Report Towards a Common Framework for Media Clusters Brussels

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Part of Work Package 1:
Conceptual coordination of mapping Brussels’ media industry
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 1** – Conceptual coordination of mapping Brussels’ media industry. Work Package 1 is committed to develop the overarching concepts for the three levels of the other Work Packages, media institutions, workers and communities. The output of this Deliverable was built on the findings and the literature review of Deliverable 1.1a while additional literature was investigated. The output is a common framework into which empirical observations and theoretical considerations of all Work Packages, media institutions, media workers and media communities can be placed. The findings of this Deliverable will be used within the other Work Packages to guide the analysis of the media industry and the media-clustering phenomenon in Brussels and beyond.

Deliverables that are built on the findings here are:

- Deliverable 2.1
- Deliverable 3.1
- Deliverable 4.1
- Deliverable 5.1
- Deliverable 6.1
Key findings

Why do we need an integrative framework for media cluster research?

1. Many studies are based on single case studies and high-tech clusters transferring their findings to all media clusters leading to mere suppositions about cluster dynamics.
2. Studies have tended to assume static configurations of clusters while the reality shows a wide diversity and dynamic processes taking shape.
3. Many studies are focussing on the companies of a cluster while the dynamics of media clusters highly depend on social aspects.
4. Literature lacks in a common vocabulary to tackle the research.

This shows a clear need for an integrative framework federating the heterogeneous approaches for media cluster analysis in order to tackle the research project MCB.

What elements are addressed through the integrative framework?

Media clusters are depicted of different acting entities:

1. Media institutions
2. Media workers and
3. Media communities

These entities can be described through different parameters (7Ps): Place, proximity, pertinence, profile, path-dependency, policy and performance

The entities and parameters are highly interlinked through causation-relations. The integrative framework of interrelated entities and parameters shall be filled in with observations and data when analysing media cluster dynamics.

How can research on media clusters benefit from the integrative framework?

The goals of the framework:

1. Bring a more divers view on the dynamics of media clusters away from single case studies.
2. Guide the user towards a more dynamic approach of processes within media clusters.
3. Approach media clusters on all socio-economical levels.
4. Unite existing vocabulary to form a more comparative discipline.

The benefits of the framework is that it can be used like a toolset, that it is multidisciplinary, that it guides the user, that the objectives of analysis can differ, and that it appeals to academia, governments and stakeholders alike.
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Introduction

Among scholars in cluster research, the common assumption is that locating related actors in a regional agglomeration brings advantages for these firms. Many authors also recognized in the last decade that the media industry is actually characterized by heavy concentration in certain locations, into media clusters (Karlsson & Picard, 2011). The notion of media companies clustering is rather remarkable however, both in the light of general economic thinking and of specific dynamics of the current media industry.

For instance, traditional economic theory has for decades put forward the idea that companies seek to escape competition, hence to avoid proximity to competitors in order to protect their competitive advantages (R. Smith, McCarthy, J., & Petrusevich, M., 2004). What would the advantages of proximity be for media companies? Especially when additionally, one might question the advantages of proximity in the age of the Internet and connectedness. Through digital communication technology, a shift from traditional mass media to horizontal communication networks creating global networks is taking place (Castells, 2011). The increasing importance of the Internet as a distribution and consumption platform has disrupted the traditional national media markets, while the concurring globalization tendencies have diminished the importance of location in the media industry. Still, geographic concentration and specialization of media firms in certain locations can easily be observed, which Porter (2000) calls the location paradox.

The conceptual idea and the observable trends of media clusters contradicts therefore traditional economic logics, globalization and ICT trends, as it fosters the proximity of firms. This paradox raises at least two issues, which will be addressed in this Deliverable:

- The first issue to be discussed are the reasons for clustering. If ICT-trends allow firms to avoid direct competition within a location, why would media firms cluster anyways? What can be the advantages of clustering in the media industry and which parameters should be looked at and addressed? If indeed media clustering appeals to governments and academics alike, then we should gain a clear understanding of how it contributes to the successful development of media industries.

- The second issue to be discussed is when does agglomeration actually means clustering. The mere co-location of firms is not enough to describe cluster dynamics. A media cluster has many facets. But, how can a cluster be described? What are the relevant actors and entities within a media cluster? Are their specific characteristics and
interrelations that could explain why proximity and location matter in media industries?

The main research question that was followed within the Deliverable is: **What are the dynamics shaping media clusters?** Various aspects of the dynamics of media clusters have been touched upon in the existing literature, but no agreement on a comparative framework or common understanding of the phenomenon can be found in recent scholarly work to answer this question (cf. Deliverable 1.1a). By looking at existing research on media clusters, we propose an integrative framework for the socio-economic analysis of media clusters that federates the different existing approaches into one multidisciplinary framework. Within this framework empirical observations and theoretical considerations of media clusters can be placed. Therefore, the first part of this Deliverable explores the nature of media clusters through reviewing the conceptual foundations in practice and in scientific research. The state-of-the art in cluster research and its limitations is identified. The second part proposes an integrative framework to close these gaps and discusses its potential benefits and challenges in the analysis of media clusters.

### Part 1: The diversity of media cluster research

Many different academic disciplines have tried to study the phenomenon of industry clusters. It should be noted that the term cluster is used very differently in different disciplinary contexts (Picard, 2009).¹ Economic geographers provide evidence in form of maps for the existence of clusters in a wide variety of industries and most commonly call the phenomenon industrial districts (cf. Amin, 2000). In strategic management, the competitiveness of so-called agglomeration economies has been investigated by many authors (cf. Porter, 1990) (cf. Deliverable 1.1a). Other research disciplines touching industry clusters are political economics, urban studies, sociology, and organisational behaviour studies (Picard, 2008).²

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¹ “Cluster analysis” also refers to a collective term covering a wide variety of techniques for delineating natural groups or clusters in data sets in computer applications (Anderberg, 1973).

² The following elaboration of definitional approaches and research on media clusters are partly revising the findings of Deliverable 1.1a while adding additional literature and elaborations to the literature on media clusters.
Definitional approaches to media clusters

The origins of the idea of clustering of firms in a location are often attributed to Alfred Marshall in his book "Principles of Economics" (Marshall, 1920). The most commonly used definition of clusters stems from Porter, who defines a cluster as "a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities" (Porter, 2000, p. 16). Within economic geography Becattini describes a cluster as "a socio-geographical entity which is characterized by the active presence of both a community of people and a population of firms in one naturally and historically bounded area" (Becattini, 1990, p. 39).

Also, many attempts have been made to find an appropriate definition to describe the phenomenon of media clusters. Picard (2008) defines media related clusters as a "specialized form of agglomeration designed to produce mediated content, such as motion pictures, television programs/videos, broadcasts, audio recordings, books, newspapers, magazines, games, photography and designs, websites, and mobile content." The significant relations with other industries and clusters such as cultural industries, sports and entertainment and ICT industries have been also recognized. Picard (2008) distinguishes hereby at the broadest level four compositions of media clusters and defines them as: audio-visual clusters, new media clusters, creative industry clusters and print media clusters. Goldsmith and O’Regan (2003) argue that audio-visual clusters actually take three possible forms: "production precinct, cinema city, and media city". Picard (2008) identifies also three archetypical clusters in the media industry: spontaneous, planned and real-estate driven highlighting the drivers of the creation of a media cluster which also leads to a distinction between managed, cooperative and unmanaged organisations of media clusters. Many authors have identified clusters that are built around large media institutions like public broadcasters and major commercial channels, where small media firms exist around to provide services towards these major players (Picard, 2009).

Research on media clusters

In literature there are various kinds of approaches to find, that are used to analyse clusters (see Mazzarol, Patmore, & van Heemst, 2005; Porter, 1990). Two examples are the GEM Analysis by Padmore and Gibson (1998) and Porter’s Diamond of national advantage (Porter, 1990). But there are many more approaches to be found who have been developed to analyse industry clusters and specific media clusters taking all kind of different approaches from micro-to macro-level (e.g. Mazzarol et al., 2005, p. 10). The findings of these analyses are various.
Marshall (1920) attempted to find and describe the key elements of clusters, such as subcontractors, available skilled labour and formal and informal communication due to a common base of knowledge across the cluster integrated firms, as well as employees and the community. These aspects are still today often cited and analysed. Research often found the causes for a successful cluster to be availability of financing, effective organisation of incentives for cluster companies and personnel, and the availability of qualified staff. Also, scholars in the strategic management discipline underlined the interest of the “presence of sources of medium- and high-risk capital” (R. Smith et al., 2004) as well as entrepreneurial personnel with appropriate incentives to operate firms, and the capability for personnel to connect and learn from other participants in the cluster (Perrons, 2004).

Karlsson & Picard (2011) explain that “[media] clusters promote and improve production of entertainment and content by connecting producers through private and public partnerships, networks and projects, i.e. making media production more efficient” and “also stimulate media innovation”. Additionally, they describe: “an important element of clusters is that the cluster firms share resources, such as labour, contract services information and knowledge, and interact directly or indirectly for mutual advantage and benefit” (Karlsson & Picard, 2011, p. 4).

Britton & Legare (2005) identified the presence of a labour pool of skilled workers, which are available for project-based activities. They observe that media engaged in on-going production in the cluster also rely upon significant temporary contracted labour and services to supplement internal staff and functions. Porter (1990, 2000) links the cluster phenomenon together with locational advantages, which are tied to know-how, capabilities and common knowledge resources. Many scholars focus on knowledge exchange within clusters, like Tallman et al. (2004) who suggest that knowledge exchange is central to the functioning of a cluster.

Other authors rather stress the economic benefits of the de-integration of the value-added chains providing flexible and specialized activities (cf. Sabel & Piore, 1984). These scholars focus on the production linkages between firms in a cluster. Also, many scholars have highlighted innovation not only as a tool for efficiency but also as the sole purpose of a cluster itself. However, the mere agglomeration of media companies in a specific location is not merely sufficient: also the interaction and coordination among the integrated media companies is necessary (Picard, 2009). Krugman analysed the emergence of clusters and argues that a cluster can be traced to “some seemingly historical accident” (Krugman, 1991, p. 35) stressing the importance of path-dependencies in cluster research.
The gaps on media cluster research

There seems to be a multitude of different approaches to define and study media clusters (cf. Deliverable 1.1a Part 3). However, limitations in existing frameworks can be observed in the literature. First, many studies have mostly focused on high-tech clusters like Silicon Valley, transferring their findings towards all media clusters (cf. Casper, 2007; Morgan, 1996). This background should be kept in mind when using the established frameworks. Additionally, quite often, mere suppositions have been made among scholars and among political decision makers. **Empirical evidence tends to be built upon these qualitative assumptions** or through case studies. However, the benefits identified on one case cannot easily be transferred to other cases of media clusters.

Second, media clusters take a variety of forms worldwide, some focusing on specific industries and others operating in broader media and communication fields. The characteristics of the participants in media clusters vary and these traits affect the scope and dynamics of clusters and their effectiveness. The media industry is a fast moving sector highly influenced by the development of ICT. This makes the media industry dynamic, while **definitions tend to assume static configurations**. A workable definition of media clusters should be both abstract enough to encompass these differences, while at the same time still have enough raison d’être to describe a specific socio-economic phenomenon. A framework needs to cope with the characteristics of all actors and entities and the dynamics of a cluster and the developed approaches so far seem to have trouble in grasping the differences and similarities sufficiently.

Third, it can be observed that most studies focus on the companies, even though the significance of the people and their social interactions within clusters has been recognized. These actors within a cluster should be seen as important as the companies.

And fourth, **academia still does not have a common vocabulary** to approach media clusters. The multitude of concepts used to describe characteristics and entities of clusters makes it difficult to see the connections between different studies. This shows a clear need for an integrative framework federating the heterogeneous approaches for media cluster analysis.
Table 1 – The gaps in research on media clusters.

<table>
<thead>
<tr>
<th>Gap in Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Many studies are based on single case studies and high-tech clusters</td>
</tr>
<tr>
<td>transferring their findings to all media clusters leading to mere suppositions</td>
</tr>
<tr>
<td>about cluster dynamics.</td>
</tr>
<tr>
<td>2. Studies have tended to assume static configurations of clusters while the</td>
</tr>
<tr>
<td>reality shows a wide diversity and dynamic processes taking shape.</td>
</tr>
<tr>
<td>3. Many studies are focussing on the companies of a cluster while the</td>
</tr>
<tr>
<td>dynamics of media clusters highly depend on social aspects.</td>
</tr>
<tr>
<td>4. Literature lacks in a common vocabulary to tackle the research.</td>
</tr>
</tbody>
</table>

Part 2: Towards an integrative framework

Bringing cluster literature together

Despite of the limitations identified in the literature review, **commonalities within the approaches can be found and used as a guideline** to build up an integrated framework and definitional method. Table 2 gives an overview of the differences and similarities in existing literature. The authors have been selected based on their high profile within the academic community while the authors cover a broad range of different academic disciplines. Not only media cluster literature has been considered but also other analysed industry fields and cluster approaches (see Deliverable 1.1a for an overview of existing approaches). The chosen authors have been introduced above.
Table 2 – Literature study on cluster research.

<table>
<thead>
<tr>
<th>Literature</th>
<th>Focus</th>
<th>Included Entities</th>
<th>Included Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Porter (2000)</td>
<td>Defines a cluster as “a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities”</td>
<td>Companies, institutions</td>
<td>Location, proximity, interconnection, linkages, particular field</td>
</tr>
<tr>
<td>Becattini (1990)</td>
<td>Defines a cluster as “a socio-geographical entity which is characterized by the active presence of both community of people and a population of firms in one naturally and historically bounded area”.</td>
<td>Community, companies</td>
<td>Location, activeness, history</td>
</tr>
<tr>
<td>Picard (2008)</td>
<td>Defines a media cluster as “specialized form of agglomeration designed to produce mediated content, such as motion pictures, television programs/videos, broadcasts, […]”.</td>
<td></td>
<td>Production</td>
</tr>
<tr>
<td>Picard (2009)</td>
<td>Identifies media clusters, as “primarily operational clusters in which there are a few dominant players and a high number of microenterprises and a large number of freelance labours”.</td>
<td>Companies, workers</td>
<td>Operation, composition</td>
</tr>
<tr>
<td>Marshall (1920)</td>
<td>Described the key elements of geographical closeness as clusters of subcontractors, available skilled labour and formal and informal communication due to a common base of knowledge across the cluster integrated firms, as well as employees and the community.</td>
<td>Companies, Workers, communities</td>
<td>Location, proximity, skills, knowledge</td>
</tr>
<tr>
<td>Smith et al. (2004)</td>
<td>Underlined the interest of the presence of sources of medium- and high-risk capital.</td>
<td></td>
<td>Investment</td>
</tr>
<tr>
<td>Perrons (2004)</td>
<td>Focuses on entrepreneurial personnel with appropriate incentives to operate firms, and the capability for personnel to connect and learn from other participants in the cluster.</td>
<td>Workers, community</td>
<td>Capabilities, connection, knowledge</td>
</tr>
<tr>
<td>Karlsson &amp; Picard (2011)</td>
<td>Attempted to explain that “clusters promote and improve production of entertainment and content by connecting producers through private and public partnerships, networks and projects, i.e. making media production more efficient” and “also stimulate media innovation”.</td>
<td></td>
<td>Production, efficiency, innovativeness</td>
</tr>
<tr>
<td>Karlsson &amp; Picard (2011)</td>
<td>Observe that “an important element of clusters is that the cluster firms share resources, such as labour, contract services information and knowledge, and interact directly or indirectly for mutual advantage and benefit”</td>
<td>Companies, workers</td>
<td>Sharing, knowledge, interaction</td>
</tr>
<tr>
<td>Britton &amp; Legare (2005)</td>
<td>Identified the presence of a labour pool of skilled workers available for project-based activities within media clusters.</td>
<td>Workers</td>
<td>Skills, activities</td>
</tr>
<tr>
<td>Porter (1990, 2000)</td>
<td>Links the cluster phenomenon together with locational advantages, which are tied to know-how, capabilities and common knowledge resources.</td>
<td></td>
<td>Location, knowledge</td>
</tr>
<tr>
<td>Tallman et al. (2004)</td>
<td>Propose that knowledge spillovers central to the functioning of a regional cluster.</td>
<td></td>
<td>Knowledge</td>
</tr>
<tr>
<td>Krugman (1991)</td>
<td>Concentrated on the emergence of clusters and argues that a cluster can be traced to “some seemingly historical accident”.</td>
<td></td>
<td>History</td>
</tr>
</tbody>
</table>
Based on the literature review, the following three principles have been drawn to answer the question: what are the dynamics shaping media clusters? These two principles about entities and parameters will be the founding elements of the integrative framework:

1. A media cluster is not a simple construct. Within media clusters not only companies matter, but also other actors. The whole nature of a cluster therefore encompasses **different entities**.
2. The different entities a media cluster is composed of have various relevant characteristics that go beyond the mere fact of co-location and its believed benefits. These characteristics should be seen as **parameters** on which one cluster can differ from another.
3. The **specific interrelations** of the parameters of cluster entities determine the dynamics of a media cluster, hence the way it will behave and the specific efficiencies in terms of economic development it will engender.

### The entities of a media cluster

Three integral **entities of a media cluster** have been identified in the literature review, based on the first principle stated above. Table 3 shows how the entities have been depicted based on the literature study in Table 2:

<table>
<thead>
<tr>
<th>Entity:</th>
<th>In literature discussed as:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Media institutions</td>
<td>Companies, associated institutions, firms, agglomeration, subcontractors</td>
</tr>
<tr>
<td>(2) Media workers</td>
<td>Personnel, skilled workers, labour pool, employees</td>
</tr>
<tr>
<td>(3) Media communities</td>
<td>Community, connecting, communication, common base of knowledge</td>
</tr>
</tbody>
</table>

**MEDIA INSTITUTIONS**

The first entity of media institutions describes the **macro-level view of the media cluster**. As described in the literature study, researchers delineate clusters as agglomeration of “companies” or “firms”. We propose to describe them as media institutions. Media institutions are often defined through their sector, end product or activities. For instance, the European Commission describes media and content industries by their end product including “books, broadcasting, cinema, music, newspaper, and video games” (Simon & Bogdanowicz, 2012). The European NACE classification system enables to identify
media institutions based on their activities giving access to many publicly available data sources (Simon & Bogdanowicz, 2012).

In literature, Picard (2008) defines media clusters as a “specialized form of agglomeration designed to produce mediated content, such as motion pictures, television programs/videos, broadcasts, audio recordings, books, newspapers, magazines, games, photography and designs, websites, and mobile content.” We have summarized these different dimensions of media institution as follows: the size of the institution, the legal form, the customer segment, competition level, the value created (entertainment, news, education, etc.), the distribution channel (broadcasted, online, printed, etc.), the end-product (book, mobile apps, newspaper, TV content, etc.) and the activities of the institution (creation, distribution, etc.). The mere definition of the media industry is not simple and has been often discussed in literature and politics: Does the media industry include telecommunication, advertisers and how about the upcoming ICT related companies? What about cultural and creative industries and what is the difference? We propose for this model to include all institutions, which are directly or indirectly related to the “creation of mediated content” (see Deliverable 1.1a for the delineation of the media industry and the circle model). This definition scopes all aspects of the converging media industry. Additionally, this definition also includes other supporting institutions and organisations, which in cluster research is often called “institutional thickness” (Bassett, Griffiths, & Smith, 2002). This term refers to the cluster network of for instance financial institutions, chambers of commerce and trade associations and higher educational institutions like universities, training organisations but also local authorities, and marketing and business support agencies. Many authors already acknowledged the importance of so-called “associated institutions”.

MEDIA WORKERS

The second entity to include into a media cluster framework, are the media workers. The literature study showed that “access to skilled labour” and the “personnel” available in a cluster are seen to be essential in clusters. We propose to include this into the integrative and multidisciplinary framework at a micro level. It has been argued that media work is a knowledge-based occupation, in which individuals perform a professional project (Macdonald, 1995, p. 35). We regard media workers as professionals as described by Volti’s criteria to determine professions: specialized knowledge, formal education, value to society

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3 See Deliverable 1.1a for more details on the debates on defining media through sectors.
4 Further research has been conducted in Deliverable 2.1 and a more elaborated definition for media institutions was developed.
and individuals, ethics, common standards and autonomy (Volti, 2011, pp. 97–100).

It is important to keep in mind that the quick evolution of technologies and mediated communication in recent years has led to the creation of new professions in the media sector such as web designers or community managers (Bartosova, 2011). For Miller (2011), what has been called media workers should be regarded as workers performing a task (or more accurately an accumulation of very different tasks) leading to the production of media. Drawing from previous research and the sociology of media professions and occupations we suggest defining media workers as individuals (be professionals or not). These individuals are working within a media company or as an independent working within the media industry and are highly connected to other media workers while producing or facilitating the production of media content.\(^5\)

**MEDIA COMMUNITIES**

The third entity is the media communities. The literature study revealed that the “community of people” and the capability to “connect and learn” are indispensable in a cluster (Perrons, 2004). From a theoretical approach we propose to consider them from the perspective of “communities of practice” on a meso level of the media cluster. This approach is not new, as a number of authors have already made some connections between clusters and communities of practice (Chesnel, Molho, Morteau, & Raimbeau, 2013). Lave and Wenger (1991) developed originally the concept of communities of practice. They noticed that workers are sharing knowledge outside of the usual framework and on a voluntary basis.

Wenger defines communities of practice as “groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly” (Wenger, 2006, p. 1). According to him, communities of practice are made of three crucial characteristics: (1) a shared domain of interest; (2) interactions of its members; and (3) the practice, in which a shared repertoire of resources is developed. Communities can appear spontaneously but can also be enforced. That is why knowledge management researchers try to give tools to managers, like face-to-face conferences, teleconferences or online platforms, with the hope that sharing knowledge will benefit their company (De Souza Briggs & Snyder, 2003). We suggest including all kind of formal and

\(^5\) Further research has been conducted in Deliverable 4.1 and a more elaborate definition for media workers was developed.
informal communities following the definitional approach by Wenger (2006) where media workers are involved.  

The three entities, institutions, workers and communities, show how **zooming in from a macro towards a micro approach can explain the dynamics within a cluster from many angles**. A media cluster is, as described in our first principle, made of different entities and all entities are connected in a certain way. Figure 1 visualizes an abstract model of a media cluster to show the three entities and their interrelations in a simplified way. The simplified model in Figure 1 has for instance five institutions from the AV sector. We assume that there are two broadcasters, one pre-production company, one post-production company and a university in the cluster displayed through the different forms. Within each institution there are several media workers (between three and nine employees for simplicity). The workers as an example can be differentiated in being in a management, a content creation or a technical position. Some institutions have only employees from two of these possible positions. Some of these workers are interacting in a community but not all workers are part of them. For instance, the technical workers are regularly discussing trends in a Google+ group. And the managerial workers are attending once a month a networking drink. This exemplary model of a media cluster depicted in Figure 1 shows how complex the interrelations and the possible entities of a cluster are. The dynamics in a cluster can be multi-folded. These entities build the first level of the integrative framework.

**Figure 1** – Institutions, workers and communities as media cluster entities.

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6 Further research has been conducted in Deliverable 6.1 and a more elaborate definition for media communities was developed.
The parameters of a media cluster

On a second level we have identified the parameters of the entities of a cluster that characterize them. This is built on the second principle made above. Table 4 shows in detail how the parameters have been depicted based on the literature study in Table 2 and present the seven different parameters, the so-called 7Ps:

Table 4 – 7Ps based on the literature study.

<table>
<thead>
<tr>
<th>Parameter:</th>
<th>In literature discussed as:</th>
<th>Questions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Place</td>
<td>Location</td>
<td>Where are...?</td>
</tr>
<tr>
<td>(2) Proximity</td>
<td>Proximity, interconnection, linkages, connection</td>
<td>How close...?</td>
</tr>
<tr>
<td>(3) Pertinence</td>
<td>Agglomeration</td>
<td>How many...?</td>
</tr>
<tr>
<td>(4) Profile</td>
<td>Activities, particular field, composition, interaction</td>
<td>What kind...?</td>
</tr>
<tr>
<td>(5) Path-dependency</td>
<td>History, boundedness, origins</td>
<td>What evolution...?</td>
</tr>
<tr>
<td>(6) Policy</td>
<td>Operation, organisation</td>
<td>Which laws...?</td>
</tr>
<tr>
<td>(7) Performance</td>
<td>Knowledge, investment, efficiency, innovativeness</td>
<td>What output...?</td>
</tr>
</tbody>
</table>
The first parameter is place. Industry clusters have a connection to a “location” and the geography of a cluster has been described in literature as “bounded to an area”. **Place in this context is to be understood as space or geographic scale.** Many studies have chosen a geographical scale a priori by limiting the cluster to administrative or political regions (Boufaden & Plunket, 2005), like nation states, regions, cities and so forth (Boschma, 2005). Additionally, the increased use of the cluster concept has exposed the imprecision in the geographic scale at which clusters are measured and evaluated (Britton & Legare, 2005). This can lead to a mismatch between the “unit of observation” and the “spatial extent of the economic phenomena” leading to analysis failures (Breschi & Lissoni, 2001) (see Deliverable 1.1a Part 4 for more insights).

We suggest following the idea of a dynamic perspective of place that pays attention to various dimensions of the space – or more precisely spaces – which the cluster might operate at (Martin, 1999). This would lead to an understanding going beyond the normal convictions of place divided by political municipalities and enables to identify the main concentrations and dynamic externalities of media clusters. Still, this notion does not neglect the justification to start from a predefined place, like a city. For instance, delineating a place might also lead to an “identity” and branding of the cluster. Finding possible borders of a cluster makes additionally cluster policy possible, as responsibilities of authorities of different scale governments can be identified. However, the notion should be that the place of the cluster is not static but dynamic as to be able to stretch further or shrink smaller in case the media cluster dynamics do not fit into the predefined place. Therefore, place can describe many dimensions from a media cluster operating in only a building, neighbourhood or city towards an interregional or even international media cluster.

This claim also accounts for the different entities of the media cluster. For instance, the institutions included in a media cluster might spread over a certain geographic scale while media workers live outside of this place and take part in communities that are to be found even somewhere else. Additionally, besides defining the place, the first factor also explores the characteristics of it. In order to find out what characteristics to take into account Porter's (1990) framework for the competitiveness of nations gives some indications. The conditions he describes that are relevant to be provided by the place can be for instance specialized resources, infrastructure, external and endogenous determinants of a geographic landscape and demand conditions of the home market. Many more place-specific economic, social & cultural characteristics might be found that are relevant for a media cluster. For institutions of the media cluster that means to describe the geographical scale on which the institutions locate but also relevant infrastructure and resources they need to produce media content. Social factors like living conditions, local attachment and cultural embeddedness are important
not only for firms but also media workers and their communities. Therefore, identifying the parameter place for a media cluster shall help to answer the question: **Where are the entities of the media cluster?**

**SECOND PARAMETER: PROXIMITY**

The second parameter, proximity, has been central in literature, and will be discussed here in more detail. **Proximity is to be understood as closeness or nearness** and therefore is to be distinguished from the first parameter, place. Proximity of the different entities of a media cluster is often depicted as the originator for the cluster itself or the dynamics happening within the cluster. However, proximity in cluster research can have many dimensions. In this integrated approach, we suggest to adopt the definition of the French School of Proximity\(^7\) that takes geographers and social disciplines into consideration. Lussault and Lévy (2003) distinguish thereby between (1) topographical and (2) topological proximity.

**The (1) topographical proximity** describes the traditional spatial approach towards cluster entities. Still, geographic proximity is also not easy to characterize as there are many possible ways to calculate and depict proximity or distance between two entities or even a set of entities, for instance so-called shortest surface distance, optimum flight path, distance through the earth, driving distance, etc. When investigating two entities on a map with the longitude and latitude as location indicators, the direct distance between these two points give indication about the proximity. Euclidean distance is widely used in distance analyses in the literature for that (Smoyer-Tomic, Hewko, & Hodgson, 2004) but it tends to underestimate other factors. However, it is an easy to calculate and comparable indicator. Travelling time is a much more accurate measure as it also includes the infrastructure. Using these estimations further specificities are added to scale proximity between entities like local features in space and in time. Which topographical proximity to use in analysing media clusters depends on the goals and the features of the media cluster. For instance, large-scale comparisons of clusters can sufficiently rely on Euclidean distance while city structures are better described through travel times between entities. Topographical proximity can describe the nearness of media institutions, the nearness of media workers and also the nearness of media communities. But also in-between proximity exists. This proximity can also describe how close media workers live from their workplace or the media community for instance. This describes the mobility of media workers, which can be essential for cluster dynamics as these conditions influence workers willingness to participate in a cluster. For instance, proximity of workers to the cluster means that they can gain access to a greater number of

\(^7\) See Carrincazeaux and Coris (2011) for summary of the French School of Proximity approach.
potential employers, minimizing periods of unemployment and allowing progress in their careers with potential wage growth (Storper & Venables, 2004). The same interrelations can be found with media communities and clusters. The proximity is a key element for defining communities but they don’t necessarily need to have a physical proximity, as digital environments are possible.

This leads to the second type of proximity, the (2) topological proximity. Topological proximity can be defined as institutional, technological, social and organizational linkages between entities (Boschma, 2005) and moves away from the geographical idea of proximity. Most of the authors taking this view into account are from the innovation management discipline. However, also in the context of media clusters this is an important parameter to account for. Institutional proximity is characterized by a common understanding of shared values and ‘culture’ among entities but also by similar institutional structures, which can lead to a high degree of mutual trust. Technological proximity can mean that entities face for instance the same technological challenges, have similar technological capabilities or share the same technological need. Technological proximity can have an immense influence on knowledge spillovers. Linkages between entities characterize social or organisational proximity. Especially between institutions in a cluster, linkages are important as production connections and have been often highlighted (Tallman et al., 2004). These “buyer-supplier relationships” and “competitor and collaborator relationships” are viewed as essential for cluster growth and development (Anderson, 1994). The existence of tangible relationships between companies that are connected together to form a “quasi-organisation” has been witnessed in several studies over the past (for a summary, see Iacobucci, 1996). Results can be complex interaction, adaptations and investments within and between companies over time (Håkansson & Ford, 2002). In addition, this raises the issue of the cluster’s supra regional and international inter-links. Linkages mean for media workers their professional but also private networks. These networks of relationships can highly impact the career paths but also the skills of media workers. Media communities are in itself already connections between media workers but can also form supra relationships to institutions and other communities. Institutional proximity can have a strong influence on organisational proximity as contracts are found to be more stable if also institutional proximity exists. This also influences the exchange of knowledge between entities. Media workers’ knowledge can more easily be transferred if a shared culture exists, which can be translated in value systems, viewpoints, conventions and rules of a certain group of people (Krätke, 2003). This network of linkages has also been often described in literature as “industrial atmosphere”, “noise”, or “buzz”. This “buzz” consists of specific information and updates, news, understanding of new knowledge and skills and learning processes.
In summary, the parameter of proximity has been included in the integrative framework to answer the question of: **How close (topographical and topological) do the entities of a cluster need to be towards each other on different levels?**

**THIRD PARAMETER: PERTINENCE**

The third parameter is the pertinence of the cluster. Research highlighted that a cluster is a “group” or an “agglomeration”. Also the activeness of the cluster and the relevance for a region has been acknowledged broadly. Pertinence therefore can be translated into the number of entities and their relevance for the location. The issue for clusters and pertinence is that there is no clear benchmark of the scale that is needed to form synergies and cluster dynamics. This seems quite surprising given the amount of empirical work existing on industry clusters.

One reason is the wide variety of media clusters and the different profiles within them, which leads to different demand in scale and number of entities. Additionally, the number of entities necessary to be considered a cluster also depends on the size of the place and demand conditions. Still, cluster research has often used statistical measures like the Gini coefficient or measures of concentration to define and scale clusters (Martin, 1999). Besides statistical approaches especially research on development and life cycles of clusters has dealt with the scale of clusters developing an argument on the “critical mass” of clusters. Authors have used this idea to argue that a critical mass of media institutions is necessary to achieve cluster dynamics and the advantages coming from agglomerations (Fornahl & Menzel, 2003). In cluster research, the concept of critical mass was developed to argue that a cluster is not yet a cluster without achieving it. Research in this area has linked firm formations that influence the development of a cluster into four stages: growing, formatting, declining and stable clusters (Fornahl & Menzel, 2003). Besides the number of firms, critical mass also was already linked to other scales of the cluster in research, like the number of media workers and media communities, but also other local conditions such as regional human capital and the presence of supporting services (Brenner & Fornahl, 2002). This enables to navigate internal relevant development processes of a cluster (Saxenian, Bresnahan, & Gambardella, 2001).

Therefore, for this framework we suggest to not only look at the number of institutions but also the number of workers and communities relevant and additionally other quantifiable characteristics that are helpful to fully understand

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8 Rosenfield S.A. (2000) found for example that in less populated areas, smaller numbers of similar companies already form a relevant cluster, such as the 11 houseboat builders around Lake Cumberland, Kentucky that dominate the high-end boat market.
cluster dynamics. The question to be answered by the parameter is therefore: **How many entities (total and in relation) are needed to make the cluster relevant?**

**FOURTH PARAMETER: PROFILE**

The fourth parameter is the profile of the entities. Researchers highlighted the “relatedness” between cluster entities. Authors, scholars and institutions have used many different approaches to profile a cluster. As described above, some do account for the end product, stating that a media cluster is made of companies profiled to create for instance books. Others approach this issue along the value chain stating that the composition of a cluster should host companies along the whole value chain of producing specific media content. There is a need to profile the entities within a cluster to find the identity of the whole cluster. **Profiling the entities will help to understand their functions and connectedness.**

The profile of the organisations should therefore describe the size, its activities and its place along the value chain. The profile of the media workers and their labour conditions also matter. It is important for a media cluster to have access to certain skills and a certain mix of skills. In the research of the sociology of professions already many insights to profile media workers can be found. For instance, Abbot (1988) analysed so-called information professions and distinguished them into qualitative task’s area, quantitative task’s area and the combined jurisdiction. Deuze (2007) investigates media professionals in a usual sector-divided way which he describes as “four key media professions”: (1) advertising, public relations and marketing communications, (2) journalism, (3) film and television production, and (4) game design and development. Westlund (2011) results argue for the existence of three types of media workers, which he calls: the “techies”, the “creatives” and the “suits”. Also, clear profiles for the communities need to be developed. Researchers already identified several kinds of communities of practice (Cohendet, Roberts, & Simon, 2010; De Souza Briggs & Snyder, 2003; Roberts, 2006; Wenger, 2006): (1) Self-driven, (2) artificial, (3) professional and (4) virtual communities. Also the members of the communities need to be identified and certain profiles of media workers tend to participate in certain communities. This issue can help to understand communities much better.

With the convergence of the media industry the borders between sectors and definitions got blurry and this should be dealt with. Within the integrative framework this is described through the profiles, which will highlight the question: **What kind of entities (in terms of profiles along the value chain, activities, size, organisation, skills, labour conditions, etc.) are needed?**

**FIFTH PARAMETER: PATH-DEPENDENCY**
The fifth parameter is path-dependency describing the evolution of a cluster. In literature, the “historic ligation” is often mentioned. This can be described in the path-dependencies of the cluster. Many authors have solely focussed on the current state of the media cluster. Also, scholars have often criticized this. The analysis of path-dependencies within clusters should cover this as it highlights the need to look at the historic development. If a media cluster is to be characterized it is important how this cluster has developed and what its origins are.

This parameter is closely related to the parameter location as many authors argue that not only the resources of the location are causing certain cluster dynamics and activities to emerge but ‘history’ is considered to be the leading cause (Martin, 1999). So-called backward and forward linkages and existing expectations can cause cluster patterns to lock-in through processes of cumulative causation (Martin, 1999). Fujita and Thisse (1996) summed that up: “once spatial differences for industry agglomeration take shape they become substantial” (but must not be the most optimal or beneficial spatial clustering dynamic). Factors to look at are the trajectories of media institutions, workers and communities.

Finally, path-dependencies will look at professional leaders, local attachment and life trajectories. Considerations of cluster life cycles can have a strong impact on the path-dependencies as well. Therefore this parameter has been integrated into the integrative framework in order to answer the question of: How is the cluster evolving?

SIXTH PARAMETER: POLICY

The sixth parameter is policy describing regulations and incentives for all three entities. Freedman (2008) highlights the importance of political actors on media systems. He defines media policy as “systematic attempt to foster certain types of media structure and behaviour and suppress alternative modes […]” (Freedman, 2008, p. 1). Freedman (2008) also differentiates between media policy, which refers to the development of goals and norms, media regulation, which focuses on the operation of legally binding tools, and media governance, which describes the sum of all the mechanisms.

Also important in this context are the different levels in media policy. Not only regional governments but also national and supranational bodies are increasingly important in the context of media policy. We should distinguish between policies directed towards the media institutions, media workers and the communities. Therefore, this parameter shall answer the question of: What governance structure (from different governmental levels and policy tools available) influences the entities of a media cluster?
SEVENTH PARAMETER: PERFORMANCE

The seventh parameter is performance. The issue that many researchers faced when studying media clusters is often related to identify and quantify the added value or the return on investment. One way to look at performance is to look at the end product, or the economic indicators, like the number of employees, GDP, etc. (cf. De Souza Briggs & Snyder, 2003).

These indicators are highly related to the transactions that take place within media clusters. Traditionally, transactions are defined as exchange of goods, labour and money, which are often indicated through formal instruments such as contracts (Storper, 2000). Also, the possibilities of firms to acquire investment within a cluster (R. Smith et al., 2004) have been often highlighted in research. But transactions can also refer to “soft and untraded interdependencies” such as knowledge, relations, rules, and conventions” (Storper, 2000, p. 148). Transaction can also be related to collaboration and network processes. The more transactions within a cluster take place the higher the performance of the cluster can be perceived. The performance of the cluster lies within the reduction of so-called transaction costs through lowering uncertainties and risks which has been argued to be influenced by the geographical proximity (Scott, 2000). Additionally, “search and information costs” are reduced within clusters (Scott, 2000).

Besides transactions also processes of adaptation are accelerated within clusters (Scott, 2000). This leads to the importance of knowledge exchanges and spillovers in clusters. This concept has become a central interest as it often leads to a positive dynamic that fosters creativity and innovation (Håkansson & Ford, 2002). Knowledge externalities have been also often described as “main factor” that explains why media clusters are formed (Boufaden & Plunket, 2005). Often, the idea of “tacit knowledge” has been used in that context. Tacit knowledge is hereby defined as know-how that is acquired in practice via the “informal exchange” of behaviour and processes (Gertler, 2003, p. 78). Existing tacit knowledge in a cluster is also an important attractive factor that creates a virtuous circle: high-level knowledge will attract new entrants to the cluster and the newcomers will thus create more knowledge (Tallman et al., 2004). Additionally, researchers, mainly with a managerial approach, describe the aim of knowledge management is to create and disseminate knowledge within a company in order to increase its competitive advantage (Nonaka, 1991).

Knowledge management specialists used the communities of practice concept in their work in order to see what could be the advantages and the limits for companies or public entities to create, foster or help such communities. The idea is that those communities, which are already beneficial for the workers, could represent an advantage also for the companies and that there will hopefully be a possible “return on investment” (De Souza Briggs & Snyder, 2003).
Other researchers have especially highlighted the higher “efficiency” and “innovativeness” of firms located within clusters (Karlsson & Picard, 2011) which is also linked to positive externalities. Many attempts have been made to account for the innovativeness of clusters (e.g. Traoré, 2004; Pouder & John, 1996). The considerations are often combined with number of patents, R&D expenditures or similar quantifiable measures of innovativeness. However, this imposes a difficult task on research on media clusters. The media market is not as much defined by innovations measurable by patents but media, as a product is innovative in itself, defined by creativeness. Other externalities produced within clusters are higher competition levels. Porter (1990) stresses: “Among the strongest empirical findings from our research is the association between rigorous domestic rivalry and the creation and persistence of competitive advantage in an industry”. He stresses that “localized competition” for limited resources leads to differentiation on the market and pushes less flexible and adaptable firms from the market. Market niches are developed with distinct functions of each player in which they hold a competitive advantages (Baum & Mezias, 1992). Another aspect to look at within performance of clusters is the influence the cluster has not only on endogenous externalities but also on its environment. Policy-makers often exploit the perceived influence a media cluster can have on an urban climate, the exogenous externalities. Scholars around the world have tried to use creative industries as favourable tools for regional and urban economic development. The attempt is often to transfer less attractive neighbourhoods into creative districts within a restructuring process.

Within the integrative and multidisciplinary framework these considerations have been translated into performance. The ability of a cluster lies within the acceleration of endogenous externalities like formal transactions (exchange of goods, money and labour), positive spillovers of knowledge and innovativeness and creativity and within exogenous externalities like urban development. Therefore the parameter of performance has been integrated to answer the question of: **What benefits (in terms of formal transactions, knowledge spillovers, innovativeness and creativity and urban development.) do the cluster entities achieve?**

### The interrelation of entities and parameters

The above described entities and parameters are highly interlinked in a cluster and influence each other. As media cluster research often aims to create policy recommendations it is not only important to create insights into the cluster status but also look into the dynamics and causations. We have found several interrelations in the literature study. This is based on the third principle made above. Therefore, we combine the three entities and the 7Ps into one common framework to be filled in with observations and data and can serve as a starting
point for benchmarking specific clusters in relation to others, but always taking into account the goals and dynamics inherent to that cluster. The definitions and factors to look into are summarized in Table 5.

As can be depicted in Table 4 many similarities and interrelations between the Ps and entities of a cluster can be found. **First, the entities are highly interlinked.** The institutions are perceived from a macro perspective way that defines them as institutions that are involved in the creation of mediated content. This definition already determines the media workers to look at within a media cluster, as they are mostly employees of these institutions (additionally self-employed media workers are to be integrated). These media workers are the micro level of the cluster and depict through participation the media communities to look at, as they need to participate in them at a meso level. This shows how highly interlinked the entities are and therefore many parameters to analyse within a cluster can overlap in its investigation throughout the three entities. This has already been visualized in Figure 1 (vide supra).
**Table 5 - Summary of definitions and factors within the entities and 7Ps.**

<table>
<thead>
<tr>
<th></th>
<th>Media Institutions</th>
<th>Media Workers</th>
<th>Media Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>To be defined as ...</strong></td>
<td>...all institutions (profit, educational, governmental, etc.), which are directly or indirectly related to the &quot;creation of mediated content&quot;.</td>
<td>...as those (be professionals or not) contributing at least partly to the production processes of media institutions.</td>
<td>...all kind of formal and informal communities where media workers are involved to share an interest, interact and practice.</td>
</tr>
<tr>
<td><strong>Place</strong></td>
<td>...the geographical scale and local conditions influencing the media cluster’s dynamics.</td>
<td>Geographic scale, specialized resources, infrastructure, demand conditions, other local conditions</td>
<td>Geographic scale, specialized resources, infrastructure, living conditions, local attachment, cultural embeddedness, other local conditions</td>
</tr>
<tr>
<td><strong>Proximity</strong></td>
<td>...the topographical and topological nearness influencing the media cluster’s dynamics.</td>
<td>Distance measures, shared values and culture, common technological challenges / capabilities / needs, organisational linkages (competitor and collaborator relationships / supra-cluster linkages)</td>
<td>Distance measures, mobility, shared values and culture, common technological challenges / capabilities / needs, social linkages (private and professional networks / supra-cluster linkages), &quot;buzz&quot;</td>
</tr>
<tr>
<td><strong>Pertinence</strong></td>
<td>...the scale of the cluster in quantity of entities and concentration for the place linked to the development phase of the cluster.</td>
<td>Number of firms, concentration of firms, other quantifiable characteristics</td>
<td>Number of workers, concentration of workers, other quantifiable characteristics</td>
</tr>
<tr>
<td><strong>Profile</strong></td>
<td>...the type of entities and their functions within a cluster.</td>
<td>Activities, sector, size, value chain position, organisational form, target group, scale of operation, etc.</td>
<td>Activities, sector, skills, labour conditions, contract form, etc.</td>
</tr>
<tr>
<td><strong>Path-dependency</strong></td>
<td>...the historic ligation, the origins and historically developed patterns influencing the dynamics of the cluster.</td>
<td>Trajectories of media firms, local attachment</td>
<td>Trajectories of communities, local attachment</td>
</tr>
<tr>
<td><strong>Policy</strong></td>
<td>...the media governance tools from all levels influencing the media cluster's dynamics.</td>
<td>Policy goals and tools influencing media institutions</td>
<td>Policy goals and tools influencing media workers</td>
</tr>
<tr>
<td><strong>Performance</strong></td>
<td>...the endogenous and exogenous externalities that media clusters produce.</td>
<td>Increase of formal transactions, knowledge spillovers, innovativeness /creativity, urban development</td>
<td>Increase of formal transactions, knowledge spillovers, innovativeness /creativity, urban development</td>
</tr>
</tbody>
</table>

*Note: The text in the table is a summary of definitions and factors within the entities and 7Ps. The full definitions and factors are provided in the report.*
Second, the different parameters are highly interlinked. It is often only possible to investigate one P while also looking at another. For instance, while investigating the pertinence of media workers it comes naturally to also describe the profiles of media workers within a cluster. Therefore, to truly understand a media cluster it is important to describe the number of content creating workers needed while also the number of technical workers. The proximity, pertinence and profile of the cluster entities are highly reliant on the place. For example, is the place a neighbourhood, proximity comes naturally while the size of the place also influences the pertinence possible and the resources available in the place depicts the profile of the cluster entities. Path-dependency is also reluctant on findings within policy and the place as these have especially historic ligations that can influence the cluster now. As has been already described within the Ps, performance can be influenced by proximity, pertinence, profile, place and policy and the other way around. The degree of influence depends on the cluster’s characteristics. Therefore, the interrelations of the Ps are very important within a cluster analysis. Additionally, the Ps, proximity, pertinence and profile are especially focussing on the three entities while the other Ps, path-dependency, policy, place and performance, can also be used to describe the whole cluster without looking at the different entities. The influence the parameters have on the cluster is therefore to be depicted before, on top, below and after the cluster. We have visualized the interrelations of the Ps in Figure 2.

Third, there are strong interrelations between the Ps and the entities. As can be seen in Table 5, the factors to look at within each entity and parameter are very similar but also unique. In place, the geographical scale is to be looked at for all entities and this can overlap or be very different. However, place focuses for institutions also on the demand market while for media workers place also includes living conditions. The similarities and differences to analyse are important in cluster research. However, not all necessary investigations could have been conducted to make the list of factors exhaustive. Further research is needed.

Fourth and most important, the Ps and the entities are interlinked through causation. Much research has tried to investigate the reasons for success of clusters and why media companies cluster. However, there is still no common agreement and argumentations have been often made based on single case studies. As has been shown all parameters and entities do correlate somehow. However, correlation does not mean causation. This is the so-called “chicken and egg” problem. Does proximity within a cluster cause higher performance of the entities? Or, does higher performance cause proximity? Do the characteristics of the place cause agglomeration and pertinence of media institutions or does the pertinence cause characteristics of the place? Do media institutions follow media workers or do media workers follow media institutions? This exercise of questioning causality can be made with all parameters and all
entities. The thesis of this novel framework is that causation of media cluster dynamics depends on the nature and functioning of the whole cluster. The search for the causation of the agglomeration is a difficult task however and defining what a media cluster is in nature needs to be based on these considerations.

Figure 2 – Possible relations of the parameters of a media cluster.

Table 6 – The integrative framework of media cluster research.

<table>
<thead>
<tr>
<th>Media clusters are depicted of different acting entities:</th>
</tr>
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<tbody>
<tr>
<td>- Media institutions</td>
</tr>
<tr>
<td>- Media workers and</td>
</tr>
<tr>
<td>- Media communities</td>
</tr>
</tbody>
</table>

These entities can be described through different parameters (7Ps):

Place, proximity, pertinence, profile, path-dependency, policy and performance

The entities and parameters are highly interlinked through causation-relations. The integrative framework of interrelated entities and parameters shall be filled in with observations and data when analysing media cluster dynamics.
Final Considerations

This integrative framework differentiates from existing frameworks, that have showed several limitations: (1) many studies are based on single case studies and high-tech clusters transferring their findings to all media clusters leading to mere suppositions about cluster dynamics; (2) studies have tended to assume static configurations of clusters while the reality shows a wide diversity and dynamic processes taking shape; (3) many studies are focussing on the companies of a cluster while the dynamics of media clusters highly depend on social aspects; and (4) literature lacks in a common vocabulary to tackle the research.

The integrative framework of two levels, entities and parameters, federating the heterogeneous approaches from different disciplines for media cluster analysis has been especially developed to tackle the limitations found in literature so far. The integrative framework is supposed to be used on a divers array of media clusters, as it is not limiting cluster considerations to specific media clusters.

(1) This shall lead in the future of media cluster research towards a more divers view on the dynamics not limiting assumptions on single case studies.

(2) The here-developed framework shall guide the user towards a more dynamic approach of media clusters. It focuses on processes between different entities and characteristics bringing the user away from static descriptions. The interrelations of parameters and entities are highlighted.

(3) Users of this framework are called to approach media clusters away from mere analysis of media companies. The threefold method putting media workers and media communities on the same level as media institutions is bringing the social aspects of media clusters back into focus.

(4) The integrative framework unites the so-far used vocabulary from different academic disciplines. Bringing different concepts of media cluster research together can lead to a more comparable approach along existing disciplines connecting media cluster researchers more and enhancing future research.

Besides tackling the limitations found in research so far, the framework developed here had several other goals. First, the integrative framework is to be seen as tool to find the nature of a cluster and its dynamics accordingly. This means that the framework does not offer a series of indicators, on which a cluster can score high or low. Rather, the framework allows to ‘profile’ a cluster, meaning it is a tool to help surface a cluster’s main entities, their dynamics in terms of the 7 identified parameters and the resulting efficiencies. The framework then allows assessing whether possible changes in these dynamics could improve the efficiencies, but explicitly acknowledging that what does account for one cluster does not need to be applicable to another. Of
course, benchmarking specific constellations of a cluster against the dynamics of another cluster in order to assess the dynamics of a cluster is still necessary, but not in a way that predefined and general indicators need to be met. This implies that certain parameters are more important in certain media clusters than others or parameters might not play a role at all. This means that the framework cannot only be used to place quantitative and qualitative observations within the parameters but the framework also invites to fill it with additional theoretical considerations of media clusters.

**Second, the here-developed framework is open to considerations from different academic disciplines.** The multidisciplinary view is achieved on the one hand through the three entities; the media institutions from an economical perspective, the media workers and communities from social and occupational considerations. On the other hand the multidisciplinary approach is highlighted through the parameters, depicting geographical, economical, social, and more views into account not only based on empirical observations but also qualitative analysis.

**Third, the integrative framework guides the user to not forget important aspects when analysing media clusters.** As the framework implies, there are different kind of media clusters and a more systematic approach leads to clarity of results. Additionally, when applying the framework, the researcher is enabled to focus on (or pick) most important aspects to use of the framework depending on the particularities of the media cluster in question. However, the framework stresses as well that when only parts of the framework are applied important characteristics of the nature of the cluster might be not revealed.

**Fourth, the framework is also flexible in its objectives.** Cluster research has many different research questions and causes. For instance, the framework can be used when the cluster phenomenon of media is observable in a certain region or city and research is supposed to explain it. But the framework is also usable if a region has not identified a cluster yet but wants to find out where media agglomerates. Also, the framework can be used on so-called branded clusters to see if there are actually cluster dynamics happening. And fifth, the integrative framework shall not only appeal to academia but especially to governments on all levels and stakeholders alike. It is supposed to give clear indications to governments where possible policy tools can support the development of a media cluster. Also, the need to define goals in media clustering is there for governments and other stakeholders like media companies.
Table 7 – The goals and benefits of the integrative framework

<table>
<thead>
<tr>
<th>The goals of the framework:</th>
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<tbody>
<tr>
<td>1. Bring a more diverse view on the dynamics of media clusters away from single case studies.</td>
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<tr>
<td>2. Guide the user towards a more dynamic approach of processes within media clusters.</td>
</tr>
<tr>
<td>3. Approach media clusters on all socio-economical levels.</td>
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<tr>
<td>4. Unite existing vocabulary to form a more comparative discipline.</td>
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</tbody>
</table>

The benefits of the framework is, that it is multidisciplinary, that it guides the user, that the objectives of analysis can differ, and that it appeals to academia, governments and stakeholders alike.

**Conclusion**

The cluster phenomenon in the media industry has become an important topic not only in academia but also for policy matters. The common assumption about media clusters is that locating related actors inside a regional agglomeration brings advantages for these media firms (Picard, 2008). However, as we have shown in this Deliverable, the idea that a media cluster is simply an agglomeration of media companies seems false as many other dynamics occur.

Similar considerations have been already made in Deliverable 1.1a. A **definition of media cluster** was developed based on two aspects: First, agglomeration alone does not define a cluster, but agglomeration needs to cause mutual advantages. And second, the focus should be on all possible entities of a media cluster and not only on firms or institutions. The proposed definition is as follows: "A media cluster is defined as an agglomeration, that is involved in the process of production to consumption of mediated content, that co-locates for mutual advantages." (cf. Deliverable 1.1a)

Within this definition, our first level of the integrative framework is incorporated, the three identified entities of a media cluster as the agglomeration: media institutions, media workers and communities. Additionally, this definition of a media cluster highlights the advantages accelerated through co-location within a media cluster. These advantages are depicted within the integrative framework through the identified parameters, the 7Ps: place, proximity, pertinence, profile, path-dependency, policy and performance. By means of what research has found so far, the parameters should be able to tell us what the advantages are and how they are caused.
The research question of this Deliverable was: **What are the dynamics shaping media clusters?** The Deliverable showed that the dynamics in a media cluster depend on the nature of the media cluster and the interrelation and causalities that exists between the identified entities and parameters. However, a clear answer to this question is not yet possible. The so-called “chicken & egg” problem has not been solved yet and interrelations between all parameters and entities are not clear yet. Additionally, we do not claim the framework to be exhaustive. The parameters and entities were depicted based on previous research made and we assume that there are additional parameters and entities that might play a role in media cluster dynamics. Therefore, this framework needs to be further developed by testing it on existing media clusters. Clear comparisons and benchmarking of the different factors to look at is necessary to truly answer the question of what dynamics shape different media clusters. Furthermore, the media sector is in a constant state of change being influenced by convergence and digitalisation trends, which makes a clear delineation of the different entities and parameters hard to grasp. The here-developed framework tries to grasp this problem by defining a media cluster, its entities, parameters and interrelations on a flexible way that can be further filled by applying the framework to more and more clusters. A workable framework of media clusters should be both abstract enough, while at the same time still have enough raison d’être to describe a specific socio-economic phenomenon.
Appendix: References


