Media Clusters Brussels

DELIVERABLE 2.3a

Report on Data Analysis: Brussels' media industry

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Part of Work Package 2:
Media organisations' characteristics and value chains

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Media Clusters Brussels – MCB – is a collaborative and interdisciplinary research project of the Brussels Capital Region involving the three leading universities of Brussels, VUB, ULB and USL-B. The aim is to analyse the many facets of the media industry located in the Brussels Capital Region and explore the development of clusters.

The Projet de Plan Régional de Développement Durable / Ontwerp van Gewestelijk Plan voor Duurzame Ontwikkeling for Brussels (2013), approved by the Brussels Regional Government on 12th December 2013, identifies the cultural and creative industries as one of the four key sectors of the metropolitan economy, and more specifically proposes a media city at Reyers as the first strategic cluster (Pôle Reyers) to develop. However, despite the fact that the Brussels Region is committed to foster the development of the media sector, there is up until now hardly any empirical data available about the structure and dynamics of the media industry in Brussels. This project aims at creating socio-economic value for the media industry in the Brussels Region and beyond by providing decision-makers with the in-depth knowledge they need regarding the media industry in Brussels while accompanying the phases of implementation of the Pôle Reyers. The overarching research question is: How can the structure and dynamics of the media sector in the Brussels metropolis be enhanced to improve its social and economic roles?

MCB is divided in six **Work Packages**. Work Package 1 offers a general overview, definitions and common framework of the project. Work Packages 2 & 3 focus on Brussels media institutions by studying Brussels' media clusters from a macro and socio economical perspective. Work Packages 4 & 5 focus on the media workers within Brussels from a micro perspective and Work Package 6 on the communities the media workers form to create interactions and communities of learning from a meso perspective. These three points of interest, media institutions, media workers and media communities, enable MCB to grasp all dynamics of media clusters in Brussels.

More information on the Media Clusters Brussels project is available on the Internet (www.mediaclusters.brussels).

The project is financed by Innoviris under the Anticipate programme (Prospective Research – Anticipate – 66 – 2014/2018).

Scope of this report

This report is dedicated to **Work Package 2** – Media organisations' characteristics and value chain. Work Package 2 is committed to the analysis of the media institutions [1] integrated in the media clusters of Brussels. This Deliverable focuses on an economic impact analysis of the actors from a macro view. The Deliverable was built on the findings of Deliverable 1.1a, 2.1 and 2.2b. The output of this Deliverable is an overview of the media landscape of Belgium highlighting Brussels' role and the impact the media industry has on the economy. Localization and key data of the media industry and media clusters are delivered to reflect on first insights regarding two of the P parameters established in Work Package 1, the population (pertinence) and profile of media institutions (see Deliverable 1.1b and Komorowski, 2016). The findings will be used to support the future research of Deliverable 2.3b and to support the research findings of future Deliverables in Work Package 3.

Deliverables that are built on the findings here are:

Deliverable 2.3b

Deliverables of Work Package 3

[1] We have chosen to use the term „media institutions", which deviates from the wording chosen in the Project Proposal "media organisations" (see title of Work Package). "Media institutions" as term, integrates more dimensions of firms and organisations to be included into the analysis as has been elaborated in Deliverable 1.1b.

Key findings

Why do we need research on Brussels' media industry?

Already a lot of studies exist that include analysis on the media industry as part of the CCIs and Brussels as part of Belgium and the communities. Based on these studies, we can draw the following conclusions:

(1) There is a strong political interest in knowledge on this matter.
(2) But, research is still in its infancy and highly dispersed.
(3) The Brussels' media industry can therefore be considered as a topic that needs proper academic research.

How do we research the media industry in Brussels?

The economic impact analysis model was chosen as method as it gives the opportunity to deliver estimations on key data and comparative analysis of the media industry also in a geographical scope. It is necessary to define the (1) scope of the research, (2) data, (3) economic impact indicators, and (4) limitations of the method:

(1) The **media industry and Brussels** as spatial unit are defined in the context of this analysis, building on the work done in Deliverable 1.1a and 2.1.
(2) A **dataset** was retrieved from Bel-first and is built on the identified NACE codes and the principal activities of active entities including companies, institutions and self-employed in Belgium. The dataset was cleaned and harmonized. Other valuable data sources enrich the analysis (including Eurostat, NBB, etc.).
(3) **Indicators** were chosen that describe the economic contribution of the media industry, its structure and employment structure in a comparative and spatial way.
(4) The **limitations** of the here-developed method are based on the complexity of the media industry and the reliability of the data set. Reasons include: Inappropriateness of the nomenclatures for the activities; The huge majority of self-employed people and small organisations, which are not subject to full financial reporting obligations; The increasing level of crossover between different activities; The fact that companies report their financial figures for the national – and not regional – territory, making regional shares difficult to estimate; The difficulty to define boundaries of a particular function, activity, or sector within the media industry.

What is the economic impact of Brussels' media industry?

The economic impact analysis shows that the media industry in Brussels plays an important role. The media industry contributes highly to the local and Belgium's economy and has a strong influence on employment. The findings can be summarized through key numbers about Brussels' media industry:

Total net added value	1.699,57 million EUR (2,4% of total Brussels' economy and 40% of total Belgium's media industry)
Annual average growth	2,53% (≥ 2,1% total Brussels' economy)
Employers	6.500 (6% of total Brussels' economy)
Employees	25.000 (+1.300 independents =4% of Brussels' working population)
Structure	Small number of very large players (e.g. VRT, RTBF, RTL, Kinepolis group, Rossel et cie, Mediafin) and lots of small players.

How is the Brussels' media industry concentrated and distributed?

The analysis shows how highly concentrated media activities in Brussels are in terms of value created and media workers. Especially, the AV sector is highly centralized in Belgium's capital. Within Brussels, the highest concentration can be found in the postal town of Schaerbeek or correspondingly in the neighborhood of Reyers. Media entities form agglomerations in Brussels either around a strategic location or along major streets. Media entities that locate outside of Brussels are placed strategically close to the city border. The findings can be summarized through key numbers on the concentration of net added value:

Belgium's media industry	39,0% in Brussels / 50,2% in BMA (followed by province of Antwerp with 16,8%)
postal code areas	12,7% 1030 Schaerbeek in Brussels followed by other areas in Brussels (followed by 2800 Mechelen with 4,3%)
Belgium's AV sector	64,3% in Brussels
Brussels' media industry	28,9% in Reyers followed by 4,8% in Etangs d'Ixelles
Reyers	About 50 media entities that employ more than 5.300 media workers that work mostly in AV

How does the results compare to other studies?

The results of this Deliverable can be compared in two different ways to put them into the right perspective:

1. Studies on Brussels' media industry (see Part 1) - The comparison supports the findings of this Deliverable that Brussels is a leading media location within Belgium and that the key numbers presented are realistic as they are supported also by other studies.

2. Studies on media clusters in metropolitan areas – For the comparison, we looked at other studies on Amsterdam, Berlin, London, Toronto and Singapore. The comparison shows that Brussels as important media location shows similar geographic structures and concentrations that can be found in other media locations. However, other cities are much more centralized (like London) and especially well-known as media location while Brussels could still improve.

What does this mean for the development of policies?

Conclusions can be drawn based on the findings of this Deliverable for policy making:

1. More work needs to be done at national and European level to adopt appropriate standards and definitions as well as to prioritise the collection of statistically sound data on the media industry. The here-presented framework limits these drawbacks but for future research and a constant monitoring we call for action to make data more reliable.

2. In order to make policies for the media industry, data- and evidence driven insights are highly important. Also, data and insights allow policy makers to develop evidence-based responses to problems. We call policy makers to use the here-presented insights in the development of future policies targeted at Brussels' media industry.

3. Brussels has been identified in this Deliverable as leading media location in Belgium. But the city is not yet well-known for that and cannot compete with international media cities world-wide. We call for a more active involvement of the Brussels' government to support the future development of the media industry in the city and built upon the already positive conditions to make Brussels a leading international media locality.

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Introduction

The media industry represents a significant set of sectors that are developing in fast pace. Driven by these changes entirely new sectors have emerged (e.g. computer games, social media) and the industry is growing enormously profiting and being challenged by the technological advancements. This makes the media industry not only very important for the economy and an interesting study object but this makes the sector especially divers and harder to grasp than ever. **That is why, it is often not clear what the real extent and the impact of the media industry on the economy is**. Still, within research and political agendas, the media industry has been broadly acknowledged as a key driver for economic development. The European Commission states that the media industry plays 'a key economic, social and cultural role in Europe', which 'creates growth and jobs' (European Commission, 2015). Also, more and more regional initiatives have been developed that aim at developing the media industry at a local level.

In December 2013, the **Brussels Government approved the Design of the Sustainable Regional Development Plan** (Brussels Hoofdstedelijk Gewest - Region de Bruxelles-Capitale, 2013). In this plan, the Cultural and Creative Industries (CCIs), including the media industry, are identified as one of four economic sectors that are key to the development of the metropolitan economy (2013, p. 44). The geographical area of the two Belgian public broadcasters, RTBF and VRT, is identified as one of the seven priority areas to be developed as a strategic leverage in the multipolar development strategy for the region (2013, p. 65). The media industry has been identified as economically and geographically important leverage. Brussels is planning on developing and subsidizing the media industry either directly and indirectly through investments from public sector funds.

The argument for the public support and subsidization of the media industry in Brussels is strongly influenced by its ability to generate economic benefits for the region. But the extent of the economic impact and therefore, the viability of this argument is not clear. Research on Brussels' media industry is still scarce (Part 1). **This Deliverable has the goal to fill this gap and estimates reliable quantifiable outcomes that delineate the impact the media industry has on Brussels' economy and beyond** (Part 3 and 4). In order to achieve this goal, the economic impact analysis model (Part 2) is applied delivering estimations on key data and comparative as well as geographical analysis of the media industry. There are five contributions this Deliverable makes:

1. The Deliverable gives a detailed overview of existing media industry research on Brussels (Part 1) and compares the approaches (Part 2) and results (Part 5).

2. The Deliverable utilizes the novel delineation of media and Brussels as media locality that has been developed in Deliverable 1.1a focussing on economic spatial units and the media content production activities based on key data (Part 2).
3. The Deliverable provides a comparative analysis of the media industry between sectors, on a national level (between regions, provinces, and cities) and within Brussels (between municipalities and neighbourhoods) (Part 3).
4. The Deliverable maps media activities and highlights the geographic importance of Brussels (Part 4).
5. The Deliverable compares the results of the impact analysis of existing research on Brussels' media industry and other studies world-wide (Part 5).
6. The Deliverable provides implications for policy makers in Brussels (Conclusion).

Part 1: Research on Brussels' media industry

To identify existing research on Brussels' media industry is essential to start your own study. Novel contributions in research are not supposed to repeat existing results or disregard them. Within this part, the Deliverable will first give an overview of existing studies and will then summarize them. **The studies have been identified through web-searching** of key words in the languages of French, Dutch and English. Found studies have been screened for references to other existing studies. The so-called snowball approach was used. Additionally, studies have been found that already list and compare existing research (e.g. Martens, Dobbels, Amez, & Ysebaert, 2014). These have been used by the author to not only make sure that no essential study is missing in this analysis but also to expand existing overviews to create a novel contribution to research on Brussels' media industry.

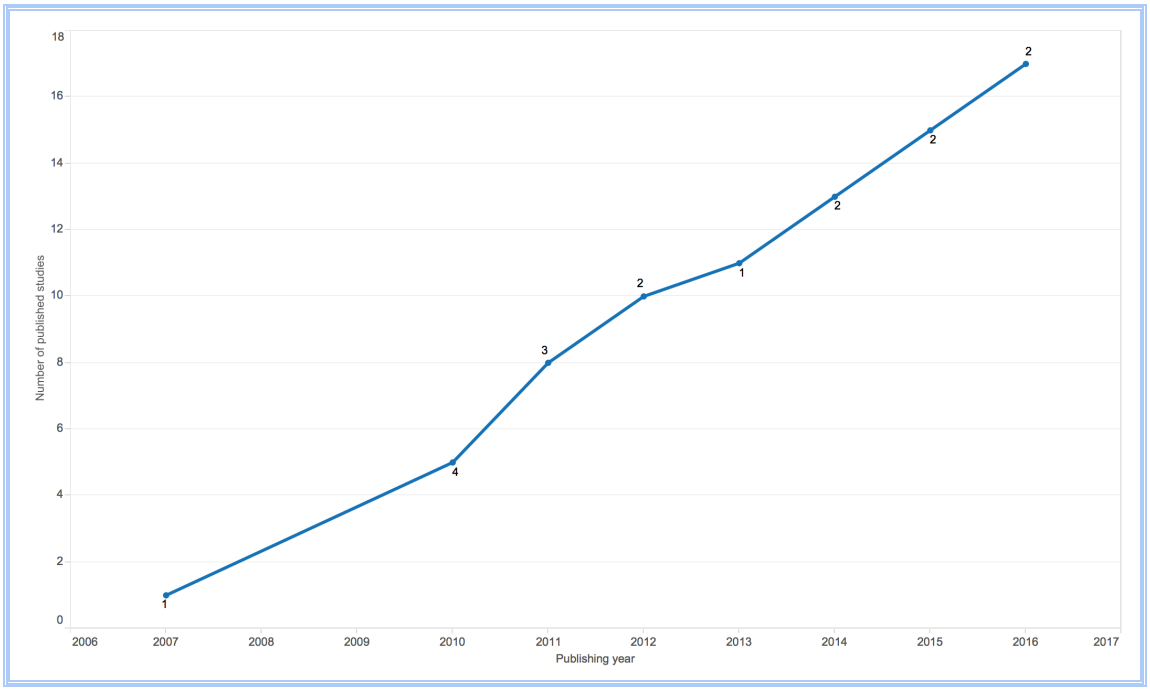
It needs to be taken into account that there are no studies that solely focus on the media industry and Brussels (as depicted in Part 2) so far. For that reason, **the author decided to include studies in this analysis that go beyond Brussels and the media industry**. The analysis includes studies about Flanders, Wallonia and Belgium as Brussels is part of these geographical units and it enables valuable comparison possibilities (see Part 5). Also, included are CCI (cultural and creative industry) studies and other media-related sectors.

Existing studies: an overview

The research identified 17 studies that fulfil the following requirements: (1) They focus on analysing the sector, economic impact or similar; (2) The studies' scope is the media sector, part of the media sector or the broader industry; (3) The studies have a quantitative approach (not purely descriptive or based on findings of other reports).

Table 1 below gives an overview of all identified included local studies comprising summaries, their language, geographical focus, sector focus, authors and publishing year. Additionally, five studies are identified that are the closest to this study and are marked in blue. The studies that meet the criteria have been **conducted between 2007 and today** while each year on average two new studies are produced (not included regular studies that are published yearly). Figure 1 shows the development.

Figure 1- The evolution of published studies over time.



The studies published are all reports. No academic publication in a journal was identified fitting the criteria. This is connected to the authors: Public institutions and governmental organisations (7 reports) have conducted studies themselves, like the report of the Flemish Games Association or the report of the Parlement de la Communauté francaise de Belgique Wallonie-Bruxelles; Or, they have commissioned consultancies (6 reports) to conduct research for them, like

Deloitte, Idea Consult, Ineum Consulting, PIM, etc.; Or they have commissioned public research facilities (4 reports), like ULB, University de Liège, etc.

Because of the strong connection of the studies to public and governmental institutions, the foci of **the studies are also very divers**. Depending on the institution the reports are only accessible in certain languages quite evenly distributed between French and Dutch, while only some reports are available in English or more than one language. And the scopes are highly dispersed. Only three studies handle the media industry while most focus on the cultural and / or creative industries or a certain sub-sector, like the AV sector. The same is applicable for the geographical scope. Most studies focus on Flanders or Wallonia but somehow integrate Brussels in this context while also nation-wide studies and Brussels-focused studies exist. Figure 2 gives an overview of the distribution of language, sector scope and geographical scope of the studies.

Figure 2- The distribution of published studies based on language, sector and geographical scopes.

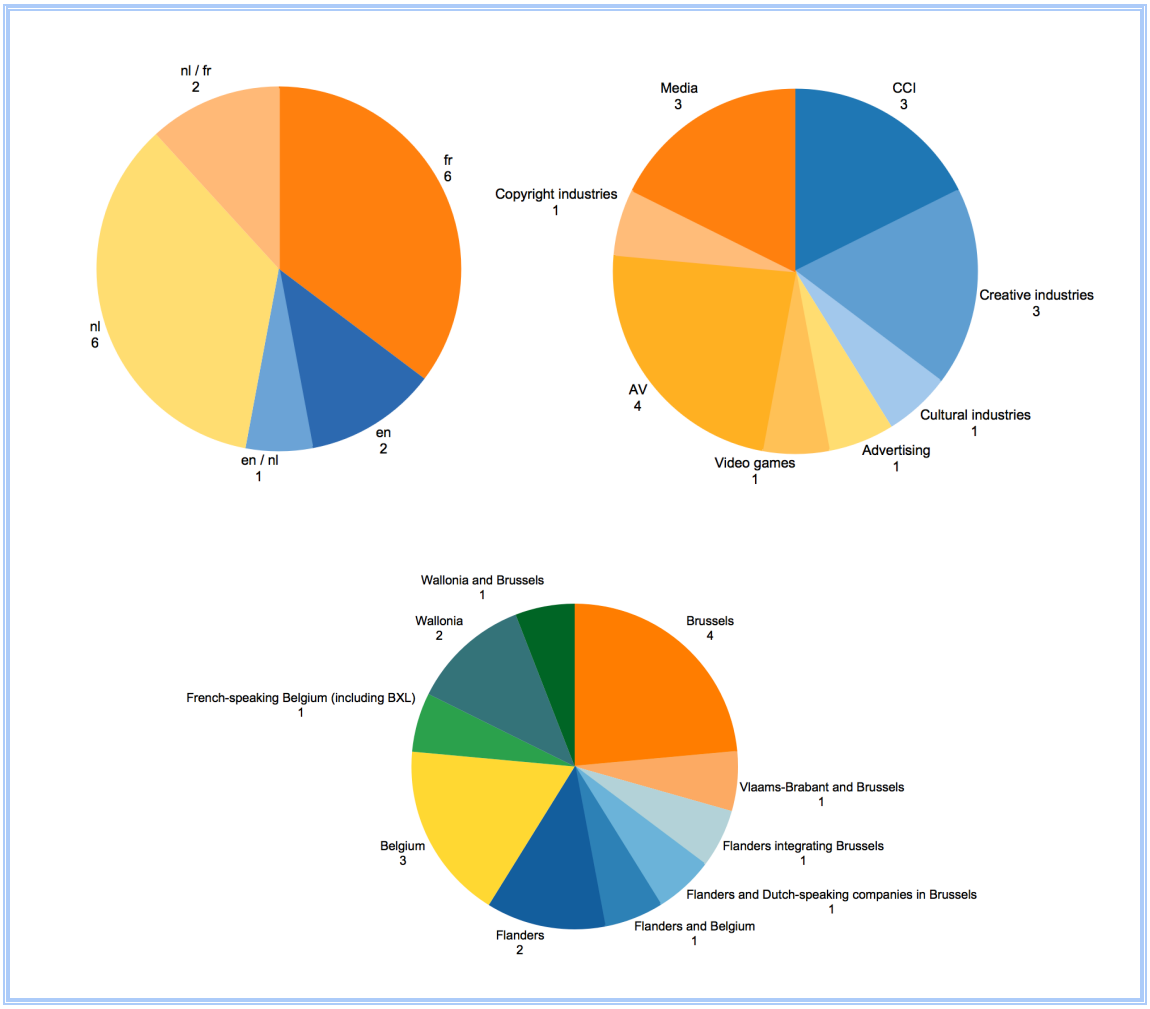


Table 1 – Literature study on Brussels' media industry: an overview.

Reference	L	Geographical scope	Focus	Summary
Antoine & Heinderyckx (2011)	fr	French-speaking Belgium	Media	Report for the Parliament of the French Commune documenting the state of the news media in French-speaking Belgium presenting numbers of financial situations, public financing, sales (sales-channels), diffusion of copies, confidence in press, journalists profiles, regulation, policy action points, etc. (specializing on specific media outlets then market overviews).
Bogte & Verbruggen (2016)	en / nl	Flanders and Belgium	Video games	Report of the Flemish Gaming Association (FLEGA) presenting numbers on local gamer profiles and usage, industry impact analysis and trends.
De Voldere & Maenhout (2007)	nl	Flanders	Creative industries	Report by the Vlerick Management School on the book, music and visual arts sector in Flanders (for Administratie Cultuur, Boek.be, Muziekcentrum Vlaanderen and Initiatief Beeldende Kunsten) presenting numbers on the three sectors in sales, media workers, income sources, turnover, added value, and concentration in Flanders.
De Voldere, Mertens, Wautelet.& Berckmoes (2011)	nl / fr	Brussels	CCI	Report on Brussels' CCI by IdeaConsult for the Kamer van de Middenstand van de Economische en Sociale Raad for Brussels with focus on needs, sector statistics, estimations of size and impact analysis presenting numbers on self-employed, employers, employees, and jobs.
Lazzaro & Lowies (2014)	fr	Wallonia and Brussels	CCI	Report for the IWEPS by the ULB presenting numbers on employment, self-employed, value added, turnover and its impact and evolution.
Magis (2011)	fr	Brussels	AV	Report of Bruxellimage about the status of the AV sector in Brussels presenting numbers of companies and employees active, SWOT analysis, governmental support, policy action points, etc.
Deloitte (2015)	en	Belgium	Advertising	Report for the Raad voor de Reclame Belgium presenting numbers on impact of the advertising industry on Belgium's GDP, influence on the media sector including direct and indirect employment, and other impacts of the sector (e.g. on brands and consumer spending).
Flanders Smart Hub (2012)	nl	Vlaams-Brabant and Brussels	Creative industries	Report on the CI sector in Vlaams-Brabant for the new started creative cluster Createch in 2012 presenting a SWOT analysis for the creative sector in the province including numbers of companies and self-employed on a geographical scope.
Idea Consult & Vlerick Management School (2010)	nl	Flanders integrating Brussels	AV	Report on Flanders' AV sector for the Vlaams Audiovisueel Fonds presenting numbers on employees, self-employed, number of companies, employers in different activities in AV (production, distribution, broadcasting) along the value network and through geographical distribution along arrondissements in comparison to total employment.
Ineum Consulting & Kurt Salmon Associates (2010)	en	Brussels	Cultural industries	Report on Brussels' cultural and economic performance prepared as case study for an international conference presenting a SWOT analysis for Brussels' cultural sector and development, general data about Brussels and numbers on tourism, the cultural sector, education, examples of cultural

				offers, and educational offers and limitations based on cultural management in Brussels and public funding.
mediarte.be (2014)	nl / fr	Belgium	AV	Report on the Belgian AV sector focussing from mediarte.be for the Audiovisuele sector & Fonds voor de filmproductie on media workers in special activities as supervised by mediarte.be presenting numbers on situation and evolution of numbers of employers and employees, self-employed, and temporary workers in the AV sector in Belgium analysed on geographical level, language level, employee profiles (gender, age) and by biggest employers.
PIM, Partners in Marketing (2010)	nl	Belgium	Copyright industries	Report on Belgium's copyright industries for Arthena presenting numbers on turnover, investment, employment (FTE, employers), value added including multiplicators and international comparison.
Service Géneral de l'Audiovisuel et des Multimédias de la Fédération Wallonie-Bruxelles (2016)	fr	Wallonia	AV	Detailed report on status of AV sector in Wallonia and beyond prepared by the Service Géneral de l'Audiovisuel et des Multimédias de la Fédération Wallonie- Bruxelles presenting a collection of different statistics from various sources (other reports) on consumption expenditure on culture per household by region, TV channel specific statistics, financing, film sales, movie goer profiles, budget of film production, policy subventions, co-production of films partly with geographic comparison, including lists of companies in the AV sector, films and formats produced.
Vlaamse Regulator voor de Media (2015)	nl	Flanders	Media	Report of the Flemish media regulator about media concentration in Flanders presenting numbers on structures of the different media sectors, detailed analysis of media groups in Flanders and media concentration in the different sectors based on turnover, equity, employees, revenue, loss, HHI, C2, C4, etc. (often based on company and not overall) including also productions, audience numbers, price evolutions, the international context, and policy recommendations.
Schrauwen, Demol, Van Andel & Schramme (2014)	nl	Flanders and Dutch-speaking companies in Brussels	CCI	Report on Flanders' CCIs by Flanders DC and the Antwerp Management School that is regularly updated (yearly) presenting numbers on self-employed, employers, employees, turnover, added value measuring impact on GDP and median turnover per people working in the media through a bottom up and top down analysis. Additionally, recently geographical analysis was added. Plus, a mapping exercise that integrates economic indicators and the value network approach.
Surlemont, Pirnay & Aouni (2013)	fr	Wallonia	Creative industries	Report of the University of Liège on Wallonia's CCIs and creative class for the CPDT presenting numbers on the creative class, their profile, their location, attractiveness factors for the creative class like technology, talent, tolerance, influence on innovation and entrepreneurship, and the CCIs numbers and location in that context.
Verheyen & Franck (2012)	fr	Brussels	Media	Report of Idea Consult on Brussels' media sector presenting feasibility of the planned Pole media at Reyers for the A.D.T. presenting numbers on employees and value added of the media industry and focussing on a SWOT analysis including description of tendencies in the media sector, dynamics, case studies of competitors (e.g. Malines, Vilvoorde) and benchmarks (e.g. MediaCity Manchester) and also including geographical analysis.

Besides the identified 17 studies above additional reports should be mentioned. They have focused on sub-sectors that are not directly included in the scope of this research but deliver also insights in Brussels' media activities or CCI industries. Some examples are Raeymaeckers et al.'s (2013) analysis of journalists, Kampelmann & Plasman's (2012) study on the fashion and design industry, Debroux's (2009, 2013) publications on artists and De Spiegelaere et al.'s (2013) book chapter on the performing arts scene. Other studies include Fagard's (2013) book chapter that focuses on an historical analysis of the visual arts, Martens et al.'s (2014) publication on the CCI based on desk research, Janssens et al.'s (2011) audience analysis, Vincent and Wunderle's (2009, 2012) production analyses, Huijgh and Segers' (2005) report that is based on policy analysis of the cultural industries and others (e.g. Cochez, De Spiegelaere, & Vanderleen, 2013; Genard, Corijn, Francq, & Schaut, 2009; Meur, 2012; Noels & Wellens, 2010; UNIZO Startersservice, GRAYDON, 2011; Van Roey & Venken, 2014; Vuijllsteke, 2011).

Additionally, several institutions and public bodies provide more insights, like for instance the annual reports of the Agentschap Kunsten En Erfgoed (2016) or the report collection of the Belgian Entertainment Association (2016), the reports of BAM Instituut voor beeldede audiovisuele en media kunst (now Kunstenpunt) (2016) and most reports of Flanders DC (2016).

Furthermore, the author identified 5 international studies that mention information specifically on Brussels. This includes Richards (2005) who analysed culture and tourism in Europe, Palmer et al.'s (2004) report on the European Cities of Culture, Krätke and Taylor's (2004) publication on global media cities, Boix et al.'s (2015) Europe-wide media cluster localization paper and Nielsén and Power's (2011) CCI Cluster report for the European Commission.

What can we learn from existing studies?

Already a lot of studies exist that include analysis on the media industry as part of the CCIs and Brussels as part of Belgium and the communities. Based on these studies four lessons can be learned:

(1) **There is a strong political interest in knowledge on this matter.** A lot of studies have been found that are commissioned or conducted by political bodies or public organizations on the matter, which shows a clear demand. Especially, the economic impact analysis is the most often chosen approach to create this knowledge. The interest however, is quite recent as the largest bulk of studies was produced within the last 6 years and the interest seems to grow steadily also for the future. Particularly interesting appears to be the media industry as most studies either include the media industry as part of the CCIs or focus on a sub-

sector. This can also be observed about Brussels, as Brussels is in all these studies either part of the larger picture or even highlighted as part of Flanders or the French-speaking community in Belgium.

(2) But, **research on the matter is still in its infancy, highly dispersed and lacking in certain aspects**. As regional research in this field is only about 6 years old and not much academic work has been done (most studies have been conducted by consultancies). There is a lack of common standards to enable comparativeness and deeper insights. Most studies have either chosen a very broad scope including the CCIs or they narrowed it down to only a single sub-sector. The focus on media, which is a very congruent sector with similar economic characteristics and cluster tendencies (cf. Deliverable 1.1a) is very rarely taken. Also, the authors of these studies are always different. There seems to be no "real" experts in the field. Some of the studies showed a clear lack of descriptions on the methods and data sources used making them highly unreliable. And finally, there is a clear lack of research that focuses on Brussels and the media industry (except Verheyen & Franck, 2012).

(3) The **Brussels' media industry can therefore be considered as a topic that needs proper academic research** that might support industrial development and policy in the Brussels' Region. As such, this Deliverable anticipates the need for research about the economic impact of Brussels' media industry in a comparative way that includes geographical aspects in the context of clustering tendencies.

The here-presented studies will further guide the development of the methodology of this research (Part 2). Additionally, the findings of existing studies will be used to compare the results of this research and to see if the findings are reasonable (Part 5). And finally, the findings of this part will further guide the development of policy recommendations for the future (Conclusion).

Table 2 – Why do we need research on Brussels' media industry?

Already a lot of studies exist that include analysis on the media industry as part of the CCIs and Brussels as part of Belgium and the communities. Based on these studies, we can draw the following conclusions: (1) There is a strong political interest in knowledge on this matter. (2) But, research is still in its infancy and highly dispersed. (3) The Brussels' media industry can therefore be considered as a topic that needs proper academic research.

Part 2: The measurement of the media industry

There are various methods and frameworks to measure the media industry. In order to achieve the goals of this Deliverable, the economic impact analysis model is the most suiting. The framework gives the opportunity to deliver estimations on key data and comparative analysis of the media industry also in a geographical scope. **The choice of a model for economic impact analysis relies on the nature of the problem to be analysed as well as the data available** (cf. Pleeter, 2012). Within this part of the Deliverable this model will be delineated. The scope of the research, the data sources and economic impact indicators as well as the limitations of them will be discussed. In order to see how this research is positioned next to existing economic impact analysis studies five studies have been chosen that are showing the most similarities to the goals of this research for comparison (see Table 1, studies marked in blue).[2]

The scope of the research

While already a lot of studies in the area of this Deliverable exist, the scopes are very divers and conceptualization arose from different contexts and locations. In this case, the context is the project Media Clusters Brussels, which goal is to create knowledge on media clusters in the city. Within this research project the delineation of media (Deliverable 1.1.a) and media industry (Deliverable 2.1) and Brussels (Deliverable 1.1a) has been already established and will be now brought into context of this Deliverable and of existing studies on Belgium (see above).

THE MEDIA INDUSTRY[3]

The media industry is often depicted through sectors, the end product produced or the activities in general (cf. Picard, 2008; Simon & Bogdanowicz, 2012). The mere delineation of the media industry, however, is not simple and has been repeatedly discussed in literature and politics. Within this Deliverable, we follow the delineation developed for the MCB project (see Deliverable 1.1a) that has been supported in the findings of Komorowski & Ranaivoson (forthcoming) and

[2] The comparison of this research to other studies was inspired by the report of Lazzaro and Lowies (2014).

[3] This chapter summarizes the findings of Deliverable 1.1a and Deliverable 2.1 and puts the findings into the context of the economic impact analysis of this Deliverable. For more information, see the applicable Deliverables.

focus on the end-product: 'mediated content'. This includes activities of production and publishing of mediated content. This is the core of the media industry. Additionally, activities are considered as supporting the media industry when they relate to distribution, post-, pre-production and retail of mediated content. Core and supporting actors are seen as directly part of the media industry. Furthermore, the media industry involves external and facilitating activities that are not directly included in this study but are part of the delineation of the media industry for this project and will be included in upcoming Deliverable 2.3b and future Deliverables of Work Package 3. Even though the media industry is converging, a distinction into sectors gives additional insights for analysis. **Four key sectors were chosen: new media, advertising, print and audio-visual (AV)** (see Deliverable 1.1a for more insights).

The fundamental criterion, which is common to these sectors and for the delineation, is mediated content. This includes all outputs that are distributed through a carrying media, like paper, the TV, the Internet, etc. These mediated contents can be traditional (for example a book, a film, a sound record) or not (for example video games, mobile applications). However, the medium used for the content is supposed to be distributed to a big consumer group. The four sectors have been chosen as the delineation gives flexibility considering besides traditional media sectors also converging trends caused by the digital transformation in the media. Therefore, it is also important to understand that the four sectors chosen are not perfectly distinguishable. This enables the research to focus on the dynamics, linkages and interplay of different media institutions.

Additionally, as this Deliverable is built on public data even further delineation is necessary. In order to access data, statistical nomenclatures served as basis: NACE codes on economic activities on a four-digit level. **The chosen NACE codes have been grouped into the activities (core, support) and their sub-categories and the four core sectors** as identified above. Table 3 gives an overview of the identified NACE codes and their categorisation that has been utilized in this Deliverable (see Deliverable 2.1 for more insights).

The delineation of the media industry as here developed is so far unique among existing studies on the media industry or CCIs in Belgium. However, an approach to distinguish our own delineation that is most fitting to the research goal is important as this also influences how the findings are applicable in the context of the study. Still, it is essential to know in how far there are differences to other studies as this shows **how this research positions itself** next to them and in how far findings are comparable.

Table 3 – The NACE codes of the media industry (depicted from Deliverable 2.1).

NACE Number	NACE-Classification[4]	ACTIVITY CATEGORY	SECTOR
C18.1.1	Printing of newspapers	SUPPORT	PRINT
C18.1.3	Pre-press and pre-media services	SUPPORT	PRINT
C18.1.4	Binding and related services	SUPPORT	PRINT
C18.2.0	Reproduction of recorded media	SUPPORT	AV
G47.6.1	Retail sale of books in specialised stores	SUPPORT	PRINT
G47.6.2	Retail sale of newspapers in specialised stores	SUPPORT	PRINT
G47.6.3	Retail sale of music and video recordings in stores	SUPPORT	AV
J58.1.1	Book publishing	CORE	PRINT
J58.1.2	Publishing of directories and mailing lists	CORE	PRINT
J58.1.3	Publishing of newspapers	CORE	PRINT
J58.1.4	Publishing of journals and periodicals	CORE	PRINT
J58.1.9	Other publishing activities	CORE	PRINT
J58.2.1	Publishing of computer games	CORE	NEW MEDIA
J59.1.1	Motion picture, video, TV programme production	CORE	AV
J59.1.2	Motion pic, video, TV programme post-production	SUPPORT	AV
J59.1.3	Motion pic, video and TV programme distribution	SUPPORT	AV
J59.1.4	Motion picture projection activities	SUPPORT	AV
J59.2.0	Sound recording and music publishing activities	CORE	AV
J60.1.0	Radio broadcasting	CORE	AV
J60.2.0	Television programming and broadcasting	CORE	AV
J63.1.1	Data processing, hosting and related activities	SUPPORT	NEW MEDIA
J63.1.2	Web portals	SUPPORT	NEW MEDIA
J63.9.1	News agency activities	CORE	PRINT
M73.1.1	Advertising agencies	CORE	ADVERTISING
M73.1.2	Media representation	CORE	ADVERTISING
N77.2.2	Renting of video tapes and disks	SUPPORT	AV

Table 4 shows how this study positions itself next to other studies. With the focus on the media industry's core and supporting activities, we chose to focus on a quite congruent industry that can be easily compared and analysed together. Compared to other studies, however, we will not discuss here the broader CCI activities. This was chosen, because the economic impact of the media industry can only be discussed through their core and supporting activities. While facilitating and external activities are not directly involved in the production of mediated content. Still, through the delineation of the media industry that also integrates external and facilitating activities (see Deliverables 1.1a and 2.1), future studies of this project will also incorporate these activities as crucial.

[4] Titles of NACE codes have been partly shortened.

Table 4 – The delineation of the media industry next to other studies.

	REFERENCE:	**PROPOSED NEW DELINEATION FOR THIS STUDY**	Schrauwen, et al. (2014) (Antwerp Management School)	Idea Consult & Vlerick Leuven Gent Management School (2010)	Verheyen & Franck (2012) (IDEA Consult)	PIM, Partners in Marketing (2010)	Lazzaro & Lowies (2014) (ULB)
	FOCUS ON:	Mediated content	CCI	AV	Media	Copyrights industries	CCI
CORE (Publishing Production) **SUPPORT** (Distribution Post-production Pre-production Retail)		PRINT SECTOR	Print		Press	Press	Books & press
					Others	Literature	
		AUDIO-VISUAL SECTOR	AV	AV Production	AV	Music	AV
				AV Distribution		Movie	
			Music	AV Technical activities		Radio	
				Creative activities		TV	
		NEW MEDIA SECTOR	Gaming		Software	Software	
			New Media		Games	Games	
		ADVERTISING SECTOR	Advertising		Advertising		Advertising
EXTERNAL		Other creative and cultural activities			Photography		
					Entertainment	Concerts	Events
			Visual arts				Visual arts
			Design				Design
			Fashion				Fashion
			Culture				Cultural education
			Theatre				Culture
							Archives & libraries
		Hardware			Hardware		
		Software			IT		
FACILITATORS		Membership organisations					
		Education					
		Government					
		Business support					
		Research					
EXCLUDED			Architecture				Architecture

THE BRUSSELS METROPOLITAL REGION[5]

Many studies chose a geographical scale of the media industry a priori, which limits the media industry to administrative or political regions (Boufaden & Plunket, 2005), like nation states, regions, cities and so forth (Boschma, 2005). But, by predetermining the delineation of Brussels the real extent of the impact of the media industry could be hidden in the forthcoming analysis. Therefore, we follow in this Deliverable the delineation of Brussels as developed in Deliverable 1.1a: **a flexible and dynamic delineation** that is able to describe Brussels as territory with borders and incorporates the possibility for spatial and a-spatial processes that extent these borders.

For that reason, we distinguish the **data gathered into macro-geographic data that is defined by pre-given spatial units and micro-geographic data that are addresses**. Within the macro-geographic data, we further distinguish data within the border of the Brussels'-Capital Region, which is made of municipalities, postal code areas and neighbourhoods that form the core of the analysis. Additionally, we decided to adapt the approach of Brussels Metropolitan (2015) that includes the whole of Halle-Vilvoorde and Walloon Brabant into the Brussels Metropolitan Area (BMA). A metropolitan area or metropolitan region is most often described as a region, which unites a densely populated urban core and its less-populated surroundings. The metropolitan area is seen as a unit because it shares characteristics like a common industry, infrastructure, and housing (Squires, 2002). Because of the importance of metropolitan areas as a common socio-economical and geographical unit, this concept is especially relevant for the economic impact analysis. Comparison to other areas is given by taking the other regions, arrondissements, and other cities within Belgian but also international comparison into consideration. Micro-geographic data is utilized through mapping exercises (see Deliverable 1.1a for more insights).

Table 5 summarizes the approach and compares it with other studies. As can be seen in Table 5, **the approach of this Deliverable goes beyond the geographical scales and delineations that have been utilized in other existing studies**. Our approach integrates while focussing on Brussels all kind of units, from regions, to provinces and even smaller geographical units, that have not been analysed so far, like municipalities, postal codes and neighbourhoods. Additionally, only two studies utilized actual mapping exercises while this is one of the core foci of this Deliverable.

[5] This chapter summarizes the findings of Deliverable 1.1a and puts the findings into the context of the economic impact analysis of this Deliverable. For more information, see the applicable Deliverable.

Table 5 – The delineation of Brussels next to other studies.

REFERENCE:	**PROPOSED NEW DELINEATION FOR THIS STUDY**	Schrauwen, et al. (2014) (Antwerp Management School)	Idea Consult & Vlerick Leuven Gent Management School (2010)	Verheyen & Franck (2012) (IDEA Consult)	PIM, Partners in Marketing (2010)	Lazzaro & Lowies (2014) (ULB)
FOCUS ON:	Brussels	Flanders and Dutch-speaking Brussels	Flanders and Brussels	Brussels	Belgium	Wallonia and Brussels
Presenting numbers on the following geographical areas						
Outer Brussels	Belgium				Belgium	Belgium
BMA	Brussels Metropolitan Area					
CORE	Brussels Capital Region		French-speaking Brussels	Brussels Capital Region		Brussels Capital Region
		Flemish Region incl. Brussels (only Dutch-speaking companies)	Dutch-speaking Brussels			
Outer Brussels	Flemish Region		Flemish Region (partly on Province-level)			
	Walloon Region					Walloon Region
Geographical comparative analysis (%)						
Outer Belgium	International (Brussels with other cities / Belgium with other countries				International comparison of impact (world-wide)	
Outer Brussels	National (Belgian overall compared to main sub-divisions)			Comparison between Brussels and national specialisation on media activities		Comparing numbers / impact distributed along BE, Brussels and Wallonia (sometimes incl. Flanders and French and Dutch)
	Regional					
	Provinces		Distribution of employers and employees in Flanders (incl. Brussels)			
	Arrondissements					
CORE	Municipalities (within BMR)					
	Postal Codes (within BMR)					
	Neighbourhoods (within Brussels)					
Mapping exercise and geographical distribution						
Outer Brussels	Heat maps along chosen geo units	Distribution of companies along postcodes in Flanders				
CORE	Micro-data within Brussels			Micro-data on addresses of companies identifying distribution within Brussels		

The data and comparative indicators

As the choice of a model for economic impact analysis relies on the nature of the problem to be analysed as well as the data available (cf. Pleeter, 2012), our own methodology based on the goals of the report needs to be built. The methodology we propose to analyse the economic impact of the media industry in Brussels uses a mix of two approaches: (1) Traditionally used economic impact indicators are established that are decisive in most international and local frameworks to ensure to a certain degree of interregional or international comparability while additional valuable indicators are added (Part 3); (2) An extended geographical analysis is established on pre-defined units and micro-geographic data to present comparative analysis and localization of activities (Part 4). In the context of the overall research project MCB, the geographical aspect is especially important and will get for this report more attention than usual in economic impact analysis. First, we define the data used and how the data was processed. Second, the chosen indicators extracted from the data are determined. And third, limitations of the methodology are elaborated.

THE DATA[6]

In order to **create a valuable dataset for this study**, the following steps were taken: In a first step, (1) we identified the most suiting data source and its characteristics. After that, (2) we extracted data and different variables that are valuable for the analysis. Then, (3) we adapted and harmonized the extracted data based on our research framework. And lastly, (4) we identified additional data sources and extracted targeted information to enrich our data analysis.

(1) The **data source chosen** is the Amadeus database. It is the most comprehensive Pan-European database containing financial information on approximately 21 million companies from 38 European countries, developed by Bureau van Dijk Electronic Publishing (Bureau van Dijk, 2016). For this study, we acquired access to the Belgian part of the database, named Bel-first. The data acquired includes Belgian enterprises, associations and foundations with and without filing obligation to the National Bank of Belgium (in total about 2.3 million entities). The Bel-first data base was chosen for the following reasons: First, the focus of this study lies on the media industry and therefore enterprises, associations and foundations that are active in the media industry are the study object here summarized as media institutions. Additionally, self-employed people

[6] This chapter is built on the findings of Deliverable 2.2 and puts the findings into the context of the economic impact analysis of this Deliverable. For more information, see the applicable Deliverable.

are included. Second, Bel-first contains information on the entities' financials and organizational structure including number of employees, turnover and more. These indicators are the foundation of an economic impact analysis (see below). Third, the data available also contains data with up to 10 years of history and location data for the entities. The benefits of the Bel-first database are that the information available go beyond the data provided by the National Bank of Belgium (NBB) and the Crossroads Bank of Enterprises (KBO / BCE), as also entities without filing obligation are included and time series are available.

(2) The **data was initially collected May 2015** (see Deliverable 2.2a). The data was updated in April 2016 (see Deliverable 2.2b). Economic entities were retrieved whose principal activity fall under the identified four-digit NACE codes of the media industry as elaborated above. One NACE code is assigned to each unit recorded in the Bel-first database, according to its principal economic activity. The principal activity is the activity, which contributes most to the value added of the unit (the principal activity does not necessarily account for 50% or more of the unit's total value added, however). Only entities were retrieved who are in an active legal status (not provisional or inactive). The results from this search-inquiry from Bel-first include both companies and other enterprises with various legal forms and self-employed people. At this sector level, key data is extracted in time series from 2007 to 2014. The reason to use this number of years is that it contains nearly a full business cycle, with the result that growth rates reflect structural changes (Leurdijk et al., 2012). For each relevant four-digit NACE-BEL code, the following information was extracted from Bel-first: Company name, location data, NACE principal activity, language, size of entity, legal form, net added value, turnover, number of employees. In total, data for 38.045 entities was retrieved based on the search strategy.

(3) The retrieved **dataset needed further convergence and harmonization** for the analysis in the context and scope of this research. In order to fit into the statistical constraints, entities in the dataset are regarded as units. Each unit is a specific entity, which was defined by a 'batch number' for traceability, in such a way that it can be recognized and identified and not confused with any other unit. This enables the possibility to update the data set again in a later stage of the research. The location and activity information were converged with additional information. For analysis purposes, the location data available was enriched with information on municipality- and neighbourhood- level within Brussels. All entities' locations were also grouped into the three regions and the arrondissements into the Brussels Metropolitan Area. Additionally, the principal NACE codes were translated into the identified categories and four sectors of the media industry (see above). The micro-location of addresses of entities in Brussels and the BMA have been created with the tool Doogal to extract the longitude and latitude of addresses (see https://www.doogal.co.uk/BatchGeocoding.php).

Lastly, important unavailable data cells needed to be harmonized. Adjustments needed to be made based on assumptions and estimations in terms of an 'educated guess' about the total size of the studied variables.[7] This was done for unreported figures on net added value, turnover and number of employees. The reason for that was that some figures are only available to a limited extent for the enterprises in Bel-first due to the filing obligations each entity has meaning that usually smaller entities provide less often data. But, the media industry is especially represented by a large number of small and medium-sized firms and only a small number of large players (Leurdijk et al., 2012). Therefore, it is significant that the measurements include these companies when analysing the media industry. We chose to apply the median value for harmonization. The median value is the middle value of the string of values of a sample. It is a common method to achieve a typical value in industrial statistics as it is especially helpful if the weight of only some large firms will cause distortions in measurements as it would be the case for the media industry (KEA European Affairs, 2006).[8] Finally, for the self-employed people, the same assumptions are made except for the figure on number of employees (we regarded the number of employees here as 1 for calculations on the total number of media workers but they were excluded when analysing the amount of employees) and adjustments implemented.[9] The author applied the principle of prudence in this context by working with figures that are nearer to the lower limit than the upper limit.

[7] The author took inspiration from and used the same estimation methods as applied by FlandersDC in their regular reports (Flanders DC, 2016).

[8] The author would like to exemplify the working method that was applied to estimate the median values of net added value, turnover and number of employees of the entire population based on the indicator for the number of employees in 2014: First, the sample was filtered. In 2014, out of more than 38.000 entities of the media industry in Belgium, more than 35.000 did not report the number of employees in 2014. Then, all self-employed entities were filtered. There were 26.000 entities left out of which 23.000 did not report. The 3.000 entities that gave indications have been used then as sample of 2014. Second, the median of the sample was calculated. Within this example, the median value was 2 employees per entity in 2014. For comparison, the average was 23. The author regards 2 employees per small entity as quite realistic while 23 employees would overestimate the real population. This method of filtering and calculation of the median value was applied to all missing data cells in the data set. The results of the calculations of the median value of all years were as follows: about 2 employees per entity, 30.000 EUR net added value per entity and 190.000 EUR turnover per entity.

[9] An exception was made for the entity RTBF (RADIO-TELEVISION BELGE DE LA COMMUNAUTE FRANCAISE), the Walloon public broadcaster. As RTBF is registered as "public utility founding", the public broadcaster has no filing obligation and therefore no net added value, turnover or numbers of employees is reported in the dataset. However, RTBF is one of only three media institutions that have been identified to have more than 1.000 employees. It would distort the results to adjust this entity the same way as the

(4) The analysis of the data retrieved from Bel-first was then finally enriched with **data extracted from a number of other publicly available data sets**. From a Belgian level, the NIS (Nationaal Instituut voor Statistiek) and NBB (National Bank of Belgium) deliver key data on the population, work and economy in Belgium (NBB, 2016; NIS, 2016). The Federal Planning Bureau (FPB) is a public agency that collects and analyses data on a federal level on for example economic and social policy issues and published input-output tables (FPB, 2016). On the level of Brussels and its municipalities, IBSA / BISA (Brussels Institute for Statistics and Analysis) collects and provides similar Brussels' statistical data (IBSA/BISA, 2016). From a European level, Eurostat provides statistics (Eurostat, 2016a) like EU employment data that is collected from two different sources: from the Labour Force Survey (LFS)[10] and from the Structural Business Statistics (SBS)[11], both administrated by Eurostat. Other data sources used in studies, have and will be utilized in Work Package 3 and 4.

Table 6 summarizes the data sources utilized in this Deliverable next to the other available studies in Belgium. As can be seen, **compared to the other studies, the author has chosen the most comprehensive approach utilizing as many valuable data sources as possible** for the European comparison and the Belgian information accessible. This approach will ensure that the most comprehensive picture on the economic impact of the media industry in Brussels can be drawn.

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other "small companies". Therefore, data for RTBF on turnover was retrieved from the 2016 report prepared by the Service Géneral de l'Audiovisuel et des Multimédias de la Fédération Wallonie- Bruxelles (Service Géneral de l'Audiovisuel et des Multimédias de la Fédération Wallonie- Bruxelles, 2016) and on number of employees from a report for the Parliament of the French Commune from 2011 (Antoine & Heinderyckx, 2011) and Mediarte in 2014 (Mediarte.be, 2014). If values were not available, they were estimated based on the available data, and in comparison, to the Flemish public broadcaster, VRT (VLAAMSE RADIO- EN TELEVISIEOMROEPORGANISATIE).

[10] LFS is a quarterly survey given to a sample of the population living in private households. The LFS includes data on at most 3-digit NACE level for most, but not all, NUTS 2 regions.

[11] SBS statistics is mainly sourced from business registers and includes structural data over the economy. On NUTS 2 regional level Eurostat only administers data on NACE two-digit level. Four-digit level data are collected on national level, but not for all NACE categories. The four-digit level is in turn available for NUTS 0 regions (countries) but not for NUTS 2 regions.

Table 6 – The data sources chosen next to other studies.

REFERENCE:	**PROPOSED Data sources**	Schrauwen, et al. (2014) (Antwerp Management School)	Idea Consult & Vlerick Leuven Gent Management School (2010)	Verheyen & Franck (2012) (IDEA Consult)	PIM, Partners in Marketing (2010)	Lazzaro & Lowies (2014) (ULB)
Bel-first	X	X	X	X		
NIS	X				X	
NBB	As part of Bel-first				X	
FPB	X				X	
IBSA / BISA	X		X	X	X	
EUROSTAT (LFS, SBS, etc.)	X					
ONSS/ RSZ	Utilized in WP4	X	X	X	X	X
INASTI / RSVZ	Utilized in WP4		X		X	
Other unofficial sources	Utilized in WP3	X	X			
NACE level	4-digit	5-digit	4-digit	4-digit	4-digit	5-digit

THE CHOSEN INDICATORS

In this Deliverable, the economic impact analysis model is applied delivering estimations not only on key data but also with a focus on a comparative as well as geographical analysis of the media industry. Therefore, (1) key indicators, (2) comparative comparison levels and (3) geographical units for the mapping need to be developed. For the data analysis, Tableau was used.

(1) The key indicators are based on basic economic indicators: number of firms, employment, value added, trade balance, growth, labour productivity, and firm structure. These indicators are "the most widely used macro-economic indicators in sector and national comparison" (Leurdijk et al., 2012). For this analysis, the key indicators have been structured into economic contribution, employment and firm and market structure. The definitions and the way the indicators have been analysed is mostly inspired by the elaborations of Eurostat (2016a) and the OECD (2016a).

The economic contribution of an industry or sector is especially expressed through the indicator of value added. It is the most basic indicator of earnings for specific activities. It is defined as turnover minus cost at firm level. It can be compared with a country's general gross domestic product (GDP). This key indicator is also used in order to observe and to understand the growth level of a sector and share of the economy (Eurostat, 2016b). Additionally, the contribution of an industry or sector can also be expressed through multipliers that are calculated on the basis of input-output tables that describe the trade balance.

These multipliers show the direct and indirect effect an economic activity has on the economy and other sectors (FPB, 2016). Another important indicator is the **employment and labour market structure** of an industry or sector, expressed in this study by the number of employers, employees and self-employed. A self-employed person is broadly defined in this context as anyone who is not employed by an employer for the performance of his or her professional activity, including freelancers, self-employed entrepreneurs, etc. An employee is an individual who is employed by an employer. An employer is an institution that employs at least one staff member. Employment is the clearest indicator of activity in a sector (OECD, 2016b). The ratio between employment and value added is labour productivity. The higher this absolute ratio is, the higher the use of capital in case of manufacturing industries or the wages earned if services are involved. A fast growth of this ratio is often seen as an indicator of the adoption of new and more productive capital or innovation. But, also other causes can influence this indicator (Eurostat, 2016b). The last indicator that was considered is the **firm and market structure within** an industry or sector including the average firm size. Another important indicator within the market structure are the legal forms of the institutions if there are also associations and pubic bodies are active in the sector. Moreover, the growth in number of firms gives an indication of new entrants and exits of firms showing how dynamic a sector is (OECD, 2016c). Within Belgium also the indicator of the language spoken within an institution gives insights into the market structure and if Brussels as mostly French-speaking city is also attractive for Dutch-speaking media firms. More insides on the market structure of Brussels' media industry will be given in future Deliverables of Work Package 3.

(2) The key indicators with a focus on the number of employees and the value added will be used for comparison on different levels, to show the significance of them. This comparison will be done on different levels: media sectors of the industry, geographical units within Belgium, other cities, and other sectors in share and real numbers.

The media subsectors are divided as described above into core and supporting entities in print, AV, advertising, and new media. The comparative analysis on a geographical level focuses on the regions, the provinces, arrondissements and postal towns and within Brussels, on the municipalities, postal towns and neighbourhoods. For comparison, the cities of Amsterdam, Berlin, London, Toronto and Singapore as especially strong media localities are chosen (see Part 5). For comparison to other local economies the construction and telecommunication sector have been chosen as the telecommunication sector is also a mostly knowledge based industry in Belgium with strong focus in Brussels and the construction sector gives a comparison to a different sector.

Table 7 – The indicators chosen next to other studies.

REFERENCE:	**PROPOSED Indicators**	Schrauwen, et al. (2014) (Antwerp Management School)	Idea Consult & Vlerick Leuven Gent Management School (2010)	Verheyen & Franck (2012) (IDEA Consult)	PIM, Partners in Marketing (2010)	Lazzaro & Lowies (2014) (ULB)
FOCUS ON:	Institutions	Sector	Sector	Employment	Employment	Employment
Total numbers						
Economic contribution						
Value added	X	X		X	X	X
Turnover	X	X			X	X
Growth	X	X	X	X	X	X
Multipliers	X				X	
Investment[12]					X	
Employment						
Employers / companies	X	X	X		X	X
Employees	X (focus in WP4)	X	X	X	X	X
Self-employed	X (focus in WP4)	X	X		X	X
Labour productivity	X					
Firm and market structure						
Company size	X		X			
Legal form	X					X
Company entrants / exits	X					
Language	X					
OTHERS						
	X (focus in WP3)	Network analysis		SWOT /Case studies, etc.		
Comparative indicators (%) based on net added value and media workers (or employees)						
Included Sectors / activities	X	X	X		X	X
Other sectors	X				X	
Geographical comparison (%) and indicators based on net added value and media workers (or employees) in Belgium						
Belgium:	X				X	X
Regions	X	X				X
Provinces	X		X			
Arrondissements	X		X			
Postal towns	X	X				
Geographical comparison (%) and indicators based on net added value and media workers (or employees) in Brussels and BMA						
International comparison	X			X	X	
Neighbourhoods	X			X		
Micro-locations	X			X		
Specialization and Concentration measures	WITHIN Deliverable 2.3b			X		

(3) The mapping exercise focuses on first visualizing the comparative analysis of different geographical units and later on micro-geographies of addresses within Brussels, the Brussels Metropolitan Area and the media cluster around Reyers.

[12] The indicator for investment was excluded because the NIS collects this information and only data till 2009 is given. The indicator was therefore not included in the analysis because no current data was available.

This Deliverable maps the media industry in Belgium in three stages where the study progressively increases the geographical level of resolution. The study goes from a Belgium-wide perspective that compares the regions, provinces, arrondissements and postal towns to a Brussels-wide perspective that compares the postal towns or municipalities within Brussels, and the Brussels' neighbourhoods, to finally a micro-view on the locations of media institutions and independents within Brussels, the BMA and the chosen neighbourhood of Reyers in more detail. The progressively increasing comparative level of different geographical areas to the micro-locations will reveal cluster patterns within and beyond Brussels' media industry.

Table 7 shows the chosen indicators and the comparative approach in comparison to other studies. While most studies so far include indicators on employment and growth, many studies do not take a comparative approach into consideration. While the comparison gives the most valuable results to estimate the real economic impact of the media industry. The market structure and the language are also indicators not prominent in current studies at the moment. **Our approach tries to be as comprehensive as possible**.

Limitations

It is necessary to report explicit shortcomings and limitations of the methodology here introduced, so that the results of this Deliverable can be placed in the right perspective. There are two major limitations for the data analysis: (1) the complexity of the media industry which leads to (2) low quality of the data.

First, the **media industry shows complex structures** and is highly impacted by converging tendencies and technology advancements leading to interconnected activities, and novel dynamics making it impossible to clearly distinguish and characterize each entity. Consequently, the demarcation of the various entities of the media industry is neither exclusive nor exhaustive. This was already elaborated in the delineation of the media industry developed for this Deliverable (see above). For instance, the different sectors of the media industry are not exclusive, as an actor in the industry could be active not only in one but in several sectors, like the broadcasters who also have written content on their websites. The here-developed approach is theoretical and gives good possibilities for distinctions between activities and entities as the approach gives more restricted delimitation of the media industry. However, the delimitation used for the purpose of extracting industrial data is not as open to considerations as a theoretical approach. Another important factor in this is the globalization tendencies in the media industry. Mediated content is through the advancements in technology not bound to certain distribution locations anymore and content can flow world-wide. In a global world, the boundaries of a region are relative as

industrial sectors are subject to international dynamics. For instance, organisations in Brussels are not necessarily Belgian and operate across national boundaries and organisations abroad may have a significant effect on the local economy. This complexity of the media industry generated by convergence tendencies and globalization through technological advancements is hard to grasp in quantitative methods. The study is therefore limited to the available resources in identifying the institutions and self-employed people in the media industry and cannot work exhaustively, neither in terms of defining activities nor spatial boundaries. There is therefore, a heavy dependence on the reliability and completeness of the available data sources.

But, secondly, **data sources on the media industry are hardly reliable**.[13] Only a portion of the activities of the media industry is encapsulated by classification systems, like the NACE nomenclature (see above). For the majority of the activities, there is no code, or an activity spans different codes, or one code covers different activities. Also, irregularities have been encountered between entities' attributed activity codes and actual activities carried out. For instance, the companies that are summarised under a certain code actually perform a different activity, either related or not, and should not be attributed to the activity concerned. On the other hand, entities that actually perform the activity for which searches are made using the nomenclature, are included under a different activity code and are therefore not included in the group to which they belong. This means that there is a discrepancy between the reality and the analysis of data made here. Additionally, working with official data sources means that there are constraints in data availability. Especially financial data has many constraints. For the entities, all available data are reported according to the reporting requirements of the legal form. This leads to big data gaps in the data set. For example, for self-employed people and small companies often, only address details and activities nomenclature are shown, without financial data. At the same time, the media industry encompasses in the majority these kinds of entities. Also, a time lag could be identified as publicly available data becomes only available after about two to three years. The complexity of organisational structures in economic and legal areas causes potential discrepancies in the data collection process. When an institution is identified as being part of the media industry but carries out several activities, some of these activities might not belong to the media industry as here defined. But only total figures are available and accounted for. This leads to distortions in the datasets. Unavailable data cells due to reporting requirements of entities needed to be harmonized (see above). This means that the findings of this research are dependent on assumptions made in the harmonization process. Extrapolation however does not take into account the differences between sectors and activities. In the absence of more

[13] See Schrauwen, Demol, Van Andel & Schramme (2014) for more details on limitations in industrial data analysis.

accurate and comprehensive information, this implemented adjustment is however a good option to approximate the findings than simply ignoring the absence of data.

All these limitations lead to distortions in the findings. Thus, it is important to understand that different approaches, delineations and operationalization in this research field can generate very different figures. **The methodology here-developed can be considered as an effort to provide the fullest possible picture of the economic impact of the media industry** from different angles enabling one to observe trends and comparative insights while delivering estimations. Still, the identified limitations and shortcomings need to be taken into account to place the results in the proper context.

Table 8 – How do we research the media industry in Brussels?

The economic impact analysis model was chosen as method as it gives the opportunity to deliver estimations on key data and comparative analysis of the media industry also in a geographical scope. It is necessary to define the (1) scope of the research, (2) data, (3) economic impact indicators, and (4) limitations of the method:

(1) The **media industry and Brussels** as spatial unit are defined in Deliverable 1.1a and 2.1 and considerations were brought into the context of this analysis.
(2) A **dataset** was retrieved from Bel-first and is built on the identified NACE codes and the principal activities of active entities including companies, institutions and self-employed in Belgium. The dataset was cleaned and harmonized. Other valuable data sources enrich the analysis (including Eurostat, NBB, etc.).
(3) **Indicators** were chosen that describe the economic contribution of the media industry, its structure and employment structure in a comparative and spatial way.
(4) The **limitations** of the here-developed method are based on the complexity of the media industry and the reliability of the data set. Reasons include: Inappropriateness of the nomenclatures for the activities; The huge majority of self-employed people and small organisations, which are not subject to full financial reporting obligations; The increasing level of crossover between different activities; The fact that companies report their financial figures for the national – and not regional – territory, making regional shares difficult to estimate; The difficulty to define boundaries of a particular function, activity, or sector within the media industry.

Part 3: The economic impact of the media industry in and on Brussels

The Brussels region is the economic motor of Belgium as it represents almost one third of the national economy with only one tenth of the inhabitants (1,193,420 inhabitants in August 2016). It is also the third richest region in the European Union after Luxembourg and London (Ineum Consulting & Kurt Salmon Associates, 2010) with a GDP of 61.899 EUR per capita in 2013 (NBB, 2016). The Belgian capital is a key area for journalists. In 2013, the European Commission stated that 1024 journalists from 533 different media and 68 different countries registered in the Belgian capital to cover news on the EU. In addition, there are the local Brussels-based Belgian journalists, approximately over 1000 (AJP, 2016) combining into a total of more than 2000 journalists in Brussels. This makes Brussel the world-wide leading press centre. **Brussels however, got so far not widely acknowledged as leading media location.** This part presents the findings of the economic impact analysis of the media industry (core and supporting activities here-after referred to as media industry) in Brussels delivering estimations not only on key data but also with a focus on a comparative analysis including trends showing the importance of Brussels as media location in terms of economic contribution, employment and market structure.

Economic contribution

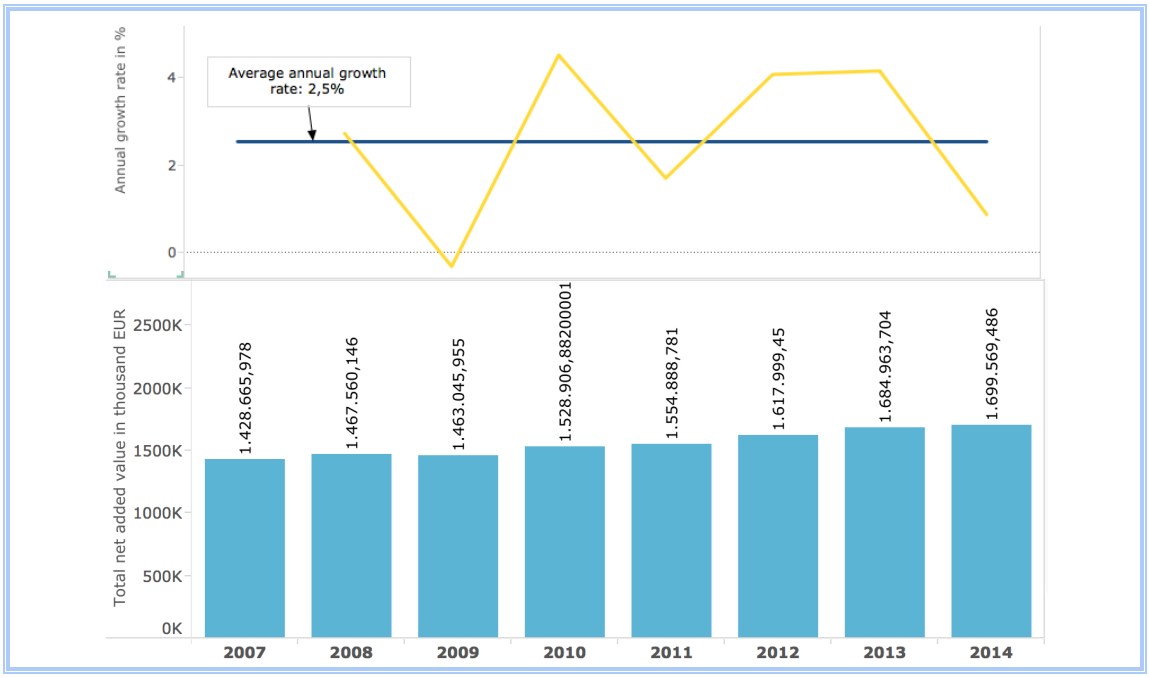
The **media industry creates an important contribution to the Brussels' economy**. In 2014, 5.946,02 million EUR turnover was generated. With 1.699,57 million EUR net added value produced in 2014, the Brussels' media industry contributes 2,4% to Brussels' total economy (71.744,5 million EUR). The relative importance of the media industry becomes more apparent when other industries are compared. For instance, the contribution of the construction industry to Brussels economy is the same as the media industry (2,4%). The telecommunication industry only contributes little more compared to the media industry (3,0%). Table 9 summarizes the findings.

Table 9 – The contribution of Brussels' media industry in 2014 in terms of net added value (Sources: Belf-first; Eurostat, 2016; IBSA/BISA, 2016; NBB, 2016).

	Net added value in million EUR	Share of Brussels' media industry in %	Share of Brussels' Construction industry in %	Share of Brussels' Telecom industry in %
Brussels' media industry	1.699,57			
Brussels	71.744,5 (2013)	2,4	2,4	3,0
Belgium	400.643	0,4		

The annual average growth level of the media industry in Brussels (2,5%) is higher than the overall growth levels of Brussels' economy (2,1%) and Belgium's economy (2,2%) making the industry even more important by every year. The positive trend is stable and can be expected to continue in the future. One explanation can be that the media industry is highly influenced by the ICT developments and therefore grows faster than other industries showing a strong potential for innovation and expansion. The growth and the key data are displayed in Figure 3.

Figure 3 – The evolution of the net added value of Brussels' media industry and comparison of the average annual growth rates (Sources: Bel-first; IBSA/BISA, 2016; Eurostat, 2016).



	Average annual growth rate in %	
Brussels' media industry	2,5	
	Brussels	Belgium
Total economy	2,1	2,2

The media industry's sectors contribute to the media industry differently. When broken down, **the audio-visual sector is the largest sector**, contributing 828,14 million EUR net added value (48,7%). This is due to several very large players in this sector like VRT, RTBF, RTL BELGIUM and KINEPOLIS GROUP. VRT alone contributes 11,8% of the total economy of the media industry in Brussels. The most contributing activity is correspondingly television programming and broadcasting activities followed by advertising agencies and AV production activities. Brussels is therefore host of the biggest media players in terms of net added value in Belgium especially in the AV sector. The new media sector is by far the smallest sector of the media industry. 0,1% of core activities could be identified including publishing of computer games and web portals. The supporting functions in the sector are delineated by data processing, hosting and related activities and make up 13,1% of the total media industry economy of Brussels. However, these findings need to be considered only as broad estimations as the real extent of the new media sector is difficult to grasp because of the limitations in the activity classification system (see Part 2).[14] Table

[14] The supporting activity "Data processing, hosting and related activities" is to be understood quite broadly and was included because it encompasses for example streaming services or application and Web hosting. This supporting category includes institutions like SPOTIFY BELGIUM, MEDIARGUS (which is an online service that gives access to Belgian newspapers and magazines), different Belgian Websites and Applications (like CINEUROPA, KAPAZA, etc.) and many more that are considered as media industry in our definition. However, this category also includes companies that are only involved in IT services and are not related to media production. The firm SMALS for instance, which is located in Brussels is an IT solution provider and takes up more than 70% of the total new media economy in Brussels. The other firms identified in Brussels in the new media sector however are all small and micro enterprises and freelancers. This distorts our results. It should be also noted that we by choice did not include activities of the NACE classification like "other software publishing", "Computer programming activities", "other information service activities" and many more as core or supporting activities, as samples of the data showed that only a few of the institutions included in these categories were related to the new media sector. Therefore, it should be noted that the new media sector as a very young sector is the hardest to grasp through classification systems like NACE. The numbers here presented show only an estimation as we already identified single entities that should be excluded and at the same time entities that should be included but do not fit the classification.

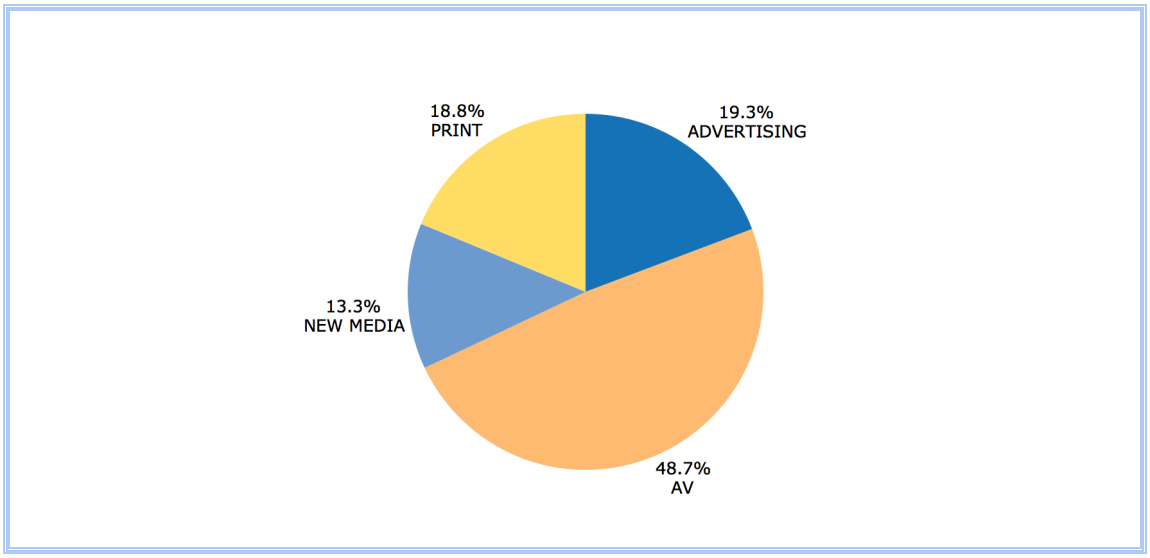
10 gives a detailed overview of the shares of the sectors, chosen sub-activities and institutions. Figure 4 visualizes the distribution of the four media industry sectors.

Table 10 – The sectoral division of Brussels' media industry in 2014 based on share of net added value (including chosen activities and institutions with high share) (Source: Bel-first).

	Share of total Brussels' media industry in %
New Media	13,3
Data processing, hosting and related activities (support)	13,1
Publishing of computer games / web portals (core)	0,1
Print	18,8
Publishing of journals and periodicals	3,6
VERBRUIKERS UNIE TEST ANKOOP	3
Publishing of newspapers	3,9
ROSSEL ET CIE / MEDIAFIN (1,9 / 1,8)	3,7
Book publishing, binding, retail sale	2,9
Advertising[15]	19,3
JC DECAUX / IP BELGIUM (1,5 / 1,4)	2,9
AV	48,7
Television programming and broadcasting activities	23,3
VRT	11,8
RTBF	10,0
RTL BELGIUM	3,1
Motion picture, video, TV programme (post-) production activities	17,4
Motion picture projection activities	3,8
Sound recording and music publishing	1,3

[15] The advertising sector is highly influenced by companies that work in advertising space, like JC DECAUX. In our delineation of the media industry core activities are supposed to reflect activities in the production and publishing of mediated content. Advertising space is seen as a media that carries mediated content that gets distributed to a big audience. The companies who "publishes" the mediated content (the advert) on such a media is therefore considered as core entity of the media industry.

Figure 4 – The share of the four sectors of Brussels' media industry based on net added value (Source: Bel-first).



Another possible way to demonstrate **the economic importance of the media industry is through linkages with the rest of the economy**. These linkages are described through input and output tables that show the multiple economic effects that are produced in terms of creating output (production), value added (income) and jobs (employment).[16][17] The findings are summarized in Table 11.

The output (which is equivalent to the revenue generated) created by a sector has through backward linkages to other sectors that contributed to the production of this output influence on the whole economy. Using the FPB provided average multipliers, the publishing sector's (NACE code 58) total output multiplier is for instance valued at 1,9. This means that for every Euro the publishing sector in Brussels earns, it value adds an additional 90 Cents to other parts of Belgium's economy. Out of the four provided sectors, the advertising sector has the highest production multiplier. For the advertising sector this means that an increase in demand for the output of goods and services would stimulate total output of goods and services in Belgium to rise by twice the amount (multiplier of 2,0). The input multiplier describes a similar linkage, as it examines in how far the output

[16] The Federal Planning Bureau (FPB) collects input and output tables for Belgium every 5 years and the latest results are available for 2010 (FPB, 2016). Multipliers are calculated based on these input and output tables for different sub-sectors that do correspond to the NACE classification on a 2-digit level (while some are also accumulated). We therefore can only present numbers on activities that have been identified along two-digit code activities. These codes include 18, 58, 59-60 and 73. The results and descriptions of these codes can be found in Table 11.

[17] The analysis of the multipliers was inspired by Mun and Boey's (2005) report on the copyright industries of Singapore that considered the guidelines of WIPO for the analysis.

of a sector would result in an increase in value added (or GDP). In other words, taking the example of the programming and broadcasting sector (NACE code 60), every Euro increase in output from this sector would result in an increase of 70 cents of Belgium's GDP. This is the highest value added multiplier of the identified four sectors (multiplier of 0,7). The employment multiplier highlights the linkage of cumulated jobs per initial employment within a sector. This means that for every position that is created in for instance the film, TV and music production sector (NACE code 59) additionally more than one position is created in Belgium's economy (multiplier of 2,6).

Table 11 – The multipliers of the Belgian media industry in 2010 (Source: FPB, 2016).

Chosen activities for analysis						
NACE code	Description					
18	Printing and reproduction of recorded media					
58	Publishing activities					
59	Motion picture, video and TV programme production, sound recording and music publishing					
60	Programming and broadcasting activities					
73	Advertising and market research					
Multipliers within Brussels-based sectors for Belgium's economy						
Spatial	Brussels			Belgium		
NACE code	Production multiplier	Income multiplier	Employment multiplier	Production multiplier	Income multiplier	Employment multiplier
18	1,7	0,1	1,7	1,6	0,6	1,6
58	1,9	0,7	2,7	1,8	0,8	2,6
59	1,7	0,7	2,6	1,6	0,7	2,3
60	1,6	0,7	1,6	1,7	0,7	1,7
73	2,0	0,6	3,8	2,0	0,7	3,2
Total economy	1,5	0,7	1,5	1,6	0,7	1,5

If we compare the multipliers of the chosen Brussels' media sectors with the multipliers of the total Brussels' economy, we can see that they have higher multipliers than the multipliers of Brussels' total economy (e.g. Brussels' advertising sector has a production multiplier of 2,0 while Brussels' economy has only a multiplier of 1,5), meaning **that the media sectors have an above average impact on Belgium's economy**. If we compare the multipliers of the

media sectors based in Brussels to the multipliers of Belgium's media sectors, we can also see that Brussels' multipliers are on average much higher (e.g. the employment multiplier of Brussels' printing sector (NACE code 18) is with 1,7 higher than Belgium's multiplier with 1,6). This shows the importance of Brussels' media sectors in Belgium. An exception is the income multiplier that is for the media sectors in Brussels within the average.

Employment

Around 6.500 employers are active in Brussels' media industry in 2014. That shows that 6,4% of all employers in Brussels belong to the media industry. Around 60,0% of employers perform core activities in the media industry (production and publishing activities) while the others are active in supporting functions (distribution, post-, pre-production and retail). Most are related to production activities (43,9%). The 6.500 employers employ more than 26.000 people. Additionally, around 1.300 people are self-employed in Brussels' media industry, which together makes up 4,4% of Brussels' work places. The numbers on employment are summarized in Table 12.[18]

Table 12 – Employment of the media industry in Brussels in 2014 (Sources: Belf-first, IBSA/BISA, 2016).

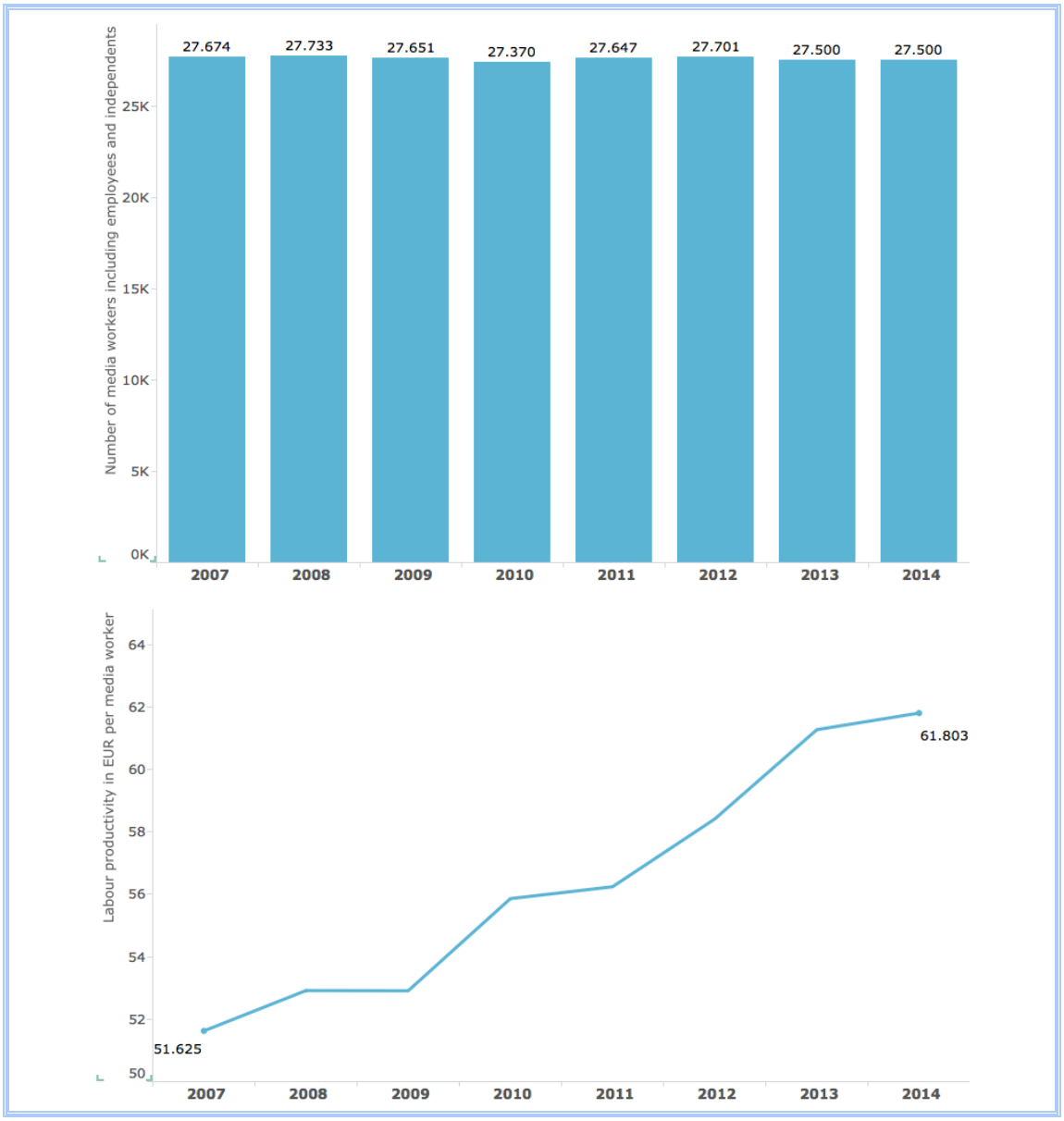
	Number of employers	Number of employees	Number of self-employed	Total media workers
Brussels' media industry	6.409	26.224	1.276	= 27.500
Brussels' total economy	99.388	619.676 (work places)		
Share of Brussels' media industry in %	6,4	4,4		

The number of people working in Brussels' media industry is quite stable (however, slightly decreasing) while at the same time the output created is growing (see above). This can be explained through the labour productivity. **The labour productivity of employed and self-employed in Brussels' media industry increased** from 2007 till 2014 by more than 19,7%. This means that in 2007 every media worker in Brussels produced around 52.000 EUR net added value per year while in 2014 this increased to 62.000 EUR (net value added / number of media workers). This high increase can be interpreted through several

[18] The here-presented numbers of employment deviate from the findings in Work Package 4. The reason is that different data sources were used (see Deliverable 4.2). Deliverable 4.2 relies on data from ONSS/RSZ and INASTI/RSVZ.

ways. First, the adaptation of new technologies can lead to higher labour productivity. In order to create content less working hours are needed due to new technologies. But this can also indicate that less working hours is put into the creation of content leading to less quality of media content due to the new pressure and competition in the media markets. More research needs to be done to understand the mechanisms causing this development. On average the labour productivity increased by 2,6% per year. Figure 5 displays the evolution of number of employees and the increase in labour productivity.

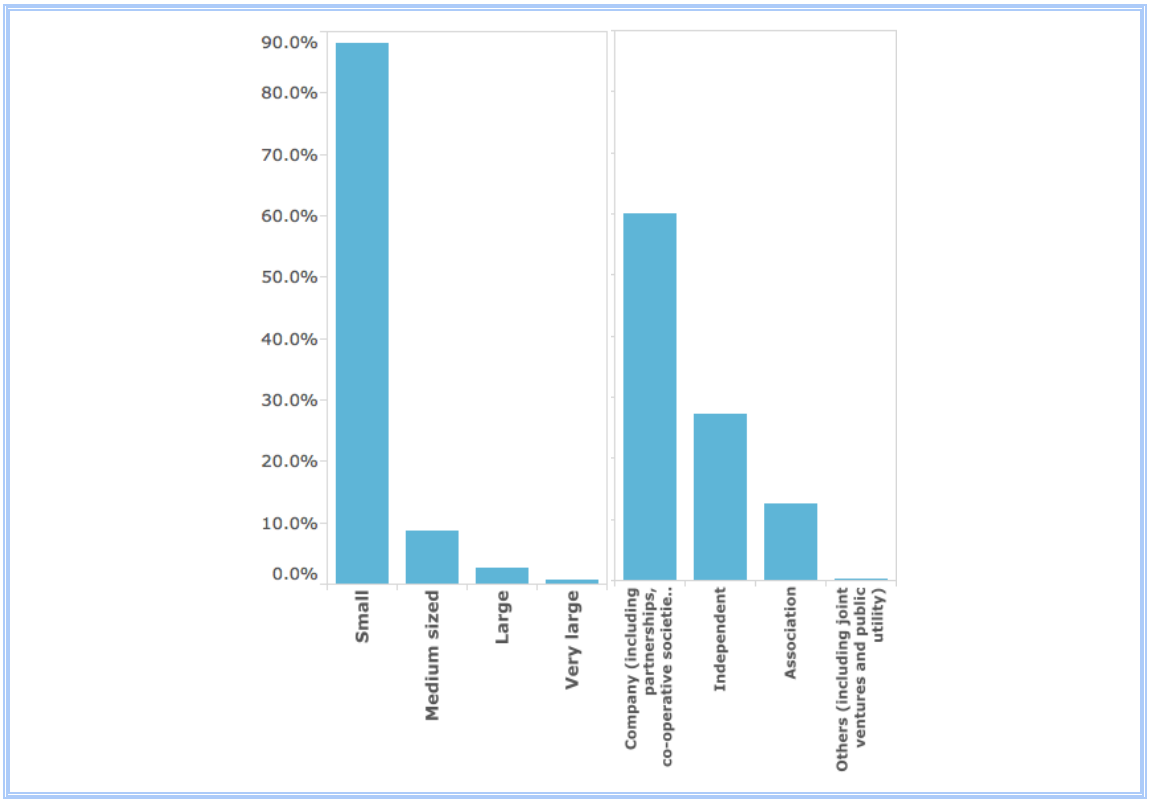
Figure 5 – The evolution of number of media workers and labour productivity in Brussels' media industry based on net added value in EUR (Source: Bel-first).



Market and firm structure

Overall**, the media industry in Brussels is characterised by a small number of very large players and a lot of small players, self-employed and micro enterprises**. Only 17 enterprises create around 50% of total net added value of the industry, the biggest including VRT, RTBF, RTL BELGIUM and KINEPOLIS GROUP from the audio-visual sector, ROSSEL ET CIE, VERBRUIKERS UNIE TEST and MEDIAFIN from the print sector, JC DECAUX and IP BELGIUM from the advertising sector (see Table 10 above). Out of the employers in Brussels' media industry, these large and very large employers represent only around 3,3% and around 8,5% are marked as medium sized. The rest of employers (around 88.2%) are identified as small in size (calculations are made excluding the 62,2% of entities that have no indication for their size).[19]

Figure 6 – The distributions of Brussels' media industry institutions along size and legal form (Source: Bel-first).



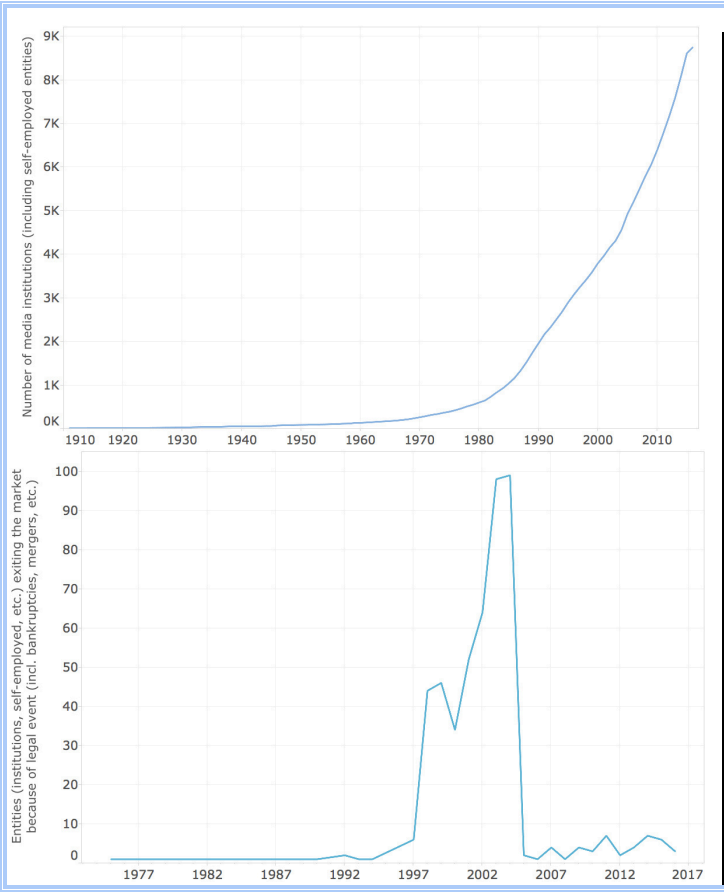
[19] Within Bel-first the size of the entities is defined if at least one of the following conditions is met per category: Very large = operating revenue ≥ 100 million EUR / total assets ≥ 200 million EUR / employees ≥ 1.000; large = operating revenue ≥ 10 million EUR / total assets ≥ 20 million EUR / employees ≥ 150; medium sized = operating revenue ≥ 1 million EUR / total assets ≥ 2 million EUR / employees ≥ 15; small = if no condition is met.

Looking more closely at these employers, we see that about 60,0% of employers are companies (including partnerships, co-operative societies and other forms), around 27,2% are independents, 12,4% are associations and only 0,3% are identified as other legal forms in Brussels' media industry (calculations are made excluding the 39,0% of entities that have no indication about their legal form in the data set). **This indicates how diversified the media industry in Brussels is** and that not only companies play an important role but also associations and other legal forms. The distributions of institutions of Brussels' media industry along size and legal form are visualized in Figure 6.

The media industry and market structure is also highly dependent on **the entry and exit of new institutions as this is seen as a marker for business dynamism and economic growth**. New firms are thought of as especially innovative and play an important role as job creators. Also, the competitiveness of the industry is dependent if new entrants can enter and less productive firms exit the market. Since around the 1990s, the increase in entities in the industry is strong and grows on a stable basis. The data shows that on average 7,0% of all self-employed and institutions in Brussels' media industry are new to the market every year. Especially the new media sector and the AV sector have strong entry rates of 9,3% per year. Both sectors grew within the last 30 years by more than 1000% while the print and the advertising sector grew each by around 500%. An explanation for this positive and stable trend could be the digitization of the media industry. The very positive trend started with the mists of the Internet and continues to encourage more and more institutions and self-employed to enter the market.

At the same time the exit rate of entities due to for instance bankruptcies but also mergers are on average 3,1% per year. However, the average is disturbed by the years between 1998-2004. Within these years, the number of firms exiting the media industry skyrocketed. This can be explained by the recession of the early 2000s and the burst of the dot-com bubble. Since 2004 the exit rate is stable again. It is a frequently reported finding that most new firms who enter a market do not survive for long. The firms and self-employed who leave Brussels' media industry leave on average after almost 15 years. This survival rate is quite long. However, around 20% who exit the market leave after less than 5 years. Some of the biggest and "oldest" still existing media companies in Brussels' media industry includes AGENCE BELGA, which started already in 1920, ROSSEL ET CIE, which started business in 1936 and for instance SONY PICTURES RELEASING, which started business in 1939 in Brussels. The here-presented numbers are presented and visualized in Figure 7.

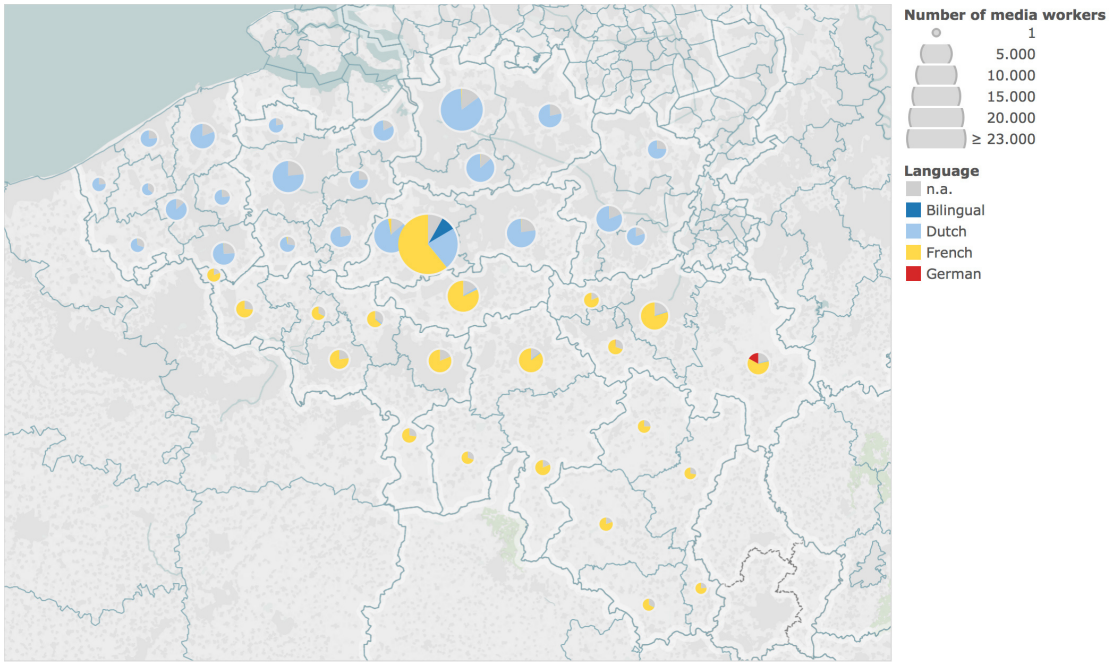
Figure 7 – The exits and entries of entities (including also self-employed) of Brussels' media industry (Source: Bel-first).



Entry rate in % (average 1985-2015)	Brussels` media industry (institutions and self-employed)
Total	7,0
Print sector	6,4
New media sector	9,3
AV sector	9,1
Advertising sector	6,7
Exit rate in % (average 1985-2015)	3,1
Survival rate in average years	15

The available data proofs that Brussels is not only an important location for French-speaking (63,1%) but also for Flemish media institutions and (13,6%). Brussels is the only location in Belgium showing also a relevant number of bilingual media institutions (0,8%) (with 22,5% of institutions who do not indicate a language). If we weight this results by media workers Dutch becomes even more important in Brussels (22,6%). Additionally, **Brussels is the only city in Belgium where more than one language is relevant**, while otherwise a clear line of French-speaking media workers in Wallonia and Dutch-speaking in Flanders can be observed. A mapping and the key data of distribution of languages spoken in the media industry is visualized in Figure 8.

Figure 8 – The distributions of languages by media workers and institutions in Brussels and Belgium`s Arrondissements (Source: Bel-first).



	French	Dutch	Bilingual	not available (n.a.)
Share of language of Brussels' media institutions in %	63,1	13,6	0,8	22,5
Share of language of Brussels' media employees in %	60,9	22,6	8,3	8,2

Table 13 – What is the economic impact of Brussels' media industry?

The economic impact analysis shows that the media industry in Brussels plays an important role. The media industry contributes highly to the local and Belgium's economy and has a strong influence on employment. The findings can be summarized through key numbers about Brussels' media industry:

Total net added value	1.699,57 million EUR (2,4% of total Brussels' economy and 40% of total Belgium's media industry)
Annual average growth	2,53% (≥ 2,1% total Brussels' economy)
Employers	6.500 (6% of total Brussels' economy)
Employees	25.000 (+1.300 independents =4% of Brussels' working population)
Structure	Small number of very large players (e.g. VRT, RTBF, RTL, Kinepolis group, Rossel et cie, Mediafin) and lots of small players.

Part 4: The geography of the media industry in and around Brussels

Research within the context of regional economic investigations often focusses besides economic impact on the subject of distribution and concentration of economic activities. This is also subject to media cluster studies. **Before media clusters can be analysed they need to be identified**. As a media cluster is defined as an agglomeration of media activities (cf. Deliverable 1.1a), the distribution and concentration of media activities in certain local areas have been often used in research and by practitioners to identify media clusters. The here-presented distribution and concentration on a macro- and micro-geographic level gives first insights into where to find media clusters (see Deliverable 2.3b for further investigations on the specialization and cluster formation of media activities in Brussels). The aim of this part is to bring the geographical focus of media cluster research into the economic impact analysis and provide a selection of possible calculations and visualizations of media activities' distribution and concentration within Brussels and beyond. In order to show concentration, the following findings focus on percentages of total amount of value produced in the media industry and of number of media workers and the distribution of addresses of media institutions.

The macro-geographic concentration

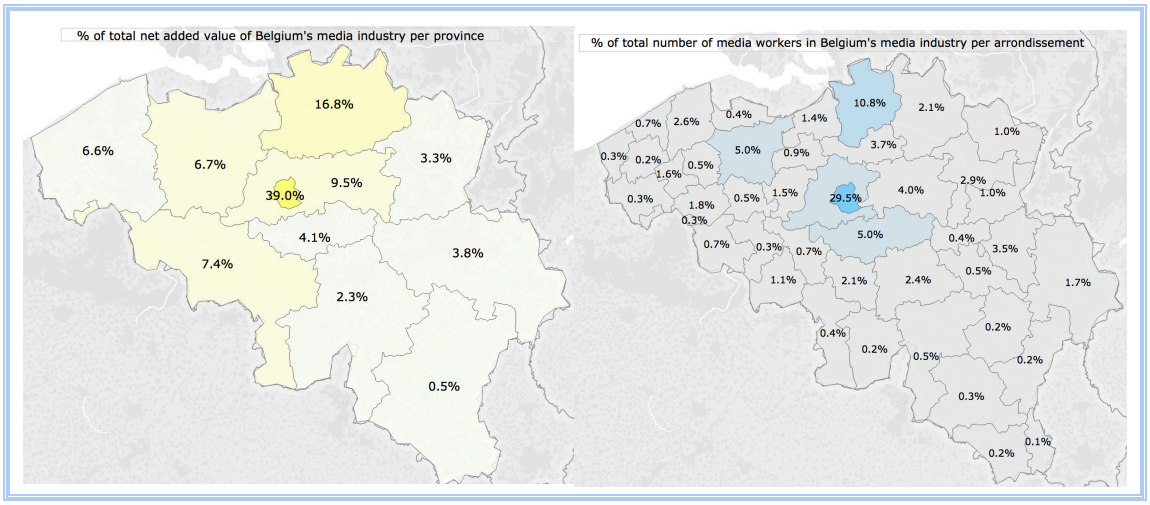
Brussels creates 39,0% (1.699,56 million EUR) of the total net added value of Belgium's media industry (4.353,90 million EUR) showing how strong media activities are concentrated in the city. On a regional level, Flanders creates more net added value of Belgium's media industry with 42,8%. However, if we look at the Brussels Metropolitan Area (BMA), which includes Halle-Vilvoorde and Walloon Brabant with Brussels into one socio-economic unit (see Part 2) the BMA produces 50,2% followed by the rest of Flanders with 35,8%.

Looking closer at smaller and more comparable area levels within Belgium, **Brussels leading position becomes more apparent.** In comparison to the contribution of other provinces, Brussels is leading with 39,0%, which is followed by Antwerp with only 16,8% and Flemish Brabant with 9,5% of the total value created by Belgium's media industry. On an even smaller level, the arrondissements, Antwerp shows even less concentration of value created by media activities in Belgium with 10,1% followed by Halle-Vilvoorde with 7,1%,

which could also be considered as part of the BMA. Within Wallonia, Liège as province shows media activities (3,9%) while Mons is the Arrondissement showing the highest contribution in this region (4,6%). Similar findings on the levels of regions, provinces and arrondissements can be made looking at the concentration of number of media workers.

This leading position of Brussel is also supported by the data on postal code areas in Belgium. Schaerbeek in Brussels (1030), location of the future media cluster to be installed by the Brussels' government and the two public broadcasters, is the leading area not only for value created (12,7%) in Belgium's media industry but also for media workers (7,5%), followed by Brussels City Centre (1000), and Sint-Gillis (1060) in Brussels (each 5,2%). Only then the first postal code area outside of Brussels can compete in terms of value created, Mechelen (2800) with 4,3%. This is followed by Elsene (1050) in Brussels. Other important postal code areas outside of Brussels in terms of value created in Belgium's media industry are Antwerp (2050) with 2,5% and Asse (1730) with 2,3%. More postal code areas produce less than two percent of Belgium's media industry, like Etterbeek (1040) in Brussels, Gent (9000) and Berchem (2600). The geographic distribution based on value created and number of media workers in different area levels is displayed in chosen visualizations in Figure 9 and the numbers are presented in Table 14.

Figure 9 – The geographical concentration of media industry activities in Belgium's local areas based on share of net added value and of number of media workers in 2014 (Source: Bel-first).



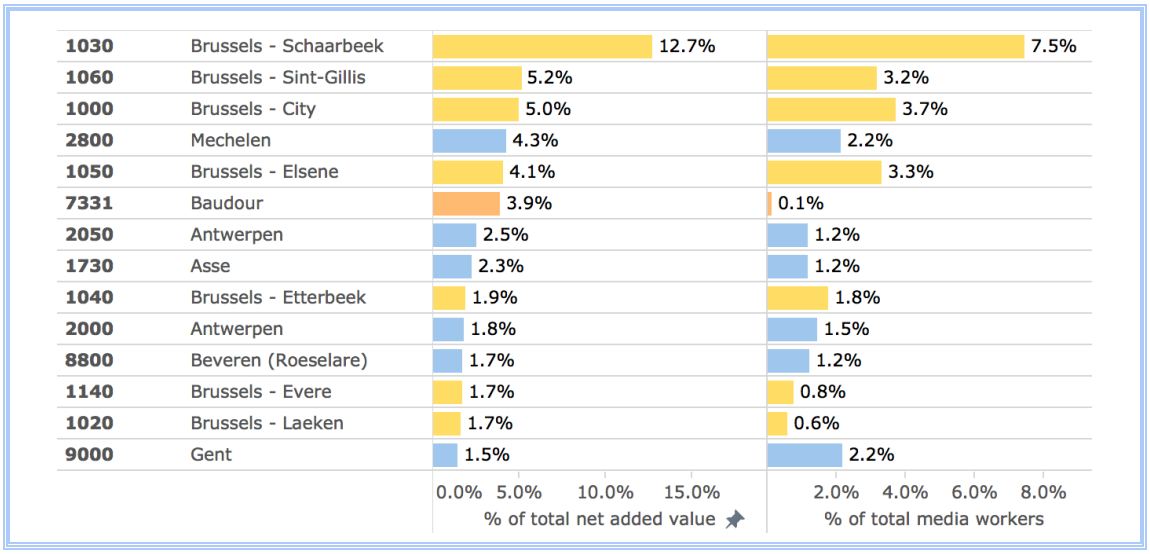


Table 14 – The geographical concentration of media industry activities in Belgium's local areas based on share of net added value and number of media workers in 2014 (Source: Bel-first).

BELGIUM	100%= 4.353,90 million EUR total net added value produced by media activities 93.269 media workers (including employees and independents)								
Regions	Brussels	Flanders				Wallonia			
Share net added v. in %	39,0	42,8				18,1			
Share workers in %	29,5	49,7				20,8			
Regions with BMR	BMR	Flanders (without Halle-Vilvoorde)				Wallonia (without Walloon Brabant)			
Share net added v. in %	50,2	35,8				14,0			
Share workers in %	40,9	43,3				15,8			
Provinces with highest shares	Brussels	Antwerp	Flemish Brabant	East-Flanders	West-Flanders	Liège	Hainaut		
Share net added v. in %	39,0	16,8	9,5	6,7	6,6	3,9	7,4		
Share workers in %	29,5	16,7	10,4	9,8	8,0	6,1	5,6		
Arrondissements with highest shares	Brussels	Antwerp	Mechelen	Halle-Vilvoorde	Leuven	Gent	Liège	Nivelles	Mons
Share net added v. in %	39,0	10,1	5,1	7,1	2,4	3,1	2,4	4,1	4,6
Share workers in %	29,5	10,8	3,7	6,4	4,0	5,0	3,5	5,0	1,1
Postal towns (codes) with highest shares	1000 Brussels City	1030 Brussels Schaerbeek	1060 Brussels Sint-Gillis	1050 Brussels Elsene	1040 Brussels Etterbeek	2800 Mechelen	7331 Baudour	8800 Roeselare	2050 Antwerp	1730 Asse
Share net added v. in %	5,2	12,7	5,2	4,1	1,9	4,3	3,9	1,7	2,5	2,3
Share workers in %	3,7	7,5	3,2	3,3	1,8	2,2	0,1	1,2	1,2	1,2

Through comparing the value created by different media sectors and their geographic concentration along chosen areas within Belgium, we see that **Brussels' leading position as media locality is especially due to the AV sector**. Within the capital, 64,3% (828,14 million EUR) of the total audio-visual value in Belgium (1.288,00 million EUR) is produced. More than half of this is produced in Schaerbeek (1030) in Brussels, the location of the broadcasters VRT, RTBF, RTL and BETV. Other leading media locations in terms of value created by the AV sector in Belgium can also be found within Brussels including Elsene (1050) (5,6%), Evere (1140) and Etterbeek (1040) due to AV production activities and Laeken (1020) (5,2%) due to the location of KINEPOLIS. Postal towns outside of Brussels that are relevant for the AV sector only come into the picture with Antwerp (2000) and Rixenart (1330) with each 2,4% share.

If we look at other media sectors in Belgium's media industry, **we see that the value created is more evenly distributed along different areas**. Flanders is for instance the leading region for the advertising sector in terms of value contributed to the Belgian advertising sector (47,5%), but the leading postal towns in this regard are Elsene (1050) with 8,0% and Schaerbeek (1030) with 7,3% share of net value added created in the advertising sector in Belgium. Both are located in Brussels and host big advertising agencies like CLEAR CHANNEL and IP BELGIUM.

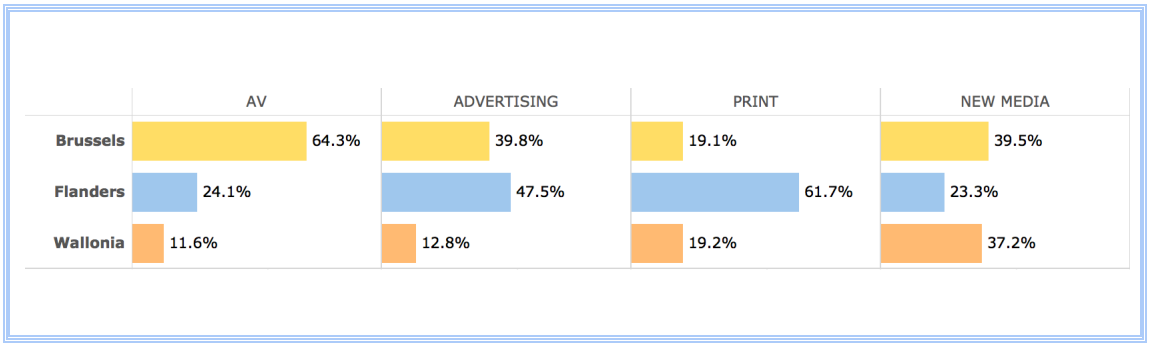
The print sector is even more distributed along different cities including especially Flemish locations. Mechelen (2800) is leading in this regard by producing 9,2% of all value created in Belgium's print sector. In Mechelen the international known magazine publisher SANOMA MEDIA and the book publisher WOLTER KLUWERS can be found. Antwerp (2050) becomes important (6,4%) because the newspaper publisher MEDIAHUIS is located there. Other major newspaper publishers can also be found in Flanders including DE PERSGROUP in Asse (1730) and ROULARTA MEDIA GROUP in Roeselare (8800). The French newspaper publisher SUD PRESSE is located in Beez (5000). However, also Brussels hosts important print companies including French and Dutch newspaper publishers like ROSSEL ET CIE and MEDIAFIN in the Brussels' city centre (1000).

The new media sector is quite evenly concentrated along the regions. It needs to be kept in mind that the classification system distorts the results (see Footnote 13). The distribution of the media sectors along postal towns can be found in Table 15 and along the regions in Figure 10.

Table 15 – The geographical concentration of media sectors in Belgium's local areas based on share of net added value in 2014 (Source: Bel-first).

Belgium	AV 100%= 1.288,00 million EUR total net added value produced Advertising 100%= 828,34 million EUR total net added value produced Print 100%= 1.672,28 million EUR total net added value produced New Media 100%= 570,19 million EUR total net added value produced									
Region	Brussels				Flanders			Wallonia		
	AV									
Postal towns (codes) with highest shares in AV sector per region	1030 Schaerbeek	1050 Elsene	1020 Laeken	1140 Evere	2000 Antwerp	9000 Gent	1930 Nossegem	1330 Rixenart	4000 Glain	1420 Braine-l'Alleud
Share net added v. in %	37,4	5,6	5,2	3,5	2,4	1,8	1,6	2,4	0,9	0,9
	Advertising									
Postal towns (codes) with highest shares in advertising sector per region	1050 Elsene	1030 Schaerbeek	1000 City	1160 Oudergem	2000 Antwerp	2800 Mechelen	1932 Sint-Stevens-Woluwe	4680 Hermée	4000 Glain	7180 Seneffe
Share net added v. in %	8,0	7,3	6,6	3,3	3,9	2,4	2,1	0,6	0,4	0,4
	Print									
Postal towns (codes) with highest shares in print sector per region	1000 City	1060 Sint-Gillis	1050 Elsene	1040 Etterbeek	2800 Mechelen	2050 Antwerp	1730 Asse	5000 Beez	5004 Bouge	1401 Baulers
Share net added v. in %	6,0	2,8	2,2	2,0	9,2	6,4	5,4	1,5	1,4	1,0
	New Media									
Postal towns (codes) with highest shares in new media sector per region	1060 Sint-Gillis	1000 City	1130 Haren	1140 Evere	2600 Berchem	8790 Waregem	9320 Erembodegem	7331 Baudour	4000 Glain	1380 Couture-Saint-Germain
Share net added v. in %	28,0	5,3	1,5	1,4	4,9	2,2	1,2	30,0	0,6	0,4

Figure 10 – The geographical concentration of media sector activities in Belgium's regions based on share of net added value in 2014 (Source: Bel-first).



Taking the same calculations as above we can also look closer into Brussels' media industry. Not surprisingly, **Schaerbeek (1030) produces with 32,6% (553,95 million EUR) most value added to Brussels' media industry (1.699,57 million EUR).** This is followed by Sint-Gillis (1060) with 13,2%, the City Centre (1000) with 12,8% and Elsene (1050) with 10,4%. These results are also supported by the distribution of media workers (27.500 in Brussels) along the postal areas in Brussels.

Looking at the neighbourhoods within Brussels, it is not surprising that **Reyers produces the highest share to Brussels' media industry** with 28,9% followed by the Etangs d'Ixelles (4,8%) and the Quartier Nord (3,3%). It needs to be kept in mind that several addresses (10,2% of entities) could not be clearly located within a neighbourhood and therefore 18,4% of net added value of Brussels' media industry cannot be assigned to a neighbourhood (see Part 2).

If we consider the different concentrations along the media sectors, we can observe that Schaerbeek (1030) (58,1%) and accordingly Reyers (54,2%) along the neighbourhoods host more than half of the strongest sector in Brussels, the AV sector (10,17 million EUR). This is followed by the Etangs d'Ixelles in Elsene (1050), which hosts the AV production company URAISE and Quartier European, which is within Elsene (1050) and Etterbeek (1040) and hosts the AV production company VIDEOHOUSE.

Within the advertising sector similar concentrations in these areas can be observed and additionally the neighbourhood Quartier Nord shows significance, as the advertising agency JC DECAUX is located close to Gare du Nord. ROSSEL ET CIE, a big newspaper publisher, which is located in the neighbourhood Notre-Dame Aux Neiges brings the Brussels City Centre (1000) into the picture when it comes to the total value created by the print sector in Brussels. In Sint-Gillis (1060) in the neighbourhood of Port de Hal, you can find the TEST ANKOOP magazine publisher and in the Tour et Taxis building in the neighbourhood of Quartier Nord in Laeken is the newspaper publisher MEDIAFIN located. In the former industry areas and close to the canal in Brussels, major data hosting companies of the new media sector are located.

These concentrations of big media companies can be seen in the concentration of media activities based on number of media workers and net added value created by the different sectors of Brussels' media industry. The concentration is visualized in Figure 11 and the numbers on neighbourhood and postal town level within Brussels are presented in Table 16.

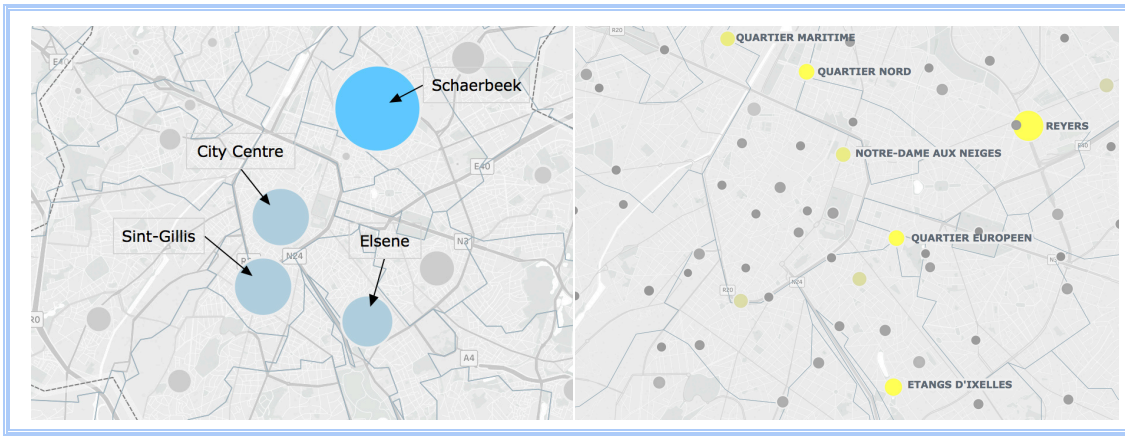
Table 16 – The geographical concentration of media industry activities in Brussels' local areas based on share of net added value and number of media workers in 2014 and by media sector (Source: Bel-first).

Brussels	Total 100%= 1.699,57 million EUR total net added value produced 27.500 media workers (including employees and independents) AV 100%= 828,14 million EUR total net added value produced 10.174 media workers (including employees and independents) Advertising 100%= 327,39 million EUR total net added value produced 5.890 media workers (including employees and independents) Print 100%= 318,71 million EUR total net added value produced 8.221 media workers (including employees and independents) New Media 100%= 225,34 million EUR total net added value produced 3.215 media workers (including employees and independents)							
Postal towns within Brussels with highest shares of Brussels	1030 Schaerbeek	1060 Sint-Gillis	1000 City Centre	1050 Elsene	1040 Etterbeek	1140 Evere	1020 Laeken	1180 Ukkel
Share net added v. in %	32,6	13,2	12,8	10,4	4,8	4,4	4,3	3,6
Share workers in %	25,3	10,8	12,7	11,3	6,0	2,7	1,9	6,2
Neighbourhoods within Brussels with highest shares of Brussels	Reyers	Etangs d'Ixelles	Quartier Nord	Quartier European	Quartier Maritime	Notre-Dame aux Neiges	Matonge	n.a.
Share net added v. in %	28,9	4,8	3,3	3,1	2,5	2,4	2,0	18,4
Share workers in %	19,2	2,2	1,8	2,5	1,6	1,6	2,0	15,5

	AV			Advertising			Print			New Media		
Postal towns within Brussels with highest shares per sector of Brussels	Schaerbeek	Elsene	Laeken	Elsene	Schaerbeek	City Centre	City Centre	Sint-Gillis	Elsene	Sint-Gillis	City Centre	Haren
Share net added v. in %	58,1	8,7	6,8	20,0	18,3	16,7	31,6	14,9	11,5	70,8	13,4	3,8
Share workers in %	54,3	7,6	2,2	16,5	12,4	11,5	20,8	8,6	14,5	55,0	11,9	2,7

	AV			Advertising			Print			New Media		
Neighbourhoods within Brussels with highest shares per sector of Brussels	Reyers	Etangs d'Ixelles	Quartier European	Reyers	Quartier Nord	Etangs d'Ixelles	Notre-Dame Aux Neiges	Porte de Hal	Quartier Maritime	Quartier Nord	Industrie Otan	Industrie Sud
Share net added v. in %	54,2	5,6	5,4	12,0	10,3	9,8	12,2	10,3	9,7	9,6	3,3	1,2
Share workers in %	49,7	1,1	4,2	2,9	3,8	5,0	4,5	4,5	3,1	7,0	1,2	1,1

Figure 11 – The geographical concentration of media activities in Brussels' areas based on share of net added value 2014 (Source: Bel-first).



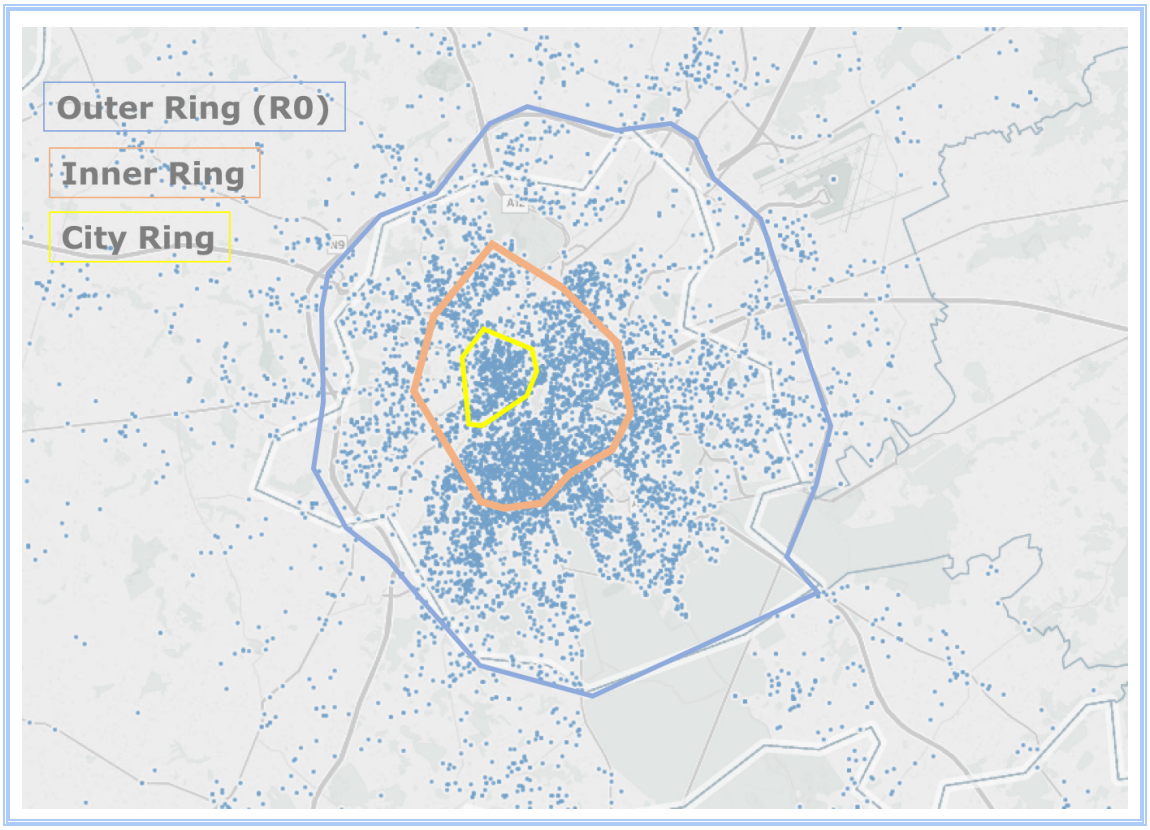
The analysis of macro-geographic areas and Belgium's media industry shows **how highly concentrated media activities in Brussels are**. This is not only the case for value created but also for the concentration of media workers. Especially, the AV sector is highly centralized in Belgium's capital and many big media companies are located in Brussels. Besides Brussels, the city of Antwerp follows but shows in comparison only around one-fourth of the concentration of media activities. Within Brussels, the highest concentration of media activities can be found in the postal town of Schaerbeek or correspondingly in Reyers. This is the side of the future media cluster that is planned by the Brussels Regional Government around the already there located public broadcasters VRT and RTBF. Other areas, in which media activities are concentrated include Elsene in the Etangs d'Ixelles area, the European Quarter and the areas around the canal. **The concentration of media activities in several areas in Brussels is a strong indication that there could be media clusters formed**.

The micro-geographic distribution

The addresses of institutions and independents in the media industry can also be directly **plotted on a map to reveal patterns, that are hidden using pre-defined geographical areas**, like postal towns or provinces. Around 95% of addresses in the Brussels Metropolitan Area (Brussels including Halle-Vilvoorde and Waals-Brabant) could be plotted through longitude and latitude geo-mapping (see Part 2 for insights on the BMA and the quality of plotting addresses).

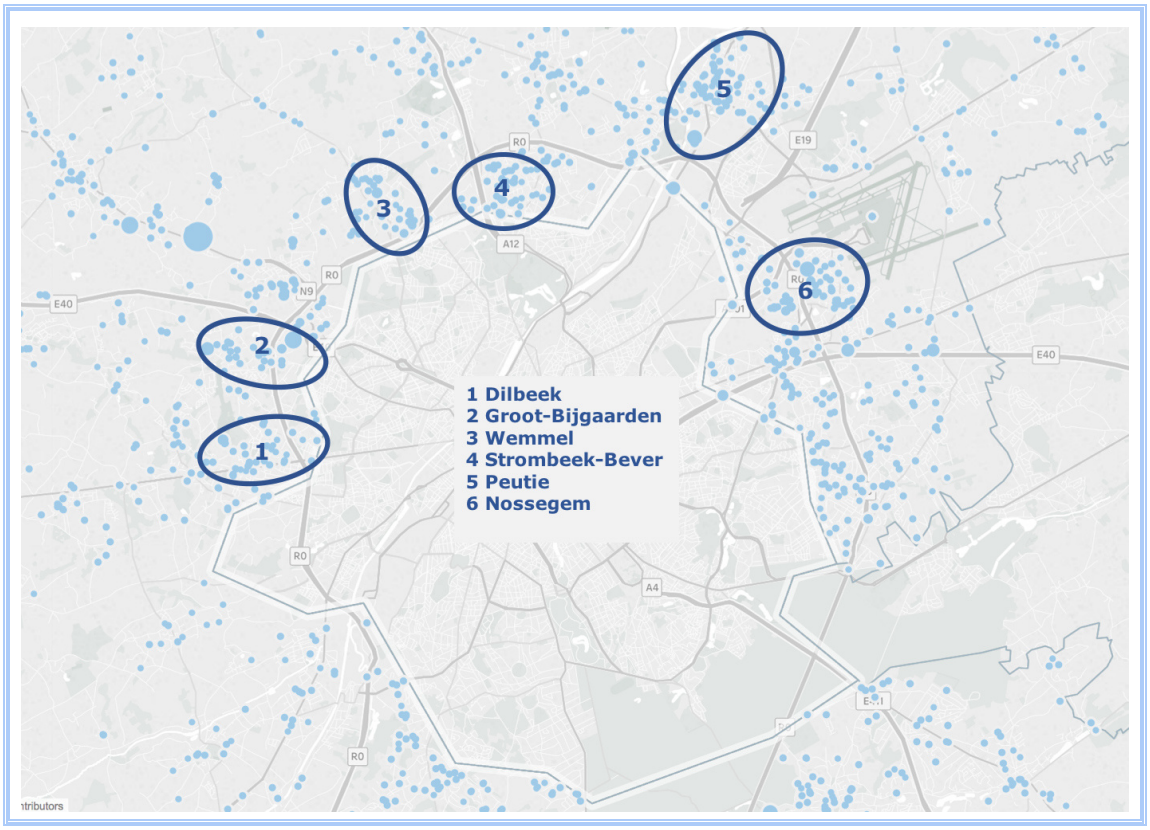
Plotting the addresses of media institutions in Brussels and the BMA supports the findings of the macro-geographic analysis: **media entities are densely distributed within Brussels**. Figure 12 shows where media entities (institutions and independents) are located. The visualization indicates that Brussels city centre (within the city ring) is completely "covered" in media entities. Also, the population of media entities within the area within the inner ring (R21, N 290 and connecting streets) of Brussels is densely distributed (especially in the South-East of the city centre). The further away a media entity is located from the inner ring of Brussels, the more scattered and less dense gets the distribution. Within the outer ring (R0) and outside of Brussels, it can be observed that media institutions are distributed along the highways and big streets that directly lead in and out of Brussels' city centre forming a kind of "star-like" formation (more focused on the South and East). All media sectors looked at separately revealed the same patterns.

Figure 12 – The distribution of media entities (institutions and independents) in the BMA (Source: Bel-first).



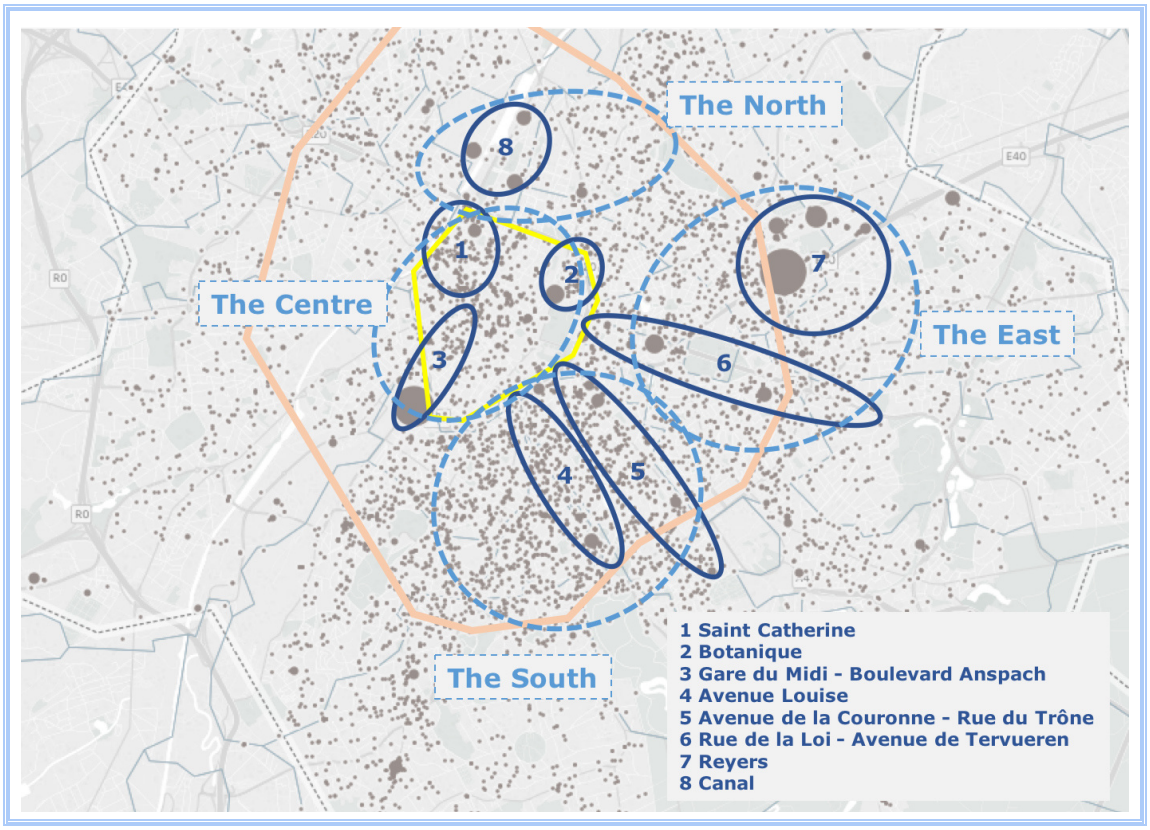
This "star-like" formation can be even better visualized zooming in on the borders of Brussels. Outside of Brussels, we see several dense populations of media entities along the R0, the outer Autobahn ring of Brussels with dense populations in neighbouring cities that are directly connected to the capital. This shows, that many media companies and independents chose to locate directly at the border of Brussels. This includes not only small entities but also big companies. The densest populations directly at Brussels' border can be found in: (1) Dilbeek with many small companies and independents in the advertising and print sector; (2) Groot-Bijgaarden, with similar entities but also the big print publisher MEDIAHUIS; (3) Wemmel, with also many small entities of these sectors; (4) Strombeek-Bever, with TWENTIETH CENTURY FOX FILM BELGE located there; (5) Peutie, with small and medium sized companies from the AV sector; and (6) Nossegem, which also includes major AV companies like SBS BELGIUM and DEMENSEN. The distribution in proximity to Brussels' border is visualized in Figure 13.

Figure 13 – The distribution of media entities (institutions and independents) in the BMA (Source: Bel-first).



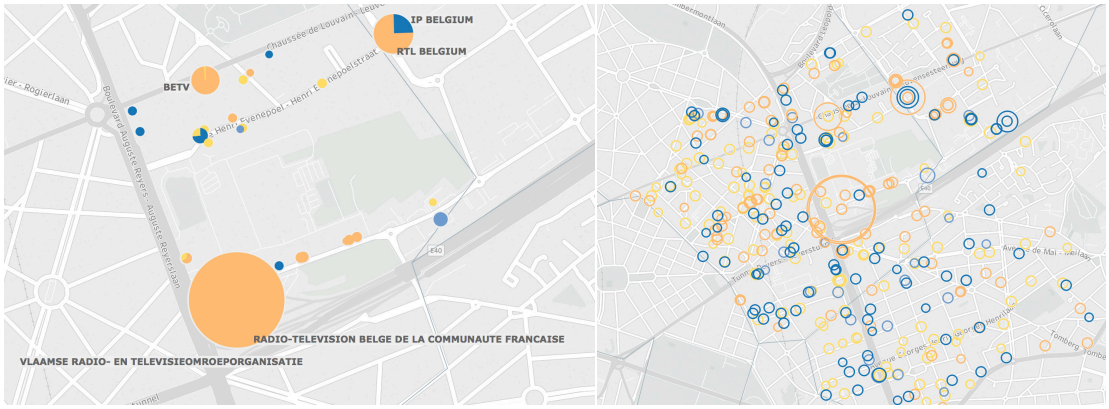
Looking more closely into the locations of media entities within Brussels, we can reveal several "hot spots" or agglomerations that show a dense population of media institutions, independents and major media companies. These **assemblages form either around a strategic location or along major streets within Brussels**. These strategic locations include within the city centre the area around Saint Catherine, where AGENCE BELGA is located and around Botanique, where ROSSEL ET CIE is located. Additionally, we see a less dense agglomeration around the canal, where MEDIAFIN is located within the Tour & Taxis building and JC DECAUX's office is in close proximity. Around Reyers, we see of course the major broadcasters within Brussels situated. Additionally, we have several streets that show a dense agglomeration. These include three streets that are directly connected to the city centre and move into the South-East of Brussels: Avenue Louise, Avenue de la Couronne that turns into the Avenue du Trône and Rue de la Loi that turns into Avenue de Tervueren, where the European Institutions are located. Also from the train station Gare du Midi, we see an agglomeration along the Boulevard Anspach. Combined we witness a distribution of these hot spots of media entities into the North, the East, the South and the Centre agglomerations of the Brussels' media industry. The distribution is visualized in Figure 14.

Figure 14 – The distribution of media entities (institutions and independents) in the BMA (Source: Bel-first).



If we investigate the **agglomeration around Reyers more closely by plotting the media entities, we see that around 50 media entities are situated in this neighbourhood** (as defined by Brussels). These entities combine almost 5.300 media workers out of which around 4.300 work for the two public broadcasters VRT and RTBF. Additionally, we have BETV and RTL BELGIUM located in Reyers. Accordingly, 95,7% of all media workers at Reyers work for the AV sector and most of them for broadcasting activities (86,8%) and programme production activities (8,7%). Looking at the number of media entities however, we can see that at Reyers more than 25 AV institutions are situated but there are also several entities of the other sectors including more than 10 advertising and 10 print entities. All these entities are located directly around the Reyers area of the public broadcasters and share often one address showing that there are office buildings where several media entities are located in. If we look beyond the Reyers neighbourhood and integrate media entities that are at a maximum distance of 20 minutes walking away from the two public broadcasters, we can find already ten times as many firms (more than 500). The activities become much more diversified including also much more print and advertising companies. This suggests that specialization on AV activities is only high in closest proximity to Reyers. Figure 15 visualizes the maps of Reyers and the sectors of the entities.

Figure 15 – The distribution of media entities (institutions and independents) in the BMA.



The distribution of micro-geographic data, addresses of media institutions, can give valuable insights in the patterns of media cluster formations that goes beyond pre-defined areas.

Table 17 - How is the Brussels' media industry concentrated and distributed?

The analysis shows how highly concentrated media activities in Brussels are in terms of value created and media workers. Especially, the AV sector is highly centralized in Belgium's capital. Within Brussels, the highest concentration can be found in the postal town of Schaerbeek or correspondingly in the neighborhood of Reyers. Media entities form agglomerations in Brussels either around a strategic location or along major streets. Media entities that locate outside of Brussels are placed strategically close to the city border. The findings can be summarized through key numbers on the concentration of net added value:

Belgium's media industry	39,0% in Brussels / 50,2% in BMA (followed by province of Antwerp with 16,8%)
postal code areas	12,7% 1030 Schaerbeek in Brussels followed by other areas in Brussels (followed by 2800 Mechelen with 4,3%)
Belgium's AV sector	64,3% in Brussels
Brussels' media industry	28,9% in Reyers followed by 4,8% in Etangs d'Ixelles
Reyers	About 50 media entities that employ more than 5.300 media workers that work mostly in AV

Part 5: Comparing the results

In order to **understand the results of the impact analysis better and to put them into the right perspective**, this part focuses on the comparison of the findings with the findings of other studies. A comparison can be made on the one hand, with other studies that have the same study object, meaning the studies that were introduced in Part 1 that analysed the media industry and Brussels or Brussels as part of larger geographical areas and the media industry as part of other industries and its sub-sectors. These insights will help us to show that the findings are realistic and if other approaches showed similar findings. The findings that can be compared will of course in no case be exactly the same. This is due to the different methods and data sources used by each study. Still the insights that can be derived from such a comparison will show if our results are over- or underestimating the real impact of Brussels' media industry. On the other hand, studies on other European capital cities can give valuable insights in how far, Brussels as media locality is showing the same or a similar economic impact and geographical concentrations. This comparison will help us to understand if the impact of Brussels' media industry is unique or if the structures and impacts of the capital cities in other countries are showing the same results for the media industry. This can also guide the development of policy recommendations that integrates a more holistic view on the findings (see Conclusion).

What do other studies say?

For the comparison, we first use the 17 studies analysed and presented in Part 1 and which methodologies have been compared to this study in Part 2. The studies were screened for findings that can be compared to our findings with a focus on key numbers on Brussels and the media industry or sub-sectors of the media industry (ten studies delivered comparable key numbers). First, **the comparison supports the findings of this Deliverable that Brussels is a leading media location within Belgium**.

Lazzaro and Lowies (2014) for instance found that the share of employed and self-employed of the CCIs are higher in Brussels than at national or Wallonia level. They especially highlight that the AV sector is concentrated in the capital. This is also pointed out by the study of Idea Consult and Vlerick Management School (2010) and mediarte.be (2014). This is congruent with our results. Flanders Smart Hub's study (2012) highlights also the importance of Brussels for the media industry as part of the creative industries and the interplay of Brussels with its surrounding areas in that context. This fits our elaborations that the BMA and the direct surroundings of Brussels show high concentrations of media activities.

Table 18 – Comparing the results with other studies on Brussels' media industry.

Indicator	Area	Sector	Key number	Comparison[20]	Results (numbers of 2014)
Antoine & Heinderyckx (2011) (numbers of 2009)					
No workers	French-speaking Belgium	Magazines	1.454	≥	1.204
		Newspapers	1.261	≈	1.276
Bogte & Verbruggen (2016) (numbers of 2014)					
No employers	Brussels	Game studios	7	<	10
De Voldere & Maenhout (2007) (numbers of 2005)					
No employees	Flanders	Book publishers	2.450	≈	2.258
Value added			154,9 million EUR	≈	175,1 million EUR
Magis (2011)					
No employees	Brussels	AV	5.000	<	9.873
Flanders Smart Hub (2012)					
No companies	Brussels	AV production	642	≥	511
Idea Consult & Vlerick Management School (2010) (numbers of 2007)					
No workers	Brussels	AV	3.879	<	10.174
Employment	Brussels	AV	45%	≤	50,2%
mediarte.be (2014)					
No employees	Belgium	AV	10.961	<	19.687
No employees	Brussels	AV	63%	≥	50,2%
Service Géneral de l'Audiovisuel et des Multimédias de la Fédération Wallonie- Bruxelles (2016)					
No companies	Brussels	Magazines	105	<	153
Vlaamse Regulator voor de Media (2015)					
No employees	Flanders	Radio & TV	2.289	<	4.503
Verheyen & Franck (2012)					
No employees	Brussels	Media	53.598	>	26.224

[20] ≈ if less than 10% difference; ≤ / ≥ if less than 30% difference; < / > if more than 30% difference.

Schrauwen, Demol, Van Andel and Schramme (2014) also stress that Brussels is the most important location for CCI activities. Verheyen and Franck (2012) analysed the geographic distribution of media activities and found three hot spots within Brussels for the media industry including (1) Tour & Taxis / Pentagone Nord, (2) Reyers / Moyenne Ceinture Nord / Est, and (3) Ixelles / Saint-Gilles. These hot spots have also been identified in this study but four other areas have been additionally found that highlight media activities in the city. This study was reliant on more comprehensive and comparable measures than previous studies. Still, the results show from all studies, how important Brussels is for the Belgian media industry. A closer look at this important location for media revealed therefore more insights.

Looking more closely at the numbers, we see that **the results of this study are very close to about half of the numbers presented in other studies**. This shows that the results are realistic as also other approaches and methods create similar findings. However, some results diverge from previous studies. Magis (2011) found that there are around 5.000 employees in Brussels' AV sector. On the other hand, this study found almost double as many employees. Also Idea Consult and Vlerick Management School (2010) and mediarte.be (2014) under-estimate this number compared to our findings. Table 18 summarizes the comparison. The reason for that are the different approaches taken. Still, we consider our **findings compared to other studies quite realistic as they are supported also by other studies** and a conservative approach was taken giving confidence in the results of this Deliverable. Additionally, this study is the most resent updating the findings of previous research and giving more insights and more findings based on different indicators compared to previous studies.

What is the economic impact of other European capital cities?

By looking at international studies, we can draw additional conclusions about Brussels as important media location. For the comparison, **studies have been taken that analysed capital cities or the largest city within a country** in the context of media clusters. Several studies have been identified including studies on European capitals with Musterd and Deurloo's (2006) analysis of Amsterdam, The Netherlands, Krätke's (2004) study on media clusters in Berlin, Germany, and Nachum and Keeble's (2003) analysis of London, UK. Additionally, Eriksson's (2011) paper on Singapore and Britton and Legare's (2005) analysis of Toronto, Canada, are supplementing the comparison.

First, we can conclude from the analysis that **all international studies highlight that the capitals or populous cities analysed are the most important locations for media activities within the corresponding**

countries. Brussels is no exception. This observation is essential to media cluster studies as these agglomerations of media activities in capital and metropolitan areas has become subject to studies and is the starting point of many research. The phenomenon of media agglomerations in metropolitan areas are an indicator that media clusters exists and are functioning and profiting media activities that locate within this context. This is also expressed in the typology developed in this project, where one typical media cluster is the "Creative Region", a capital or major metropolitan area that attracts media activities (see Deliverable 1.1c and Komorowski, 2017). Furthermore, all studies highlight that certain neighbourhoods or areas within these cities are hot spots for media activities. Musterd and Deurloo (2006) observe for instance, that within Amsterdam there are strong concentrations in three neighbourhoods including the city centre, the neighbourhood Oud-West and Oud-Zuid. Krätke (2004) highlights East-Berlin's city centre around Chaussee Straße and an extension to inner urban districts like Prenzlauer Berg for concentrations of multi-media firms. London's neighbourhood Soho is a well-known location for media companies form the AV sector and is discussed by Nachum and Keeble (2003). Also within Brussels, we showed that there are concentrations in the city centre and certain surrounding neighbourhoods. This shows that Brussels as important media location shows similar geographic structures that can be found in other media locations. Also this trend is supported by the media cluster typology that describes several smaller scale media clusters within cities (see Deliverable 1.1c and Komorowski, 2017). But, in how far is Brussels an important media location compared to these other media cities. Amsterdam, Berlin, London and Toronto are already internationally well-known cities for media activities. Brussels on the other hand, is not much acclaimed for being an international media city. Table 19 compares insights on these cities with the results of this Deliverable of Brussels' media industry.

Table 19 – Comparing the results with other cities.

Study	City	Indicator	Key number	Comparison[21]	Results (numbers of 2014)
Musterd & Deurloo (2006)	Amsterdam, The Netherlands	No employees media industry	12.000	<	26.224
Eriksson (2011)	Singapore, Singapore	No employees media industry	59.000	>	26.224
Eriksson (2011)	Singapore, Singapore	Media industry % of GDP	1,56%	<	2,4%
Krätke (2004)	Berlin, Germany	No employers	7.000	≈	6.500
Nachum & Keeble (2003)	London, UK	Concentration of employees in media industry	70-90%	>	29,5%
Britton & Legare (2005)	Toronto, Canada	Concentration of employers in new media sector	37%	≈	39,5%

If we look at the numbers that are presented for the other cities, we can see that **Brussels shows similar concentrations and populations of media employees and firms**. For instance, in Berlin, around 7.000 employers in the media industry are located in the city, while in Brussels you can find only little less based on our findings, which are 6.500. In Toronto around 37% of new media companies of Canada are located while you can find an even higher concentration of these companies in Belgium in Brussels (39,5%). Also, Brussels seems to host almost double as many people being employed by the media industry compared to Amsterdam. And, the media industry is more important for Brussels' economy than to Singapore's. Still, there are much less people employed in Brussels in the media industry compared to Singapore. London shows also much higher concentrations of media activities with 70-90% of employees of UK' media industry being located in the city. Brussels on the other hand hosts only about 30%.

The comparison of different cities need to be taken carefully as we cannot compare the methodologies of these studies in detail and different scopes and estimations could have been taken compared to the methodology of this Deliverable. Still, the comparison gives indications to help the results put into the right perspective. We can see that Brussels can be compared to other leading

[21] ≈ if less than 10% difference; ≤ / ≥ if less than 30% difference; < / > if more than 30% difference.

media cities and is not exceptional in its concentration of media activities. However, other cities are much more centralized (like London) and especially well-known as media location while Brussels could still improve.

Table 20 - How does the results compare to other studies?

The results of this Deliverable can be compared in two different ways to put them into the right perspective: 1. Studies on Brussels' media industry (see Part 1) - The comparison supports the findings of this Deliverable that Brussels is a leading media location within Belgium and that the key numbers presented are realistic as they are supported also by other studies. 2. Studies on media clusters in metropolitan areas – For the comparison, we looked at other studies on Amsterdam, Berlin, London, Toronto and Singapore. The comparison shows that Brussels as important media location shows similar geographic structures and concentrations that can be found in other media locations. However, other cities are much more centralized (like London) and especially well-known as media location while Brussels could still improve.

Conclusion

"Not everything that counts can be measured,

and not everything that can be measured counts", Albert Einstein.

This Deliverable estimated and presented quantifiable outcomes that delineate the impact the media industry has on Brussels' economy and beyond. The economic impact analysis model was applied delivering estimations on key data and comparative as well as geographical analysis of the media industry. The report rests upon a methodology that has aimed at caution, minimalism and accuracy. It is important to note at the outset of the impact of the media industry is likely much higher. We discussed this and the many problems that arise when measuring the media industry. Still, we can draw conclusions that are relevant for current policy making:

First, we like to highlight that **more work needs to be done at national and European level to adopt appropriate standards and definitions as well as to prioritise the collection of statistically sound data** right across the sectors of the media industry. Important measures cannot be drawn with the available data and "not everything that counts can be measured". This

Deliverable presented a framework that aimed at limiting the drawbacks that derive from the data. This can be the starting point to improve data on the one hand and to start a constant monitoring of the media industry also in the future. So far, only a screenshot could be made while constant monitoring also in the future can provide a sound basis for new knowledge on the matter on the short, middle and long term.

Second, the findings of this Deliverable can inform the development of new policies. It is important in this context that **we focused in this Deliverable on the impact of the media industry and therefore follow current research findings on the meaning of the media industry on the local levels and Brussels' future plans**. The presented numbers concentrate on this matter to inform the Brussels' government as "not everything that can be measured counts". The framework highlights this aspect and presents a new way to present relevant data on Brussels' media industry going beyond usual frameworks. Therefore, we like to highlight the need for data- and evidence driven policies. Also, the European Commission clarifies that 'in order to make well-informed policy choices, the Commission is increasingly reliant on the timely availability of relevant data' (DG Communications Networks, Content & Technology, 2015, p.3). More refined data allows policy makers to develop evidence-based responses to problems.

Finally, the findings of the Deliverable can be summarized as follow: **Brussels is the leading location for media activities in Brussels.** However, this local dominance of Brussels is mostly due to the big AV firms that are located in the city. Without these major firms, Brussels' position as media locality is less relevant. The media industry can be used as leverage for socio-economic empowerment of regions, as tool to communicate values and promote objectives of public interest and as attraction for well-educated talent, investment and new companies. The media industry performs social and political functions (see Deliverable 1.1a, Part 1, for more insights). But, while large urban areas and capital city regions dominate the media industry, some city regions do better than others, like London and Paris for instance (Power & Nielsén, 2011, p. 5). Brussels' position on an international level for the media industry is not acknowledged at the moment. Despite housing, important national and regional, public and private media companies and the strong concentration of media activities in the city, **Brussels is not yet part of the leading cities in terms of the media industry on an international scale**. This should change! And while Brussels already recognised the potential beneficial role of the media industry in its Design of the Sustainable Regional Development Plan (Brussels Hoofdstedelijk Gewest - Region de Bruxelles-Capitale, 2013), much more needs to be done to make Brussels into a leading media city. While the big AV firms in Brussels make the city important for Belgium, the future and the international context depends much more on international players and innovative media companies.

Table 21 - What does this mean for the development of policies?

Conclusions can be drawn based on the findings of this Deliverable for policy making: 1. More work needs to be done at national and European level to adopt appropriate standards and definitions as well as to prioritise the collection of statistically sound data on the media industry. The here-presented framework limits these drawbacks but for future research and a constant monitoring we call for action to make data more reliable. 2. In order to make policies for the media industry, data- and evidence driven insights are highly important. Also, data and insights allow policy makers to develop evidence-based responses to problems. We call policy makers to use the here-presented insights in the development of future policies targeted at Brussels' media industry. 3. Brussels, has been identified in this Deliverable as leading media location in Belgium. But the city is not yet well-known for that and cannot compete with international media cities world-wide. We call for a more active involvement of the Brussels' government to support the future development of the media industry in the city and built upon the already positive conditions to make Brussels a leading international media locality.

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