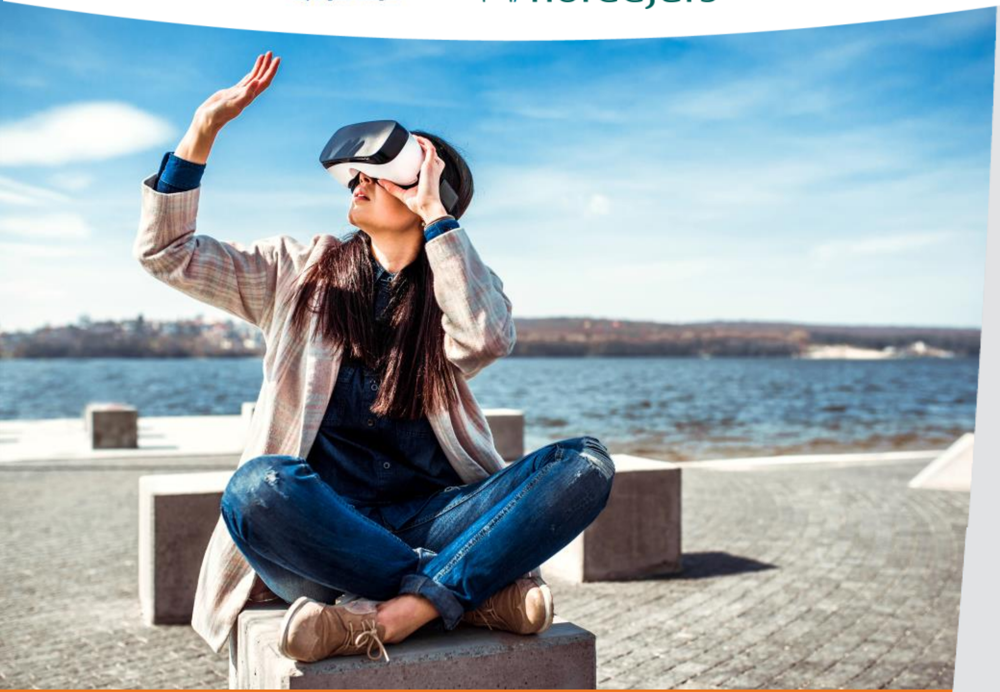

Good Practice Catalogue on Favourable Framework Conditions and Policies for Game Business

Output 2.5 of the BGI Project

Interreg Baltic Sea Region

EUROPEAN UNION

EUROPEAN REGIONAL DEVELOPMENT FUND

This document outlines good practices used in the BGI partner regions with regards to economic development and industry support by the public authorities or their affiliated organisations. These practices served as models in the project's objective of improving the framework conditions for the regional game industry.

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Content

1. Introduction

European diversity is a challenge and an opportunity for the European Union. The different mind-sets and resulting approaches render coherent and overall solutions and a shared course of action difficult, while at the same time offer a whole range of proven good practices that could provide guidance for the most efficient strategies and policies for varying circumstances.

In the quest for a common understanding on how to best improve framework conditions for their native game industries, public authorities from the Baltic Sea regions have investigated the common and best possible grounds on which their game industries and the game sector in the BSR as a whole could thrive. To establish this, every region undertook an analysis of their regional situation through intense discussions with stakeholders from the industry and decision-makers from the regional authorities. Through exchange of their findings and insights, the regions understood where they already had good practices in place in support of their game industry on which to build on, or which have proven successful with other industry sectors and could well be extended to also embrace their game industry.

This output provides both a reflection on the individual good practices as models for adaption in similar contexts and political and economical climates (see section “recommendations”) and the respective case description for the selected practice example.

The document is addressed to policymakers at all levels interested in proven practices and tools to facilitate improvement of framework conditions for and stimulate industrial growth of the game business.

We wish to point out that the good practices presented here were selected for their suitability to embrace or be adapted for the game industry. There is no doubt that some of these practices have long been established in other regions as well, and in some cases even in a more sophisticated way. What guided us here was the fact that through the BGI project these specific good and proven practices were focused on and found suitable to improve conditions for the game industry. Often the game sector is mentioned in strategic documents as belonging to one or another category targeted with the scope of the strategy. However, experience shows that in most cases this does not entail that games are being treated equally when implementing those measures.

In this way, this document is hoping to motivate regions with similar good practices for other economy sectors, to consider including pro-actively games into the scope of their implementation planning and activities.

2. Recommendations

2.1 Cluster Policies and S3: The Bigger Picture in Mind

In Europe, cluster policies and Smart Specialisation Strategies have been strongly propagated tools for policymakers, interested in using clusters as a tool to facilitate regional structural change through industrial innovation policies.

> *"Europe's regions must provide entrepreneurs with a favourable business environment and support appropriate to their particular needs. This is why cluster policies and smart specialization strategies are at the heart of delivering the EU's growth strategy, as they help to take the geographical and thematic context into account in order to boost jobs, SME growth and investment."*[1]

Cluster policies and Smart Specialisation Strategies are like two sides of a coin. Amongst the good practices of governmental economic development support described in this document, several touch upon the question of those two aspects.

2.1.1 S3 - Smart Specialisation Strategies

The Smart Specialisation strategy is a tool for the European Union (EU) to trigger economic growth and provide recovery from economic crises. The concept of smart specialisation has attracted great interest and has been adopted widely in European regional and innovation policy. The aim of the strategy in Europe is to become competitive in the global economy by concentrating resources in research and innovation (R&I) and linking them to priority economic areas.

Based on the analysis of one's regional economy, society and innovation structure the Smart Specialisation Strategy helps to define and focus on fields and sectors that are worth to be further developed, and to find perspectives for future development of these sectors. However, as the Polish researcher Aleksandra Gulc (2015)[2] pointed out: "[…], smart specialisation does not mean only supporting of existing strengths of the regions but rather finding the new possibilities of their development".

The game sector as horizontal trigger for innovation

Looking at what role the game industry could play in this context, as done by the Lithuanian government, the asset of the game business lies in its horizontal capacities to "help find perspectives for future developments" both as an ICT enhancement for established industries (medicine, automobile, etc.) and for the creative and innovation application of technologies within the cultural and creative industries (theatre, cinema, fashion, tourism, etc.).

In this respect, as with the ICT sector, strengthening the game sector has a double purpose: enabling an emerging industry with high revenue potentials and fostering their horizontal impact level through the cross-sectoral focus. Meaning that as member states that apply the Smart Specialisation

[1] "Smart Guide to Cluster Policy" (2016) published by the European Commission within their Guidebook Series: "How to support SME Policy from Structural Funds" - https://www.cluster-analysis.org/downloads/smart-guide-to-cluster-policy.

[2] Gulc, Aleksandra (2015). Analysis of Methodological Approach to Identify Smart Specialization on the Example of Polish Regions. Procedia - Social and Behavioral Sciences, 213, pp. 817–823.

strategy are enabled to acquire funding by the many different European funding schemes, these could then be steered towards this horizontal capacity of ICT and games. As with so many of the good practices delineated in this document, the Lithuanian government with the Lithuanian Innovation Centre at their side not only demonstrated an admirable open-mindedness and exceptional percipiency, but also their readiness for quick and productive action.

The benefit of a roadmap

As with cluster strategies, the effect of the involvement and leadership role of governments and public authorities (PAs) in strengthening the sector is the methodological analysis of the status quo and evaluation of the potential of the respective industry. A roadmap describing the analysis results and developing respective recommendations would act as catalyser for the self-concept and profile of the industry to becoming an established industry. With the Smart Specialisation Strategy, the public support schemes would forster the horizontal capacities and thus help sharpen the industry profile in this respect.

The value of the roadmap relies not only heavily on the methodology applied and the scope of the analysis, but also on the timeliness with which the investigation is carried out, as facts, trends and figures in such emerging and fluctuating industries quickly become outdated. The impact of the roadmap on the other hand strongly depends on the actions taken on the basis of the recommendations and new knowledge. This is where the government then decides whether and how to initiate dialogues with the industry and research sectors. This is where the cluster initiatives come to life, as a platform for implementing the Smart Specialisation Strategies and generating concrete actions.

The Lithuanian policy and decision-makers, like their Baltic neighbours, understood the efficiency of sharing and transparency for successful and fast-paced growth. They are translating a summary of their roadmap for the game sector, thus providing others a valuable blueprint for adaptation.

2.1.2 PA participation in business clusters

Cluster initiatives and the benefits of PA involvement

> *“A business cluster is a geographical location where enough resources and competences amassed reach a critical threshold, giving it a key position in a given economic branch of activity, and with a decisive sustainable competitive advantage over other places, or even a world supremacy in that field (e.g. Silicon Valley and Hollywood).”*[3]

Clusters do not mandatorily require governmental support or involvement for their existence, but experience has shown that public authorities have an “anchoring” effect for sustainable cluster performances. Having public authorities on board provides credibility and reliability and thus stimulates the successful collaboration between companies and organisations, convincing them of the mutual benefit to address industry or sector relevant issues and to set competitive considerations aside.

Public authorities taking on the cluster management role has become a fairly common practice, both to form the clusters and in particular to determine which cluster activities to fund and support.

[3] Wikipedia, English entry “Business Cluster”, summarising the gist of Michael Porter’s cluster theory - https://en.wikipedia.org/wiki/Business_cluster.

Mostly, the clusters thus supported are embracing large economic areas, which allows flexibility in choosing a specific sector to focus on, depending on the current political climate (e.g. innovative competitiveness) and which needs have priority (e.g. IT security or e-mobility). Often this extensive type of involvement, which entails a long-term financial commitment, is seen on a national rather than a local or (small) regional level.

The pitfall of large PA managed or supported clusters

Though an advantageous approach for established industries, the downside can be that emerging industries sometimes do not fit into the larger categories determining “cluster divisions”, and therefore risk falling short in terms of getting attention for their value within the economy.

This is often the case for the game industry, either presumingly being catered for by the Information and Communications Technology or by the Cultural and Creative Industry cluster. However, ICT clusters usually focus on technological innovations for digital environments, but games are innovation-drivers and first appliers, and their business case is not primarily concerned with inventing new technology but creating an entertaining experience. This entails that in ICT clusters mostly the non-entertainment game development production gets the clusters’ attention. CCI clusters are often geared towards established cultural production, such as performance arts (theatre / dance), music, fashion, photography, film, communication design, fine arts, and tourism, most of them not yet considering digital environments as their primary habitat which makes games “the ugly (techno) duckling” in the family of creative industries. In contrast, film and fotography, though using new technologies, are not perceived as primarily “technological” productions by the other CCI.

2.1.3 Forming cluster on a local level

Local cluster initiatives

> *“Clusters are in the vast majority of cases not ‘created’: they emerge, because different locations provide different types of opportunities for specific companies to invest, succeed, and grow. Clusters are the result of a cumulative process, where the success of one company paves the way for others to follow. Such processes take a long time, and are inherently unpredictable. Cluster evolution is a natural process, but it is not automatically a successful one.”*[4]

While S3 and cluster policies usually happen on a larger scale than the local clusters, the latter are an invaluable and elementary building block for cluster policies and Smart Specialisation Strategies. It makes a lot of sense for PAs to get involved from the start and help clusters form into collaborative units. The local level can already demonstrate a propensity to “clustering”, i.e. excelling in one particular sector, often fostered through education opportunities, thus providing human resources and attracting companies, who if successful attract other companies and other forms of education or training, and then often trigger some kind of public response. The role of the PA is not only to recognise the potential of that local growth but to help shaping “specific qualities” of a business environment that give a location a unique and lasting advantage. By helping to create these qualities, governments can have a significant influence on the emergence and growth of a cluster.”[5]

[4] “Smart Guide to Cluster Policy” (2016).
[5] “Smart Guide to Cluster Policy” (2016).

For a PA to participate in a cluster and help it become an established collaborative partnership, they enter this cooperation with a long-term commitment in mind and the goal of setting up a 3-5-year development plan. The balance that must be found for a successful cluster is not only one of power and responbility, but of roles. The industry with their associations, networks and the education / research institutions providing new knowledge, innovation and expert or young talents need to provide insight into the specificities of the industry, their requirements and shortcomings, their strengths and weaknesses. The PA with their policy-mindedness, far-sightedness and larger scope of interest and motivation beyond the pure and immediate industry needs are the necessary complement for the cluster as a whole to determine qualities for a business environment to stimulate growth of that industry sector and its ecosysetm the region.

Also, the geographical scope needs to be wisely taken into consideration. On a national level, cluster policies and PA participation become not only a strong tool but are also sometimes encumbered by a multitude and complexity of considerations and rules. As clusters basically need to be a grass-root initiative, it makes a lot of sense for PA at local and regional level to participate in the early stages of cluster formation.

The case of Norddjurs presented here is a good example for this where the local PAs of Aarhus, Aalborg and Grenaa joined forces as they understood the opportunity for collaboration with the complementary nature of their respective locally emerging clusters. One of the stimuli for looking at getting involved in cluster activities is the lack of public funding schemes for emerging businesses such as the game sector. Creating a cluster on the local basis is an effective way to lay the foundation for inclusion of the sector into a national cluster policy which entails the allocation of European structural funds in line with the related smart specialisation strategies.

The challenge is to invest in creating the kind of qualities that meet a market need: many locations across Europe have invested in airports or universities, while only a few have been able to make these investments a key asset in competing for economic activities. Often, the difference has been that successful regions have been able to integrate the investment into a broader set of qualities that made their location attractive for a specific cluster

2.1.4 PA supported organisation as driving force in a cluster

Looking at the Malopolska Region practice described in this document, they seem to have found a way to transfer the role of cluster management to an external organisation, not in a formalised way as is the case with clusters managers situated within the PA but as a natural development. In the case of the Malopolska regional government, the Marshall's Office, this happened with the Krakow Technology Park who has evolved to being not only the one-stop shop of the IT business in the region, but the key driver in establishing a growth environment for the game industry without having an official status as "cluster manager". The very nature of a Tech Park guarantees a direct involvement in the business development activities, while governmental management by their very status would need to restrict their role to promoting or financing activities and fostering communication with and within the cluster.

The Malopolska Region approach has many advantages but relies heavily on the open-mindedness and far-sightedness of the policymakers and high-level executives of the PA, and in addition to a commitment to active support it requires a peer-to-peer attitude towards the Tech Park managers (or whoever is taking on the role of key driver). In our example, the Tech Park is an integral and central part of the regional economy and plays a pivotal part in it on a daily basis. They have first-hand knowledge and practical experiences in the respective "fields" to foresee market trends, understand best approaches to dealing with business demand and development requirements. At the same time, they are not the companies themselves, and therefore they tend to be better placed to critically assess the bigger picture and analyse an industry status unbiasedly from that "outsider" perspective.

In a nutshell: a cluster management located within a PA, even if staffed with former industry stakeholders, will naturally be driven by political interests and often constrained by prudent administrative procedures germaine to public authorities. An external organisation acting as key driver will orientate themselves to economic interests. As economic development is an integral part of the political agenda, the interests are not contradictory, but the approach taken might well differ in both cases.

In the example of the Malopolska Region, the government has made a long-term commitment to supporting the regional ICT cluster through being a part-owner of the Tech Park. This is an invaluable move as it anchors the Tech Park as competent and credible go-between for the business world and the political field. Besides the ownership, the PA then supports the Tech Park and the cluster in similar ways to cluster managers located within PAs. However, this constellation fosters the acceptance of the Tech Park as mediator between PA and industry, and this role is different from being an advocate for an industry (such as trade associations) who are naturally more disposed to have biased opinions. Such a combination established for the Malopolska Region, allows for a highly informed and competent long-term strategy built in a continuum, alongside individual one-time funding schemes.

With PA cluster managements, there often is no go-between organisation they could rely on for objective insights and unbiaised advice, mostly they deal directly with the associations or companies themselves.

A Tech Park with a PA on board (i.e. part-ownership) is also not restricted to activities funded by the PA managed clusters. This ensures that the clusters can be productive out of their own budgets in addition to being partly funded by the government for specific actions. With a cluster management located within a PA, there is a risk of the communication between cluster representatives and PA being predominantly focused on individual actions for funding or PR support, less on long-term strategies for the industry based on a continuous dialogue.

For an emerging industry of which definitions, image, needs, scope, etc. are still in the process of being shaped, the Malopolaska Region example shows a promising approach to boosting the industry by helping them form a long-term vision and sound self-understanding through this cooperative form of game cluster support.

2.2 Focus on Talent Growth

2.2.1 Pro-actively mitigating lack of IT competences

Nearly every European country recognises the lack in IT competences and ensuing shortage of talents for the national economy. The reasons for this deficiency are manifold which makes decisions into counter-measures difficult: where to start remedy this complex situation. The good practice presented in this document is from Ventspils city in Latvia. Their answer to the question was to address the triangle: children / youth, parents, and teachers. Such an approach would be near impossible on a national level or for large regions, but though a remarkable accomplishment, it is feasible on a local level which provides a perfect blueprint and experience base for others to follow.

The main success factors of the local government's ICT development strategy of the Ventspils Digital Centre, established by the city in 2005, are:

- Investing in the creation and running of a digital centre as a public knowledge centre
- Providing the centre with a suitable location
- Endowing the centre with digital equipment and state-of-the art infrastructure
- Empowering the centre with programmes to implement the talent growth focus as well as support of business economy in the city
- Fostering the growth of an ecosystem or "education cluster" around digital competences
- Establishing a platform to coordinate the activities within that ecosystem
- Supporting financially the growth of the centre to accommodate the increase in attendants

The success of the Ventspils Digital Centre:

- Catering for schools, parents, and young persons
- Providing extra-curricular activities and summer schools
- Offering free of charge services and education
- Receiving support from the industry – often on a voluntary basis
- Their flexibility in adapting to development and new understanding

This last item has given leeway to start including games as a module for their education and incubation activities. Their partners in this "education cluster", Ventspils University of Applied Sciences and Ventspils High Technology park, have welcomed this approach and together they have explored ways to integrate game development and business into their agenda:

- Game development in education for children and youth as a means to attract them to coding and IT learning
- Involving parents and teachers to better accept and understand how to handle games
- Game development in studies to provide human resources for enterprises and thus attract them to settle in Ventspils
- Game incubation to incite start-ups to enter the game business, thus fostering the growth of the industry

Ventspils has set an example of combining many aspects in one compelling strategy, being efficiently and within short time implemented by the close and coordinated cooperation of the key players in their local IT business development and education field.

2.2.2 Fostering a start-up-friendly environment

Promoting an entrepreneurial spirit and intensified business skills is on everyone's political agenda for economic growth. There are a wide range of measures taken to this end all over Europe. Certainly, funding schemes tailored for start-ups are an efficient incentive though such schemes often will require a critical mass of start-ups before being endorsed as a public investment. Countries like Sweden have set in motion instilling entrepreneurial mindset in young people at a very early stage (school age). Not only do we see a lack of interest in IT development with the younger generations but there also seems to exist a noticeable absence of business or profit-making ambitions. As both are sorely needed, creating an environment that would encourage young people to gain IT expertise and raise their appetite for starting a business of their own, seems a good place to start.

Tartu City provides us with a good example of nurturing an environment that is attractive and challenging, yet not overwhelming or overbearing. As is the case with many university cities, Tartu benefits from a high ratio of young denizens. Together with their local universities, incubators and tech parks, the city forms a partnership that ensures a good foundation for promoting a sustainable start-up climate. The success of their sTARTUp-Day, amongst the biggest festival within Europe, relies not only on the attractiness of their colourful programme but feeds upon the many activities carried out (jams, hackathons, meet-ups, summer camps, etc.) tailored perfectly for this age group. It was only natural to expand these activites with game development as a fitting building block in the overall strategy. The recently initiated incubation for games and film that complements the existing Tart Centre for Creative Industries[6] incubator and the incubation activities of the Tart Science Park such as their recently created "S2B Launchpad incubator"[7] demonstrate the impact of Tartu's endeavours to stimulate a start-up scene through appealing and bespoke activities and thus creating a promising demand by start-ups for honing their entrepreneurial skills.

[6] https://loovtartu.ee/en/tartu-center-for-creative-industries/information.
[7] https://teaduspark.ee/en/incubation/.

2.3 Strong PA support

2.3.1 Tactical and strategic support: working with the industry

Picking just any item of the long list of the successes of Sweden, as this one for example:

- The World Economic Forum ranks Sweden as one of the top ten most competitive countries in the world, with top grades for innovation capacity by investing more than 3.3 % of the country's GDP in research and development (as of 2019) – one of the highest rates in the world.

Looking at the whole list (see the best practice section for Sweden), one is quickly convinced of the predominant position Sweden holds, in the BSR, in Europe and globally. A reason that keeps popping up in studies and discussions: the Swedish culture. Mostly followed by the argument: they are a small country (in terms of populations), thus more agile.

True as this might be, these are just the backdrop of practices that still can be analysed, understood and adapted – surely not as easily into another cultural fabric, but nonetheless the Swedish success rate would entice to look into their practice from across borders, to see what one could learn from them.

The Baltics are also small countries, and very open to technology and change. They might follow the Swedish example and quickly show similar accomplishments. But can countries ignore the practices leading to this success merely on the basis of having a larger population? The opportunity of the European Union is that it offers a whole range of ideas on how to think out of one's national box and reshape or rethink one's conventional practice to overcome deep-rooted burdens.

The most striking features of the "Swedish approach" are alien to many other European practices:

- Hardly any public financing schemes for businesses
- Political level not taking the front seat and dominating with political agendas

A lot depends on the mind-set:

- Taking a peer partner approach to businesses, regardless whether they are small, young and established companies
- Investing not primarily into funding schemes, but into comprehensive, competent, and continuing support
- Prepared to take risks

As postulated with the clusters, the government and public authorities could provide for an "unbiased expert strategy" development (or roadmap) translating a long-term vision on how to transform an emerging or ailing industry into a productive and profitable economy sector. Sweden is doing exactly that, both on a national level but also for the Stockholm region which accounts for over 50 % of the country's investment activities. By cooperating with the businesses eye-to-eye, accepting their expertise and combining it with their own expertise to design tailor-made support activities, the PAs show a strong commitment to fostering the success of the industry, and their own dedicated measures.

Nearly flirtingly bemoaned by the industry, Sweden does not support the business sector with public money directly. But it uses public money to create an environment that

- welcomes international companies to settle or invest,
- facilitates the founding or settling of a company (on average 7 days)

- appeals to talents, young and senior, to move and stay to the region, with their spouses and family
- provides quality education and in turn highly qualitfied employees, young entrepreneus and talents

And instead of public investment into companies, they invest into expert staff to attract private investors who, as proven, take on the role of financing start-ups and scale-ups.

Many other European regions will assert that these are areas into which we also invest a lot. But if the impact is not the same, then what elements are there then that one could learn from? Possibly a closer look at the approach taken with the investment, from approval of the investment and the regulations of how to allocate that investment, to the knowledge base (e.g. type of involvement and acceptance of industry expertise) and business development expertise of those determining, developing and implementing the activities. Between a policy decision to invest public money into a said favourable environment and the actual measures incurring the expenses, is a long way for many encumbrances to impede a successful impact of the investment.

2.3.2 Understanding the economic power of games

Admittedly, on a short term, the Swedish approach is difficult to adapt for practices relying on state support of ailing or emerging industries which is the more common practice in Europe.

Amongst those countries with these systems, Finland has introduced a remarkably good practice on how to shape entrepreneurial thinking and successful business performances, translating a far-sighted vision into a high profit generating economy.

The question of funding a specific sector is always a chicken and egg question: whose responsibility is it to help an industry grow: the industry itself or the government? The answer would be “who has the greater interest”. As with all investments, that question entails the risk of prediction and prescience: what value might a young industry bring to economy / society? How urgently do we need a new economic power or edge to be globally competitive?

As many European states, Finland relies heavily on the export trade. They formed an early vision, spiced with a large portion of endurance, to complement their export activities of natural-resource-based goods (e.g. paper) with technological and innovative goods. So, they prepared for large state investments into the IT sector.

Way before most other European countries, they included games into this economic development scheme (as opposed to a culture funding scheme), first as a subclass to IT, later as a category of its own.

Though at first glance, Business Finland (BF; formerly known as TEKES) operates like many other European business development schemes, the success of their approach lies in the exemplary pro-active role they’ve taken on: they built up in-house competences on the game industry. They set up a scheme, SKENE, dedicated not only to game business support, but also as a means to acquiring knowledge, not only with a view of being able to judge who is worthy of the state support, but also of understanding how to help the budding potential of a start-up flourish and mature. In this endeavour, they were strongly supported by the Finnish game association Neogames, a fruitful collaboration that had already taken roots in previous programmes that included games as a subclass.

Out of the SKENE programme experience, three practices emerged and determine what distinguishes intrinsically the Business Finland from other business development schemes:

- Business Finland pro-actively keeps up with industry knowledge and trends (going to respective fairs and conferences) to be able to assess the innovative and growth potential of companies, which is beyond merely technological considerations. Not only do they apply a larger concept of "innovation", their assessment of a viability of a company compares with how private investors determine their choice, i.e. the composition and knowledge of a team, the dynamics and division of responsibilities, and to a certain extent, the content of the game product will also play into their decision of whether a project is innovative. This requires an informed understanding secured through intensive exchange with the industry and their different stakeholders.
- Business Finland are often dealing with young persons, thus they understand that the financial investment of the state needs to be secured by helping them along the way. The support is personal not through rules only. In some measure, BF takes on the role of a mentor (for the business developer part, not the creative production part). As such they also happen to create a bonding between the companies and the state, which partly explains the fact that companies even if growing to a large company remain in Finland to return the support given by society earlier in form of taxes and a strong economy. And this personal care also fosters an environment of sharing and trust.
- Business Finland – and here they resemble the Swedish approach – see themselves on par with the companies and industry they support. It is not an abstract thought, but a fully engaged in mind-set: the funding activity is a give and take, and thus a win-win situation for both sides. The Finnish society and economy either jump-start a profitable business whose taxes are a return in investment, or they invest in know-how which will be gained by the teams regardless of success or failure. Should a company fail in this business, even if "only" a creative business, they will still add valuable workforce and much needed IT expertise to the labour market or focus on one of the elements of game-making (e.g. VR, 3D, software design, artistic design, animation, etc.) as a company profile. The investment is highly unlikely to not produce any of these impacts for society.

Meanwhile, Business Finland has such a strong basis of industry knowledge (not only games of course) that their schemes are shaped in a way that accommodate both IT and games and other technology-enabled sectors. This has been an issue in other regions, where the economic development schemes are still following structures that work for traditional technical or productive trade, their value chains and business models, combined with the processes of IT development (which differs strongly from game production cycles) and a focus on "innovation" being technological.

Business Finland schemes – with their strong orientation to export trade – cover elements that often are not included in other regional development schemes, such as internationalisation and marketing. Also, the schemes cover all growth stages, while often one sees a gap between start-up and fully-grown business in public funding scheme. The "gap" is often a bumpy road to success, with failure as necessary ingredient. Though there is an awareness in all economy-developing discussions about the value of failures, it is hard to determine which failures have value and which are destructive. This might explain the reluctance to support the "second stage" scale-up with public funds. And yet, Business Finland has exactly managed that step-by-step and going all the way support scheme.

2.3.3 Understanding the creative and cultural force of games

Whereas economic development funding schemes primarily cater for innovation and entrepreneurial capacities, another appeal is created through culture funding, more precisely in new media funding. With the introduction of the notion of creative and culture industries, the expectations towards the funding impact has been a bit blurred and the object of controversial discussions.[8][9][10]

In this context, games are often subsumed under "interactive audiovisuell" media and with the increased focus on tech-enabled culture, games are receiving more attention, in particular as a cross-innovation driver.

According to game incubator staff, there is a tendency with programmers starting game studios, but not being very successful for the lack of creativity. On the other side, they often are more open to accepting the need for an entrepreneurial approach and taking up incubation offers.

It would be interesting to underpin the impression that the reason there are so many "indie" studios in e.g. Berlin because of the funding from the cultural side and thus a stronger appreciation of and emphasis on creative content. And to study whether the incentive through creative industry funding fosters creativity, that can be complemented through other schemes promoting entrepreneurial and marketing skills for creative talents.

For a creative industry to thrive, the value chain depends on the actual creative input. Putting tech-enhanced creative businesses into the same basket as other tech-based productions might fail to foster the creative side. Schemes with business development agencies tend to have business managers as evaluators of applications. Schemes supporting a cultural policy tend to have staff with creative or humanistic background.

Supporting games with culture and media schemes, as shown in the Berlin / Germany example, where this has been the main approach, creates a climate for games that paves the way for applying with the Commission for a notification to include games into the areas (i.e. culture) within the General Block Exemption Regulation (GBER).

As with movies and music, much larger amounts can be granted (providing they pass the culture test) without the state-aid limitations.[11] This is in particular interesting for states wishing to attract larger international companies to their country in order to boost their national game industry, as this offers not only more job opportunities for game developers, but also attracts more senior talents from abroad. This in turn will help an industry grow more mature, more quickly adapt to international standards, benefit from global influencers and networks. While the regional schemes ensure the "supply" of young talents nurturing the creativity of the industry and then too, attracting larger companies to settle in the respective region.

[8] Wikipedia, entry "Creative industries" Various commentators have provided varying suggestions on what activities to include in the concept of "creative industries" (DCMS 2001, p. 04)(Hesmondhalgh 2002, p. 12)(Howkins 2001, pp. 88–117)(UNCTAD 2008, pp. 11–12), and the name itself has become a contested issue – with significant differences and overlap between the terms "creative industries", "cultural industries" and "creative economy" (Hesmondhalgh 2002, pp. 11–14)(UNCTAD 2008, p. 12).

[9] https://en.unesco.org/creativity/sites/creativity/files/digital-library/What%20Do%20We%20Mean%20by%20CCI.PDF.

[10] https://www.researchgate.net/publication/27472880.

[11] See also Prof. Dr. Malte Behrmann: "Culture, Technology, Business: Financing Strategies for Game Development in EuropeAppraisal of European public support schemes for the Game Industry with a focus on cultural funding", BGI project, http://baltic-games.eu/files/bgi_game_development_financing_strategies.pdf.

2.4 Conclusion

The viability of described and selected good practices in this document for game business support strongly depends on the regional circumstances (political culture and endeavour, administrative rules and procedures, legal regulations, political climate, etc.) and of the maturity level of the regional game industry. The success of such practices as presented in this document, however, also needs to be seen against the cultural backdrop, with their idiosynchratic traditions and mindsets. It also strongly depends on the individual people determining the policy and execution of such practices. And yet, the great asset of the Europe Union is that in their core the cultures of its member states are congruent enough to be able to learn from the differences. Understanding the diversity gives the opportunity to adapt using models and practices from other cultures. Therefore, “soft differences” such as in the level of open-mindedness or how unapproachable or segregated an authority is being perceived or demonstrated, the balance of trust or flexibility and risk avoidance strategies are perfectly expressed in the different practices and their success. Interreg projects such as Baltic Game Industry strongly rely on the fruitful exchange for cross-fertilisation of strategies and practices, nudging public administrations to enhance their own approaches and adapt model examples to reshape their practices and strategies.

At the same time, they foster the emergence of a joint endeavour to support games on a European level both as a European cultural expression and production, and as an industry with a high potential requiring better framework condition on the European level and driving innovation with creativity. Games can be one facilitator to make Europe competitive on the global market through tech-enhanced industries.

3. Good Practices

3.1 Clusters as a Platform for Joint Economic Development – Norddjurs (DK)

Rationale Behind Industry Clusters in Denmark

The definition of a cluster varies, and therefore it is very important to start by knowing what type of cluster you are analysing. However, in general a cluster is a geographic concentration of interconnected businesses, suppliers and associated institutions in a particular field, and clusters are considered to increase productivity and success of the particular business field.

The rationale behind cluster creation as well as the rationale for public authorities to support this creation can vary. However, in general PAs can see an increase in labour markets and tax revenues if a cluster is successfully developed. Therefore, helping clusters in-the-making by correct business policies, branding, lobbying and financial support, can be a long-term investment on behalf of PAs.

There are some key elements in the clusters analysed in this project for good practice knowledge. These are:

1. Geographic concentration
2. Interconnectedness between parties
3. Unique ecosystem

Ad 1. The geographical concentration must be present. Some clusters are local, some are regional, and some are even national or transnational. For this project, we focused on local geographically concentrated clusters in Aalborg, Aarhus and Grenaa, as a start for game development framework improvement on a local level.

Ad 2. To become a cluster, several parties need to be engaged in interconnected activities. In clusters, the parties can be businesses, suppliers, and associated institutions such as educational institutions and PAs. For this project, the focus on cluster development has been on the connection between game development incubators, PAs, and education institutions.

Ad 3. There needs to be a platform of knowledge and cooperation before a cluster development can begin. Analysing the local game development stakeholders in Aalborg, Aarhus and Grenaa from a cluster development point of view, all three areas point to existing positions of strength within the game development ecosystem – be it either via university educations, start-up schemes or existing game businesses.

Forming a cluster for the game sector

The background of each cluster varies. This was also true for the case of forming a joint game business cluster with the three local clusters of Aalborg, Aarhus and Grenaa. The common ground on which they based their cluster creation, was that they share that young people have a wish to become game developers without having access to knowledge, education, or business development. However, each have taken different approaches how to the handle the demand by students and start-ups in their future work. Furthermore, Grenaa separates itself from the other two by not being located in a big city, and without a university present.

Ideas Lab in Aarhus has existed since January 2017 and works as a start-up hub for talents making digital experiences – meaning a broader incubator catering not solely for game developers. The talents are usually either university students or talents which finished a higher education. Ideas Lab receives financial support from Aarhus Municipality, and is situated in municipal buildings.

Game Hub Denmark in Aalborg is also focusing on game development and with close connections to a university as the talent pool from which they recruit a number of start-ups every year. These start-ups receive business support from the municipal business service, and a PA is in this case directly involved in supporting the start-ups.

Game Hub Denmark in Grenaa differs by not having a university in close geographic distance. However, the local educational institutions present have provided educational offers for game development which stretches from secondary education up to include a bachelor's degree, thus creating an entire eco-system within the education system, with the incubator as the final stage. Until recently, the PAs have not been a part of this cooperation.

Building on the success of a proven practice

The three local clusters provide a robust basis for joining their efforts to form a common cluster in support of regional game development. In the analysis of the three clusters, there are some general lessons learned will benefit the newly formed game cluster:

- Early cooperation
  A clear and early cooperation effort between education institutions, incubators and PAs are key to avoiding misunderstandings and problems along the way.

- Clear communication and meetings
  Open communication and regularly meetings are important. It is clear that the different partners in a cluster need to meet and have open communication, as they each have their own way of working, which differs between being a PA, an education institution, and an incubator. A network manager dedicated to the cluster, who can serve as a bridge builder, can be advantageous.

  Financial support
- Financial support is obviously important. For the cluster to develop, financial support is needed. Not only in terms of getting development support and in terms of project funding, but also to get funds to create a solid foundation of personnel and resources for long-term development.

The general framework for game development in Denmark makes it clear that for game clusters to develop successfully, the local teamwork must in place, combined with clear and open communications and financial support. This prevents misunderstandings, and secures a long-term cooperation and funding, which in turn provides the cluster with the stability needed to develop. It also gives the cluster a possibility to create a solid brand that can be used to attract talent, more financial support, and higher qualified staff.

Grenaa Game Cluster – An in-depth analysis:

The Game Cluster in Grenaa separates itself from more general clusters by having established outside pre-existing public business support framework structures that are active on a national level. There is only a small programme for game businesses to seek financial support. Furthermore, as stated above, Grenaa is not one of the top 5 or even top 10 largest cities in Denmark, and has no local university, which often acts as a catalyst for new tech business development through research.

The cluster itself exists of a number of education organisations that all have a specific programme for game development students, which means that as a student you can include game development in your education from secondary school, through gymnasium / technical school, and all the way to a newly created bachelor's degree, and finally the game incubator for students who wants to create their own game development company.

Grenaa offers unique potentials and challenges for both established and potential clusters outside the large metropolitan areas, where recruitment of talent requires a lot more resources and commitment in order to create a sustainable development, combined with having a unique eco-system unlike any present in Denmark.

In cooperation with an external expertise company called Seismonaut, Norddjurs Municipality did an in-depth analysis and interviews with key partners in order to pinpoint key steps and best practices based on the cluster history and development strategy.

- <u>Long-term organisational and financial foundation</u>

  In order for a cluster such as Grenaa Game Cluster to develop, it is optimal that there is a long-term financial foundation combined with a solid organisation. In Norddjurs, the municipality as a public authority did not enter the cluster development until late in the process. Earlier participation could have resulted in more focus on stakeholder lobbying, physical infrastructure development that matched the game development scene and helped brand the cluster and thereby recruit talents. Secondly, a financial contribution from the municipality could have heightened the quality and quantity of especially start-up companies.

- <u>Strong focus on recruitment</u>

  For a cluster developing outside the large cities and higher education institutions, focus on recruitment of talent, both in terms of students, entrepreneurs, and teachers, is paramount to the continued development of the cluster. Attending student fairs, branding, and marketing on multiple levels towards relevant stakeholders is a top priority for all educations and the incubator within the cluster.

- <u>Clear and precise brand</u>

  To succeed with attracting both talent and financial support, it is imperative that the cluster develops a clear and precise brand that is easily explained and recognisable. Grenaa Game Cluster has become famous on a national level for anyone interested in an education in game development, but it is an area that needs constant attention, to compete with the larger cities.

- <u>Stakeholder relations</u>

  To attract investments and to promote the cluster, a continuous focus on stakeholder relations is important. Regional and national public business development forums are vital in order to be a potential recipient of financial support, and this is an area where the PA within the cluster can play a central role in lobbying both on the political stage as well as between civil servants.

- Clear expectations and benefits

It is important that all partners agree on what to expect and how the cluster benefits each partner. It is highly difficult for a cluster to conjure up a start-up business that quickly scales up to having several hundred employees. Those “unicorns” are few and far between. This also means that partners need to be patient and not necessarily look at the cluster as a job creation success or failure. Instead, the cluster can act as a important part of a larger city-brand, which is the case of Grenaa where the cluster attracts a lot of young talent, which otherwise is difficult for any city outside the top 5-8 cities in the country. Being a part of the city and municipality storytelling like this, is an important parameter to include in the discussions of public authorities participating and perhaps funding some of the game clusters.

- Professional capital vs. social capital

Finally, the PA can spearhead the work on social capital within the cluster. As exemplified in the Grenaa Game Cluster, each partner in the cluster has plenty of professional capital, meaning that all work extremely hard and well on their own specific agenda, being helping start-ups, or educating young talent. However, many of them lack the time and ressources to coordinate meetings between the different organisations, facilitate a unified vision and strategy, as well as be responsible for the practical work of plan meetings, agendas etc. While this seems redundant, it is the social capital that makes the cluster grow, and helps each organisation reach their individual goals.

3.2 sTARTUp Day – Tartu (EE)

Pioneers of the e-society

In 2005, Estonia became the first nation to hold elections over the Internet and in 2014, the first nation to provide e-residency. Named "the most advanced digital society in the world" by Wired magazine[12] in 2017, ingenious Estonians are pathfinders, who have built an efficient, secure and transparent ecosystem that saves time and money. Estonia has been ranked No 1 for entrepreneurial activity by the World Economic Forum in 2017 and No. 1 for start-up friendliness by Index Venture in 2018.

The Estonian success story started in 1994 when in politically turbulent times, establishing IT was seen as crucial to solving the challenges society faced, and the decision was made that 1 % of the GDP was to be earmarked as stable state funding for IT. Ever since, a lot of pioneering digital services have been successfully established and digital measures have been taken up and put in place:

- Computer skills are seen a priority in school education with the result that 90 % of the population uses the Internet regularly; Estonia ranks first in the Digital Development Index.[13]
- From 1996 the following services have been put subsequently in place: first e-banking service, e-cabinet meeting, e-tax board, m-parking.
- In 2001 X-Road has become the backbone of e-Estonia, allowing the nation's public and private sector information systems to link up and operate in harmony. 99 % of public services are accessible online 24/7.
- Services such as for example the e-id and digital signature, i-voting, e-health, e-prescriptions, and the road administrations e-portal have been implemented
- Also measures in the scope of cyber security have been taken to avoid future threats, blockchain technology has been pushed in order to mitigate threats of insider data manipulation in the Estonian registries.
- In 2014 the e-residency programme was established to attract international people, talents, and business (e.g. Digital Nomads) to Estonia. Since, the number of e-residents and their businesses is steadily increasing.
- In 2019 the Estonian government came up with a detailed strategic plan for promoting implementation of AI solutions in the public and private sector.
- The country also established the e-Estonia Briefing Centre to inspire global policy makers, political leaders, corporate executives, investors and international media with the success story and the best practice examples of e-Estonia services. The visitors center supports building links to leading IT service providers.

Though very innovative and IT-oriented, there was not much of a game industry to speak of back in the 1990s, when the whole devopment started. Companies in Estonia were making webpages, they were not that much into gaming. And although Estonians consider themselves as being a Nordic country rather than a Baltic State, they did not emulate the successful growth of a games sector.

[12] https://www.wired.co.uk/article/estonia-e-resident - issue from Monday 27 March 2017.
[13] See Wikipedia (English) article "ICT Development Index": The ICT Development Index (IDI) is an index published by the United Nations International Telecommunication Union based on internationally agreed information and communication technologies (ICT) indicators - https://en.wikipedia.org/wiki/ICT_Development_Index.

The “sTARTUp Day” Initiative

The Smart City of Tartu is a university city and there are a lot of students and younger people in the city, half of the population is under thirty years old.

One of the most important events to escort Estonia’s pioneering developments is the sTARTUp Day[14] which is the biggest festival in the Baltics, bringing together startups, traditional entrepreneurs, investors, innovators, and students. The aim of the event is to connect startup-minded people and celebrate entrepreneurship in the smart city of Tartu. Initiated in 2016, this annual event brings together around 3,000 – 4,500 people.

Back in 2015 there were many amazing events happening all over Tartu, however, all of them were too small to stand out to international investors or journalists. So the idea was born to aim at organising one bigger event that would bring all of the smaller events under one roof to collectively create a bigger impact. The idea was pitched to the community in a sauna and got positive feedback instantly.

What makes the sTARTUp Day far more than just a regular event is that there a community has been built around it, bringing together the whole ecosystem.[15]

The very first sTARTUp Day was organized in December 2016 and was sold out with 3,000 participants – all thanks to a collective community effort. Five years later, sTARTUp Day is a joint effort carried out by 9 very different main organisations and a lot of help comes from plenty of smaller companies and organisations.

The event offers:

- Inspiring-educational stage programme
- Organised matchmaking
- Hands-on seminars with professionals
- Speed-dating
- A large demo area full of innovation
- Vibrant side events
- International pitching competitions
- Unforgettable parties

The community members provide many different offers that together create a highly attractive and rich start-up support landscape.

For example, incubators are initiated, that are based on different topics that seem to offer potential and that have their source from the sTART-Up Day, e.g. on space technology or on gaming. Next year’s focus of the sTART-Up Day is Smart City / Future City - Technology meets citizens, e.g. on city planning, self driving cars, etc.

Finally, the business development boost for the overall ecosystem cannot be underestimated, regular meetings between actors of the ecosystem are taking place and pushing activities forward.

[14] https://www.startupday.ee/.
[15] https://www.startupday.ee/.

The City of Tartu's support and benefit

While on the national level, startup support is not high on the agenda, the city of Tartu is funding the event with 40,000 €. Another 40,000 € is being provided to finance a start-up manager position who act as a coordinator for the community and their cooperation for the sTARTUp day and their platform (e.g. the website, the branding, promotion of member activities and services). The manager also organises pre-incubation activities and incubation activities as part of the Fast Track Tartu strategy.

The city of Tartu is benefitting a lot from the event, e.g. through money spent in the region on hotels, taxis, and restaurants. Furthermore, Tartu can underline and strengthen its global reputation as one of the hubs for start-ups and innovation.

Though there is no dedicated gamefund, games are benefitting on the city's focus on start-ups and incubation. And with the growing awareness of the potential for games within the community and the ensuing larger number of interested young people and talents in game development, the city has supported Tartu Science Park in a series of games start-up projects[16] and activities (jams, hackathons) and their piloted incubator. Now, together with Tartu Centre for Creative Industries, the Tartu Science Park has recently anounced an unique incubation programme on gaming and film[17] initiated on 23 Sep 2020.

The sTART-Up Day has played an important role, as they provided a playing field for encounters and peeks into the yet little explored terrain of game development and its opportunities for IT-talented youth as found in Tartu.

Looking ahead

The sTART-Up Day will take place for the fifth time in January 2021. Due to the pandemic, the event will only be restricted to 750 people, but there is the plan of making it more international and giving it a hybrid structure.

150 speakers are expected to participate, half of them from Estonia, half from abroad. One of the partners is the American Embassy to be able to also include speakers from the US. It will be a hybrid format, to also attract more interesting speakers worldwide.

Different sectors will be engaged with the event in 2021:

- Fintech
- Meditech
- Education
- Gaming

Screenings will happen in the Estonian communities all over the world, there will be mini festivals in the US within those settings. To acquire the necessary sponsoring is difficult in those days of a pandemic, the private sector is reluctant to investment. However, the city will carry on supporting it without cuts as they understand the benefits, they gain from this event and its the sustainability.

[16] Baltic Game Industry (http://baltic-games.eu/171/), GameCamps (https://teaduspark.ee/en/projektid/game-camps-2/) and most recently Baltic Explorers (https://teaduspark.ee/en/projektid/baltic-explorers-2/).
[17] https://teaduspark.ee/en/incubation/gaming-film-incubation/.

3.3 Funding Games as business - the Business Finland approach – Helsinki (FI)

Thrilling and inspiring

The main public funding source for the Finnish game industry has been Tekes, from 2018 onwards known as Business Finland, when it merged with two other public organisations, Finpro and Invest in Finland.

Tekes was established 1983, and its initial purpose was to provide funding for R&D-projects by companies, higher education institutes and research centres to accelerate the growth of the Finnish technology sector.

Tekes started to fund game industry already in the end of the 1990’s. The first Tekes funding targets in game industry were technologies and tools used by game developer studios. The reason Tekes started to fund the game industry was twofold: Games are heavily based on technology and as such they were a promising new business opportunity.

In early years of game funding, Tekes did not have any specific scheme dedicated to the game industry. Rather, the funding provided to game studios was part of Tekes’ regular funding activities.

FENIX

In 2003, the first development programme, Fenix, was introduced where games had a category of their own among other categories. The Fenix programme was running from 2003-2007 and its focus was on end users and user interaction in software applications.

VERSO

In 2006, Tekes started another programme, Verso. Unlike Fenix, Verso was dedicated to the internationalisation and export of Finnish software, including the game industry. In addition to funding, the Verso programme provided support in many other forms including various types of consulting, market research and testing, events and seminars and customer contacts and networking.

However, the funding was clearly the most important form of support. Verso was running until 2010. During Verso, Tekes started developing its in-house game industry expertise and networks which were essential in shaping the Skene programme.

SKENE

When the Skene programme started at the end of 2011, Tekes already had quite a long history in game industry-funding. With the support of Neogames, the Finnish game industry association, it had developed its own game industry networks, game industry knowhow and in-house expertise to a sophisticated level.

Unlike the previous Fenix and Verso programmes, Skene was a programme dedicated to the game industry. Skene was running until 2015 and was aimed at professionalising the Finnish game industry and enabling a greater economic impact for the sector. With Skene, Tekes funded 105 game company projects, and nine academic research projects during 2012–2015. The total amount of Tekes funds deployed under the umbrella of the Skene programme was €33.3 million. In addition to Tekes funding, the applicants invested their own matching funding with €33.2 million.

A major lesson from the Skene funding scheme was that a well-timed programme with sector-specific support can have a massive economic impact. Tekes had been providing various forms of funding to

Finnish tech companies for many years (including game studios), but it was not until the activities were wrapped up in a dedicated programme, with specific effort to activate the industry and inspire a new business-first mindset, that there was a major shift in attitude within the game sector.

The growth of the game sector during the timeframe of the Skene programme is undeniable. During Skene, industry turnover grew from €165 million to €2.4 billion and around 1,000 jobs were created. The economic impact targets of Skene were far exceeded with more consistent success stories, fuelled by a business-first mindset from the game entrepreneurs. In this respect, the Skene programme had a significant impact on the goal of Finland becoming the number one player in the gaming industry in Europe. Considering that the unofficial target for Skene was to hit one billion Euros in turnover by 2020, the objective was achieved just after the first year of the programme.

2015 – 2020

After the Skene programme, Tekes considered launching a new game industry-dedicated programme,[18] but since game industry funding was quite possible through normal funding tools, those plans were not realised. In 2018, after merger with Finpro and Invest in Finland, Tekes changed its name to Business Finland.

In 2019 Business Finland launched the Entertainment Finland programme. The game industry is included into the activities of Entertainment Finland, but as always, game companies can apply funding from other programmes (e.g. Tempo) or normal Business Finland funding like all the other companies from other sectors.

TEKES / BUSINESS FINLAND – Funding Impact

For Tekes / Business Finland, the game industry has been worth the funding. It is estimated, that during years 1998-2019 Tekes / Business Finland has funded the game industry with about €150 million. This funding has helped to build an industry, which showed a cumulative turnover of almost €15 billion during the same time. According to tax records, the Finnish game industry has produced €2.5 – 3 billion tax revenue to the national economy in the last ten years alone.

In terms of economic significance and financial value, the capital region with Helsinki as the main hub is still well ahead of other regions. 97% of the industry’s turnover is generated by companies located in the capital region and 75% of the industry’s workforce is working at capital region companies.

The funding scheme[19]

Companies registered in Finland can apply for Business Finland funding at anytime. Business Finland funding for game companies is either a grant (de minimis subsidy) or a loan. The funding is the regular Business Finland scheme and can cover part of the project costs. No ownership is claimed.

Kari Korhonen, Senior Advisor with Business Finland, states what the main criteria for the funding young teams are:

- Team and resources must show a passion to grow.
- Potential of the company to penetrate the global markets.
- The drive for sustainable business is a significant factor.

[18] https://www.businessfinland.fi/en/for-finnish-customers/services/funding/tempo-funding/game-business-funding/.
[19] https://www.businessfinland.fi/en/for-finnish-customers/services/funding/.

Innovation is seen as given if:

- A company develops **new game concepts, game platforms** or game development **tools**
- A company develops **new operation** and **business models** and **cross media concepts** and formats
- A company uses **gamification** in the development of new product and service concepts

A game company can use funding e.g. for:

- Testing the viability of the business concept, exploring the demand on a new market and getting feedback from potential customers (Tempo funding – grant, €50.000)
- Developing and piloting new products, services and business models (R&D and piloting funding – loan €100,000 €+)
- Rapid scaling of business to international markets e.g. strengthening the team and developing global growth strategy (Young Innovative Company funding – grant and loan, total €1,250,000)

Business Finland's recipe of successful funding

Finland's strong dependency on the export trade determined the design of the funding scheme for the innovation and technology sector. Funding for the game industry started almost 20 years ago in Finland, but then only a couple of game developing companies were applying for the funding.

The game industry is considered to be very worthwhile to support in a specific manner as the industry is a growth industry that is attracting skilled and talented people and also fostering skills and business knowledge.

However, the fact that the game industry is driven by global players targeting international markets, made it interesting for Finland to develop as one of their important export sectors. Another consideration in favour of supporting the industry, was that games are triggering skills and competence, which is very important for Finland that is acclaimed for ist pioneering role in the educational sector.

In the beginning, the funding provided was small, but the game industry was getting more and more important – it has significantly matured since then.

Working with the industry representatives, such a Neogames whose role in the funding development has increased significantly over the decades, has led to a deeper understanding on how to fund game companies.

Business Finland considers funding & services following a case by case basis and by this reacting towards market dynamics. Business Finland is thus pro-actively seeking to find the best companies to support.

The Business Finland programme have been widely acclaimed and are being evaluated on an international level, e.g. Skene got a lot of credits, especially for supporting start-up companies.

They carry out evaluation of the funding schemes provided, based on the following criteria:

- Revenues gained from international markets
- If and how the specific objectives have been reached
- Growth vision

As long as the industry is well matching those criteria, there will be new programmes aimed at supportung the game industry. The programmes try to respond to new demands and the dynamics of the rapidly changing market.

In summary, the main success factors of the Finnish funding approach are the following:

- Clear and honest analysis of the unique selling points the country has to offer (e.g. consideration that the country is focusing on exports, successful and highly acclaimed on an international level for its educational approaches)
- Funding schemes are building up on another, taking up and following up on the learnings and the evaluation of predecessor funding schemes.
- Funding schemes are well analysed and evaluated
- Funding schemes are adopted to the dynamics of the development of different areas, topics, and industries
- The approach to fund a specific industry that offers potential for growth has turned out to be very successful (in this case the game industry with the SKENE programme)

3.4 Funding interactive audiovisual Content – Berlin (DE)

The mission of Medienboard Berlin-Brandenburg

Medienboard Berlin-Brandenburg is the funding institution for the audiovisual media industry of Germany's capital region. The Media Business Development division represents Berlin-Brandenburg as a key media location in Germany at international markets and festivals, provides market research and analysis and organises networking events.

The department funds media-related projects, serial formats as well as the development of content in the games, web, mobile and VR categories. The Film Funding division provides funding for films, high end drama series and film-related projects, advises filmmakers on financing issues, and supports the development of the film industry.

Medienboard Berlin-Brandenburg has been commissioned by the federal states of Berlin and Brandenburg to promote the development of the audiovisual sector in the states' joint media region, and thus to strengthen this sector in Germany and in Europe.

The funding[20] goals are:

- to support the qualitative and quantitative development of the Berlin-Brandenburg media industry and culture
- to facilitate varied and high-quality media production in Berlin-Brandenburg
- to fund emerging media talent
- to strengthen the economic competitiveness of the region's media companies, especially independent production companies, developers, and technical service providers, along with the necessary infrastructure
- to present and represent the region at home and abroad

Addressing Games as an Interactive Audiovisual Culture Production

Region of Berlin-Brandenburg

Created in 2006, the Medienboard's funding programme for innovative audiovisual content funds the development and production of games, transmedia, virtual reality, and other interactive projects with an annual budget of about €2 million.

(Co-)producers and developers from Germany (preferably based in Berlin or Brandenburg) are eligible to apply. The so-called New Media Funding is a project development funding as well as a project production funding for development that also game studios can apply for. Furthermore, funding is also for technological development (e.g. Virtual Reality and Games Engines)[21]. To further promote the capital region, the overall convergence of the media is key, and the New Media Funding is fostering that development while considering and acknowledging that steadily, the game industry is playing a driving role within that environment.

The funding takes the form of a performance-based repayable interest-free loan and usually covers 50 % of the eligible costs (i.e. a 50 % own contribution margin is expected).

[20] https://www.medienboard.de/foerderung-games?cookie_notice=1&cHash=8c1decfd72b5744aa7a1a2ec1cd0f4d5.

[21] In particular for this type of innovation projects, economic development schemes are as easily available – they can be combined with the Medienboard funding (which is a performance-based interest-free repayable loan).

Before applying for the funding, a kick-off discussion with one of the policy officers is key, to assess the basic facts of the project, such as the content, its genre, the team, and the marketing strategy. The personal approach provides an initial consultation and help the teams through the application process.

The funding scheme itself is quite open, the application can be with a written concept or also a first prototype. The support of new and emerging talent is in the centre of the funding, but also senior studios can apply. Projects are mainly chosen for their cultural v but also for their economic values.

Four pillars are important and crucial for the Medienboard funding committee:

- The content and cultural aspects are the key element (Creative Industries)
- The potential for innovation and the unique selling points of the project
- The economical impact
- The team, its diversity, and its professionalism to successfully work on the project

Companies that have been granted funding and are economically successful with their projects need to repay Medienboard's funding, based on a 50 % basis of their revenue, from the moment they made enough revenue to have covered their own contribution to the funding first. Also, within 3 years, the studio or teams can apply for the repaid loan to be re-invested into a new project of theirs.

This is beneficial for the studios as they are proving that they are working economically successful, they are gaining more traction and by that they are also recommending themselves for future and mostly more relevant, larger funding.

Also, with this approach Medienboard is giving an incentive to those studios that are successful and to also compensate for funding that has not been successfully realised. Thanks to this approach, Medienboard can continue its strategy to also support and fund creative and innovative niche and indie projects that do not strive for economic success in the first place.

The list of projects that received funding over the past years is very broad and diverse: Successful projects rank from multi-platform content, apps and games for children, virtual and augmented reality applications to games and serious games.

The funding is working successfully with the game industry which is proven by the overall development in the region in the recent years. More and more indie game developers are sustainably establishing and steadily growing their businesses in the capital region, which is attracting other parties of the game industry's value chain (e.g. e-sports companies, event organisers) and as well global players in the field to the region (e.g. Ubisoft has opened an office in Berlin in 2018).

Furthermore, the funding has existed for over 10 years now and during that time, a noticeable step towards professionalism within the game industry has been made. In 2020, the Berlin capital region was the most successful German region at the German Computer Game Award (DCP), Medienboard-funded games were awarded with five prizes in total, three of those were first prizes. Also, the number of the application proposals for funding have significantly increased in recent years.

Studios need compelling content and high-quality prototypes to be successful in acquiring publishing deals with international publishers. For this, the funding is extremly helpful, a lot of the projects Medienboard funded acquired international publishing deals, many of them with Scandinavian publishers.

In addition to the project funding, Medienboard also funds game industry-related events to support networking as well to enhance business opportunities: Some of the major events for the game industry include the Games Week Berlin with the German Computer Game Award (DCP) ceremony (every two years), the Quo Vadis developer conference, the indie-game festival A MAZE/Berlin, the Gamefest at the Computer Game museum, matchmaking dinners and games:net, the VR Now conference, Womenize! – a platform for more diversity in the digital business and more. Medienboard also hosts its own events like e.g. the Media Convention together with re:publica which is an international event that is successfully fostering the exchange among different creative and media industries.

<u>Cross-regional cooperation</u>

The Medienboard funding is one of the several regional funding scheme that exist in Germany. The different funding schemes of the different German Federal States vary in their focus and structure, as well as in the impact they are having on the game industry and naturally, also in terms of the budgets that are available. The different fundings schemes of the Federal States obviously successfully demonstrated the overall potential game industry can offer and also pathed the way for the national German Games Fund that has been initiated in 2019.

One can confirm, that in general in Germany games are primarily funded within new media funding schemes which differs intrinsically the approach in Poland or Finland for example, where games are funded within IT through either innovation schemes or R&D programmes.

To make the information on the regional games funds more accessible but also to enhance the exchange of the different regions with one and another Games Germany was initiated: Games Germany – Regional Funds and Networks is a cooperation of six funding and seven network institutions from different parts of Germany due to the federal political system. Under the umbrella of Games Germany (GG), these local game institutions are represented as one united national appearance. Their goal is to present and communicate with all international partners in their respective markets.

GG is there to provide relevant insight on:

- the structure of the German federal funding system,
- the German game industry and its core players as well as
- the nuts and bolts on German games development, production, and publishing.

<u>The national Games Fund in Germany</u>

Compared with countries like Canada, the UK and France, which have developed comprehensive, sustainable, and successful game funding systems, until now, Germany has not been competitive as a location for game development because it does not have any equivalent structures at a national level.

Recently, the revenue share of German game development in Germany fell to just 6.4 per cent. Germany risks therefore missing out on the development of this medium of the future. The German trade association game e.V., that is also the owner of the world biggest trade-fair of the sector, gamescom, frequently outlined this dilema for political institutions and very much pushed the idea for a national funding in the field.

The German film industry for example has been benefitting for years from regular national funding support that has much pushed the film sector. In recent years, and especially at gamescom 2017 and in the federal government coalition agreement, there have been cross-party calls for development funding. The aim is to make more of the potential of the German game industry in the future to facilitate digital innovations and create new jobs and cultural stimuli. The plan was to set up a support fund for culturally valuable computer games that systematically and specifically supports development and production in Germany and creates a level playing field for European competition.

In 2019, a pilot phase for the German Games Fund was initiated by the German Government and this year, during the political opening of gamescom in August 2020, German Federal Minister Andreas Scheuer, gave the starting signal for Germany's major games fund.

This was an important step. The notification allows to offer higher grants that are exempt of the state-aid regulation which limits public funding to a maximum grant of €200,000 over the course of 3 years. The federal government applying for the notification reflect the increased appreciation of games within their politico-economical agenda recognising the sector as a viable creative cultural industry. Understanding games as a cultural good, thus following suit to many of their Federal lands (Bavaria, North-Rhine Westphalia and Baden-Wurttemberg) and countries such as French, Belgium, UK, and Denmark, has been a milestone which has been facilitated by the existing strong support of regions such as Berlin-Brandenburg and their funding agency, Medienboard.

3.5 Investing in citizens' digital competences – Ventspils (LV)

The Ventspils Digital Centre

Ventspils Digital Centre (VDC) is an institution of Ventspils City Council established back in 2003. The digital competences of local citizens and entrepreneurs at the time were relatively limited. To address this situation was understood as a means to counteract the slow growth of the ICT sector in the region.

Thanks to the implementation of the project ""e-Ventspils - digitisation of government services", a web portal hosting available public services was developed which was a successful innovation at that time. Such digitalisation formed a basis of digital infrastructure and knowledge, allowing to identify the future priorities by incorporating ICT as an important area of development in Ventspils.

Since 2005, VDC operates in its current building where it has established a knowledge centre and infrastructure, as well as IT support tools to assist SMEs in modernisation and digitisation, helps to obtain necessary skills and knowledge, and facilitate the involvement of the Ventspils municipality, its residents and entrepreneurs in the information community and e-Government. VDC has gradually evolved in a modern digital regional hub in Latvia.

Activities & services

In its early days VDC provided mainly two services:

- Access to technologies (Internet, printing, copying, scanning, and many more);
- Consultations & support.

Consultations despite huge public demand, were commonly not considered a sustainable long-term service. Despite this climate, VDC continued to monitor and identify the demand for technology-related education. The first target audiences were teachers, entrepreneurs, and all other enthusiasts. But later on, the proportion of the target groups changed.

In 2015 the local government issued the ICT development strategy for the period 2015-2018. The focus of the strategy lay on talent growth as the basis of the industry development. Special attention should be paid to talent growth at a very early age, therefore the strategy included activities to improve digital competences with children and young people, provide centralised technology-related after-school activities, allowing to form and grow the interest of young talents for the ICT sector.

Within this strategy, VDC modernised and included a wide range of different technologies and provided equipment for educational use in school classrooms (computers, physics equipment, etc.). Also, together with primary and secondary school students and teachers, various educational activities were incorporated allowing to boost the interest as well as the quality of STEM education (science, tech, engineering, mathematics).

The number of participants in education-of-interest lessons increases every year. It has grown from 300 students in the first year to 750 in the year 2019, which is an absolute maximum for the current infrastructure. To grow even more, VDC must expand its infrastructure. Therefore, the current ICT development strategy for 2019-2021 was developed by considering the success as well as lessons learned from the previous period.

In the current strategy, more emphasis is put on summer schools where children are taught a meaningful use of technologies during the months of June and July. This enables younger generations to become both creators and responsible consumers. It should be highlighted that all after-school activities provided by VDC are free of charge. They have become highly popular, not only for citizens from Ventspils but also attract families from other regions including Lithuania spending their summer holidays there.

VDC is not the only establishment which provides education-related activities especially for life-long learning. Ventspils High Technology Park, Ventspils University of Applied Sciences, Ventspils Library also operate in this field. Therefore, from 2020 Ventspils city works on the development of a common platform which allows efficient coordination by eliminating possible overlapping courses & activities between different establishments.

VDC is a not-for-profit organisation, therefore paid services have very accessible prices. The aim is to provide knowledge either for the general public or municipal employees and teachers. In the case of new technology-update iterations (new operating systems, office programmes, equipment in municipalities or schools, etc.) VDC provides all necessary on-demand training and support for the target audiences. In close cooperation with the local education, the VDC board follows up with teacher competences. This is to enable teachers to integrate the newly acquired student competences obtained during education of interest lessons into the regular school education.

The current strategy allows to explore various technology fields and thus the gaming sector has attracted the interest of both VDC and students. By fostering the talent growth, VDC hopes to grow the community of the game industry (gamers and game developers) and therefore boost the development of the game industry in cooperation with other establishments such as Ventspils High Technology Park, Ventspils University of Applied Sciences and the Latvian Game Developers Association.

Business support

VDC supports SMEs by providing support & consultation as well as education and is a good example of a successful cooperation with Ventspils municipality, Ventspils University of Applied Sciences, Ventspils High Technology park and the business incubator in order to promote digitalisation of businesses of this region.

In addition, VDC provides state-of-the-art technical infrastructure such as optical fibre network, IP telephony, servers, etc. Also, it organises the competition of the Ventspils ICT pilot programme which provides financial support (up to €15.000) for businesses which are willing to develop their product or service in Ventspils. Currently, other support mechanisms are not available.

Communication channels

VDC actively uses various communication channels depending on the target audience. School students are reached by using education board communication platforms (e-class app, social platforms and social ads, web pages, printed magazines). In addition to that, VDC organises open days where people can come and receive information and ask questions.

Minority schools are approached more individually to eliminate any confusion caused by language barriers. For seminars and life-long learning, VDC reaches out to the general public using social platforms, printed magazines and databases made from participant lists obtained in previous events.

The growth of VDC is not about to stop. A new Science and Innovation Centre is being built which will be under the supervision of VDC and thus will enable a huge potential for long-term development. The best is yet to come.

3.6 Smart Specialisation Strategy – Lithuania (LT)

The Baltic States Memorandum of Understanding

All Baltic States have signed the memorandum of understanding on closer cooperation in higher education, research, and innovation (2012). The purpose of this memorandum is to strengthen the cooperation of the parties in fostering coordinated research and development policy to strenghten innovation, in particular to meet the conditionality recommendations of the European Union for the next financial planning period for EU structural funds in 2014 – 2020.

One of the tasks includes supporting actions aiming to coordinate and create a basis for constant exchange of information on research, technology transfer and innovative industries in areas of Smart Specialization of each country as well as identifying common priorities and areas of synergetic cooperation.

All three Baltic States have set common priorities for their Smart Specialisation strategies in 2012: ICT, biomedicine and health technologies, materials, technologies, and engineering systems. Smart energy is a priority in Latvia and Lithuania, but functional food and logistics - in Lithuania and Estonia. Lithuania is the only country of the Baltic States which has set a priority regarding creative industries.

The Lithuanian Smart Specialisation Strategy

For the Lithuanian economy to grow, the necessary economic transformation was to be initiated through a structural change that would foster growth based on high productivity knowledge and human capital intensity. Generating closer collaboration was key to allowing for a critical mass of businesses and researchers to join forces and bring about systemic changes that would lead to higher competitiveness.

Following intense discussions with expert groups and a series of surveys, Lithuania proposed six priority areas of Smart Specialisation: energy and sustainable development, health technologies and biotechnologies, new production processes, materials and technologies, transport, logistics and ICT and an inclusive and creative society (creative industries). The expert groups consisted of representatives from research, business, non-governmental and governmental sectors to get the most objective view. Lithuania focuses also on medical engineering for early diagnostics.

We analysed the structural changes of production and export in the traditional sectors of the economy and defined products with high added value. From there we defined the mentioned six sectors that were offering solid potential. We evaluated the growth potential of the sectors as well as their potential to establish a productive innovation system. For Lithuania, the export potential of industry sectors is of very high importance.

We also studied whether there are universities linked to the sector that could execute experiments and studies or contribute with evaluations. Human resources, science and business cooperation in the field were another crucial factor.

The Smart Specialisation Strategy helped to define and focus on fields and sectors that are worth to be further developed, funded, and adopted to the dynamic new developments (innovation).

Introducing Games into the Lithuanian S3

One of our priority sectors are the creative industries. However, in the beginning we only focused on film and the audiovisual sector with no special emphasis on game development. In the ICT sector we focused much on tools with AI.

Then in 2019, seizing the opportunity of the review process of the Lithuanian S3 with the Ministry of Education and the Ministry of Economy, the Lithuanian Innovation Centre made an intervention and presented the powerful potential the emerging game industry would offer to the country. The compelling arguments were the innovation-driving force of games as well as their inherent predisposition to build synergies with other industries, e.g. in the field of cloud gaming or AI (horizontal impact).

The fact that the gaming sector is rapidly growing has also favoured the decision to include the game developing sector into the priorities of the Smart Specialisation Strategy. In support of this, a roadmap has recently been developed that provides recommendations on how the creation of a business and financial environment for the game development sector could best be achieved.

Roadmap for the creation of a business and financial environment for the game development sector

As a blueprint for this game sector roadmap, we used the roadmaps that we developed in the past for the manufacturing industries and their pipeline structures. We closely analysed the activities in the game sector and the state of the industry, e.g. what are the popular genres, technological trends, for example cloud gaming. We investigated this not only on a national, but also on a European and global level. Then we pursued step by step:

- Analysis of the experience and knowledge of the studios, collection of data with the support of the industry association.
- We arranged and carried out a survey with the companies.
- We had quantitative and qualitative interviews with industry stakeholders but also with other sectors, such as education and academia.
- We also assessed the global context and the direction where the industry is moving.

The pipeline structure reflects all steps: the history of the sector until today's development, from global trends to the national situation of the sector and the most recent technologies and trends found there. In sum, we analysed where Lithuania can work hand in hand with the global ecosystem and where it can and might find its special niche.

End July 2020 the roadmap was finished. We identified and stressed the strengths and the opportunities within the ecosystem and prepared recommendations for measures that should be taken. To this end, we collected and analysed data from 60 companies in Lithuania and also data from other countries which sometimes proved a little difficult. It took 3 months from the agreement with external experts to the final version of the Roadmap. And then another month to design and print the physical copies.

We found out that 95 % of the production is exported and that larger companies are also spending money on R&D. Although a lot of the study programmes in universities offer modules that are game-related, there is no graduation programme for game development yet. But there are Master Study modules in game design, gamification, and AI. The sector inspires other disciplines and industries, e.g. through gamification.

The roadmap was presented to the Ministries and other associated organisations on 8 October. This was also done with an enquiry into possible funding and support, e.g. for a national accelerator.

To name just a few of our recommendations:

- Attract more talents from other countries
- Build up an accelerator for game developers
- Create a sandbox for gamification solutions in an open data format
- Foster collaboration between the universities and the respective companies of the sector

We also discussed with the Lithuanian Game Developers Associations, the opportunities for the game and tech sector regarding funding instruments by the European Commission.

We set us the ambitious goal that in 2030 Lithuania will be the hotspot of the game developing sector in the Eastern European region.

3.7 Collaboration with the Regional Technology Park – Krakow, Malopolska Region (PL)

The Perfect Timing for Initiating an Excellent Business Growth Environment

The Marshall's Office of the Malopolska region and the Krakow Technology Park (KTP) are looking back at an over 20-year long cooperation which laid the foundation for a successful business environment for several IT-based industries, amongst them the game business sector. Over the past ten years, the far-sighted and open-minded support of the government helped create an internationally renowned brand for its regional game industry. The cooperation also fostered the establishment of a game business cluster with KTP taking the lead as informal cluster manager.

Let's take a closer look at this inspiring example of:

How to Play in Cooperation Mode[22]

The Players' Profiles

The Marshall's Office of the Malopolska region is a regional self-government implementing a number of initiatives supporting the economic growth of the Malopolska region to make it more innovative and attractive for investments. Malopolska is an excellent place for conducting businesses, including those using modern technologies. "Creative and leisure industries" is one among the 7 Smart Specialisations of the Malopolska region. The region has an 8,8 % share in the Krakow Technology Park. Some of the basic data and numbers about the "rea administered by a Marshal of the Region with the Management Board and the Sejmik of the Region (the Regional Council) can be found here.[23]

Krakow Technology Park LLC is the most comprehensive one-stop-shop for business in Poland. The Park has a wide variety of tools that help its clients grow faster and smarter: from pre-incubation, through incubation and acceleration to KTP's own seed fund and the Polish Investment Zone. The Park's ecosystem consists of more that 500 enterprises but also aiding each other. KTP goes where the potential for growth is assured, engaging in such industries as video games, IT, Industry 4.0. It also manages and aids with the growth of industry and corporations within the Polish Investment Zone. KTP creates a platform for a strong cooperation between business, local government, universities as well as regional and industry-focused communities.

Quest 1 – „Which Came First: The Egg or Digital Dragon?"

Due to, among other factors, the ownership link, cooperation between The Marshall's Office of Malopolska region and Krakow Technology Park in terms of regional

[22] All icons used in the following quests are from https://thenounproject.com/ , authors named in order of appearance: BGBOXXX Design (1, 6, 9), RIZCA (2), Amethyst Studio (3), Icongeek26 (4), pransong tadoungsom (5), Smalllike (7), Andy MC (10), Jessie White (11).

[23] https://krakow.stat.gov.pl/download/gfx/krakow/pl/defaultaktualnosci/758/3/11/1/2020_woj_malopolskie_w_liczbach.pdf

development, supporting entrepreneurship and innovations, has been going on almost continuously from the very beginning of KTP in 1997.

As for the start of initiatives focusing on supporting the video game industry, one can pinpoint the breakthroughs of the first and second decade of 21st century. Within a common research programme „Technological perspective Krakow-Malopolska 2020" and the „Innovation broker" project, the main parties have identified creative industries – video games among them – as a branch of industry with a high level of innovation and perspectives for the future of the region.

As an effect of these joint activities, „creative industries" made their way to the list of regional Smart Specialisations and in 2011 the first Digital Dragons (then called „European Games Festival Digital Dragons" - DD) took place. This initiative was based on the assumption of a need for an event in Central-Eastern Europe with a business focus (B2B) dedicated solely to the video game industry. The collaboration with universities and the regional Bloober Team studio played an important part in launching the first edition of the conference. A lot of other Polish game studios followed Bloober Team's lead, e.g. Techland and CD Projekt.

However, the first edition of the conference was far more modest than what Digital Dragons grew to be today. Not only was the scope, agenda, and attendance smaller, but – before anything else – catching the attention of potential attendees was not an easy task as it was a brand-new event. Nevertheless, what Digital Dragons in 2011 has accomplished was that it confirmed the assumption about the market need. On top of this, it turned out to be a solid event. Both KTP and the Marshall's Office were strongly engaged in solidifying this new quality in the industry.

Collateral Quest 1

The success of the first conference was the reason behind the decision to organise monthly meetings of students from Krakow with game industry specialists, hosted by the AGH University of Science and Technology. During the meetups, the participants had the opportunity to learn about the industry hands-on from its practitioners.

Similarly, KTP and the Marshall's Office have organised, as part of the Global Entrepreneurship Week, classes for high school and university students in terms of designing video games.

The years 2012-2014 were a time of intense study visits abroad:

- for KTP – to attend the most important video game industry conferences, e.g. in USA and China and learn from them
- for the Marshall's Office – to learn about the potential of video game industry, especially looking at it from regional growth's point of view
- for companies from Malopolska region – to have an opportunity to build new competences, international network and to internationalise their offer

The then Prime Minister of Poland, Janusz Piechociński, as well the political environment at the time, have agreed on the importance of the Digital Dragons conference and the entirety of game industry, and how crucial it is to support it.

All of the activities mentioned above were of a pilot character, but slowly transforming into a solid form.

Quest 2 – „How to train your Digital Dragon"

A year later – in 2012 – the European Games Festival Digital Dragons was held again with a larger and more ambitious scope. With a view to scaling up not only nation-wide but also internationally, it was also the first edition of the Indie Showcase contest and other new activities. The second edition of DD reaffirmed the need of both market and industry, for such an event in Central-Eastern Europe.

The conferences in 2011 and 2012 have jointly gathered 800 attendees (compared to the most recent edition of DD from 2020 with almost 3,000 participants).

Quest 3 – „Toss a coin to your Digital Dragons"

While the first two editions were built on EU project funds, the third one strove to be commercially viable through private sponsors, ticket sales, and the main patron – the Voivodeship. Though in the beginning this proved to be quite a challenge, in the end the ambition was gratified, and a satisfactory number of tickets was sold.

This model of financing DD has survived to this day. The Marshall's Office is still the key partner with all the visibility during the event guaranteed due to that. The conference is opened every year by Voivodeship's authorities. The reason behind the continued support of the event by the Marshall's Office is that it sees the potential of DD as crucial in promoting Malopolska region, also internationally.

Changing the event's name to „Digital Dragons" gave rise to a now world-renowned brand.

Quest 4 – „Around the world in eighty Digital Dragons"

On the one hand, the need to build a strong global position for Polish game studios, and on the other hand, the wish to promote Malopolska region as a business-friendly place, have borne fruit in a brand-new initiative. Based on regional funds from the EU, two editions of the „Creative Malopolska" project were carried out. Within them, game and film studios from Malopolska region were able to take part in international industry fairs, conferences, B2B meetings, etc. The first edition was held in years 2016-2019, while the second edition has begun in 2020. It serves as a unique opportunity for the companies to look for business contacts abroad, learn new skills, gain knowledge, and enter new markets.

The implementation of the projects was supervised by the Malopolskie Centre of Entrepreneurship, an agency of the Voivodeship specialising in controlling EU funds spent in the region.

Quest 5 – „Academy. Digital Dragons, of course"

As of 2016, KTP has been running a monthly series of two-day lectures designed for students and aspiring game creators taking their first steps in the craft. This was initially known as Game Academy, now as Digital Dragons Academy. In this case, the involvement of the Marshall's Office was not as intense, although the Academy has surely been established as a fruitful and much welcome impact of the long-term of cooperation between KTP and the Marshall's Office.

Quest 6 – „Baltic Digital Dragons”

The years 2017-2020 mark the time of collaboration between the Park (as the partner) and the Marshall’s Office (as an associated partner) in EU-project Baltic Game Industry, co-funded by the Interreg Baltic Sea Region programme. BGI has stimulated a number of analyses, expert activities, explorations of new ways and tools to support the game industry, but – first of all – a pilot project to assess the value of an instrument that KTP has not veat added to the Digital Dragon range of offers: an incubator for young game studios. Within the project’s lifespan of 2017-2020, KTP has organised two test batches of an incubation programme, the first focusing on mobile game developers, and second one on PC and console games.

Quest 7 – „Digital Dragons Incubator powered by Malopolska”

That is how a new instrument of supporting game industry has been added to the standard offer of Krakow Technology Park to become a vital part of a regional and national game ecosystem. It is now widely recognised as a means to stimulate talent growth and provide young game studios with business knowledge. The need to maintain the incubation in the offer has been confirmed in the framework of the most recent KTP strategy. In addition, the Marshall’s Office has decided to help both financially and promotionally the 3rd edition of Digital Dragons Incubator, now beyond of scope of BGI.

Collateral Quest 2

Reflecting the understanding of the importance of the game industry for the region, the Marshall’s Office supports the video game industry also outside of activities organised by KTP and the Digital Dragons brand. For example, it supports a series of workshops called „Write the Game”, implemented by the Villa Decius Association, during which aspiring screenwriters are learning how to write engaging stories in games (the workshops are also promotionally backed up by KTP).

The Voivodeship also helps distribute regional funds from the EU to game studios from the region. In the years 2014-2020, the authorities of the Malopolska region have granted more than 30 million PLN for both smaller initiatives (like „innovation vouchers”) and larger R&D projects.

And the Winner Takes it All

Digital Dragons is both a brand and a set of instruments to support for the game industry, systematically developed for almost 10 years by Krakow Technology Park. This process would have been, if not impossible, then for sure far less successful and sustainalbe if not for productive, open and favourable attitude of the Marshall's Office of Malopolska Voivodeship towards supporting the game industry.

The Office has grasped the potential of the game industry in times when not many entities have even understood the specifics of games. It is a good place to quote an anecdote from the times of the second edition of Digital Dragons conference. All organisers were thrilled that one of the national TV stations was preparing a video on the event. However, to everyone’s dismay, it turned out to be a video about stereotypes, addiction to playing and other pathological behaviours related to video games, entirely omitting any conclusion from the business conference.

Thankfully, a lot has changed since then in terms of perceiving video games by the public. What has not changed, thankfully, is the continuous support of the Marshall's Office for the game industry along the years. For the Marshall's Office staff, being engaged in joint projects with Krakow Technology Park has provided an opportunity to develop new skills, broaden their knowledge and build new contacts that may serve as a canvas for new projects in the future.

The crucial factor determining the quality of the collaboration between KTP and the Marshall's Office is the awareness of the importance of common goals behind all projects. What is also paramount is how both parties treat each other as real partners. All these details ensure the succes of the joint industry support.

3.8 PA active investor approach – Stockholm (SE)

Driving innovation and entrepreneurship

For a long time already, Sweden has focused its efforts on supporting innovative start-ups and tech companies. The innovation hub that it is today relies on Sweden promoting entrepreneurship, with its start-up scene steadily but rapidly growing. With a mix of experienced serial entrepreneurs acting as investors, Sweden has shaped a vibrant start-up landscape dominated by young and highly educated talents. Its capital city Stockholm, with a unique distinction in producing unicorn companies per capita, second only to Silicon Valley, is widely considered a hotbed.

Over the last decade, the country has taken the lead in the digital arena driving innovation within technology. Home to successful start-ups including Spotify, Skype, King, Mojang, Klarna, Stockholm is home to one of Europe's most important tech communities and some of the fastest growing start-ups world over. 2017 saw one of the biggest success stories in the rapidly growing FinTech space, with Klarna evolving from a FinTech company, to currently being at the helm of the European banking landscape. Today, in the middle of 2020, Klarna is even Europe's most valuable private FinTech start-up.

Rise of FinTech

Sweden's rise to FinTech prominence has started around three decades ago. The early 1980's saw the financial markets deregulated. In 1984, the Optionsmäklarna was created, the first options exchange which enabled remote trading. Such technological advancement acted as a catalyst to foreign investments into the country. The expansion of the ICT sector triggered a rapid penetration of smartphones and the Internet, creating an advantageous climate for tech-enabled sectors such as FinTech.

A few decades to harness knowledge and experience, the country has now reached an unrivalled competence which has become a pillar of its present-day success. Sweden is today solidifying its position as a hotspot for crypto-currency experimentation and innovation. As the FinTech sector shifts gears from being viewed as a disruptive revolution to an evolution offering viable solutions to end users, financial centres globally are striving to build an ecosystem to facilitate FinTech prospects. Global success stories in recent years, a society facilitating the entrepreneurial spirit that is driving innovation capabilities has ensured that Sweden occupies a coveted position among the global list of FinTech hubs.

The city accounts for one fifth of the total FinTech investment in Europe. The calendar year 2017 saw the Swedish FinTech space attract investments to the tune of USD 358 million. In 2019 Stockholm scaled FinTech investments to a new level. Based on the 3-year average from 2017-2019, Stockholm ranks 3rd after London and Berlin in Europe. For the first two quarters in 2020, FinTech investments have focused on large and later-stage deals.

Recent Milestones

- The World Bank's Doing Business 2018 report ranks Sweden, 10th globally on the ease of conducting business. It estimates **the time to start a business** within **Sweden at 7 days.**
- The World Economic Forum ranks Sweden as one of the top ten most competitive countries in the world, with top grades for innovation capacity **by investing more than 3.3 % of the country's GDP in research and development** (as of 2019) – **one of the highest rates in the world.**
- Sweden **pushed and pioneered crowdfunding.**

- In 2017, as per the OECD, Sweden has **20 start-ups per 1,000 employees, compared to just five in the United States** and 74 % of the start-ups in Sweden also have **among the highest survival rate after three years**. Start-ups in Sweden also see a relatively faster growth (OECD).
- The 2018 Bloomberg Innovation Index underlines Sweden's dominance in innovation, ranking the country 2nd globally. **What is commendable is the nation has managed to achieve this standing with a population at 10 million, approximating that of the city of London**. With a system that provides entrepreneurship with an economic security, innovation has been key to Sweden's competitiveness and growth.
- Sweden dominates the Nordics in terms of exits. As of mid- 2017, Swedish exits stood at 50 compared to 60 for the whole of 2016. (Nordic Tech List).
- The European Digital Social Index ranked Stockholm 4th and the EU regional Competitiveness Index ranked Stockholm even 1st.

The role of the PA

The Swedish government is mainly providing the regulations through their agencies as for example „Business Sweden" (https://www.business-sweden.com/) and the Swedish Innovation Agency called „Vinnova" (https://www.vinnova.se/en/). Invest Stockholm is Stockholm's official investment promotion agency with the city-owned company Stockholm Business Region. the so-called „Stockholm Business Alliance" (SBA) covers 56 municipalities attracting more than 50 % of total foreign direct investments into Sweden. Since its inception in 2006, the partnership has provided free advice and professional services to a wide range of international firms. The team of Invest Stockholm provides tailor-made information and advice for companies wanting to establish a new business in the region, as well as for companies wanting to expand an existing business. They assist interested investors in identifying relevant investment opportunities within the region. Stockholm's "hotlists" for investment, listing the companies from different sectors investors can engage with, serve more as a teaser, as the overall tech sector is moving too fast to keep the list updated steadily. The objective is to attract 30 projects on a yearly basis, that also implies retention of projects where businesses are kept in the country – those that originally planned to move on. This number is usually reached and very often we are outperfoming this.

In sum, Invest Stockholm is offering a whole bunch of different services that – all together – can produce the desired impact but there are many determining influences, e.g. the timing has to be right. Many different factors have to be considered when designing a new potential service, trial and error is a popular method we apply.

The overall impact our work causes, is very hard to measure because that is also based on the values the country is proposing and strengthening. Invest Stockholm sees the need to make a statement to show what is key for our working culture. We also offer a coaching programme to match women founders with investors. Diversity and equality are important values of our Swedish culture, but it is not enough to just promote those, you also have to live by them.

Invest Stockholm proposes the readiness, being able and prepared to react quickly. As can be seen with the current pandemic. A lot of effort was put into helping and supporting the young companies so that they can make it through the pandemic. The decision makers of companies are often not in Sweden so a retention programme for the existing companies to retain jobs in Sweden was in the focus, which is basically more a consolidation of the previous investments.

The dynamics and nature of the business development activities in Sweden need to be understood as an expression of their culture, as in Sweden the politicians would not just implement a scheme and impose that. It is more the other way around, that they listen carefully to the people and their needs: it is a bottom-up approach, based on the triple helix model – government, academia and business! The Swedish model is very much driven by the businesses, politicians are not in the driver seat. The gain of trust is key for our work. We also do have cluster building in different regions, e.g. the automotive industry in the South of Sweden, Göteborg is focusing on self-driving cars, close to Denmark there is the medical valley. For a small country as Sweden, there are many sectors where we are outstanding and seen as world leading.

Key success factors of the Swedish model:

- Consensus model is lived in Sweden, you take everybody on board. If you have an idea you anchor that, and it then turns out to become a co-creation.
- Preparedness to change and the strive to be “a step ahead” is what puts Sweden at the forefront of technological change. Openness is the cornerstone of the Swedish mentality.
- A robust and enabling social infrastructure has aided Sweden’s journey to the top. Substantial social benefits reduce the risks faced by entrepreneurs and costs for companies, thus encouraging start-ups.
- A liberal market and mindset have been catalysts for new developments and products.
- Physical spaces enabling co-working besides low-cost conference centres aimed at networking and marketing are helping cut down costs of infrastructure.
- With more than 40 % of the population having a 3-year university degree as a minimum, companies have the convenience of choosing from a highly skilled workforce.
- The country has also been voted the best place to raise a family with companies offering flexible work hours.
- Sweden ranks third, of 72 countries around the world in the world’s largest ranking of English skills as a second language.
- What distinguishes Sweden amongst tech hubs globally is the celebration of a community which facilitates an ecosystem that breeds the spirit of sharing.

4. Additional Notes

Annex Estonia

- The Estonian sTART-Up Day, taking place on a yearly basis in Tartu and gathering around 4,000 visitors, start-ups and investors: https://www.startupday.ee/.
- Example of a presentation from the sTARTUp Day, the presentation by Christian von den Brincken "How to do business with German corporations?" at the sTARTUp Day 2019. Christian von den Brincken is running the Business Development Department of the German corporation Ströer which is also responsible for strategy and innovation of the group. He compares doing business with a German corporation to dancing Salza with an elephant: https://www.youtube.com/watch?v=DlcYTle5k0g.
- Service hub of the Estonian digital society: https://e-estonia.com/.
- The main success factors of the Estonian way: https://e-estonia.com/four-lessons-from-building-the-most-digital-society-in-the-world/.
- Case Study: How Estonia became the global digital leader and what businesses can learn from it by Erik Ehasoo, September 2017: https://blog.rubiksdigital.com/how-estonia-became-the-global-digital-leader-83e1ff576f36.
- Incubation programme for game and film industry by Tartu Science Park and Tartu Centre for Creative Industries, starting in September 2020: https://teaduspark.ee/en/unique-incubation-program-for-game-and-film-industry-companies-was-opened/.
- The Estonian VR&AR community: http://www.eevr.ee/.

Annex Helsinki, Finland

- Fenix Final Report: https://docplayer.net/9747950-Fenix-interactive-computing-2003-2007.html
- Verso Final Report: https://docplayer.fi/3701782-Software-mobile-solutions-and-games-industry-evaluation-of-tekes-software-related-programmes.html
- Skene Final Report: https://www.businessfinland.fi/49dec6/globalassets/julkaisut/3_2019-programmes-for-education-and-gaming.pdf
- Business Finland, Report 3/2019: Programmes for Education and Gaming - Evaluation of Skene, Learning Solutions, Future Learning Finland and Education Export Finland Programmes: https://www.businessfinland.fi/49dec6/globalassets/julkaisut/3_2019-programmes-for-education-and-gaming.pdf
- Neogames Finland ry (2019): The Game Industry of Finland - http://www.neogames.fi/wp-content/uploads/2019/04/FGIR-2018-Report.pdf
- The actual funding scheme for games provided by Business Finland: https://www.businessfinland.fi/en/for-finnish-customers/services/funding/tempo-funding/game-business-funding/

Annex Berlin

For the capital region

Overview and information on the Game Industry in Berlin, including companies, events, funding bodies and consulting for companies and entrepreneurs who want to settle in Berlin, provided by Berlin Partner in 2018: https://www.berlin-partner.de/fileadmin/user_upload/01_chefredaktion/02_pdf/publikationen/Games-Industrie_en.pdf

Berlin Partner for Business and Technology: Business and technology support for companies, investors, and scientific institutions in Berlin – this is the Berlin Partner für Wirtschaft und Technologie GmbH mission. With customised services and an excellent science and research network, our many experts provide an outstanding range of programmes to help companies launch, innovate, expand and secure their economic future in Berlin.

A unique public-private partnership, Berlin Partner for Business and Technology collaborates with the Berlin State Senate and over 280 companies dedicated to promoting their city. Berlin Partner is also responsible for marketing the German capital to the world, for example with the successful "be Berlin" campaign. Berlin Partner also supports companies who want to move or establish their business in Berlin: https://www.berlin-partner.de/en

Games:net: The network games:net connects indie studios as well as established players, national and international companies with useful contacts within economy, politics, and research. Regular networking events offer a platform for promoting the multi-faceted exchange between the actors in the ecosystem around the game industry.

The continuing dialogue between the game industry and the institutions and supporters on site lead to a healthy ecosystem in the region. This includes not only the dialogue with state politics, but also at the national level. Games:net has set itself the task of improving the conditions at the location and to show and support the diversity. Games:net is the mouthpiece for the capital region and creates visibility for the member companies.

Activities and offers of games:net

- Regular networking events within the game industry and beyond
- Exchange / Roundtables with representatives of politics, institutions, and funding institutions
- Professional roundtable discussions
- Shared booths on international fairs (gamescom, Nordic Game and more)
- Delegation trips abroad
- Access to investors (Investors‘ Dinner)
- Arrangement of personal and individual contacts in the network and beyond
- More visibility on site through multiple communication tools
- Services in the field of recruitment (Job Market, Industry Day, job newsletter, HRNETWORK)
- Cross-industry contacts in the media and digital industries

Further information: https://www.medianet-bb.de/en/games-net-berlinbrandenburg-2/

Games Capital Berlin: Information hub and blog with many useful contact links for funding, events, education and networks - https://www.gamescapital.berlin/

Medienboard Berlin Brandenburg: The New Media Funding of Medienboard supports the development and production of innovative audiovisual content: https://www.medienboard.de/en/ & www.medienboard.de/nc/en/games/

VRBB: The VRBB association was founded early 2016, bringing VR companies together to develop a sustainable VR industry in the region of Berlin-Brandenburg. Prior to establishing the association, frequent informal meetings with a group of people from different industries, institutions and government representatives were discussing the opportunities VR and AR present to the region and its players from the media and high-tech industry: https://virtualrealitybb.org/

On a national level

The German Game Industry Association game e.V. is also the owner and sponsor of the trade-fair gamescom and the developers' conference devcom. The asscoiation is based in the capital. Their webpage is an usefull hub of information on the German game industry, the market development, the academical and educational institutions in the field as well as on the national funding: https://www.game.de/en/

German Games Funding: Information in English on the German Games Funding, a recent funding scheme implemented by the German Government, its conditions and requirements: https://www.game.de/en/german-games-funding/

Games Germany: Information on the different regional fundings for the game industry: https://www.games-germany.de/about/

Annex Lithuania

- Short Profile of the Lithuanian game ndustry on the BGI Webside: http://profile2020.baltic-games.eu/lithuania/regional-game-industry/
- Article on the situation of the Lithuanian game ndustry, 2017: https://gameon.lt/en/2017/lithuanian-game-industry-is-going-in-the-right-direction-it-just-needs-a-little-help/
- Webpage of GameOn, a B2C event for the games industry that is happening on a yearly basis with around 20,000 visitors. The event in November 2020 will not take place due to the pandemic: https://gameon.lt/en/2020/announcement/
- Information on Smart Specialisation by the European Commission: https://ec.europa.eu/jrc/en/research-topic/smart-specialisation
- Smart Specialisation in Lithuania: https://strata.gov.lt/en/smart-specialisation
- The Smart Specialisation strategy in Estonia, Latvia and Lithuania: https://llufb.llu.lv/conference/economic_science_rural/2017/Latvia_ESRD_45_2017-71-78.pdf

Annex Sweden

- Invest Stockholm: http://www.investinstockholm.org/
  - offering hotlists for the different investment areas
  - a talents guide for talents wanting to move to Sweden
  - an entrepreneurs' guide for entrepreurs willing to move their businesses
  - a presentation of Sweden as „A women's place"

- Fintech focus by Invest Stockholm, 2020: https://www.investstockholm.com/globalassets/invest/reports/stockholm-fintech-guide-2020.pdf

THE PROJECT

The project 'Baltic Game Industry' (BGI) aims to foster the game industry in the Baltic Sea region - turning an ambitious game developer scene into a competitive and attractive business sector with sound innovation potential and thus making the region a game hotspot with worldwide competitiveness.

The partnership works together on framework condition improvements, on making business support services fit for the special needs of game start-ups and finally on new business opportunities for game developers in other industry sectors, such as health care. The core element is the installation of durable game incubators, programmes and schemes for game start-ups across the region.

BGI effectively combines policy and business development. Tailor-made game business support fosters a durable economic growth of this innovative industry in the whole region. The introduction of VR technologies in non-game industries contributes to boosting innovation beyond games. The common branding of the Baltic Sea region as game innovation hotspot will attract international clients, investors, creative entrepreneurs and qualified workforce.

Read more at www.baltic-games.eu

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- Finland: Neogames Finland, Metropolia University of Applied Sciences, City of Helsinki
- Germany: Hamburg Institute of International Economics, HTW Berlin University of Applied Sciences, State of Berlin, University Medical Center Hamburg-Eppendorf
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