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CLUSTER STRATEGIC DIRECTION AND INITIATIVE MODEL TO FACILITATE THE DEVELOPMENT OF THE AUDIOVISUAL SECTOR IN LATVIA

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I hereby declare that the Doctoral Thesis submitted for the review to Riga Technical University for the promotion to the scientific degree of Doctor of Engineering Sciences (Telecommunications) is my own. I confirm that this Doctoral Thesis had not been submitted to any other university for the promotion to a scientific degree.

Kaspars Steinbergs _______________
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The Doctoral Dissertation is written in Latvian and consists of an introduction, 3 parts, conclusions and proposals, bibliography of 147 sources of reference. The volume of the Thesis is 147 pages. The Thesis includes 21 figures and 25 tables.

The Doctoral Thesis and Summary are available at the Scientific Library of Riga Technical University, 5 Paula Valdena Street 5.

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GENERAL REVIEW

Co-operation and specialisation of a particular sector with common resources – such as labour, capital, knowledge and information, natural resources, technology or common market – has existed for ages, for example, in the Hanseatic League or China Silk Road. However, the scientific interest in this topic sparked only in the late 19th century, when Alfred Marshall used it in his scientific works, for example, in a book "Principles of Economics" where the term industrial district was used. There it was used in relation to "the concentration of specialised industries in particular localities" (Marshall, 1890). Since the seventies of the 20th century, this topic gathered popularity among more and more researchers, for example, G. Becattini, M. Fiore and Ch. Sabel, who studied industrial districts in western German and in Italy. These studies show that due to the influence of a variety of historical factors, industrial districts have developed in certain industries where companies are specialised, thus facilitating the cooperation between enterprises and their development (Bahlmann & Husman, 2008). These and other researchers gave rise to the cluster theory made by the USA scientist Michael Porter that since the publication in the early 1990s has been widely recognised and acknowledged among scientists of many branches of science, including the management science, as well as among policy planners. This theory showed the role of clusters in the competitiveness of companies and industries (Porter, 1990).

A significant contribution to the development of the cluster concept in management science has been made by researchers, such as Ph. Aydalot, M. Enright, P. Maskell, S. Rosenfeld, Ö. Sölvell, Ch. Ketels, and others. Their main research directions are the role of clusters in increasing competitiveness, the impact of clusters on the innovation process, the role of the state in cluster activities, and clusters operating in different regions of the world (Bahlmann & Husman, 2008; Enright, 2000; Maskell & Lorenzen, 2004). An extensive research on clusters in Europe and around the world was conducted by The Institute for Strategy and Competitiveness at Harvard Business School and the Centre for Strategy and Competitiveness (and the European Clusters Observatory managed by it) at the Stockholm School of Economics.

Development of clusters at the political level in the European Union is closely linked to the development of innovation. These matters currently are overseen by the European Commission Directorate-General for Internal Market, Industry, Entrepreneurship & SMEs (small and medium-sized enterprises). A significant contribution to the development of cluster concept has been made by studies and policy documents developed in accordance with Europe INNOVA – an initiative for innovation professionals and The High-Level Advisory Group on Clusters, such as the European Cluster Memorandum. Both academic and political studies have come to the same conclusion: clusters provide prosperity and economic growth of the region, particularly allowing medium-sized and small companies to increase their competitiveness in the global market, and create an environment for the facilitation of innovation (Sölvell et al., 2003; Andersson et al., 2004).

A frequently mentioned example of a cluster is Hollywood (a film industry cluster), which shows the key role of clusters in the development of different industries. For more than ten years, the audiovisual sector and its clusters have been analysed in the context of concepts of creative industries and the creative economy. The ever increasing role of creative industries in the economy, and hence the need for research in this direction, including those in management science, has been emphasised both in the United Nations "Creative Economy Report 2010", and the Amsterdam Declaration adopted during the conference organised by the European Commission "Towards a Pan-European initiative in support of creative industries in Europe". This declaration is addressed to European policy-makers in relation to the development of creative industries. This can also be seen in other documents. In these documents, among other things, a particular emphasis is put on the role of clusters in the development of creative industries (including the audiovisual sector), which is backed by academic and practical studies conducted by A. Pratt, S. Krätke, H. Bathelt, etc. Although the very concept of creative industries is relatively new, the existing research shows that creative industries (including the audiovisual sector), on the one hand, provide even greater added value to the economy, and, on the other hand, provide much wider access to culture and improves the quality of the urban environment. Cluster development plays an undeniable role in these processes because they create an environment for attracting creative professionals. (Kaiser & Lieveke, 2007; Turok, 2003; Krätke, 2002; Bathelt, 2002)

At the Latvian and the Baltic States level there have been cluster studies conducted in sectors, such as wood processing, information and communication technologies, transport and logistics, etc. (Garanti, 2014; Boronėnko & Zeibote, 2011a, 2011b) However, the development of creative industry clusters (including the audiovisual sector) has not been studied, although the development of clusters of creative industries has been strongly emphasised in the Sustainable Development Strategy of Latvia until 2030. It should also be clarified that from the point of management science and economic science the audiovisual sector has been analysed very little. Examples of such studies are the ones carried out by the Institute of Economics of the Latvian Academy of Sciences.
The main goal of the research is:

Through assessing the development possibilities of the audiovisual sector cluster in Latvia, to develop cluster strategic direction and initiative model by using the Balanced Scorecard approach and thus identifying the key tasks at the sector level and at the companies' management level that would foster cluster development.

The main tasks of the research are as follows:

1. To study the literature on cluster development and operation, as well as their role in stimulating the development of the audiovisual sector globally and particularly in Europe.
2. To perform a qualitative and quantitative analysis of the Latvian audiovisual sector.
3. To develop and evaluate a cluster strategic direction and initiative model and identify tasks to be performed at the level of company, sector and at the national level.

The research object of the dissertation is the audiovisual sector in Latvia.

The subject of this dissertation is the development possibilities of audiovisual sector cluster.

The hypothesis is defined as follows: Latvian audiovisual sector companies have a high development potential if the development of audiovisual sector cluster will be promoted and consistent management of cluster initiative will be provided.

The Thesis Presented to Defence:

1. The main factors for the development of the audiovisual sector in Latvia are strategic management improvement, development priority-setting and the establishment of an efficient public funding allocation system.
2. The offer of the audiovisual sector related higher and vocational education programmes only partly meet the needs of companies and are so because to the insufficient cooperation between the two.
3. Cluster creation possibilities can be assessed as low and are affected by poor collaboration within a sector, the lack of leaders, increasing competition for public funding and a low level of understanding between the involved parties of the benefits resulting from cluster operation.
4. Cluster creation possibilities may increase if appropriate national and regional policy is implemented, including the establishment of a new public media complex, sector-related vocational education study programmes and creation of a business incubator.
5. Audiovisual sector cluster initiative Balanced Scorecard model and strategic linkage model allows to determine a strategic direction for cluster development and effectively includes interests of all cluster stakeholders.

Methods used for solving the above-mentioned tasks in this paper were:

- A literature review, which includes a critical analysis of scientific literature on the cluster theory and an analysis of the activities of the audiovisual sector, by forming the theoretical basis and getting familiar with the experience of other countries.
- An analysis of policy planning documents and legislative acts which include assessment of the national and regional level policy planning documents pertaining to the creative industry, particularly to the audiovisual sector, and the development of the cluster, economy and the labour market.
- The sector statistics review, which includes the assessment of several indicators, such as the number of enterprises in the sector, turnover, employment, financial support received, the local market share, the number of international awards won, etc.
- Individual semi-structured interviews which were conducted in four rounds. The people interviewed were managers, employees and creative professionals of the audiovisual sector companies in Latvia, their associated organizations, as well as sector and cluster policy experts.

- Focus group discussions which included two discussions with the representatives from companies within the sector, public authorities, NGOs (non-governmental organizations) and educational institutions.

- A case study, which involves the familiarization with the functioning of the major companies in the audiovisual sector and their support organizations by analysing their management processes, documentation, and financial information.

The research methodology was developed on the basis of the grounded theory approach. The analysis of three rounds interviews and two focus group discussions transcripts was carried out using qualitative data analysis software NVivo10. In each transcript of interview and focus group overview codes (keywords or phrases) were defined. Analysis of those allowed to obtain categories. Conceptually similar categories were combined under concepts which were also created using the memos made during the interviews and focus group discussions. Conclusions drawn from the analysis of interviews and focus group discussions were compared with the results of analysis of sector statistics, legislative acts and policy planning documents, as well as literature analysis, findings and conclusions. This led to the development of the strategic directions of the audiovisual sector cluster of Latvia and the Balanced Scorecard model which was then assessed in the fourth round of interviews. At this stage 5 interviews were conducted with experts and researchers of the audiovisual sector and cluster policies.

Limitations of the Research

Limitations of the research are related to the availability of definitions of the audiovisual sector and statistical data. At present, the audiovisual sector at the European Union level involves film, television, video game and multimedia development. However, the audiovisual sector is only partially analysed in this aspect. The literature review included the information on cluster formation and their importance in film and television field, as well as a broader field of media and new media, which includes the development of video games and cross-media products. Statistical analysis of data was made only on those companies that are covered in the NACE Rev.2 classification (Group 59.1 and 60.2). These companies are operating in the motion picture, video and television programme production and television programming and broadcasting activities. Video game and inter-media product development companies were not included in the statistical data analysis since NACE classification does not allow to determine companies operating in such areas.

In several places, statistical data are provided in two currencies: EUR and LVL, for which there were two reasons. First of all, during the examined period 2008-2013 the Latvian national currency was LVL, however, for the sake of comparison, let’s say with data on Lithuania and Estonia, these values have been converted also into EUR currency. While the data taken from other sources such as policy planning documents have been left unconverted in currency given. This is because these data are used rather for representation than comparison purposes.

Interviews were conducted with the representatives from the film, television, video game and inter-media companies. However, the most of the interviews were conducted directly with representatives of companies engaged in the film sector, taking into account the findings gained from the literature review and analysis of sector statistical data. Overall, those interviewed represented companies within the sector with the number of employees accounting for approx. 42.5% of the sector total and turnover accounted for approx. 30.3% of the total number of the sector, taking into account the information collected from the analysis of the statistical data.

Research Period

- The analysis was carried out for the period of 2008 - 2013 and includes data also for the period before and after this period in order to show trends over time.

- Research interviews were conducted during the period from spring of 2010 to spring of 2012.

- Focus group discussions were held in spring of 2012.

- Interviews to assess the strategic direction of cluster initiative and the Balanced Scorecard model took place in November/December 2014 and in September 2016.
The theoretical and methodological framework of the thesis consists of the following materials:

- The scientific literature on cluster theory (M. Porter, P. Maskell, H.O. Rocha, S.A. Rosenfeld, Ch. Ketels and others), culture and creative industries (A. Pratt, N. Garnham, T. Flew, and others), film and audiovisual sector and their clusters (S. Krätke, H. Bathelt, R.G. Pickard and others).
- The scientific literature on management theories and methods, in particular about a strategy and Balanced Scorecard model (D. Norton, R. Kaplan) and their application in the development of cluster strategy, as well as performance evaluation.
- Studies conducted by the researchers of clusters in Scandinavia (Ö. Sölvell, Th. Andersson, et. al.). Particularly the studies "Clusters. Balancing Evolutionary and Constructive Forces" and "The Cluster Policies Whitebook".

The research base of the thesis consists of the following materials:

- Statistical information available in organizational databases and publications made by the Central Statistical Bureau (CSB) of Latvia, EUROSTAT, the State Culture Capital Foundation (SCCF) of Latvia, and the Ministry of Economics and the Ministry of Culture of Latvia, etc.
- 32 interviews (conducted in four rounds), two focus group discussions (with a total of 16 participants), with respondents representing approximately 7% of the total number of companies in the sector, as well as the most important public authorities, NGOs, educational institutions and sector experts.
- Planning documents, such as the national and industrial development plans, the European Union (EU) policy-planning documents pertaining to the development of creative industries and clusters, as well as normative acts.

Scientific Novelty and Practical Significance of the Research:

1. Definition of term "cluster" developed by the author.
2. Improved concept of the audiovisual sector and its research methodology.
3. A strategic direction and Balanced Scorecard model for cluster initiative of the audiovisual sector of Latvia has been developed – which is a unique tool in cluster strategy planning and performance evaluation that can also be applied to the development of other creative industries and cluster strategies.
4. Strategic linkage model for audiovisual cluster has been developed.
5. Development tasks of the cluster initiative in the audiovisual sector in Latvia have been prepared for national, sector and company level.

The approbation of research results and their practical significance.

The research results were presented and discussed the chairpersons of the Latvian National Film Centre, the National Electronic Media Council, the Latvian Game Developers Association, Latvian IT Cluster, as well as leaders of companies within the sector. The results were presented at the conference held on 31st May 2012 by the Investment and Development Agency of Latvia "Opportunities of Latvian creative industries in the interactive game business". The research results have been taken into consideration during the implementation and enforcement of the Alberta College study programme "Entertainment management and production" branch "Video game development" (exists since 2012). The study results were discussed at scientific conferences in Latvia and abroad and have published in scientific journals and publications.
Presentations in conferences.


Publications:


Part of the research is done within the framework of the Baltic Sea Region Programme 2007 – 2013 project "First Motion".


The structure and volume of the research

This thesis consists of an introduction, 3 chapters comprised of 9 sub-chapters, final conclusions and recommendations, a list of references. The total volume is 147 pages, including 21 figures, 26 tables, 4 annexes (comprising 83 pages). The list of references includes 146 different sources which have been summarised in a list of references.

This dissertation is comprised of the following chapters:

1. Clusters and their role in the development of the audiovisual sector
2. Development possibilities of the audiovisual sector cluster in Latvia
3. Cluster strategic directions and initiative model of the audiovisual sector

The first chapter deals with the history of cluster concept development, definitions, strategic aspects of cluster creation and operation, as well as the role of clusters in the development of the audiovisual sector.

The second chapter provides an insight into the structure of the Latvian audiovisual sector and shows the key statistical data of its operation. It also deals with research methodology and provides discussion and analysis of the interviews conducted.

The third chapter describes the cluster strategic direction and model of the Latvian audiovisual sector developed by the author, as well as proposed tasks at the company management, sector and national level, and reflects the evaluation of strategic direction and model which is done through interviewing experts.

In the concluding chapter there are the key conclusions listed arising from the study results, and recommendations are given.
KEY SCIENTIFIC TENETS

1. Clusters and Their Role in the Development of the Audiovisual Sector

(Chapter 1 consists of 31 pages, 1 table and 8 figures)

Since the 1990s the cluster concept has become a topical issue in a number of scientific disciplines, including the management science. This had been driven by several studies and publications in the field of economics and management science, economic geography, and sociology. Currently, one of the most widely used cluster conceptions in the management science has been developed at the Harvard Business School (hereinafter – HBS) by Professor Michael Porter. His conception has its roots in his book "The Competitive Advantage of Nations" (Porter, 1990). Here a cluster is defined as "groups of interconnected firms, suppliers, related industries and specialised institutions in particular fields that are present in particular locations" Porter's cluster concept was developed on the basis of several years of research conducted in ten countries. Porter was looking for the reasons why within the global economy companies in a particular sector, country or region was more competitive than elsewhere. One of the main conclusions drawn from his research was the fact that competitiveness of a company was not so much determined by company's own activities or particular sector but the overall business environment. According to Porter, the business environment is formed by the interaction of four elements:

1) Context for strategy and rivalry
2) Factor conditions
3) Demand conditions
4) Related and supporting industries (Porter, 1990).

With company's strategy, structure and competition Porter understood a set of local circumstances that contribute to the promotion of investments and continuous innovation, as well as vigorous competition among local companies. This set of circumstances contributes to a company's greater efficiency and a higher productivity. The second group of competitiveness elements is made of resources, such as natural resources, human resources, capital resources, local infrastructure, information, scientific and technological infrastructure and administrative system, which are all necessary for the production process or the provision of services. Also important are the demand conditions of the local market, such as an experienced consumer with a purchasing power, customer needs that are ahead of the global demand, as well as a specific domestic demand in specialised segments. Related and supporting industries also play an important role and determine the availability of local suppliers and related companies of the sector (Porter, 1998).

Later, by developing his theory, Porter added two more elements – the government and the chance. Despite the fact that in his analysis, Porter has assigned a minimal role to the government, a large part of his recommendations are specifically related public policy (Boroņenko, 2009), and it also appears in almost all cluster initiatives already implemented. As noted by Michael J. Enright, cluster initiatives differ by the degree of government involvement. The local governments of large, developed economies have contributed to most of the cluster initiatives, while national governments of much smaller developed and developing countries have often played the leading role in cluster development (Enright, 2000).

The "Chance" in Porter's theory is understood as an event in the result of which a particular industry in a particular region becomes more competitive, such as due to the changes in the political system, wars, currency fluctuations, technological discoveries, etc.

Nearly twenty years have passed since the first definition of Porter's cluster concept. During this time both the author's definition has changed, and a number of other definitions by other authors have been developed. Therefore, the current (according to the webpage of the Harvard Business School (HBS) and the Institute for Strategy and Competitiveness) cluster definition by Porter states that: “A cluster is a geographic concentration of related companies, organizations, and institutions in a particular field that can be present in a region, state, or nation” (Institute for Strategy and Competitiveness, 2014). Unlike the first definition in 1990, the scale of geographical concentration has been specified and such definition contains a generalised list of participants of a cluster.

In accordance with several scientific conclusions, currently there is no one single definition of the term "cluster" and even more, there cannot be one. This is determined by the use of the cluster concept in different scientific disciplines (economics, management sciences, economic geography, and others), an adaptation of the definition to the needs (e.g., academic or political) of the user, various dimensions of this concept (geographic, socio-economic, industrial, etc.), and the nature of a cluster as an open and a dynamic system. For example, in
"The European Cluster Memorandum" which was developed in cooperation with the HBS Centre for Strategy and Competitiveness and the Stockholm School of Economics, clusters are defined as "regional concentration of specialised companies and institutions linked through multiple linkages and spill-overs - provide an environment conducive to innovation" (Center for Strategy and Competitiveness, 2007). In this definition, and throughout the document, there is an emphasis on the role of clusters in the creation of innovation. However, what makes this definition unique is that there is an attempt to include all dimensions and elements of a cluster concept.

These dimensions are:

- Geographic concentration.
- An interconnectedness of companies and organisations, where there is a distinction made between:
  - the link between companies;
  - the link between companies and other groups of cluster participants.

An increasing number of definitions include elements introduced and adjusted during the course of development of cluster concept, such as:

- Various size companies and related organisations.
- Geographic concentration scale.
- Socio-economic and cultural factors of links.
- The role in knowledge acquisition, in the creation and implementation of innovation.

With regard to the analysed cluster definitions, the author offers his own definition of the concept which will be used subsequently within this paper: "cluster – a regional concentration of companies and related organizations within a sector, which creates the environment for innovation and contributes to the increase in competition in the region".

The definition used within this paper specifies that clusters are formed within the framework of companies of a sector and their related organizations. The concentration of sector companies and related organizations occurs in certain regions – starting, for example, from one region of a city (quarter) and ending at transnational level of the regions. It is essential that such concentration creates an environment for innovation and an increase in region's sustainable competitiveness. The cluster has an essential role in innovation in the sector, which promotes the development of the region in order to increase competitiveness.

Cluster as a dynamic system has its own life cycle which begins with the emerging cluster and ends with its disintegration or transformation. There are several cluster life cycle models mentioned in various sources and they are span from three to six stages (see Andersson et al., 2004; Enright, 2000; Rosenfeld, 2002; Seeley, 2007). The author takes on cluster life cycle model created by the International Organization for Knowledge Economy and Enterprise Development (IKED) and published in "The Cluster Policies Whitebook" and updates it with other authors' findings and examines the following life cycle stages of a cluster: agglomeration, emerging cluster, developing cluster, mature cluster, declining cluster. These cluster stages can end in the three following ways: in transformation, stagnation or decay.

Agglomeration is a situation when there is a regional emergence of sector companies and their support organisations with a geographic concentration. Often, such process is encouraged by the innovation, emergence and implementation of inventions and external investments, as well as sector development facilitating favourable business environment.

During the cluster emergence stage, common interests start to emerge between companies and the need for cooperation among companies and supporting organizations arises.

During the cluster development stage, the critical mass for creating a cluster is reached. Links within the cluster are active and external links begin to form. There is a rapid emergence of supporting companies, and formal and informal organizations are forming, which are implementing a cluster initiative. Along with the cluster initiative and the development of its implementing organization, cluster brand, home page and similar activities can also be created.

During the cluster maturity stage, cluster has reached the highest point in its life cycle and the growth rate begins to slow down. During this stage routine kicks in and less attention is paid to innovation. More and more
companies which produce similar and substitute goods start operating outside of the cluster, therefore the price becomes the main weapon in competitiveness.

**During the cluster declining stage**, the cluster growth rate has decreased dramatically and the factors that could foster growth have reduced as well. There are no longer any new companies that could revitalise the operation of the cluster. Even further – the existing companies begin leaving the cluster and are refocusing on places where there is a new cluster emerging. At this stage it is important to determine the right strategy to prevent cluster stagnation or decay and allow its transformation to happen.

**Cluster transformation** will only be possible if the market demands, technologies, and other factors change, and if the major cluster participants of the cluster are able and willing to implement these innovations. Once again, research and development activities – at the level of the cluster and each company – begin playing an important role. Also of importance are those newly established companies that will enter the territory of the particular cluster.

If the cluster fails to transform, then it can **disintegrate**, namely, the cluster ceases to exist. However, sometimes there are cases when a cluster continued to exist, although without any signs of progress. The **stagnation** period might be prolonged if there is no new leader emerging within the sector or in the external environment, and there are no events contributing to the cluster development. Often during the stagnation period, the cluster continues to exist from an impact of its former “inertia”.

Each cluster life cycle stage is different; hence there is the need for implementation of diverse strategies at the level which includes all cluster participants. These specific activities might be supportive, stimulating, transforming and restoring, and they must focus on the creation and implementation of innovation, research and development, as well as the uptake of technologies (De Propris, 2007).

Several large groups of **cluster members** can be distinguished, as shown in Figure 1.1.

![Figure 1.1. Groups of cluster members](image)
The central group of cluster participants is comprised of sector **companies**. As a rule, companies tend to merge in groups within the value chain. This means that there is a company or companies who produce certain goods and provide services, companies that supply raw materials, companies that purchase the finished products, companies providing services and related companies.

Time and again in a particular territory there is one sector emerging which has a need to co-operate with one or more suppliers of raw materials, product purchasers, distributors, transporters throughout the whole value chain of a sector, and where each successive step increases the value of the finished product. If any other companies from the same sector begin to operate in this particular area, they also use the same companies within the value chain of the sector. Therefore, the creation of such value chain is an important basis for the development of a cluster within the sector.

A significant group of cluster participants is also **academia** which plays a vital role in innovation generation and training and preparation of skilled employees and managers. Co-operation of companies with both the educational and research institutions has a very important role within the cluster with synergetic effects. The role of universities in the development of clusters is vital not only in the first stages of cluster life cycle but also later on. That includes the training of suitable staff and forming a breeding ground for innovation and for new business creation.

Although mutual cooperation of **financial institutions** with companies is less attributed to cluster links, however, the role of these institutions in the first stages and the overall development of the cluster should be emphasised.

At a time when the role of information must not be understated, there must be cooperation within the cluster with **mass media**. Nowadays this includes not only traditional means of media, such as newspapers and television but also the Internet and other new media. Mass media do not have direct links to other cluster members. However, they essentially reflect the latest developments related to the specific geographical area, including cluster activities, thus increasing the visibility of a cluster and even creating its brand (Sölvell, 2009).

Although the nature of a cluster does not require its participants to be officially involved in any organizations, often there are informal associations or official **cluster organizations** occurring among cluster participants. They are established to achieve common cluster-level objectives and to represent the cluster, create its brand, and so on.

**The role of the government** in the economy as a whole and in terms of clusters varies from country to country, resulting from the policy implemented, economic system and other factors. However, Porter has listed the four key roles of the government in the economy, which are important in the context of clusters (Porter, 1998).

1) The main role of the government is to ensure macroeconomic and political stability. This can be accomplished by ensuring a solid functioning of administration institutions, consistent economic framework and consistent macroeconomic policy, which also includes prudent financial policy and low inflation.

2) The government must improve general microeconomic capacity through improving the quality and efficiency of general-purpose inputs to business and the institutions that provide them identified in diamond theory such as an educated workforce, an appropriate physical infrastructure, and accurate and timely economic information.

3) The government has to establish the overall microeconomic rules and incentives governing competition that will encourage productivity growth.

4) The government has to develop and implement a positive, distinctive, long-term economic action program, or change process that mobilizes government, business, institutions, and citizens.

In other words, the role of the government is to "overview the whole field", thus providing such business macro-environment that is favourable to the development of clusters at the national and regional levels. Since the creation of clusters is not "a top-down" action, the government has to provide catalytic and supporting functions for the emerging new clusters and the already existing ones.

**The role of clusters in the development of the audiovisual sector** is one of the most studied subjects in cluster research, and most of these studies are based on the analysis of case studies. Studies on clusters in Cologne, Munich, Scotland and Potsdam/ Babelsberg audiovisual sectors show the role the cooperation of companies within the value chain and leading companies in the cluster development (see Mossig, 2004; Kaiser & Liecke, 2007; Turok, 2003; Krätke, 2002). The importance of state and local municipalities and their related
institutions, as well as various cluster supporting organizations have been examined in research dedicated to audiovisual sectors in Leipzig, Denmark, Montreal (see Bathelt, 2002; Mathieu, 2006; Tremblay & Cecilli, 2009). External links to local clusters and their activities in a global environment have been studied for the audiovisual sectors in Sweden and Toronto (see Dahlström & Hermelin, 2007; Vang & Chaminade, 2007; Morawetz et al., 2007) etc. Many authors have also studied the role of education and research institutions in the development of clusters.

Two types of clusters can be distinguished in the audiovisual sector. The first type is clusters that include companies providing a full production process of films/television programming (see Figure 1.2). The second type is clusters which include other groups of participants (related and service providers, public and local authorities, financial institutions, education and research institutions, public organizations and mass media).

Two types of clusters can be distinguished in the audiovisual sector. The first type is clusters that include companies providing a full production process of films/television programming (see Figure 1.2). The second type is clusters which include other groups of participants (related and service providers, public and local authorities, financial institutions, education and research institutions, public organizations and mass media).

Often activities of a large company promote the development of the audiovisual sector and cluster creation. An example of this is public and commercial television providers. For example, in Germany the most important film industry clusters are located in Babelsberg (Potsdam), Cologne, Hamburg and Munich. Babelsberg is the only one where there are no major TV studios (Krätke, 2002). The situation is similar in the United Kingdom, where the creation of clusters is promoted by the establishment of regional BBC and commercial television programming branches, for example, in Scotland (Turok, 2003).

Educational and research institutions also have a crucial role in cluster activities in the audiovisual sector, and particularly in the creation and implementation of innovation, as well as training and preparation of professional staff and managers. Educational institutions also allow for the forming of social links, which is an important factor for the film industry. An example of this would be the cooperation between script writer and director, etc.

Some of the functions that can be carried out the most effectively, at a lower cost, and with better results within the cluster of the audiovisual sector are global marketing, lobbying of sector interests, and attraction of new investments, public relations, research, and an introduction of the innovations. This becomes easier to carry out if

Figure 1.2. Expanded film industry value chain (Krätke, 2002)
done together in a cluster than independently by each company. For this purpose, (as it was already mentioned above) there are different supporting organisations established within the cluster. They often involve community organizations, educational and research institutions or even regional government or local authority. The most common in film industry are organisations that are engaged in the attraction of financing for film projects and other promotion-related activities. Also, common are organisations that attract film projects to the region and provide them with all the necessary information and other kinds of support, as well as take marketing-related actions at the sector level.

At the national or regional levels, the development of audiovisual sector, especially in the film industry, often is stimulated through tax policy. This process can be divided into two categories: The first category is direct incentives such as: salary credits, sales tax reductions or income tax reduction or income tax exemption. The second category is indirect incentives that facilitate investments (Morawetz et al., 2007).

However, such tax policy is not unambiguous, especially in circumstances where countries or regions use only these means to increase the competitiveness of their sector. During the initial stage tax credits can have a positive impact on the development of the sector and clusters. However, their prolonged use might discourage sustainable development. This is because tax discounts, on the one hand, attract audiovisual projects, but on the other hand, do not create conditions for making investments because a large portion of such projects are one-off measures (Morawetz et al., 2007).

In Europe at the national or regional levels financial support for the audiovisual sector plays a vital role. This is complemented by special funding from the European Union, which is intended to support specifically the making of such artworks (Morawetz et al., 2007). Formerly this was done in the programme "Media" now known as "Creative Europe". According to Dale, such funding is targeted at European films because they often struggle to attract the required number of film watchers and other sources of income for them to be commercial and not subsidised (Dale, 1997). However, this funding supports the making of films that play an important role in the strengthening of the national identity and are targeted at young people or, for example, support films of young directors. At the same time, it also creates tax revenue and allows attracting foreign investment (by exporting services) and generating revenue also for other related industries.

Overall, the audiovisual sector has a high potential for cluster creation and it is determined by stages of value chains, film production process and national policy. The creation of clusters in other cities or regions, e.g., Leipzig (Germany) or Skåne (Sweden), has contributed to the development of the sector, the region, and international competitiveness – as shown in sector cluster examples.
2. Development possibilities of the audiovisual sector cluster in Latvia

(A Chapter 2 consists of 53 pages, 6 figures and 19 tables)

A general overview of the sector is provided in Figure 2.1.

![Audiovisual sector in Latvia and the supporting structure](image)

Figure 2.1. Audiovisual sector in Latvia and the supporting structure
(Developed by author).

Compiling and analysis of the statistics on companies operating within the audiovisual sector in Latvia are based on data from the CSB and NFC databases. Statistical data was collected on companies whose specified fields are the ones shown in Table 2.1 (based on NACE Classification Rev. 2) as their main type of economic activity.

<table>
<thead>
<tr>
<th>NACE code</th>
<th>Type of activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>59.11</td>
<td>Motion picture, video and television programme production activities</td>
</tr>
<tr>
<td>59.12</td>
<td>Motion picture, video and television programme post-production activities</td>
</tr>
<tr>
<td>59.13</td>
<td>Motion picture, video and television programme distribution activities</td>
</tr>
<tr>
<td>59.14</td>
<td>Motion picture projection activities.</td>
</tr>
<tr>
<td>60.20</td>
<td>Television programming and broadcasting services</td>
</tr>
</tbody>
</table>

(Source: Central Statistical Bureau of Latvia, 2014)

Unfortunately, the NACE classification does not fully cover the entire audiovisual sector and its fields. For instance, the classification does not include statistics on a video game and multimedia companies. Also a great number of organizations that create products for the audiovisual sector have specified other activities as their main types of operation. An example of this is information technology companies offering “video on demand”, and the like. Similar problems related to the collection and analysis of the statistical data has also been identified in other studies (see Vanags, 2007, Ministry of Culture, 2013b). Therefore, for the characterisation and, mainly, for the
research as a whole, the author used data and information on film, video and television sectors. This is because according to the author’s estimate during the research period they represented the most significant part of the audiovisual sector of Latvia. Nevertheless, wherever possible, there is information presented on the other fields within the sector.

As seen in Table 2.2 the number of companies within the audiovisual sector during the period of 2008–2013 has increased by more than 50%. This can be attributed to young professionals entering the sector and the existing companies being restructured, as well as other factors. Most companies are engaged in production of films and television programmes (on average 50%) and the development and broadcasting of television programming (on average 27%). On the other hand, the number of employees in the sector has fallen by about 1/4. This is due to emigration, change of occupation (for instance, switching from working in the media field to the education field or similar) or reaching the retirement age. The turnover of companies for this period has fallen by more than 27% (compared to 2008 and 2009). It is mostly due to the economic crisis and the resulting reduction in public funding for films, as well as the decrease in the number of commercial tenders. Unsurprisingly, after overcoming the lowest point of the crisis and through entering new markets, as well as offering new products, the turnover has increased by almost 20% (compared to 2009 and 2013). However, in 2013 it had not yet reached the level of 2008 (the difference is more than 13%).

The same is also true for the production value and added value of these companies and added value, which decreased respectively by 28% and 54%, when comparing 2008 and 2009 data, and increased respectively by 21% and 20%, when comparing 2009 and 2013 data. Thus, these values did not reach 2008 figures and are reflected as the decrease in the added value (by almost 45%).

During this period, the situation in the audiovisual sector could be characterised as partially stagnating. This means that despite the fact that the number of companies in the sector had grown, however, it had not contributed to the rise in the number of employees or increase in turnover. This, of course, can be attributed to the significant economic impact of the crisis on the industry. Changes in the number of employees, however, suggest that the majority of companies in the sector are micro-enterprises or small companies.

Key indicators of business activities of the companies operating in the sector are: funding attracted, number of products (films and television programmes) shown and their international acclaim (awards received, etc.).

A vital source of funding and development of the audiovisual sector in Latvia is the public funding (grants) from National Film Centre (NFC) of Latvia, the State Culture Capital Fund (SCCF), the European Union funds (Media and Eurimages) and the Riga Film Fund (RFF). This enables companies to develop and make films and television films, to post-produce, record and demonstrate them in cinemas in Latvia and abroad, as well as to make co-productions, etc. (see Table 2.3).
### Table 2.3.

<table>
<thead>
<tr>
<th>Year</th>
<th>Source of funding</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NFC</td>
<td>SCCF</td>
</tr>
<tr>
<td>2008</td>
<td>3243054</td>
<td>1073651</td>
</tr>
<tr>
<td>2009</td>
<td>1770464</td>
<td>461680</td>
</tr>
<tr>
<td>2010</td>
<td>1065010</td>
<td>260335</td>
</tr>
<tr>
<td>2011</td>
<td>1164010</td>
<td>241828</td>
</tr>
<tr>
<td>2012</td>
<td>1064266</td>
<td>379832</td>
</tr>
<tr>
<td>2013</td>
<td>1466398</td>
<td>398967</td>
</tr>
</tbody>
</table>

(Source: National Film Centre, 2014b; Riga Film Foundation, 2014; MEDIA Desk, 2014)

The total funding available for film production in the last five years has been around 1.6 - 2.5 million Latvian lats (approx. 2.35 – 3.67 million Euros). This is approximately at the same level as it was in the sector during 2004 – 2006 (National Film Centre, 2014b). Sector funding reached its peak in 2008, but in the subsequent years it has faced a significant reduction due to the financial and economic crisis. For example, in 2009 the reduction was by 47 %, in 2010 – by 35 % compared with the previous year.

Analysis of film industry finance recipients allows determining the most active companies are in the audiovisual sector in Latvia. These are companies that have managed to attract substantial financial resources; including those from the European Union funds (see Table 2.4.).

### Table 2.4.

<table>
<thead>
<tr>
<th>Studio name</th>
<th>NFC</th>
<th>SCCF</th>
<th>Media + Eurimages</th>
<th>RFF</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rija Films</td>
<td>1033929</td>
<td>68363</td>
<td>555378</td>
<td>91850</td>
<td>1749520</td>
</tr>
<tr>
<td>Platforma Films</td>
<td>921466</td>
<td>7640</td>
<td>159648</td>
<td>0</td>
<td>1088754</td>
</tr>
<tr>
<td>Animācijas brigāde</td>
<td>669335</td>
<td>75364</td>
<td>109296</td>
<td>0</td>
<td>853995</td>
</tr>
<tr>
<td>Mistrus Media</td>
<td>567264</td>
<td>66172</td>
<td>155685</td>
<td>0</td>
<td>789121</td>
</tr>
<tr>
<td>EGO Media</td>
<td>407497</td>
<td>99116</td>
<td>117762</td>
<td>94483</td>
<td>718858</td>
</tr>
<tr>
<td>Juris Podnieks Studio</td>
<td>258476</td>
<td>93933</td>
<td>344303</td>
<td>0</td>
<td>696712</td>
</tr>
<tr>
<td>Studija Lokomotive</td>
<td>454501</td>
<td>61344</td>
<td>151693</td>
<td>0</td>
<td>667538</td>
</tr>
<tr>
<td>Nida Filma</td>
<td>653626</td>
<td>6986</td>
<td>0</td>
<td>0</td>
<td>660612</td>
</tr>
<tr>
<td>Tanka</td>
<td>557313</td>
<td>9947</td>
<td>0</td>
<td>0</td>
<td>567260</td>
</tr>
<tr>
<td>Kaupo</td>
<td>536595</td>
<td>12999</td>
<td>0</td>
<td>0</td>
<td>549594</td>
</tr>
<tr>
<td>F.O.R.M.A.</td>
<td>531850</td>
<td>8492</td>
<td>0</td>
<td>0</td>
<td>540341</td>
</tr>
<tr>
<td>Kompānija „Hargla“</td>
<td>457159</td>
<td>45823</td>
<td>24949</td>
<td>0</td>
<td>527932</td>
</tr>
</tbody>
</table>
After compiling data on financing receivers for audiovisual and film sector during the period of 2000 - 2013, it was established that more than 70 organizations have received support, particularly for films production and distribution. Table 2.4 reflects information on 12 companies in the audiovisual sector who during the period of 2008 - 2013 have attracted the largest (more than 500 000 EUR) total funding from the National Film Centre of Latvia, the State Culture Capital Fund, EU funds (MEDIA and Eurimages) and the Riga Film Fund.

An important indicator of the situation in the audiovisual sector is data on products created by the companies within the sector particularly as films and television programmes produced and broadcast. CSB statistical data on these indicators is presented in Table 2.5.

<table>
<thead>
<tr>
<th>Year</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short films</td>
<td>25</td>
<td>33</td>
<td>29</td>
<td>18</td>
<td>15</td>
<td>19</td>
</tr>
<tr>
<td>Feature-length films</td>
<td>16</td>
<td>17</td>
<td>16</td>
<td>18</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Total length of films (in minutes)</td>
<td>1300</td>
<td>1828</td>
<td>1487</td>
<td>1117</td>
<td>1542</td>
<td>1580</td>
</tr>
<tr>
<td>Total length of programmes by TV broadcasters (in hours)</td>
<td>98606</td>
<td>97219</td>
<td>65401</td>
<td>52898</td>
<td>87704</td>
<td>101214</td>
</tr>
</tbody>
</table>

(Source: Central Statistical Bureau of Latvia, 2014; calculation made by the author on filmas.lv, 2014)

The total number of demonstrated films indicates that the film industry in Latvia can be characterised as stable and that despite the changing government financial support, 14 feature-length films and 23 short films on average are made annually. However, it should be noted that correlation of the decrease or increase in the funding with the number of films made can be observed only with a two to three years' delay, which is related to the duration of film production cycle. For instance, the reduction of a number of feature-length films in 2012 and 2013 was due to the reduction of public funding to the film industry in 2009 and 2010 (see Table 2.3). The situation is similar also in the television sector where the overall length of TV programmes is affected by the economic situation (this is the case particularly for the commercial channels), the amount of public funding to the Latvian Television and other external factors, such as the implementation of full digital broadcasting in the entire territory of Latvia in 2010. This had an impact on the number of TV broadcasters. In 2010 their number fell from 25 to 19 and to as little as 17 broadcasters in 2011. This resulted in a decrease of the overall length of programming (Central Statistical Bureau of Latvia, 2014).

In order to determine the most active companies in the audiovisual sector in Latvia, the author used a method that has been previously approbated in research called “Business Models and Value Chains in Audiovisual Media” (Juris Podnieks Studio, 2011). By using the information provided by the NFC database, it was possible to identify all of the film studios that had produced at least one film during the period of 2008 to 2013. In this manner, around 50 film studios were identified (which shows a rather high level of fragmentation in the sector). And only 11 of those have released at least five films during these six years (see Table 2.6).
Table 2.6

The most active film studios in Latvia (in the period of 2008 - 2013, number of films, minutes)

<table>
<thead>
<tr>
<th>Name of the studio</th>
<th>No. of films</th>
<th>Total length of films</th>
<th>Name of the studio</th>
<th>No. of films</th>
<th>Total length of films</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vides filmu studija</td>
<td>12</td>
<td>583</td>
<td>Jura Podnieka studija</td>
<td>9</td>
<td>283</td>
</tr>
<tr>
<td>Atom Art</td>
<td>10</td>
<td>68</td>
<td>Ego Media</td>
<td>8</td>
<td>418</td>
</tr>
<tr>
<td>Animācijas Brigāde</td>
<td>10</td>
<td>116</td>
<td>Mistrus Media</td>
<td>8</td>
<td>315</td>
</tr>
<tr>
<td>Filmu studija Rīja</td>
<td>10</td>
<td>368</td>
<td>Studija Lokomotive</td>
<td>8</td>
<td>416</td>
</tr>
<tr>
<td>Fonds Sibīrijas bērni</td>
<td>9</td>
<td>484</td>
<td>Kompānija „Hargla”</td>
<td>7</td>
<td>290</td>
</tr>
<tr>
<td>A.Epnera studija AVE</td>
<td>5</td>
<td>270</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Author calculations by filmas.lv, 2014)

During the last five years, the most productive were studios which specialise in the production of documentaries and animated films. However, it should be noted that the majority of animation films are short-features – shorter than 10 minutes.

Other studios which are important for the film sector in Latvia are Platforma filma (feature films: "Dream Team 1935", "Defenders of Riga" and others, film set "Cinevilla"), Riga Film Studio (Riga Film Studio film sets and infrastructure, 21.4 % state-owned) and Film Angels Studio (9 projects supported by RFF). However, during the last six years most Latvian film studios have produced 1–2 films, which shows a low capacity and operational efficiency of the work. This is because a large proportion of film studios in Latvia are one-man companies in which the film director is also a studio manager, film producer, author of the script and performs various other duties. Several studios ceased to exist during the period of economic crisis having carried out one film project thanks to the significant increase in funding in the sector in 2007 and 2008.

Overall, the audiovisual sector of Latvia can be characterised in two ways. On the one hand, it consists of many micro- and small enterprises which are engaged in the film production. On the other hand, there are only a few companies in the television sector and film distribution, and many companies are currently being consolidated. Most companies engaged in the film production are one-man enterprises where the owner and manager are also a film producer, director and often performs other duties. The main (and sometimes the only) source of finance for these companies is public funding for the film industry, and in the last five years, these companies have produced one to two films. It is relatively a smaller number of companies in the film industry that employ more than one employee and actively works on attracting different project funding sources, including the ones from the European Union. Such companies have made at least five films in the last five years, including international co-production films, whose artistic quality has been recognised and rewarded in the form of prizes at several international festivals. The most active and significant film industry companies in Latvia are: "Filmu studija Rīja", "Studija Lokomotive", "Platforma Filma", "Kompānija Hargla", "Mistrus Media", "Atom Art", "Jura Podnieka studija", "EGO media", "Animācijas brigāde", "Vides filmu studija", "Rīgas kinostudija", "Film Angels Studio" and others. Most of these studios are particularly successful in the animation and documentary making. However, these studios are not only actively engaged in film production, but also in other fields of the film industry, such as film distribution, film dubbing, providing of film services to foreign film studios, participation in film markets, etc.

There is an ongoing market concentration among several companies that can be observed in the television sector and fields of film distribution and screening. An example of this is television market that is largely divided between the three key players: "MTG Latvia", "Baltijas mediju alianse" and "Latvian Television". In the field of film distribution and demonstration "Forum Cinemas" has the dominant position, followed by "Acme Film" (film distribution), "Cinamon Alfa" and "Multikino" (film screenings). After obtaining the only licence to broadcast digital signals across the country, "Lattelecom" has become one of the leading companies in the audiovisual sector.

An important precondition for the development of the sector is the education level of the audiovisual sector specialists. Higher education in the field of audiovisual media in Latvia can be acquired in five higher
educational institutions, one college level, seven Bachelor's and three Master's programmes, as well as one doctor level study programme. Most these study programmes are related to the "Arts" study direction, with the exception of Rīga Stradiņš University study programme "Multimedia Communications" (study direction – "Information and Communication Science") and study programme offered by the Latvia Culture College "Administration of Arts Institutions" (study direction – "Management, Administration and Real Estate Management"). However, the management and marketing specialists that have a potential to work in the audiovisual sector are trained and prepared in other study programmes, for example, in the field of culture management or creative industries.

The number of graduates in the period of 2010 - 2012 shows that 77 persons obtained a Bachelor's degree, and 12 - a Master's degree. The difference in the number of Bachelor's and Master's graduates can be attributed to two factors. Firstly, a large proportion of Bachelor's graduates starts working and does not to continue their studies at Master's level or continue Master's studies in other study programmes. Secondly, several educational institutions only in the recent years have begun offering Master's study programmes. In the future, this could contribute to an increase in the number of Masters' students and graduates.

In general, the higher education programmes in Latvia in the audiovisual sector are focused on the study direction "Arts", mostly preparing and training directors, producers and operators. There is an apparent lack of the first level higher education programmes which would prepare assistants and technical specialists in the audiovisual field, such as operator assistants, lighting technicians, sound engineers, film editing directors and others. The lack of these study programmes can lead to significant problems in the future for the sector, because it will be difficult to ensure filming process and audiovisual works' process which will be a problem in the creation of local projects, and for the export of services. Similarly, there is a shortage of study programmes that are mainly focused on training of multimedia, new media and video game development specialists.

Various different quantitative and qualitative research methods can be used in order to assess cluster development possibilities. Cluster quantitative studies mostly provide an analysis of regional specialisation (agglomeration), industrial statistics, as well as the use of a survey method. When it comes to quantitative research methods the most often used are expert interviews and case studies (see Rocha, 2004; Jucevičius & Puidokas, 2007). In light of this, the author developed the research methodology, the stages of which are presented in Figure 2.2.

![Figure 2.2. Research methodology and stages (Developed by author).](image)

The research basis consists of three rounds of interviews and two focus group discussions. The results of these have been analysed using the grounded theory methodology. Results and conclusions of the interviews and focus group discussions were compared with the results of sector analysis conducted in Chapter 2.1 and the literature review findings in Chapter 1. In view of the results of interviews and focus group discussions and their analysis compared with the literature review findings, strategic directions for the audiovisual sector cluster of Latvia and Balanced Scorecard (BSC) model was developed. During the fourth round of interviews expert assessment was carried out of the developed strategic directions and the initiative model of a cluster (see Chapter 3).

During the first three rounds, approximately 27 (on average an hour long) in-depth semi-structured interviews were carried out. From these 20 were done with 16 owners or managers of companies and producers,
as well as leading creative professionals (with some representatives being interviewed twice in different rounds),
two interviews with the representatives of public organisations, two with the representatives of public institutions,
two representatives of the higher education study programmes and one with a film journalist (sometimes the
interviewee represented several overlapping groups). Interviews were conducted in the period between April 2010
and April 2012. This time scale was chosen in order to allow the author to assess any changes in the opinions of
the respondents on various matters related to the sector and cluster development. The author also assessed
perceptions of reality and future of the interviewees.

In order to discuss the results of interviews conducted on the potential for cluster creation two focus group
discussions were held. Nine participants took part in the first one and seven – in the second one. Nine participants
in these discussions represented eight companies in the sector; two were representatives from educational
institutions, one representative from the NGO sector, one representative from a public institution and one self-
employed professional of the sector (two representatives participated in both discussions). Six people from the
interviews also took part in discussions. Also, six new participants took part in the discussions and were from three
companies, one NGO, one educational institution and one was a self-employed professional.

Overall, the number of companies selected for this research during the period of 2010-2012 accounts for
about 7% of the total number of companies in the sector. The number of employees accounts for 42.5% of the total
number of employees in the sector. The turnover is 30.3% of the total turnover for the sector. Financing from the
funds attracted accounts for 33% of the total financing for the sector. The number of films made accounts for 50%
of the total number of films made. Representatives of the largest companies were deliberately chosen for the
interviews and focus groups as they presented a higher cluster creation potential. However, the group of
participating companies represents diversity and is a relatively high representation of the sector as a whole.

Based on the recording of each interview and focus group discussion, a consolidated text version was
prepared and specific fragments were chosen for analysis. Important fragments (content units) were extracted from
each consolidated interview and focus group discussion. After that, each fragment was labelled with a specific
code. Codes similar in content were then merged in corresponding categories. After that, all categories of the
interviews and discussions were combined in unifying themes (concepts) (Kroplijs & Raščevska, 2010). In order
to analyse (to look for the links) and to conceptualise the defined categories and themes, the author used a modified
concept map approach. Conclusions were compared with the statistical data on the sector and findings obtained
from the analysis of various sources.

Transcripts of the interviews and focus group discussions were analysed using qualitative data analysis
software NVivo which allowed setting keywords (codes), categories and indicating their frequency and coverage
(see Table 2.7).

Table 2.7

<table>
<thead>
<tr>
<th>Concept</th>
<th>Category</th>
<th>Frequency</th>
<th>References</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sector management</td>
<td>Lack of strategy</td>
<td>13</td>
<td>6</td>
<td>4.67 %</td>
</tr>
<tr>
<td></td>
<td>Reputation of the sector</td>
<td>6</td>
<td>6</td>
<td>1.93 %</td>
</tr>
<tr>
<td></td>
<td>Lack of leadership</td>
<td>4</td>
<td>3</td>
<td>2.01 %</td>
</tr>
<tr>
<td></td>
<td>Lack of promotion of excellence</td>
<td>2</td>
<td>2</td>
<td>1.49 %</td>
</tr>
<tr>
<td>Public funding</td>
<td>Insufficient funding</td>
<td>27</td>
<td>16</td>
<td>3.02 %</td>
</tr>
<tr>
<td></td>
<td>Funding award criteria</td>
<td>6</td>
<td>6</td>
<td>4.42 %</td>
</tr>
<tr>
<td></td>
<td>Inconstancy of funding</td>
<td>6</td>
<td>5</td>
<td>2.56 %</td>
</tr>
<tr>
<td></td>
<td>Fragmentation of funding</td>
<td>5</td>
<td>5</td>
<td>1.93 %</td>
</tr>
<tr>
<td>Competition and cooperation in the sector</td>
<td>Need for cooperation in the sector</td>
<td>18</td>
<td>13</td>
<td>6.08 %</td>
</tr>
<tr>
<td></td>
<td>&quot;Principle of farmsteads&quot;</td>
<td>6</td>
<td>4</td>
<td>2.99 %</td>
</tr>
<tr>
<td></td>
<td>&quot;Clash of personalities&quot;</td>
<td>2</td>
<td>2</td>
<td>1.35 %</td>
</tr>
</tbody>
</table>
Table 2.7 shows a summary of the most common categories and concepts of interviews with the audiovisual sector representatives. In total, there were 23 most mentioned categories identified and combined under the following concepts: sector management, public funding, competition and cooperation in the sector, an operation of sector companies, demand for sector products, and sector education.

An analysis of interview transcripts was performed by using qualitative data analysis software NVivo particularly the Nodes function, which allowed to identify text sections containing categories specified in Table 2.7. Summary of interview analysis results shows the frequency of each mentioning, the total number of interviews in which this category appears (references) and the average incidence intensity (coverage) – provided in percentages. The following ten categories were the ones most often mentioned: the lack of funding, participation in external markets, crisis situations, the need for sector cooperation, disinterest from the audience, marketing necessity, shortcomings in study programmes, the lack of strategy, orientation towards business, and technological developments.

The results of focus groups were analysed in the same manner. The analysis showed that the most commonly appearing topics in both focus groups were: insufficient financing, marketing necessity and importance, and cooperation prospects within the sector and its necessity. After conducting an analysis of the interviews and focus groups, as well as the memos made during them, the author combined identified categories into concepts. Cross-links between concepts and categories are shown in Figure 2.3.
As shown in Figure 2.3, all identified categories and their concepts are closely interlinked and are in mutually interrelated. From the analysis of the impact of each particular category, on other categories it is obvious that insufficient funding and the "principle of farmsteads" being predominant in the sector have the most significant cumulative effect.

If all categories and concepts of all interviews are summed up, it can be concluded that the most important factor for the audiovisual sector in Latvia is insufficient funding (especially the reduction of it). Respondents in many interviews pointed to the insufficient funding not only for the creation of products but also in relation to marketing activities, the distribution system and education. If starting with 2004 the funding available to film makers substantially increased, then between 2009 and 2010 it decreased significantly, therefore creating a crisis situation for certain companies and the sector as a whole. During the recent years, the situation has not improved substantially. This has contributed to tensions within the sector because public funding is the main reason for competition among companies. The competition has been even more intensified due to the funding allocation procedures where representatives of competing companies participate in the funding allocation decision-making process. This rivalry does not foster cooperation within the sector: between companies, within a particular field of the sector (for example, between animation studios), among all fields of the sector (for example, among television and film industries), or between related industries (for example, the video game industry). Such competition and the lack of cooperation clearly hinders the creation of a sector cluster. The lack of cooperation among sector companies and educational institutions is also crucial. As a result of this, there are no specialists trained in accordance with the needs of the sector, particularly in relation to the first level vocational education and technical specialists.

Also, the creation of a cluster within the sector is affected adversely by the lack of a single strategy, the lack of priorities and leadership within the sector. In limited funding circumstances, it is essential to define the main priorities and a clear business strategy that allows planning development in the long-term. Specific
prioritization will ensure that there is no fragmentation in the use of funding. There was a frequent mentioning in the interviews that the strategy of the sector has to promote excellence, namely, the creation of high artistic value audiovisual products which would be recognised in the domestic market and internationally.

The lack (or reduction) of funding also affects such an important factor for cluster creation as the sector's participation in external markets. On the one hand, it (the lack or reduction of local funding) contributes to the attraction of external funding and creation of co-productions. But on the other hand, such funding is necessary in order to participate in sector markets, fairs and festivals. And the lack of it reduces the possibility of finding cooperation partners, product distributors, etc.

The potential for cluster creation is also reduced by the tendency in the sector when creative professionals create their own companies without the necessary managerial and entrepreneurial competences. Also, the problem lies in that many professionals only see their company as a place for creativity and not a place for business. Hence, sometimes financial support is allocated for the creation of products that satisfy the artistic creativity of their author, but are not in demand and are not of interest to the audiences. As a result, the image of sector is damaged and with internal conflicts spilling out into the open, it also negatively affects the reputation of the sector.

Cluster creation is clearly fostered by the technological developments and gradually also by positive changes in the education system, as well as with an increasingly active participation of companies in the external markets. Cluster creation in the audiovisual sector in Latvia is very important because in conditions of limited financing, there is a need for cooperation between companies within the sector. There also should be a joint participation in the external markets, joint work on projects (especially on co-productions with foreign partners), the development of cost-efficient and sound material and technical base. It is also crucial to ensure cooperation with other potential cluster participants. This is particularly the case for education and finance fields.
3. Strategic Direction and Initiative Model of Audiovisual Sector Cluster

(Chapter 3 consists of 33 pages, 7 figures and 6 tables)

In order to formulate the strategic directions and prepare the initiative model of the cluster, one must consider in which stage of its life cycle the cluster is. Based on the cluster life cycle stages, which were addressed in Chapter 1.2 of the doctoral dissertation, and taking into account the results of the sector analysis, the author concludes that the cluster of the audiovisual sector in Latvia currently is in between cluster emergence and cluster development stages. This is supported by the following criteria:

- There are mutual cooperation links established, but they are not sufficiently developed, especially between the different areas and parties interested in the sector.
- Cluster initiative elements gradually begin to emerge, such as: a cluster brand, a web page (for example, Film Riga).
- Employment in the sector is still at a relatively low level compared to the overall economy.
- Global competitiveness of the sector is still rather low, however, during the recent years, it has been observed to have the tendency to grow.

This paper examines the use of the Balanced Scorecard approach in the formulation, implementation, and evaluation of the cluster strategy. The Balanced Scorecard model is a tool for developing an organization's strategy and for its evaluation (Kaplans & Nortons, 2008). The tool has been created by Robert S. Kaplan and David P. Norton and it can be adapted for the use in the management of a cluster.

Based on the previously developed cluster Balanced Scorecard models (Welter et al., 2011, Terstriep, 2007, MFG, 2011), the author has developed a Balanced Scorecard perspective model for a cluster, which consists of the following 4 perspectives: financial perspective, perspective of cluster's internal processes, perspective of learning and innovation and perspective of cluster members. In financial perspective, the amount of funding necessary for reaching the cluster objectives is stated, as well as what these funding sources will be. It is stated in the perspective of internal processes in which processes of the sector a cluster must excel in order for it to satisfy the needs of cluster participants and interested parties. The perspective of learning and innovation determines how a cluster can enhance the capacity of the sector to change and to develop. The perspective of cluster members formulates who will be the participants of a cluster and what they expect from it. All these perspectives relate to the strategic direction of the cluster, including cluster's vision, values and mission.

Table 3.1
Relationship between the strategic direction of cluster initiative and the Balanced Scorecard perspectives with the interview categories

<table>
<thead>
<tr>
<th>Part of BSC</th>
<th>Interview categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic direction of cluster initiative</td>
<td>Lack of strategy</td>
</tr>
<tr>
<td>Perspective of members</td>
<td>&quot;Principle of farmsteads&quot;</td>
</tr>
<tr>
<td>Financial perspective</td>
<td>Insufficient funding</td>
</tr>
<tr>
<td>Perspective of internal processes</td>
<td>Need for sector cooperation</td>
</tr>
<tr>
<td></td>
<td>Funding award criteria</td>
</tr>
<tr>
<td></td>
<td>Crisis situation</td>
</tr>
<tr>
<td>Learning and innovation perspective</td>
<td>Inadequate methodology</td>
</tr>
</tbody>
</table>

(Developed by author)

Note. The most important categories of the interviews are underlined.
Based on the results of the analysis in the previous chapter, the author defined the strategic direction of a cluster initiative in the audiovisual sector in Latvia. Strategic directions of the cluster initiative and each of the four Balanced Scorecard perspectives are linked to the several categories (see Table 3.1) of sector interviews analysed in the previous chapter (Table 2.7).

**Strategic direction of cluster initiative**

Cluster development directions have to be viewed in interrelation to the development of the sector. Until now there were no long-term development priorities established (or they were not met) for the sector. The sector mostly worked towards achieving short-term goals. Currently, the sector development directions are incorporated in the Cultural Policy Guidelines “Creative Latvia 2014-2020”. These guidelines establish the film industry development directions, which are: the attraction of foreign films (i.e., exports of film and production services), the creation of co-productions (i.e., collaboration with foreign companies of the audiovisual sector) and the making of domestic films of different genres and themes. Therefore, the direction of the development of the audiovisual sector should be the increase of global competitiveness. The author puts forward the following **cluster vision** for the audiovisual sector in Latvia to become the primary choice in Northern Europe for the development of audiovisual works.

Nowadays competition within the audiovisual sector has a global character. This, surely, means that Latvian companies mainly compete with other European companies for co-production projects or participation in the development of foreign audiovisual works. Still due to the characteristics of our landscape, climate, architecture and cultural environment our main competitors are Northern European (including those from the Baltic States) and partly Central European and Russian companies of the audiovisual sector. Overall **competitive advantages** of the audiovisual sector in Latvia are quality of work, experience and professionalism (punctuality, reliability, etiquette) and to some extent, costs, as well as the logistics and certain architectural elements and landscape features. Therefore, the Latvian audiovisual sector clusters should achieve that they become the primary choice for the co-production and the development of foreign audiovisual works in Northern Europe and the nearby region.

The author puts forward the following **mission** for a cluster of the Latvian audiovisual sector: to increase the competitiveness of the audiovisual sector in Latvia and opportunities for its participation in the external markets, thus promoting innovation and the development of various cooperation forms and funding models. Cluster's work is directed towards the increasing of the availability of audiovisual works in both the local and the global markets, also considering the development of the technology and the needs of the audience. Through its activity the cluster contributes to the development of education and research in the sector, therefore ensuring the sector's sustainable growth and the promotion of excellence.

The main directions for the cluster mentioned in the mission are: an increased participation (in the form of co-productions, export of services, etc.) of companies in the foreign markets, the development of cooperation (between companies, between companies and support structures, among different fields of the sector and cross-sector cooperation), the diversification of funding models, the diversification of distribution options of audiovisual works, and the development of education and research which would promote innovation and sustainable development of the sector. The author also puts forward mission-based cluster **values**:

- **Co-operation** – sector cooperation has a primary role in the creation and the development of the cluster.
- **Excellence** – a cluster has to contribute to the development of world-class audiovisual works in Latvia.
- **Education** – a cluster has to promote closer collaboration between the sector and educational institutions.

Cluster's strategic goals were selected by using the suggested cluster's vision and mission as the basis. The goals stem from the work perspective of the cluster, and they are discussed in the following sections.

**Cluster members.** Cluster participants in the audiovisual sector can be film industry companies (for example, film studios, cinemas, film distributors), television industry companies (for example, television channels), companies engaged in the development and distribution of video games and multimedia works. Educational institutions and NGOs might also successfully operate in the cluster. Considering the specificity of the sector, it is clear that Riga-based companies could form the core of such cluster. Since the Cultural Policy Guidelines envisage that a significant amount of financing shall be allocated for the participation of the sector companies in foreign markets, then it can be predicted that the leading cluster companies would be those whose turnover has been related to business activities abroad. There are some structural changes that the sector is expected
to face in the future: there will be a reduction in the number of companies operating as "one men" enterprises and whose business had been solely aimed at the implementation of their owner's creative visions. It is also expected that due to the globalisation of the film and video game industries, companies would integrate into the structures of international companies, as it has already happened in the television industry. This will further the sector's integration in foreign markets.

Considering the aforementioned, the author has put forward the objective and indicators for the perspective of member participation in the cluster (see Table 3.2).

Table 3.2

<table>
<thead>
<tr>
<th>Objective</th>
<th>Indicator</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>To increase the sector companies' export volume</td>
<td>The export share of creative industries in the total export of the sector</td>
<td>Not less than 30% by 2020</td>
</tr>
</tbody>
</table>

As it has already been mentioned, the majority of cluster members will be companies whose activities will be focused towards the external markets. Therefore, the overall work of the cluster should be focused facilitating the sector's companies' participation in the external markets. Thus the strategic objective of the cluster's participants is to achieve that by 2020 the share of the sector companies' export of goods and services reaches 30% of the creative industry's overall export.

This indicator has been determined by considering similar figures in other countries. The United Kingdom's statistics on creative industries show that during 2009-2010 the exports of film, television, video, and radio and photography services on average accounted for 29.3 % of the overall exports of services of creative industries (Department for Culture, Media and Sport, 2014). Statistics provided by the Ministry of Culture of Estonia show that during 2008-2010 the export of the audiovisual and multimedia works accounted on average for 19.8 %, export of services - on average for 32.7 % of the total exports volume of creative industries (Statistics Estonia, 2012). The total export (of goods and services) in the audiovisual works' and multimedia industry amounted on average to 28.5% of the total export volume of creative industries (author's calculation).

The financial perspective of the cluster. As described previously, insufficient funding has been one of the main contributors to the increased competitiveness among companies and it has also caused tensions in the sector. Cluster's work should focus on activities that would diversify the availability of financial resources for companies involved in the sector and other parties concerned (such as educational institutions). Such activities, which have been offered by the author, are discussed further down in the text.

1) In order to promote the attraction of foreign projects the following activities are needed:
   - The joint participation of the cluster in international sector events (fairs, exhibitions, and festivals).
   - The creation and positioning of a strong cluster brand, and international marketing activities.
   - Organization of international networking events.

2) Promotion of projects (especially at the European level) that contribute to the collaboration of the sector and education, research and innovation in small and micro enterprises, as well as participation in such projects.

3) Promotion of projects that contribute to the distribution of audiovisual works across different platforms and for different audiences, as well as participation in such projects.

4) Steps to be taken in order to facilitate the attraction of capital for the implementation of projects:
   - Organization of networking events with all interested parties involved (such as financing institutions).
   - Rising of awareness about sponsorship opportunities.
   - Fostering of the development of products related to audiovisual works (merchandising).
5) In order to develop a new public media complex, investors from the real estate sector need to be attracted.

Financial perspective objective of the cluster, set forth by the author, is presented in Table 3.3.

<table>
<thead>
<tr>
<th>Objective</th>
<th>Indicator</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotion of an increase in funding available to the projects of the sector</td>
<td>The increase in funding (%)</td>
<td>To increase the available funding by 100% by 2020</td>
</tr>
</tbody>
</table>

The increase of project funding within the sector has been envisioned in the Cultural Policy Guidelines "Creative Latvia 2014-2020". Indicatively, in 2020 the available funding for projects in the sector is expected to be 4.74 million EUR, which would be an increase of almost 80% (NFC and SCCF funding in 2013 was approximately 2.65 million EUR – see Table 2.4). In the author’s view, due to the activities of the cluster this increase could be even higher. It could be especially so when considering the prognosis of growth in certain fields of the sector. Such an increase would also be needed to ensure the increase in the number of films by three times as established in the Sustainable Development Strategy of Latvia until 2030.

The Perspective of the cluster's internal processes. During the course of this research it was found that there are a range of problems within the sector related to the process management, such as: the strategic management of the sector (including priority-setting for funding allocation), a mismatch between the education programmes and the needs of the sector, insufficient cooperation within the sector, shortcomings and problems in external communication reputation, as well as problems related to the distribution system, etc. One of the main tasks for a cluster creation has to be the problem-solving of these process management problems in the overall sector. Therefore, the author has developed several recommendations for the implementation of the perspective of internal cluster processes.

1) To reorganize the funding allocation procedure: all project funding allocation processes should be delegated to the NFC (by abandoning funding allocation for the film sector through the SCCF project tenders).

For the successful organisation of the allocation of funding three working groups should be identified:

   a) Films, multimedia works and video games with high artistic value or a specific target audience, or themes (for example, intended for children, work of new directors, different projects on the history of the Republic of Latvia).

   b) Films and other audiovisual works intended for the general public.

   c) Co-production projects, foreign films and other audiovisual works.

2) Considering the suggestions regarding funding allocation systems mentioned in paragraph 1, the procedure of how funding allocation committees are set up has to be changed.

   Project evaluation committee for the evaluation of works specified in the first group should consist mainly of the sector representatives of the educational and research institutions (who, of course, themselves are not involved in the development of audiovisual works). A committee formed of representatives from the academia for the assessment of the artistic quality of the audiovisual works should be capable for evaluating the suitability of these works for a specific audience and their cultural value. The committee for evaluation of the projects of the second group should mainly be composed of the representatives of television companies capable for assessing the demand from the audience for any particular artwork, as well as the opportunities for its distribution across different platforms. The committee for evaluation of projects of the third group should mainly be composed of foreign experts who are able to assess the potential of any particular artwork in the markets abroad. In addition, the representatives from the media (including the new media) should be involved in the work of these committees. As a result, the allocation of funding for projects would not be decided by the representatives of the sector who are also working on similar projects, but by other representatives of the sector and representatives of the related parties: distributors, foreign partners and experts, academic staff, the media, etc. In this way, it would be possible to increase the opportunity for involving the target audience (film viewers, video game players, etc.).

3) A similar approach should be taken regarding the funding allocation criteria.
The main criteria for tenders of artworks of the first group should be their artistic value, a potential for receiving recognition in international festivals, past achievements of their authors, and the like. The main criteria for tenders of artworks of the second group should be their ability to attract the audience, their distribution plan and planned figures, as well as the possibilities for the distribution these artworks across different platforms. In turn, the main criteria for tenders of artworks of the third group should be: their distribution figures in other countries, the share of attracted foreign funding, proposed income from related industries (such as hotels, public catering) and the like. An important criterion in two last tender procedures should be the artworks' distribution possibilities and the marketing plan, as well as their budget.

4) Each project that has been approved by the NFC and has received funding should have an NFC co-producer involved to monitor the implementation of the project and the correct use of the funds.

5) There should be networking events organized within the cluster to facilitate the cooperation within the sector, as well as with other interested parties.

6) It is necessary to transform the Latvian Film Board to involve representatives of other fields of the audiovisual sector, and other interested parties.

Currently, the board consists only of representatives from the film and television and the Latvian Academy of Culture (National Film Centre, 2014b). The board should be expanded to include representatives of other fields in the sector, such as participants from private educational institutions who provide and implement study programmes, as well as the media representatives and representatives from works' distribution organizations (for example, cinemas). In this way, the board could become the consultative body of the Minister for Culture in the audiovisual sector policy-planning and legal matters, as well as the institution coordinating cluster activities.

7) The cluster should contribute to the creation of the above-mentioned public media complex and its becoming of the sector's leader. In the author's opinion, it is only the establishment of such complex that would ensure the sustainable competitiveness of the sector at the global level.

The improvement of internal processes is an important precondition for the creation and development of the cluster. Therefore, in order to evaluate such preconditions, the author has developed the cluster perspective objectives of the Balanced Scorecard of internal processes (see Table 3.4).

<table>
<thead>
<tr>
<th>Objective</th>
<th>Indicator</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>To increase film screening figures</td>
<td>Market share of local films</td>
<td>Not less than 10% by the year 2020</td>
</tr>
<tr>
<td>To ensure high artistic quality and international recognition of the audiovisual works</td>
<td>Number of awards won in international festivals</td>
<td>At least 100 awards won by 2020</td>
</tr>
</tbody>
</table>

Although technological developments and changing audience habits have created conditions where viewing of films in high quality is possible not just in the film theaters, however, cinema attendance figures are essential for the assessment of the competitiveness of a particular country or film studio. As it has already been discussed, in the last five years the market share of Latvian-made films in cinemas has been on average below the 5% mark. The author argues that cluster activities should be focused on doubling the market share, which should be at least 10%. This deliverable should be based on the average figures in the European Union, where the market share of local films in 2012 was on average 14.3%, in 2013 - 13.3% (calculation made by the author using the data from the European Audiovisual Observatory, 2014). This result can be achieved by changing the funding allocation system and increasing the funding for films (along with the number of local films made), by increasing the audience awareness and their involvement in the film-making process.

If the first figure refers to the results of films screened to the general public, then the number of awards won in different international film festivals refers to the indication of high-quality audiovisual works. Over the last three years, Latvian films have won approximately 38 international festival awards (National Film Centre, 2014b). However, due to the fact that statistics on awards won by other audiovisual works is not being compiled, this number could be even higher. A cluster should contribute to the increase in the number of film awards won, as well as the participation of other audiovisual works in international competitions and festivals.
Cluster Training and Innovation Perspective

In previous research the representatives of the sector pointed to the following essential education problems:

- The offer of higher education programmes being inadequate to the needs of the sector (for example, there is an overproduction of film directors, but no study programmes are available in the animation area and technical professions, there are very minimal study programmes in the audiovisual production, etc.).
- The outdated methodology is used during the study process, and there is little access to the latest technologies.
- The lack of audiovisual education in general education study programmes.

In the author's opinion, the most important directions of activity should be:

- Informing and educating the society about audiovisual works and their development (for example, by providing lectures on cinema or organizing video game development workshops in educational institutions).
- Specialisation of study programmes in foreign languages (for example, in English), an attraction of foreign students to add international cooperation aspects to the studies.
- Creation of new study programmes or specialisation (or modification of the existing ones) to meet the future needs of the sector (for example, in the video game industry).
- Integration of business and managerial courses into the audiovisual education programmes.
- The development of interdisciplinary study programmes or specialisation of the existing ones (for example, in the form of collaboration with the technical and arts higher educational institutions).
- The development of vocational education in the sector (for example, by training and preparing cameraman's assistants, sound technicians, film editing directors and special effects specialists).
- The development of research and development directions of audiovisual technologies.
- Co-operation with cluster companies to develop business incubators and contacts for transfer of the audiovisual technology (possibly within the framework of the above-mentioned public media complex).

The author has put forward cluster learning and innovation perspective objectives and deliverables (see Table 3.5).

<table>
<thead>
<tr>
<th>Objective</th>
<th>Indicator</th>
<th>Deliverables</th>
</tr>
</thead>
<tbody>
<tr>
<td>To increase the demand for graduates in the labour market</td>
<td>Number of graduates of study programmes employed in companies and organizations within the sector</td>
<td>2/3 of graduates working in the audiovisual sector</td>
</tr>
</tbody>
</table>

There is no statistics collected in Latvia in relation to where the graduates continue their career prospects. The proportion of graduates in the sector working in a related area of their specialty is unknown, same as how many of them works in other creative industries, or how many work in other areas, or do not work at all. In order to achieve the deliverables, the author used the statistical data provided by the Higher Education Statistical Agency of the United Kingdom on 2004/2005 graduates. The results showed that 74% of all graduates in the film and television industry continued their careers in this industry (Comunian et al., 2011). These figures include graduates who were employed full-time, part-time or combined working with further studies. In the framework of study "Creative Graduates Creative Futures” career of 2002, 2003 and 2004 study year graduates in arts, design, and craftsmanship of 2008 to 2010. Research demonstrated that 70.3 % of graduates in the media and electronics design field continued their careers in their field of specialisation (Ball et al., 2010).
Considering these figures, the author puts forward cluster learning and innovation prospects for 2020: 2/3 of all sector study programme graduates continue their careers in the audiovisual sector as employees or self-employed persons, both in companies in the sector and related organisations. This figure is smaller than in the previously mentioned studies. This is because it includes not only graduates from the higher education but also vocational education programmes, some of whom will choose to continue studies in the higher education study programmes.

**Summarizing** the previously outlined prospects, the author provides a simplified cluster Balanced Scorecard perspective model for the audiovisual sector in Latvia (see figure 3.1).

![Diagram of Balanced cluster Scorecard perspective model for the audiovisual sector in Latvia](Developed by author)

In this model, objectives of all perspectives are summarized, as well as deliverables and their relevance to the cluster's vision for the period up to 2020. It follows from the vision and mission that the strategic objectives of cluster operation are linked with four Balanced Scorecard perspectives of a cluster: finances, cluster members, learning and innovation, and internal processes.

As discussed above, in order to reach each objective within the set perspective, the author has put forward actions to be taken. The latest concept of the Balanced Scorecard model envisages further division of such activities in: activities and outcomes (the so called "strategic linkage model"). Based on the Balanced Scorecard perspective model developed by the author, learning and innovation, as well as perspective activities of internal processes relate to the activities, but activities carried out by cluster members and finance perspectives concern the outcomes (Lawrie & Cobbold, 2004). Cluster linkage model of the audiovisual sector in Latvia is shown in figure 3.2.
The author believes that the most important activities to be carried out to achieve the cluster's vision and strategic objectives are:

1) The reorganisation of the funding allocation system (including the responsible institutions, evaluation criteria and selection of experts for the allocation process).

2) The creation of the public media complex (including other companies within the sector, educational institutions, and a business incubator).

3) The development or modification of study programmes according to the needs of the sector and future developments (including vocational education programmes, technical programmes and interdisciplinary programmes).

The benefits of these and other activities would be significant, the most significant being: the development of digital platforms of audiovisual works, the development of internal and external cooperation, the increase of presence in external markets and the improvement of a reputation of the sector and the growth of audience interest.

The creation of the audiovisual sector cluster in Latvia could be facilitated by the "bottom-up" activities – activities of companies, as well as the "top-down" activities – implementation of the objectives to be carried out at the national level. If the above-mentioned national level objectives are essential for the further development of the sector and create an environment for cluster creation, then the development of companies, improvement and willingness to co-operate are key factors for cluster creation. Only the implementation of these two-level objectives can contribute to the implementation of the sector's and the cluster's objectives and achievement of the cluster's vision.

The most important sector objectives at the company level are the following:

1) Selection of the business model: a niche company or a multi-profile company.
2) Intensification of activities in the external markets.
3) Improvement of managerial, marketing, external communication competencies.
4) Increased participation in foreign film festivals, competitions, etc.
5) Demonstration of artworks, organization of creative workshops in educational institutions.
At the sector (cluster) level the following tasks should be undertaken:

1) Joint participation in sector fairs, exhibitions, festivals, etc.
2) The development of cooperation with interested parties (media, financial institutions, etc.).
3) The development of internal cooperation within the sector.
4) The development of cooperation between the sector and educational institutions.
5) Lobbying of sector-related matters, informing the public.
6) Sector (cluster) brand creation and positioning in the external market.
7) Organization of networking events.
8) Participation in research, technology and digital platform development projects.

In the author's view, in order to ensure coordination of cluster activity, it is necessary to develop cluster organization of the audiovisual sector in Latvia. As it has already been mentioned that there is a need to reorganise the Latvian Film Board by including representatives from the other audiovisual sector (apart from the film industry) fields, representatives of other educational institutions, as well as representatives from companies engaged in the distribution of audiovisual works, media representatives and other interested parties. In this way, such organization would be established which would represent all parties interested in cluster operation. The daily work of such organisation, project implementation and operative planning could be carried out by the Chief Executive Officer. Such organization could also perform the role of a consultative body to the Ministry of Culture and the role of institution coordinating the operation of sector cluster. This kind of reorganization of the Latvian Film Board, of course, is a task to be carried out at the national level.

Tasks to be completed at the national level are the following:

1) Support for the development of the public media complex.
2) The reorganization of the funding allocation system.
3) The expansion of the Latvian Film Board activities.
4) The transformation of education programmes according to the sector requirements and future tendencies.
5) The promotion of audiovisual research and implementation technologies.

The establishment of a new public media complex, that would include other audiovisual companies, educational institutions, business incubators and, possibly, other objects, is an important task not only for the development of the public media but also the whole audiovisual sector. In this way, a sector leader would be established which is a significant factor for the cluster development. As already mentioned by the author, the creation of such facility would be possible as a public-private partnership project, by attracting real estate investors.

The reorganization of the project financing system would allow to reduce sector rivalry and competition, as well as it would ensure the NFC supervision of supported projects. Thus the diversity of audiovisual works would increase so as with the compliance of the target audience expectations. This, in turn, would facilitate an increase of the interest from the audience allowing to increase local market share. The reorganization of the Latvian Film board is important for the promotion of sector cooperation and, as discussed above, for ensuring the functioning of the cluster organisation. In turn, changes in the sector education offer and promotion of research are an important factor for further and sustainable development of the sector.
Consequently, during this stage of cluster development, the most important tasks are the ones that are to be carried out at the national level and at the level of each company. This is because they can contribute to the cluster creation. During the next stages, the common sector and cluster tasks will be the most important ones. Those three-stage tasks determine also the cluster structure (see figure 3.3).

It also affects the cluster structure creation: the core of the cluster should be comprised of companies engaged in the creation and distribution of audiovisual works. The creation of such a core (the centre of which could be the proposed sector leader – a new public media complex) is essential for the future creation of the cluster. At the very beginning of the cluster creation it is important to involve companies from various fields (film, TV, animation, video game industry). Equally the educational institutions, NGOs and national and municipal organizations and initiatives (for example, the Riga Film Fund) should be involved in cluster operation. In the future, it can be expected that other interested parties might get involved in the cluster operation, such as financial institutions, investment funds, and the like.

In order to ensure the link between the cluster and the Ministry of Culture – the body in charge of policy planning and implementation matters – the cluster organization could function on the basis of the Film Board. In the view of the author, for this organization representatives should be delegated only from NGOs. This would contribute to the “bottom-up” principle in the cluster operation. The major role of the cluster organization would be: to promote the implementation of sector-level cluster objectives.

The Ministry of Culture is the main institution responsible for the implementation of the national level tasks. However, in a number of matters the responsibility lies with other institutions, for example, the Ministry of Education and Science, the National Electronic Mass Media Council (NEPLP), as well as others. The implementation of national level tasks would create an environment that would contribute to the creation and the development of the cluster.

In order to evaluate strategic directions for the creation of the audiovisual sector cluster in Latvia and Balanced Scorecard model, five expert interviews were carried out. Specialists selected for the fourth round of interviews were experts in the audiovisual sector or in cluster creation and operation. The interviews were held in November/December 2014, and the following respondents were interviewed:

1) Vera Boroņenko, Dr.oec. – Researcher at University of Daugavpils, Institute of Social Investigation.
2) Valdis Avotiņš, Dr.chem. – Director of Engineering Research Centre of “Ventspils International Radioastronomy Centre” of the Ventspils University College.
3) Ainārs Dimants, Dr.phil. – (now former) Chairman of the National Electronic Media Council.
4) Dita Rietuma, Dr.art. – Director of Latvian National Film Centre, a film critic.
5) Robertas Jucevičius, Dr. habil. oec. – Kaunas University of Technology, Professor, Business Strategy Institute, chair.

During the interviews, questions were asked about the need for the cooperation in the audiovisual sector, possibilities and capabilities, prospects for achieving the developed strategy vision and objectives, benefits from cluster creation, as well as tasks to be carried out in the sector and the national level. The results of each interview analysis are provided further in the thesis.

The author of doctoral dissertation “The Role of Clusters in Regional Competitiveness” and a researcher at the University of Daugavpils, Institute of Social Investigation – Vera Boronéenko believes that during the development of cluster strategy the current situation, the existing sector strategy and the past achievements – noticed by the author when conducting the sector analysis – should be taken into consideration. The results and the current planning documents were taken into account in the development of strategic directions and the Balanced Scorecard model. Boronéenko proposed to rethink the duration of the strategy. However, the author believes that the cluster creation and start-up period could go until 2020, while the cluster strategy period could be longer – for example, until 2030. Nevertheless, the author agrees to the suggestion that the proposed vision should be clarified in relation to its connection to its mission and strategic objectives. These suggestions are consistent with the opinions of other experts. Therefore, a revised vision statement is proposed at the end of this chapter.

Director of Engineering Research Centre of ”Ventspils International Radioastronomy Centre” at the Ventspils University College, a former Director of Knowledge and Innovation System Department ZINIS at the Investment and Development Agency of Latvia Valdis Avotins gave a generally positive assessment of the developed cluster’s strategic directions and its initiative model. He mentioned similar examples of clusters in the Czech Republic (Barrandov) and Sweden (Skåne). It was emphasized that a leader plays the key role in the establishment of a cluster and is vital for the implementation of such an idea. It was stressed that for the potential cluster participants it is important to define the benefits of cluster activities and their potential involvement, which the author has already provided. Avotins also suggested looking for possible contacts of the audiovisual sector cluster with other sectors and their clusters.

In the author’s opinion, the greatest possibilities for cooperation of the cluster could be with other creative industries, such as advertising, media, music and event industry. By developing the exports of services and audiovisual works the demand for translation services will also significantly increase. Based on the experience in other countries, the development of film and media clusters has a positive impact on the development of the tourism sector. Firstly, it is connected to the accommodation of filming crews and to the use of other products of the sector. Secondly, information about filming spots or specific geographical locations can attract tourists, thereby other tourism-related industries can also benefit from it, such as the catering industry. Significant cooperation is also possible to the information technology industry, mostly in relation to the digitalisation of processes, the use of the Internet, technological development and other factors. Cooperation with the IT industry can foster collaboration with other industries, such as medicine, agriculture, image processing, and other. Cooperation is also possible to the real estate industry, especially within the context of the development of a new public media complex. The development of such media campuses is a positive example from abroad. And finally, the cooperation with financial sector within the development of the audiovisual sector plays a vital role, for example, in order to attract risk capital or “start-up” funding, etc.

Positive appraisal of the need for cooperation in the sector was given by the (now – former) chairman of the National Electronic Media Council and Professor in Communication Theory Ainārs Dimants. The expert pointed out that such cooperation is established at the legislative level, especially in Europe, however, the situation in Latvia should be improved. It was stressed that cooperation among the television and cinema fields is evident and logical because films made by using public funds should be shown on Latvian television. The development of the Internet and technologies contribute to such cooperation. He pointed out that self-organization within the sector could foster cluster creation while the Ministry of Culture should coordinate and support these processes. This is consistent with the author’s vision of the Film Board as a body of such self-organization, cooperation support institutions and potential cluster organization. Dimants pointed out the discrepancy of vision with the rest of the strategy because this vision only refers to the attraction of foreign projects, but the rest of the strategy is devoted to the importance of cluster for an operation of the sector in the internal market. As stated above, the author agrees to the shortcomings of the developed vision. Therefore, at the end of this sub-chapter he offers a new upgraded version.

Director of the Latvian National Film Centre and film critic Dita Rietuma was skeptical about the strategic directions and cluster initiative model developed by the author. She pointed out that the creation of a cluster is not possible due to the mentality, the existing structure of the sector and due to historical factors. It has been repeatedly
emphasised that the cooperation in audiovisual sector is not possible because there is the technological and institutional separation between the film and television industries, which has been the case even since the “analogue era”. It was also stressed that the competition for public funding is fierce and therefore, in Rietuma's mind, it is more important to increase funding for the sector which could eventually result in the making of multiple and diverse films. The author agrees that the tense situation with the available funding undermines the potential for cluster creation, however, on the other hand, cluster creation could contribute to the increase in funding. Rietuma believed that the cluster creation would be necessary for graduates of educational institutions and young professionals. The expert pointed out the significant lack of cooperation between the sector and educational institutions. On the one hand, professionals are trained and prepared (for example, film directors) but the market is already saturated. On the other hand, there are no specialists trained that are in need for the sector: camera-man assistants, film editing directors, sound engineers, lighting technicians and others. As a solution, she proposed to establish a centre of audiovisual education competence which could operate under the wing of public television. This coincides with the author's vision on the role of public media in the cluster creation, and the need to establish a public media complex jointly with a higher educational institution. In this case, the higher educational institution should focus on the study programmes offered by the first level higher educational institutions of the audiovisual sector. Perhaps this could happen on the basis of the concepts provided by the Academy of Culture and the Latvian College of Culture. Rietuma was sceptical about the author's idea on delegation of the functions of finance allocation from the SCCF to the NFC, because the SCCF supports significantly smaller film projects and activities not related to film production (such as film lectures, film distribution, etc.). However, the author believes that the full responsibility of the management of public funding should be entrusted to the NFC, by also providing funding for the implementation of the above-mentioned activities.

The director and professor of Kaunas University of Technology Robertas Juicevičius pointed out that the use of the Balanced Scorecard model approach in the strategic management of clusters and the perspective model developed by the author is logical; however, the inclusion of cluster's vision, mission and values is unfounded. The author agrees to this because in the original Balanced Scorecard model the company's vision and strategy were used as unifying elements. Thereby only the vision from which stems all the strategic tasks can be included in the cluster Balanced Scorecard model. Nevertheless, Juicevičius agreed that the formulation of the vision, mission and values is corresponding to the cluster. Juicevičius gave an assessment of the financial and cluster participant perspective objectives as being “good”, whereas the objectives of teaching and innovation internal perspective as being unfounded due to the fact that is more exclusively related to the performance of the sector rather than strategic tasks of a cluster. The author agrees that the objectives of these perspectives could be related to the role of a cluster in the training of managers and employees in the sector, in order to promote collective innovation. However, such role of a cluster is directly attributed to the training of specialists necessary in the sector, e.g., by establishing an audiovisual education competency centre – as was suggested by Dita Rietuma. In relation to the objectives put forward by the author Jucevičius pointed out that the role of a cluster in achieving national objectives. The author agrees with that because thinks that the implementation of national level objectives is vital in order to promote the creation of a cluster.

The author compared strategic directions of the cluster creation and model developed by himself with the cluster creation variants developed by the National Film Centre, respectively in 2008 and 2012. In 2008 there was a project report "Cluster creation prospects of the audiovisual sector in Latvia" (Gailīte-Holmberga, 2008) developed and in 2012 within the framework of “Interreg” Baltic Sea Region project "First Motion” – "Audiovisual technology cluster in Latvia" was developed (National Film Centre, 2014a). Overall, both of the previously mentioned internal audiovisual sector cluster conceptions in broad terms are in line with the strategic directions and model developed by the author. It has been emphasised in all concepts that the cluster should promote internal cooperation within the sector (for example, between producers and distributors of these works, companies and educational institutions) and the expanding of activities in external markets (by establishing a special support system). Similarly, it is also important to improve study programmes and to develop new ones, especially in the field of vocational education. Cluster activities should increase the distribution capabilities of audiovisual works across digital platforms. However, the major differences are the following:

- The role of the public media as a driving force of the cluster.
- The use of the Balanced Scorecard model approach.
- Better in-depth studies as a basis for the cluster strategy and the creation model.
- Allocation of tasks to the company, sector and national levels.
- Suggestion for the cluster organisation – the reorganization of the Latvian Film Board.
• Linking of public funding allocation criteria to the cluster operation.

Summarizing the experts’ assessment of the developed strategic directions and the cluster initiative model, as well as findings from the previously developed concepts of the cluster initiative model, the author concludes that in the current situation the potential for cluster creation can be assessed as low, which is also apparent from the previous research results. Although the author agrees with the opinion of the current director of the Latvian National Film Centre Dita Rietuma that the main pressing issue in the sector is the increase in public funding, the author also believes that the improvement of funding allocation and project evaluation system is more important. The existing system has given room to tensions and ineffective rivalry between sector companies and the fields, which reduces the prospects for cluster cooperation. The existing sector strategy (or the lack thereof) has not allowed for the emergence of one or several leaders, which would be an important prerequisite for the development of the cluster. As the only driving force behind the cluster creation the author sees the development of strong public media and a vocational higher education program. The role of young professionals and companies in the cluster creation was also repeatedly emphasised by the experts interviewed. The need for a cluster leader was also stressed. Such preconditions have contributed to cluster development, as it can be seen in the literature review and analysis of international research.

Taking into account the results of the above analysis, the author formulates a new audiovisual sector's cluster vision: to promote sustainable development of the audiovisual sector in Latvia, by allowing it to become one of the most demanded areas in northern Europe for the development of audiovisual works. Such wording of the vision allows to keep the main idea of the previous formulation, by clarifying and supplementing it by taking into consideration opinions of the experts obtained during the fourth round of interviews and from their analysis. As it was previously stated, the cluster creation potential in the sector is currently relatively low. However, by carrying out certain tasks at national, sector and company levels, this potential will grow significantly. As shown in the literature review, cluster creation and operation is needed for the sustainable development of the audiovisual sector, as demonstrated by a number of examples of clusters shown before. Therefore, the role of the cluster has been stressed in the wording of the vision. This is because according to the analysis of the previous sector operation, the current solutions are mostly short-term and are rather reactive than proactive. Secondly, even though the opinions of experts have been taken into consideration, this vision retains the focus on participation in external markets. Therefore, its wording has been modified to be more achievable. As a result of cluster activities the volume and diversity of export of services of the audiovisual sector in Latvia should increase, and Latvia should become a place that attracts foreign companies so that they open their branches here.
CONCLUSIONS AND RECOMMENDATIONS

Conclusions are drawn during this thesis:

1. The review of literature shows that, although the "cluster" concept created initially by Michael Porter and later by other authors is a relatively new idea, it is, however, based on research and theories of economics, sociology and economic geography developed in a period of over a century. This fact has contributed to its broad and versatile multi-application in the fields of science and policy planning.

2. Representation of the cluster concept in academic works and policy planning documents in Latvia ascertains to the insufficient and at times inadequate to the guidelines of the understanding and application of the concept.

3. It follows from the review of literature that national or regional policy can significantly contribute to or hinder the development of a cluster, however, there needs to be an initiative from companies and their related organizations where the leader role is essential (leading organization, sector authority, and similar).

4. The analysis of the literature shows that technological developments, globalization, sector policy and consumer expectations have contributed to a much closer interaction and cooperation in the audiovisual sector in the world as a whole. However, locally this is largely dependent on local factors, such as the level of sector development, strategy and national (regional) policy.

5. The literature review suggests that generally speaking, the audiovisual sector and its related fields have a high potential for cluster creation, which is driven by the need for joint project implementation with strong links within the value chain, specialization of the companies, professional and creative collaboration.

6. An analysis of business performance data shows that audiovisual sector in Latvia, in general, is characterised by a high level of fragmentation, proportion of micro-enterprises, relatively small amount of public funding and a small number of audiovisual works made. Nevertheless, some individual companies and creative professionals have shown high performance and have achieved significant international recognition. It demonstrates that the key factors in the development of companies and projects are the competence of the directors and strategy, rather than the external environment of the sector.

7. It can be concluded from the interviews that although the development of the sector during the period of 2009 and 2012 was adversely affected by the reduction of public funding, however, its impact could have been mitigated by the implementation of effective sector strategy and priorities, as well as reduction of the impact of the public funding allocation process on rivalry within the sector and reputation.

8. The interviews showed that inefficiency of the public funding allocation system and the lack of priorities, the technological development and its availability, as well as socio-historical factors have contributed to the fragmentation of the sector and internal contradictions which do not encourage the cooperation and as a result – the formation of the sector cluster.

9. It follows from the interviews that the cluster creation potential is also reduced due to poor collaboration between companies and educational institutions in the sector, as a result of which the labour market supply does not correspond to the needs of the sector, thus increasing the fragmentation and competition in the sector.

10. The research results suggest that currently there is no enough "critical mass" formed in the audiovisual sector in Latvia necessary for the cluster creation, which is also reduced by a combination of the above-mentioned factors and the lack of sector "leaders".

11. It was stated in the expert interviews that cluster creation potential might be increased as a result of appropriate national and regional policy, including in the field of education, or by the development of cooperation culture among companies and possibilities for cooperation.

12. It was declared in the expert interviews that the creation of a unified public media complex plays a vital role in the growth of the cluster creation potential, which in conjunction with an educational institution can become a driving force of the cluster creation.

13. It can be concluded from the study results that the major benefits of the creation of the audiovisual sector cluster in Latvia would be: the development of internal and external cooperation in Latvia, export growth, better availability of audiovisual works, and better adaptation of labour market supply to the needs of the
sector, as a result of which the increase of global competitiveness and available funding would be facilitated.

14. Although the Balanced Scorecard approach has been very minimally used in strategically cluster management processes, still the developed by the author Balanced Scorecard model of the cluster of the audiovisual sector demonstrates its efficiency.

Recommendations:

1. Economic and business policy makers should in the planning documents – and accordingly to the cluster concept guidelines – emphasise the importance of clusters in raising the competitiveness, and provide appropriate support instruments. However, this should be done only after the assessment of the potential for cluster creation and development, thereby promoting the establishment of support instruments that are appropriate to each particular life cycle of the cluster.

2. Having regard to the overall trends in the world and in Europe, it is necessary to continue the implementation of support policy of creative industries (including the audiovisual sector) at national and municipal levels, especially in education fields, and for the increase of exports. As a result, it will contribute to the global competitiveness of Latvia and its visibility (image).

3. An important element of an overall policy of the audiovisual sector and particular fields should be the fostering of cooperation and participation in foreign markets. This is an important factor for the sector development and cluster creation.

4. The Ministry of Culture needs to improve the public funding allocation system in the field of the audiovisual system. This can be achieved through the changes of its administration, the establishment procedure of the project evaluation committee, change of priorities, as well as through a project supervision system. This will allow to reduce the level of rivalry for public funding; as well it can contribute to better quality and diversity of the audiovisual works.

5. The National Electronic Mass Media Council (NEPLP) should foster the creation of common public medium body and lobby the establishment of its complex – possibly in the form of a public-private partnership. Thereby a powerful leader of the sector would emerge who would facilitate the cluster creation.

6. It is recommended to create the new public media complex in collaboration with a real estate developer. As examples from around the world have shown, the diverse development of such media complexes creates an environment that attracts creative professionals, as well as other interested parties, who gladly choose this area as their place of residence.

7. Higher educational institutions in cooperation with the Ministry of Culture and public media should develop the first level higher vocational education program. This way specific professionals would be trained who currently and presumably in the future will be in great demand in the labour market of the sector. Implementation of the study programme should be carried out in collaboration with the public media complex and provide the necessary material and technical basis and internship placements for the young specialists. The training of such specialists will contribute to the sector development, for example, by ensuring simultaneous implementation of several foreign projects.

8. It is necessary to establish the audiovisual sector business incubator that would encourage companies to enter the sector, as well as the development and implementation of innovative projects and products. Development of such incubators is essential in the early stage of cluster development.

9. The Ministry of Culture in collaboration with the Ministry of Education and Science and other relevant organizations should facilitate the implementation of interdisciplinary projects, through cooperation of academic staff of the programmes of the audiovisual sector and other study directions (such as IT, engineering). This should promote the development and market uptake (including foreign markets) of new technologies and innovative products.

10. The Ministry of Culture should transform the operational framework of the Latvian Film Board, by including cooperation matters of the audiovisual sector in its competence and by expanding the circle of participants. Such transformation of the old organization will allow for creation of potential new organization engaged in developing of the cluster initiative and coordinating its activities.
11. In the future sector companies need to choose an appropriate strategy that ensures their sustainable development. These must be specialised, artistically focused micro-enterprises or diverse business-focused companies with a significant extent of economic activity in external markets. An increase of the second-type companies is a key factor in the cluster creation.

12. Companies and NGOs in the sector should strengthen the cooperation with secondary education establishments, which can be done by the demonstration of audiovisual works, by hosting lectures on cinema or creative workshops, thus boosting the interest in created works, the achievements of the sector and specific nature of the professions in this field.

13. Sector NGOs and companies have to develop cooperation with NGOs and clusters of related sectors (such as IT, tourism, media) by implementing joint interdisciplinary projects for the development of new products and technologies, competencies, skills, and similar. This will develop the external cooperation of the sector and will provide access to new markets.

14. Managers of companies and NGOs should improve internal and external communication competence and develop marketing activities for presenting audiovisual works. This will help to improve the overall sector's image, reputation and cooperation of sector companies, as well as to increase the Latvian audiovisual market share.

15. Sector leaders should develop cooperation through joint participation in foreign markets of audiovisual works, fairs and festivals that contribute to the reduction of costs related to the participation in foreign markets and provide greater efficiency.
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Internet:

Policy documents:
57. Sustainable Development Strategy of Latvia until 2030

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