disciplines helped growth in the gaming industry in Hamburg, Germany compared to that of Utrecht, the Netherlands. Due to their lack of educational institutes focusing on games, Hamburg was forced to think outside the box:

"Germany did it very well, I think that having this access to capital and growing these creative game companies to creative business companies is so important. That really makes the difference between making a nice product and building a sustainable business".

"Who I always take as an example when we started in 2005, organizing this industry, the German industry was not that much bigger than the Dutch industry. It was like…you know if you look at…relatively it was about the same size. So we had about 600 people working in the industry, they had about 1800 or about 2000 people working in the industry, which is comparable if you compare it to the country size [which is] about as big as it is in the Netherlands. But Germany has grown much bigger the last couple of years compared to the Netherlands. Just the Hamburg region is like six or seven thousand.

So it's growing really really fast and I think one of reasons is access to capital in Germany. It's strange to say, but because there was a lack of good game schools, you see that those teams are much more multi-disciplinary there. So you see people that maybe even studied Economics, but also in their spare time program games, have started a company. So they already have this different mind-set ability. You see that having a lack of something sometimes can help, even getting you somewhere else quick, because you don't have this infrastructure. You need to do it differently. Seth van der Meer, Festival of Games

Potential responsible stakeholders:
- Utrecht School of the Arts (HKU)
- The Dutch Game Garden
- The Chamber of Commerce

Malta: Malta

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According to the Innovation Union Scoreboard[52], Malta falls in the third of four categories regarding innovative activity, placing it in the category of a **moderate innovator** (innovation leader, innovation follower, moderate innovators, modest innovators). According to Malta Enterprise (ME), the Maltese Games industry must be broken into two parts: a well-developed sector and start-up gaming companies.

The Ministry of Culture emphasized that the Creative Economy Working Group has commissioned and successfully launched a Digital Games Strategy for Malta in April 2012. The National Strategy for the Cultural and Creative Industries identifies the need for a wide range of games-specific incentives and provision of mechanisms to encourage game-related activity and international cooperation. The Strategy classifies two main priorities for Malta:

1). Transferring generic technical and high-level programming expertise from other IT areas into the games sector;
2). Strengthening arts-related courses to secure a stream of talent that can contribute to games development.

The Malta Digital Games Fund can be seen as a catalyst for building a games industry in Malta that can both attract private investment and foster the games sector. Additionally, international interest in Malta is growing, with a number of companies either setting up, or considering setting up shop in the country over the past two years.

Top Three Recommendations

It's not what you know, it's who you know!
(Jeffrey Gitomer)

1. Access to market

Malta Enterprise already provides trade show attendance grants for the USA, Far East and Europe, subsidising some of the cost of Maltese companies attending trade shows to conduct business and gather market intelligence. Suitable trade shows include GDC, Casual Connect and Siggraph. This support should be continued and expanded to facilitate linkages between Maltese and foreign companies.

Potential responsible stakeholders:
- Malta Enterprise
- Ministry of Finance

Brain Gain

2. Networking and cluster development

Malta should learn from other local support agencies' experience of growing inorganic games clusters by attracting games companies. In doing so, it will establish new skill sets and methodological know-how, build understanding of the key drivers behind global games companies' location decisions, and build contact networks. It will also increase the visibility of Malta to key decision makers in global companies, and ultimately drive all three strategic objectives forward.

Potential responsible stakeholders:
- Malta Enterprise
- Malta's Creative Economy
- The National Strategy for the Cultural and Creative Industries

Where's the Money?

3. Access to finance

Gaming companies know little of what Malta offers in terms of incentives and opportunities. Malta should actively facilitate matchmaking between start-ups and incoming games companies and local banks, funds and finance schemes, expediting the task of finding and applying for finance (which can have too high an administrative overhead for small companies). This could effectively extend the remit of the Business Support Centre.

Administrative assistance with EU grants, such as the MEDIA programme and other grants, should also be offered.

Potential responsible stakeholders:
- Ministry of Finance
- Malta Enterprise

Bulgaria: Sofia

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According to the Regional Innovation Scoreboard, the Sofia Region is classified as a **modest innovator (medium)** (innovation leader, innovation follower, moderate innovators, modest innovators). Considering the significant discrepancy in the level of development in the Sofia Region compared to the rest of the country - with the former being much more advanced than the latter – Sofia may be described as having a relatively robust knowledge-based economy with some SME clusters in operation.

However, it is currently lacking significant rewards for cultural and creative entrepreneurship and risk taking, and satisfactory state aid or support for creative and cultural industries (CCI). Rather, CCI is acknowledged, but no coordinated strategies to support it exist. The rest of the country is lagging behind Sofia region as a result of the lack of adequate business support strategies in general, let alone in the CCI field.

Top Three Recommendations

If you build it, they will come.

1. Institutionalizing a strategy for the support of the creative industries and the digital gaming sector.

According to one digital game CEO, the sector is expected to grow at an annual rate of 20%[53].” However according to a policy-maker at the Ministry of Economy, Energy and Tourism, “no specific policies for the games industry exist.”[54]. Bulgaria has no strategies for the promotion of the creative industries, never mind a strategy for the digital gaming sector. There is an urgent need for the completion of the ‘Strategy for the Development of the Creative Industries’ which has already been started by the Ministry of Economy, Energy and Tourism. Specific measures for the digital gaming sector should be developed through consultations with digital game companies and other creative industries stakeholders. These consultations should focus on the creation of a forum where the development of a creative industries cluster can be discussed.

Potential responsible stakeholders:
- Ministry of Economy, Energy and Tourism, “Business Environment and SME Policy” Directorate

Give them the tools and they will get the job done.

2. A lack of financial options should not be a bottleneck for bringing great ideas to market.

Access to finance tops the list of challenges mentioned by game enterprises[55]. In addition, survey respondents[56] mentioned that financial support is necessary for promotion (80%), creation (42%), and distribution of digital games (38%). Participants in a round table on creative industries and digital gaming in July 2012 said that state funding for internships in game development companies would be mutually beneficial.

Many game start-up companies exist inside personal residences and on a shoe-string budget. They have ambition, a vision, skills and very little financing. Yet they need some. These people are often students with amazing talents that require a financial bridge to bring their ideas to the market. It is the government’s responsibility to help them realize this potential through the development of a guarantee fund for the cultural and creative industries to secure loans from banks.

Potential responsible stakeholders:
- Ministry of Economy, Energy and Tourism, “Business Environment and SME Policy” Directorate

Everybody Wins.

3. Bridging the gap: helping students and young job seekers find their place on the labour market.

Companies want good, committed employees and employees want companies that appreciate their talents. But in the chaos of the labour market, how can they find each other? Survey results indicated that the links between digital gaming companies and educational/ or research institutes need to be strengthened. Online job boards, word-of-mouth and face-to-face interviews are all helpful. But it is always risky to marry someone before you have lived with them. Can you actually get along? You don’t really know until you have tried.

What would be helpful is the promotion of a trial period for employers and employees through the provision of government stipends, allowing students and recent graduates to work free of charge to the employer for a period of 6 months, after which the employer will hire the intern or let them move on. Whether or not he or she is hired, the intern will gather important skills and the employer takes on minimal financial risk.

Potential responsible stakeholders:
- Ministry of Labour and Social Policy, “Department of Funds” and/or “Department of Labour Market”

[53] BOO-Games Regional Analysis Report. Appendix B, Interviews: Retrieved from http://www.boogames.eu/uncategorized/boo-games-regional-analysis-report/

[54] BOO-Games Regional Analysis Report. Appendix B, Interviews. Retrieved from http://www.boogames.eu/uncategorized/boo-games-regional-analysis-report/

[55] The BOO-Games survey and BOO-Games Regional Analysis Report. Appendix B, Interviews. Retrieved from http://www.boogames.eu/uncategorized/boo-games-regional-analysis-report/

[56] The BOO-Games survey was conducted in the period May-June 2012 among relevant gaming stakeholders in Bulgaria.

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Austria: Salzburg

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According to the Regional Innovation Scoreboard, Salzburg is listed as an **innovation follower (medium)** (innovation leader, innovation follower, moderate innovators, modest innovators).

With a GDP of €19.8bn in 2009, Salzburg accounts for 7.2% of the Austrian GDP. Its GDP per capita of €37,500 is above the Austrian and the EU-27 average and its regional unemployment rate is 2.5%[57]. In 2009, more than 8% of the Salzburg-based enterprises can be attributed to the creative industries. The nearly 2,400 companies in the creative industries located in Salzburg employed almost 7,900 persons.

As gaming is a relatively new sector in Salzburg, the regional games industry mainly consists of software developers, web designers and interactive media designers. Companies are relatively small in size, except for a few international companies present in the region. Game developers believe that there is a great potential in Salzburg for the development of serious or applied games as well as mobile and online games.

Top Three Recommendations

Think Ahead!

1. Promoting and Supporting entrepreneurial competences and skills (e.g. financial, commercial, managerial skills by entrepreneurs).

"Highly skilled individuals in the Creative Industries, especially in design and digital interactive media/gaming, want to become entrepreneurs".
Source: *BOO-Games interview with a university in Salzburg*

Salzburg is already fertile ground for creative companies, due to its many start-ups, education and research facilities, as well as its regional development. The task is to create favourable framework conditions for an ecosystem where graduates and entrepreneurs in the creative industries can flourish and grow, among other things by stimulating the demand for their services by companies from other sectors. Existing regional initiatives and activities (e.g. Educational Programmes, Support Actions for Founders, Incubators), shall focus on the entrepreneurial needs of creative people.

Potential responsible stakeholders:
- Regional Government
- Regional Development Agency
- Educational Institutions (e.g. University of Applied Sciences)

Keep Moving!

2. Applying creative industries funding instruments (e.g. Creative Voucher Model) to the need of gaming projects.

"It is visible that small structured creative businesses have completely new expectations and demands for modern business locations: flexible forms for cooperation, co-creation, project-oriented work within networks, cross-disciplinary interest…."
Source: *Austrian Intermediary in Creative Industries*

Public sector investment to establish or sustain the games industry in the region is not sufficient. One way to specifically cater to the emerging gaming industry is to have support services which are tailor-made for the target group and can sustain a new open networking culture: Creation of new relationships between creative service providers and SMEs from other sectors; opening-up the mind-set of micro and small enterprises to the world of creative services. Coaching-workshops and training for creative industries companies can improve their investment readiness and facilitate access to finance by cooperating with start-up initiatives.

Potential responsible stakeholders:
- Ministry of Economics
- Regional government

They Are Here!

3a. Raising Awareness for the economic potential of gaming (e.g. serious gaming, digital distribution, cloud computing and continuous human and machine interface).

"Austria's creative industries produce a turnover which is as large as that of tourism, their exports are strong, and they are important suppliers for other sectors."
Source: Fourth Austrian Report on Creative Industries, creativwirtschaft.at

Traditionally speaking, Salzburg is seen as Mozart, skiing, handcrafts, manufacturing. The region of Salzburg has the ambition to aim higher and demonstrate its willingness to transition from a traditional economy relying on crafts and manufacturing, tourism, culture and health, to a sustainable and innovative economy pivoting on service innovation and through a more strategic use of all forms of its creative potential. The traditional industries need to recharge their innovation batteries with the supporting tractive force of the creative sector and the process itself fuels also the growth of the latter.

3b. Stimulating innovative projects using game related applications and promoting cross sectorial cooperation (e.g. by networking activities and knowledge-sharing between industries, research and education with other traditional industries).

Survey respondents indicated that the current emerging game sector in Salzburg is not connected to other sectors. Games can be a tool to provide innovative solutions to societal problems. The issue is how to cross-fertilize these assets with other sectors for creativity-based innovation to grow rapidly and sustainably in a structural modern and open economic eco-system with future potential. Partnerships between businesses, public institutions and the games sector should be stimulated. It is thus important to strengthen, through various measures, the companies' capacity to innovate (particularly SMEs) by bridging the traditional sectors with the creative ones.

Potential responsible stakeholders:
- Regional Government
- Regional Development Agency

[57] http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/1-22052013-AP/EN/1-22052013-AP-EN.PDF

Conclusion

In talking and working with policymakers, the BOO-Games project team is well aware of the practical constraints in terms of time and resources. Our hope for this guide, and for the entire project, is that policymakers will consider specialised support for the digital gaming sector in their cities, regions and/or countries. We believe that this abridged guide, (which reflects that main messages from those working in the digital gaming field from across Europe) makes the case that well-tailored public policies can significantly strengthen the competitiveness of these companies across Europe. In turn, this will lead to improved employment opportunities and a demand for educational services in the field.

In order to capitalise on the informational and awareness-raising activities conducted within the BOO-Games project, a Good Practices Guide will also be developed to help address some of the challenges, and exploit the opportunities that exist in each region. We understand the skepticism that may exist when a measure which was successful in one geographic area is attempted in another. Understanding the context within which it was successful is extremely important. With this in mind, this Good Practices Guide will outline the success factors for digital gaming support policies in order to provide policymakers with actionable intelligence on which to base their decisions.

For more information and links to the Regional Analysis, please visit the BOO-Games website:
www.boogames.eu

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