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A research study for Hilversum Mediastad

The Changing Creative Landscape & MCoE Insights

Final Report

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Executive Summary (1/3)

The evolution of digital media, changing legal requirements, the powerful voice of the consumer and fast developing technology are a few significant drivers influencing the creative industry. The objective for Hilversum Mediastad is to transition to a new, digital creative industry driven by local resources and capabilities, and inspired by international ambition and learnings. This research study aims to help Hilversum Mediastad in formulating next steps for becoming a vibrant creative valley by identifying relevant industry trends and learnings from other Media Centers of Excellence (MCoE). The term MCoE refers to the functional concept of a "media park" in terms of their form of appearance which depends on ownership, purpose, reputation and location, whereas "Media Park" refers to a specific local physical place or virtual platform.

The creative industry is changing continuously driven by a multitude of developments, which leads to new opportunities and challenges for industry players

The relevant trends in the creative industry described in this report are provided from a media consumption and an industry development perspective. The trends illustrate how quickly the habits of consumers change, and what businesses and other stakeholders do to provide innovative services and create value for their direct environment. The analysis shows how complex and multidimensional the creative industry is becoming driven by aspects such as technology advancement, blurring industry boundaries, and the fight for talent.

As media has become more omnipresent in our society, it is engrained in our daily lives where boundaries are becoming less apparent. The birth of "influencers" and "power consumers" through user-generated content, peer-to-peer sharing, and the exponential reach of social media creates new dynamics in the creative ecosystem. Thus, this development forces businesses to rethink their business model and position in the value chain. The challenge is largely about monetization of customer value and how to retain trust and build sustainable customer relationships. Businesses are heavily investing in technologies like Artificial Intelligence (AI) and Internet of Things (IoT) to improve their services. Consequently, the convergence of media and technology has given rise to issues in data privacy and security, complex business models, and unclear governance & control. Besides the benefits, the market will need to invest heavily in safeguarding the use and application of technology in the creative industry. One of the accompanying developments of technology advancement is the impact on talent and employment. The outlook for the global creative industry is that it will experience a *war for talent*.

In general, creative businesses have a short-term focus on profitability and lack of focus on the required innovation strategy – in part this has lead to a structural deficiency in the skills needed to combat technological developments.

The role of MCoE is evolving and expanding across new territories

In the global creative industry, there are MCoE with wide-ranging roles and functions facilitating, on behalf of public and/or private organisations, value creation for (local) stakeholder groups. When looking closer at the historic development of MCoE, it can be noted that the purpose and ambition of MCoE can differ significantly. It is evident that conventional and most prominent form of media park continues to be centered about media production – however MCoE explore other sectors, niches, and services as well. Some MCoE are initiated for helping businesses to stay relevant in this industry such as nextMedia.Hamburg, whilst others like FilmbyArhus are developed for a societal or economic development purpose. This development is partially due the relevant "front row" position, where they have a broad view on market demand, risks and opportunities. For the international benchmark, four MCoE were chosen in addition to Hilversum Mediastad, which are 1) nextMedia.Hamburg, 2) Creative Valley Hainaut, 3) FilmbyArhus, and 4) Vancouver Film & Media Centre and Film Commission. These MCoE are chosen against a few criteria, which includes among others: a specific industry/ sector specialisation (entertainment & media production), a favourable location in Europe or Canada and a strong focus on driving economic and social value for the local environment and greater ecosystem. Additionally, the different forms of the chosen MCoE provide a broader perspective for Hilversum Mediastad.

The proliferation of digitisation revitalises the role of MCoE

As the creative industry is becoming more dynamic and versatile, it brings new opportunities and challenges for MCoE. Whereas a physical location may have been essential to the success of MCoE in the past, now the digital world allows for the growth of more touch points, ultimately offering unprecedented levels of synergies and connectedness. Virtual platforms can facilitate this – allowing for channels that assist in knowledge sharing, development of new ideas and connecting individuals and organisations. MCoE are no longer restricted to their once traditional mediating role. Now, they can contribute along the entire value chain, aiding in building a coherent approach for topics such as market research, best practice sharing, and innovation governance.

Learnings for Hilversum Mediastad

The value that local MCoE create or facilitate for their direct environment is driven by four factors: a) knowledge cultivation, b) employment stimulation, c) cultural heritage conservation, and d) collaboration.

Executive Summary (2/3)

Knowledge cultivation

Nearly all MCoE stimulate knowledge building and sharing via partnerships or cooperation with university programs and other knowledge institutes. All MCoE understand that it is relevant to anticipate industry developments, and thus, proactively organise knowledge events to educate and share insights with the (future) work force of creative professionals. Some MCoE like the Creative Valley of Hainaut leverage specific niche expertise like Numediart University's global expertise in sound, image and video treatment and the specialisation of slow-motion film. Building a distinctive reputation and specific expertise can have a pull effect towards market players.

Employment stimulation

Globally, the creatively industry is expecting a higher demand for specialised skills in coming years. The MCoE recognises the need to mediate on the job market, cultivate new talent and rent spaces for startups and freelancers. The latter is seen in MCoE such as FilmbyArhus and Hilversum Mediastad, where the demand for more flexible work spaces and the rise of "digital nomads" is anticipated.

Cultural heritage conservation

Hainaut is one of the MCoE which has a strong focus on cultural heritage conservation. It uses interactive media applications to showcase their cultural heritage and provide city experiences to rediscover the historic culture of Hainaut. In addition, the city has a rich cultural programme and the museums function as 'creative connectors'. Moreover, Hainaut hosts approximately 35 highlights and 300+ events. The city of Mons has 12 museums and is about to open 5 new ones. The digitization of museums tie together a number of media formats including the use of IoT, web documentaries and citybranding like VisitMons application for tourists exploring the city.

Driving collaboration

Finding partners and initiating collaborations has been an essential task of an MCoE. Creative Valley Hainaut is a strong driver within their ecosystem and has strong synergies with other European cities to boost mobility and value across international boundaries. Programmes like Café Europe fosters social innovation and creativity across shared experiences. In addition, the MCoE is involved in Mons 2025 City project to increase collaboration among citizens, creatives and the municipality. A great example of cross-border collaboration is given by FilmbyArhus. The MCoE drives innovation and knowledge sharing across industries, projects include application of VR and AR in the health, education, and tourism sector.

Key takeaways for Hilversum Mediastad

Hilversum Mediastad has a strong legacy in cultural heritage conservation, accompanied with a focus on knowledge cultivation and employment stimulation. When looking closer at the similarities and differences of other MCoE, there are a few learnings which are relevant for Hilversum Mediastad.

A strong purpose and distinctive brand positioning is essential in today's creative industry

Other MCoE like Aarhus have a strong, clearly defined mission and strategic plan complemented with SMART formulated performance metrics. As the European Capital of Culture 2017, Aarhus has a coherent brand positioning and strong presence in the on- and offline world. The global positioning is recognised by international audiences and have led to international partnerships such as the North Sea Region. With a strong list of cultural events and programs, it is expected that Aarhus will slowly emerge from Copenhagen's shadow as the emerging cultural city of Denmark. With a focus on media & entertainment, it is more difficult for MCoE like Hilversum Mediastad to stand out from other MCoE as boundaries of the media sector are blurring. Building a distinctive positioning further within the Dutch creative industry enabled by a consistent story and proposition across the penta-helix will contribute to a stronger pull effect to Hilversum Mediastad.

A physical location contributes to value creation but it is not fundamental to the success for all MCoE

The virtual operations of the MCoE within Hamburg and Aarhus complements existing physical clusters and activities across the cities. Hamburg has a track record in cultivating print media, journalism and related domains, which has a strong physical presence in the city. However, the purpose of nextMedia.Hamburg is to drive initiatives to foster sustainable business models in the digital economy. So far, nextMedia.Hamburg creates value by focusing on a virtual platform for various services like consultancy and business networks.

Drive cultural experiences and societal development by applying new tech

Creative knowledge and skills is no longer restrained to the creative industry, but can be used as a lever for urban development, societal innovation and value creation across the penta-helix. FilmbyArhus recognizes this and has initiated projects, events and master classes to further enhance their contribution to the local community and even beyond their industry. By opening up and bringing competence expertise to other industries, Aarhus has taken the first steps into becoming a true creative ecosystem.

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Executive Summary (3/3)

Rethinking urban development in anticipation of a sustainable future

Can the built environment be part of our strategy against premature aging? Does architecture add to our creative mind-set? These questions were asked by the MCoE of Aarhus. This MCoE has made it their mission to tackle urban challenges by increasing their scope of work in contribution to their local environment and community. FilmbyArhus commit themselves to an integral, multidisciplinary approach across the penta-helix and leverage their physical and digital assets to contribute to a higher level purpose than their MCoE.

A stronger collaboration across the penta-helix leads to a more sustainable and vibrant ecosystem

Vancouver Film & Media Centre and Film Commission have strong ties with the local government to ensure a stable tax and geopolitical environment to sustain an attractive environment for local and international organizations. The tax incentive programme has contributed to more international film production scene in Vancouver. Another example of collaboration from a complementary skills perspective, nextMedia.Hamburg has advisors who act as ambassadors of the MCoE and are committed to assist in advancing Hamburg as MCoE. These advisors are experts in their fields and mediate among stakeholders to formulate goals, facilitate new connections and initiate projects.

The city of Aarhus is not only known as the European Cultural City of 2017, but it also houses innovation initiatives such as Agro Food Park (an innovation centre for the agriculture and food sector), The New University Hospital (with a focus on MedTech and education), and Navitas (an education and research centre for CleanTech). The innovative image of Aarhus boosts the city's mission to sustain its internationally recognized role of European Creative City of 2017.

Next steps for Hilversum Mediastad

The positioning of Hilversum Mediastad in the creative ecosystem is fragmented, and inexplicit among other Dutch cities. Within a traditional ecosystem of multiple owners and a divers group of stakeholders with mixed interests, it has been difficult to form a coherent perspective on the future ofHilversum Mediastad . Despite a strong physical presence and ties with many stakeholders across the penta-helix, it has become more difficult for the MCoE to leverage assets, resources and relationships to generate relevant value. The pull effect towards Hilversum Mediastad has diminished over time as other cities and initiatives are drawing talent, startups and corporates away. In principle, Hilversum Mediastad has all the traits of becoming a vibrant Media Centre of Excellence when compared to other MCoE in the world.

Hilversum Mediastad has grew into a large behemoth, of which it size and legacy has been limiting organisational agility, innovation capability and market pull.

To reposition Hilversum as Mediastad of the Netherlands, the MCoE should consider the following steps:

- Formulate a strong, distinctive ambition and market positioning which is not coinciding with other Dutch cities or creative platforms;
- Establish reciprocal collaborations with stakeholders across the penta-helix to stimulate joint commitment towards talent development, employment creation and knowledge cultivation;
- Steer and operate Hilversum Mediastad from one management organisation to simplify and manage diverse stakeholder functions and interests;
- Formulate a sustainable value proposition and operating model to anticipate market developments, technological innovation and changing consumer needs;
- Formulate a stakeholder strategy (e.g. citizen, consumer, business) to identify the primary stakeholder groups and formulate a coherent brand strategy accordingly.

Research methodology

The focus of the research study is to provide an objective view on industry trends and an objective comparison of selected Media Centres of Excellence. Consequently, the report provides fact-based insights identified, analyzed and formulated for Hilversum Mediastad. This report is by no means a recommendations document, but merely provides input for the Economic Outlook for the municipality of Hilversum.

The observations and insights of this research study are collected through a) primary research via experts interviews (i.e. experts from PwC), b) secondary research via desk research, application of web and social tools and PwC's Entertainment & Media Outlook. The research is conducted from August 7th up until September 11th 2017. The derived insights from the interviews supplements the secondary research that was conducted. The list of experts that we interviewed for this research study includes local industry experts from Hilversum Mediastad and international PwC experts.

On September 11th, a co-creation session was organised to inform selected stakeholders of the municipality of Hilversum. The discussed topics and outcomes are captured in a separate chapter of this report, whilst other relevant insights from the workshop are integrated in the main document.

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The goal of the study is to provide an objective view on selected drivers of Media Centres of Excellence and to identify which learnings are relevant for Hilversum Mediastad

The current situation

The evolution of digital media, changing legal requirements, the powerful voice of the consumer and fast developing technology are a few significant drivers influencing the creative industry. The objective for Hilversum Mediastad is to facilitate the transition to a new, digital media sector driven by local resources and capabilities, and inspired by international ambition and learnings.

The ambition

As identified in the implementation program “Tipping Point” Mediavision 2016-2019, the ambition is to reposition Hilversum and the Media Park as part of the new, digital creative industry.

The objective of this study

In this document, we provide an objective view on the drivers of Media Centres of Excellence (MCoE) and the key insights to relevant areas for Hilversum Mediastad.

Firstly, it is important to look at the definitions of a MCoE for which it can be concluded that the core definition is both multifaceted and ambiguous. The definition is based upon the differentiating factors: ownership, focus, reputation and location and the main value drivers, knowledge cultivation, employment stimulation, driving collaboration and cultural heritage cultivation. From these we identified five categories of Media Centres of Excellence (MCoE).

Secondly, to formulate the role and ambition for these MCoE it is necessary to identify and understand the trends and drivers in the creative industry. Therefore, we have conducted a quick scan to illustrate relevant industry developments which we foresee for the coming years. The majority are likely to happen on a global scale, while some developments are dissimilar in local territories. We have selected two perspectives and associated insights which are relevant for the benchmark study and next steps for the media consumption and media industry developments of Hilversum Mediastad .

Thirdly, in order to substantiate the objective view, we selected MCoE in Vancouver, Aarhus, Hamburg and Hainaut for the international benchmark. The benchmark will provide insights on the distinct focus points of each MCoE, and will detail how each builds differently on the value drivers in shaping the future of their local creative industry. This is informative on building both learnings, and points of differences to be observed across MCoE. In addition, we will provide examples of good practices on several topics to show how these MCoE are progressing in their journey.

Finally, this research report will be wrapped up with an overview of key insights and learnings, which will also be shared during an inspiration session with key stakeholders of Hilversum Mediastad and the media park itself to prepare for the next step in the Economic Outlook and in building a bright future for the new digital creative valley in Hilversum.

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Media Centres of Excellence (MCoE) Classification

FORMS OF APPEARANCE OF MCoE



Media Centres of Excellence (MCoE) can be defined based on their purpose and value drivers…

Purpose of Media Centres of Excellence (MCoE)

Based on literature, desk research and consultation with industry experts, we can conclude that the definition of a media park is ambiguous and multifaceted. We therefore defined **Media Centre of Excellence (MCoE**) based on the following distinctive factors that are relevant for the creative industry and the MCoE:

- **Ownership:** The ownership structure and whether this is private, public or owned by the people both in terms of operations and financial investment.
- **Focus:** The degree of internal and external focus and the specialisation and distinctiveness within creative industry.
- **Location**: The focus on physical and or virtual location and collaboration.
- **Reputation**: The international importance & recognition and branding and the degree of media knowledge sharing and its information accessibility on national and on international scale.

Value drivers of Media Centres of Excellence (MCoE)

Based on extensive research, we defined value drivers for Media Centres of Excellence (MCoE). The interpretation, strategy and execution of these value drivers differ among the different types of MCoE.

Knowledge cultivation

The development of knowledge within MCoE and the application, maintenance and cultivation of it. This includes the degree of specialisation, distinction and technological. developments

Employment stimulation

The stimulation of employment and the way MCoE foster entrepreneurship and talent development. This includes educational opportunities and the extent to which businesses are pulled towards it.

Cultural heritage conservation

The maintenance, security and development of cultural heritage and the way it reacts to future developments. This includes spill-over across other creative industry segments.

Driving collaboration

The MCoE composition, the formation, the nature of collaboration and the role of the stakeholders. This includes (international) partnerships, universities, professionals, start-ups, living-labs etc.

Source: PwC analysis, Robert Picard – Media Clusters, Media Management and Transformation Centre, Understanding “Cultural Ecosystem” in Creative Industries Policies

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… and exists in different flavours

MCoE come in different forms of appearance depending on their focus, ownership, location and reputation…

Media Park
Focus on profit

A Media Park is most distinguishable through its **physical location** and the traditional value chain focus on **profit**. The main goal is to **create content** and **production** is based on connecting supply and demand. Most Media Parks are a combination of **public and private ownership** but run as a business entity with a strong internal focus and with performance metrics driving the media park. (i.e. media park specific revenue and reputation). Although having a spill-over effect in stimulating employment and increasing innovation these are not the main goals of the parks.

Media Campus
Focus on profit & talent development

A Media Campus is an extension of a media park but incorporates the additional main focus of **knowledge cultivation**, **stimulation** and **sharing**. It concentrates on skills development as well as fostering new talents and thinkers in the media industry often in a physical campus location. Another distinguishing factor is the tendency to have ownership or dominant stakeholders consisting of **educational institutions**, **municipalities** and **government institutions**.

Media Cluster
Focus on synergistic relationships

A Media Cluster is a network of physical locations and **virtual platforms** (media parks, media campuses and projects), which develops **synergistic relationships** and networks with the goal to enhance the clusters' success factors such as efficiency, creativity, innovation and profitability. Media Clusters don't necessarily have ownership and are often initiated by privately owned Media Centres of Excellence and build upon its relationships with other stakeholders to drive value.

Creative Valley
Focus on fostering creativity

A Creative Valley is an **agglomeration** of both physical media parks and/or clusters as well as virtual platforms and initiatives encompassing everything **creative** and **media** related ranging from journalism, art, **cultural heritage**, **start-ups** to creative business services. A Creative Valley is both public and privately owned with the main goal of enhancing the creative industry as a whole and **fostering innovation** on a creative and media industry level. Start-ups and business modelling, financing and networking are additional main functions and objectives of the Valley.

Creative Ecosystem
Focus on improving living standards and city reputation

A Creative Ecosystem is the **virtual interconnected** and overlapping network of all platforms and physical locations related directly to other industries than only the **creative** industry. Its main goal is to enhance creativity and better society as a whole through not only incorporating the goals of the media parks, campuses, clusters and valleys, but also by directly **stimulating employment**, improving the **standard of living** and bettering the **reputation of the city**. The Ecosystem is not owned but its governance and driving force comes from various bodies including the government, municipalities, institutions as well as private investors and from the citizens themselves.

**During this study these different forms of appearances of MCoE are defined based upon a bottom-up research approach by means of interviews with subject matter experts, existing literature and desk research. The different forms are a reflection of the current market, which is subject to change due to different internal and external market dynamics*

Source: PwC analysis, Monitor Creative Industry 2016 iMMovator, Robert Picard – Media Clusters ,Media Management and Transformation Centre, Understanding "Cultural Ecosystem" in Creative Industries Policies

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Trends in the Creative Industry *(quick scan)*

TWO PERSPECTIVES: MEDIA CONSUMPTION AND INDUSTRY DEVELOPMENT



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Quick Scan Trend Analysis

To formulate the role and ambition for Media Centres of Excellence, it is necessary to identify and understand the trends and drivers in the creative industry

The themes described in this quick scan illustrate relevant industry developments which we foresee for the coming years. The majority are likely to happen on a global scale, while some developments are dissimilar in local territories. With our Annual Entertainment & Media Outlook, we monitor and analyse the trends from different perspectives, including the influence of technology, economic developments, social value and regulations. For our perspective on the global entertainment & media industry 2017-2021, please click here to access our thought leadership. For this study, we have selected two perspectives and the associated insights to these, which are relevant for the benchmark study and next steps for media city Hilversum.



Perspective 1 - Media consumption

Influenced by advanced technology and content explosion, consumers seek better content anytime, anywhere through unique experiences tailored to their needs.

As consumers are becoming more vocal, empowered and selective in their choice, it is necessary to understand “the what” that makes them tick and, more importantly, to uncover what their true needs and desires are.

In this chapter, the following topics will be covered: consumer lifestyle & behaviour, content creation, technology and experience.



Perspective 2 – Industry developments

The creative industry is changing continuously, leading to new opportunities and challenges for industry players who want to stay relevant in the next decade. The speed in which technological advancements are embraced and adopted by organisations is astounding. It has assured some organisations who thrive on unique service propositions, where others are struggling to retain their client base.

In this chapter, the following topics will be covered: convergence of industries, continuous learning, industry regulations, the value of creativity, fight for the consumer, and media shapes culture

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Media consumption (1/3)

Influenced by advanced technology and content explosion, consumers seek better content anytime, anywhere through unique experiences tailored to their needs

	Consumer perspective	Impact on media landscape
1. Consumer lifestyle & behaviour	**1. Media, omnipresent in society** Consumption and spending on media and entertainment has never been so high and is predicted to continue increasing. Media has become omnipresent in our society surrounding and influencing our daily lives on a continuous basis. Additionally, media-multitasking has become the norm, with consumers engaging in 3+ media activities simultaneously, such as watching television, browsing the internet and replying to text messages.	Media consumption is becoming more and more embedded in our lives, where habit-forming services are becoming more prevalent. The shift to subscription based business models, such as Twitch in gaming, Musical.ly in video production and Audible in ebooks, show that consumer value lies in “quality features” which brings benefits like “convenience”, “always accessible”, “easy to share”, “latest update” and lasting experiences and habits.
2. Content creation	**2. Prosumers - the new consumers** The creative industry is shifting from industry produced media content to user generated (media) content (UGC). The ability to produce content anywhere, anytime and to concurrently receive and stream live content is giving rise to the "prosumer“ – persons who both produce and consume content. This is resulting in more choice of specialised media content, and thus special interest groups, which are led by the likes of "influencers", the new age (digital) "celebrities" - and anyone can be one..	To gain access to and maintain market share in the media industry has become increasingly difficult. The birth of “influencers” and “power consumers” through individual user-generated content has increased the need for more ecosystem management, e.g. understanding and building relationships with customers, vendors, partners and competitors. The challenge is how to monetise customer value and grow business value for the industry and its stakeholders.
3. Technology	**3. The convergence of Media & Technology** The eight essential technologies: Augmented Reality (AR), Artificial Intelligence (AI), the Internet of Things (IoT), Virtual Reality (VR), drones, robots, Blockchain and 3D printing are reshaping the media industry in how consumers are consuming, producing and ultimately experiencing media.	Technology has accelerated the rate of content production and its reach, enhancing the effectiveness and efficiency of distribution and targeting. It is integrally related to monetization and customer engagement. Consequently, the convergence of media and technology has given rise to issues in data privacy and security, complex business and pricing models, and governance & control. Besides the obvious benefits, the market will need to invest heavily in safeguarding the use and application of technology in the creative industry.
4. Experience	**4. The shift from activity to experience** Communities and “tribalism” based on personal preferences and interests are allowing for shared media experiences. Consumers are no longer seeing media as a passive activity, rather they want to engage and immerse themselves fully into new experiences, engaging all senses and allowing for an all-round user experience. Examples are Virtual Reality arcades and eSports, which showcase that technology-driven experiences have been an important boost for the next phase in gaming.	Consumer behaviour has changed from seeing media as a one-dimensional activity (such as going to the movies) to consumers actively seeking real-time, experiences (like going to ComicCon). Additionally, the multi-sensory experience is expanding through technology, which is interesting for niche communities and special interest groups. This introduces the “long tail” of new or adapted products and services targeted to niche groups.

Sources: NCE media 2016, The Guardian: The digital apocalypse 2016, Statista 2017, PwC Strategy&, 2016 Entertainment and Media Trends, OTV Nielson 2017, Socialblade 2017

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Media consumption (2/3)

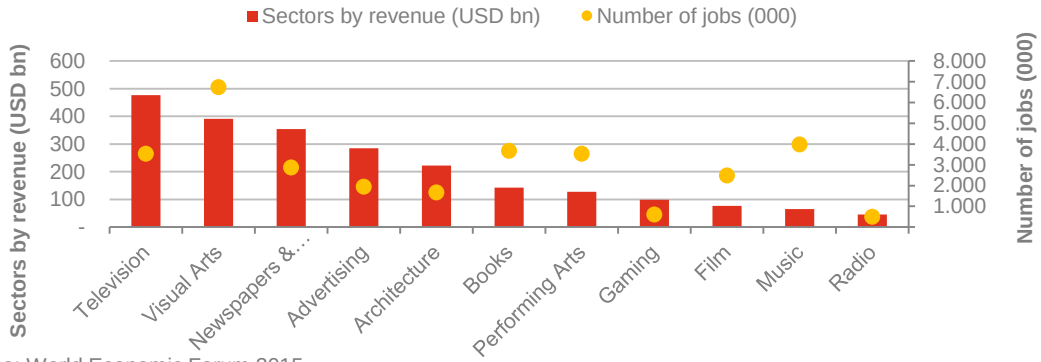
Influenced by advanced technology and content explosion, consumers seek better content anytime, anywhere through unique experiences tailored to their needs

1. Consumer lifestyle & behaviour

Media, omnipresent in society

- Consumption and spending on media is constantly increasing with its reach and impact on society gaining in value. We are directly and indirectly subjected to the influence of media on a continuous basis through what we see on the streets, on our mobile devices, what we hear from our friends and what we find online. Media is going beyond multichannel by creating meaningful experiences in a omnipresent way.
- Media consumption and spending has increased and consumer expenditure has never been so high in the creative industry, reaching 780 million euros in the Netherlands. The digital mobile trend is taking over with 71% of media consumption coming from mobile device usage. (Online) subscription based models are becoming standard.
- Media multitasking has become the norm as 90% of consumers are now multitasking while watching TV. An average of three additional activities including internet browsing, reading email and text messaging are completed while watching television. Between the age of 16-24, 64% of the total media time spent is already online. More and more people are also starting to watch content out of home (OOH). For instance, 26% of OOH impressions were attributed to viewers aged 18-34, while 32% stemmed from those aged 55 and up with OOH consumption even expected to rise.

The global creative industry by revenues & employment



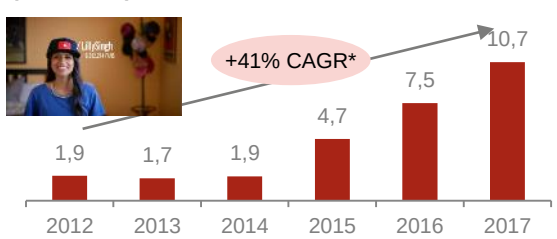
Source: World Economic Forum 2015

2. Content creation

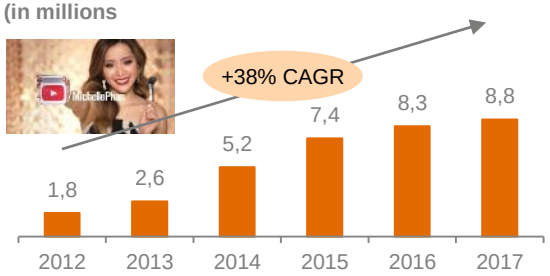
Prosumers - the new consumers

- The creative industry is experiencing a change where individually produced content (UGC) is becoming - in some domains – as big as industry produced content. To produce and share content in real-time, anywhere via (peer-to-peer) platforms is enabling users to simultaneously consume and create content. As a result, more special interest groups arise next to mainstream content and media "influencers", who are becoming the modern (digital) celebrities – and anyone can be one.
- Content creation is expanding and is including individual users as well as large corporations. User-generated, personal and real-time content creation is taking over through social platforms such as Facebook and Twitch. Additionally, personalised content from wearables such as Fitbit or consumer data generated through preferences from purchase history are being continuously generated, creating new business models for customer insights.
- All access to broadcasting platforms and the freedom of expression is changing the media landscape. P2P streaming technologies are designed to turn every video consumer into a video node, enabling users to simultaneously consume and deliver the stream.
- Media production is seeing a shift from consumer to prosumers with influencers becoming main drivers in content creation. For instance, Michel Phan who partnered with Endemol Beyond to launch Icon Network and her beauty and wellness-themed video content has become symbolic in the way young people consume content. Co-creation with prosumers, and other stakeholders in the value chain, is the new value driver in media business models. The importance of relationship building and stakeholder management and the reach of influencers ranging across all industries cannot be ignored in the modern media landscape.

No. subscribers of influencer Lily Singh (in millions)



No. subscribers of influencer Michelle Phan (in millions



***CAGR:** Compound Annual Growth Rate

Sources: PwC Strategy&, 2016 Entertainment and Media Trends), OTV Nielson 2017, Socialblade 2017

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Media consumption (3/3)

Influenced by advanced technology and content explosion, consumers seek better content anytime, anywhere through unique experiences tailored to their needs

3. Technology

The convergence of Media and Technology

There is a strong tendency towards media and technology convergence, which will continue to influence the creative industry

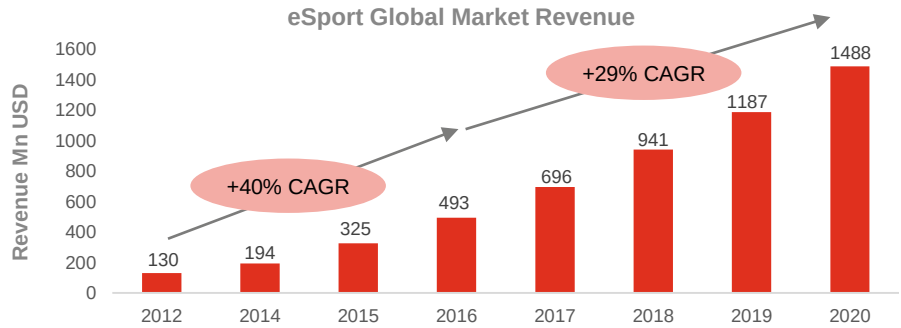
- **Virtual Reality (VR**): computer generated simulated environments encompassing all fields of media and technology from books, art, theatre, gaming and music, allowing the user to have a dynamic, connected and multisensory experience. In addition, applying serious gaming and gamification techniques, these experiences can enhance the application, for example in education and entertainment
- **Artificial Intelligence (AI):** the application of different automation and algorithm techniques and technology to be able to change the way we consume and produce media, e.g. automated machine translation, robot painters, and personal DJs
- **Drones:** Drones equipped with cameras allow for extensive use in media production as well as broadcasting, in the professional as well user generated content space. They allow for autonomous application and are packed with sensor technology
- **(Physical) robots:** Robotics in a physical form are used in interactive media, IoT and other related domains allowing for personal and impactful experiences
- **Internet of Things (IoT):** by connecting objects (like devices, cars, and other physical objects), humans and data, more personalised and relevant experiences and services can be created. For example, advertising can be targeted on individual level instead of target group level.
- **Blockchain:** The consumer can expect a securer, easier access to an abundance of content developed by more content creators. Additionally, the experience will be more on a personal and granular level. For content creators, they can be creative with payment models as well as expecting simpler attribution, payment, and distribution systems. Furthermore, this allows for the introduction of the concept of "digital scarcity". Also, industry challenges like piracy, IP ownership and copyright issues can be addressed
- **3D Printing:** the application of 3D printing could be used for prop creation in media production as well in animation and the creation of prototypes. Another example, consumers can also print merchandise or other objects of their favourite brands or characters to make their online experiences more tangible
- **Augmented Reality (AR):** the application of digital layers of information, graphics and other data over real world objects to enhance our 'analogue' world

Source: PwC The essential eight technologies

4. Experience

The shift in media from activity to experience

- Social interaction has always been a strong component driving the success of media, however the TV industry as compared to the social media landscape, has arguably given young adults only few opportunities to interact on a social level when consuming media content. Recent developments are however drafting a bright future for media activity as it is becoming increasingly experience based.
- The age of the mega platform is over… the next generation raised being always-"on" will embrace digital *tribalism*. This generation will move away from the massively commercial social networks and are migrating to more personal social networks based on less complex ecosystems. The rise of niche interest groups and thematic communities such as comic-con, an international convention on pop-culture ranging from comic, games e-sports to board games, paves a way to niche content creation both online and offline.
- Furthermore, the rise of the gaming industry is seen as the digital apocalypse which is disrupting a number of industries of which media and entertainment is one. The rise and the adoption of the concept of multi-users VR and AR is seen as the next development in the entertainment industry. For example, the Toybox Touch experience from Oculus demonstrates the possibility to interact with another individual in virtual reality playing for instance pin-pong.
- In the gaming sector, e-sports has recently emerged as a spectator activity with increasing number of attendees and viewers. The global market for e-sports grew to US $696 million in 2017 and may exceed $1.4 billion by 2020. ESPN, FOX Sports and other leading sports networks have introduced eSport competitions to their broadcasting repertoire, partnering with major gaming companies such as EA sports, Riot and Blizzard.



Sources: NCE media 2016, The Guardian: The digital apocalypse 2016, Statista 2017

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Creative industry developments (1/3)

The creative industry is changing continuously, which leads to new opportunities and challenges for industry players want to stay relevant in the next decade

Convergence of industries

Blurring boundaries of the creative industry

- Organisations such as Tencent and Amazon are providing services which encompass multiple industries like media, retail, and technology. These multi-faceted organisations are breaking industry boundaries to deliver better experiences for the customers.
- An important driver for these multi-faceted organisations are Mergers & Acquisition deals. In the past years, the main motivations factors for M&A are a) consolidation driven by adjacent services and customer base (value chain integration) and b) capability extension.

Continuous learning

Need for more tech enabled creative professionals

- Media and production agencies are becoming technology organisations, who use Artificial Intelligence (AI) for example to create campaigns, script writing, and automated machine translation.
- Where the focus once was on mass media and intuition, now media professionals focus on personalisation and micro data to create consumer profiles. This transition has resulted in a demand for more tech-driven media professionals, such as data scientists, AI developers, VR specialists, neuromarketeers, etc.

Industry regulations

Pushing the boundaries in the digital world

- Media organisations continue to navigate the fine line between delighting consumers and annoying them. Where usability and emotion are value drivers, privacy and security are mostly value detractors.
- Whereas net neutrality is less of a hot topic in the Netherlands, privacy and monetisation are highly discussed topics. The enforcement of General Data Protection Regulation (GDPR) in May 2018 will have significant impact on organisations who are rely on third party data, and do not have a direct relationship with customers.

The value of creativity

Tech-driven creativity

- Technology has been changing the creative industry. The success and thus value of media concepts do not solely rely on pure creativity, but on understanding micro moments in the lives of today's consumers. For example, Netflix knows exactly when viewers get 'hooked' on a TV show and which movies are best suited to the mood of their viewers.
- The value of media will continuously be challenged. Technology can lead to more commoditisation in media, and thus, more abundance and lower perceived value.

Fight for the consumer

Use of data to personalize experience

- Media preferences are highly influenced by the dynamics and diversity of culture, language, income, and regulation. It has affected companies' ability to monetise investments and their position in the value chain more than ever before.
- Organisations are fighting for the consumer relationship and their data, like profile, behaviour and contextual data, the value chain has become more complex. Those like Netflix, who create consumer-centric, distinctive and habit-forming services, are more successful in creating long term (perceived) value in the eyes of consumers.

Media shapes culture

New era of media-driven culture

- Back in the day, media channels were limited to companies who used them as vehicles for delivering messages to mass audiences – shaping opinions, behaviour and ultimately culture. Nowadays, consumers can produce and share content themselves and thus shape opinions amongst themselves.
- As media channels are more accessible for consumers, organisations are forced to re-evaluate their roles and responsibilities towards consumers, which goes beyond a functional role and expands into social responsibility and ethics.

So why is this relevant for players in the creative industry?

The definition and scope of the creative industry is changing, which impacts the structure and dynamics of the creative ecosystem.

As the industry is changing more rapidly due to technological advancements, media and creative professionals will be required to constantly educate themselves with new knowledge and skills.

As digitisation drives innovative services and experiences, the appropriate regulations may not exist yet. Understanding and anticipating new regulations will help to advance the creative industry.

The perceived value of media is changing for consumers, and consequently, also for media organisations. Understanding what drives consumer value and how to create it in a sustainable way is key for staying relevant in the creative industry.

Truly understanding consumers on a personal and contextual level will give organisations the competitive edge and prolong their longevity in the creative industry. MCoE will continuously need to understand who key industry players are and what their role is in the ecosystem.

The creative industry is not just about delivery, but about shaping and influencing culture and people. The role of media is becoming more dynamic and versatile, which makes the industry in turn more complex and all-encompassing.

Source: PwC Analysis

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Creative industry developments (2/3)

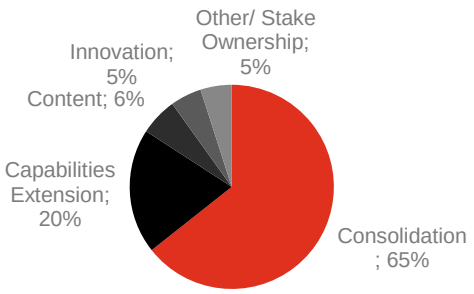
The creative industry is changing continuously, which leads to new opportunities and challenges for industry players want to stay relevant in the next decade

Convergence of industries

Blurring boundaries of the creative industry

Especially in the entertainment & media sub sector, we have seen large international deals of at least $1 billion in size that were initially announced from 2011 through 2016, such as the acquisition of Virgin Media by LGi and the acquisition of Whatsapp by Facebook. These deals were mainly executed by communications and broadcasting companies, who pursue global expansion in response to competitive pressures and growth in local markets. In 2016, Verizon announced the acquisition of Yahoo for nearly $5 billion, which targeted the portfolio of media content properties and AdTech capabilities. This deal illustrates how the lines between sub sectors such as media, communications and technology, are blurring, and perhaps will fade in the future.

Motivation for announced media & tech deals (> $1bn)



Source: PwC Megadeals transforming the EMC sector 2016

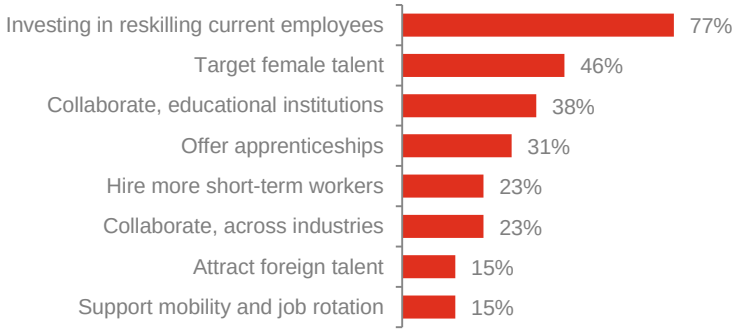
Continuous learning

Why the creative industry needs to continue investing in a future-proof workforce

As technology is seen as a driver for the industry, the impact it has on talent, recruitment and employment will be significant in the coming years. Therefore, economists are pushing for more funding in STEAM fields – science, technology, engineering, arts and mathematics – to spur innovation and economic growth. The domains art and design were recently added to the STEM acronym as it was acknowledged that art and design are missing elements in the mix. However, the expectation is that the required talent and skills will be harder to recruit in the future compared to other industries. The main barriers for future workforce planning in the creative industry are the result of focus on short-term profitability (64%) and misalignment with innovation strategy (50%).

Strategies to improve talent in creative industry workforce

Percentage of survey respondents who identified each given strategy



Source: PwC analysis, WEF The Future of Jobs Report 2016

Industry regulations

Pushing the boundaries of the digital world

As the creative industry continues to change, organisations develop new services with accompanying business models, which may include new ways of consumer engagement and analytics. Policy may not always be on par with the knowledge and speed of market players. An example of new regulation with significant effect on the creative industry is the EU's GDPR, due for introduction in May 2018, which is a result of increased demand for data privacy. It will have significant impact on organisations who rely on third data, who do not have a direct relationships with customers. The current estimate is that GDPR's potential 4% fine of global revenues.

As an example, the upcoming sector eSports has experienced tremendous growth in the past year, where many questions were raised around policy and regulation. A few sector challenges:

- Child protection; how to protect the young (professional) gamers? How to educate youngsters about responsible gaming?
- Game security; how to prevent foul play in eSports, like hacking?
- Betting market: how to prevent match manipulation?
- Doping: how to prevent the use of brain stimulants and relaxers?

Source: PwC Pulse Survey, GDPR Series

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Creative industry developments (3/3)

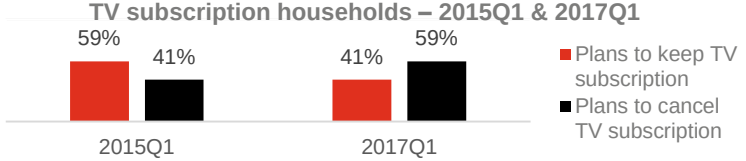
The creative industry is changing continuously, which leads to new opportunities and challenges for industry players want to stay relevant in the next decade

The value of creativity

Tech-driven creativity

The amount, type, flexibility and accessibility of content to consumers have shifted the perceived value of media for consumers and organisations. The expectation is that through technology, media can be increasingly commoditised with digital templates and auto generated solutions. Nowadays, consumers can let AI generate hours of music, or can easily view artworks all over the world through VR glasses. The abundance of content and experiences could lead to a lower perceived value of the product / service. This "commoditisation" trend brings challenges to companies (i.e. how to intrigue consumers who are "spoiled"), but also opportunities to find new products and services to "fuel" this trend. An example of this challenge is the decreasing price to value ratio for TV subscriptions. Despite more premium content produced by cable companies, the need to have a TV subscription is seen as less of a necessity. The price of pay TV increased slightly, while alternatives which are inexpensive or free are stimulating consumers to find value elsewhere.

TV subscription households – 2015Q1 & 2017Q1



As a result, the trend of households cancelling or not even purchasing a TV subscription is becoming more prevalent, especially in single person households. An example of how tech disrupts creativity is Jukedeck, a company that uses machine learning technology to compose music and adapt music, providing people and companies with songs shaped to their needs. The company can generate unlimited music as long as no one is claiming the rights of the songs. As such, creativity is no longer a scarce resource, but can be made redundant by the means of technology.

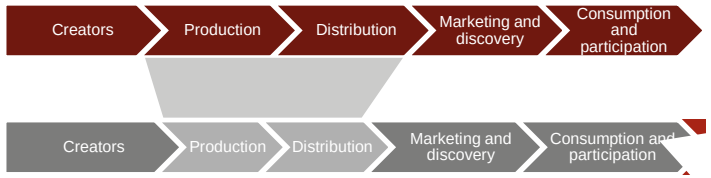
Source: PwC Analysis

Fight for the consumer

Use of data to personalise experiences

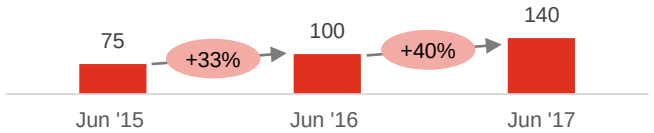
The internet has fostered the disintermediation of the value chain. Distribution of content has become less of a bottleneck due to services such as YouTube and Netflix. This has put content creators in a better position to not only monetise their content, but also to create new experiences. These developments have lead to a shift in the relative importance of players in the value chain.

Shift in how value is distributed in the creative industries [illustrative]



The above graphic simply illustrates that other businesses in the value chain can penetrate the market at different links in the value chain – reaching consumers directly (i.e. business-to-consumer models). To be successful in this competitive environment, organisations need to win consumers by truly understanding them on a personal and contextual level. By data collection and analysis, organisations find relevant insights to create personalise content. For example, based on your listening behaviour and the playlist of other users, Spotify developed an algorithm which generates automatic playlists for users based on their taste. This distinctive feature has set Spotify apart from its competitors and contributed to its company's success.

Number of active Spotify users worldwide in millions



Source: PwC Analysis, Statista, Strategy& The digital future of creative Europe

Media shapes culture

New era of media-driven culture

It is well-known that media in all its forms shapes opinions, behaviour and ultimately culture. For example, in Asia, fair skin is a standard of beauty. The media perpetuates this by glorifying men and women who adhere to that standard. Before the existence of platforms allowing consumers to produce and share content, the creative industry had a considerable amount of control in shaping and influencing a culture. However, with the proliferation of social media, consumers can absorb not only the content organisations produce and share, but also that of other consumers. Consumers now have endless (unverified) sources to shape their thoughts. Given this change, the question arises - what the role and responsibility of media should be? As an example, a while ago, Facebook was under fire for the spread of fake news on its platform, which could have influenced the US election results. Mark Zuckerberg dismissed the issue stating that fake news, of which it was a small amount, could not have influenced the election. However, more than half of the adult population utilises Facebook as a source of news, and this number continues to rise. Following this criticism Facebook has now rolled out a tool to detect fake news.

Growth in use of Facebook for news in % of users



Source: PwC Analysis, Pew Research Center 2016

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MCoE Benchmark Assessment & Insights

INTERNATIONAL BENCHMARK

The MCoE have been chosen based on their different form of appearance, international reputation, recognized specialization in the media industry, focus area and the distinct way they build upon the value drivers.

See detailed benchmark framework in appendix



[Belgium]

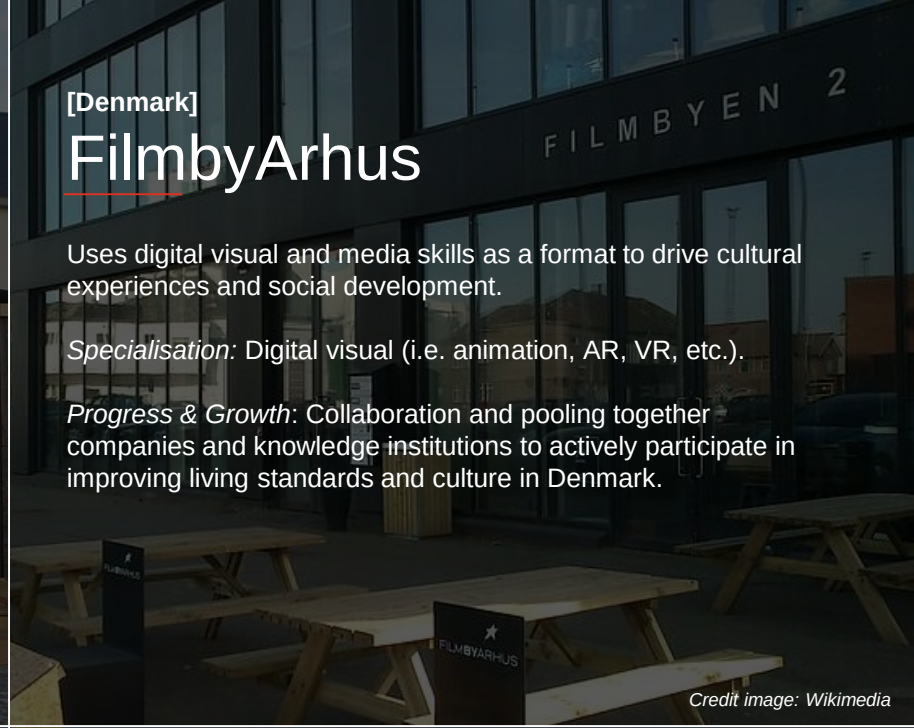
Creative Valley Hainaut

Aims at connecting cultural, digital and creative practitioners in Mons and the wider region of Hainaut.

Specialisation: Media production, film/TV, graphic design and gaming, “smart heritage” creation.

Progress & Growth: Social agenda and develop creative environment via ‘platform acting’ and ‘ecosystem thinking’.

Credit image: AEC



[Denmark]

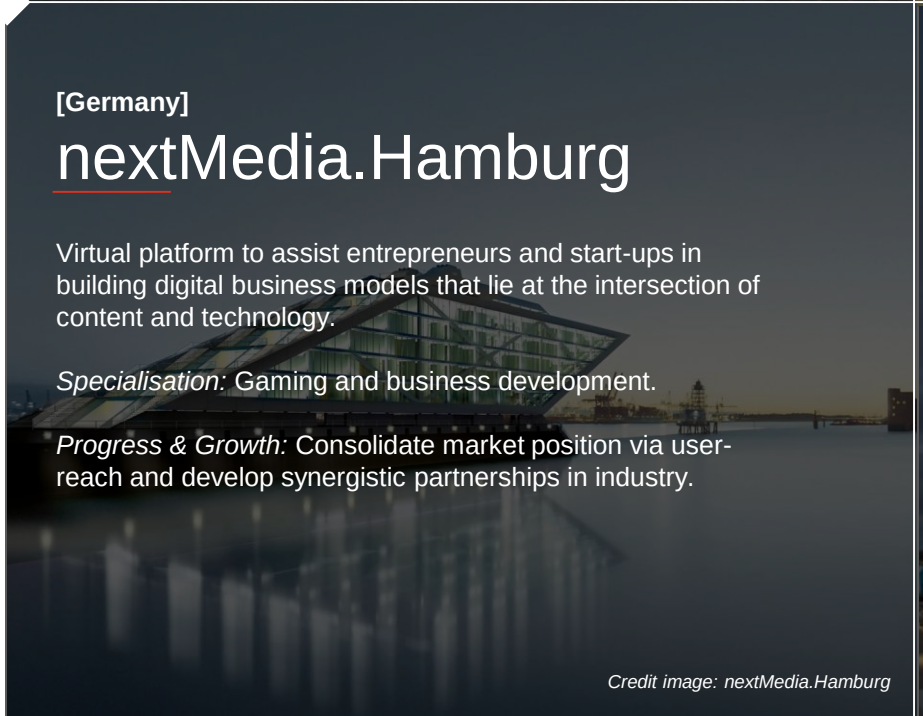
FilmbyArhus

Uses digital visual and media skills as a format to drive cultural experiences and social development.

Specialisation: Digital visual (i.e. animation, AR, VR, etc.).

Progress & Growth: Collaboration and pooling together companies and knowledge institutions to actively participate in improving living standards and culture in Denmark.

Credit image: Wikimedia



[Germany]

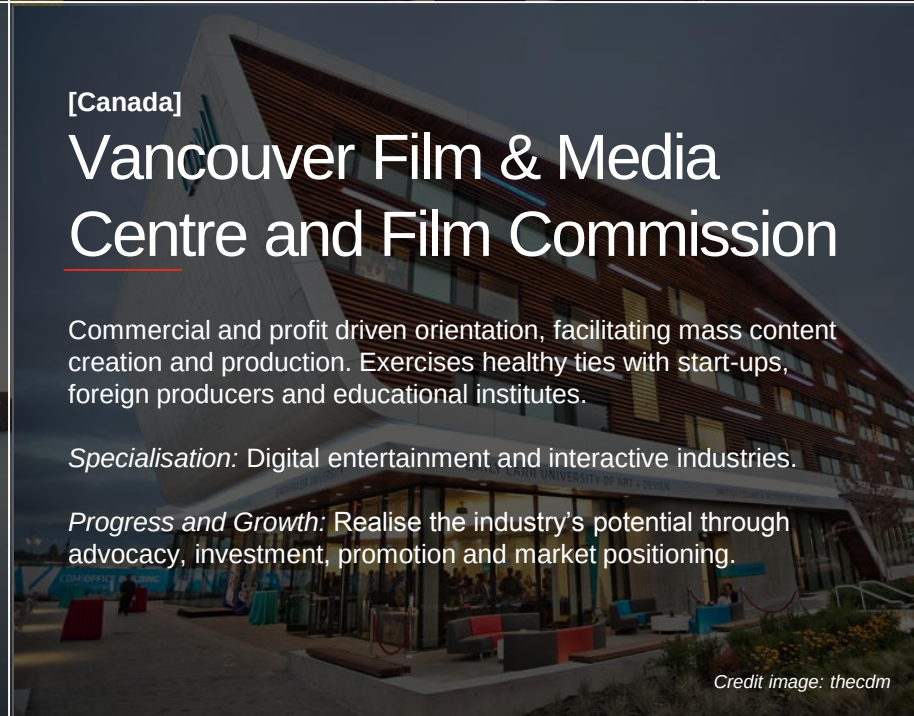
nextMedia.Hamburg

Virtual platform to assist entrepreneurs and start-ups in building digital business models that lie at the intersection of content and technology.

Specialisation: Gaming and business development.

Progress & Growth: Consolidate market position via user-reach and develop synergistic partnerships in industry.

Credit image: nextMedia.Hamburg



[Canada]

Vancouver Film & Media Centre and Film Commission

Commercial and profit driven orientation, facilitating mass content creation and production. Exercises healthy ties with start-ups, foreign producers and educational institutes.

Specialisation: Digital entertainment and interactive industries.

Progress and Growth: Realise the industry’s potential through advocacy, investment, promotion and market positioning.

Credit image: thecdm

Hilversum Mediastad

Within the Netherlands, there are several media / innovation clusters of which Eindhoven is recognized for its technology focus, Amsterdam for its digital creativity hubs and Hilversum for being specialised in media production across the entire value chain, from concept development to production services.

Did you know…

… that there were nearly 8000 jobs in the Media and Entertainment industry in Hilversum in 2015?
… that Hilversum Mediastad houses 120 - 150 companies?
… that Hilversum Mediastad has 23 TV studios?
… that Studio 22 is the biggest TV production studio of Europe?

MCoE progression

Status quo and ambition

The physical presence of the media cluster within Hilversum Mediastad fosters collaboration between companies and propels the strong heritage and cultural values of Hilversum. The MCoE is both privately and publically owned. Synergistic relationships among stakeholders and the media networks have been created, with the aim to enhance the MCoE's success metrics in terms of efficiency, creativity, innovation and profitability. With this in consideration, this MCoE's could be classified as a Media Cluster type.

Hilversum Mediastad's ambition is to grow into the fulcrum of the vibrant Creative Valley in the Netherlands. This is realised through a series of initiatives such as: collaboration with education institutes, start-up accelerator programmes and the rise of virtual collaboration platforms. Additionally, the spill-over effect into other creative industries and the pull-effect from foreign specialized technology organisations aids in fostering innovation at an industry-wide level. Distilling from this is the ambition and impetus to eventually transition into a Creative Valley.

Media Cluster → Creative Valley

Performance

Cultivating Knowledge

Several organisations within the MCoE stand out in the area of knowledge cultivation:

- The Media Campus is an initiative that is focused on education and talent management.
- The Institute of Sound and Vision preserves media within their museum by digitizing content and has a broad international knowledge network.
- iMMovator facilitates network and knowledge events.

These organisations also work together to facilitate knowledge sharing. For instance, iMMovator and the Institute of Sound and Vision collaborate to organize and develop Cross Media Cafés. These events provide a format for members of iMMovater and people in the network of the Institute of Sound and Vision to seek updates and have discussions on trends and developments in the media. The average number of visitors per session, to-date, has been 200.

The accessibility to sources that cultivate knowledge within the MCoE indicate the desire of the network to continuously learn and be up-to-date with developments.

Stimulating Employment

In 2014, different organisations within Hilversum Mediastad including the municipality, education institutes and companies formed a consortium with the objective to increase the media employability of the city. Examples of initiatives is the establishment of Lab24 – a collaboration space with favourable renting conditions, and SWITCH – a place where everyone can access workshops and involve themselves in presentations. These initiatives contribute to an attractive working environment drawing more people to work at the MCoE.

The creative industry accounts for 27% of the local economy in Hilversum with an annual turnover of approximately €2,7 billion. Scale reduction in media production in Hilversum has called for more freelance professionals – now 58% of the workforce – who can work in collaboration spaces e.g. SWITCH. The settlement of international organisations like NEP, United and Ericsson who are experimenting with new technologies like VR & AR are also attracting other companies to the park.

Cultural Heritage Conservation

Decorated with the 100 year-long heritage of being a media city, exemplifying traditional values of culture, philosophy and religion through public broadcasting, and celebrating a tight-knit connection with the people of Hilversum – this demonstrates how the MCoE embraces culture. Hilversum Mediastad is recognized as 'the mediastad', and frequently chosen as the location for reward ceremonies, recognizing talent in events such as Media Diamant and Radio Ring. Further, the Institute of Sound and Vision also have an agenda to preserve culture by digitizing and archiving media and promoting tourism and visitors (see below).



Driving Collaboration

The nature of collaboration is mostly driven from within the MCoE itself, on national scale, and in collaboration with the main stakeholders. Some start-ups initiatives and recent education partnerships have also been launched. Despite this, there is limited attraction or collaboration prospects foreseeable on an international scale yet.

iMMovater and the institute of Sound of Vision are working together, and cooperate to drive collaboration e.g. inviting experts to the Cross Media Café. Another collaboration initiative within the MCoE is MediaMatter, an innovation accelerator. Six media organisations (e.g. NPO, Persgroep, en de Groene Amsterdammer) are currently interested and involved in this initiative where the objective is to scout (inter)national start-ups and scale-ups.

Source: PwC Analysis, Beeld en Geluid jaarverslag 2016, Hilversum Media Campus, Monitor Creative Industrie 2016, Cross Media Café, MediaMatter

Creative Valley Hainaut

The Creative Valley Hainaut aims at connecting cultural, digital and creative practitioners in Mons and the wider region of Hainaut, particularly focusing on collaboration and economic development. It strives to be a hub and incubator for both local and international projects. The MCoE contributes to social development by providing technology-related trainings to unemployed adults.

Did you know…

… that the development of the 'urban space' in the Creative Valley includes the establishment of a new Congress Centre by the American architect Libenskind and a new train station by the Spanish architect Calatrava

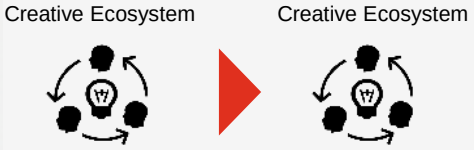
… that Hainaut had approximately 1200 jobs in Publishing and Audiovisual creation, 1000 in the Advertising and 3300 in the Entertainment and Recreation in 2016.

MCoE progression

Status quo and ambition

With a focus to create and foster a creative learning environment, Creative Valley Hainaut acts as an interconnected and overlapping network whose contributions outreach merely the direct beneficiaries of the MCoE. Its main goal is to enhance the widest form of creativity in society as a whole. Additionally, the MCoE is building the future footprint of the city of Mons. By improving living standards, bettering the reputation, and building cultural heritage – the MCoE solidifies its social agenda. As the Creative Valley is owned and governed by various bodies including the government, municipalities, institutions as well as private contributors – the Creative Valley acts like a Creative Ecosystem.

Current developments in Hainaut build upon the trends of media consumption and business models in media. This serves the wider creative ecosystem by encouraging 'platform acting' and 'ecosystem thinking' – thereby further strengthening the reputation of the Creative Valley of Hainaut.



Performance

Cultivating Knowledge

One of the main goals of Creative Valley Hainaut is to create and foster a creative learning environment. They facilitate knowledge cultivation through partner universities and research institutes to nurture a creative workforce and stimulate continuous learning. Partners include:

- Numediart University who has a global reputation for sound, image and video treatment and specialises in slow-motion film.
- The Microsoft Innovation Centre which is located in the Creative Valley and drives research in health.
- TechnociTe provides short and medium term trainings which are related to new technologies in ICT and digital. The target group for these trainings are mainly unemployed adults.

Stimulating Employment

Employment is stimulated through e.g. grant programs, and well-equipped facilities. New, state-of-the-art facilities aim to address the skills shortages in STEM-oriented occupations and encourage interest into new digi-tech industries.

- Hainaut offers a yearly grant programme supporting digital literacy projects in the region.
- Numediart is equipped with six different innovation and working labs that focuses on eight technological trends such as augmented reality, 3D design and motion captures.

Cultural Heritage Conservation

Creative Valley Hainaut has an underlying purpose to equip society with skills to improve their own city and demonstrates how media can shape culture. It builds upon the digital media consumption trend with interactive and digital media applications incorporated in the cultural heritage sites allowing people to discover the city. It has a rich cultural programme and the museums functions as 'creative connectors'.

- The cultural programme of Hainaut includes 4 seasons, 35 highlights and more than 300 events in total
- Mons has 12 museums and is about to open 5 new ones. The digitization of museums tie together a number of media formats including the use of IoT, web documentaries and city-branding like the VisitMons application for tourists exploring the city.

Driving Collaboration

Creative Valley Hainaut is a strong driver of collaboration and has strong synergies with other European Cities (i.e. Pilsen) to boost mobility and impact across boundaries. Examples include:

- Café Europe has the goal to foster social innovation and creativity allowing a network of European cities to share experiences.
- The MCoE drives transdisciplinary cooperation in the 'Mons-Borinage' and 'Centre' region gathering 25 partners, including local authorities, the Foundation Mons 2015, local and international companies, universities, museums, events and research centres.

In addition, Creative Valley Hainaut is a partner of The Mons 2025 City project to foster collaboration among citizens, creatives and the municipality. The MCoE facilitates this event and coordinates 19 municipalities in the wider region of Mons. It has been given the task to organize workshops, where concrete ideas are aligned with Mons' strategic objective.

Source: PwC Analysis, Website Creative Valley Hainaut, Coeur du Hainaut report, Employment report

FilmbyArhus

The 'Big Picture' is the name of FilmbyArhus' strategy for 2020 to drive companies and education in the digital visual industry to actively participate in developing society and culture in Denmark through e.g. the production of artistic films. It has a strong physical presence in the business park and throughout the region of Jutland. The aim of the MCoE is to focus on collaborations and projects to stimulate innovation within and outside the creative industry.

Did you know…

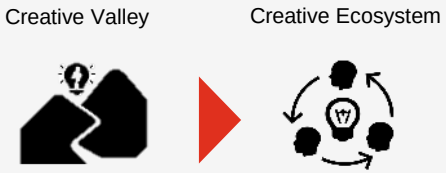
… that the municipal region of Aarhus is the second biggest city in Denmark with 336.000 inhabitants?
… that the institution is owned by the municipality?
… that the park houses 80 media companies?
…that the turnover in 2016 was 20 million DKK

MCoE progression

Status quo and ambition

FilmbyArhus is located in Aarhus Harbour and houses companies active in e.g. journalism, art, digital and visual industry. This MCoE's ambition is to use digital visual and media skills to drive cultural experiences and social development beyond the creative industry which is a characteristic of a Creative Ecosystem. To attain this ambition, FilmbyArhus initiated several projects to drive international collaboration and explore possibilities in other industries which serve to better the region of Jutland and to improve the standards of living with a strong focus on the application of creativity in its widest form.

However, the results of these initiatives are not visible yet therefore the MCoE can currently be seen as a Creative Valley which has taken the first important steps into progressing into a Creative Ecosystem by further leveraging the international reputation and strong recognition of Aarhus.



Performance

Cultivating Knowledge

FilmbyArhus facilitates knowledge sharing and cultivation through programs, master classes and projects. The park houses two educational institutions:

- Kaospilot – hybrid between design and business school that offers a leadership and entrepreneurship program
  - More than 600 people have completed the program
- VIA film and Transmedia – educates to produce film in different genres across formats and platforms:
  - 30 students a year (from 200 applicants)
  - Retention rate of 100%
  - Records a total of 120 students from the summer of 2016

Stimulating Employment

The 12,000m^2 business park located at the harbour has 500 work places. The MCoE will, in collaboration with Aarhus Municipality, expand the park with another 4400m^2 increasing the number of work places by 300 (i.e. increase by 60%). Moreover, talent development is a main focus of the MCoE including research centres for media and education and incubators and accelerators to create a vibrant start-up environment.

Cultural Heritage Conservation

The MCoE is involved in many projects that connects media with culture which is in line with FilmbyArhus' vision of driving cultural experiences and contributing to societal development in Denmark. Examples include:

- Digital visual companies collaborated with experts from the Moesgaard Museum to produce "The Journey", a cinematic production about the human conditions filmed on seven continents.
- In Project New Nordic Noir, the process of film and television production is reversed. Producers and writers were invited to use the West Coast of Jutland as the starting point for stories as the area contains stories that need to be told. This initiative is expected to boost film tourism.

Driving Collaboration

FilmbyArhus drives collaboration within and outside the creative industry through challenging (cross border) projects. Examples of cross-border projects include:

- Create converge: organisations are given the task to explore the potential of gaming and animation technology in other industries
- Cross motion: organisations are given the task to explore VR and AR opportunities in health, education and tourism sector

See case study for more information

Source: PwC Analysis, Website FilmbyArhus

Next Media.Hamburg

Due to developments in the industry such as change in consumer behaviour and technological development, companies need to change their business model to stay relevant and competitive within the industry. As such, nextMedia.Hamburg was established. nextMedia.Hamburg believes that successful digital business models at the intersection of content and technology is key to the future of the media sector. With this vision in mind, nextMedia.Hamburg was established to expand and support the regional network of media and digital industries, especially in regard to the development of sustainable, innovative content business models in the digital economy to secure and expand Hamburg's position as a leading media location.

Did you know…

… that Hamburg's creative industry has more than 21,000 companies and generates 10+ billion euros in revenue annually?

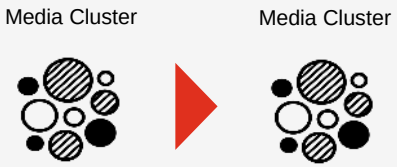
… that nearly three quarters of Germany's top 25 top magazines are produced in Hamburg?

MCoE progression

Status quo and ambition

The nextMedia.Hamburg initiative was established in 2014 to support the entrepreneurial climate within the media/IT industry cluster of Hamburg but also to serve the industry in general. As it has almost no physical presence and the main focus of the virtual platform to drive collaboration between education institutes, start-ups and private companies by means of a strong (online) community there is a high tendency for the creation of employment and the sharing of knowledge, therefore NextMedia.Hamburg would currently fall under the form of MCoE Media Cluster.

As the current initiatives from NextMedia.Hamburg include the promotion of the city of Hamburg as purely a business location and the fact that they are focused upon further strengthening synergistic relationships with stakeholders without the indication of cultural spill-over or signs of bettering the city for its living standards the MCoE is likely to stay close to the form of Media Cluster.



Performance

Cultivating Knowledge

nextMedia.Hamburg facilitates knowledge sharing by organizing networking events through their association Hamburg@Work, nextMedia.Lectures where renowned experts discuss issues and trends within the industry, and through partnerships with several educational institutes such as Business & Information Technology School, Hamburg University of Applied Sciences (HUAS) and Hamburg Media School. Specifically, the partnership with HUAS prompted the initiation of the 'Masters of Games' track. This offers students the opportunity to undertake theoretical courses to develop the technical knowledge in the field of game development.

Practical knowledge concerning finance, business models and operating structures is addressed through frequent workshops conducted by Start Up City Hamburg.

Stimulating Employment

nextMedia.Hamburg stimulates employment by building bridges between start-ups, and different sizes of enterprises in the industry through the recommendation of cooperation projects, events and potential business partners. An example of such is 'StartHub' – an initiative designed to nurture Hamburg's start-up scene through the creation of projects and expediting business processes.

Launched in 2003, one of the core branches of nextMedia.Hamburg, Gamecity:Hamburg supports businesses in the gaming sector. The network was founded with the intention of developing Hamburg as an attractive location for the games industry. Since it's launch, the number of jobs in the gaming value chain has seen significant growth – increasing from 800 to 4,000, sorted within 150+ businesses in the segment.

Cultural Heritage Conservation

Organisations within Hamburg are not only promoting their business, but are also highlighting the city as a business location for collaborations and projects.

Hamburg has notable repute as a city of media: the "city of content" – a marked history of leading political magazines, tabloid newspapers, weekly magazines etc. Whilst consolidating this prestige, nextMedia.Hamburg seeks to position itself as a location for innovative businesses in the fields of online, software and games. In turn complementing the agenda of the city of Hamburg and it's keen role in shaping media and digital transformations.

The cosmopolitan city of Hamburg has long been an ideal environment for founders and entrepreneurs, nextMedia.Hamburg contributes to this continuation during the transition to the digital-era.

Driving Collaboration

In line with the mission of nextMedia.Hamburg, multiple events are organized where stakeholders from different companies within the industry come together to share ideas and co-collaborate. As an example, Gamecity:Hamburg has hosted 200+ events for game industry professionals, connecting 30,000+ participants. One of the most well-known events, Gamecity Treff facilitates informal contact, networking and the exchange of knowledge with the aim of promoting business contacts within the games industry and beyond.

Alongside this, nextMedia.Hamburg provides co-working space for freelancers, entrepreneurs and startups alike. Included in this offering, nextMedia.Hamburg establishes networking channels to spark potential partnerships. This creates an extensive, interconnected, and integrated network of business support avenues.

Source: PwC Analysis, Website nextMedia.Hamburg

Vancouver Film & Media Centre and Film Commission

The Vancouver Media Film & Media Centre (VCFM) and the Vancouver Film Commission (VFC) falls under the governance of the Vancouver Economic Commission with the VCFM focused on the Digital Entertainment & Interactive industries and VFC overseeing the TV and filming production in Vancouver. The focus of the MCoE is to realise the industry's true potential through advocacy, investment, promotion and positioning.

Did you know…

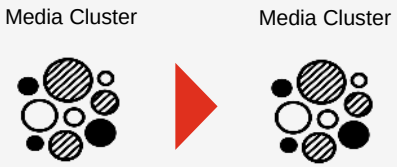
… that the Digital Entertainment & Interactive industry in Vancouver has close to a 1,000 businesses doing screen-based activities such as visual effects (VFX), animation, film & TV production and games development?
… Vancouver has one of the biggest clusters in the world for games and animation
… that the premier international event on computer graphics and interactive techniques (SIGGRAPH) attracted close to 15,000 attendees?

MCoE progression

Status quo and ambition

Vancouver Film & Media Centre is commercially driven and profit oriented as the main focus is on content creation and production. Their dominant market position is driven by healthy relationships with start-ups, foreign producers and educational institutes. However, they also have strong ties to the local government which ensures a stable tax and geopolitical environment to keep the MCoE a very attractive location for media investments building upon the city's economic reputation. As such, the characteristics are suggestive towards a Media Cluster.

However, there are limited signs to drive industry spill-over and no intention likely to broaden cultural initiatives to serve the wider ecosystem besides gaming. Neither are there incentives that better the quality of life or further builds upon the city's reputation for living standards, Therefore, the MCoE is most likely not to progress into another form of appearance than the one of Media Cluster.



Performance

Cultivating Knowledge

The MCoE facilitates knowledge sharing by promoting events related to technology and the Digital Entertainment & Interactive (DE&I) industry and education and training programs available in Vancouver such as Centre for Digital Media (CDM). CDM offers a Master of Digital Media graduate degree program and is home to industry studios and a variety of industry and professional development programs. The Centre is jointly owned by education institutions such as University of British Colombia (UBC) and Emily Carr University of Art + Design.

Stimulating Employment

The Digital Entertainment & Interactive industry in Vancouver generates more than 40,000 jobs boosting the city's economy by billions. The MCoE has several initiatives to stimulate employment:

- The MCoE promotes the use of CareerScout, a tool that connects people to local companies looking to hire experienced professionals. Participating companies include Microsoft and Amazon.
- For VFX and animation jobs, the MCoE works together with Lost Boys – School of VFX. Vacancies in VFX, animation and games are being published on a job board which contains approximately 1,700 vacancies posted by 77 different companies.

The government also indirectly stimulate employment by providing attractive tax incentives to film and television production activities. *For example,* the Film Incentive BC Tax Credit – a labour based tax incentive offering a refundable tax credit of 35% to eligible businesses.

Cultural Heritage Conservation

TV production and animation started developing in the '70s and '80s respectively and are regarded as the root of the DE&I industry in Vancouver. From there on, the industry kept growing and expanding in scope (e.g. gaming). Today, Vancouver is ranked 3 for both Film & TV production in North America and city for animation careers boosting the city's economy. TV production and animation is thus an important aspect in the culture of Vancouver. By developing and implementing a strategy to strengthen the DE&I industry, the MCoE hopes to continue this legacy.

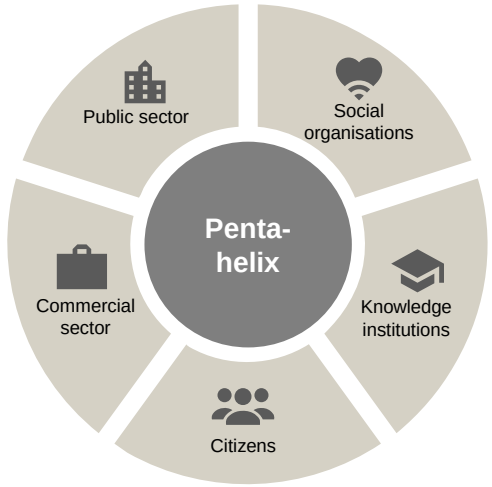
Driving Collaboration

The MCoE itself does not seem to directly drive collaboration. Instead, the MCoE describes the city's compact design as natural driver of collaboration as one *"can speak in the street or in a coffee shop".*

Source: PwC Analysis, website Vancouver Film & Media Centre and Film Commission, Centre For Digital Media

Ecosystem collaboration

A perspective on collaboration across the penta-helix.



Roles across the Penta-Helix

- Public sector
- Social organisations
- Private sector
- Learning Institutions
- Members of the general public

*See appendix for information on the Penta-Helix model

Source: PwC Analysis

Media Centres of Excellence	Indication	Description of collaboration across the Penta-Helix
[**Hilversum – The Netherlands**] Hilversum Mediastad		Hilversum Mediastad mainly works with knowledge institutions, public services and citizens. For example: the MCoE has a physical “Media Campus” whom collaborates with knowledge institutions to provide media courses to students and professionals. In addition, it aims to involve citizens of the local community by hosting “open days” which allows them to get a glimpse of “the behind the scenes”. Another example includes that the MCoE provides collaboration work places for start-ups, freelancers and students.
[**Hainaut - Belgium**] Creative Valley Hainaut		Creative Valley Hainaut is connected to nearly all stakeholder clusters across the penta-helix. The MCoE makes a tremendous effort in connecting, aligning and involving stakeholder clusters in nearly every project that is initiated. For example, the collaboration with the Mons region and Café Europe are multi-stakeholder initiatives tackling knowledge, employment and urban challenges across large scale platforms.
[**Aarhus - Denmark**] FilmbyArhus		FilmbyArhus is connected to nearly all stakeholder clusters across the penta-helix. The MCoE houses two educational institutions on site and works together with different stakeholders to provide an extensive training curriculum. Also, it works with various stakeholder clusters to explore possibilities of digital visual skills in other industries such as health, tourism and education. Moreover, the MCoE works together with the municipality to expand their physical presence and works with other public institutions on projects such as Aarhus Stories.
[**Hamburg - Germany**] nextMedia.Hamburg		As a relatively young MCoE, Next.Media.Hamburg has been establishing a few strong partnerships with local, knowledge institutions to provide lectures and other knowledge sessions for students and media professionals. In addition, the MCoE has a strong focus on the gaming sector. It works with established companies and start-ups to cultivate more knowledge and drives collaboration across multiple stakeholder clusters.
[**Vancouver - Canada**] Vancouver Film & Media Centre and the Film Commission		The Vancouver Film & Media Centre has a strong commercial focus on building out their knowledge and expertise on film & media production and their mediating role on the job market. The focus on industry knowledge and employment has led to numerous partnerships with business from the private sector and knowledge institutes. In addition, the MCoE benefits from the attractive tax incentives that the municipality offers (international) stakeholders.

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Selected Case Studies

LEARNINGS FROM THE BENCHMARK

The case studies provide additional insights which could be interesting for Hilversum Mediastad. In the near future, these could consolidate a future-proof, robust format that continues to allow for (inter-)national collaboration.

The case studies demonstrate that urban design and societal development can play an important role in improving the living standards. Furthermore, a strong online brand positioning contributes to the reputation of a city.



Spotlight on FilmbyArhus

Drive cultural experiences and societal development by applying new tech (1/2)

FilmbyArhus acknowledges and addresses the trend, creating empathy and interaction through audio-visual narratives, and has made its mission to gather and strengthen the value chain in the creative industry and use audio-visual narratives to create growth and value in society. With the help of technologies such as virtual and augmented reality and 360 videos, the MCoE attempts to blur boundaries among industries through projects, events and master classes, which should ultimately drive cultural experiences and societal development.

Project Cross Motion

In the EU-funded project Cross Motion, skills and knowledge from the digital visual industry are not being used to create entertainment, but to explore new business opportunities in the education, health and tourism sector. The development of SME networks initiates and enhances cross innovation and connects experts in the audio-visual field and gaming industry with professionals in noncreative sectors. In this project, participants were specifically asked to explore VR and AR applications in the specified sectors. One prototype that resulted from the project is the VR Clinic, a VR computer game were students interact with a virtual patient about to learn about symptoms, to order blood tests and to learn how to draw the right conclusions.

Project Create Converge

Create Converge is a North Sea Region-funded project that consist of companies that recognize the potential of gaming and animation technology in noncreative sectors. The objective is to develop knowledge and learn across cultures and borders. As part of this project, FilmbyArhus collaborates with the University of Hertfordshire and VIA University College to develop masterclasses for creative professionals who are interested in applying their skills in noncreative industries. There is one project which focuses on visual content in the fashion industry through content projected on building or other surfaces.

Source: PwC Analysis, website FilmbyArhus



Image credits by FilmbyArhus

Spotlight on FilmbyArhus

Drive cultural experiences and societal development by applying new tech (2/2)

Project Aarhus Stories

How do you tell a 1000 year old story in an interesting way for a wide and diverse audience across generations? To tackle this question, FilmbyArhus collaborated with Old Town for the historical academic knowledge, and production company M2Film to deliver an unique experience by projecting the city‘s history in five chapters over the south-facing façade of Aarhus Cathedral. By combining the latest knowledge in imaging, film production, and animation combined with historical knowledge, new opportunities and experiences arise in cultural heritage preservation.

Event this.festival

With FilmbyArhus at the forefront, this.festival (tech, human, interactive, stories), presents tomorrow’s digital and visual experiences for both the private and public sector. The festival highlights how unique solutions can be created when skills of the digital visual industry meets other industries.

Event Aarhus Walks on Water

Aarhus Walks on Water is an event organized together with Aarhus University, VIA UC, Headstart Fashion and Silkeborg Production College. Young fashion designers showcase their collections of technology enhanced clothing and accessories on a floating catwalk in Aarhus Harbour.

Key insights from this case study

Digital and visual content is no longer restrained to the creative industry, but can be used as a lever for urban development, societal innovation and value creation across the broader private and public sector. FilmbyArhus recognizes this and has initiated projects, events and master classes to further enhance their contribution to the local community, businesses and beyond their industry. By opening up and bringing competence expertise towards other industries, Aarhus has taken the first steps into becoming a true creative ecosystem.

Source: PwC Analysis, website FilmbyArhus

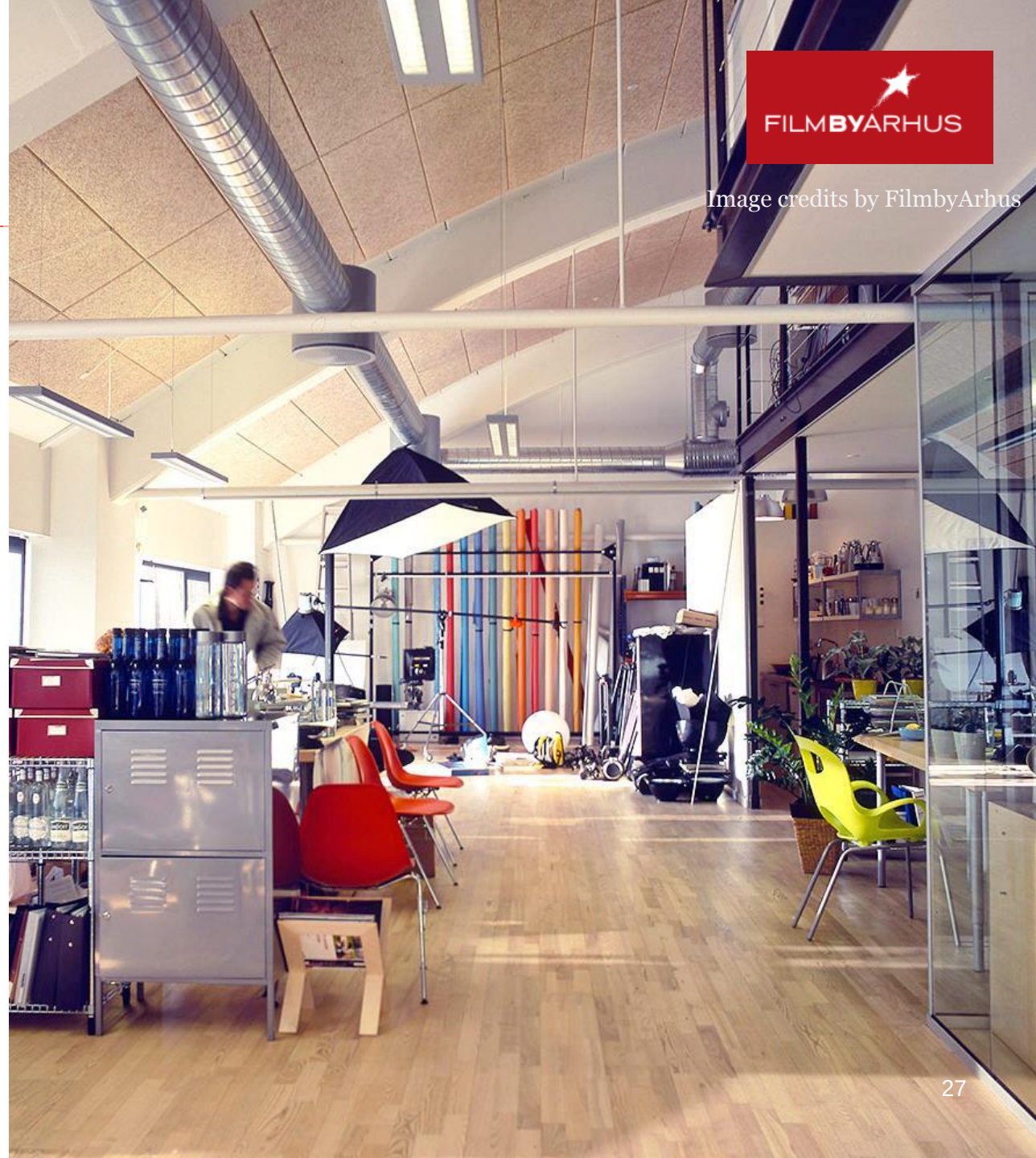


Image credits by FilmbyArhus

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Spotlight on FilmbyArhus

Urban development is important to enrich the MCoE and the city of Aarhus

Aarhus is the second largest city of Denmark with a rich heritage in culture, education and design. The European Capital of Culture of 2017 has planned several large scale construction projects to enrich its city towards it 269,000+ inhabitants and other local stakeholders. The city's growth objectives are associated with an expected increase in inhabitants (+25% from 2008 to 2030), students (+50%); thus, an increase in homes (+33%) and jobs (+50%).

Urban development

A competition with several urban design bureaus was launched in 2015 by FilmbyArhus and Aarhus Municipality in order to promote a positive development of the film city and add new qualities and experiences to the area where Aarhus harbour meets the city centre. This was one of the first steps of FilmbyArhus to drive value across their local community via urban development. Another example is that FilmbyArhus is improving their physical presence to be able to create more impact within the creative community and towards local citizens. FilmbyArhus' new building is expected to be finalized by 2018 of which the function is not only to facilitate new projects and serendipitous connections, but it is also meant to integrate more with the city as a urban space for the Aarhusians. The space will total 4,400 square meters, a 1,000 square meters of garden on the building, and the city building will be used as a big canvas to show the work and projects of FilmbyArhus and its partners.

Urban mobility

With regards to mobility, Aarhus has been one of the first cities to offer a sustainable mobility plan through the use of low barriers plans for bicycles and e-bikes. It will also realise Denmark's first light rail transportation system to allow shorter travel time and contribute to a greener city. This development is driven among others by CleanTech and Smart City initiatives of Aarhus, which contributes to a more attractive city to work and live in.



Image credits by FilmbyArhus

Aarhus' Strategic Business Plan

To realise the ambition of a becoming a truly European creative industry city, Aarhus has written a Strategic Business Plan to show their commitment towards the future. The following paragraph regarding "Rethinking the City" is included in the Strategic Business Plan: *"We will rethink the city in the context of the region. We will explore the future of the city, its collective memory, tradition and history and use what already exists in new ways. In 2017, we ask: can the built environment be part of our strategy against premature aging? Does architecture add to our creative mind-set? We seek answers to the way we will live in the future, through the innovative design strategies of today."*

Key insights from this case study

The city of Aarhus has made it their mission to tackle urban challenges by increasing their *scope of work* in contribution to their local environment and community. They commit themselves to an integral, multidisciplinary approach across the penta-helix and leverage their physical and digital assets to contribute to a higher level purpose than their MCoE.

Source: website Aarhus, Aarhus Strategic Business Plan 2017, AART architects

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Building virtual platforms and online presence of MCoE

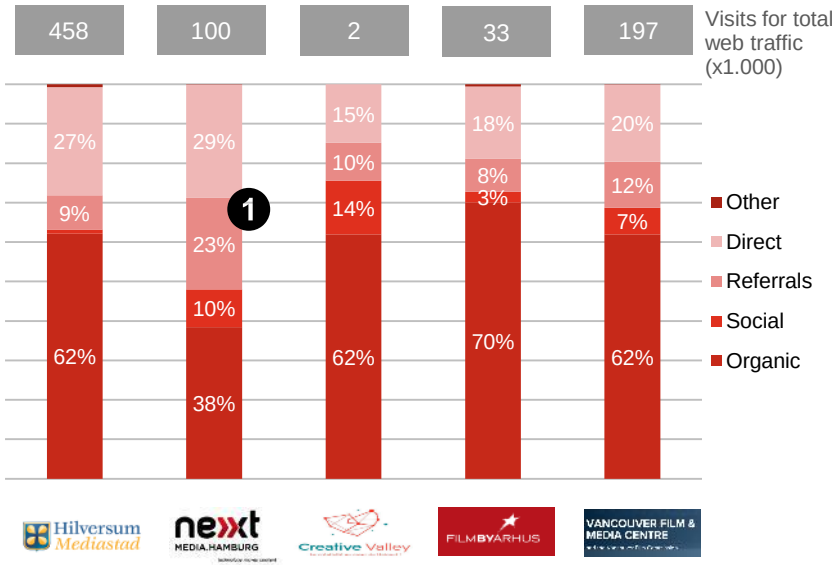
The digitization of MCoE enables those with a well-established virtual presence and digital community to increase awareness in the industry

1 **Collaboration and ecosystem approach to consolidate industry associations drives reciprocal website referrals**
Web traffic of nextMedia.Hamburg is driven in part by referrals from closely affiliated gaming pages such as 'gamedevamp.com' and 'bytro.com'. This exemplifies strong industry affiliations with both pan-European and international gaming counterparts. In turn creating an effective web of interconnected domains for gaming users.

2 **A unified Hilversum Mediastad website (as opposed to several disjointed domain names) could better contribute to online profiling and identification.**
Multiple domain names are associated with Hilversum Mediastad (presented below). 'Hilversum.nl' generates the greatest number of unique monthly visits, other domain names experience less than 5,000 unique visitors per month. Notable spikes in traffic are observed for mediapark.nl (Dec 2016) and mediastadevents.nl (May 2017), however these are structurally unrelated to overall trends.

3 **Search keywords generated indicate a strong branding and value proposition for nextMedia.Hamburg relative to Hilversum Mediastad**
Keyword searches suggest traffic is directed to nextMedia for gaming related enquiries, supporting the hypothesis of a strongly defined brand proposition. Relative to Hilversum Mediastad – traffic is generated through entries unrelated to media, such as keywords including 'municipality' – these experience high bounce rates away from the webpage

Incoming web traffic share per channel (Aug 16- Jul 17)



Note: Labels are not included in this graph when <2%
Source: SimilarWeb (2017) – Reported as of 1 Sep 2017

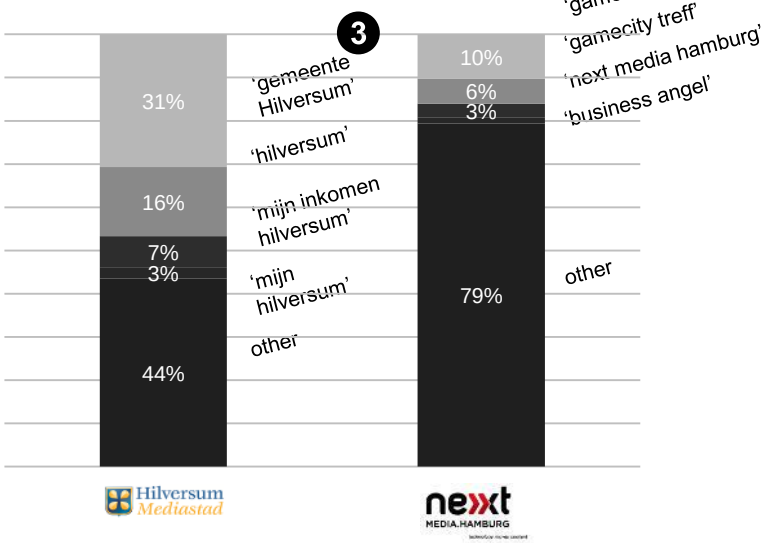
Unique monthly visits by domain name (Aug 16 – Jul 17)

Domain Name	Average Unique Monthly Visits
hilversum.nl	15000
hilversummediacampus.nl	<5000
mediastad.nl	<5000
mediapark.nl	<5000
Mediastadevents.nl	<5000

2

Note: Numbers rounded to nearest '000
Source: SimilarWeb (2017) – Reported as of 1 Sep 2017

Keyword referrals for organic searches (Aug 16- Jul 17)



Source: SimilarWeb (2017) – Reported as of 1 Sep 2017

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The data collected from web and social tools are based on algorithms of the tools applied. These algorithms provide estimates of traffic, click and posting activity per website. The results presented in this report are thus indicative estimates.

Co-creation session: Building a vibrant future for Hilversum Mediastad

15 SEPTEMBER 2017
(SEE APPENDIX FOR DETAILS)



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Collected insights from the workshop session on 15 September 2017 (1/2)

The objective of the workshop was to collect insights from the primary stakeholders of Hilversum Mediastad; the stakeholders include individuals from the municipality of Hilversum, iMMovator, Media Park Beheer, and Institute for Sound and Vision and the Ministry of Economic Affairs. The workshop was kicked off with a short presentation on the MCoE benchmark results, followed by a discussion on the future of Hilversum Mediastad. The discussion led to a wide range of observations and insights regarding the ambition of Hilversum, how it adds value to the creative ecosystem and what the possible next steps could be for Hilversum Mediastad. This section summarizes the observations and insights derived from the workshop discussion.

A clearly defined strategic direction helps to reposition Hilversum Mediastad within the creative industry, and to formulate actions to build a futureproof Media Centre of Excellence

From the discussion with the workshop participants, it is clear that Hilversum Mediastad is in need of an strategic ambition and clear mission statement, which helps stakeholders to align on building a future proof proposition. It is important to involve organisations across the penta-helix for collective commitment and involvement in formulating the strategic ambition for Hilversum Mediastad. This approach will help to increase buy-in from stakeholders and create a sustainable future for the MCoE. In addition, it was mentioned by the workshop participants that performance measurement should be more clearly defined and transparent to participants. Throughout the years, Hilversum Mediastad has been known for its function as the “Verhalenfabriek”. The workshop participants suggested to take this function as the core and revive the role for Hilversum Mediastad as storyteller.

Hilversum has all the traits of becoming a vibrant MCoE

The workshop participants do not foresee large barriers for Hilversum Mediastad to become a vibrant MCoE. Hilversum has a broad range of resources and assets that can pull relevant stakeholders towards the Media Park which includes: a city with a suburb character, recently improved infrastructure, an education system including international school, an attractive fiscal climate and green scenery. The only possible point that could hinder Hilversum from growing is a slight shortage in housing.

The economic ambition is to improve talent development and facilitate academic development

The most mentioned focus area by the workshop participants was attracting the right talent with the right skill-set to create a sustainable workforce for the creative industry. One of the suggestions was to look into more long-term partnerships and physical presence of academic institutes. Additionally, knowledge sharing initiatives are fragmented and facilitated by different stakeholders. In order to build scale, it could be considered to leverage the position of The Institute of Sound and Vision in more (international) knowledge sharing including the use of virtual platforms.

Stimulating employment is a key driver for the Municipality of Hilversum and should involve stronger collaborations with relevant talent, organisations and institutes

The municipality has clearly expressed that driving employment is a key parameter in building a prosperous creative ecosystem in the future. Ideally this should be expressed and tracked by setting clear objectives and performance metrics agreed among relevant stakeholders, who are committed in realising together with the municipality. Another important component is improving entrepreneurship within Hilversum Mediastad by collaborating more with start-ups, scale-ups and established organisations.

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Collected insights from the workshop session on 15 September 2017 (2/2)

Leveraging cultural heritage is important to continue building sustainable creative ecosystem by leveraging the knowledge and expertise of renowned organisation like The Institute for Sound and Vison

From the discussion with stakeholders, it is clear that Hilversum has a lot to offer in the area of culture. However, it is important to safeguard a sustainable development within this area and leverage the cultural variety of the media park. Apart from television production, other domains like radio production, format development and distribution technology should also be leveraged to drive value across the creative ecosystem.

The workshop participants have observed that the majority of the initiatives across Hilversum Mediastad are not widely shared, and that the value is not always seen or perceived by their stakeholders. Therefore, by making the wider public more aware of what is happening within Hilversum and communicating it more and in a transparent way will contribute to the brand positioning of Hilversum as driver of the creative ecosystem in the Netherlands.

From the workshop session, a few observations were shared regarding urban design and planning, however a deep-dive is needed to formulate a detailed vision

The discussion retrieved useful insights based on Architecture & Design, Values & Cultural Heritage and Landscape & Buildings, however the workshop participants recommended to formulate a more detailed vision for the urban design and development for Hilversum Mediastad. The discussed points included:

- The design of the physical media park Hilversum should be of high quality, multifunctional, futureproof and preferably iconic. In addition, it was noted by applying media outdoor could contribute to a more holistic “media experience” in the urban space.
- The Landscape & Buildings should modular, multifunctional, creative use of existing (and new) buildings integrated within the outdoor environment and local scenery. A modular, multifunctional building could facilitate function mixing, plenty of meeting and working spaces, a hotel facility, experience centres for new technologies, intertwined with nature and surroundings but within max. 30 min reach from Amsterdam.
- The values and cultural heritage of Hilversum as the “Verhalenfabriek” should be clearly expressed in the urban development as well as brand positioning plan. Urban development should directly connect to the cultural programme and initiatives of Hilversum and emphasize that Hilversum is the physical hub of the creative ecosystem of the Netherlands.

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Appendix

CONTENTS

SUMMARY FACTS & QUANTITATIVE INFORMATION
PENTA HELIX INFORMATION
BENCHMARK BACKGROUND INFORMATION
CO-CREATIVE WORKSHOP SESSION
SOURCES



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Overview of MCoE general information & quantitative data…

Hilversum Mediastad

- MCoE media cluster
- Size of Hilversum city is 46.35km^2 and ~89,100 inhabitants
- Park owned (2/3) by the English investment firm Europa Capital and by public and private broadcasters (1/3)
- Park is situated urban area ‘Gooi en Vechtstreek’
- City celebrates 100year anniversary in 2017
- Nearly 8000 jobs in the Media and Entertainment industry in Hilversum in 2015
- Hilversum Mediastad houses 120 - 150 companies
- Creative industry account for annual turnover of approximately €2.7bn
- ~30,000 visitors to Hilversum Mediastad open day in 2016

Creative Valley Hainaut

- MCoE creative ecosystem
- Size of Mons is 146.56km^2 and ~94,964 inhabitants
- Park owned and governed by various bodies – government, municipalities, institutions as well as private contributors
- Park situated across wider region of Hainaut
- Further building on 2015 award of European cultural capital
- Hainaut had approximately 1200 jobs in Publishing and Audio-visual creation, 1000 in the Advertising and 3300 in the Entertainment and Recreation in 2016
- Creative Valley Hainaut houses 35+ large-scale businesses and supports a number of start-ups

FimlbyArhus

- MCoE creative valley
- Size of urban Aarhus is 91km^2 and ~269,000 inhabitants
- Park owned by the municipality
- Park is situated on 12,000m^2 property at the harbour
- Park initiative born in 2011
- Jobs in the creative industry amounted to 4,161 for Aarhus in 2015
- FilmbyArhus houses 80 media companies and has 500 work places
- Turnover for FilmbyArhus in 2016 was 20mn DKK

nextMedia.Hamburg

- MCoE media cluster
- Size of Hamburg city is 755km^2 and ~1,787,000 inhabitants
- Jointly funded by public and private bodies, and businesses and individual
- Park is predominantly virtual based (not physical location)
- Park initiative born in 2014
- Contributed towards creation of 3,900+ jobs in now 140 companies
- In gaming sector, 150+ businesses are situated in Hamburg
- Hamburg creative industry generates +€10bn in revenue annually?
- Gamecity:Hamburg has hosted 200+ events, bringing 30,000+ participants

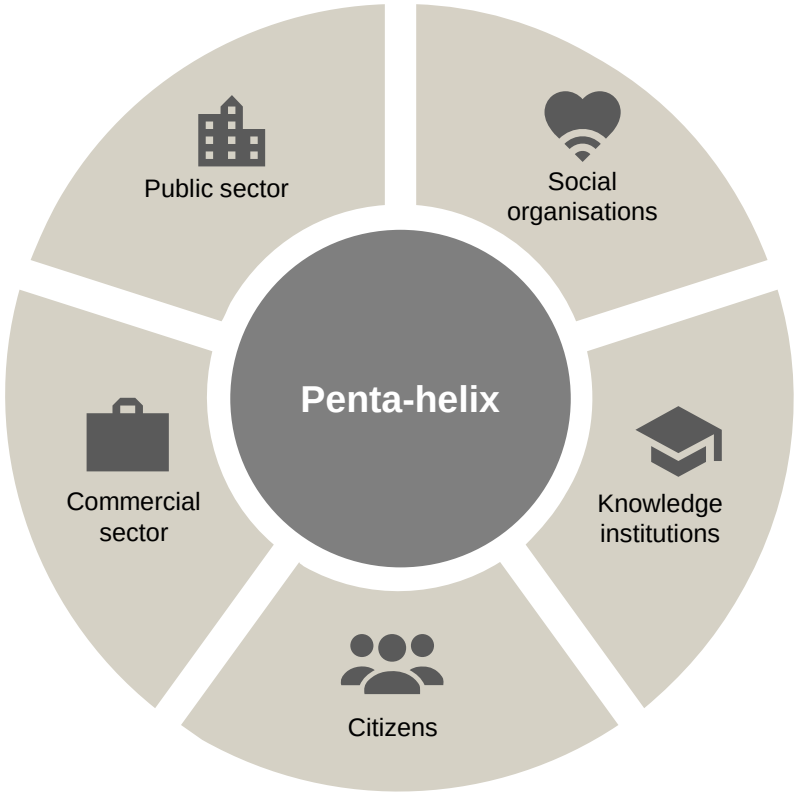
Vancouver Film & Media Centre and the Film Commission

- MCoE media cluster
- Size of Vancouver city is 114.97km^2 and ~631,500 inhabitants
- Under governance of Vancouver Economic Commission
- Park spread across different facilities in Vancouver city
- VFMC established in 2016
- Digital Entertainment and Interactive (DE&I) industry generates more than 40,000 jobs in Vancouver
- DE&I industry in Vancouver has approx. 1,000 businesses
- Vancouver has one of the biggest clusters in the world for games and animation
- DE&I generates $3bn p/a revenue in British Columbia
- International event attracts ~15,000 attendees per year

Source: Hilversum Media Campus, Creative Valley, FilmbyArhus, nextMedia.Hamburg, VFMC and Film Commission & Trade and Invest BC

Penta-helix, an integral approach towards ecosystem collaboration

Penta-helix



Penta-helix, a integral and multidisciplinary approach towards ecosystem value

Successful economic regions are able to operate in a sustainable manner by finding a balance among strategic ambitions around economic development, social cohesion and quality of the living environment. The 'penta-helix' model assists in building and establishing multidisciplinary and –interest approaches to involve relevant stakeholder clusters to achieve common objectives. The model includes five perspectives:

a) public sector;
b) private sector;
c) social organisations;
d) learning institutions and
e) members of the general public.

Application in this research study

From our research study, it should be noted that the role of MCoE vary depending on factors such as purpose, strategic positioning and market developments. However, the majority usually act as a centralized hub from a "hub and spokes model", which facilitates new connections, project and knowledge cross-overs, and innovation delivery across the 'penta-helix'. The value that MCoE create can be increased by facilitating more ecosystem collaboration through partnerships and standardized ways of working, whilst providing sufficient flexibility towards new approaches and partnership.

Source: PwC analysis

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We will perform the comparison of MCoE by means of 5 research components based on the value drivers

Research components	Sub components	Research questions
General characteristics Purpose, organisation and marketing	Strategic vision, organisation, governance, and physical location	What is the purpose and objective of the media campus? How is the media campus organised? What are the physical characteristics of the media park, who legally owns the park and how is it financed?
	Focus area	Which domains does the media campus cover? From a competence (e.g. job creation, knowledge sharing) and sub sector (e.g. broadcasting, film, gaming) point of view?
	MarComms	What are the relevant and major marketing & communication initiatives?
Cultivate knowledge Knowledge development, sharing and application	Degree of complementation and specialisation	To what extent is the knowledge and expertise complementary with other parks? And to what degree is it specialised?
	Knowledge sharing and cultivation	What does knowledge sharing entail? And how is this organised and facilitated by the media campus? How is new and adaptive knowledge cultivated?
	Technology development	How is the use of new technology applied? And what are the objectives regarding innovation?
Stimulate employment Employment and local impact	Employment and entrepreneurship	How does the media campus stimulate employment and entrepreneurship? To what extent is there a business pull towards the media campus? What kind of initiatives are organised, and what are their results?
	Talent development	How does the media campus create and maintain talent development and educational opportunities?
Driving collaboration Campus composition and collaboration	Composition of campus members	Who are the campus members (stakeholders) and what is their role? (e.g. professionals, universities, businesses, other public institutions, other campuses, etc.)
	Nature of collaboration	What is the nature of the collaboration and what are the desired outcomes? To what extent are there international and local influences and impacts?
Embrace cultural heritage Sustain the history and future of the creative industry	Cultural heritage	How does the media campus maintain and secure their cultural heritage whilst anticipating and reacting on future developments?
	Develop future cultural footprint	How does the media park cater for the future cultural footprint and which spill-overs are present across the creative industry?

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Discussion topic: next steps for Hilversum Mediastad

Translating ambition into reality – what are the key focus areas to realise the strategic vision?

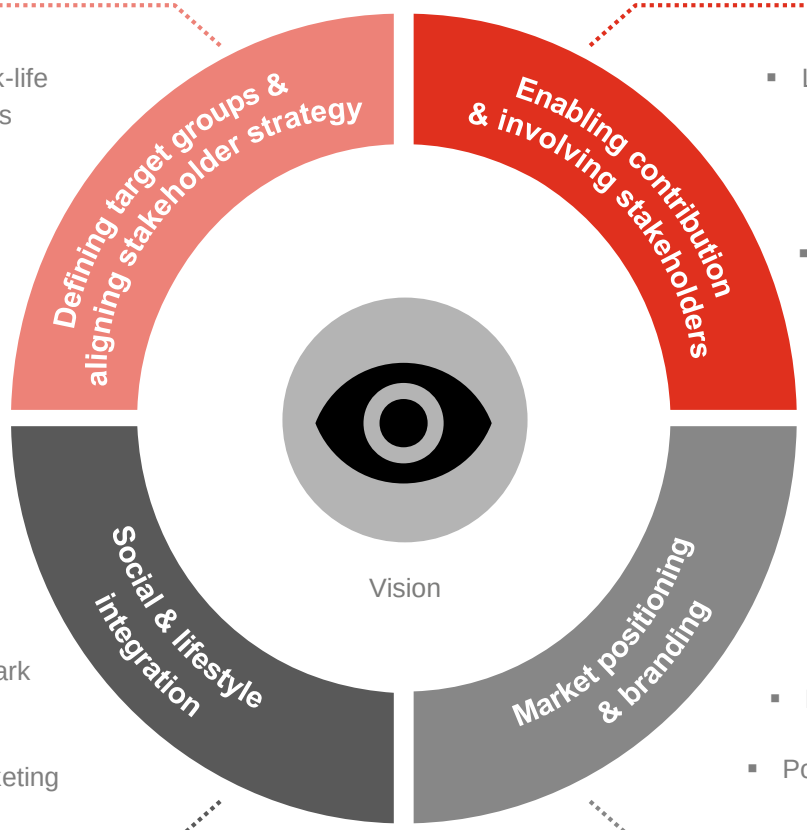
Key focus areas as identified by workshop participants…

Demographics & attracting users

- Attract co-creative, diverse users who engage in park-life
- Determine user base – hub for creativity and start-ups
- New (updated) methods for consumer outreach
- Staying relevant and user-friendly for consumers
- Need for accessibility and usability
- Sufficient infrastructure for talent pool?
- Affordable housing and facilities for target group – rent for companies is not prohibitive
- Where to be (behind the scene)? Take them inside?

Media park "for the people"

- Media place to be, i.e. you never want to leave
- Hip and happening – distinctive media culture
- Live, eat, love, work, sleep, enjoy, shop, go out, etc.
- Hilversum is known as the "Verhalenfabriek" – build heritage in future through story-telling
- Connect public space and urban space with media park and more broadly the city of Hilversum
- Emphasize value in knowledge development
- Interwoven approach: combined city media and marketing
- Creative meeting invitations



Steering direction of park across entire 'helix'

- Leverage contacts to promote collaboration and mobilize user and partner base available to Hilversum Mediastad
  - Decision of primary target groups and outreach models, i.e. B2B/ B2C approach
  - More bottom-up initiatives and concept test ideas
- Align and include expectations of park stakeholders in forming a future strategic direction
  - Promote open innovation & triple helix structure
  - Collaboration with other media parks

Park awareness and consumer image

- Grow and use Hilversum brand
  - Effective tools for branding and positioning
  - Latest media entertainment – build reputation for transitioning from old to new media formats
- Build reputation of central media campus of Netherlands – heart and soul of Dutch media world
- Position Hilversum as attractive hotspot – a creative valley
  - Tourist attraction – 30 mins from Amsterdam

Source: Hilversum Mediastad Co-Creative Workshop Session (11 Sep 2017): *Findings and input collated from workshop participants*

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Discussion topic: the value drivers

What are the key inputs required to develop Hilversum Mediastad into a sustainable, innovative creative valley?

Cultivating Knowledge



- Hogeschool and university initiatives
- Develop competency in media and economy sectors
- Appoint a campus ambassador to drive media interest
- Key driver: talent development
- Tying social issues into agenda
- Leveraging knowledge does not need to be in physical location (capabilities can be spread)
- Sound and Vision Institute – consider as umbrella function for a number of different / fragmented initiatives
- Develop and scale initiatives – current initiatives are fragmented in Hilversum
- Determine best-fit knowledge sharing via questionnaires and surveys

Stimulating Employment



- Attract start-ups and more scale-up businesses alike; consider what industry is most relevant to target
- Capabilities in virtualization, IT, VR/ AR viewing
- Develop intrinsic motivation and inspire others internally and externally
- Employment mix with other uses such as broadcast and publishing
- For the Hilversum municipality employment is a key driver of focus
- Target of 30% increase in employment in 2017-2025 in Hilversum

Cultural Heritage Conservation



- Facilitate through video format
- Focus on media embedding history or culture
- Consider importance of this in context of Hilversum Mediastad
- Media mile Hilversum
- Use Hilversum branding
- Leverage current cultural heritage to build future footprint
- Link media to Music in Hilversum
- Better position the institute of Sound and Vision and leverage position
- Leverage different cultures and mindset in the park
- Position Hilversum as the new Hilwood

Driving Collaboration



- City as a test environment
- Make old/ existing networks smarter
- Determine users and best channels for collaboration
- Media campus = networking, facilitating a place to meet and create
- Investor network
- Different cultures in the park
- Design and organise for meeting an open layout
- Mix of public and governmental functions in the area
- Leverage different cultures and mindset in the park
- Leverage the trust and community feeling and “labour-ethos"

Source: Hilversum Mediastad Co-Creative Workshop Session (11 Sep 2017): *Findings and input collated from workshop participants*

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Discussion topic: Urban design and planning

How do we capture the values and embrace cultural heritage of Hilversum Mediastad in the park's future physical appearance?

Architecture & Design



- Design to embody a connection centre and meeting place
- Emphasis on quality architecture
- Flexible
- Sustainable build and focus
- Iconic
- Experience route emanating from the centre of the park
- Green buildings and intertwined with nature
- User transformation existing buildings
- Make media application visible

Values & Cultural Heritage



- Gone with ‘swiebertje’
- Recognition of media embedded
- “Hip and happening”
- Experience media through environment
- Connect with new technology
- Open/ transparent media
- Function mixing/ connection

Landscape & Buildings



- Create a structural, vibrant meeting place in Hilversum
- From mono to multifunctional use of the park spaces
- User transformation existing buildings
- Consider a hotel on campus
- 30 mins from Amsterdam
- Learning points as inspiration mix – 5 relevant ideas

Source: Hilversum Mediastad Co-Creative Workshop Session (11 Sep 2017): *Findings and input collated from workshop participants*

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Sources

General

- Robert Picard – Media Clusters, Media Management and Transformation Centre
- Understanding "UndersCultural Ecosystem" in Creative Industries Policies

Hilversum Mediastad

- Hilversum Media Campus
- Monitor Creative Industrie 2016
- Cross Media Café
- MediaMatter
- Mediapark
- Beeld en Geluid jaarverslag 2016
- Mediavisie 2016-2019

Creative Valley Hainaut

- Website Creative Valley Hainaut
- Creative Valley's role in Mons 2025 strategy
- Café Europa
- Coeur du Hainaut report
- Employment report

FilmbyArhus

- Website FilmbyArhus
- The Big Picture – strategy
- Reasoning behind the Big Picture
- About FilmbyArhus
- FilmbyArhus development projects
- This.festival event
- Aarhus Stories
- VR Clinic
- Filmby3
- Aarhus Filmcity Cross-Sectoral Strategies
- Aarhus 2017 Strategic Business Plan

nextMedia.Hamburg

- Website nextMedia.Hamburg
- Media & Digital City Hamburg
- Gamecity Hamburg
- Cooperations nextMedia Hamburg
- Hamburg@Work
- Start-up City Hamburg

Vancouver Film & Media Centre and the Film Commission

- Vancouver Film & Media Centre and Film Commission
- Digital Entertainment & Interactive
- Film & Television production
- VFX Animation
- Video games & Interactive media
- History of Vancouver's digital entertainment & interactive industry
- Centre For Digital Media
- Events
- VFX jobs
- Career scout
- British Columbia statistics
- Trade and Invest BC

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