

DIRECTORATE-GENERAL FOR INTERNAL POLICIES

POLICY DEPARTMENT
STRUCTURAL AND COHESION POLICIES **B**

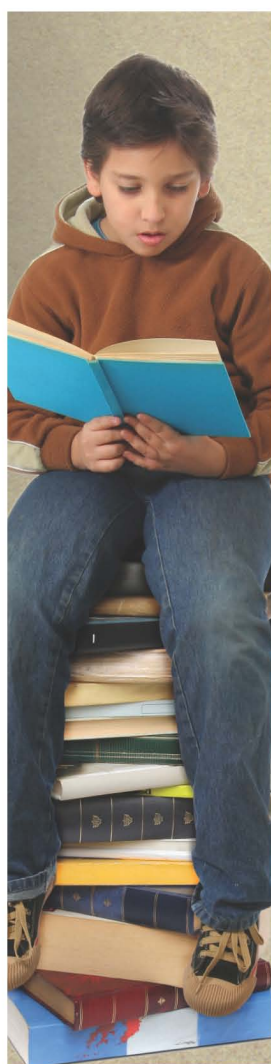
Agriculture and Rural Development

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**PUBLIC AND
COMMERCIAL MODELS
OF ACCESS IN THE
DIGITAL ERA**

STUDY





DIRECTORATE GENERAL FOR INTERNAL POLICIES

**POLICY DEPARTMENT B:
STRUCTURAL AND COHESION POLICIES**

CULTURE AND EDUCATION

PUBLIC AND COMMERCIAL MODELS OF ACCESS IN THE DIGITAL ERA

This document was requested by the European Parliament's Committee on Culture and Education.

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Abstract

This study provides an overview of the status and potential evolution of how content is delivered to the wider public in Europe, including the experience of the public sector and commercial providers. On the base of problems and causes identified, a series of recommendations are made to respond to the challenges of the digital era regarding access to content in Europe.

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LIST OF ABBREVIATIONS

AAP	Association of American Publishers
Apps	Application software
ARROW	Accessible Registries of Rights Information and Orphan Works towards Europeana
BBC	British Broadcasting Corporation
BnF	Bibliothèque Nationale de France
CCO	Creative Commons Zero Public Domain Dedication
DRM	Digital Rights Management
EGDF	European Games Developer Federation
EGEDA	Entidad de Gestión de Derechos de los Productores Audiovisuales
ePUB	Electronic Publication, an official standard of the International Digital Publishing Forum
EU	European Union
EU-27	The current 27 Member States of the European Union
EUR	Euros
F2P	Free to Play
FEP	Federation of European Publishers
ICT	Information and Communications Technologies
IPR	Intellectual Property Rights
IPTS	Institute for Prospective Technological Studies
ISPs	Internet Service Providers
JISC	Joint Information Systems Committee
M€	Millions euros

MARC	Machine-Readable Cataloguing
MDCE	Museums Digital Content Exchange
MoU	Memorandum of Understanding
NL	The Netherlands
OECD	Organisation for Economic Co-operation and Development
PC	Personal Computer
PPPs	Public-Private Partnerships
PPV	Pay per View
PSI	Public Sector Information
PwC	PricewaterhouseCoopers
RAI	Radiotelevisione Italiana
RTVE	Radio Televisión Española
SCA	Strategic Content Alliance
SMEs	Small and Medium Enterprises
SVT	Sveriges Television
TV	Television
UK	United Kingdom
UNESCO	United Nations Educational, Scientific and Cultural Organisation
USA	United States of America
VAT	Value Added Tax
VoD	Video on Demand
Vs.	Versus
WAN-IFRA	World Association of Newspapers and News Publishers

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EXECUTIVE SUMMARY

Scope and Methodology

This study provides an overview of the status and evolution of the way in which cultural and creative, both commercial and public, content is delivered to and accessed by the wider public in Europe. Trends, obstacles and drivers in the transition to a digital era are identified and provide a basis for a set of recommendations.

The media and content sector encompasses a set of industries including music, film and video, publishing (books, newspapers and magazines) and broadcasting (radio and TV) and sometimes also videogames and other information services (news agencies, portals, directories, etc.). These industries include a number of distinct activities (e.g. recording, publishing, performing, distributing, broadcasting and retailing) arranged in value chains with three main stages: production, distribution and consumption.

The study analyses commercial content and public content separately. First, it provides an analysis of four of the main (commercial) industries in the media and content sector – film, videogames, books and newspapers – aiming to highlight the disruption brought about by digitisation, their common attributes as well as their dissimilarities across the industries and possible implications for their future developments. These industries were chosen according to similarities with public content (for film, books and news) and their innovative nature (videogames), in order to maximise lessons to be learned for the public content sector.

Due to its distinctive features (e.g. regulatory and public good implications) when compared to commercial content, public content has been examined separately. In addition, since the digitisation process is still incipient in the public sphere, this structure of analysis helps identify the lessons that can be extracted from commercial provision and applied to public content.

The analysis covers the whole EU, supported by more in-depth analyses of seven Member States: Estonia, France, Germany, Italy, Spain, Sweden and the United Kingdom (including fact sheets in Annex). Data gathered combines desk research with 10 in-depth interviews and an online survey (75 valid surveys were collected, 41 from public stakeholders, and 34 from private stakeholders). In addition, a number of cases have been identified. Short descriptions of these cases are included in the study in boxes to illustrate findings and key aspects of, for instance, the business models or funding models described.

The study is structured as follows. Chapter 1 introduces the objective, scope, method and structure of the study. Chapter 2 overviews the four commercial content industries: Film, videogames, books and newspapers, providing for each one: (1) a general description including overall performance indicators on the status of the current market and the transition to digitisation; (2) value chain analysis; (3) new business models; (4) an analysis of financial sustainability and funding; (5) illustrative case studies; and (6) conclusions.

Chapter 3 is dedicated to public content, including (1) introductory definitions; (2) general overview of the status of digitisation; (3) availability of digital content and corresponding business models; (4) funding issues; (5) the role of content platforms and their impact on public content delivery with a brief examination of Europeana; and (6) identifying the main

obstacles the public sector is facing in its transition to the digital era. Chapter 4 gives a summary of the general conclusions of the study and a series of recommendations on how to stimulate digital content accessibility and reutilisation in Europe.

Annexes include fact sheets for each of the countries selected for further analysis (Estonia, France, Germany, Italy, Spain, Sweden and the United Kingdom) as well as a summary of the online survey and references.

This summary is in line with the structure of the study with the addition of a general introduction to the (commercial and public) content markets, which synthesizes findings from the study.

Content Markets – General Features and Developments

Some two decades ago media and content industries were relatively mature, characterised by high returns to scale and scope, with marked barriers to entry (due to the high costs of production) and, therefore, prone to concentration. Markets were culturally segmented and distribution was territorially divided. From the public perspective, positive externalities in media and content were the main argument for different types of public policies and regulations, including in some cases direct provision of content and information through variations of public service.

Digitisation brought radical transformation to the sector, reducing production and distribution costs, as well as changes in user consumption and perception of media and content. These changes have disrupted the structure of the content industries and pose entirely new challenges. In addition, in the case of public information and content, there is now considerably less difference from commercial products/offers, at least from the consumers' perspective.

Regarding the structure of the industry, new entrants and new media have appeared, and although some legacy features of the industry persist, in particular the high returns to scale and scope for professional content, the existence of considerable externalities and cultural distinctions, new digital stakeholders are currently leading the process of re-intermediation. Public information and content is only starting to use the potential of these new entrants and new media, and has yet to work out a model to reconcile public objectives and commercial interests in the digital environment.

Together with technology and socio-economic changes, two other phenomena have had an adverse impact on media and content industries: online copyright infringement (often labelled 'piracy') and the failure of the industry to exploit digitisation to create innovative solutions to compensate the effects of copyright infringement. A Substantial part of the public sector shares this myopic attitude of not providing users with appealing digital content.

New digital media have some specific features differing from traditional media. Apart from the reduction in costs of production and distribution and possibilities for interaction and personalisation of the media experience, new media enjoy reduced costs for service at a distance, thereby creating incentives for de-territorialisation and making traditional regulation more difficult. The capacity for personalisation of digital media also allows for – at least theoretically – better implementation of consumers' preferences for the long-tail preferences of consumers and the catalogue of providers. The lowering of entry barriers to non-professional content and information has created new forms of user-driven innovation

where consumers can express themselves more easily than ever, challenging both the legacy industries and existing regulation. Social network innovations have also been used by new players to enter into the distribution sector of this domain. This same absence of barriers has eased abuse of professional content, and regulation and policy making has so far failed to deploy efficient solutions to the problem, proving a lack of understanding of consumer perspective.

Looking at the short to mid-term future, some general trends in the evolution of media and content industries can be identified: They can be grouped by themes: structure of the industry, production, distribution, consumption, business models and consumer behaviour. Regarding the **structure of the industry**, legacy media and content will largely survive but will be smaller than prior to digitisation – the music industry is a key example – and new players will be the driving force in its evolution. New players (e.g. new intermediaries from the ICT sector) currently aiming to commoditise content as their main business models are only indirectly connected to the production of media and content, therefore not necessarily sharing the “cultural” values traditionally associated with parts of this industry. Also, the current structure of the industry presents new forms of potential market dominance, such as platforms and the ecosystems around them – mobile and social media as main examples (e.g. Android, Apple, Facebook). The platforms behave like multi-sided markets, gathering developers, producers, advertisers and consumers to create a full ecosystem, in which the owner of the platform keeps control over its main features and evolution.

The professional **production** of media and content increasingly needs to consider several media simultaneously considered for content release – the cross-media or trans-media experience. Media conglomerates are adapting their production structures to this new paradigm. However, public content used to be aimed mainly at one particular media (i.e. television) and a lack of resources makes its extension to other media difficult, unless a complementary business model can be found.

Distribution of content is where the re-intermediation process is mainly taking place and where new agents have entered the media and content domain (e.g. Apple, Netflix). Their approaches to markets are radically different from legacy media and they are deeply modifying the consumer experience – time shifting in TV, over-the-top services, social media, or mobile apps as main examples. Public content is experiencing difficulty becoming part of the new ecosystem without being cannibalized.

Consumption of digital media and content by individuals is taking place in an increasingly connected environment, more interactive, more mobile, more social, and where several media are used complementarily if not simultaneously. Consumers can also become producers of their own content. But all of this requires digital literacy, adequate user equipment and new skills. Therefore, it can create yet another digital divide.

Business models in media and content are also changing. Traditionally, the revenue streams of media and content industries came from subscriptions, sales to consumers and selling audience attention to advertisers. However, both these revenue models confront specific difficulties in their translation to a digital environment. In the case of advertising, a relevant part is moving from traditional into social media (and search engines) where reaching out to a wider audience of interested consumers is more effective and where business models involving audience personal information is becoming more prominent. Digital paid-for solutions are still in their infancy, with digital subscription services – where the cloud is taking on an increasingly important role and blurring the distinction of products

and services – replacing traditional product purchases. Also, some new business models have appeared, such as virtual items or in-app purchases, typical in gaming. In general, digitisation allows for the introduction of more flexible business models, better suited to specific needs of consumers. However, these have not compensated the decline in revenue streams of traditional businesses.

Commercial Content Markets – Film, Videogames, Books and News

Apart from these general trends, each of the sectors analysed in the study has its own **specificities**, which are outlined below.

In Europe, the **film** (cinema, video) market is dominated by US films (approx. 60% market share), with strong EU local productions aimed at domestic markets. The main digital challenge is the quest for a suitable modification of the release window system to cope with new media, and the threat from online copyright infringement to achieve a sustainable legal offer of digital films. From the consumer perspective, there is as yet insufficient provision of digital videos and films across territories due to licence limitations. In fact, online digital consumption of video and film is still very limited (5% in 2010), compared with overall consumer spending, although film production is already mainly carried out in digital format. Digitisation of films reduces costs and simplifies post-production and allows for the implementation of innovative business models, better suited to the demands of users such as impulse purchasing, reproduction quality, price or type of access device.

The **videogames** industry is already a digital industry in terms of production, consumption and, partly, distribution and is a showcase for techno-economic innovations, able to attract increasing demographics to gaming. In fact, among the investigated media and content industries, the videogames industry has the highest percentage of revenue derived from online distribution (42% in 2011). This on-going shift to online distribution is altering the traditional value chain of the sector, increasingly blurring the role of traditional agents, such as publishers and distributors. EU publishers hold a reasonably strong position, accompanied by quite a large number of innovators and entrepreneurs in the games development area, particularly in the growing online or mobile gaming segments. The disintermediation process is favouring the direct relationship between games developers and online retailers, or even final customers. The overlap between videogames and the ICT sector has facilitated the creation of an innovative ecosystem with new technologies and business models. Multiple business models are being adapted to the needs of users in areas such as access modes (via web browser, client application installed on the computer, mobile application, etc.), payment (pay per download, repeat subscription payment, payment for game extensions or to access game extensions, pay per purchase of items, etc.), or game devices (consoles, computers, smart phones, tablets, etc.). One of the business models created by the videogames industry, the “free to play” model (or “freemium” model), may be of interest in the provision of public content, as it allows a simple distinction to be made between public service, basic objectives and further commercial interests.

The **book** industry is the latecomer to the digitisation process (with some notable exceptions for niche products such as encyclopaedias). This fact has given the industry the opportunity to learn from the experience of other media and content industries. In 2012 the e-book market represented just 4.5% of global sales of books in developed countries (North America, EU-5 and Japan). From the EU perspective, it is the only market in the media and content industry where European companies hold a leading position. However, US companies lead the transition to the digital age. In addition, online distribution is

dominated by companies outside the book publishing industry (e.g. Amazon) and it is only very recently that publishers have started to launch initiatives to deploy their own market digital platforms to sell e-books online. This e-book market today is just a digital version of the paper market, with the same business models. The key element in the development of the market is the new reading devices: e-book readers and tablets. Currently, two models coexist: closed models, linked to specific devices, in which the user can only acquire books in the store of the device manufacturer and cannot access them from any other device; and open models, based on online platforms with books reproducible on any device. The advent of e-books has altered the cost structure as has already happened in other media and content industries. It is estimated that the total costs of online models are 15% to 25% lower than those of physical models. Public initiatives regarding digitisation processes of existing literature are competing with private initiatives. This situation is causing a shift of intervention based on regulation towards contract or partnerships models.

The **newspaper** industry is witnessing a decrease in circulation, and a strong fall in revenue, due to the impact of digitisation. In many ways, the traditional printed-press sector was the first to be affected by the success of the Internet as a source of information. However, the demand for online news is also growing together with an explosion in types of formats and models of production, and dissemination of news online. Therefore, online journalism has often been referred to as having a potential compensatory effect, even if its structure, skills and possibly values differ considerably from traditional journalism. The overall newspaper business model is confronted by the reality that paying for and reading a daily newspaper is quite different from reading it online free of charge. As a consequence, declining print and advertising revenues are not sufficiently offset by increases in online advertising revenues. Digital newspapers have attempted to replicate online the business models of print versions, including models of payment per copy, subscription and advertising revenue with mixed results. Some newspapers even experimented with the pay-wall model (access to content via subscription), but had to pull out, once they found that the income from the sale of access to content did not offset advertising losses. After this initial failure, newspapers have tried to reintroduce the pay-wall model for premium content, such as financial information. Finally, the emergence of tablet PCs and e-readers seems to be offering some opportunities to the digital press sector. Several newspapers have launched services for these devices, with a subscription model to access the content. However this is still too incipient to extract general valid conclusions.

Public Content

The public content analysed in this study includes cultural and historical heritage content and public sector information, with a focus on cultural content held by public service broadcasters, educational, research and cultural establishments. With respect to copyright protection, public content encompasses: (1) works in the public domain; (2) works where copyright appertains to a public entity; (3) works where copyright appertains to a private subject but which are guarded or held by a public entity (including orphan and out-of-commerce works).

Although the EU and its Member States have made a huge effort to make digital content more accessible over the last decade, public content is still in the early stages of digitisation. Overall, some 20% of cultural content has been digitised, ranging from 4% for national libraries to 42% for art museums. On top of that, only about one third of that digitised content has been made publicly available online, hence only about 6% of the European cultural content is accessible online.

Digitisation is a costly process especially when considering that the actual technical conversion to digital form is only one part of the process. Clarifying copyrights and reaching agreements with all copyright holders is particularly costly. The process of making public digital content available in Europe has so far been focused on the digitisation process itself. It has been rather fragmented both at the European and Member State level, consisting in mainly short-term projects with funding coming mainly from public sources, rather than private. Encouraged by the European Commission, a number of Public-Private Partnership (PPP) models have been implemented. Although sometimes successful, there have also been problems with these models. Among other things, the public sector argues that it needs to be in control of projects in order to safeguard public interest, while the private sector argues that public institutions often lack the necessary commercially oriented skills.

Given the restricted budgets, the economic uncertainty and the high costs of digitisation, new business and access models have been devised to allow a wider access to cultural content while guaranteeing the copyrights and related intellectual property rights of third parties, and to create revenues to guarantee the long-term sustainability of projects and services. These business models for public content can be categorised according to who holds the copyright (public domain, copyrighted, orphan content) and how content is exploited (commercial use or non-commercial use). The provision of public content to commercial players for exploitation may either be free or involve one-off payments or revenue-sharing schemes (normally at marginal costs). For non-commercial use public content in Europe is mainly provided free of charge on an open access basis. However, business models already in place for commercial content in other industries are increasingly being applied by heritage and cultural institutions for reasons of sustainability. Most cultural institutions do not yet offer ways (or licences) to make commercial use of their content and, with respect to this, policies are not clear. To facilitate the commercial exploitation of public content business models must be specifically designed for this purpose, creating simple licences that boost re-utilisation.

Orphan works constitute a large share of available content. These works create problems for digitisation and online distribution. In spite of the recent EU Directive 2012/28/EU, several problems persist: (1) legal uncertainties; (2) economic uncertainties; and (3) limitations regarding beneficiaries included in the directive.

Clearly, public content is still at a very early stage of digitisation and is faced with a considerable number of barriers to progress. In particular, funds for digitisation are lacking, due to: the reluctance of public administrations, immature business models, high costs and dubious returns. In addition, a clear path is lacking in their transformation to the digital domain and there is an absence of coordination among initiatives at all administrative levels – including EU level. Furthermore, there is a shortage of adequate content management, at least for orphan works and a lack of user awareness in general. There is also a deficit in appropriate skills within public institutions, and the multiple and divergent small-scale negotiations with existing digital platforms are limiting the bargaining power of the public bodies involved.

On the positive side, there is a potentially high demand for public content, waiting to be adequately satisfied with the right combination of highly-qualified professionals working for the public sector and government support – both direct and through regulation. A higher level of coordination would be also needed in intellectual property rights management, and in the digital provision of public content, including a better-harmonised framework for digital intellectual property rights. Finally, user awareness and involvement (social

innovation) seems to be a determining factor in the success of the future digital provision of public content.

Opportunities, Challenges and Recommendations

Finally, having identified the opportunities and challenges for European content, a number of recommendations are outlined here. Common **opportunities** across media and content industries that are still not fully exploited in the EU include: production of cross-media content, the creation of innovative user experiences from the wealth of public content, the use of online distribution to improve content dissemination beyond national borders, and tapping commercial initiatives and social innovation to meet the objectives in public production and diffusion of content.

In spite of the many advantages and opportunities brought about by digitisation, a number of **challenges** across the media and content industries remain. On the supply side, the main challenges lie in that the advantages of digitisation often accrue to different players in the value chain than those who invest in digitised content, creating a resistance to fully embrace it. In addition, digitised goods are threatened by copyright infringement. On the consumers' side, there is still a notable absence of innovative solutions able to satisfy their demands on usability and usefulness – the difficulties with multi-territorial licences in video and film being a main example. More precisely, a simple and effective multi-territorial licensing framework should be the main policy and regulatory challenge for media and content in the EU, together with an intellectual property regime able to foster innovation and creation, and acknowledge society's new perspectives of media and content.

A number of **recommendations** are outlined below, to address the challenges identified in the transition to the digital era and an information-based society.

The first set of recommendations of the study focus on the need for **further funding** of digitisation, preservation, and technical and business innovations. This investment is needed because of the positive economic and societal externalities arising from digitising content. However, a re-think in funding schemes is needed. Further funding should:

- involve continued support for the digital transformation of media and content industries;
- research into the development of technical and business innovations;
- consider cross-media production as a prime opportunity;
- establish new forms of long-term orientated funds, particularly for non-profit organisations;
- create specific programs and tools for entrepreneurs and innovators in digital media and content covering early-stages to consolidation;
- aim at creating European multi-sided platforms and ecosystems in digital media and content, in particular using the sectors and areas in which Europe is leading;
- promote cross-sector and cross-border production and distribution of content;
- encourage PPP in the public domain for the acquisition of expertise, the use of existing technologies and for funding initiatives; and
- re-design existing programs to avoid duplication of initiatives.

Together with funding, European policies should also be orientated towards **increasing coordination and creation of economies of scale** in the use of technical infrastructures:

- create economies of scale both in technical infrastructures and management units for production and distribution of digital content and media;
- encourage centralised or coordinated rights management agencies;
- investigate and reduce transaction costs in the provision of digital media and content throughout Europe;
- fight insufficient provision of digital content and media across EU territories due to market barriers;
- coordinate actions in the digital public provision of content, including production, distribution, consumption and negotiations with existing platforms;
- bring content to wherever the user is: place content in existing platforms;
- foster coordination among initiatives, and at all levels, in the digital provision of public content particularly in their relationship with commercial initiatives; and
- adopt a harmonised framework and package of measures – promotion of legal offers, user awareness, collaboration of players involved in transactions with content and media, specific legal measures – to fight online copyright infringement to “keep honest users honest”.

Specific recommendations regarding the improvement of **multi-territorial licences and revision of the intellectual property regime**:

- improve harmonisation of the framework for digital intellectual property rights and review the intellectual property regime to foster innovative and creative developments, which is particularly needed for orphan works;
- consider an improved multi-territorial licensing regime, including rapid implementation through coordination of existing licences, for media and content to bypass existing barriers to distribution and consumption inside the EU;
- explore, research – and promote – new avenues in the intellectual property regime (commons, open licences, etc):
- promote open access to orphan and out-of-commerce works; and
- guarantee educational use of public content under special conditions (open access is recommended).

The fourth set of recommendations is orientated towards the **improvement of access to public content and the promotion of innovation** around it:

- re-think positively public policy on media and content, including the assessment of direct provision of content and information through diverse variations on public service;
- consider in particular commercial initiatives and social innovation to meet the objectives in public production and diffusion of content;
- create an ecosystem around public content: open data and distribution platform initiatives;

- experiment and use – for specific types of public content – new flexible business models taken from commercial content initiatives, in particular considering the “freemium” model as it allows for a clear distinction between public service, basic objectives and further commercial interests;
- investigate and promote the role of users as “prosumers” of content of public interest; and
- promote the creation of innovative user experiences from the wealth of public content, eliminating the current barriers so that innovators and entrepreneurs can use it fairly.

The final set of recommendations is orientated towards raising **user awareness** and **education of highly skilled professionals**:

- raise user awareness of digital European heritage;
- invest in talent: create positions in the public sector with the required digital expertise; and
- create a forum with the industry to work on a European curriculum for the media and content sectors.

The architecture of the **Creative Europe Programme**, as the new framework programme for the cultural and creative sector within the Multi-Annual Financial Framework 2014-2020, already responds to some of the problems identified here. In particular, it is in line with some of the recommendations made in this study, namely: it is continuing economic support to the creative and cultural sector until 2020; it promotes transnational and cross-sector actions; it focuses on capacity building; it aims to improve user awareness by reaching new audiences; and it addresses, to a certain extent, the fragmentation of funding and the short-term perspective of projects.

However, some of the above recommendations should be more specifically addressed by the Programme, such as: cross-media production of content; cross-border online distribution of media and content; placing EU public content in existing digital platforms; creation of a European Curriculum; education and hiring of highly skilled professionals in digital media and content; support for open public content; coordination of digital provision of public content and use of infrastructures; venture capital/initial investment and common, coordinated online distribution platforms (public content, newspaper industry).

1. SCOPE AND METHODOLOGY

1.1. Scope

The objective of this study is to provide **an overview** of the **status** and **potential evolution** of the **way in which cultural and creative content is delivered** to the wider audience in Europe, both public and commercial. Trends, potential problems and their causes in the transition to the digital era have been identified as a basis for detailed recommendations that aim to respond to the challenges of an information-based society.

The media and content industries encompass a **heterogeneous** set of (sub-) industries composed of music, film, video, videogames, publishing (books, newspapers, magazines) and other information services (news agencies, portals, directories, etc.). They include distinct activities – recording, publishing, performing, distributing, broadcasting, retailing, etc. – arranged in a value chain with three main stages: production, distribution and consumption. Digitisation has deeply modified each of these stages but not the chain itself, apart from introducing the possibility of user interaction and enhancing their role as “prosumers” (consumers as producers of content and information). In particular, this study provides an overview of four of the main commercial activities within the media and content industries **film, videogames, books and newspapers**, with the aim of highlighting the disruptions brought about by digitisation, their common similarities as well as dissimilarities and, as the process of digitisation is still ongoing, possible future implications.

The main reasons for choosing these sectors for analysis is the similarity between contents produced by three of the industries chosen – films, books and newspapers – and public content, and the innovative nature the fourth, the videogames industry, which has developed some of the most ground-breaking models of online content distribution that can be applied to public content distribution. These four sectors provide important lessons to be learnt for and in the interests of the public sector.

Because features of public content, such as regulation or public good implications, differ considerably from those of commercial content, they have been examined separately. Since the digitisation process is still in its infancy in the public sphere, this structure will also help identify solutions that can be extracted from commercial provision and applied to public content.

The analysis refers to the situation in the whole European Union. However, in order to better illustrate findings, seven countries have been analysed in depth. Those countries are: Estonia, France, Germany, Italy, Spain, Sweden and the United Kingdom representing, respectively, major EU countries (France, Germany and the UK), one Scandinavian country (Sweden), one Eastern country (Estonia) and two Southern countries (Italy and Spain).

1.2. Methodology

The selected methodology for this study is a combination of desk research and primary research. Primary research comprised in-depth interviews and an online survey.

Desk research

The desk research used online and printed sources, for the most part reports and studies from national commercial bodies devoted to content industry analysis, academic institutions and public administrative bodies devoted to the preservation and promotion of cultural heritage.

For data collection regarding countries analysed in depth, a local partner from each selected country collaborated in the desk research, identifying data sources and, where necessary, translating relevant reports and studies with the exception of Italy, for which we employed our internal resources. The national partners were:

- Strategic Content Alliance , United Kingdom
- Cap Digital, France
- Division of Technology & Society, Department of Technology Management and Economics, Chalmers University of Technology, Sweden
- Youth in Science and Business Foundation (YSBF), Estonia
- Cluster Audiovisual Gallego, Spain
- Dynamic Organisation Thinking, Germany

Online survey

An online survey was carried out among private and public organisations in the field of digital content from the whole European Union. The survey, which comprised 75 valid surveys of which 41 from public stakeholders and 34 from private stakeholders, has no statistical significance but helped identify trends in the various countries for both the public and commercial sectors. Results from the survey have been used to verify the main findings from the desk research, in terms of business models, obstacles and driving forces for the distribution of digital content in Europe.

The survey of the questionnaire is included in Annex II.

Interviews with experts

After the desk research and online survey, a series of interviews were carried out with renowned experts in the field of content distribution in Europe validating previous findings and complementing the analysis.

The interviews were semi-structured, lasting between 45 and 60 minutes, conducted in person over the telephone, or IP conference. The interviewees were:

- Mr Malte Behrmann, Secretary General, European Game Developer Federation, Germany
- Ms Fabia Buenaventura, General Manager, Spanish Federation of Audiovisual Producers Associations, Spain
- Prof. Richard Collins, Visiting Professor at City University London, UK
- Mr Arnaud Decker, Secretary General, Pôle Radio/TV de Lagardère Active, France
- Mr Stuart Dempster, Director, SCA, UK
- Mr Pascal Ennaert, Coordinator, Vlaamse Kunstcollectie, Belgium

- Mr Aitor Grandes, Founder and CEO, 24symbols, Spain
- Mr Luis Rodríguez Moreno, Institutional Relations Director, Virtual Library Miguel de Cervantes, Spain
- Mr Koit Saarevet, Project Manager, Estonian National Archive, Estonia
- Ms Annette Birgerson, Director of Communications, Ms Ingrid Hall-Roth, Director of Research and Collections, Mr Odd Johansen, Director of Administrative Services, and Mr Magnus Olofsson, Head, Vasa Unit. Vasamuseet, Sweden.

The data collected was analysed by the research team. The process of comparing and analysing practices and models was done via International Benchmarking. In addition, cases of success and failure were selected and summarised for illustrative purposes.

International benchmarking

International Benchmarking was conducted among seven countries: Estonia, France, Germany, Italy, Spain, Sweden and the United Kingdom. The analysis focused on funding strategies, both public and private, in the different stages of development in content distribution. Conclusions have been used to analyse the current situation in Europe, and cases presented to illustrate findings.

Main data and findings for each country are summarised in an attachment to the main study in the form of country fact sheets. To facilitate the comparison and the consistency of data, European data sources (including data for all the countries analysed) were preferred to national ones, even if some of the latter might have provided more recent data. Some missing information at European level was integrated with national sources.¹ Data for certain sectors in Estonia could not be identified.

Case studies

Cases have been identified for illustrative purposes. A short description of cases was included in the study in the form of boxes to illustrate findings and key aspects of the business models or funding models described.

Acknowledgements

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¹ Accounts from the UK sources were maintained in pounds.

1.3. Structure of the study

The study analyses commercial content and public content separately.

Chapter 2 overviews four main content sectors: Film, videogames, books and newspapers. A first section provides a general description, for each sector, together with overall performance indicators on the status of the current market and the transition to digitisation. A second section is devoted to the description of the value chain and innovation models being implemented within these sectors. The overview is completed with a number of case studies. A final section on conclusions closes the analysis of each market. Chapter 3 is dedicated to public content. With the aim of providing an overview of the models of access to public content in Europe, the analysis starts by defining “public content” in the framework of this study. A general overview of the status of digitisation of public content is then provided. The extent and the ways in which digital content is currently available are outlined, together with corresponding business models, the latter generically considered regarding how public organisations deliver content to create revenues.

In view of the high costs of digitisation and current budgetary deficits in the public sector, a section on funding is also included.

The role of content platforms and their impact on public content provision is considered in the following section, which includes a brief examination of Europeana.

The analysis of public content ends by identifying the main obstacles the public sector is facing in digital content delivery in its transition to the digital era.

Chapter 4 gives a summary of the general conclusions of the study and a series of recommendations to boost digital content accessibility and reutilisation in Europe.

Attachments include a fact sheet for each of the countries selected for further analysis: Estonia, France, Germany, Italy, Spain, Sweden and the United Kingdom.

2. COMMERCIAL CONTENT MARKETS

KEY FINDINGS

General trends in the evolution of media and content industries can be identified as follows:

- **Structure** of the industry: The industry is smaller than prior to digitisation and new players are driving its evolution. These players are not directly connected with the consumption of media and content and therefore do not necessarily share the “cultural” values traditionally associated with parts of this industry.
- **Production:** for content release nowadays, several media need to be simultaneously considered: the so-called cross-media or trans-media experience. Media conglomerates are adapting their production structures to this new paradigm.
- **Distribution** of content is where the re-intermediation process is mainly taking place and where new agents have entered the media and content domain. The distribution of media and content has been moved to online platforms, where several sides of the market are addressed – developers, producers, advertisers and consumers – to create an ecosystem around the platforms.
- **Consumption** of digital media and content takes place in an increasingly interconnected environment which is more interactive, more mobile, more personal and more social. Consumers can become producers of their own content. Additionally, the Internet has become the first source of immediate information for interested users, to the detriment of traditional media.
- **Business models:** traditionally, the main revenue source of media and content industries came from subscriptions and consumer sales, and from selling end-user information to advertisers. In general, digitisation has enabled the introduction of more flexible business models, but has not compensated for the traditional sources of revenue. In advertising, the main revenue source for digital content, prices (lower than in traditional models) are not increasing at same rate as the growth of audiences, and because of the high levels of copyright infringement in certain industries.
- **Challenges:**
 - From the supply side: the advantages of digitisation benefit a wider range of players in the value chain with respect to those who invest in digitisation, thereby creating resistance to fully financing it. Further financial threats lie in online copyright infringement.
 - From the consumer perspective, there is still a lack of innovative solutions able to satisfy demands for usability and usefulness – the difficulties with multi-territorial licences in video and film being a main example.

Two decades ago the **media and content industries** were relatively **mature**, characterised by high returns on scale and scope. The costs of producing a prototype were high, while the costs of subsequent copies were much lower. As a consequence, industry structure displayed high barriers to entry and was therefore prone to limited concentration.

Markets were culturally segmented, producing substantial advantages for large and homogeneous communities, and creating a “natural” territorial distribution of contents according to aspects such as language.

Within this pre-existing framework, **digitisation technology** brought about a radical transformation. It dramatically reduced distribution costs while considerably reducing production costs at the same time. In addition, technology has facilitated a **socio-economic change** in users, illustrated in an increased propensity towards privatisation of media and content consumption, creative easiness, sharing and interacting with information and content, possibilities to manage several distinct media, and a shift in the perception of value of different media. These changes have brought with them a **wealth of innovations** in applications, services and business models, but they have also **disrupted the structure** of traditional industries and given rise to entirely **new challenges**.

Regarding the structure of the industry, **new entrants and new media** have appeared due to the success of new technologies among users, the decline of obstacles to entry – a potentially short-term effect – the blurring of territorial frontiers for service providers, and the de-professionalization of part of content production (user-generated contents). However, some **legacy features of the industry persist**, in particular the high returns to scale and scope for professional content, dominant externalities and cultural distinctions. As a consequence of digitisation, media and content industries initially followed a process of **disintermediation**, but currently a new process of **re-intermediation** is underway with new digital stakeholders assumed leading role.

Digitisation has had an **adverse impact on traditional media (“legacy media”) and content industries**, due not only to technology and socio-economic changes, but also to major modifications in the traditional approach of supply and demand. Users have transferred part of their consumption to new media and have modified existing patterns of consumption, adding interaction, production of content – the “prosumer” phenomenon – and using several media simultaneously. While new media are potentially better suited for advertising and the personalisation of media and content, online copyright infringement has reduced the chances of a smooth transition to digital media. Furthermore, the conservative behaviour of the industry has delayed the creation of innovative solutions to compensate the effects of piracy.

All these impacts and challenges are addressed in the following sections. Section 2.1 is devoted to the demands of digital content in the European Union, as an introductory framework for the study of particular sectors. Sections 2.2 to 2.5 analyse four main content sectors, namely film, videogames, books, and newspapers.

For each sector there is:

- 1) A general introduction, comprising key indicators of performance (global market, European market, demand of content, added value), as well as indicators of the status of transition to digitisation. The types of indicators used are the same across sectors, to allow for direct comparison.
- 2) An analysis of the value chain and innovation models characterising these sectors. Innovation models comprise the traditional perspective of business models, their prevalence and their prospects for economic sustainability, but also the possibilities for the creation of added value to their digital transformation.

- 3) A number of selected case studies, including an analysis of best practices and failures.
- 4) Conclusions, together with features of commercial initiatives that can be potentially replicated by public entities for distributing their own content in order to improve dissemination.

2.1. Digital content demand in the European Union

Over 73% of European citizens are Internet users.² Internet has changed the way people communicate, generate and consume information. Internet has also changed the way people consume media and cultural content.

According to Mediascope Europe, 73% of Internet users in Europe watched TV online, 67% listened to radio online and 91% read news online in 2012.³

Consumer expenditure on recreation and culture in Europe varies across countries, ranging from 5.2% of total household expenditure in Cyprus and Malta, to 1.9% in Estonia and 2.0% in Luxembourg. The average for the EU-27 is 3.3%.⁴ As a share of GDP most EU countries spend between 4% and 6%.⁵

Globally, it is estimated that around 42.5% of spending on entertainment and media came from digital spending in 2012. It is also expected that global digital spending will increase at a rate of 12.1% CAGR⁶ annually until 2016, whereas non-digital spending will only be 2.8%. As a result, 67% of total spending will come from digital spending by 2016.⁷

Consumption of digital content has also changed in recent years. Access to online content is nowadays multi-screen, both sequentially – changing from one device to another – and simultaneously – using multiple devices at the same time.⁸ According to TNS,⁹ 98% of Europeans have a mobile phone, 58% a desktop, 56% a lap top, 30% a smartphone and 7% a tablet. Furthermore, access to Internet and to digital content is increasingly mobile: in 2011¹⁰ global smartphone shipments surpassed PC shipments for the first time. In 2011 mobile phones already accounted for 65% of non-computer Internet traffic in the EU-5¹¹

² Seybert H. (2012): *Statistics in focus 50/12*, Eurostat.

³ Fennah, A. (2012) "Mediascope Europe", http://www.iabeurope.eu/media/98354/mediascope_europe_2012_pan-european_launch_presentation_summary_interact_2012.pdf. IAB Europe. Accessed in March 2013.

⁴ Eurostat. *Final consumption expenditure of households by consumption purpose*, 2011. Accessed in 3 January 2013.

⁵ Enders Analysis (2012): *Digital Europe: Diversity and Opportunity. Let's Go Connected*.

⁶ Compound Annual Growth Rate.

⁷ Stenzel, U., Goretti Sanches Lima, M. & J Downes, J. (2012): *Study on Digital Content Products in the EU*. IBF International Consulting.

⁸ According to Google's study *The New Multi-screen World: Understanding Cross-Platform Consumer Behavior*, 90% of users use more than one device to accomplish their goal. <http://googlemobileads.blogspot.co.uk/2012/08/navigating-new-multi-screen-world.html>. Accessed in March 2013.

⁹ TNS: *Mobile Life 2012*. <http://www.tnsglobal.com/>.

¹⁰ According to Canalys data during 2011 487.7 million smartphones were shipped compared to 415 million PCs. News Room, Canalys website, <http://www.canalys.com/newsroom/smart-phones-overtake-client-pcs-2011>. Accessed in March 2013.

¹¹ EU 5 is comprised of France, Germany, Italy, Spain and the United Kingdom.

and tablets for approx. 25%.¹² In fact, most online tasks are initiated on a smartphone but continued on another device, including video viewing.¹³

Another trend influencing citizens' consumption of digital content is the advent of user-generated content. Internet has reshaped the way content is generated, with an enormous impact particularly in the videosector.¹⁴ Facebook reported in 2012 that more than 300 million images were uploaded to their service every day.¹⁵ Every minute, 72 hours of video were uploaded to YouTube.¹⁶ Twitter had over 140 million active users in 2012 and published 340 million Tweets a day.¹⁷ According to NM Incite, a Nielsen/McKinsey company, in 2011 there were 181 million blogs worldwide.¹⁸ This development in creation of content is having a major impact in the value chain of the media and content industry.¹⁹

Altogether, these changes in consumer behaviour have created new patterns in demand that have a clear impact on the way citizens access digital content. Users want content to be mobile, social, accessible through various devices. They also want to re-use and create new content at the same time. How these impacts are addressed in the content industry will be analysed in the following sections.

Table 1: General characterization of media and content demand in Europe

Population (2012) ²⁰	503,663,601 citizens
Internet access	
Internet users (2012) ²¹	73.35%
Households with Internet access (2012) 75.74%	75.74%
Households with broadband connection (2012)	71.91%
Devices for Internet access²²:	
Households that access internet through mobile phone (2010)	15%
Households that access internet through desktop or portable computer (2010)	68%
Households that access internet through smart tv (2010)	4%
Average expenditure on cultural services²³	
% of total household's expenditure (2011)	3.3%

Source: Several sources

¹² Abraham, L. & Block, B. (2012): *Connected Europe: How smartphones and tablets are shifting media consumption*. comScore and Telefonica.

¹³ Google (2012): *The New Multi-screen World: Understanding Cross-Platform Consumer Behavior*.

¹⁴ Cha, M., Kwak, H., Rodriguez, P., Ahn, Y. & Moon, S. (2007): *I Tube, You Tube, Everybody Tubes: Analyzing the World's Largest User Generated Content Video System*.

¹⁵ Blog for developers, Facebook website. <https://developers.facebook.com/blog/post/2012/07/17/capturing-growth--photo-apps-and-open-graph/>. Accessed in March 2013.

¹⁶ Youtube Statistics website. <http://www.youtube.com/yt/press/statistics.html>. Accessed in March 2013.

¹⁷ Blog, Twitter website. <http://blog.twitter.com/2012/03/twitter-turns-six.html>. Accessed in March 2013.

¹⁸ News, Nielsen website. <http://www.nielsen.com/us/en/newswire/2012/buzz-in-the-blogsphere-millions-more-bloggers-and-blog-readers.html>. Accessed in March 2013.

¹⁹ McKenzie, P., Burlkell, J., Trosow, S., Wong, L., Whippey, C. & McNally, M. (2012): *User-generated online content 1: overview, current state and context*. First Monday, Volume 17, Number 6 – 4 June 2012. <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/3912/3266>.

²⁰ Eurostat (Population at 1 January 2012). Provisional. Accessed on 3 January 2013.

²¹ Individuals who have used Internet in the last 3 months.

²² Eurostat. Households with access to Internet, by device for accessing via PC, digital TV, mobile device. Consulted on 3 January 2013.

²³ Eurostat: Final consumption expenditure of households by consumption purpose. Accessed on 3 January 2013.

2.2. Film

KEY FINDINGS

- **US films enjoy a dominant market position** in the EU (about 60% of market share), while the EU industry has strong local film productions focused on domestic consumption.
- The **release window** system is being challenged by new digital media and the industry has not yet found an alternative system.
- Although rapidly growing, online **digital spending is still very limited** (5% of total spending in 2010).
- Overall production is already carried out as an all-digital process, while distribution and consumption are increasingly carried out as online digital processes. In fact, the industry is at a stage where the replacement of physical distribution of digital copies (DVD, Blu-ray) with online distribution through the Internet has started, albeit slowly.
- **Digitisation has reduced costs** in production and distribution, creating new opportunities for small producers and some degree of disintermediation in the value chain.
- Digitisation is still pending for half of all cinema screens, which constitutes a main barrier to independent cinema networks.
- **Digitisation allows the implementation of innovative business models**, which more effectively address critical areas in demand, such as time constraints, reproduction quality, price levels, and variety of access devices.
- Online **copyright infringement** primarily affects the box-office release window. This unfair competition limits the attractiveness of services complying with copyright rules.
- **Geographical limitation of licences** granted by producers significantly restricts users' access to content.
- A significant barrier to launching online film distribution services by SMEs is the **licensing model used by film studios**, which require substantial advance-payments. This fact hinders the access of SMEs to major commercial releases, which are in high demand by users.
- Another relevant barrier is the **lack of awareness of the general** public about the existence of online film distribution services: a critical aspect to achieve economic viability.

2.2.1. Introduction

The film industry is facing a huge challenge in its adaptation to digital distribution of content. Digitisation not only impacts on the distribution process but the whole value chain, as can be seen in the following paragraphs. This phenomenon has motivated important changes in all processes involved in film production and distribution over a short period of time. These changes are contributing to reshaping the traditional composition of the industry, modifying classical ways of accessing films (new screens over different periods of time) and allowing access to new agents who are trying to compete with the key players of the sector: the film producers.

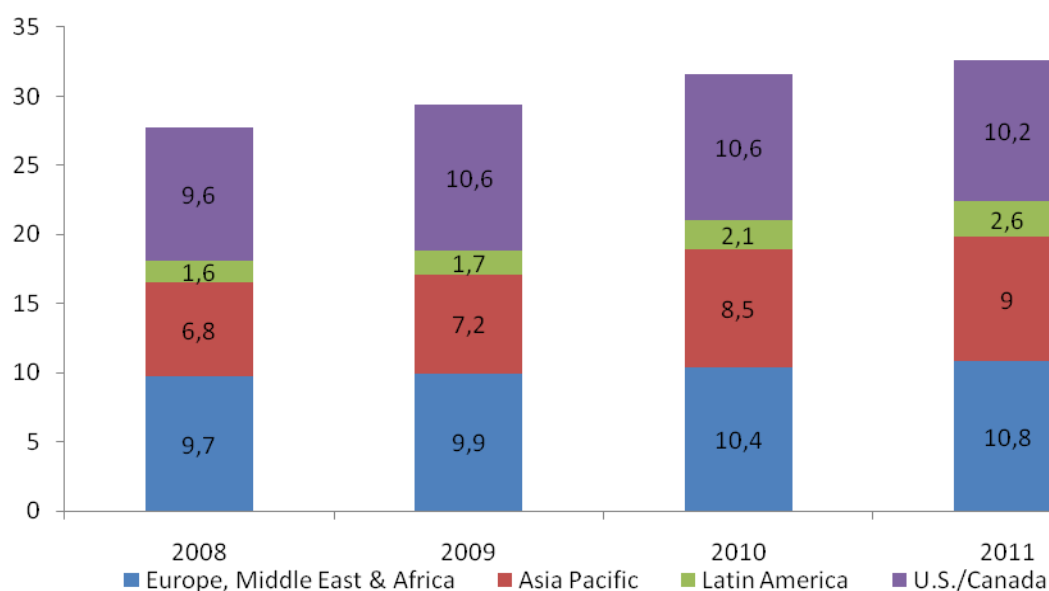
There is no doubt about the dramatic impact of digitisation on this industry. Focusing analysis on the distribution process, for the purposes and objectives of this study, it is clear that at almost every stage of the process, from cinema viewing to substituting hard copies of films by online digital copies, the industry has had to modify its development to adapt to new ways of distribution. The following paragraphs show the implications involved in adaptation.

2.2.2. Key indicators

The global market

The film industry comprises two main traditional sources of income: box office and physical video retail and rental (DVD/Blu-ray). According to MPAA (Motion Picture Association of America), global box office earnings reached \$32.6 billion in 2011, up 3% on 2010 earnings.

Figure 1: Global Box Office (\$ billion)

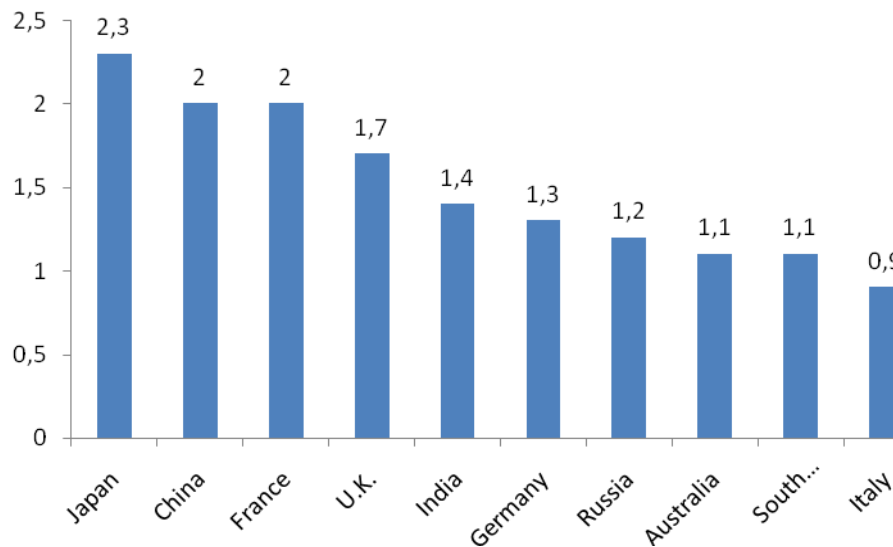


Source: Motion Picture Association of America, Inc.

In 2011, EMEA had overtaken USA/Canada as the region with highest box office incomes. Latin America was the region with the highest CAGR (2008-2011), 17.6%.

Among the top box office markets, excluding US/Canada, there are four European countries.

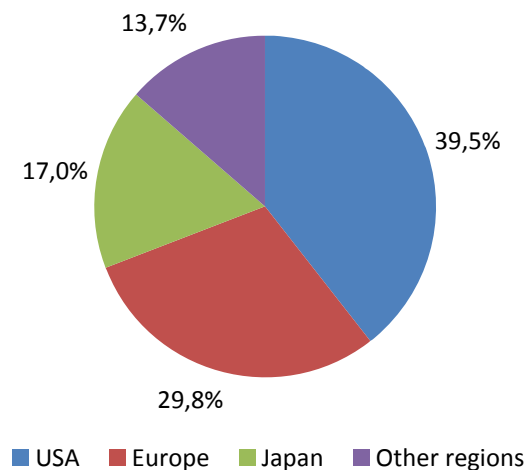
Figure 2: Top 10 Box Office Markets excluding USA/Canada (\$ billion)



Source: Motion Picture Association of America, Inc.

The other big income source of the film industry, physical video retail and rental, reached \$38.5 billions worldwide in 2011²⁴ with the following market share:

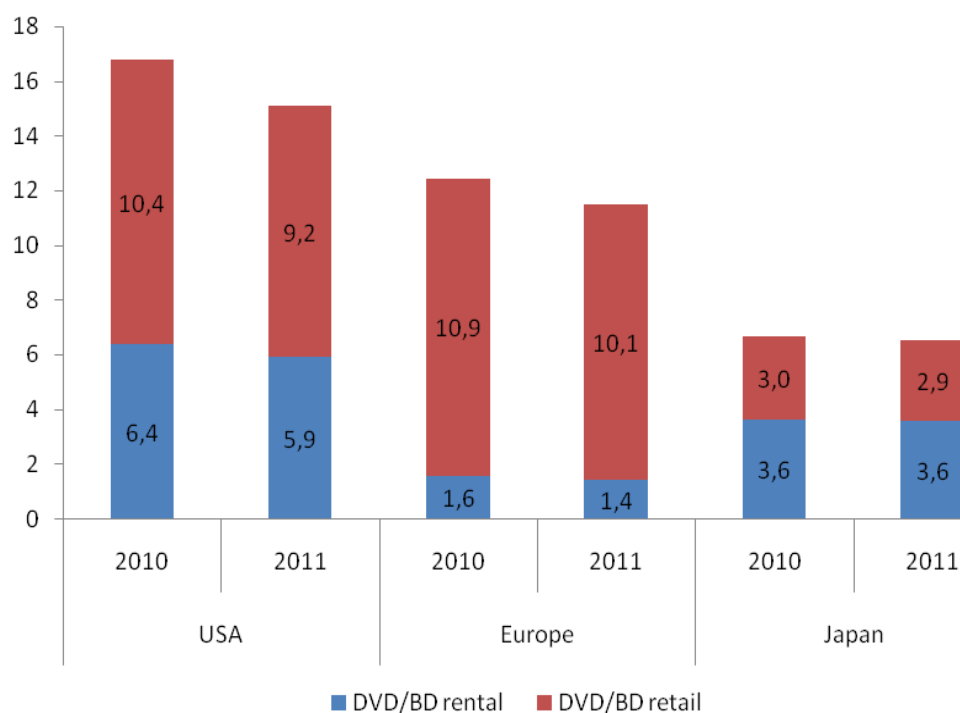
Figure 3: Worldwide physical video market share (%)



Source: International Video Federation (2012)

It is a highly concentrated market, as the main three regions account for 86.3% of total spending. If the two main distribution models within the market (retail and rental) are taken into account, there are significant differences between the three regions, as shown below.

²⁴ Estimated from International Video Federation (2012).

Figure 4: International spending on DVD/Blu-ray Disc (\$ billion)

Source: International Video Federation (2012)

Spending has dropped in all regions between 2010 and 2011 at different rates. While sales fell by 10% in USA, they fell by 8% in Europe but only 1.9% in Japan. There are also significant differences between contributions to the total market of rental and retail sales. Rental sales in Japan accounted for 55.4% of total sales in 2011. However in the other two regions, rental sales had less relevance (12.2% in Europe and 39.1% in USA).

The European market

According to the European Audiovisual Observatory, gross box office income in the European Union reached €6,413 million in 2011, up 0.7% compared to 2010. The number of cinema admissions (tickets sold) was 962 million.

Table 2: Gross box office sales (€ million) and admissions in Europe (millions) in 2011

COUNTRY	GROSS BOX OFFICE	ADMISSIONS
EU-27	6,413	962
Austria	127.3	16.8
Belgium	158.7	22.8
Bulgaria	18.7	4.7
Croatia	13.2	3.3
Cyprus	7.1	0.9
Czech Republic	49.2	10.
Denmark	125.8	12.4
Estonia	10.1	2.5
Finland	65.5	7.1
France	1,308.9 ²⁵	215.6
Germany	958.1	129.6
Greece	93	10.8
Hungary	41.3	9.5
Ireland	111.8	16.3
Italy	695.4	111.1
Latvia	8.3	2.1
Lithuania	10.7	3.0
Luxembourg	9.2	1.3
Netherlands	240	30.4
Norway	133.3	11.7
Poland	174.2	38.7
Portugal	79.9	15.7
Romania	29.4	7.2
Russia	836.3	165.2
Slovakia	17.3	3.6
Slovenia	13	2.9
Spain	630	95.6
Sweden	169	16.4
Switzerland	187.5	14.9
Turkey	171.1	42.3
United Kingdom	1,197.5	171.6

Source: European Audiovisual Observatory (2012)

The top five markets (France, Germany, Italy, Spain and the United Kingdom) of EU-27 account for 74.7% of gross box office income and 75.2% of admissions.

Regarding the physical video market, European spending fell for the seventh consecutive year in 2011, ending the year at €8.3 billion, down 7.7% compared to 2010.²⁶

²⁵ Data from 2010.

²⁶ International Video Federation (2012).

The European industry

The film industry comprises 76,000 companies across Europe in several processes involved in the value chain, with 375,000 persons employed.²⁷ The European film industry obtained a turnover of €55,400 million in 2009.

Table 3: Key figures of European film industry (2009)²⁸

COUNTRY	NUMBER OF ENTERPRISES	TURNOVER (€m)	ADDED VALUE AT FACTOR COST (€m)	NUMBER OF PERSONS EMPLOYED
EU-27	76,000	55,400	18,707.05	375,000
Belgium	1,912	1,299.2	485.2	5,985
Bulgaria	549	110.1	30.3	2,083
Czech Republic	2,299	403.1	79.7	3,784
Denmark	1,448	1,116.1	362.1	6,436
Germany	6,216	6,661.4	2,695.1	52,732
Estonia	186	38.4	17.1	1,080
Ireland	953	422.2	167.3	4,373
Greece	1,966	862.8	286.4	7,968
Spain	7,267	5,305.7	1,682.1	37,685
France	12,296	11,433.2	5,834.9	:
Italy	6,140	4,596.4	1,901.7	33,840
Cyprus	87	22.2	11.4	273
Latvia	162	29.9	8.2	614
Lithuania	104	32.1	6.1	675
Luxembourg	144	81.6	34.5	467
Hungary	3,227	1,169.9	480.3	5,806
Netherlands	1,311	2,223.9	845.2	18,641
Austria	1,531	616.3	238.2	5,436
Poland	4,677	849.7	207.5	10,974
Portugal	1,849	583.1	150.0	5,424
Romania	1,665	296.1	74.0	6,905
Slovenia	449	123.3	33.3	934
Slovakia	46	101.2	21.9	525
Finland	959	409.2	149.7	3,407
Sweden	5,185	2,100.3	533.8	9,267
United Kingdom	13,691	14,533.2	2,362.6	:
Norway	2,124	722.6	235.2	3,749
Switzerland	404	777.6	305.8	5,738
Croatia	579	113.3	37.5	1,546
Turkey	1,145	878.0	171.4	7,062

Source: Eurostat (2012)

²⁷ Eurostat (2012): SBS Database, NACE J5913. Accessed on 17 October 2012.

²⁸ ":" means data not available.

The five major economies of the European Union (France, Germany, Italy, Spain and United Kingdom) account for 60% of enterprises of the film industry and 76.7% of turnover. These percentages show a highly concentrated industry in a low number of countries.

Regarding the process of distribution, there were more than 3,600 enterprises in 2008 (data of 2009 not available in Eurostat), with a turnover of €12,744 million in 2009.

Table 4: Key figures of European film distribution (2009)²⁹

COUNTRY	NUMBER OF ENTERPRISES ³⁰	TURNOVER (€m)	ADDED VALUE AT FACTOR COST (€m)	NUMBER OF PERSONS EMPLOYED
EU-27	3,641	12,744.13	4,521.21	25,000
Belgium	62	238.8	54.3	238
Bulgaria	49	18.0	1.9	239
Czech Republic	:	:	:	:
Denmark	60	229.2	40.0	389
Germany	327	1,618.5	584.6	3,117
Estonia	0	:	:	:
Ireland	:	:	:	:
Greece	:	219.4	50.8	1,759
Spain	:	:	:	:
France	:	3,004.3	796.7	:
Italy	328	853.7	331.2	1,768
Cyprus	7	0.9	0.4	16
Latvia	16	:	:	46
Lithuania	11	4.8	0.2	70
Luxembourg	19	:	:	:
Hungary	169	841.1	439.0	856
Netherlands	24	:	:	326
Austria	81	76.3	24.2	260
Poland	232	119.8	67.9	930
Portugal	167	146.0	21.3	468
Romania	49	43.5	5.5	304
Slovenia	23	10.0	1.1	62
Slovakia	12	:	:	:
Finland	32	117.9	18.0	162
Sweden	196	486.1	98.5	1,025
United Kingdom	496	3,144.4	1,703.8	:
Norway	31	225.0	66.2	220
Switzerland	:	:	:	:
Croatia	104	32.5	10.7	473
Turkey	:	181.4	39.0	345

Source: Eurostat (2012)

²⁹ “:” means data not available.

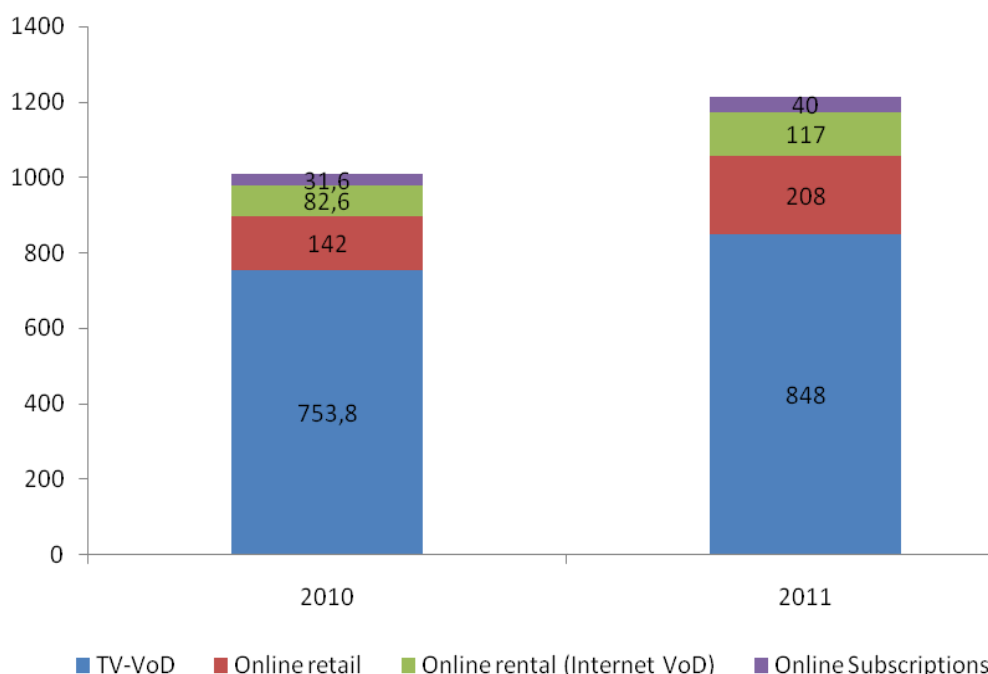
³⁰ Data of 2008.

In the case of film distribution processes it is difficult to provide accurate figures regarding geographical distribution of enterprises and turnover due to the lack of information from individual countries concerned. However, in general the film distribution sector shows the same level of concentration as global film industry, since 61% of turnover comes from only three countries (France, Germany and United Kingdom)

The transition to the digital age: The market for online films

The key indicator of the transition to digital distribution of films is current consumer spending on available online access models. This spending, which comprises the main online access models (TV-based video on demand and digital retail, rental and subscriptions services accessed via computers and the Internet connected televisions) was about €1,200 million in 2011 in Europe,³¹ which represents an increase of 20.1% over 2010.

Figure 5: Consumer spending on relevant online access models in Europe (€ million)



Source: International Video Federation (2012)

The access model with the highest growth in 2011 was digital retail (46.6%), followed by digital rental (or Internet VoD), up 41.7% to €117 million. Consumer spending on online access models accounts for 12.8% of total spending on buying and renting films.³²

³¹ International Video Federation (2012).

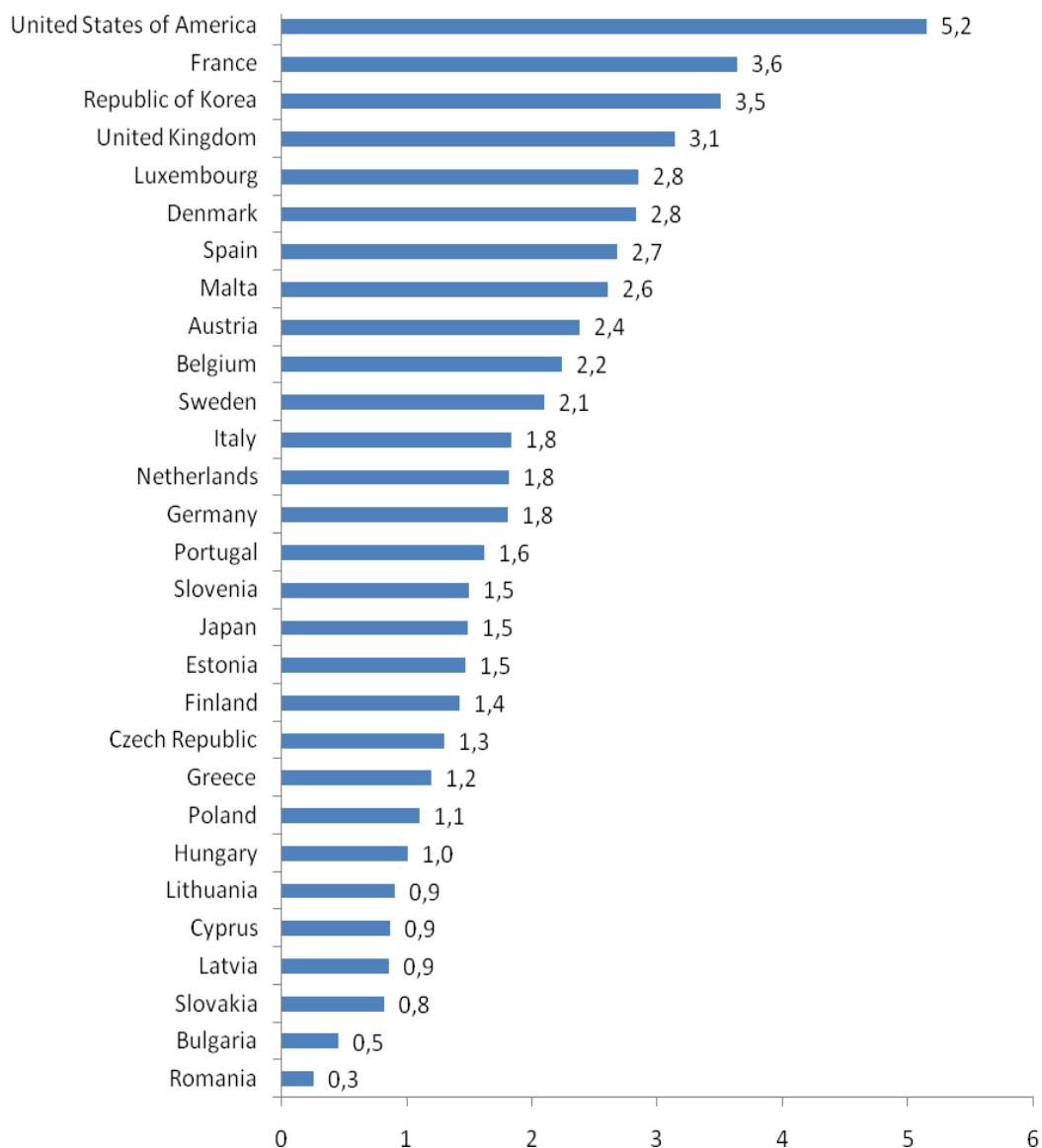
³² International Video Federation (2012).

Key indicators of demand

There are many indicators that illustrate the demand for films. The above sections aimed to characterise demand from an economic and market perspective. Now we will turn to indicators of individual user behaviour patterns in film consumption on screen including cinema, TV and computers.

The first indicator illustrating demand of traditional access models is cinema attendance frequency per capita. According to UNESCO, the country with the highest cinema attendance frequency in 2009 was Iceland with 5.8 attendances per capita. Focusing the analysis on the countries within the scope of the study USA, France, South Korea and UK are the only four countries that break the threshold of 3 attendances per capita, per year.

Figure 6: Cinema attendance frequency per capita in 2009 (age group between 5 and 79)



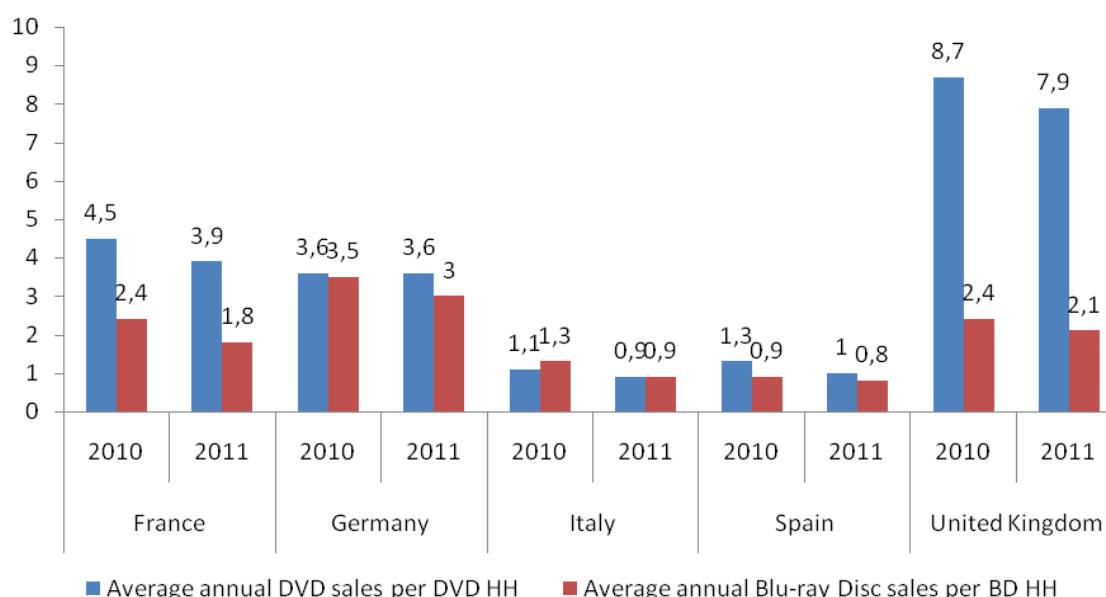
Source: UNESCO Institute for Statistics (2010)

At a global level, this indicator shows how rare going to the cinema has become, as the countries that make up the majority of world's population report an attendance frequency of less than one film per year.³³

Another interesting indicator to measure the demand for films is the average number of DVDs and Blu-ray Discs purchased per equipped household per year. In 2011 European households purchased 3.6 DVDs and 1.8 Blu-ray Discs on average.³⁴ In the same period US and Japanese households bought 6.1 DVDs and 2.4 Blu-ray Discs, and 2 DVDs and 0.4 Blu-ray Discs on average, respectively.³⁵

The following chart shows the evolution of this indicator from 2010 to 2011 for the most relevant European economies.

Figure 7: Average number of DVDs or BDs purchased per equipped household in 2011 (units)



Source: International Video Federation (2012)

As can be seen in the chart, the purchase of physical copies of films has fallen in all main European economies, both in DVD and Blu-ray Disc formats. The examples of Italy and Spain are especially relevant, as equipped households purchased less than one DVD or Blu-ray disc per year.

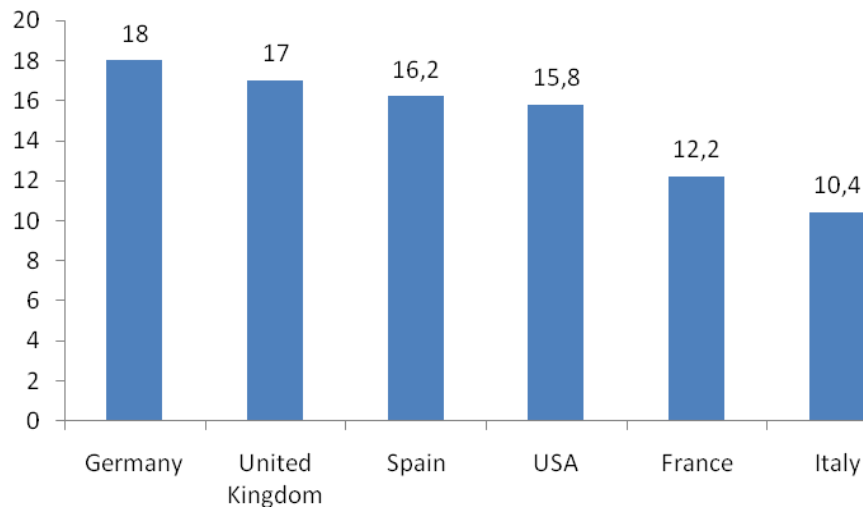
The last indicator to be analysed is related to online consumption: average time spent watching videos online.³⁶ According to Comscore, video viewers from the top five European economies spent 14.8 hours watching online videos in December 2010, just an hour less than US video viewers.

³³ Unesco Institute for Statistics (2010).

³⁴ Estimated from International Video Federation (2012).

³⁵ Estimated from International Video Federation (2012).

³⁶ Although it could be more accurate to analyse the time spent watching films, all the studies are focused on the general concept of "video". We will use this concept, knowing that it is different from that used when traditional access models have been analysed.

Figure 8: Time spent watching online videos in EU-5 and USA during December 2010 (hours)

Source: Comscore (2011)

There are pronounced differences among individual European countries. For instance, German viewers spent almost 8 hours per month more than Italians watching online videos.

Added Value

Online film distribution represents a growth opportunity for the European film industry, given the dominance of the American Majors' traditional channels of distribution and subsequent viewing in physical format (according to figure 10, US films account for 61.4% of admissions in cinemas). Online distribution allows new ways of providing contents to final users without having to use channels and business models managed by American Majors. This new form of distribution is causing a rethink of the release windows system: until recently, digital distribution was confined to viewing films on free-TV, which limited its development. Producers are now beginning to realise the added-value of this kind of distribution, compared to distribution on DVD/Blu-ray. In fact, its obvious advantages over physical media distribution (lower logistic costs, ubiquitous multi-device access, etc.) are accelerating the process, making it the second most popular way of release only after film premiere performances. In addition, the widespread infringement of online copyright has had an impact on a change in mentality (promoting online distribution instead of relegating it to one of the last release windows) among producers and distributors, as one possible way of fighting it, i.e. by legally providing the content that the user wishes to access a short time after its cinema release.

From an economic point of view it is difficult to quantify the **added-value** of online film distribution since there are no precise statistics on the volume of business these distribution models³⁷ generate, and the figures available for other added-value elements refer to the overall distribution process, without distinguishing between physical and online distribution. Official sources such as Eurostat provide an overall figure of added-value per film distribution, video and TV programmes in the European Union of €4,521 million in

³⁷ De Vinck, D. & Lindmark, S. (2012): *The film sector*. Luxembourg: Institute for Prospective Technological Studies. Joint Research Center. European Union.

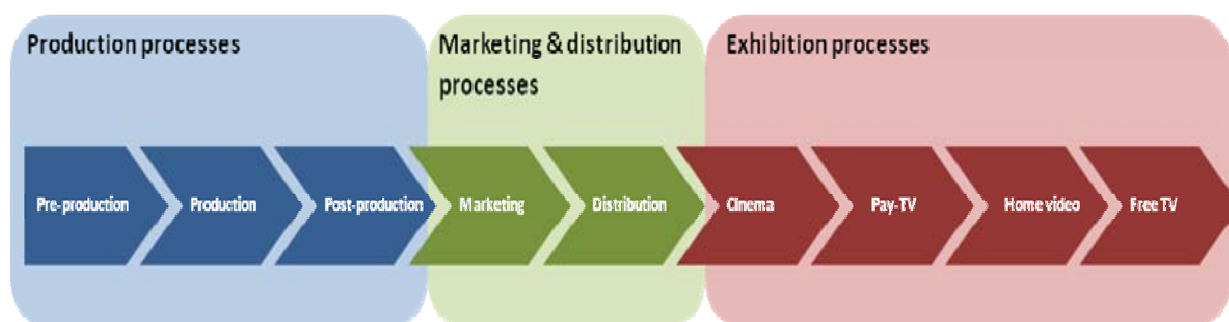
2009.³⁸ If we consider this, the online market share of the overall film distribution market worldwide is estimated at 5%,³⁹ thus if we assume the same percentage for Europe and we apply this percentage to the value benchmark set by the filming distribution industry, then we can estimate that the added value of online distribution in Europe would be approx. €226 million.

But added-value cannot be measured only in economic terms. The aspect of cultural and heritage preservation must be taken into account when assessing the contribution of the online film distribution sector. Online distribution provides an opportunity to raise awareness of European film heritage that otherwise would not be possible.

2.2.3. Value chain analysis

The conventional film industry is made up of several categories of players, who develop their activities in the various areas of the value chain: production, distribution and marketing, and exhibition.

Figure 9: The traditional film sector value chain



Source: Adapted from De Vinck & Lindmark: *The film sector* (2012)

The conventional categories of players involved in the film industry are producers (involved in pre-production, production and post-production processes), distributors (involved in distribution and marketing processes), exhibitors (focused on general cinema exhibition), retailers, both physical and online (focused on selling films after cinema release), and broadcasters (focused on screening films through pay-TV services and free-to-air TV), through the release windows system.⁴⁰ This system is based on a multi-stage process of showing and viewing films. Stage one is premier followed by general cinema release, then video home rental and sales, pay-view services, pay-TV and finally free-to-air TV. Time intervals between each stage are contractually agreed upon, or defined via industry consensus.⁴¹ The most common schedule for release is as follows: home video rental and sales is 6 months after general cinema release; pay-per-view release (film rental services from pay-TV broadcasters or online film rental services) 3 months after home video release (hence 9 months after cinema release); pay-TV release (free release on Pay-TV services) 3 months after pay-per-view release (12 months after cinema release); and free TV broadcasting 12 months after pay-TV showing (24 months after cinema release).⁴²

³⁸ Eurostat. Accessed on 17 October 2012.

³⁹ De Vinck, D. & Lindmark, S. (2012): *The film sector*. Luxembourg: Institute for Prospective Technological Studies. Joint Research Center. European Union.

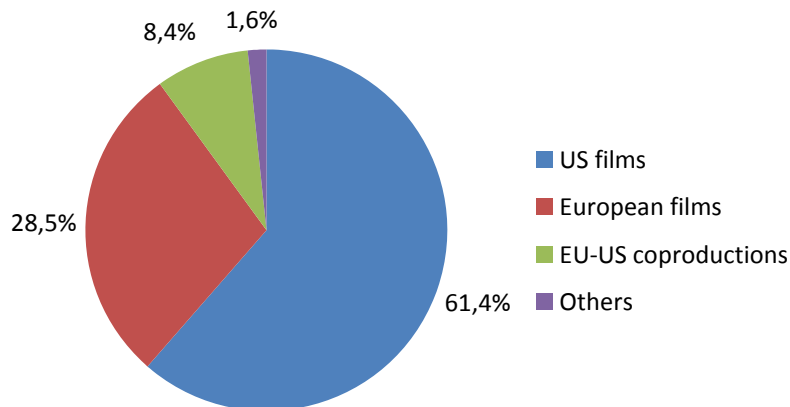
⁴⁰ Ibid.

⁴¹ Ibid.

⁴² Ibid.

Each category of agents is made up of different types of companies: individual creative entrepreneurs, SMEs focused on national markets, national large companies vertically integrating the entire film value, or horizontally integrating portions of the value chain (for instance, retail) across several types of content (retail films, music video games, etc.), and large international companies and their affiliates (mainly Hollywood studios).⁴³ These latter players have a dominant position in the European film market, which has strong implications in digital distribution, as will be analysed further on. According to the European Audiovisual Observatory, in 2011 the market share of US films in Europe accounted for 61.4% of admissions⁴⁴, and in the past five years has been over 60%.

Figure 10: EU market share by country of origin in 2011 (%)



Source: European Audiovisual Observatory

Although the dominant position of US films refers to cinema exhibition, it also applies to the other release windows (home video sales and rentals, online distribution, pay-TV and free-to-air television).⁴⁵

Digitisation has been the basis of each of more recent innovations in the film industry. In fact, digitisation affects all processes of the film industry value-chain.⁴⁶ Some of them, such as production or post-production, are almost totally carried out digitally (digital cameras, post-production software, etc.). The first step towards predominant digitisation was the transition from VHS standard to DVD standard in the mid-1990s. The second step was the distribution of digitalised films by digital broadcaster TV networks (both free and paid services). The third step was the replacement of 35mm film with digital copies played through digital projectors during cinema performances. Finally, we are currently undergoing the last stage of the digitisation of the distribution process: replacing physical distribution of digital copies (DVD, Blu-ray) by online distribution via the Internet.

⁴³ De Vinck, D. & Lindmark S. (2012): *The film sector*. Luxembourg: Institute for Prospective Technological Studies. Joint Research Center. European Union.

⁴⁴ European Audiovisual Observatory (2012): Press release: "EU box office inches to record high in 2011 as European comedies provide welcome relief and 3D matures" http://www.obs.coe.int/about/oea/pr/mif2012_cinema.html. Accessed in October 2012.

⁴⁵ De Vinck, S. & Lindmark S. (2012): *The film sector*. Luxembourg: Institute for Prospective Technological Studies. Joint Research Center. European Union.

⁴⁶ Ibid.

These two last stages are considered in detail in the following paragraphs, since they are the processes of digital distribution to which the film industry is currently devoting their efforts, and the processes which are decisively contributing towards reshaping the current value chain. Firstly, the drivers and barriers of digital distribution of films for cinema release will be analysed. Secondly, the opportunities for and threats to online services will be described.

Starting with the shift from physical to digital distribution, the driving force of digitisation in the distribution process within the cinema release system are the costs saved overall in the distribution process both for producers and distributors. The replacement of 35mm film with digital archives allows distributors to save approximately €1,000 per copy.⁴⁷ In major film releases, with thousands of copies being shown around the world, savings through replacement of physical copies with digital files are clearly evident. Marked savings are also witnessed in the drop of logistics costs; costs fall dramatically in digital distribution, since the physical transportation of reels to cinemas is replaced by Internet connection.

The digitisation of films also offers advantages from the post-production point of view. The process facilitates the processing of information for the same film, such as foreign-language subtitling and/or dubbing.⁴⁸

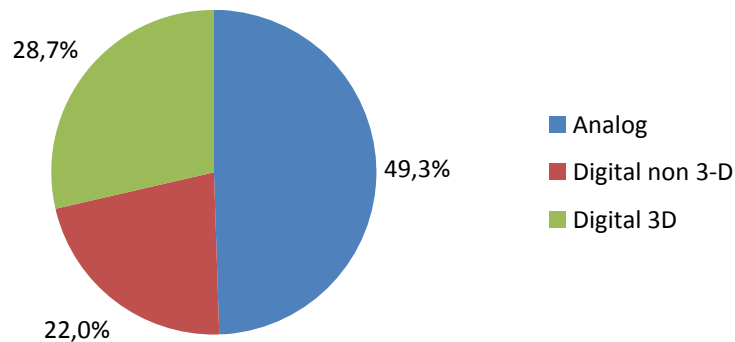
Reducing costs through the digital distribution of films also favours entry into the film-exhibition market by independent or medium-sized producers. They can allocate their budget to a range of other processes within the value chain, such as marketing activities, to achieve a wider dissemination of their work. Replacing physical distribution with digital distribution also enables independent film-makers to become less dependent on major Hollywood studios in the distribution process and promotes the disintermediation of the value chain.⁴⁹

Despite the undeniable advantages of the digitisation of films in post-production processes and the creation of copies, which facilitates the entry of medium-sized producers, some obstacles still stand in the way of or slow down digital distribution. The digitisation of cinemas is one of the most important steps in the overall film industry. Although this process started more than a decade ago, almost half of existing world cinema screens are still analogue.

⁴⁷ De Vinck, S. & Lindmark S. (2012): *The film sector*. Luxembourg: Institute for Prospective Technological Studies. Joint Research Center. European Union.

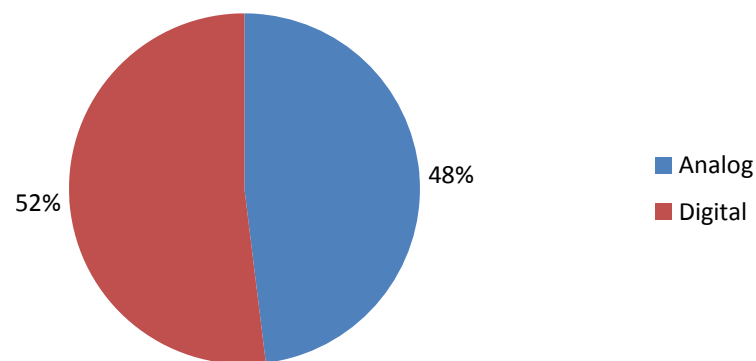
⁴⁸ Ibid.

⁴⁹ Cameron, L. & Bazelon, C. (2011): *The impact of Digitisation on Business Models in Copyright-Driven Industries: A review of the Economic Issues*. The Brattle Group, Inc.

Figure 11: 2011 Cinema Screens by Format in the World (%)

Source: Motion Picture Association of America, Inc.

According to the European Audiovisual Observatory,⁵⁰ the situation in Europe is similar to the world situation with 52% of cinema screens digitalised.

Figure 12: 2011 Cinema Screens by Format in Europe (%)

Source: European Audiovisual Observatory (2012)

The biggest problem in the digitisation of cinemas is the large investment required for digital equipment for performance, as well as other major investment for transfer that must be made by cinema owners. The average cost of cinema-digitisation is about €100,000 per screen (accounting for digital projector, 3D screen, in-house management structures and systems).⁵¹ However, the main beneficiaries of digitisation are the distributors, given the savings in costs they reap,⁵² although in the transition period, where analogue and digital cinemas coexist, distributors must generate both types of copies, which poses an extra cost that will continue if the digitisation process of cinemas slows down.

⁵⁰ European Audiovisual Observatory and Media Salles (2012): *Press release. Over half of Europe's screens are now digital but single-screen cinemas are struggling.* Strasbourg/Milano 18 January 2012.

⁵¹ De Vinck, D. & Lindmark S. (2012): *The film sector.* Luxembourg: Institute for Prospective Technological Studies. Joint Research Center. European Union.

⁵² According to the Independent Cinemas Office of United Kingdom, a cinema-ready digital copy of a standard feature film costs as little as £50 as opposed to £500 – £2,500 for a 35mm print copy: <http://www.independentcinemaoffice.org.uk/resources/how-to-start-a-local-cinema/building-design/digital-cinemas>. Accessed in March 2013.

The investment needed to digitalise cinemas may be acceptable for chains and multiplex cinemas, which show films of high commercial value, but may prevent access to the digital age by smaller independent European cinema networks.⁵³ In addressing the reluctance of cinemas to tackle digitisation due to the high costs involved, a new financing model has been developed in the USA: the Virtual Print Fee (VPF).⁵⁴ The model is based on the acquisition of equipment by a third-party investor and both cinema venues and distributors pay a fee (higher for distributors given the potential savings that can be achieved) for use.

Focusing analysis on the online distribution of films, both through Internet services and services managed by broadcasters or telecommunications operators, the main driving force comes from the growing tendency among audience viewers towards this new form of distribution, which in turn is leading to the digitisation of the producers' catalogue. Online distribution also allows innovative business models to be implemented, better suited to the demands of users in critical areas such as reproduction quality, prices or new services provided by connected devices (smartphones, tablets, Smart TVs, etc.).

However, there are also barriers that hinder the distribution of digitised works: online copyright infringement is one of them. While it primarily affects the home video and cinema release window, it also limits the release of legal services by practising unfair competition. Illegal services offer free access to a quality digital copy of films, which prevents legal services from intervening and competing with them.

The other obstacle, common to other cultural digital content and occurring in the distribution of digitised films as well, is the territorial limitations of licences granted by producers. Licensing policy works within a defined territory inherited from the distribution of physical copies, and which significantly restricts access to content by users who seek a broader programme on the Internet available in the aforementioned operating windows.

In addition to these driving forces and hindering obstacles, the most important challenge that online services face in becoming a real alternative to traditional channels of distribution is to shorten the time gap between cinema release and online release. Ideally, it should be at the same time as home video release or even before. There have already been attempts to prioritise online release,⁵⁵ however, the majority of large producers and distributors continue to rely on the home video release window, since it has been the main source of revenue for the last 30 years, exceeding even box-office sales and income. Producers have preferred to slow down online release in an attempt not to cannibalise their income from home video release. Nevertheless, the last few years have witnessed a change in attitude with the launching of successful online services, like Netflix, Vudu or Lovefilm, and new opportunities have been opened up for online distribution by modifying the traditional release schedule, providing an alternatives to home video rentals and sales.

⁵³ European Commission (2010): *Communication from the Commission on Opportunities and Challenges for European Cinema in the Digital Era*: Brussels COM (2010) 487 Final.

⁵⁴ Arts Alliance Media (2010): *Virtual Print Fee: Questions and answers from Arts Alliance Media website* http://www.edcf.net/edcf_docs/vpf_q-a_200710.pdf. Accessed in March 2013.

⁵⁵ In September 2012, Twentieth Century Fox announced the release of digital movies through the Internet weeks before DVD release. http://www.nytimes.com/2012/09/07/business/media/fox-to-offer-digital-movies-closer-to-theater-release.html?_r=0. Accessed in October 2012.

2.2.4. New business models

As discussed previously, the digitisation of audiovisual content leads to the development of innovative business models for online distribution. Several agents are involved in developing these new business models: we find traditional agents of the value chain of the film industry (producers, distributors, exhibitors, retailers, broadcasters) creating their own online distribution services to directly exploit the new distribution methods, and who are exploring synergies with other release windows. Clear examples are the US services that use standard Ultraviolet,⁵⁶ described as a case study (see section Case studies). Another example is the Filmotech⁵⁷ service, focusing on Spanish cinema and developed by the Spanish Audiovisual Rights Management Body (EGEDA). When establishing business models, synergies between different actors in the value chain also play an important role. For example, independent producers, whose biggest challenge is access to a market dominated by major companies, can try to increase their presence in the market through strategic alliances, distributing their works digitally through services related to devices with high penetration among users. An example of this type of model is the service Mubi,⁵⁸ which reached an agreement with Sony Computer Entertainment Europe to incorporate the service rendered by the console PlayStation 3.⁵⁹ This service, accessed directly via the Internet, has created a market from millions of users of this device, in which competition is much lower than on the Internet. Other clear examples of innovation in business models can be found in strategies followed by TV broadcasters, who, through their Web portals, are distributing their own content (series, documentaries, etc.). They obtain additional revenue via advertising or by modifying the window release and by charging users a fee to view episodes of key series online before being broadcast on television. Although the extent of such use on the market is still limited, both from the economic point of view as well as the number of users (see section Key indicators), these are innovative solutions that allow audiovisual contents to be provided for the growing demand of online users with the added value of: quickness, easiness and low costs.

Moreover, new actors beyond the traditional value chain are trying to position themselves in the online distribution process with a variety of strategies and goals. One example is Netflix,⁶⁰ the leading US online rental movie service with over 27 million subscribers in ten countries, or iTunes from Apple. Both agents had not been part of the film value chain prior to the advent of online distribution, but have managed to position themselves strategically in the online environment, having taken advantage of traditional players, trying to regain control of distribution through initiatives such as the ones discussed above.

Both types of agents, the ones in the traditional value chain and new entrants, use mainly two distribution mechanisms: downloading files to the user device for later playback or streaming playback. Although there is a growing trend towards streaming – a mechanism that allows the user to start playback at the time of purchase or rental of the film, facilitating control of intellectual film property rights by the creator of the service, providing greater flexibility and business and introducing added value services such as user interactivity⁶¹ – some services continue with downloading services, since streaming requires a greater bandwidth that not all Internet connections have. However, given the

⁵⁶ Ultraviolet website <http://www.uvvu.com>. Accessed in October 2012.

⁵⁷ Filmotech website <http://www.filmotech.com>. Accessed in October 2012.

⁵⁸ Mubi website <http://www.mubi.com>. Accessed in October 2012.

⁵⁹ About us, Mubi website. <http://mubi.com/about/partners>. Accessed in October 2012.

⁶⁰ Netflix website <http://www.netflix.com>. Accessed in October 2012.

⁶¹ Asimelec (2010): *Informe 2010 de la industria de contenidos digitales (Digital content industry 2010 report)*. Madrid, Spain.

advancement of Internet connections in terms of speed, streaming distribution is gaining ground over downloading. There are also services, depending on the dynamics of the Internet, which offer both options to the user.

One of the challenges faced by online film distribution services is achieving correct segmentation of the target market, using a business model for each segment identified to suite their characteristics, considering aspects of access mode, price plans, enabled devices, available catalogue and DRM mechanisms. The combination of all these variables offers multiple possibilities for the development of business models.

According to the experts interviewed, the key to a successful business model in the cinema industry lies mainly in the extent and diversity of the film catalogue and on the speed of the online launch of a film premier. Although the long tail⁶² model is useful in increasing the dissemination of European audiovisual heritage, its economic potential still remains unclear.⁶³ Meanwhile, online service distribution creators are focusing their efforts on acquiring the rights of commercial launches, the main attraction for most users.

2.2.5. Financial sustainability

Traditional funding model

The traditional funding model, which provides funds for each stage of the value chain, from pre-production (or even script writing) to marketing and distribution processes, is headed by film producers. They can finance all processes up to final release and showing, depending on the level of vertical integration of the industry. Some studios have even invested in cinema chains, encompassing the whole value chain.⁶⁴

Given that pre-production, production and post-production processes are directly supported by producers, it seems purposeful to analyse how the distribution process is financed; it can be funded by two different agents:

- US Majors Studios through their distribution divisions located in national regional markets;
- independent distributors who are not associated with the US Major Studios. These can be territorial distributors in their own countries or exporters in source country.⁶⁵ They can be involved in all territorial distribution activities from cinema release to distribution via Internet services.⁶⁶ This type of agent tends to focus on local films.

Although US Majors Studios dominate the release windows system in most countries, there are other territories such as France, Japan or South Korea where independent distributors control distribution through different screens.⁶⁷

⁶² 'Long tail', concept coined by Chris Anderson, refers to a strategy of selling a great variety of goods with low prices over a long period of time. Thanks to digitization and distribution, storage costs have dropped dramatically. This fact enables a broad catalogue of products to be sold without time limits and at a low cost, so it is possible to encompass a huge potential market, allowing small audiences to be built up over time and establish space in the global marketplace for 'less-commercial' contents.

⁶³ De Vinck, S. & Lindmark, S. (2012): *The film sector*. Luxembourg: Institute for Prospective Technological Studies. Joint Research Center. European Union.

⁶⁴ WIPO (2011).

⁶⁵ Ibid.

⁶⁶ Ibid.

⁶⁷ Ibid.

Funding models for new services

Once a digital copy of a film exists, the process of online film distribution requires funding for further activities:

- Acquisition and deployment of necessary technological infrastructure for service delivery;
- acquisition of licences for distribution of audiovisual content;
- marketing and promotion activities.

In relation to the first activity, funding mechanisms depend massively on the nature of the service provider. For services developed by new companies, with or without a previous relationship with the film industry, there are a number of funding opportunities from the public sector both at a national, regional and European level. These opportunities may be generic to the specific activities or venture of the film. Most countries have economic support plans for online film distribution, either through promotion agencies of cultural industries or through support for business innovation.

At the European level, the MEDIA 2007 programme of the European Commission funds the creation of pilot projects to incorporate technological advances in the value chain of the audiovisual sector. In the field of distribution this programme funds the development of VoD services to: *"support the creation and exploitation of catalogues of European works to be distributed digitally across borders to a wider audience and/or to cinema exhibitors through advanced distribution services, integrating where necessary digital security systems in order to protect online content"*.⁶⁸

The deployment of infrastructure and the development of ICT systems in online distribution involve an initial investment for companies who can usually access various public funding programmes, both at a national and European level, as well as other mechanisms to develop new businesses (seed capital) or business lines (private equity, bank loans, etc.). However, the biggest financial problem faced by companies who wish to launch online film service distribution is not necessarily related to technological infrastructure, but to the cost of licences for audiovisual content distribution, which in certain circumstances can jeopardise the viability of the business model as a whole. Film studios require a fixed advanced payment for the licensing rights of their films, regardless of sales figures of the online distribution service. The acquisition of online distribution rights due to this type of payment is a financial obstacle in the way of launching these services by SMEs, which are only eligible to distribute small catalogues of films without commercial developments. Major commercial releases, which are those in high demand by users, are left to their own production companies to distribute through their own departments or via large companies (Apple, Amazon), which have the financial clout to pay for such licences in advance. An additional problem is the economic and administrative burden of negotiating licences for each area in which the content can be accessed.

The main challenge to online film distribution services hoping to achieve economic viability is becoming well-known among the general public. The opportunity for services to make audiovisual content accessible on the Internet is vast (according to the European Audiovisual Observatory, there were 264 online Video-on-demand services across Europe in 2011⁶⁹) and much of its success relies on their ability to reach as many potential users as possible. This requires adopting a suitable marketing strategy and target-oriented promotion. The Internet enables this marketing process to be more efficient, making it a powerful tool in circulating this service among web users.

⁶⁸ Media programme website http://ec.europa.eu/culture/media/programme/newtech/vod_dcc/index_en.htm. Accessed in October 2012.

⁶⁹ European Audiovisual Observatory (2011): *2011 Yearbook: Film, television and video in Europe*.

Payment models are varied and shared among other content industries. There are online distribution services that offer free access to certain films (with advertising), replicating the model of free-to-air TV. Generally, providers of such services combine a catalogue of open access works with payment models. User payment models include: making a charge for each individual transaction (rental or sale of a downloaded movie or streaming mode), or periodical subscription offers (typically monthly) for unlimited access to the catalogue available. The pricing-scheme for films is implemented depending on the time period between cinema release and its launch online. New releases ("new" meaning anything from a few months up to one year after general cinema release) are sold at a higher price than catalogue films.

2.2.6. Case studies

The following case studies present several examples of the impact of online distribution in the film sector. They have been selected due to their novelty in relation to some of the aspects analysed in the preceding paragraphs. The first one, Ultraviolet, represents a good example of an industry standard which is contributing to the modification of the release windows system, favouring online distribution. The second one presents an innovative way of financing films, taking advantage of the possibilities brought by the Internet. This case study, suggested by one of the experts interviewed, shows how the Internet can contribute to the development of the European film industry, not only increasing the channels of content distribution but enabling new ways of financing.

Box 1: Ultraviolet standard

ULTRAVIOLET

Ultraviolet is a US online film distribution standard developed by the Digital Entertainment Content Ecosystem Consortium, which brings together more than 70 US agents of the film value chain, including film studios, retailers, consumer electronics manufacturers, cable TV companies and ISPs. Ultraviolet represents a new approach for digital distribution based on the collaboration between different agents in the value chain.

The standard is used by one of the leading American retailers (Walmart Entertainment) and by some of the majors such as Fox, Universal, Paramount and Sony Pictures.

This cloud-based standard allows users, and up to five members of a household, to access the catalogue of films from multiple devices (TV, PC, Tablet, Smartphone, Video games consoles) through streaming or playback by downloading the file. The service also provides copies of DVD or Blu-ray films on request.

The creators of the service have also explored the synergies with physical distribution. DVDs and Blu-ray sold by retailers within the consortium have a barcode that allows the owner to redeem a digital copy of the film, so users can watch the film wherever they go.

The relevance of this case study lies in the fact that some services that use the UV standard make films available simultaneously both online and in DVD/Blu-ray format. For the first time, commercial services are equating the release window of DVD/Home Video Rental & Sales with viewing sold online, giving an idea of the importance that the big players are starting to attach to distribution via the Internet. In fact, this is one of the main features highlighted by the creators of the service as a value-added service compared to its major competitor in the American market, Netflix, who offers its customers viewing 28 days after its release on DVD/Blu-ray.

Source: www.uvvu.com. Accessed in November 2012

Box 2: People for cinema**PEOPLE FOR CINEMA**

'PeopleForCinema' is a crowdfunding platform enabling people to participate in the promotion of films, or fund part of the distribution budget. Thus, individual investors can participate in the distribution of films with distribution companies. This service was founded by two entrepreneurs in Paris, in 2009.

The website provides information to help people choose a film to back, e.g. synopsis, cast, financial information, outcomes of similar films, etc. Individual investments can be as much as 10% of the overall budget.

Incomes films make are then shared between all the participants according to their initial financial contribution. Additionally, participants can access special film offers, such as invitations to premières or exclusive interviews and videos. However, investors can also lose money, if the film is a flop. Currently, this platform constitutes the most important French distributor and has participated in more than 40 films, raising almost 2.5 million Euros.

Apart from establishing a new model of funding, this model has created a new kind of cinema promotion, since every online investor becomes an ambassador to the film they have funded, so film financing participants in this project frequently achieve greater presence on social networks, for example.

Source: www.peopleforcinema.com. Accessed in November 2012

2.2.7. Conclusions

This brief analysis of the film industry shows a sector with considerable expectations regarding this new way of distribution, which it has taken in digitisation at all stages of the release windows system, although with some reluctance from the big players (Majors) to enhance online distribution at the same time as the Video/DVD rental and retail release windows. The current protection system of the release windows (either delaying launch online or by high licensing fees for online film distribution, which adds considerable financial complications to the launch of new services) goes against the creation of new business models in the field of online distribution. Additionally, the use of online distribution licensing mechanisms by national territories, typical for the distribution of physical copies, does not facilitate the deployment of new services tailored to the application, which requires engaging content online regardless of origin. The main conclusions to be highlighted are:

- The European market is dominated by the US Major Studios. Over 60% of the films shown in Europe originate in the USA.
- The European industry has a number of national film producers focusing on domestic consumption. Online distribution can help improve their dissemination beyond national borders.

- Cinema distribution is based on a system of release windows. The classic distribution 6-9-12-24 (releasing movies on physical format – DVD/Blu-ray – six months after cinema release, 3 months later released on PPV services, 12 months later released on pay-TV services, and 24 months later on free TV) is being profoundly changed by the advent of online distribution. Producers are discovering the potential of this new form of distribution and are beginning to prioritise the online launch of their film productions.
- The distribution of films through online services is being performed by both the actors in the value chain who own the rights, and the incoming agents that acquire distribution rights. Thus, rights' holders have two open business opportunities: their own online services, or licensing of works for exploitation by the end user.
- The major investment to be made by third parties when launching a film distribution service is the cost of licences. Additionally, the policy followed by the Majors when licensing their content for online distribution (payment in advance of the licence regardless of real sales or forecast sales) is a major financial obstacle for small and medium businesses trying to break into the distribution world and is hindering their economic sustainability.
- The general public are looking for access to recent commercial releases in online distribution and it is not yet clear whether the term "long-tail" means the sustainability of online distribution services will be ensured. However, the existence of market niches of non-commercial consumers, linked to the high level of non-commercial movies produced in Europe, may contribute towards achieving that economic sustainability.
- The business models used in online distribution are varied, offering the user various options for access and payment according to their preferences. In general, there is a trend toward the streaming mode access, while with regard to payment the most common models are based on payment per individual transaction (purchase or lease), or periodical subscriptions for unlimited access to the catalogue. The fundamental aspect of any business model aimed at the general public is that it has an extensive catalogue of content that includes the latest releases. Business models can also be targeted at specific niches of users and their characteristics should meet the expectations of those users in the niche.
- In the area of online film distribution, administrative barriers remain, comprising physical distribution methods, such as territorial or geographical limitations for distribution. This policy of the rights' holders to exploit presentation, or distribute licences according to territory is a barrier preventing overall success of online models.

2.3. Videogames

KEY FINDINGS

- The video games industry is the only content sector which has **arisen in the digital era**, in which most activities in the value chain are performed digitally and therefore offer possible insights into digital development of other industries.
- **Online distribution is altering the traditional value chain** of the sector. The roles of traditional agents such as publishers and distributors are declining. These agents are facing a disintermediation process, which now favours a direct relationship between games developers and online retailers, or even end-user customers. The gradual disappearance of these distribution agents in the Internet world and in distribution mobile devices is hindering access to finance for games development companies.
- The video games industry is one of the content sectors with the **highest percentage of revenue derived from online distribution**. Around 42% of the income earned in 2011 by the global video games industry came from online sales.
- The overlap between video games and the ICT sector has facilitated the creation of an **innovative ecosystem** in which new models have taken advantage of the advances in the field of communications.
- There are **multiple business models fully adapted** to the needs of users in areas such as access modes (via Web browser, client application installed on the computer, mobile application, etc.), payment (per download, recurring subscription payment, payment for game extension or access to game extensions, purchasing items that enhance the gaming experience, etc.), or game devices (consoles, computers, smartphones, tablets, etc.).
- One of the business models created by the video games industry, free to play, may be of interest in the operation of public content, since it can be made available free of charge to users, requiring payment only from those users who want enhanced features.

2.3.1. Introduction

The games industry has one essential feature that sets it apart from the other three content sectors analysed: it is the only content sector created in the digital era, in which most of processes of the value chain are performed digitally. Also, this sector pioneered experimenting with new online distribution models, since they did not need to digitise their content. Although mainly focused on the field of entertainment, the games industry can pass on good practices and useful lessons for the online distribution of public content.

The games industry is, so far, the most innovative in creating models of access to content. Its greatest overlap with the ICT sector has facilitated the creation of an innovative ecosystem in which new models have taken advantage of advances in the field of communications, both fixed and mobile. Also, companies are still able to fight against the greatest threat to digital distribution: online copyright infringement by offering users

business models with higher added-value that favours the growth of legal services in video games distribution.

Another highlight of this industry, thanks to its innovative nature, is its proactivity. While the other commercial sectors of cultural content are being launched into online distribution, forced by changes in user habits (tendency to consume more content on the Web), and the impact of copyright infringement on their physical distribution figures, the games industry has been swifter in taking advantage of online distribution. The games industry has actively contributed to shape consumer purchasing and viewing habits online, influencing consumers' patterns of other online content. For this reason, analysing this industry can serve as an example for the distribution of public content online.

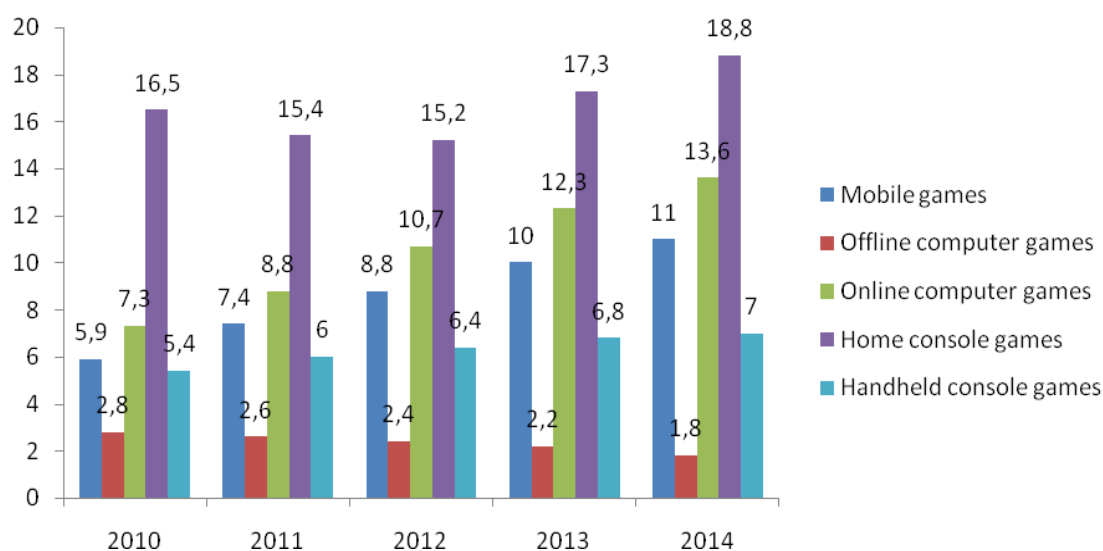
2.3.2. Key indicators

The global market

The worldwide videogames market reached €40.2 billion in 2011.⁷⁰ It is expected to grow 9.1% per year up to 2014.

Though home console games is the category that contributes most to the global market (38.3% in 2011), wireless games and mobile games are video game segments for which further growth is expected by 2014, with an annual growth rate of 16.8% between 2010 and 2014, well above the average annual growth rate of sales in consoles and portable games (3.3% and 6.7% respectively).

Figure 13: Worldwide video games software market by segment (€ billion)



Source: IDATE (2011)

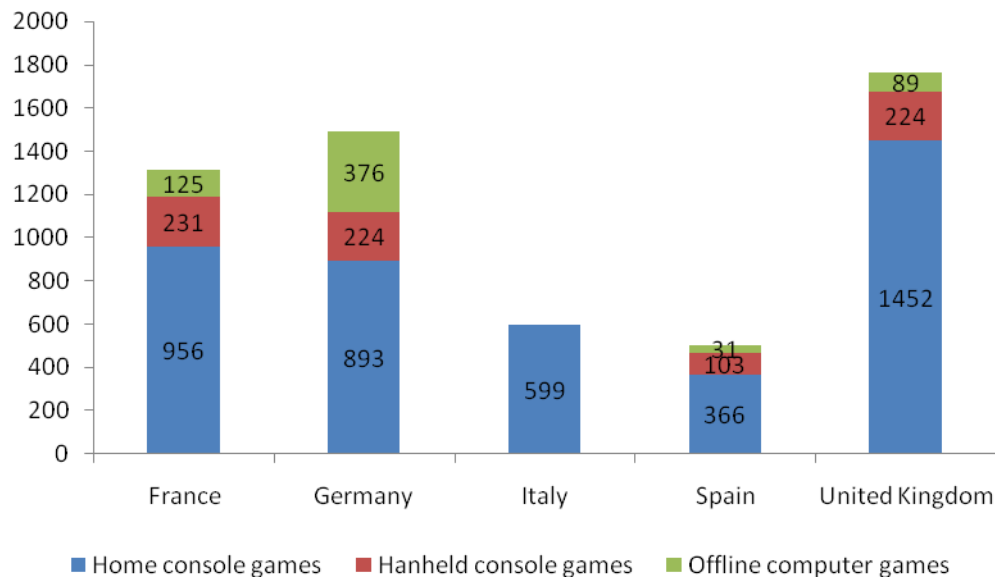
The only category in which revenue will decrease up to 2014 is offline computer games. Its contribution to the global market in 2011 was 6.5%, but is forecast to be only 3.4% in 2014.

⁷⁰ Idiate (2011): *Digiworld Yearbook 2011*. Montpellier, France.

The European market

The European market is led by the United Kingdom, followed by Germany and France. The top five economies of Europe reached an overall income of €5,670 million⁷¹ in 2011.

Figure 14: European video games software market by segment⁷² (€ million)



Source: ADESE (2011)

In all the countries analysed, videogames for home consoles are predominant, especially in the United Kingdom (82.3%), Spain (73.2%) and France (72.8%). Offline computer games are very popular in Germany. This category accounts for 25.2% of their total market.

The European industry

The data available from official sources for this sector are scarce. Eurostat only provides information about the videogames publishing industry, without reference to the development process in which Europe shows more strength.

⁷¹ Adese (2011): *Anuario de la industria del videojuego*. Madrid Spain. This figure only considers offline models (home console games, handheld console games and offline computer games).

⁷² The source used does not present disaggregated data for Italy.

Table 5: Key figures of European publishing computer games sector (2009)⁷³

COUNTRY	NUMBER OF ENTERPRISES	TURNOVER (€m)	ADDED VALUE AT FACTOR COST (€m)	NUMBER OF PERSONS EMPLOYED
EU-27	:	2,008.73	:	9,100
Belgium	81	35,9	20.0	363
Bulgaria	6	0,1	0.0	11
Czech Republic	:	:	:	:
Denmark	19	47.1	32.2	405
Germany	214	328.2	140.0	1,282
Estonia	1	:	:	:
Ireland	:	:	:	:
Greece	0	0.0	0..0	0
Spain	:	:	:	:
France	149	666.5	287.9	:
Italy	16	9.9	0.9	98
Cyprus	5	8.4	5.2	135
Latvia	3	1.4	0.1	6
Lithuania	6	2.2	0.4	14
Luxembourg	1	:	:	:
Hungary	15	0.6	0.1	18
Netherlands	0	0.0	0.0	0
Austria	9	17.5	6.1	67
Poland	84	9.5	4.9	255
Portugal	21	0.9	0.2	40
Romania	63	17.1	10.4	713
Slovenia	3	0.1	0.1	:
Slovakia	0	0,0	0.0	0
Finland	12	:	:	:
Sweden	197	230.3	80.3	1,697
United Kingdom	103	576.2	:	:
Norway	22	19.3	14.5	245
Switzerland	:	:	:	:
Croatia	0	0.0	0.0	0
Turkey	2	:	:	:

Source: Eurostat (2012)

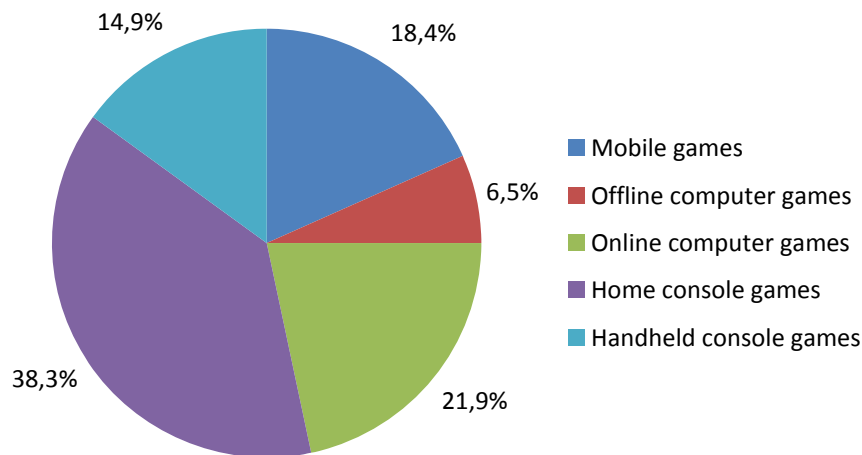
The videogames publishing industry has a limited overall economic impact, with a turnover of €2,008 million at the European level. It is a highly concentrated industry, as 89.7% of turnover comes from only four countries (Germany, France, Sweden and United Kingdom).

⁷³ ":" means data not available.

The transition to the digital era: The market for online games

The video games industry is, along with the music industry, the sector with the highest percentage of revenue derived from online distribution. Around 42% of the income earned in 2011 by the global video games industry came from online sales.⁷⁴ According to data provided by other sources,⁷⁵ the percentage which came from digital distribution was 40%.⁷⁶ In absolute terms, the global market for online games reached €16.2 billion in 2011.⁷⁷

Figure 15: Share of revenue by type of video games in 2011



Source: IDATE (2011)

Incomes from console games, both home and handheld consoles, accounted for 53.2% of total incomes. Online computer games and mobile games, the two categories involved in digital distribution, were the second and the third largest categories by revenue, respectively.

Key indicators of demand

According to ISFE (Interactive Software Federation of Europe), 48% of European online population play games. 25% of this online population play at least once a week.⁷⁸ The following figure shows the percentage of Internet users that play different types of games in different European countries.

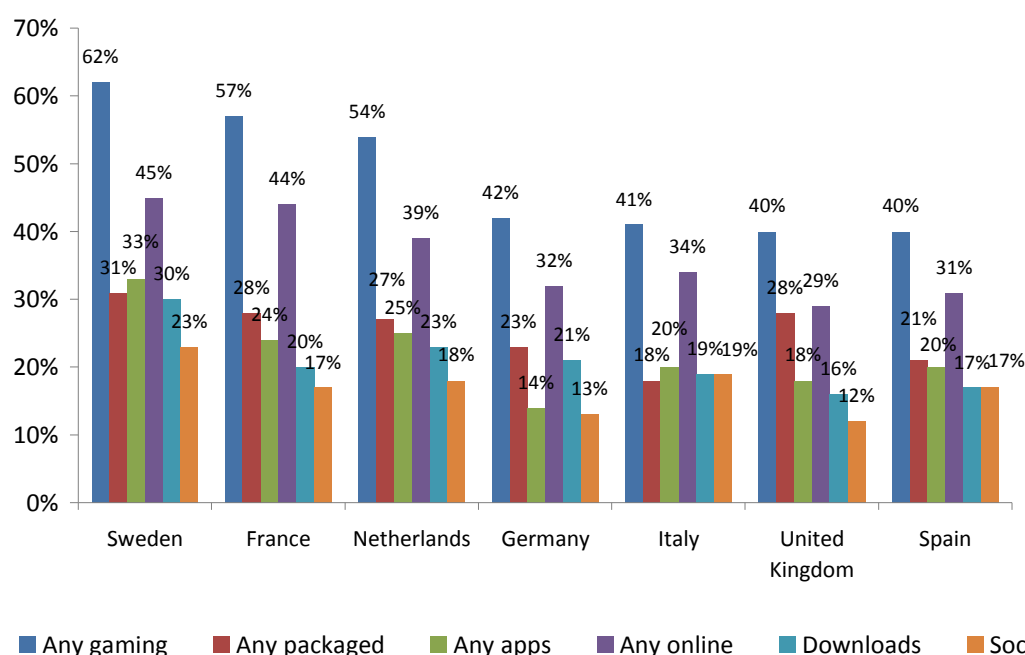
⁷⁴ International Federation of Phonographic Industry (2012): *Digital Music Report*. This figure includes players' purchases of accessories and additional game content as well as subscriptions.

⁷⁵ IDATE (2011): *DigiWorld Yearbook 2011*. Montpellier, France.

⁷⁶ Regarding mobile games and online computer games.

⁷⁷ IDATE (2011): *DigiWorld Yearbook 2011*. Montpellier, France. Regarding mobile games and online computer game.

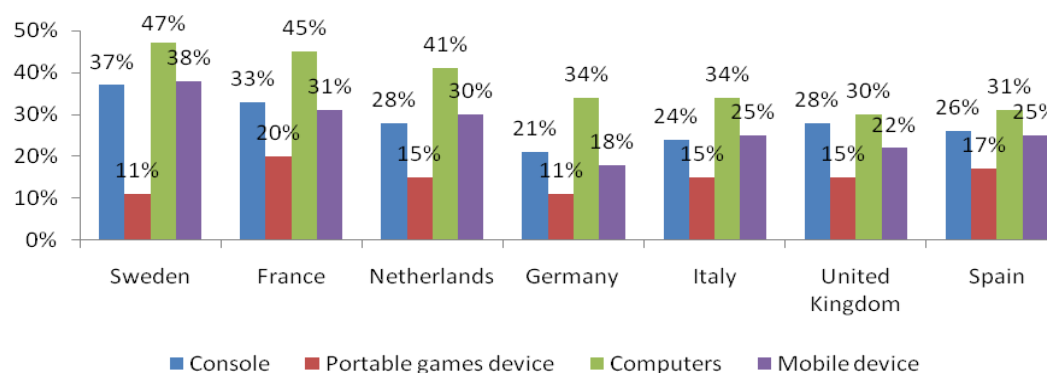
⁷⁸ ISFE (2012): *Videogames in Europe: consumer study*.

Figure 16: Types of games played in Europe (% online population)

Source: ISFE (2012)

France, the Netherlands and Sweden are countries with the highest number of game players, both offline (packaged) and online.

Regarding devices used for games, computers and mobile devices have overtaken the traditional offline games device: the consoles.

Figure 17: Devices used for games (% online population)

Source: ISFE (2012)

In all countries, the computer is the main device used to play games. The second device most popular is the console, except in Italy, the Netherlands and Sweden, where mobile devices have replaced consoles.

The last relevant indicator is the number of users that have purchased games in the previous year. According to ISFE, 35% of the European online population purchased at least one game between 2011 and 2012.⁷⁹

⁷⁹ ISFE (2012): *Videogames in Europe: consumer study*.

Added Value

According to Eurostat, the added value of the process of publishing computer games in 2008 fetched €903 million, representing 40% of production value.⁸⁰ Other studies are more critical about the added value of the video games industry. For example, according to a study on its economic contribution to the cultural sector in Scotland, the games industry was not found to have added any value to the Scottish economy.⁸¹

Regardless of point of view, the online distribution of games is a good opportunity for the European industry, focused so far on the development process. Online distribution facilitates market access with less intermediation due to the virtual disappearance of publishers, allowing a direct relationship with online retailers. However, the downside for development companies is the virtual disappearance of the marketing process (carried out by publishers), thereby entrusting the success of video games to their expansion through services such as social networks.

2.3.3. Value chain analysis

There are four main actors in the value chain of the games industry:⁸²

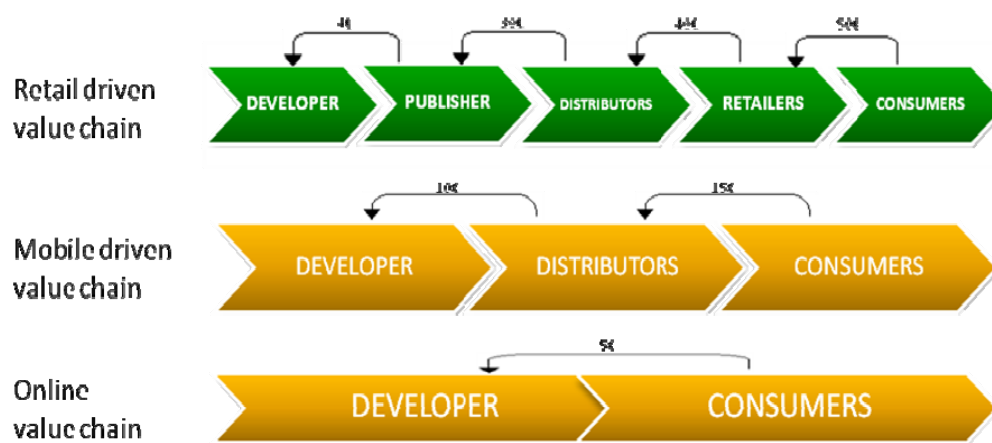
- Video Game Developer: responsible for the technical and artistic creation of the game;
- publisher: whose mission it is to adapt games for marketing, (text translation, dubbing, etc.);
- wholesale distributor: in charge of logistics management and delivery of video games to retail outlets; and
- retailer: in charge of the sales process to the end user.

The advent of online distribution as an alternative to physical distribution is altering the traditional value chain of the sector and the role of each of the agents involved in it. Figure 18 shows simplified view of different value chains favoured by online distribution and how proceeds are distributed among the various actors:

⁸⁰ Eurostat (2012).

⁸¹ DCRResearch (2012): *Economic Contribution Study: An Approach to the Economic Assessment of the Arts & Creative Industries in Scotland*. Carlisle, United Kingdom.

⁸² De Prato, G., Feijóo, C., Nepelski, D., Bogdanowicz, M. & Simon, J.P. (2010): *Born Digital / Grown Digital: Assessing the future competitiveness of the EU Video Games Software Industry*. Luxembourg: Institute for Prospective Technological Studies. Joint Research Center. European Union.

Figure 18: Value chains of video games industry and breakdown of final retail price

Source: European Games Developer Federation (2011)

It can be visualised that the new ways of distribution (through mobile devices or the Internet) are producing a substantial change in the value chain, with the disappearance of some agents and modifications within income distribution. These crucial changes will be discussed in depth in the section on innovation models.

2.3.4. New business models

Business models launched in the field of online distribution of video games reflect a clear premise: to adapt fully to the needs of users in modes of access (via Web browser, client application installed on the computer, mobile application, etc.), payment (per download, recurring subscription, for game extensions or to access game extensions, per purchase of items that enhance the games experience, etc.), or types of games devices (consoles, computers, smartphones, tablets, etc.). Therefore, a wide range of business models have adapted to change in user preference and we will analyse those applications with more relevance and potential in the field of public content and that have a differential character in the video games industry:

- Free access to user with revenue for the developer/publisher/distributor from advertising. Advertising can be shown through their own distribution service (web portal, mobile app, etc.);
- "Advergaming": games with the purpose of advertising a brand or product;
- "Free to Play" model;
- "Apps" download model for mobile devices. Despite its not being a proper model of the video games industry, the fact that most existing applications in app stores are games, we will describe it in this chapter;
- "Serious games". Although not strictly a business model, it is important to discuss the synergies between the world of video games and other sectors such as education or professional training, which are a highly replicable model for the dissemination of public content to European citizens and as such will be discussed in this chapter.

In the free access model, users access games without any charge, there being several ways to insert advertising into the game that generates income to financially support this type of business model. One form of integration is when the user has to watch and cannot bypass commercials before the game starts. Another way is to insert advertising into the service of free access to video games (web portal, mobile app, etc.), taking advantage of the high number of visits that these services have. This business model is usually associated with so-called "casual games", defined as simple games used with low costs in developing and editing, generally accessed from Web portals that bring together an extensive catalogue of these games. They are also used in free video games downloaded from mobile devices, which typically include banner ads.

The synergies between the games industry and the advertising world go beyond the insertion of advertising into distribution services. The game itself becomes an advertising medium. "Advergaming" comprises video games specifically developed to advertise brands, products, public or private initiatives. The company or organisation that wants to be advertised develops a video game as an advertising strategy which is less intrusive than traditional advertising, with better prospects of user loyalty and high-impact viral. Another model of synergy-game advertising is in-game advertising, where the advertising media itself includes advertising. In this model, both types of company stand to gain, since the advertisement insert adds realism to the game and heightens effectiveness and experience. Another model initially developed by the video games industry is the "free-to-play" (F2P) model. This model was created in South Korea, as a solution to the great level of copyright infringement in the country.⁸³

This model enables the user to access the game free of charge online and he only pays if he wants to access new or improved feature extensions, or purchase other virtual goods that help to advance in the game. In some cases, free advertising is also used as a source of income when the user skips registering for the game and virtual goods purchases. The concept behind this model pre-empts a large user base that plays free of charge, and where only a small percentage pays small amounts periodically for virtual goods (this percentage ranges between 5% and 7% of F2P gamers through a PC).⁸⁴ Therefore, the key is to reach an ideal number of users that enables a high percentage of paying users. This is the reason why the rapid development of F2P games has been linked to the emergence of a service with millions of users and social networks. A clear example of this type of F2P games is Farmville (provided by Zynga),⁸⁵ which in March 2010 reached 85 million active users per month, mainly through the social network Facebook.⁸⁶ This business model may be of interest in the operation of public content, since it can be made available to users free of charge, requiring payment only from those users who want enhanced features (i.e. free access to digitised images of paintings in a museum and payment for the same scanned image with higher resolution).

The latest business model being used by the video games industry is distribution through app stores for mobile devices. As previously mentioned, this model is not unique to this industry, but we have highlighted it in this chapter because video games are the most

⁸³ DEV (2010): *Desarrollo de videojuegos en España*. Madrid, Spain.

⁸⁴ Pearson, P. (2012): *Guillemot: As many PC players for F2P as boxed product*. Games Industry International <http://www.gamesindustry.biz/articles/2012-08-22-guillemot-as-many-pc-players-pay-for-f2p-as-boxed-product>. Accessed in November 2012.

⁸⁵ Zynga website <http://www.zynga.com>. Accessed in November 2012.

⁸⁶ Caoil, E. (2010): *Farmville sheds another 9 million users in latest Facebook rankings*. Gamasutra http://www.gamasutra.com/view/news/28913/FarmVille_Sheds_Another_9_Million_Users_In_Latest_Facebook_Rankings.php#.UIAPXa4Yq_g. Accessed in November 2012.

common type of application present in app stores.⁸⁷ Through app stores, users can download video games onto their mobile devices (smartphones and tablets), either free of charge or via payment. The main innovation in this business model is a modification in the distribution value chain of video games since the video game developer interacts directly with the owner of the app store to distribute their products, as shown in Figure 18 (boosting mobile value chain). This business model allows the disintermediation of the video games distribution process, reducing, or even eliminating the role of the publisher, and increasing the relevance of developers in the value chain. This process of disintermediation may favour the European video games industry, mainly composed of small and medium-sized developers.⁸⁸

Finally, among the most innovative business models implemented by the video games industry, it is worth mentioning the use of this type of content in learning or training programmes, beyond pure entertainment. So-called “serious games” are applied in diverse areas such as education, medicine, health, safety or military training. Professionals learn to manage situations (flying a plane, performing surgery, integrating in a new country, etc.), or play the game for some personal benefit such as physical or mental exercise through video game simulations. This is a collaborative model between the video games and other sectors, which in 2010 generated revenues of €1,500 million, with an estimated annual growth of 47% until 2015.⁸⁹ Within the field of “serious games” the most relevant sector is education, the so-called “edutainment” sector (Educational Entertainment). Such games can be useful in the dissemination of the extensive European cultural heritage to children and young people (the major game users) of the member states.

2.3.5. Financial sustainability

Traditional funding model

In the traditional funding model, focused on creating offline video games, publishers are the main funders of the different stages, from developing to marketing and selling physical copies. Software development of video games can be executed internally by publishers or outsourced to specialised companies. In the latter case, publishers pay a fixed fee to the development company and can also agree upon a variable fee based on the sales of the game.

The distribution process is also financed by publishers. Within this process, marketing activities, as well as the adaptation of games to local markets (translations, dubbing, etc.), are the most important ones. These activities can be directly carried out by publishers or developed through local companies in each territory. Likewise, publishers finance specialised marketing companies.

⁸⁷ For instance, according to the Web page 148Apps.biz, 18% of applications of Apple US App Store are video games, more than 125,000. <http://148apps.biz/app-store-metrics/?mpage=catcount>. Accessed in October 2012.

⁸⁸ De Prato, G., Feijóo, C., Nepelski, D., Bogdanowicz, M. & Simon, J.P. (2010).

⁸⁹ IDATE (2010): *Serious games. A 10 billion euro market in 2015*. Idate News 518. Montpellier, France.

New funding models

As in the other sectors analysed, EU member states have a range of public assistance programmes to help launch video games distribution services. Seeing video games as a “cultural product” in countries like France, Germany or Spain is having a positive impact on the sustainability and growth of the sector, as it allows access to public support for the promotion of cultural sectors, essential in some cases to launch any new initiatives. Previously, video games development was classed as software development, with no access to cultural support.

Modification in the value chain causing a rise in online distribution also has important implications for funding. In the traditional value chain of physical distribution, the publisher gave developing companies the necessary funding for the creation of the video game.⁹⁰ The profits were distributed among the various agents, as shown in figure 18 above. However, the virtual disappearance of the real publisher in distribution, the Internet, as well as in distribution through mobile devices, makes it difficult for games development companies to access financing.

As previously mentioned, configuring videogames as a cultural content opens the door to new avenues of public funding which allows the start-up and implementation of creative initiatives in the field of online distribution. However, game developers suffer the difficulty of accessing traditional financing mechanisms for the expansion stages of their companies. The high risk that game development companies face and the fact that video games rapidly become outdated and obsolete deter traditional banks from investing.⁹¹ Developers are therefore adopting other business strategies to achieve financial sustainability. The first is to reduce the investment in each game developed. Companies are adapting their existing games for online distribution and also developing new low-cost games which offer good performance and sufficient quality to be played through new gaming devices such as smartphones or tablets. Funding for these games comes mainly from consolidated company resources or from so-called FFF (friends, family and fools). The second strategy is usually pursued in the distribution of several low-cost video games simultaneously in various services in order to attract as many users as possible. Thus, the success of any one of them gives rise to funding for new developments via a self-financing mechanism.

2.3.6. Case studies

The case studies selected represent both the success of adaptations in the online distribution of a small company and the failure of a big company in its attempt to create a device with its online service to distribute mobile games. The first case has been selected as an example of the dynamics and degree of innovation of the sector, which allow the development of successful videogames by small companies and with low investments. The second presents the opposite case, a big company that has failed to address the creation of a device and its online sales service that might compete with handheld consoles, as an example of a failure to adapt to the users’ demand (prices and game design).

⁹⁰ De Prato, G., Feijóo, C., Nepelski, D., Bogdanowicz, M. & Simon, J.P. (2010).

⁹¹ DEV (2010): *Desarrollo de videojuegos en España*. Madrid, Spain.

Box 3: Rovio

ROVIO ENTERTAINMENT

Rovio is the Finnish company responsible for the game Angry Birds. The company was founded in 2003 by three students from the Helsinki University of Technology and is focused on online video games distribution. Its highly successful Angry Birds franchise was launched in 2009 and in its first development the company invested around €140,000. It achieved an estimated revenue for all of its business models created around the franchise (including the sales of cuddly toy animals of its characters) of more than 75 million Euros in late 2011, with estimated profits of 48 million Euros. The game has since been downloaded more than a billion times.

In early 2009 the company was close to bankruptcy, having developed 51 games prior to the release of Angry Birds, for publishers like Namco or EA. The founders took the step of making and distributing their own video games online.

Source: www.rovio.com and Wikipedia. Accessed in November 2012

Box 4: Nokia N-Gage

NOKIA N-GAGE

In the late 1990s, Nokia identified an opportunity to combine mobile phones and handheld consoles. They developed the N-Gage, a device which integrated both functionalities. Nokia launched its first N-Gage device in 2003 in order to compete with other handheld consoles. However, the high price of the device, compared to that of its main competitors (Gameboy Advance), along with a poor selection of games and design faults contributed to its failure. In 2004 Nokia launched a new version, N-Gage QD, but early on had to face strong competition from Nintendo DS and Sony PSP, which offered higher quality games. Although Nokia was able to sell 3 million devices between 2004 and 2007, the Finnish company failed to turn its device into an integral part of a lifestyle, as Apple managed to achieve a few years later with its iPhone. Nokia may have been the pioneer in the development of smart devices with a range of capabilities (games, playing music and video, phone calls, etc.), but it was not able to convince consumers of the advantages of having several multimedia services in the same device.

In 2009 Nokia decided to close down its N-Gage store, specifically designed to sell games for Nokia devices.

Source: IPTS and Xbit⁹²

2.3.7. Conclusions

- The video games industry has been the pioneer in digital distribution, experimenting with different business models, some of which may be appropriate for the distribution of public domain content.
- Although this sector is focused on the field of entertainment, there are synergies with other sectors (education, military, health, etc.), in which the video game is used as a learning tool. These synergies can also be exploited for public dissemination of content through playing games.

⁹² Shiloy A. (2009): *Nokia buries N-Gage completely, admits failure to become a maker of game consoles*. Xbit Laboratories.
http://www.xbitlabs.com/news/mobile/display/20091105190901_Nokia_Buries_N_Gage_Completely_Admits_Failure_to_Become_Maker_of_Game_Consoles.html. Accessed in November 2012.

- Modification of the traditional value chain of the physical distribution of video games, motivated by the advent of online distribution, has created a change in ways of accessing financing for new projects. Companies are increasingly turning to self-financing through the proceeds of their successful games to create new titles. Their strategy is to develop a range of low-cost games to reach the greatest number of users.
- The new model of video game sales through app stores for mobile devices supposes the disintermediation of the value chain: the developer makes his game available directly to the app store, thus earning higher margins. The downside of such disintermediation is the removal of important processes such as marketing promotion (the owner of the app store is limited to uploading the game to the store without making a promotional campaign).
- The synergies between the games industry and advertising are of particular interest to public content. Funding for online distribution services through advertising content would maintain open access for all citizens, given the nature of public domain content, but facilitate their sustainability at the same time. This is one of the most interesting models which could be applied to the public sector and will be discussed further on.

2.4. Books

KEY FINDINGS

- The book industry has been the **last sector to carry out a digitisation process**. This delay has given the industry the opportunity to learn from the experience of industries such as music and video.
- In 2012 the e-book market represented 4.5% of global sales of books in developed countries (North America, EU-5 and Japan).
- A significant feature of this industry is that it is the **only market in the content industry where European companies hold leading positions**. However, in the transition to the digital era, it is the US which dominates the new e-book market, with sales that exceeded 1,100 million Euros in 2011.
- Online distribution has been led by companies outside the book industry (Amazon, Google, Apple). Publishers have only recently launched initiatives to deploy market digital platforms to sell e-books.
- The electronic book market today is a digital version of the paper market. The main business models that are being used by the publishing industry are selling and borrowing books, as in the physical world. The appearance of **new reading devices** has played a key role in the launch of this new market.
- In the electronic book market **two classes of models coexist**: closed models, linked to specific devices in which the user can only acquire books in the store of the device manufacturer and cannot access them from any other device, and open models, based on online platforms with books reproducible on any device. While the first one has hindered the standardisation of formats, the second one has allowed users to access through a great variety of devices not linked to the service, increasing the potential market.

- With the advent of the electronic books, cost structures have altered. Some costs have disappeared (printing, logistics including transport), some have remained unchanged (creation, the author advances, editorial process, marketing and sales), some have changed (promotion through the use of new digital tools), and new ones have arisen related to new computer platforms. It is estimated that the total costs of online models are between 15% and 25% lower than costs of physical models.
- **Users expect a fall in the price of e-books** compared to traditional books. Some studies estimate this expectation to be about 20%-30%. However, there is still debate about limiting discount possibilities in digital distribution models and e-book formats.
- Public initiatives in the digitisation process are competing with private initiatives such as Google's and Yahoo's. This situation is causing a shift of intervention based on regulation towards contract or partnerships models.

2.4.1. Introduction

If we consider that the oldest known printed book – the Diamond Sutra – dates back to 868 AD and that the first evidence of papyrus written in Ancient Egypt dates back to circa 2400 BC – the account books of King Nefertiti Kakai of the Fifth Dynasty⁹³ – we could say that of all the sectors considered as part of today's content industry, books is the oldest. Throughout its long history it has experienced many changes, some disruptive.

The transition from papyrus scrolls to codex book formats in the first century was a remarkable breakthrough. The arrival of the printing press in the fifteenth century – which gave rise to the Printing Revolution – not only transformed the book industry, but the entire method of conveying information and knowledge to the world.

As a result, perhaps referring to digital distribution as a major transformation in this ancient industry is a slight exaggeration but, like other sectors of the content industry, it is facing many challenges regarding the digitisation process and the online distribution of e-books.

Of all the content sectors considered in this study, the book is the one that was incorporated into the digitisation process at a later stage. This delay has given the industry the opportunity to learn from the experience of industries such as music and video which are much more advanced in this transformation process. Today, in 2013, we can say that the e-book market is finally taking off and represents 4.5% of global sales of books in developed countries⁹⁴ (North America, EU-5 and Japan). The following section provides some figures and indicators for this market to set the context before addressing the sector's innovation models.

⁹³ Avrin, L. (1991): *Scribes, script, and books: the book arts from antiquity to the Renaissance*. New York, New York: American Library Association.

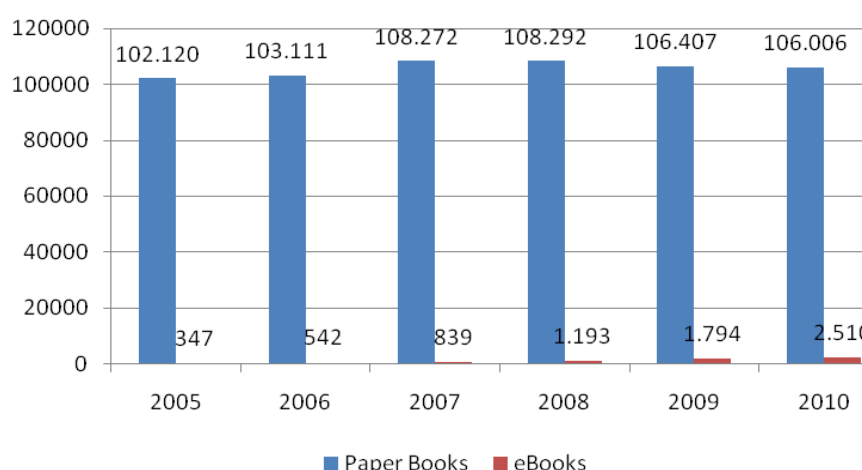
⁹⁴ IDATE (2012): *Digiworld Yearbook 2012*. Montpellier, France.

2.4.2. Key indicators

The global market

According to PricewaterhouseCoopers⁹⁵ (PwC) the book sector represents about 8% of the total media and entertainment industry, with total revenues of \$108 billion in 2010. Sales of traditional paper books have declined slightly since their peak in 2007, as shown in Figure 19.

Figure 19: Book Publishing World Market (\$ million)



Source: PricewaterhouseCoopers (2011), Global Entertainment and media outlook

A significant feature of this industry is that it is the only market in the content industry led by European companies. Bertelsmann, Hachette, Pearson and Wolters Kluwer are world leaders in general turnover and revenues, as shown in Table 6.

Table 6: World leading publishing companies by turnover (2010, € million)

Rank	Company	Country	Ownership	Country of ownership	Revenues (€m)
1	Pearson	UK	Pearson (corp.)	UK	6,102.09
2	Reed Elsevier	UK/NL/US	Reed Elsevier (corp.)	UK/NL/US	5,387.47
3	Pearson Education	UK	Pearson	UK	4,880.51
4	Thomson Reuters	US	The Woodbridge Company Ltd	Canada	4,297.93
5	Wolters Kluwer	NL	Wolters Kluwer	NL	3,556.00
6	Lexis Nexis	NL	Reed Elsevier	UK/NL/US	3,073.12
7	Bertelsmann	Germany	Bertelsmann AG	Germany	2,897.00
8	Elsevier Science	UK/NL/US	Reed Elsevier	UK/NL/US	2,350.35
9	Hachette Livre	France	Lagardère	France	2,165.00
10	McGraw-Hill Education	US	The McGraw-Hill Companies	US	1,835.46
11	Grupo Planeta	Spain	Grupo Planeta	Spain	1,829.00
12	Random House	US	Bertelsman AG	Germany	1,828

Source: Livres Hebdo n°870, 2011

⁹⁵ PricewaterhouseCoopers (2011): *Global Entertainment and media outlook*.

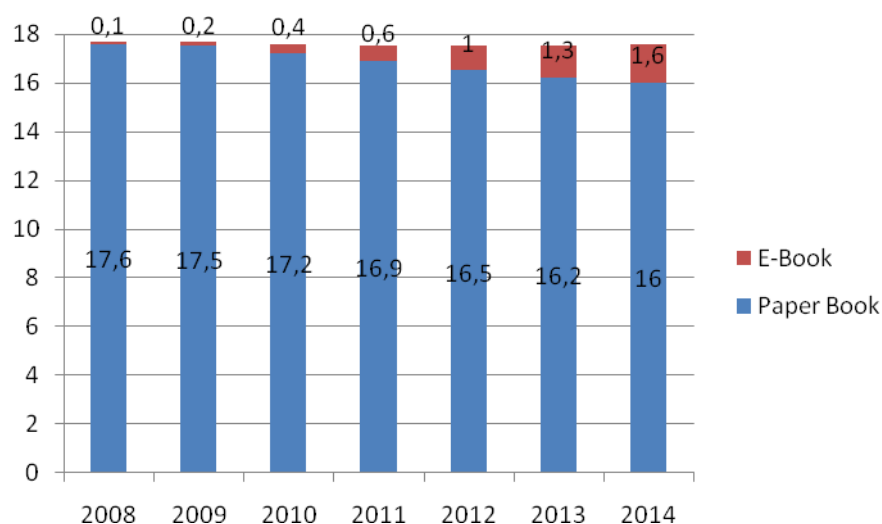
Similarly, major book fairs are held in Europe (Frankfurt, London and Bologna), as pointed out by the Federation of European Publishers (FEP).⁹⁶ The European market totalled \$44 billion, representing 40% of the total market. The US market totalled \$33 billion (30%).

The European market

The European book market reached €22.8 billion of revenues in 2011, which represents a decrease of 3% with respect to revenues of 2010. The largest markets in terms of revenues in 2011 were Germany, followed by the United Kingdom, France, Spain and Italy.⁹⁷

According to IDATE, the top five European markets obtained €17.5 billion of revenues in 2011. The e-book market in these countries accounts for 3.4% of total revenues in that year. It is expected that the contribution of e-book sales to total market will grow to 9% in 2014.

Figure 20: Global book market in the top five European markets (€ billion)



Source: IDATE – Digiworld Yearbook 2011

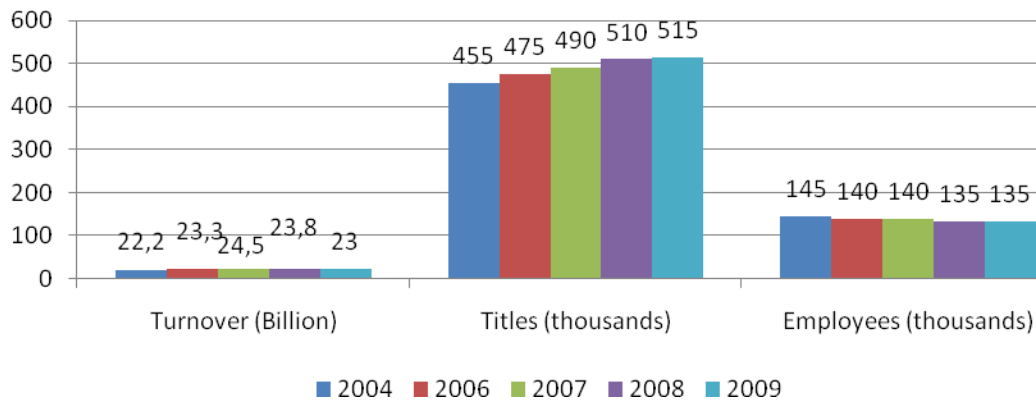
The European industry

The publishing industry is an important sector of the EU's economy. Figure 21 shows the most relevant sector's data in accordance with the information provided by the Federation of European Publishers. Note, data show a slight decrease in turnover and an increase in the number of titles published, while employment remained stable (with a slight decrease beginning in 2007).

⁹⁶ Federation of European Publishers (2011): *The Whole World is Here. Books in the digital age.*

⁹⁷ Federation of European Publishers (2012): *European Book Publishing Statistics 2011.*

Figure 21: Turnover (€ billion), number of titles (thousands) and employment (thousands) of the publishing industry in Europe⁹⁸



Source: European Federation of Publishers, (2011), Publishers' Round Table, 13th July 2011

In 2009, Eurostat provided additional information on the number of firms and added value disaggregated to country level. The employment and income figures are somewhat higher than those provided by FEP. According to Eurostat, the sector included more than 26,000 companies and 160,000 employees, which means that it is an important sector in the economic framework of the European Union.

⁹⁸ Federation of European Publishers (2011): Publishers' Round Table, 13th July 2011.

Table 7: Key figures of European book publishing sector (2009)⁹⁹

COUNTRY	NUMBER OF ENTERPRISES	TURNOVER (€m)	ADDED VALUE AT FACTOR COST (€m)	NUMBER OF PERSONS EMPLOYED
EU-27	26,249	29,239.95	9,942.58	167,600
Belgium	444	701.5	224.7	3,176
Bulgaria	295	51.4	13.5	1,282
Czech Republic	:	:	:	:
Denmark	457	440.7	131.6	2,167
Germany	1,866	4,965.7	2,076.4	23,467
Estonia	128	28.1	8.7	889
Ireland	:	:	:	:
Greece	1,262	793.7	308.0	8,034
Spain	:	:	:	:
France	3,377	5,904.3	1,277.3	:
Italy	2,141	2,710.0	611.6	10,903
Cyprus	23	3.2	1.6	50
Latvia	114	23.6	8.7	798
Lithuania	171	61.1	18.0	1,358
Luxembourg	16	0.8	0.1	7
Hungary	1,276	265.9	77.8	3,745
Netherlands	1,478	:	:	9,668
Austria	322	281.0	104.5	1,945
Poland	2,291	922.9	390.8	16,320
Portugal	420	357.4	96.7	2,451
Romania	1,071	145.7	39.4	4,326
Slovenia	205	101.4	27.8	1,073
Slovakia	13	25.9	7.9	230
Finland	309	345.4	118.8	2,017
Sweden	2,004	663.3	202.2	4,201
United Kingdom	2,305	4,667.6	2,157.7	:
Norway	536	490.2	167.7	1,969
Switzerland	:	:	:	:
Croatia	543	163.3	56.6	2,963
Turkey	676	240.5	78.1	3,975

Source: Eurostat (2012)

The transition to the digital age: the e-book market

Unlike the traditional publishing market, dominated by European companies, what has happened in the transition to the digital era is that the US now dominates the new e-book market, with sales that exceeded €1,100 million in 2011, representing approximately 10% of the global market of books, according to figures provided by IDATE.¹⁰⁰ Amazon is the US

⁹⁹ Eurostat (2012).

¹⁰⁰ IDATE (2012): *Digiworld YearBook 2012*. Montpellier, France.

market leader with 65% of e-book sales, followed by the largest bookstore chain, Barnes & Noble, with 25% of total sales.¹⁰¹

In 2010, the North American market had already exceeded the Japanese market, which had pioneered the adoption of e-books. Meanwhile, the major European markets are moving more slowly, even when they have shown significant growth, reaching €400 million in 2011 for the top five countries. Table 8 shows the main figures of this market in the more developed regions, and a forecast until 2015 made by IDATE.

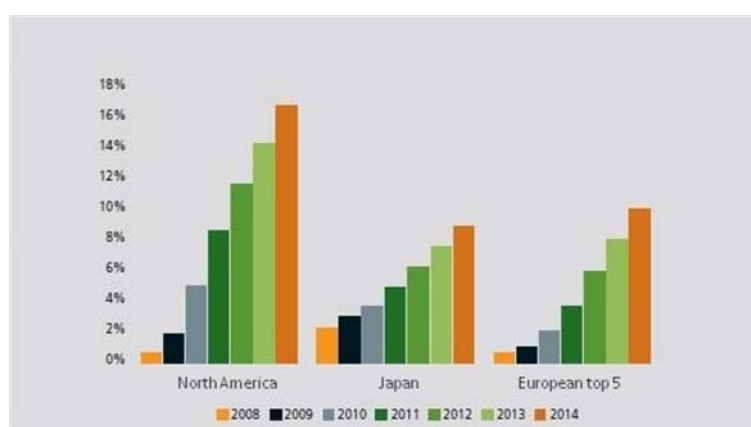
Table 8: The e-book market (€ million)

	Country	2009	2010	2011	2012	2015
North America		331	794	1,211	1,585	2,259
	USA	315	769	1,170	1,512	2,093
	Canada	15	25	41	73	166
EU-5		56	105	400	674	1,472
	Germany	17	24	72	149	389
	France	19	25	84	151	282
	Italy	2	9	28	59	218
	Spain	9	13	122	159	269
	United Kingdom	10	33	94	156	314
Japan	Japan	494	558	627	708	1,718
Total		881	1,457	2,238	2,967	5,449

Source: IDATE – Digiworld Yearbook 2012

Remarkably, e-book growth is very rapid, as illustrated in Figure 22. The American market grew from only 0.6% of the market in 2008 to almost 10% in 2011. In 2010 more than 114 million e-books were sold in the world. Growth rates are also high in Europe and Japan. In Europe, 60% of annual growth is expected over next few years.

Figure 22: E-book share of total book market



Source: IDATE – Digiworld Yearbook 2012

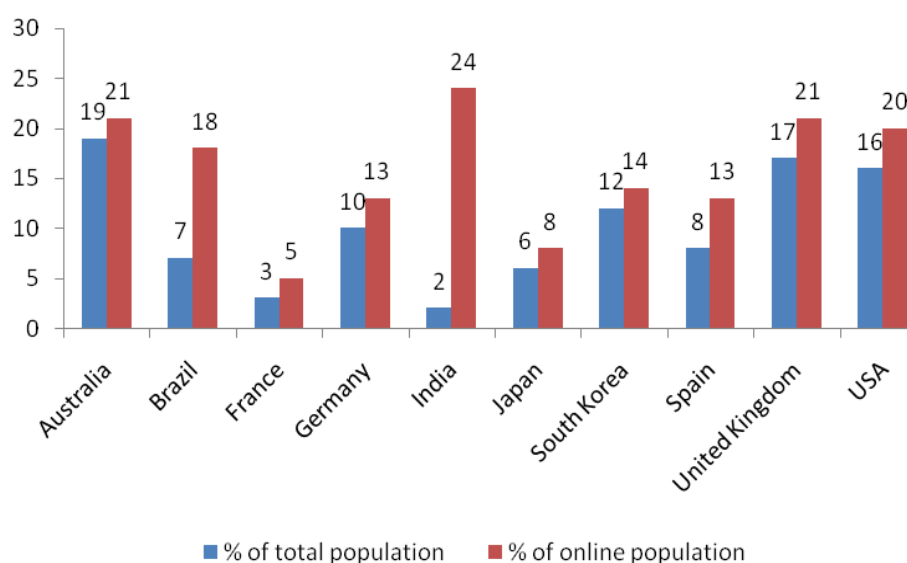
¹⁰¹ American Association of Publishers.

Despite this growth, in the long run it is not expected that losses in paper format will be offset by growth in digital format worldwide, as Figure 20 shows. The main reasons of this lack of offsetting of losses in physical sales with growth of online sales are the reduction of incomes per unit sold online and the impact of copyright infringement. However, as discussed in the next section, the new format creates new opportunities, both in cost reduction possibilities, as well as opportunities to create new formats of books that incorporate enhanced elements such as video, social networking or applications. The speed at which casual readers, defined as those who use reading as a form of entertainment, which account for the majority of revenues, will make the transition to digital and the speed of expansion of improved formats, will determine the extent to which digital format offsets the losses of paper format.¹⁰² In Europe, the market is expected to decrease only slowly until 2014.

Key indicators of demand

Although it is difficult to find suitable indicators that would characterise the demand of print books, there are interesting statistics about the demand of e-books. For instance, a survey conducted among online population in 10 countries shows the percentage of Internet users that have purchased an e-book in the past six months:

Figure 23: Population who have purchased an e-book in the past 6 months¹⁰³



Source: Bowker Market Research & BISG (Book Industry Study Group) (2012)

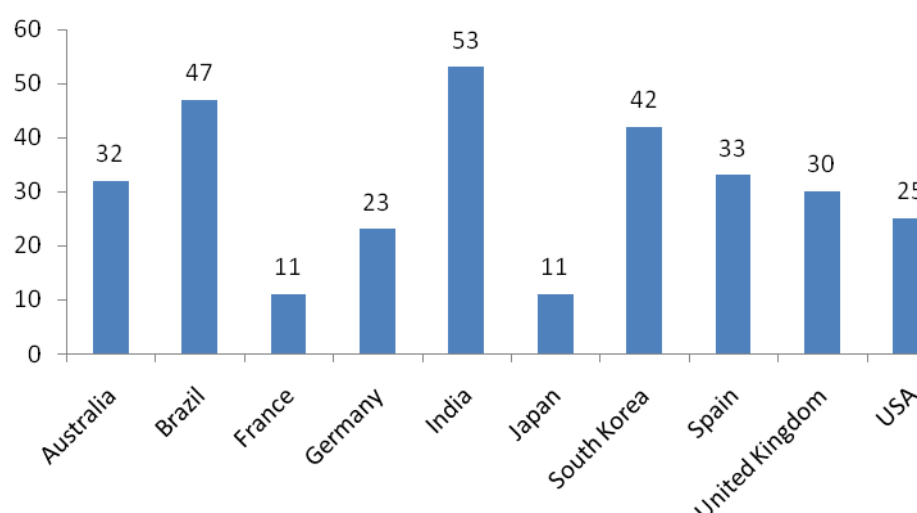
Australia, United Kingdom and USA are the countries with highest penetration of e-book buyers per capita. If online population is considered, almost a quarter of Indian Internet users have purchased an e-book in the past six months. In contrast, only 5% of online population in France have acquired an e-book. Despite France being one of the leading markets in printed books, e-books are not achieving rapid penetration in that country.

Free e-books are driving demand in emerging countries.¹⁰⁴ Two representatives of this type are India and Brazil who are leading the penetration of free e-books among online population.

¹⁰² IDATE (2011): *Digiworld Yearbook 2011*. Montpellier, France.

¹⁰³ Survey conducted in early 2012.

¹⁰⁴ Bowker Market Research & BISG (Book Industry Study Group) (2012).

Figure 24: Population who have downloaded free e-books in the past 6 months¹⁰⁵

Source: Bowker Market Research & BISG (Book Industry Study Group) (2012)

As in the case of purchases of e-books, France and Japan obtain the lowest penetration, with relevant differences in the rest of the countries surveyed. Consumers in neither Japan nor France seem eager to step into the digital distribution of books.

Added Value

According to Eurostat, the value added in the EU by the process of book publishing in 2009 stood at €9,942 million, representing 39% of production value.¹⁰⁶

From this figure alone it is difficult to estimate the added value of new digital distribution models since no figures are as yet available. But based on the above findings, we could predict that the percentage of sales is similar to the percentage of added value, and that in Europe this accounts for about 1%. As such we might estimate a figure of €99 million for 2010. For 2011, this figure should increase to close to €300 million.

The book industry in Europe is a mature industry, with a long tradition and with world-leading companies. The evolution towards e-books is a serious challenge for these companies, who may lose their current supremacy to the Internet giants. Addressing this transition seriously and considering new models that coexist with paper format will be critical to maintaining and increasing the added value of this industry for the European economy.

2.4.3. Value chain analysis

The book industry has been a very stable market over the last few decades, with narrow profit margins, where publishers need long periods of time to achieve a return on their catalogue.¹⁰⁷ The traditional book market chain is shown in the figure below.

¹⁰⁵ Survey conducted in early 2012.

¹⁰⁶ Eurostat. Accessed in November 2012.

¹⁰⁷ Simon, J.P. & de Prato, G. (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries. The Publishing Industry*, JRC Technical Reports.

Figure 25: Traditional book market value chain

Source: IPTS (2012)

Book content is created by one author or more co-authors, either directly to a publisher or through an agent. These last two play an important role in the value chain, as they are the ones who select authors and hence content, and act as gatekeepers to quality standards. Distributors manage the logistics of delivery to retail stores where the book is purchased by users. In this value chain, the publisher has the most important role since he is the stakeholder with the greatest clout in the book industry. However, in the UK and the USA, the concentration of large chain stores has shifted that power role within the value chain from publishers to large retail stores.

The inrush of digital distribution

The traditional book industry has introduced numerous technological improvements to the production process over the last few decades: word processing, typesetting, phototypesetting in the 60s, image setting in the early 80s and desktop publishing in the mid-80s. New technologies improved processes and reduced costs, but did not greatly change the relationship between stakeholders in the value chain. The publishing industry has been very reluctant to introduce digitisation to the final product, the book, and in its relationship with customers. This reluctance is explained by how this change would affect its strategic assets, but may also be partly explained by the failure of the audio-book format (CDs) that was marketed in the late 80s.¹⁰⁸

Thus, it is not surprising that outsiders were the driving force behind the spread of the e-book. In this process, the platform created by Amazon in 1995 played a key role, taking the first step towards digitisation through online distribution of paper books. This first step was followed by the launch of the Kindle reading device in 2007 which gave the final impetus to the e-book. Other Internet companies joined Amazon (Google, Microsoft, Yahoo), and then device companies jumped on board (Apple, Samsung, HTC, etc.).

Large bookstore chains (Barnes & Noble, Fnac) subsequently joined these Internet companies with specific stakeholders such as Kobo,¹⁰⁹ and a wide variety of niche companies selling e-books.

¹⁰⁸ Although audiobooks have been much more successful in the USA than in Europe, and the extension of mp3 has re-launched the market in recent years, the Audio Publishers Association (APA) reports that the total number of audiobooks published in 2010 was 6,200 (Source: APA, Industry data 2011). For example in Spain in 2010 only 129 audiobook ISBN were registered (Source: *Panorámica de la Edición Española de Libros 2010*, Ministry of Culture).

¹⁰⁹ Kobo website <http://www.kobobooks.com>. Accessed in November 2012.

With the emergence of the e-book there were substantial changes in the traditional value chain. As in other sectors, it was now possible for the author to eliminate intermediaries, but any step beyond this would involve a major change for stakeholders in the line of distribution. The emergence of the e-book has changed the balance of the value chain; hitherto dominated by publishers, the e-book has shifted the balance in favour of distribution links.

This phenomenon is no different from that which occurred in other content sectors. Importantly, the US is taking the lead in the online distribution segment, as they have the Internet giants (Amazon, Google, Apple) who have the monopoly in this segment, unlike the publishing segment, dominated by European companies.

Publishers have only recently launched initiatives to deploy digital platforms to the market. In 2010 several projects in Europe took off: in Italy, Edigita by RCS, Mauri Spagnol and Feltrinelli; in France, Eden by Flammarion, Gallimard and La Martinière; in Spain, Librandia by Planeta, Santillana, Roca Editorial, Grup62, Group SM, Wolter Kluwer and Random House Mondadori; in Germany, Bertelsman in cooperation with Holtzbrinck.¹¹⁰ Similar to other content sectors such as the film industry, this sector's publishing companies are giants that have bargaining power comparable to that of the large Internet companies. Also the role of selection and evaluation of books that publishers make is largely considered to have greater value than in other content industries, which allows publishers greater control over changes in the chain value.

2.4.4. New business models

As mentioned above, the e-book market today is a digital version of the paper market. The main business models being used by the publishing industry are **selling** and **lending books**, as in the physical world. In markets like Japan selling series of books for mobiles is highly successful and reflects a similar model used in this market for novels and comics.

Other business models are still in a minority, one being: renting textbooks, selling chapters from travel books, funding public domain books through advertising, and subscriptions to scientific and technical libraries.¹¹¹

The role of new reading devices

The advent of new reading devices has played a key role in the launch of the e-book. Sony launched its reader in September 2006¹¹² in the United States, and Amazon launched its Kindle in late 2007 which really boosted this market.

The arrival of the Apple iPad in 2010 had a catalytic effect, thanks to its commitment to its own platform – iBooks – a model similar to the one that had been so successful for the music world with iTunes and for the world of mobile applications with AppStore. Other mobile manufacturers like Samsung and HTC have also tried to emulate this model.

2010 is generally acknowledged to be the year when e-readers reached a mass audience, after a drastic reduction in price boosted acceptance. In 2011, according to IDATE,

¹¹⁰ Simon, J.P. & de Prato, G. (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries. The Publishing Industry*, JRC Technical Reports.

¹¹¹ IDATE (2012): *Digiworld Yearbook 2012*. Montpellier, France.

¹¹² Sony launched the first e-ink device, although the Rocket eBook was launched in 1998 as the first dedicated e-book reader by NuvoMedia.

8,073,000 readers were sold in the US market and 673,000 in the European market.¹¹³ This significant difference shows a market (US) that has clearly opted for digital consumption of books in contrast to the European market that is slower in adopting this new way of book distribution.

Access models and formats of e-books

Regarding model of access to digital books, the user can download a title to his reading device, or store it in a cloud. Although the download model is currently favoured, the acceptance of the cloud model is rapidly growing because it allows the user to create a virtual library accessible from multiple devices. File format can be generic (ePub, PDF, etc.) or specific to the vendor or manufacturer of the reading device (Palm pdb, azw Amazon, etc.).

Sales models

In models based on sales of books, we find **closed models**, linked to specific devices in which the user can only acquire books in the store of the device manufacturer and cannot access them from any other device. This was the case of Amazon with its Kindle device, but it has recently allowed books to be downloaded from its store onto Android and iOS devices. It is also the model of the Apple iPad and its iBooks platform.

Open models characterise those based on online platforms with books reproducible on any device. This is the model preferred by platforms created by publishers.

Lending models

Book-lending services contact users who borrow, and users who lend books. Amazon *Book Lending* is the flagship service. Owners can lend their books for 14 days to other users who request them, if the publisher allows it. This service has been extended with the *Kindle Library Lending* service whereby Kindle users in the US can borrow books from over 11,000 libraries. So far these services have been free of charge among users, but distributors and publishers are unclear as to whether this will improve sales or have a negative impact on them.

The latest business model consists of **lending textbooks**. Amazon has launched a lending service for textbooks that allows the user to choose the length of the loan, from 30 to 365 days. It is accessible from different devices and includes access to notes and annotations even after expiry of the loan period. With this model, the user pays only for the time that the book is available to him, for example the entire school year. Discounts can be as high as 80% of the sales price.

Product model vs. service model

One important aspect of the business models linked to the e-book is that, even when 'selling' is being referred to, what the user is actually signing most of the time is a service contract. To a large extent this model, widely used in all digital content and software, provides greater protection for publishers and authors against indiscriminate copying. This poses problems regarding second-hand selling models and lending models.

¹¹³ IDATE (2011): *Digiworld Yearbook 2011*. Montpellier, France.

Recent judgements by the European Court, supporting the marketing of second-hand software, have opened legal debate as to the development of e-book models and their impact.¹¹⁴

Advertising-funded models

The ad-supported model is exercised mainly in the *Google Print* (now called *Google Books*) project launched in October 2004 at the Frankfurt Book Fair, and had over 15 million references in 2011. Google scans books and stores them in a digital database. Books can be looked for and accessed as PDF files. The service has an associated online selling service which can be accessed additionally if the user wants a physical copy.

The initial objective of the project was to digitise 15 million books over a period of ten years with support from US and British libraries. The digitised books are those that are already in the public domain (with no copyright) or orphan books (books with copyright, but whose owner cannot be located).¹¹⁵ The project has been controversial, both from a competitive standpoint and from the management of orphan works' copyright standpoint. This will be discussed in later sections.

The business model, like most businesses driven by Google, is based on advertising. Other similar models are the ones from Microsoft and Yahoo. Microsoft launched its *Live search books* in 2006. Yahoo partnered with several public libraries to create the *Open Content Alliance*, working with the Internet Archive.¹¹⁶

Other models

The e-book offers a number of possibilities to move away from the traditional paper format and provide an improved meta format which combines text, video, applications and access to social networks. This avenue is as yet unexplored, with the exception of recent initiatives such as 24symbols, a Spanish initiative that will be analysed in more detail at the end of the chapter on Case Studies.

2.4.5. Financial sustainability

Traditional funding model

In the funding model of the book industry, publishers have traditionally played a key role, given their dominant position in the value chain. Publishers can advance money to an author in exchange for the rights over the content. This model is commonly used in the best-seller segment. Once the publisher has retrieved the advanced payment through sales, the author receives royalties - a percentage of total sales. Sales revenues are shared between the different stakeholders. In France, for example,¹¹⁷ incomes from a book are divided up as follows:

¹¹⁴ Judgment of the Court (Grand Chamber) of 3 July 2012 (reference for a preliminary ruling from the Bundesgerichtshof – Germany) – *UsedSoft GmbH v Oracle International Corp.* (Case C-128/11) (Legal protection of computer programs - Marketing of used licences for computer programs downloaded from the internet – Directive 2009/24/EC – Articles 4(2) and 5(1) – Exhaustion of the distribution right – Concept of lawful acquirer).

¹¹⁵ Wikipedia – Google Books. Accessed in November 2012.

¹¹⁶ Non-profit organization funded in 1996 to offer free access to digital collections (texts, audio, images and software).

¹¹⁷ Simon, J.P. & de Prato, G. (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries. The Publishing Industry*, JRC Technical Reports.

- 11% for the author,
- 14% for the publisher,
- 16% for the printer,
- 18% for the distributor (wholesale, logistics, sales),
- 36% for the retailer, and
- 5.5% tax.

The publishing industry has until quite recently been a financially solvent industry, but it has now entered a slow recession period. Although this funding model has remained the main model, even after the advent of the e-book, some successful authors are beginning to seek direct commercialisation without the intermediation of publishers (the best known case is that of the 'Harry Potter' books, author J.K. Rowling).

New funding models

The advent of the e-book has altered the cost structure with some costs disappearing (printing, physical transport), others remaining unchanged (creation, author advances, the editorial process, marketing and sales), some changing (promotion through new digital tools), and new ones have arisen related to new computer platforms. Although it is difficult to estimate the difference in costs between the digital and paper model, some observers estimate that costs are 15% to 25% lower for e-books,¹¹⁸ without taking into account the cost of e-readers.

New funding models are influenced by the difference in price between physical and digital format, along with the relationship between publishers and new distributors.

Pricing

Users typically expect an e-book to be cheaper than traditional paper books. Some studies estimate consumer expectation for e-books to be about 20%-30% lower in cost.¹¹⁹

No doubt price adjustments have been a key factor in general acceptance of the e-book, but decisions in this regard have been controversial and in some cases subject to regulation. In the past, some countries used to fix a minimum price for books, in order to protect small bookshops, variety of supply and cultural diversity. This regulative was introduced for example in France in 1981, with a uniform price being imposed with a maximum discount of 5%.¹²⁰ Other EU states subsequently adopted similar measures. Some countries such as Sweden opposed the measure. This debate has now extended to the e-book, and French law was amended in May 2011 to cover this new format. The debate continues, with those for and those against limiting discounts in digital distribution models and e-book formats.

Taxation also needs to be considered in the pricing mechanisms of e-books. VAT on e-books varies widely but is generally higher than on paper format books on which most countries charge a lower rate of VAT. E-books are regarded as part of the software

¹¹⁸ E. Turrin's presentation at the first IPTS MCI workshop, FEP's view at the publishers' round table with DG INFSO.

¹¹⁹ Simon, J.P. & de Prato, G. (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries. The Publishing Industry*, JRC Technical Reports.

¹²⁰ The so-called "Lang Law". *Loi n° 81-766 du 10 août 1981 relative au prix du livre*.

category and not as cultural goods, and so far the Commission has not addressed a levelling of VAT between the two formats.¹²¹

Relationship between publishers and new distributors

Many digital platforms, especially niche platforms, offer as an incentive to authors a greater percentage of revenue, in some cases up to 30%.

However, stakeholders such as Amazon, vertically integrated, initially imposed a 50/50 share between distributor and publisher. This model later evolved into an agency contract, after the arrival of Apple on the market and pressure from publishers. This contract significantly restricted the ability to apply discounts to online distribution. Additionally, publishers have opposed low prices, particularly those used by Amazon to encourage readers to purchase its e-reader *Kindle*.

Restrictions on discounts in agency contracts have been questioned by the US Justice Department, which in March 2012 opened a file on the agreement between Apple and various publishers.

Financing costs of digitisation

Digitisation costs underline a significant cost barrier to publishers necessitating faster digitisation of their entire catalogues. In answer to this problem, several public initiatives have been launched to support the digitisation process. The book sector, in comparison with other sectors in this study more advanced in adopting digitisation, has the peculiarity that many works are already in the public domain, and that the number of works yet to be digitalised is huge. Therefore, this sector does in fact face greater problems related the high costs of digitisation and the protection of the public interest,¹²² which obscures boundaries between public and private initiatives.

As with the other sectors analysed, EU member states have various public assistance programmes for the launch of book distribution services.

Similarly, given the cultural nature of books and the enormous heritage that published books already represent, different government agencies and bodies have been interested from the start in digitising and making books available, mainly those which are already in the public domain. The Europeana¹²³ project – the European digital library – is perhaps the most significant: launched in 2005 and opened in 2007 with currently six million references, and the World Digital Library, launched in 2007 by UNESCO.¹²⁴

Digital library initiatives are part of the Digital Agenda of the European Commission¹²⁵ and aim at giving all citizens access to European cultural and scientific resources. In addition to Europeana, the recommendation of the Commission adopted in 2011 promoted concerted

¹²¹ The need for harmonisation was suggested in the *Green Paper: On the Future of VAT*, COM(2010) 695 final, 1st December 2010. However, the debate still goes on. For more information on the current situation of the topic see: European Commission, *Review of existing legislation on VAT reduced rates* (TAXUD/C1), October 2012.

¹²² The *Commission Recommendation of 27th October 2011 on the digitisation and online accessibility of cultural material and digital preservation* states that: "In order to allow wide access to and use of public domain content, it is necessary to ensure that public domain content remains in the public domain once digitised".

¹²³ Europeana website www.europeana.eu. Accessed in November 2012.

¹²⁴ A huge cultural multilingual database rather than a real digital library.

¹²⁵ Europe's Information Society. Thematic Portal http://ec.europa.eu/information_society/activities/digital_libraries/index_en.htm. Accessed in November 2012.

actions with Member States, as is the case with the French Gallica¹²⁶ and German Libreka,¹²⁷ the latter in public-private cooperation.

Today, public initiatives compete with private initiatives such as those of Google and Yahoo, discussed in the previous section. This situation is causing a shift from regulative models towards contract or partnership models. The impact of the Google project has been very important, but the recent case won by several American publishers, who in 2005 reported Google for violating copyright protection, has reduced its growth.¹²⁸ In March 2011, the court sided with the publishers and forced Google to negotiate a new agreement which was more "fair, adequate and reasonable".¹²⁹ This decision was in line with antitrust authorities, both American and European, who questioned the ability of Google to create a monopoly on digitised public domain works and orphan works.

In any case, all parties recognise the tremendous value of a project such as that of Google in addressing the immense work involved in digitising books that are part of our cultural heritage.¹³⁰

The issues related to orphan works and out of print books led the European Commission to launch two initiatives in May 2011:

- **Out-of-Commerce Works:** the Commission pushed for an agreement (MoU) between libraries, publishers, authors and copyright collectives that would allow appropriate licensing solutions. The agreement was signed in September 2011.¹³¹
- **Orphan works:** the development of a Directive was proposed, then addressed by the Commission in May 2011.¹³²

Public initiatives on digitisation and access models to books will be analysed further in chapter 3, "The challenge of European Public Content".

2.4.6. Case studies

The case studies selected comprise several examples of the different business models and strategies implemented by agents of the value chain, both traditional publishers and new agents. The first case study describes the closed-model developed by the online retailer Amazon around its e-reader *Kindle*. The second one presents the opposite model created by Google. The third shows an innovative model launched by the European start-up 24symbols, which explores new ways of distribution distinct from downloading. Finally, the fourth case analyses the strategy implemented by German book stores to compete with

¹²⁶ Gallica website <http://gallica.bnf.fr>. Accessed in November 2012.

¹²⁷ Libreka website <http://www.libreka.de/>. Accessed in November 2012.

¹²⁸ The US District Court (SDNY) issued its opinion in Authors Guild v. Google in March 22, 2011.

¹²⁹ Helft, M. (2011): *Judge Rejects Google's Deal to Digitize Books*. www.nytimes.com. Accessed in November 2012.

¹³⁰ The *Commission Recommendation of 27th October 2011 on the digitisation and online accessibility of cultural material and digital preservation* states that: «The cost of digitising the whole of Europe's cultural heritage is high and cannot be covered by public funding alone. Private sector sponsoring of digitisation or partnerships between the public and private sectors can involve private entities in digitisation efforts and should be further encouraged».

¹³¹ Europa Press Releases website http://europa.eu/rapid/press-release_MEMO-11-619_en.htm. Accessed in November 2012.

¹³² European Commission (2011): *Proposal for a Directive of the European Parliament and of the Council on certain permitted uses of orphan works*. COM (2011) 289 final, Brussels, Belgium.

online distribution. These four cases are clear examples as to the impact of digitisation and digital distribution in the sector.

Box 5: Amazon

AMAZON.COM

Amazon.com is one of the world's largest online retailers. The Amazon.com website was launched in 1995 as an online bookstore and today offers a wide range of products including video games, CDs, DVDs, furniture, clothing, toys, jewellery, etc. Amazon.com operates retail websites and offers platforms that enable third parties to sell products on their websites. These platforms allow more than two million small businesses, world-class retail brands and individual sellers to offer their products on the Amazon.com website. Amazon makes its money by taking a small percentage of the sale price of each item that is sold via its website.

In 2007, Amazon introduced the first Kindle, an e-book reader. This e-book ousted the one previously launched by Sony, the first to offer a device which was similar to reading traditional black and white print. The success of Kindle lies in the idea of selling a complete service, since Amazon provides the possibility of buying an e-book at a click and offers a huge online bookstore.

Source: www.amazon.com and Slywotzky A. "The real secret of Kindle's Success"¹³³. Accessed in November 2012

Box 6: Google eBookstore

GOOGLE eBOOKSTORE

This project is the online bookstore of Google. It offers two possibilities: to store the user's library in the digital cloud so they can read all of their books on any device with an Internet connection; and to download the book onto the device and read it offline.

It has the world's largest selection of e-books: it includes over 4 million free books and "hundreds of thousands" of titles for purchase. Users can get e-books both from the Google eBookstore and from over 250 independent booksellers and retail partners.

It is possible to read Google e-books on the Web, Android phones, iPhone, iPad, iPod Touch and Readers that support the Adobe e-book platform, a requirement that precludes the Amazon Kindle. Therefore, with this project, Google has decided to challenge the supremacy of Amazon.com in the sale of e-books.

In 2008, Google launched Google Play, a digital application distribution platform for Android that includes all books on the Google e-Bookstore, as well as music, films, TV programmes and applications. Books can be read online on the Google Play website, or offline via the Android application.

Source: <http://books.google.com>. Accessed in November 2012

¹³³ Available online at <http://www.fastcompany.com/1781303/real-secret-kindles-success>.

Box 7: 24symbols

24SYMBOLS

24symbols is a service that enables users to read e-books in the digital cloud, with a “freemium”-based subscription model and with social capabilities. Readers can freely access a multi-publisher catalogue, with ads on the books and certain restrictions, or can pay a fee to enjoy a broader catalogue and more capabilities.

The free service requires users to have an unbroken connection to the internet, accept advertisement inserts and a limited catalogue (titles which are made available only for premium users depends on publisher permission.) The premium user can read even in offline mode, can access the whole catalogue available and no ads are inserted. Although selected titles are downloaded to the local device, this download is automatically performed by the application and the content is stored in a cache memory, encrypted and for a period limited to the subscription time.

The difference between free and premium services is the key to the strategy of 24symbols: the free service has sufficient quality as an active element for user acquisition, and the premium service is attractive enough so that an important percentage of free users convert to the model, becoming the main revenue source that guarantees profitability.

24symbols takes into account the number pages per view in calculating share of revenues with publishers, who receive 70% of the revenue obtained.

Source: www.24symbols.com. Accessed in November 2012

Box 8: Libreka

LIBREKA

Libreka is the project launched by the German Publishers and Booksellers Association (Börsenvereins des Deutschen Buchhandels), to create a central interface for storage, search ability, display and sale of digital versions of printed books. The platform stores the uploaded book content from publishers in a free, automated method of PDF to TIFF convert.

Libreka currently has over 580,000 e-books and 21,000 audio books, making it one of the largest e-book sales channels in Europe. Around 1,600 German-language publishers have already made their in-copyright titles available in the Libreka database, with 800 of them offering their e-books for sale on the platform, and 2,000 websites using its service. Electronic versions are priced cheaper than printed books, although e-books in Germany have a VAT of 19%, and paper books only 7%.

Source: <http://www.libreka.de/help#information> and Wikipedia. Accessed in November 2012

2.4.7. Conclusions

- The book industry is the sector which adopted new digital formats at a later stage. In this sense, this sector has been able to learn from the experience of other digital sectors.
- This sector can provide valuable experience to the public sector, given that books are an important part of cultural content in the public sector; the industry therefore can accumulate a significant background in digitisation and in providing out-of-print, orphan and public domain books.

Economic facts

- The publishing industry was an economically healthy sector until recent years, when a decline set in, as can be seen in figures 19 and 20.
- The e-book industry in Europe shows it is lagging behind its counterpart in the USA: this can be a disadvantage in this new market.
- The digitisation costs of analogue libraries are significantly high and will more than likely require public support if digitisation of all publishers' catalogues is to be achieved.

Market trends

- New business models mark a shift in the value chain from production (publishers) to distribution, providing opportunities to agents other than traditional ones, particularly the Internet giants. This situation would favour American distribution companies against large European publishers.
- In this sector, unlike other content sectors, publishing giants have bargaining power, in many cases comparable to those of large Internet companies.
- The role of selection and evaluation of manuscripts for publication by publishers' agents is considered greater than in other content industries; it lends the publishing industry greater control over changes in the value chain.
- New revenues from digital formats are not expected to offset the decline in revenues from sales of paper format in the coming years. Digitization allows consumers to access a great universe of works, most of them of public domain, at a cheaper price than printed editions. This implies a growing consumption of non-commercial works, which will reduce income due to their lower prices. Likewise, the economic potential of "long tail" in the film industry still remains unclear; there are similar uncertainties in the book sector.
- The e-book industry in Europe shows a significant delay with respect to the situation in the USA; this could be a disadvantage in this new market.

Successful model

- The book sector shows some success models, both in terms of business models, most notably those linked to e-readers such as the Kindle, and in regard to public models, such as Europeana or public-private partnerships in digitising books.
- The digitisation of books in the public domain and orphan works should be addressed as a publicly-funded project, although models of public-private partnerships also have considerable benefits.

Policy

- Issues related to VAT and price regulation have a significant impact on the evolution of the e-book market.
- Clarification of the regulations on orphan works should allow the scanning of a significant number of books, which remain inaccessible today.
- Public support remains an important issue.

2.5. Newspapers

KEY FINDINGS

- The written press sector was the first sector of the content industry to be affected by the sudden entry of the Internet.
- The traditional newspaper industry **is experiencing crisis**, due to **drastic falls in revenue** in print advertising (including classified ads) and circulation of copies. While the newspaper industry is facing this crisis, the demand for online news is growing, with an increase in the number of formats and models of production, and dissemination of news online.
- The main source of income for the newspaper industry regarding online distribution is **online advertising**. However, the decline in print advertising revenue is not sufficiently offset by the increase in online advertising revenues.
- Digital newspapers have attempted to replicate online business models of print, such as models of payment per copy, subscription and advertising revenue with mixed results.
- Some newspapers experimented with the **“paywall” model** (access to content on payment of a subscription), but had to pull out once they found that the income from the sale of access to content did not offset the advertising losses arising from the number of readers not opting for the model. After this initial failure, newspapers have tried to reintroduce the “paywall” model for premium content such as financial information.
- The **news aggregation model** is based on helping to gather news from different sources, to allow the user to select those that are most relevant to him. This model is generating considerable controversy. Newspapers believe that these services make use of, and benefit financially from, the news that they have developed, without paying for it.
- The emergence of **tablet PCs and e-readers has brought some hope** to the digital press sector. Several newspapers have launched services for these devices, with a subscription model to access content.

2.5.1. Introduction

The written press sector was the first sector of the content industry to be affected by the explosion of the Internet. News is abundant and compelling content in the online world. Free-service news quickly spreads on the Internet, thus the newspapers had to face not only the traditional radio and television competition, but also competition from new Internet news services.

In this scenario, the traditional newspaper industry is in deep crisis. A crisis in the advertising market, which began in 2008 under the financial crisis, added a structural crisis that challenges the current business model, which has resulted in sharp declines in both the sale of copies as well as advertising investments. The emergence of tablet devices in 2010 has revived some hopes of revitalising the sector. While the newspaper industry is facing this crisis, the demand for online news is growing, with an explosion of formats and models of production and dissemination of news online.

Internet has allowed for the participation of people not considered formal journalists in the news sector through blogs, forums or news aggregators (or a combination of all, as in the Pulitzer Prize winner, The Huffington Post). Other initiatives allow “citizen journalists” to inform on what happens in their community, as in the South Korean online newspaper “OhMyNews”, which publishes news sent in by its readers.

This online journalism is an opportunity for freedom of expression and information, since it has increased the amount of information available and greater plurality. From the business perspective, it is an opportunity for advertisers to target their audience more efficiently, but it threatens traditional newspapers, which must compete with it for online advertising.

Online (non-professional) journalism faces criticism about the verification and credibility of the news, especially in the cases of websites without a traditional media brand behind them.

2.5.2. Key indicators

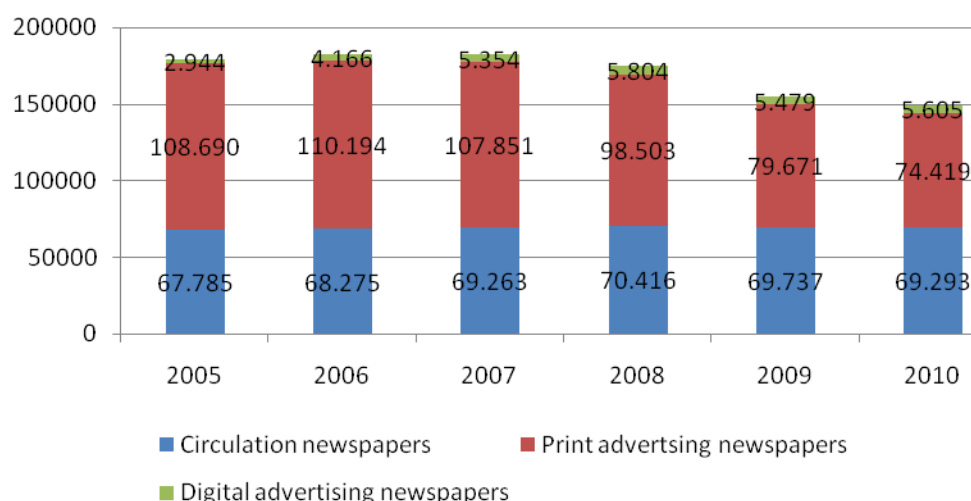
The global market

The newspaper market is a two-sided market in which publishers consider users, who purchase copies of the paper, and advertisers as clients. **Payment per copy, subscriptions and advertising** are the main sources of revenue.

According to figures from a report prepared by PricewaterhouseCoopers¹³⁴ (PwC), the press sector represents about 11% of the media and entertainment industry, with total revenues of \$149,317 million in 2010. In this market, the US leads with 24% of the market followed by Japan with 18%, Germany and the UK. Together, EU-27 is the largest global newspaper market, representing approximately one third of the global market. Although the overall market has shrunk, Europe remains the leader in this sector.

As shown in Figure 26, sector revenues have continued to decline since 2007, largely driven by the steep fall in printed advertising revenue. Only online advertising revenue has seen some growth, though not steady.

¹³⁴ PricewaterhouseCoopers (2011): *Global media and entertainment outlook*.

Figure 26: News Publishing World Market (\$ million)

Source: PricewaterhouseCoopers (2011), *Global Entertainment and media outlook*

In terms of circulation figures of copies of printed newspapers, Japan has the highest distribution: every day 10 million copies of *Yomiuri Shimbun* are distributed. In the ranking of most widely distributed newspapers, European newspapers are underrepresented. Of the 100 most circulated newspapers, 86% are Asian (China 25%, India 22% and Japan 17%), only 10% are from Europe and 4% are American. Among the 10 largest newspapers, two are European: the German *Bild* with 3.3 million copies, and the UK's *The Sun* with 2.9 million copies. The USA has four major newspapers in the 100 (*The Wall Street Journal* with 2 million, *USA Today* with 1.9 million, *The New York Times* with 0.9 million and *The Los Angeles Times* with 0.7 million copies).¹³⁵

Newspaper circulation figures are declining worldwide. In the UK, the circulation of the top 12 newspapers fell by 23% in the period 2005-2010. The United States is experiencing a drop of between 4% and 5% annually.¹³⁶ Besides the loss of income from the sale of press copies, reduced circulation means a drop in advertising revenue, which already suffered a significant setback in the crisis of 2008 and 2009. In contrast with other sectors, the decrease of 23% in advertising revenues did not recover after the crisis. The crisis in this sector affects Europe and the United States much more than Asia and Latin America. In countries like China and India, due to their greater population and the increase in rates of economic growth and education, circulation numbers are increasing, according to figures from the World Press Association (WAN - IFRA - World Association of Newspapers and News Publishing).¹³⁷

The outlook on the advertising segment provided by IDATE shows a similar trend, as reflected in Table 9.

¹³⁵ Leurdijk, A., Slot, M. & Nieuwenhuis, O. (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*. The Newspaper Publishing Industry. JRC Technical Reports.

¹³⁶ IDATE (2012): *Digiworld Yearbook 2012*. Montpellier, France.

¹³⁷ WAN IFRA. (2010). *World Press Trends 2010 Edition*.

Table 9: Spending on print media advertising (€ billion)

	2009	2010	2011	2012	2015* estimates
North America	54	51	48	45	43
Western Europe	41	41	41	41	41
Asia/Pacific	30	30	30	31	31
Rest of the World	18	18	19	20	21
Total	143	140	138	137	136

Source: IDATE – Digiworld Yearbook 2012

According to the table above, North America has suffered a continuous fall in ad spending since 2009, which is consistent with the decrease of newspaper circulation experienced in this region. Similar conclusions can be drawn from Western Europe, although here the decrease of ad spending is less sharp than in North America. In the rest of the World ad spending has increased since 2009, boosted by the increase of newspaper circulation in emerging countries (China, India, Brazil, etc.).

From the above figures it can be concluded that the reduction, at global level, in advertising revenue reflects a structural, not cyclical, situation derived largely from the rapid loss of classified advertising revenue that has moved to online media, often to specific search sites which offer better-adapted tools. Adverts for homes or second-hand material, which once provided a significant source of revenue for newspapers, are rapidly abandoning the paper model. For example, in France, the share of the online advertising market has increased from 1% in 2000, to 17% in 2005 and 50% in 2010.¹³⁸

Even in the heart of this crisis, the European industry has a better profile than the American, largely derived from its lower dependence on advertising revenue. While in the United States 87% of newspaper revenue comes from advertising, in countries like the UK this only reaches 50% and in Denmark only 38%. Japan is the country where advertising has an even lower contribution of 35%. According to data provided by the OECD, as a worldwide average, advertising represents 57% of industry revenue (50% in the case of Europe).¹³⁹

The European market

Focusing the analysis on Europe, the value of the European newspaper market totalled €36bn in 2011.¹⁴⁰ Newspapers sales account for 49% of total revenues, on average, in Europe. The remaining 51% comes from advertising. Advertising as a source of revenue fell by more than €4.5 billion from 2007 to 2010, a loss of more than 18%.¹⁴¹

Digital circulation of newspapers is expected to grow rapidly over the next few years. It is estimated that paid units of daily digital newspaper circulation will increase, in 16 western European countries, from 569,000 units in 2011 to 7.6 million in 2015.¹⁴²

¹³⁸ DGMIC/Xerfi.

¹³⁹ OECD (2010): *The evolution of news and the internet*. Paris, France.

¹⁴⁰ ENPA (2012): *Media on the move. Fact and figures on newspaper and news media publishing in Europe*. Brussels, Belgium.

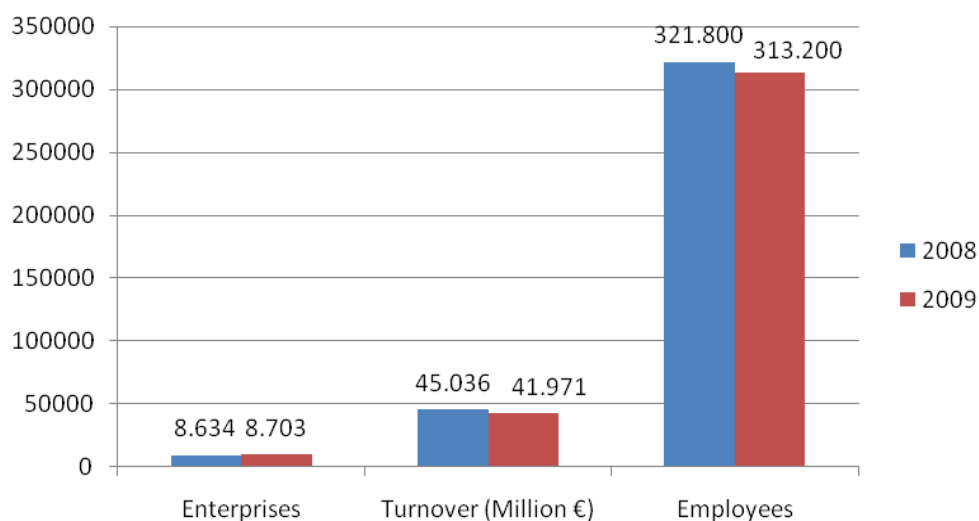
¹⁴¹ Ibid.

¹⁴² Ibid.

The European industry

The newspaper industry is an important sector in the economy of the European Union. The figure below shows the most important data in accordance with the information provided by Eurostat.

Figure 27: Key figures of the EU-27 news publishing market



Source: Eurostat (2012)

The data shows a decline in employment and income, and a small increase in the number of firms. The news publishing industry has more than 8,700 companies and 313,000 employees. However, temporary and precarious employment characterises this sector.

The following table shows the breakdown of major economic data by country provided by Eurostat.

Table 10: Key figures of European news publishing sector (2009)¹⁴³

COUNTRY	NUMBER OF ENTERPRISES	TURNOVER (€M)	ADDED VALUE AT FACTOR COST (€M)	NUMBER OF PERSONS EMPLOYED
EU-27	8,703	41,971.27	15,792.12	313,200
Belgium	188	1,050.2	283.6	3,489
Bulgaria	226	83.9	26.5	3,117
Czech Republic	:	:	:	:
Denmark	52	847.5	359.7	9,189
Germany	913	12,021.7	5,324.1	96,167
Estonia	25	:	:	:
Ireland	:	:	:	:
Greece	509	899.9	285.1	9,699
Spain	:	:	:	:
France	1,523	5,339.4	1,844.0	:
Italy	395	3,018.8	1,003.3	10,558
Cyprus	11	58.1	26.3	746
Latvia	36	31.3	12.9	1,219
Lithuania	92	62.3	14.6	2,263
Luxembourg	11	:	:	:
Hungary	119	234.8	74.2	3,058
Netherlands	348	:	:	11,009
Austria	153	1,243.2	302.6	3,853
Poland	550	428.6	202.5	7,217
Portugal	346	295.8	109.4	3,559
Romania	477	248.4	3.9	6,918
Slovenia	58	162.8	53.5	1,490
Slovakia	7	21.1	6.1	309
Finland	231	1,206.3	480.7	8,112
Sweden	485	1,857.8	543.8	14,738
United Kingdom	479	6,722.4	2,579.4	:
Norway	314	1,668.6	698.6	9,235
Switzerland	:	:	:	:
Croatia	169	272.4	87.4	3,634
Turkey	434	706.2	179.3	7,497

Source: Eurostat (2012)

The main economies of the European Union (France, Germany, Italy and the United Kingdom) account for 38% of the total number of enterprises. However, these four countries account for 64.6% of turnover. Germany alone accounts for 28.6% of turnover and 30.7% of employees, showing the economic relevance of this sector. Although Eurostat provides the most complete data, it should be viewed with caution since Eurostat groups companies according to their main activity. In the media industry it is common for companies in TV, radio and newspapers to be grouped into media holdings, and assigning them to any of these categories will depend on what each company considers its main

¹⁴³ ":" means data not available.

activity to be. This could lead to either underestimating the sector, if newspapers are integrated into companies principally engaged with TV activities, or overestimating it, in the reverse case. Nevertheless, Eurostat provides data with a fairly adequate overview of the industry situation.

The transition to the digital age: the market for online news

The newspaper industry was one of the first sectors to address the transition to the digital world. Newspapers that have chosen to completely abandon paper format and publish only on the Internet are few, but almost all newspapers now simultaneously maintain paper and digital versions. Most of them are not considering abandoning paper format in the near future, but they are all currently engaged in finding the right balance between traditional and new digital formats.

Much of the advertising in print media has moved online. The following table shows the changes in percentages of the total advertising market in the different media, according to data provided by PwC. The remarkable decline in media support compared to the steady growth of the Internet can be clearly seen. Although not all Internet ad spending can be attributed to online newspapers, this trend is a good indicator about transition processes in digital era and which the newspaper industry is involved in.

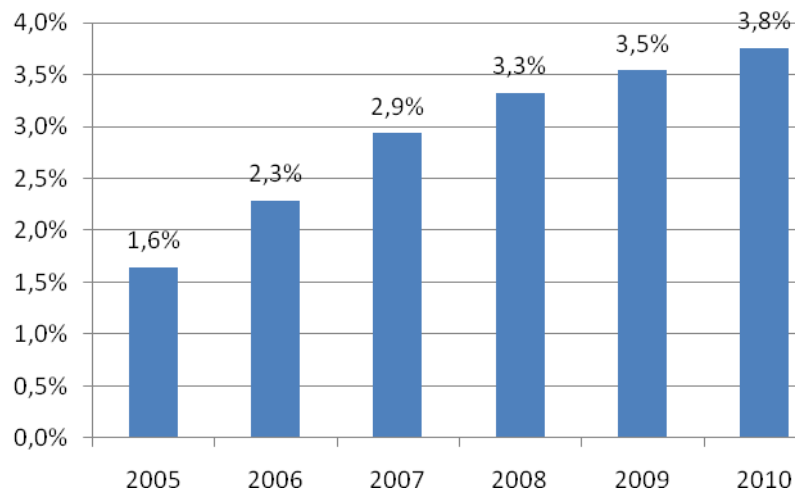
Table 11: Share of total worldwide ad spending by medium 2006-2010 (%)

	2006	2007	2008	2009	2010	Average growth
Newspapers	28.4	27.2	25.9	24.7	23.7	-14.9%
Magazines	12.5	12.1	11.6	11.4	11.0	-9.6%
Television	37.3	37.3	37.6	37.4	37.1	-0.5%
Radio	8.2	8.0	7.8	7.6	7.4	-7.9%
Cinema	0.4	0.5	0.5	0.5	0.5	20%
Outdoor	6.2	6.2	6.4	6.6	6.7	6.1%
Internet	6.8	8.6	10.2	11.9	13.6	42.9%

Source: Zenith Optimedia, 2009

While the newspaper industry has turned to online media, decline in print revenue has not been offset proportionately by the increases in online media. In 2005, revenue from online media advertising accounted for only 1.6% of industry revenues. This figure increased to 3.8% in 2010, still comparatively low. Meanwhile, traditional revenues plummeted by 11.6% in 2009 yet is and 3.8% in 2010, as shown in Figure 26. Although audience figures for digital media continue to grow, this represents much lower revenue figures than those provided by paper media.

Figure 28: Share of digital advertising in total revenue of the newspaper sector (%)



Source: PricewaterhouseCoopers (2011), Global Entertainment and media outlook

Contrary to what these figures may suggest, based on the number of users, it can be said that the European media sector is doing better in the online world than in Asia or America. According to data provided by the WAN-IFRA partnership,¹⁴⁴ the 100 most visited newspaper sites in the world (measured as per visitor per month) comprise 40 European papers. Among the 10 most visited there are seven European newspapers (5 English and 2 Spanish). If these figures are grouped by continent, 47% of one-off visitors can be attributed to European sites, while 33% are Asian and 20% are American or Australian.

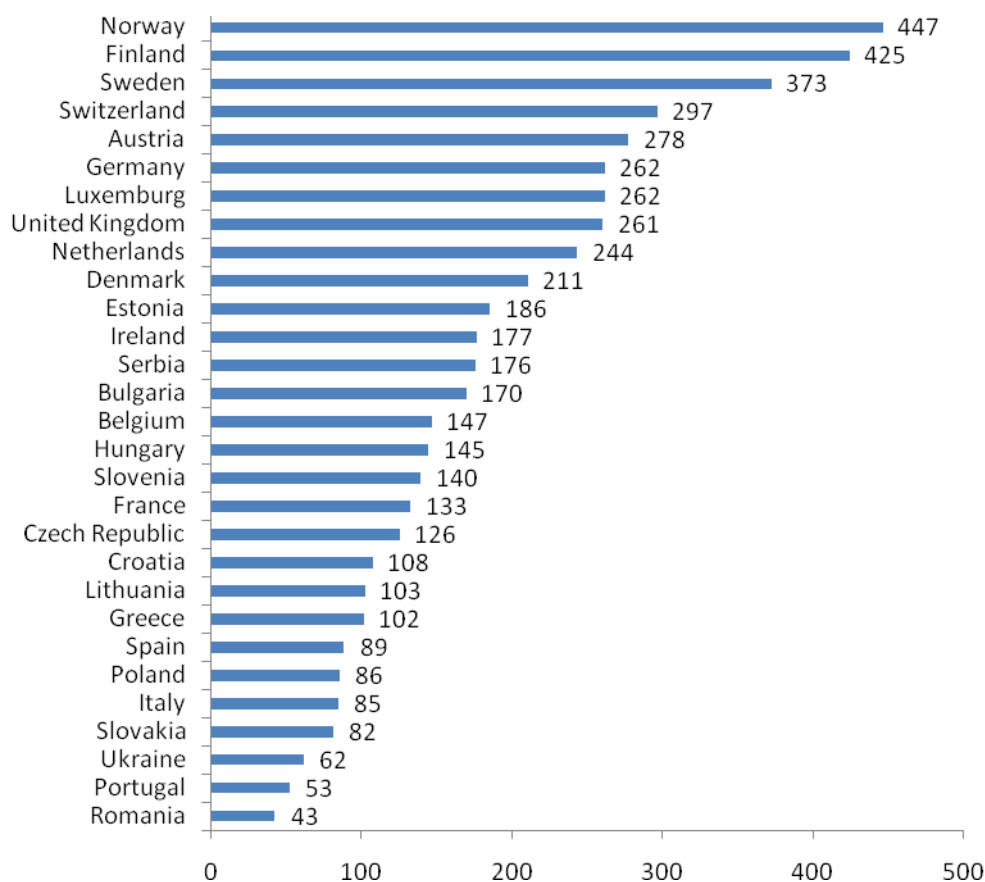
However, care should be taken not to misinterpret these figures since only newspaper sites are considered. In the online world there are many agents that compete in the advertising market who have also now joined the online news market. Services have appeared on the Internet as news general aggregators, such as those provided by Yahoo and Google, as well as more specialised aggregators that combine news from journalists with news provided by users, such as the *Huffington Post*. These new agents obtain some of their advertising revenue in the news industry. Global figures are not readily available on how these revenues are distributed among different agents, but we can say that newspapers are facing a major challenge in this transformation process.

As in many other areas of content, the new actors that have entered the digital news industry are mainly Americans, and especially the big Internet companies which, once again, threaten the position of European companies in the market.

Key indicators of demand

Average circulation of printed newspapers among the adult population is one of the best indicators to characterise the demand of traditional ways of distribution in this sector. According to ENPA, Nordic countries achieved the highest average circulation in Europe in 2011.

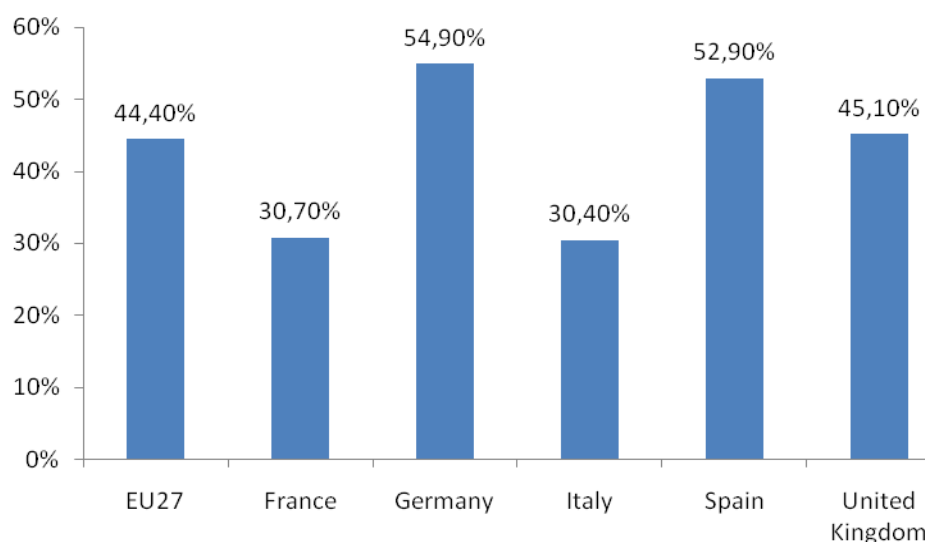
¹⁴⁴ WAN IFRA (2010): *World Press Trends 2010 Edition*.

Figure 29: Paid-for dailies: total average circulation/adult population (copies per thousand)

Source: ENPA (2012)

Considering new ways of accessing news, 44.4% of EU27 population use the Internet to read/download online newspapers. Germany is the country of the top five European economies with the highest penetration of online newspaper readers.

France and Italy are the countries with the lowest percentage of online newspaper readership.

Figure 30: Percentage of individuals who read/download online newspapers/news magazines

Source: Eurostat (2012)

Added Value

According to Eurostat, the value added by the process of news publishing in 2009 was €15,792.12 million, representing 39% of the value of production, and about 2.6% of total added value of the European economy.¹⁴⁵ Countries that provide most added value at the European level are France, Germany, Holland, Italy, Spain and the UK.

By this figure alone, it is very difficult to estimate the added value of new digital press models, since no figures have yet been published. If we assume that the percentage of revenue will be similar to the percentage of added value, and assuming that the share of digital advertising in the total revenue of the newspaper sector represented around 3.5% in 2009,¹⁴⁶ we would be talking about a figure of €552 million.

The news industry has a remarkable tradition in Europe, and as the demand for news is growing, the Internet can increase the potential of this sector. The transformation of European companies to adapt to the new digital environment poses many challenges that have to be addressed not only in the midst of the on-going process of change, but also amid the economic crisis. Given the strategic nature of this sector, both from the economic and from the social perspective, and given its role in supporting democracy, this trend will continue to have a significant impact on Europe.

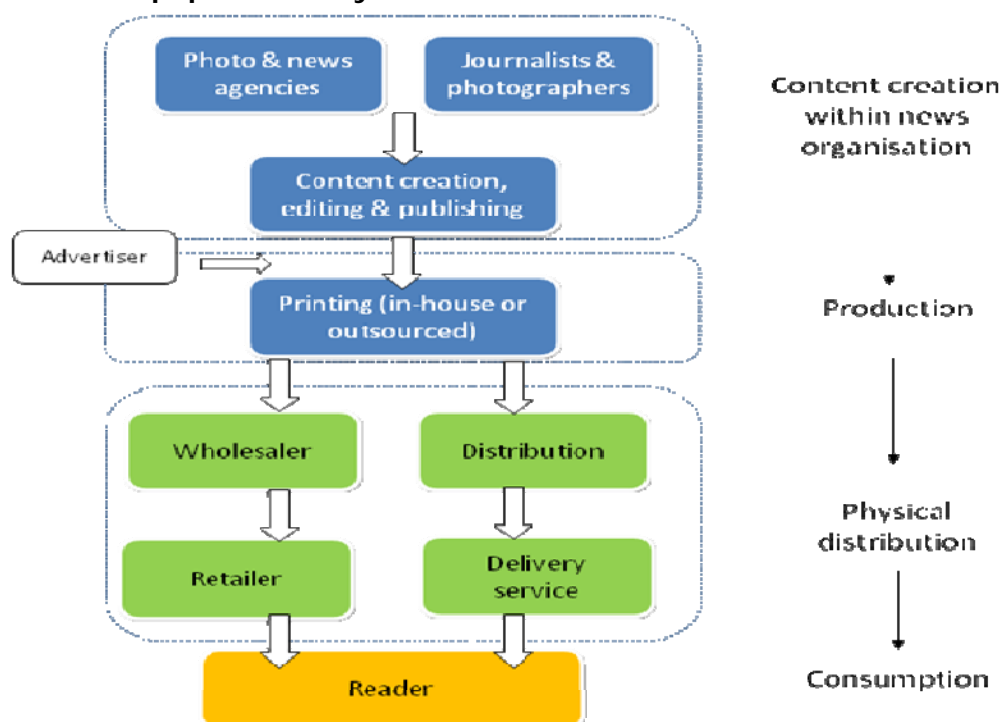
¹⁴⁵ Eurostat. Accessed in November 2012.

¹⁴⁶ PricewaterhouseCoopers (2011): Global media and entertainment outlook.

2.5.3. Value chain analysis

The traditional value chain of newspaper industry shows the following structure:

Figure 31: Newspaper industry value chain



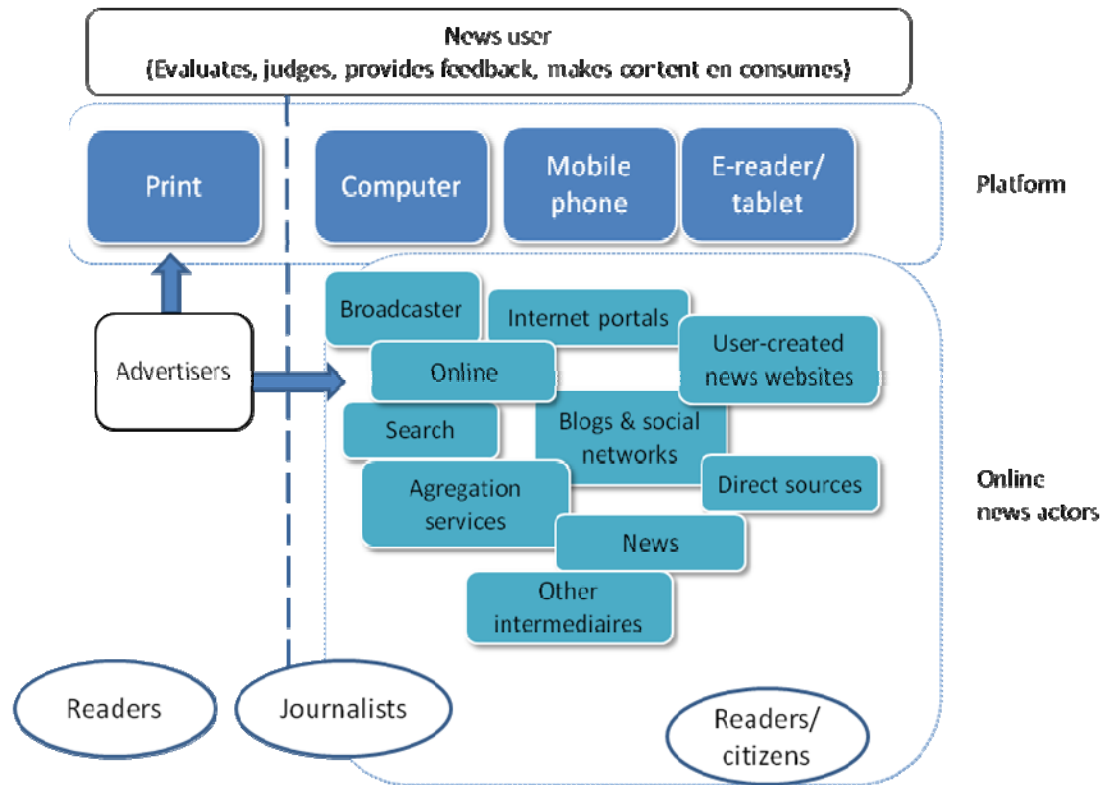
Source: IPTS (2012)

The value chain is made up of three main processes: content creation, production and physical distribution. The main agents involved in the content creation process are photo and news agencies, which provide information to newspapers, and their own journalists and photographers, who elaborate the news and reports included in newspapers. Once the information has been prepared it has to be edited according its importance and the available space in the newspaper.

After content creation, advertising is inserted in the newspaper. There are two main types of advertisement: classified advertisements, short text-only items, and display advertisements, which also include images.

Printing, which can be carried out in-house or outsourced to specialised companies, is the last stage in the production process. Finally, newspapers are distributed from printing houses through different channels depending on the final receiver: news-stands or individual subscribers.

New ways of journalism and new trends in newspaper consumption have rendered certain relationships and exchange of information in the sector between different agents through a linear value chain obsolete. Instead, a 'value-web' now provides better representation of relationships among agents:

Figure 32: News value web

Source: IPTS (2012)

This web reflects better how journalists can access information to elaborate news through different sources, the different options advertisers have to spend their budgets and the diversity of ways readers have of accessing information.¹⁴⁷

2.5.4. New business models

Over the years, the industry has been experimenting with new formats, and adding new revenue streams. In 2000, **free newspapers** were introduced, funded entirely by advertising, and since the 1990s papers have explored marketing other products (e.g. DVDs) with their newspapers.

With the arrival of the Internet, most newspapers launched websites and news offered by RSS, blogs and mobile applications. The Internet allowed major national and international newspaper publishers to adapt news and ads to be according to regional and local issues. Newspapers took to online news distribution quickly. The *Wall Street Journal* was the first newspaper to provide news online, first through a database, and then via a website. In 1995 there were 750 newspapers providing online news¹⁴⁸ and by 2000 there were 1,207; this figure continued to grow by 50% between 2003 and 2007. Over the years, newspapers have experimented with different formats and different business models, but today there are very few that have a viable business model for online news.

The Internet offers a wide range of free news sources, which has encouraged users not to access pay-for information services on the Internet. This situation has complicated the search for a sustainable online news business.

¹⁴⁷ IPTS (2012). *The Newspaper Publishing industry*. Luxembourg.

¹⁴⁸ Boczkowski, P.J. (2005): *Digitising the news: innovation in online newspapers*. Cambridge, Massachusetts: MIT Press.

Digital newspapers have attempted to replicate the business models of print, with models of payment per copy, subscription and advertising revenue, with mixed results.

Models based on advertising

Advertising is the main source of revenue for services offered on the Internet, and news services are no exception. While advertising revenues are growing in digital media, they are still very low compared to the income from advertising in print media.

This situation is explained by the lower prices of online media advertising, due to the abundance of available advertising space, fragmentation of readers, and the reduced amount of time online users read, compared to those who read a printed newspaper.

Models of payment per copy and subscriptions

Payment models in the digital media market that have been successful are rare. Some newspapers experimented for short periods of time with the “paywall” model (access to content on payment of a subscription), but had to pull out once they realised that the income from the sale of access to content did not offset advertising losses arising from the number of readers not opting for the model.

After this initial failure, newspapers have tried to reintroduce the “paywall” model for premium content. Early experience with pay-per-access to content in the newspaper was gained in the financial press, such as the *Financial Times* or *The Wall Street Journal*, whose content is of great value to industry professionals. The *Financial Times* offers several models adapted to the needs of readers, such as free access to ten articles per month and a daily news summary, or an online premium subscription, which gives access to the entire content of the newspaper. Additionally, subscribers to the print edition can subscribe to the online edition at no additional cost. *The Wall Street Journal* offers weekly subscriptions to its website, which gives users the right to access all content of the newspaper. Financial newspapers, or those that offer specialised information, have set truly successful examples of payment models. These pioneers in payment models were later joined by others, e.g. *The Berliner Morgenpost*, the *Hamburger Abendblatt* and *Le Figaro*.¹⁴⁹

Payment models for downloading content to mobile devices

The emergence of the iPad in 2010 brought hope to the digital print sector. Tablets and the new generation of e-readers enable more attractive digital newspaper access to the user, in both content and experience, which could attract more people willing to pay for a subscription or a copy that can be downloaded to their mobile reading devices. So far, the newspaper industry is optimistic about new business development opportunities offered by new mobile devices.

News aggregators

The news aggregation model is based on gathering news from different sources, to allow users to select that which is most relevant to them. This model has been remarkably successful. The use of broadcast technologies RSS-news-feed by newspapers has facilitated the emergence of such agents by allowing very simple technology integration into a single

¹⁴⁹ Leuridijk, A., Slot, M. & Nieuwenhuis, O. (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*. The Newspaper Publishing Industry. JRC Technical Reports.

stand of news from different sources, which they can also keep updated. The best example of this model is *Google News*.

This model has, however, generated considerable controversy. Newspapers believe that such services make use of, and benefit financially from, the news that they have developed, without paying for it. The most controversial issue regarding these aggregators is that the link to the original source is not made through the main page, but links directly to the news on the inside pages. As it is usually the first page of online newspapers which provides branding, thus more income, this mode jeopardises the advertising revenue of online newspapers.

Several publishers and news agencies from different European countries (Belgium, Denmark, France and Germany) have tried to prevent linking to articles and pictures that are not on the first page without prior consent. In Belgium and Denmark, news editors tried to stop Google News adding them to their websites. In Belgium, the business organisation *Copiepresse* (representing the rights of French-language newspapers in Belgium and Germany) won a lawsuit against Google: Google News links are no longer allowed to be incorporated into these newspapers. However, in July 2011, they gave their consent to Google once more. In Denmark, the Google News model was also banned if they did not pay royalties, and this was endorsed by the courts. Recently most Brazilian newspapers have also prevented Google News from accessing their news.

Disagreements between Google and newspaper publishers have not been resolved to date and negotiations are on-going. Although newspapers can always prevent access to their news, aggregators also redirect users to their newspapers, thus a measure preventing indiscriminate access from aggregators is not the most beneficial to the interests of newspapers. So far Google has refused to pay royalties for access to newspaper accounts.

Blog and content users

Other services that have been remarkably successful are those able to attract a lot of readers with news generated by low-cost users and blogs. The best example of this model is the *Huffington Post*.

Models of crowdfunding and sponsorship

The vast growth of free news services based on advertising undoubtedly gives all citizens easy access to news, but it raises questions as to the quality of this press model and that involved in root journalism cannot be covered in this model. Investigative journalism, or journalists dealing with governments or local policies, or international news in areas of less interest, could not be accommodated in a model largely funded through advertising.

To alleviate these problems, some journalists are experimenting with sponsorship models and crowdfunding. In the latter, probably the latest model, journalists ask readers for money to finance the production of an article or research on a particular topic. Readers can also suggest topics for journalists to develop. These models are more successful in the US than in Europe, probably due to traditional private sponsorship models.

2.5.5. Financial sustainability

The newspaper industry has always been considered an industry driven by private initiative. In contrast to sectors such as television or radio, which have the connotation of being a public service, the news industry has always remained in the private sphere.

Traditional financing model

The funding model of the press reflects a model of a sector that has traditionally had fixed costs, and where economies of scale play an important role. Investment in machinery and technology for writing and printing has traditionally stood as a significant barrier for new entrants.

During the last few decades, news-publishing companies have been incorporating many technological innovations in the production process, which has enabled a considerable reduction in costs. The transition to the digital world has meant the incorporation of new technologies into the processes of distribution and it has dramatically changed the situation by reducing the costs of production and distribution, which means lower entry barriers.

Public financing

Even though it is a private sector, most EU states use different mechanisms to provide financial support to the press. As in other sectors, it is offered aid to promote diversity and innovation within the sector. Its defending freedom of expression and the role newspapers exercise in democracy as a guarantor of freedom, by controlling government and administration, justifies the use of public funding.

Financial support measures are either made direct to specific newspapers or indirect to the entire sector, such as tax benefits. According to the OECD,¹⁵⁰ the following measures may be highlighted:

- Support to facilitate production, printing or news distribution
- Funding of a national news agency
- Reduction in rail or postal rates
- Reduction in VAT
- Support to promote diversity in the press
- Support to promote modernisation of newspapers
- Support for innovative projects

Within the European Union, France, Italy and Sweden are the countries that support the newspaper industry most. The Netherlands has a funding mechanism that supports newspaper diversification and minority newspapers. France and Portugal subsidise a national news agency. In addition, the French government recently introduced a programme that offers students a free newspaper subscription in order to encourage reading.

The Czech Republic, Germany, Greece, Hungary, Iceland, Spain and the UK have no direct subsidies to the press, although some offer low interest loans and favourable depreciation

¹⁵⁰ OECD (2010): *The evolution of news and the internet*. Paris, France.

accounting standards. In other cases, governments make an indirect subsidy to newspapers by buying a large number of copies, or by using institutional advertising.¹⁵¹

Indirect grants to the entire sector are generally less controversial than direct payments to specific newspapers. This is why most states are inclined to offer favourable tax benefits to newspapers, instead of opting for direct subsidies.

New funding models

Financing costs of digitisation

As mentioned above, different member countries fund the modernisation of newspapers, which in many cases has allowed them to subsidise papers' adaptation to the digital world.

There is no specific support for digitising back-copies of newspapers only currently available on paper or in microfilm format. There is not a large demand for this type of service, usually only as part of the research or scientific field. As a result, content digitisation projects are levelled more at preserving cultural heritage than supporting new businesses.

2.5.6. Case studies

The following case studies illustrate examples of different strategies adopted by agents of the value chain. The first case study presents transition to the Internet by one newspaper that has experimented with several business models. The second shows a new form of online newspaper that aggregates diverse sources of information. The third case analyses the strategy of a new entrant in the value chain. The final case shows an interesting initiative launched by a European publisher, which explores the synergies between the digital distribution of newspapers and new ways of accessing the Internet through tablets and smartphones.

Box 9: The Financial Times

THE FINANCIAL TIMES

The Financial Times (FT) is one of the world's leading business news and information organisations. They have a combined print and online average daily readership of 2.1 million people worldwide. FT.com has over 5 million registered users, including 312,000 paying subscribers; in fact, FT has more digital than print subscribers.

FT.com articles are only available to registered users and subscribers. In exchange for registration, the user is able to read up to 8 articles per 30 days and have access to email briefings, news alerts, portfolio tools and the 6am cut. The newspaper also offers three kinds of subscriptions: the most expensive including daily delivery of the printed newspaper. Corporate subscriptions are also available. Furthermore, the FT was a pioneer in developing its own app, independent of application platforms. The FT Web app proves that it is possible to write apps every bit as good as native apps using HTML5 (the standard language of the Web) rather than having to develop each app in the unique language of each smartphone platform. This decision has allowed the FT to retain full control of the app and to increase the income from digital subscriptions.

Source: www.ft.com/home/europe. Accessed in December 2012

¹⁵¹ Leurdijk, A., Slot, M. & Nieuwenhuis, O. (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*. The Newspaper Publishing Industry. JRC Technical Reports.

Box 10: The Huffington Post

THE HUFFINGTON POST

The Huffington Post is an American news website, content aggregator and blog. It was launched in 2005 in the USA and it has gradually expanded to other countries such as France, Italy, Spain and the UK. The Huffington Post receives huge numbers of hits: about 15.6 million page views per weekday. The majority of its revenue, estimated at 30 million in 2011, is from displaying advertising.

This news website has very low costs: most of their content is created by unpaid bloggers (who collaborate in exchange for visibility) and news aggregated from other media. They only publish a modest amount of original content, so their hired team is very small.

Source: IPTS (2012)¹⁵²

Box 11: Google News

GOOGLE NEWS

Google News is a computer-generated news site that aggregates headlines from news sources worldwide, puts similar stories together and displays them according to each reader's personalised interests. Users can find subjects which interest them in groups of stories or look for them in the search box. Additionally, Google News offers links to other articles on the same story, so it is possible to choose the publisher you want to read. Furthermore, Google News offers personalised news that allows the user to add groups of news to his own principal page, email alerts of topics of the user's interest, etc.

The service covers news articles within the past 30 days, it is updated every 15 minutes and aggregates in total content from more than 25,000 publishers.

Google News is experiencing problems with news publishers, especially in Brazil, France and Germany. In these countries, news publishers want to be paid by Google for using their contents.

Source: <https://news.google.es/>. Accessed in December 2012

¹⁵² Leurdijk, A., Slot, M. & Nieuwenhuis, O. (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*. The Newspaper Publishing Industry. JRC Technical Reports.

Box 12: Orbyt**ORBYT**

Orbyt is an online platform launched by Unidad Editorial, the Spanish publisher of the newspapers "El Mundo", "Expansión" and "Marca", to sell digital versions of these newspapers. The service is oriented to the consumption of newspapers on tablets and smartphones. Besides the newspapers of Unidad Editorial, the platform is open to other publishers that can sell their contents (newspapers, magazines, etc.) through it.

The subscription business model is implemented to sell content. Users can subscribe to their favourite newspapers and magazines, with monthly fees. They can configure their subscription with different pricing plans depending on the number of newspapers that they want to access.

Unidad Editorial has developed a mobile application that users have to install on their tablets or smartphones. Through this application they can access the newspapers to which they are subscribed. The newspaper through Orbyt has the same content as the printed version and additional content enhancements such as video-blogs, links, etc., to improve user experience.

The platform, launched in 2010, had about 80,000 subscribers at the beginning of 2013.

Source: <http://quiosco.orbyt.es/>. Accessed in March 2013

2.5.7. Conclusions

- This sector can bring relevant experience to the model of public access to content, given the wide diversity of business models, and models of generation and distribution of content.
- The newspaper industry is an important sector in the European economy and features leading worldwide companies.

Market trends

- The print media industry is suffering a major crisis due mainly to the reduction in advertising, a major source of revenue. A reduction in revenue driven by the economic crisis was compounded by a structural advertising crisis as a result of shifting from paper to online support (classified ads).
- New business models represent a shift in the production value chain (newspapers) to distribution, which provides opportunities for new agents, especially Internet companies. This situation favours US companies vis-à-vis European newsgroups.
- The revenue from digital media advertising does not compensate for the loss of income from the sale of copies and print media advertising. As this is not expected to change in the future, the industry must set about transforming itself to adapt to the new digital landscape.
- Most users are not willing to pay for online news, since the service for free news (advertising-funded) is vast and diverse.
- The emergence of the iPad and other e-readers is a new opportunity for advanced payment models in the field of digital media. Newspapers are currently optimistic towards this prospect.

- Business models based on advertising may question the development of journalism in areas that require greater investment, or have a minority audience, such as investigative journalism. Experimenting with models of sponsorship and crowdfunding may open up a new pathway inside the press.

Successful model

- The digital print sector shows successful models, both in terms of business models related to mobile devices like the iPad, as well as others able to combine free content and premium content.
- News aggregators and those content services that integrate users and blogs are also considered to be a benchmark of success that will attract many users.

Policy

- The press plays a key role in freedom of expression, supporting democracy by monitoring governments and administrations. It is important that this role is preserved, which may require public support to maintain the diversity of the media in the digital world.
- The controversial role of news aggregators should be clarified to allow for both the development of this successful model, as well as the profitability of the newspapers they produce.

2.6. Comparison between commercial sectors

In the previous sections commercial sectors encompassing content similar to public content have been analysed. In order to summarize this analysis, the following table presents a comparison of the most important characteristics of these sectors.

Table 12: Comparison between commercial sectors

	Film sector	Videogames sector	Books sector	Newspaper sector
Global market	Global box office (2011): \$32.6bn Physical video retail and rental (2011): \$38.5bn	Global videogames market (2011): €40.2bn	Global revenue (2010): \$108bn	Global revenue (2010): \$149.3bn
European market	Gross box office EU27 (2011): €6.4bn Physical video market EU27 (2011): €8.3bn	Videogames market ¹⁵³ (2011): €5.67bn	European book market (2011): €22.8bn	European market (2011): €36bn
European industry	Number of enterprises (2009): 76,000 Turnover (2009): €55.4bn Number of persons employed (2009): 375,000	Turnover ¹⁵⁴ (2009): €2bn Number of persons employed ¹⁵⁵ (2009): 9,100	Number of enterprises (2009): 26,249 Turnover (2009): €29.24bn Number of persons employed (2009): 167,600	Number of enterprises (2009): 8,703 Turnover (2009): €42bn Number of persons employed (2009): 313,200
Market for online contents	Spending on online access models in Europe (2011): €1.2bn	Mobile and online games market (2011): €16.2bn	e-books market (2011): €2.2bn	-
Demand	Cinema attendance frequency per capita and year (2009): France: 3.6 Germany: 1.8 Italy: 1.8 Spain: 2.7 United Kingdom: 3.1 Average number of DVDs-BDs purchased per equipped household per year in Europe (2011): 3.6 DVDs and 1.8 BDs Time spent per month watching videos online in top 5 European economies (2010): 14.8 hours	European online population who play games: 48%	Population who have purchased e-books in the past 6 months (2012): France: 3% Germany: 10% Spain: 8% United Kingdom: 17% USA: 16% Japan: 6%	Total average circulation: France: 133 copies per thousand Germany: 262 copies per thousand Italy: 85 copies per thousand Spain: 89 copies per thousand United Kingdom: 261 copies per thousand Percentage of individuals who read/download online newspapers/news magazines in EU27 (2012): 44%
Main agents in the value chain	Major US Studios (production and distribution) Independent studios Independent distributors Exhibitors Retailers	Video games developer Publisher Wholesale distributor Retailer	Authors Publishers' agents Publishers Distributors Retailers (book stores)	News and photo agencies Journalists and photographers Publishers Print houses Distributors Retailers
New business models	Online distribution services via streaming or downloading	"Advergaming" Free to Play Apps download "Serious games"	Selling e-books Lending e-books Ad-supported models	

Source: Several sources in previous sections

This table can act as a reference framework for the analysis of the public content developed in the following chapters.

¹⁵³ Top five economies (France, Germany, Italy, Spain, United Kingdom).

¹⁵⁴ Regarding only publishing industry.

¹⁵⁵ Regarding only publishing industry.

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3. THE CHALLENGE OF EUROPEAN PUBLIC CONTENT

KEY FINDINGS

- The public content analysed in this study includes mainly **cultural and historical heritage content and public sector information**. The focus is placed on cultural content held by public service broadcasters, educational, research and cultural establishments. The types of content include: printed material (books, journals, newspapers, etc.), photographs, museum exhibits, archival documents, sound and AV material, monuments and archaeological sites.
- With respect to **copyright protection**, content includes: (1) works in the public domain; (2) works where copyright appertains to a public entity; (3) works where copyright appertains to a private subject, but which are guarded or held by a public entity. For the latter category two kinds of content present particular difficulties when it comes to digitisation: orphan and out-of-commerce works.
- In principle, there are **four ways of accessing cultural digital content online**: (1) through the website of the institution that holds the analogue content; (2) via applications of the same institutions, (3) through aggregators, or (4) third-party repositories. Content can be consumed either through download or streaming (most often for AV content).
- Although over the last decade the EU and its Member States have made a major effort to make digital content more accessible, **public content is still in an early stage of digitisation in Europe**. Overall, some 20% of cultural content has been digitised, ranging from 4% for national libraries to 42% for art museums. On top of that, only about 1/3 of the digitised content has been made publicly available online, hence only about 6% of the European cultural content is accessible online. In order to put our complete heritage online, some further €100bn of investment will be needed.
- **Digitisation is a costly process** especially when considering that the actual technical conversion to digital form is only one part of the process. Other types of costs include: acquisition, ingest, bit-stream preservation, content preservation and access. In particular, clarifying copyrights and reaching agreements with all copyright holders is very costly.
- The process of making public digital content available in Europe has so far: (1) been focused on the digitisation process itself; (2) been fragmented both at European and MS level; (3) consisted of mainly short-term projects; and (4) largely come from public sources, with private funding present only to a lesser degree.

- Encouraged by the European Commission, a number of **Public-Private Partnership (PPP)** models have been envisioned and implemented, ranging from: direct sponsorship and donations, indirect and direct commercial exploitation models, to collaborative crowdfunded digitisation models. Although they are strongly supported and sometimes successful, there have also been some problems with these models. The public sector argues that it needs to be in control of projects in order to ensure public interest, while the private sector argues that public institutions are often lacking the necessary commercially-oriented skills.
- Given the **restricted budgets**, the **economic uncertainty** and the high costs of digitisation, new business and access models have been devised in order to (a) allow a wider access to cultural content while guaranteeing the copyrights and related intellectual property rights of third parties; and to (b) create revenues to guarantee the long-term sustainability of projects and services.
- These business models for public content can be categorised according to who holds the copyright (public domain, copyrighted, orphan content) and how content is exploited (commercial use or non-commercial use).
- The **provision of public content to commercial players for exploitation may either be free or involve one-off payments or revenue-sharing schemes** (normally at marginal costs). For non-commercial use, public content in Europe is mainly provided free of charge on an open access basis. However, business models already in place for commercial content in other industries are increasingly being applied by heritage and cultural institutions for sustainability reasons.
- Lessons from commercial experience show the importance of allowing for multi-device access (including mobile), with adapted business models. Simple and user-centric solutions are the key to success. Standardisation is the key for some types of content (e.g. books).
- **Most cultural institutions do not yet offer ways (or licences) to make commercial use of their content** and, with respect to this, policies are not clear. To facilitate the commercial exploitation of public content, business models must be specifically designed for this purpose, creating simple licences that boost reutilisation.
- **Orphan works** constitute a large share of available content. These works create problems for digitisation and online distribution. In spite of the recent EU Directive 2012/28/EU, several problems persist: (1) legal uncertainties, (2) economic uncertainties, and (3) limitations regarding beneficiaries included in the directive.
- Current access to digital content is dominated by content platforms. In this context, **the public sector has difficulties being part of the new ecosystem** without being cannibalised. Europeana is an initiative endorsed by the European Commission aimed at becoming the single access point for European heritage digital content. It was launched in 2008 and aggregates and distributes European cultural content through its portal and provides support to cultural institutions through content technology transfer, knowledge sharing and policy development. There is a degree of controversy regarding the suitability of creating a single access point to cultural content, due to the fear of cultural institutions losing their visibility and relevance in the digital era, and the fear that the rise of Europeana may result in a reduction of

available funding for their preservation and research activities on original artefacts and items.

- Digitisation of public content faces a number **of obstacles**. These are: (a) lack of funding for digitisation; (b) high costs of digitisation and unclear returns, the latter partly because of a (c) lack of mature business models; (d) lack of adequate content management, at least for orphan works; (e) difficulty of reaping economies of scale due to European heterogeneity, and (f) cultural/linguistic barriers; (g) the lack of a clear path in the transformation to the digital domain; (h) lack of coordination among initiatives and at all administrative levels – including the EU level; (i) the lack of appropriate skills within public institutions, and (j) multiple and divergent small-scale negotiations with existing digital platforms limiting the bargaining power of the public bodies involved; finally, (k) lack of user awareness.
- On the positive side, there is **potentially a high demand for public content**, still latent – dispersed and heterogenic – waiting to be adequately satisfied with the right combination of highly-qualified professionals working for the public sector, and government support – both direct and through regulation.
- Government support continues to be the key to the development of this market. **Government funding needs to stay high** and be supplemented via private funding. Increased coordination is also required in rights management and in the digital provision of public content, including a more standardised framework for digital intellectual property rights. Economies of scale, both in technical infrastructures and management, need to be stimulated.
- The **economic potential of public content lies partly in the reutilisation** of content by creative industries and society. Therefore policy should stimulate the creation of ecosystems around public content: open data and distribution platform initiatives, including metadata standardisation, distribution platforms and IPR management systems. It also requires coordinated action in the digital public provision of content, including production, distribution, consumption and negotiations with existing platforms.
- Finally, user awareness and involvement (social innovation) seems to be a determining factor in the success of future digital provision of content.

3.1. Public content: delimitation of the term and types of content

For the purpose of this chapter, the public content category is defined and classified with regard to three elements: type of content, legal rights over content, and type of material.

3.1.1. Types of public content

For the purpose of this study, two main types of public content are defined:

1. Cultural and historical heritage content;
2. Public sector information, as defined in the current PSI Directive.¹⁵⁶

The core of this study is creative content and therefore the analysis will focus on the first type, which includes in particular the cultural content excluded from the application of the PSI Directive, namely¹⁵⁷:

- a. *“documents held by public service broadcasters and their subsidiaries, and by other bodies or their subsidiaries for the fulfilment of a public service broadcasting remit;*
- b. *documents held by educational and research establishments, such as schools, universities, archives, libraries and research facilities including, where relevant, organisations established for the transfer of research results;*
- c. *documents held by cultural establishments, such as museums, libraries, archives, orchestras, operas, ballets and theatres.”*

3.1.2. Categorisation of public content in terms of copyrights

Types of content considered as public in the framework of this study, according to the protection of the intellectual property rights, are:

- works in the public domain;
- works where copyright appertains to a public entity;
- works where copyright appertains to a private subject but are guarded or held by a public entity.

Works in the public domain

A work is in the public domain when it is not or no longer covered by intellectual property rights. The Directive 2006/116/EC harmonises the term of protection for copyright and related rights in the European Union. It sets the term of protection of copyright for a literary or artistic work at **70 years** after the death of the author or after the date on which the work was lawfully made available to the public, if it is anonymous or was produced under a pseudonym. Furthermore, the directive sets the term of protection of related rights (performers, producers of phonograms, film producers and broadcasting organisations) at **50 years**,¹⁵⁸ to be calculated on a case-by-case basis from the date of the performance, publication or communication of its fixation.

¹⁵⁶ European Parliament (2003): *Directive 2003/98/EC of the European Parliament and of the Council of 17th November 2003 on the re-use of public sector information*. Brussels, Belgium.

¹⁵⁷ It should be noted that the Commission has elaborated a proposal for the amendment of Directive 2003/98/EC (COM(2011) 877 final) that suggests the inclusion of cultural heritage content, particularly that belonging to libraries, museums and archives in the Directive.

¹⁵⁸ European Parliament (2006): *Directive 2006/116/EC of the European Parliament and of the Council of 12 December 2006, on the term of protection of copyright and certain related rights*. Brussels, Belgium.

The entry of a work into the public domain means that it is not subject to copyright restrictions and that anyone can use it without permission. This means that these works can be copied, distributed, adapted, performed and communicated in public freely as they belong to everybody.

Very often it is difficult to determine if a work has passed into the public domain, despite the clear definitions in the Directive. These problems arise especially in cases in which it is necessary to determine the public domain status of content in multiple jurisdictions. The vast majority of public cultural heritage content falls into this category.

To the above definition of public domain content, a practice known as 'copyleft' has to be added, which consists of a copyright waiver signed by authors that involves the refusal of all rights – except for moral rights in those jurisdictions where authors are not allowed to waive them – of the work and the acceptance that the work can be used by anyone without restrictions. Therefore, the status of these works is the same as works in the public domain. The most famous of these copyright waivers is CC0,¹⁵⁹ developed by Creative Commons.

Works where copyright appertains to a public entity

Public entities own copyrights and related rights of certain works. They are generally the owners of the intellectual property rights of the works made by their personnel within the context of their work and the rights of the works developed under the performance of contracts with external entities. A public entity may also own the rights of a work by the acquisition of its copyrights (normally together with the acquisition of the work itself).

In all these cases, these works are protected by the prerogatives established by Directive 2001/29/EC, as if they appertained to a private entity or person. This means the right to allow and disallow reproduction, distribution and communication and the act of making their works available to the public.¹⁶⁰

Works with copyright but held by public institutions

Public institutions, such as museums, archives or libraries, guard works for which third parties hold the intellectual property rights. However, European Union efforts in the digitisation and preservation of Europe's cultural contents include these types of works, in order to optimise the economic and cultural potential of Europe's cultural heritage by means of the Internet.¹⁶¹

One of the barriers to the digitisation and dissemination of public collections are the problems that arise from works which are protected by copyright contained in these collections. However, Directive 2001/29/EC allows reproduction of copyright works if they are made by publicly accessible libraries, educational establishments, museums or archives, and digitisation is obviously an act of reproduction. This does not extend to the publication of these reproductions: the communication of digitalised works to the public requires authorisation of holders of the rights.

¹⁵⁹ Creative commons website <http://creativecommons.org/choose/zero/?lang=en>. Accessed in November 2012.

¹⁶⁰ If the amendment proposed by the Commission to the European Parliament and the Council of Directive 2003/98/EC is passed and includes materials from libraries, museums and archives included within the scope of the Directive, these rights might be limited or modified.

¹⁶¹ European Commission (2011): *Commission Recommendation of 27th October 2011 on the digitisation and online accessibility of cultural material and digital preservation*. (2011/711/EU). Brussels, Belgium.

There are two situations in which it is especially difficult to obtain this authorisation: orphan and out-of-commerce works. The status of these works is delaying the digitisation and dissemination of public collections, so the European Union has tried to establish different solutions, explained below.

Orphan works

In October 2012 an Orphan Works Directive was passed by the European Parliament and the Council. According to this Directive, a work or a phonogram shall be considered an orphan work if none of the rights holders of that work or phonogram is identified or, if identified, cannot be located despite a diligent search for the rights holders having been carried out and recorded.¹⁶²

The Orphan Works Directive is considered to be a significant achievement in efforts to create a digital single market and it will enable easy online access to European cultural heritage for everyone.¹⁶³ This can be affirmed by the fact that the new rule unites the status of orphan works and permitted uses of these works. Likewise, the directive allows European libraries, educational institutions and museums, as well as archives, film or audio heritage institutions and public-service broadcasting organisations to make available the orphan works contained in their collections and to reproduce them for the purposes of digitisation, making available, indexing, cataloguing, preservation or restoration¹⁶⁴. According to Article 6.2 of the Directive these actions shall only achieve aims related to public-interest missions, in particular the preservation, restoration, and provision of cultural and educational access to the orphan works contained in the collections. Organisations may generate revenues in the course of such uses, but these incomes shall be dedicated to the exclusive purpose of covering the costs of digitising orphan works and making them available to the public.

It is important to note that the Directive on orphan works applies only to works and phonograms that are first published in the territory of a Member State or, in the absence of publication, first broadcast in the territory of a Member State.

Out-of-commerce works

In September 2011, the Commission witnessed the *Memorandum of Understanding on key principles in the digitisation and making available of Out-of-Commerce works*, signed by representatives of European libraries, authors, publishers and collecting societies. This Memorandum indicates that a work is out-of-commerce when the whole work, in all its versions and manifestations, is no longer commercially available in the customary channels of commerce, regardless of the existence of tangible copies of the work in libraries and among the public (including second-hand bookshops or antiquarian bookshops).¹⁶⁵

This Memorandum aims to establish a set of key principles for voluntary agreements between users, rights holders and collective rights management organisations for the digitisation and making available of out-of-commerce books and learned journals contained

¹⁶² European Parliament (2012): *Directive 2012/28/EU of the European Parliament and of the Council of 25th October 2012 on certain permitted uses of orphan works*. Brussels, Belgium.

¹⁶³ Europa Press Releases (2012): *Commissioner Barnier welcomes final adoption of the Orphan Works Directive by the Council*. (MEMO 12/744).

¹⁶⁴ 2012/28/EU.

¹⁶⁵ European Union Memorandum of Understanding. Key Principles on the Digitisation and Making Available of Out-of-Commerce Works. http://ec.europa.eu/internal_market/copyright/docs/copyright-info/20110920-mou_en.pdf. Accessed in November 2012.

in publicly accessible cultural institutions, which are not for direct or indirect financial or commercial advantage.¹⁶⁶

However, the Memorandum is a sector-specific stakeholder driven agreement, and it should be completed by legislative measures that cover all areas of copyright.¹⁶⁷

To facilitate the identification of the rights status of a work and the identification of rights holders, the European Commission has created the Accessible Registries of Rights Information and Orphan Works towards Europeana (ARROW). One of the project's objectives is to clarify which works are orphans or out-of-commerce in order to include them in digitisation and dissemination projects.

3.1.3. Types of content materials

According to the Commission Recommendation on the digitisation and online accessibility of cultural material and digital preservation, there are seven types of cultural materials:

1. **Printed material:** this category includes books, journals and newspapers, but also manuscripts, sheet music, microforms and microfilms, maps, engravings, drawings, posters, postcards, paintings and any other two dimensional objects.
2. **Photographs**
3. **Museum objects:** they can be both 3D man-made objects and natural world specimens.
4. **Archival documents**
5. **Sound and audiovisual material:** including films, serials, video recordings and audio recordings (music and other recorded sound).
6. **Monuments**
7. **Archaeological sites**

3.2. Status of digitisation

Over the past ten years the European Commission and Member States have made a tremendous effort to make digital content in Europe more accessible, usable and exploitable in areas of public interest,¹⁶⁸ investing millions of euros¹⁶⁹ in supporting public and private cultural institutions (museums, archives and libraries) in the digitisation process.¹⁷⁰ This investment has enhanced the development of different models and methodologies for digitisation across the European cultural heritage sector.

¹⁶⁶ Ibid.

¹⁶⁷ Axham J. (2011) European MoU on Key Principles on the Digitisation and Making Available Out-of-Commerce Works. <http://kluwercopyrightblog.com/2011/09/22/european-mou-on-key-principles-on-the-digitisation-and-making-available-of-out-of-commerce-works/>. Accessed in December 2012.

¹⁶⁸ The Commission Recommendation of 24th August 2006 on the digitisation and online accessibility of cultural material and digital preservation (2006/585/EC), together with the funding programmes launched at European and national levels, is largely responsible for the boost in digitising activities in Europe during the past decade.

¹⁶⁹ Between 2005-2009 the European Commission invested €149m in the eContentPlus Programme. Funding measures of the programme are continued under the Information and Communications Technologies Policy Support Programme ("ICT PSP"), with a budget of €728m.

¹⁷⁰ Although the eContentPlus Programme included many other types of initiatives, an important part of the budget was dedicated to the digitisation of works. More information on the results of the Programme can be found in the *Final evaluation of the implementation of the multiannual Community Programme to make digital content in Europe more accessible, usable and exploitable*, COM(2011) 548 final.

These efforts, and the ones still needed – it is estimated that a total of approx. €100bn will be necessary longer term to put our complete heritage online¹⁷¹ – are an investment for the future, since recent studies show that providing access to this data (content and its metadata) without restrictions has great benefits for many different purposes, such as education and research,¹⁷² but also tourism and the creative industry.¹⁷³

Reliable statistics on the digitisation of cultural heritage and its usage was first addressed by the NUMERIC study.¹⁷⁴ The NUMERIC study was launched by the European Commission in 2007 and concluded in 2009, establishing a starting point and a first attempt at providing digitisation statistics, largely based on estimates using incomplete empirical data. It indicated that within the EU the great majority of cultural objects worth digitising have not yet been digitised. These percentages can be seen in the table below, which summarises the proportions of Collections that do not need to be digitised based on the figures established by the NUMERIC project,¹⁷⁵ along with a rough estimate of the proportions remaining to be digitised:

Table 13: Progress in digitisation of collections by type of cultural institution in 2010

Institution	No need to digitise	Digitisation completed	Awaiting digitisation
Archives	36%	1%	63%
Broadcasters	28%	6%	66%
Museums	3%	25%	72%
Libraries	69%	1%	30%
Other	0%	15%	85%
TOTAL	31%	11%	58%

Source: NUMERIC Project, Collection Trust (2010)

Large differences can be observed among types of institutions (and therefore among types of content). In 2010, libraries and archives were the institutions with the lowest percentage of objects digitised, around 1%, while museums, more advanced in the digitisation process, had already digitised 30% of their content, but they still have a large proportion of content to be digitised.

Follow-up activities are being developed by another EU co-funded project, ENUMERATE.¹⁷⁶ In the ENUMERATE study, around 2,000 institutions from 29 countries in Europe responded to a survey about the state of their digitisation process, which took place between January

¹⁷¹ Poole, N. (2010): *Report for the Comité des Sages of the European Commission "The Cost of Digitising Europe's Cultural Heritage"*. The Collections Trust. United Kingdom.

¹⁷² Comité des Sages of the European Commission (2011): *A New Renaissance*. Brussels, Belgium.

¹⁷³ Pekel, J. (2012): *The State of Digitisation*. <http://mastersofmedia.hum.uva.nl/2012/08/22/the-state-of-digitisation/>. Accessed in December 2012.

¹⁷⁴ Stroeker, N. & Vogels, R. (NL) (2012): on behalf of the EUMERATE Thematic Network "Survey Report on Digitisation in European Cultural Heritage Institutions 2012". The Netherlands.

¹⁷⁵ Chartered Institution of Public Finance and Accountancy (CIPFA) (2009): *NUMERIC Study: Developing a statistical framework for measuring the progress made in the digitisation of cultural materials and content*. United Kingdom.

¹⁷⁶ Stroeker, N. & Vogels, R. (NL) (2012) on behalf of the EUMERATE Thematic Network "Survey Report on Digitisation in European Cultural Heritage Institutions 2012". The Netherlands.

and March 2012. The purpose of this survey was to develop a clear picture of the progress being made in digitisation in the European cultural heritage sector. The most relevant figures are that – of all collections that need to be digitised – 20% of digitisation has been completed, and that 83% of institutions have a digital collection or are currently involved in digitisation activities. Although there may be a self-selection bias, the results confirm a wider pattern and show some clear differences between different kinds of cultural institutions, thereby confirming results from the NUMERIC Project: museums are, for example, way ahead of libraries and archives.

Figures from the 2012 ENUMERATE study indicate an increase in digitisation compared to the 2010 NUMERIC project, particularly for art museums, which have digitised 42% of their collections, whereas national libraries have only digitised 4% of a target of 62% of their collections.

Table 14: Progress in digitisation by type of cultural institution in 2012

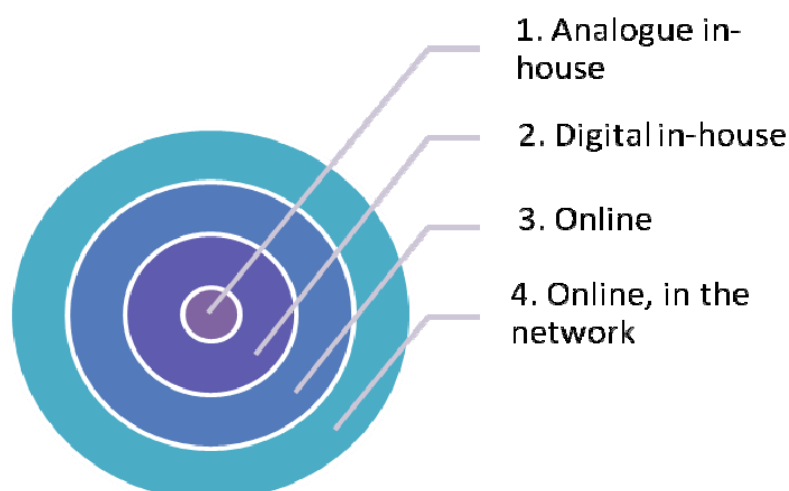
Institution	Need to digitise	Digitisation completed
Museum of art	52%	42%
Museum of archaeology, history institution	58%	28%
Monument Care	64%	26%
Museum of anthropology and ethnology	62%	26%
Other type of museum	61%	24%
Audiovisual, broadcasting or film institute	65%	22%
Museum of science, technology	63%	22%
Higher education library	52%	14%
Archives/records office	55%	12%
Special or other type of library	54%	12%
National library	62%	4%
TOTAL	57%	20%

Source: ENUMERATE Project (2012)

3.3. Access to digital cultural heritage

Following the model elaborated in the report *Business Model Innovation Cultural Heritage* (2010),¹⁷⁷ we have considered four levels or ways in which cultural heritage items or content can be accessed:

¹⁷⁷ De Niet, M., Verwayen, H. & van Kersen, J. (2010): *Business Model Innovation Cultural Heritage*. The DEN Foundation, KnowledgeLand & Ministry of Education, Culture and Science. Amsterdam, The Netherlands.

Figure 33: Forms of access to cultural heritage

Source: De Niet, M., Verwayen, H. & van Kersen, J. (2010) Business Model Innovation Cultural Heritage

These concentric circles of levels, as described in the report mentioned, refer to:

- **Analogue in-house:** the work is made accessible physically in the facilities of the institutions in charge.
- **Digital in-house:** the work is digitised or described digitally within the facilities of the institutions. Access can be provided through a closed network or through digital data carriers.
- **Online:** works are made accessible through the website but without explicit rights of use or reuse. Therefore works are merely “shown” online.
- **Online, in the network:** works are offered online in a complete form (with metadata) and the rights policy is explicit, so third parties know the rights of use and re-use of the works and information.

Most European cultural institutions are still at the second level of this model.¹⁷⁸

According to the NUMERIC Project (2009), 20% of digitised materials have been made available on the Internet, but there are still great disparities among sectors. Table 15 shows that libraries are, by far, the cultural institutions that have made digitised content best available on the Internet, with 70% of content available online in 2009, followed by archives, with 48.5% of content available online. None of the other content institutions have made more than 5.5% of their digitised content available online.

¹⁷⁸ The median proportion of digitised materials available on the Internet in 2010, according to the NUMERIC Project, was 20%. The most recent data, available via the ENUMERATE Project (2012), states that 49% of digital content is available offline and 31% is available on institution websites. Although the total figure of content available on the Internet is higher than this, as it does not include aggregators and third-party websites, availability offline is still higher. Also, the report *Business Model Innovation Cultural Heritage* (2010) states that in the Netherlands “The figures show that the majority (61%) of digital material is available within the physical walls of the institutions, while a considerable percentage (41%) of material is available online, but only on the institutions’ websites and without granting any explicit user rights for, for example, reuse. Although hard figures are lacking, it appears that cultural heritage institutions are not yet active within the outermost ring.” (p. 10).

Table 15: Digitised materials publicly available on the Internet in Europe (%)

Domains	Median, %
Audiovisual/broadcasters	4%
Archives	48.5%
Libraries	70%
Museums	5.5%
Others	3%
All domains	20%

Source: NUMERIC Project (2009)

Since 2009 progress has been made and more content is now available on the Internet; in 2012, **31% of digitised content was already available on cultural institution websites**, in addition to the content made available through other means like aggregators.¹⁷⁹

Considering that 20% of heritage materials has been digitised and that 31% of these materials is available on institution websites, it is estimated that **6.2% of total heritage content of European cultural content is accessible online**.

Following the distinction made between forms of access to cultural heritage, most of the content made available online is at the third level, so "content is available but not useful",¹⁸⁰ because explicit rights for use and re-use of the information are not available. Only 31% of cultural institutions have as yet an explicit policy regarding the use of digital collections.¹⁸¹

Rights' management is in fact one of the main obstacles in the way of digital content being available on the Internet.¹⁸² Some issues result from the fact that much content is digitised for preservation purposes and internal purposes only, e.g., cataloguing, referencing of materials or usage within the physical institution.

Clarifying copyrights and reaching agreements with all copyright holders is extremely costly, both in terms of money and time, and consequently the vast majority of content available online is out-of-copyright holdings (public domain). It is estimated that clearing rights for the whole BBC archive would cost 72 million pounds only for staff costs.¹⁸³

Regarding the ways in which digital content is made available on the Internet, most cultural institutions use their own websites for this purpose.

Figure 34 shows, according to the ENUMERATE Project, that 31% of cultural institutions use their own websites for digital content to be accessed, and this is expected to grow an

¹⁷⁹ Stroeker, N. & Vogels, R. (NL) (2012) (p. 18).

¹⁸⁰ This difference was pointed out by Mr Stuart Dempster from Strategic Content Alliance (UK) in an interview held for this report in October 2012.

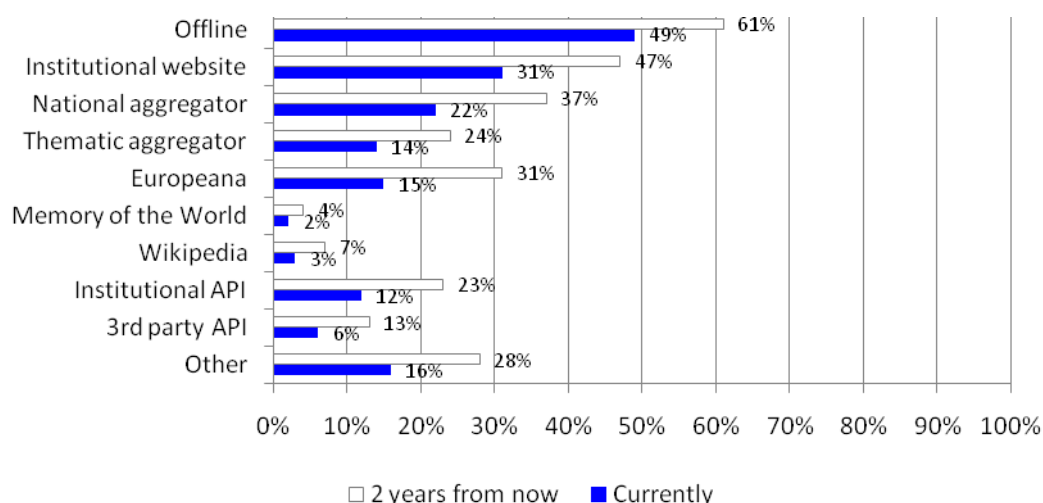
¹⁸¹ Stroeker, N. & Vogels, R. (NL) (2012): on behalf of the EUMERATE Thematic Network "Survey Report on Digitisation in European Cultural Heritage Institutions 2012". The Netherlands.

¹⁸² Chartered Institute of Public Finance and Accountancy (CIPFA) (2009).

¹⁸³ http://ec.europa.eu/information_society/activities/digital_libraries/comite_des_sages/index_en.htm. Accessed in December 2012.

additional 16% within the next two years. National aggregators, used in 2012 by 22% of institutions, are the second most common way of making digital content available online, followed by Europeana (15%), the access point that together with APIs is expected to grow comparatively faster.

Figure 34: Ways of accessing digital collections in 2012



Source: ENUMERATE Project (2012)

Four main ways of accessing cultural digital content online can be identified:

- **Institutions' own websites:** in the majority of cases, access to digitalised content is possible through the website of the institution which has the analogue content as part of its collection.
- **Applications:** in some cases it is also possible to access digital content through mobile, tablet or PC applications from the institution that holds the content. The Street Museum app of the Museum of London is an example: it maps images from the museum's collections against London landmarks.
- **Aggregators:** these portals gather online sources of digital content from a group of content providers and offer access through a single portal. They normally provide added value over a simple catalogue by classifying information (i.e. metadata) and include the original URLs to the content. Aggregators can be public or private, general or thematic. There are aggregators at a national level, such as Kulturpool (Austria) or Culturaitalia (Italy) and at a European level, like Europeana or the EFG (European Film Gateway).
- **Third-party repositories:** many cultural institutions offer their contents online through third-party portals. These portals usually offer services similar to those offered by an aggregator, but also directly provide the content while aggregators link to the digital object, which remains at the original institution. One example is the Biblioteca Virtual Miguel de Cervantes (Cervantes Virtual Library) or YouTube.

In relation to content distribution, two main models coexist: downloading and streaming.

- **Downloading:** involves copying online content to the user's device. This model of distribution is used by the majority of libraries.

- **Streaming:** content is sent over the Internet and displayed by the viewer in real time, without downloading the file to the device. Streaming is generally the preferred way for the dissemination of content on public radio and television.

3.4. Business models for digital public content

Public institutions set out to ensure that cultural heritage: “can remain a living asset over time and that it is as widely shared as possible”.¹⁸⁴ Public cultural institutions, as part of the public sector, are non-profit-making organisations that develop their work to safeguard the public good and not obtain profit.

However, as budgets become tighter and economic uncertainty threatens the whole of Europe, and considering the high costs of digitisation, digital initiatives within the public (and private) sectors are devising varied and creative ways to sustain their digital content by identifying new sources of support and revenue generation. Systems for creating long-term sustainability are still in the experimentation stage, and the path from pipe-line to permanent structure can be challenging.¹⁸⁵

As a result, the development of innovative business models for the distribution of public digital content is double-edged:

- To allow wider access to cultural content while guaranteeing the copyrights and related intellectual property rights of third parties;
- To create revenues to guarantee the long-term sustainability of projects and services.

Business models are therefore considered in a wider sense as the way public organisations deliver content and the models they are implementing to create revenues.

When analysing business models, two elements must be considered: first, Intellectual Property Rights (IPR) over the content and, second, exploitation of the content.

Business models, i.e. the way organisations create value, or how they do “business” with their clients,¹⁸⁶ are closely linked to copyrights and related rights. Copyrights refer to the legal protection of authors, performers, producers and broadcasters over their works and allow them to exploit these rights and obtain benefits from the use of their work by third parties.¹⁸⁷ Therefore, for works protected by copyright, creators’ interests protected by these rights are a key element in the definition of business models.

Seen thus, business models can be analysed in terms of public domain content, copyright content and orphan works.

Regarding the exploitation of content, a distinction can be made between private use (non-commercial use) and use for commercial purposes. This applies to public-domain and copyright content and orphan works.

¹⁸⁴ Comité des Sages of the European Commission (2011): *A New Renaissance*. Brussels, Belgium. p.1.

¹⁸⁵ UK examples of ‘best practice’ of public and commercial models of public access in the digital era, produced by the JISC-led Strategic Content Alliance, October 2012.

¹⁸⁶ Amit, R. & Zott, C. (2010): *Business model innovation: creating value in times of change*. Working Paper WP-870, July 2010. IESE Business School.

¹⁸⁷ Joint Information System Committee website <http://www.jisc.ac.uk>. Accessed in December 2012.

The aim of this chapter is to analyse existing business models, i.e. how public organisations deliver content and how they create value. The approach selected for this analysis focuses on the distinction between non-commercial and commercial use of content. Nonetheless, reference to issues regarding IPR will be included where relevant.

The separate analysis of non-commercial and commercial use of content will also allow for a better overview of lessons learnt from the private sector. For this purpose, non-commercial use will be additionally analysed by type of content: video, audio, image and text.

With the digitisation of content, the public sector has become a “producer” of digital content. In this transition to the Digital Era, cultural institutions have focused their efforts on providing access to their digital collections to final users, chasing the objective of “making knowledge resources from Europe’s cultural institutions – books, maps, audio, films, manuscripts, museum objects, etc. – more easily accessible to all for work, study and leisure”,¹⁸⁸ part of their public service duty.

As “producer” and “distributor” of content, the public sector has become an actor in the value chain of digital public content and can apply important lessons to be learnt from commercial initiatives analysed in the first part of this study that may help to create new business models and guarantee the sustainability of their projects and services. These business models are orientated towards the non-commercial use of content by users.

Figure 35: Public sector as single actor of the value chain



At the same time, digitisation of public content: “is a lasting asset for the digital economy, creating many opportunities for innovation, although the full exploitation of digital cultural assets is still embryonic”.¹⁸⁹ Placing digitised cultural assets at the disposal of creative and innovative businesses is a source of economic growth: “This will give an important input to the creative industries, which account for 3.3% of EU GDP and 3% of employment (...). Digitising and providing wider access to cultural resources offers enormous economic opportunities and is an essential condition for the further development of Europe’s cultural and creative capacities and of its industrial presence in this field”.¹⁹⁰

In this business model, the public sector becomes a content provider for the commercial sector, which develops new products and services, generates added value and creates new business. The cultural institution becomes part of a longer value chain, where the commercial player reuses or distributes public content through its platform.

¹⁸⁸ Commission Staff Working Paper: Accompanying the document *Commission Recommendation on the digitisation and online accessibility of cultural material and digital preservation*. Brussels, Belgium 27.10.2011 SEC(2011) 1274 final, p.4.

¹⁸⁹ European Commission (2011): *Proposal for a Directive of the European Parliament and of the Council Amending Directive 2003/98/EC on reuse of public sector information*. (COM/2011/877 final). Brussels, Belgium. Section 1.3.5. *PSI policy and the initiative on open access to scientific information*.

¹⁹⁰ 2011/711/EU. Official Journal of the European Union 29.10.2011 p. L 283/40.

Figure 36: Public sector as part of the value chain

Business relations between the public sector and commercial agents are different from the ones explained in the first part of this study, as these focus on the final consumer, although important lessons might be learned, particularly regarding the major barrier for the development of commercial use of public content: rights management.

The current situation and the possible evolution of business models in these two scenarios are reviewed below.

3.4.1. Non-commercial use of public content

The vision of the European Commission's *Comité des Sages* that: "public domain material digitised with public money should be freely available for non-commercial re-use by citizens, schools, universities, non-governmental and other organisations",¹⁹¹ is the most widely held view among heritage institutions in Europe, and most access models rely on open access.

As already mentioned, due to the high costs of and difficulties in identifying and managing copyrights and related rights, protected content in the hands of public institutions is not widely available, and few innovative business models are yet in place for the non-commercial use of this kind of content. This has created the so-called *black hole of the 20th century*,¹⁹² because in-copyright material (not over 70 years old) is not accessible online. To surpass some of these difficulties and facilitate the educational non-profit use of content, some jurisdictions have in recent years included exceptions in their IPR legislations to allow the publication of content on the Internet for educational and scientific use, such as the L2/2008 in Italy.¹⁹³

The following sections analyse briefly how video, audio, image and text content is made available by public institutions in Europe. For each type of content the mechanisms for making content accessible and the main existing business models are described, finalising with the key lessons from the commercial sector that are already being or might be applied to the public sector.

3.4.1.1. Video

Most video content related to cultural heritage that is made available online by public institutions throughout Europe responds to open access policies.

¹⁹¹ Comité des Sages of the European Commission (2011): *A New Renaissance*. Brussels, Belgium p. 14.

¹⁹² Comité des Sages of the European Commission (2011): *A New Renaissance*. Brussels, Belgium.

¹⁹³ Legge 9 gennaio 2008, n. 2: "Disposizioni concernenti la Società italiana degli autori ed editori": «1-bis. È consentita la libera pubblicazione attraverso la rete internet, a titolo gratuito, di immagini e musiche a bassa risoluzione o degradate, per uso didattico o scientifico e solo nel caso in cui tale utilizzo non sia a scopo di lucro. Con decreto del Ministro per i beni e le attività culturali, sentiti il Ministro della pubblica istruzione e il Ministro dell'università e della ricerca, previo parere delle Commissioni parlamentari competenti, sono definiti i limiti all'uso didattico o scientifico di cui al presente comma». *It allows publication through the Internet, free of charge, of images and music at low or degraded resolution, for teaching or scientific use, only if such use is not for profit (...).*

As a result, most of the content is displayed free of charge to the general public via streaming through: the institution's own website, thematic portals or private repositories (mainly YouTube and Vimeo).

Content is normally restricted to solely personal and non-commercial purposes, and most licences and terms of use limit the use and modification of contents.

Current business models for non-commercial use of video content are very limited and mainly include:

- Secondary business models such as merchandising and selling physical copies of the content (DVDs)
- Donations and voluntary contributions

One model that is starting to be applied is payment for **"download-to-own"**. Some organisations offer users the possibility of streaming videos or downloading them to the client's device for a fee. This is the case of the BBC's Project Barcelona, to be launched shortly¹⁹⁴ (see Box 14).

The next two boxes summarise traditional ways of funding public broadcasts in Europe and new business models being applied by the BBC.

Box 13: National public broadcast services

NATIONAL PUBLIC BROADCAST SERVICES

National public broadcast services have three main sources of funding in Europe:

- Public funding, directly through taxes or through licence fees
- Advertising
- Selling programmes to foreign broadcasters

One growing source of revenue is licensing brands to third parties to turn into consumer products such as gifts or clothing, although it does not account for a big share of budgets.

Public broadcasters have gone online providing a wide range of content and TV-on-demand services. The online models normally reproduce traditional ones, so if the broadcaster receives revenue from advertising, then adverts accompany online content, as in the case of the Italian RAI. If it is 100% publicly funded, then the content that is not limited by copyright agreements is openly available, as in the Swedish SVT or the Spanish RTVE.

Broadcasters face the same problems as identified in the commercial sector regarding licensing mechanisms by territory. As a result, some content sectors face copyright restrictions limiting their geographical availability, meaning that part of the video content of these institutions is not available outside of their own country. This could pose an obstacle for the development of new business models for online distribution of public video content.

Source: Elaborated from information available on websites of broadcasters from analysed countries¹⁹⁵

¹⁹⁴ <http://www.bbc.co.uk/news/entertainment-arts-17368514>. Accessed in December 2012.

¹⁹⁵ Countries analysed are: Estonia, France, Germany, Italy, Spain, Sweden and United Kingdom.

Box 14: The BBC and the Barcelona Project

**THE CASE OF BBC
INNOVATIVE BUSINESS MODELS AND SERVICES (UNITED KINGDOM)**

The British Broadcasting Corporation (BBC) is a British public service broadcasting corporation. Its web-based service is one of the world's largest and most visited websites. The BBC is launching several new business models around its online content to complete funding coming from licence fees in the UK. Most of its initiatives are led by the BBC's commercial arm, BBC Worldwide. In 2011/12, BBC Worldwide reported record returns for the BBC, increasing by 18.6% to £215.7 million (2010/11: £181.9 million).

The BBC website's content consists of news, weather, sports, foreign-language sites and iPlayer (a TV-on-demand service). There are three types of content: original content designed for the web, repetition of content broadcast elsewhere and companion (complimentary) websites for primary content.

For users in the UK, the BBC website offers on demand through iPlayer both programmes transmitted live and content already broadcast. In the latter case, users can see the content both in streaming mode or offline for up to 30 days. Additionally, the BBC is creating new business models to generate revenue:

- Global BBC iPlayer. This app for iPhone and iPad will allow users outside UK to watch BBC programmes on demand for a subscription.
- Project Barcelona, to be launched shortly, will be download-to-own content, without time limits and for a fee. This scheme will allow users to pay to download old and new content in an online shop. This service will compete with Apple's iTunes, where currently BBC programmes are sold for between £1.89 and £2.49. The service will, however, also compete with DVD sales, which is still an important source of revenue for the company.

Source: www.bbc.co.uk. Accessed in December 2012

Lessons from the commercial sector

Public video content is following general trends in the commercial sector with regard to access modes, and streaming is the most extended form of video consumption.

Although open access policies are common to most available services and content, cultural institutions are also learning from the private sector's experience in the development of businesses models, and they are starting to design payment models based on payments per individual transactions (**pay-per-view or download-to-own**).

Periodical subscriptions are a trend that could be applicable to the public sector. Periodicity and prices should be adapted to type of content, but it seems to be particularly suitable for broadcasters and those institutions generating large amounts of video content or frequently updating it.

So far there is no benchmark experience in the video area of the public sector using the subscription model, but there is some experience of failure from which lessons should be learnt. The next box illustrates one such failure case.

Box 15: ED*IT

ED*IT- IMAGE FOR THE FUTURE (THE NETHERLANDS)

ED*IT is part of the Image for the Future project, whose objective is to digitise the audiovisual heritage of the Netherlands. Image for the Future has created various services in an effort to reach a wide variety of target groups and to reach agreements with rights holders regarding the reuse of copyrighted material.

The education community was one of the most important target groups, and 60% of revenues from the project were expected to come from this market. In this field, the project offers content from Sound and Vision, the Filmmuseum, Public Broadcasters, Nationaal Archief (the National Archive of the Netherlands) and four museums in the fields of technology, national history, history and ethnography.

The first service launched was Teleblik (<http://teleblik.nl>), a platform that provides digital audiovisual educational materials. Based on these materials, a “freemium” type service was created through a new platform, ED*IT (www.ed-it.nl). Teleblik offers free raw materials for schools, and ED*IT is a pay system for more contextualised and packaged content.

The revenue model is based on annual subscriptions and the amount is based on the number of students accessing the service. In 2009 the fee was €1.85 per student in primary education and the fee for secondary education was one euro higher.

A mid-term evaluation report on Images for the Future reported: “Finally it was agreed that Teleblik would be maintained and would contain raw audiovisual materials, while the newly-developed service ED*IT would contain more processed material. For example, the audiovisual materials in ED*IT are also available in shorter fragments and with a more extended description. (...) It is striking that Teleblik is used extensively, while ED*IT had only 75 paid subscribers at the end of 2009. (...) From the success of Teleblik, a real need for audiovisual archive materials to enrich course content can be demonstrated. But teachers are apparently able to use the rough materials available from a service such as Teleblik sufficiently and as yet there is no much enthusiasm for digital educational materials which schools have to pay for.”

Needs of the target group were not correctly identified by ED*IT and its added value did not sufficiently meet user requirements.

Source: www.ed-it.nu. Accessed in December 2012, and Leurdijk, Bachet, Berkers, Gijbsbers & Huveneers (2010)

Another model being tested uses **advertising**. In this model cultural institutions reach agreements with companies, with certain links to the content displayed that embed non-intrusive advertisements in the site. Faculty Podcasts, from the University of Leeds is an illustrative example of this innovative advertising model.

Box 16: Faculty Podcasts**UNIVERSITY OF LEEDS- FACULTY PODCASTS (UNITED KINGDOM)**

In partnership with the History Faculty Ltd, this project provides short, downloadable films of university lecturers speaking on topics from the UK school A-level curriculum. In bringing the expertise of research scholars into the classroom, the project aims to stretch and inspire students, help them excel in their assessments and make a successful transition to university.

In order to keep all resources free to end user and to be able to continue expanding the number of resources, the project looked at private company involvement, particularly major recruiters to insert advertising on the site. The basic idea was that investing in the project would give companies the opportunity to address 16-18 year olds to aspire to work for them.

The project charges a fee to display company information on "Careers" pages, making advertising more attractive, that funds the production of further podcasts. This creates a win-win situation. Schools and universities want to be associated with graduate recruiters who ultimately employ those they teach, and all the "advertising" that appears on the site can be and is formatted to look like a page from a reference guide rather than the usual appearance of advertising on a website. In other words, it does not look as though there is advertising on the site.

Source: SCA (2012)

Finally, "**Freemium**" models might be applicable to video by offering extra features.

The most important lesson to be learnt from the private sector is that users must be at the centre of the business model definition from the very beginning. Other lessons are:

- Commercial experience shows the importance of allowing multi-device use of video, and therefore content and access models must be adapted.
- Mobile video consumption is an important trend that has to be taken into consideration.
- Use video as a way of enriching other type of content.

3.4.1.2. Audio

The current situation of access to public digital audio content in Europe is very similar to that described for the video sector.

The vast majority of entities (multimedia and traditional libraries, aggregators, broadcaster, etc.) that have made their audio content available online have done so free of charge to all users for non-commercial purposes only. Content is available mostly via streaming.

The variety of business models is more restricted than in the case of video and even highly innovative public organisations like the BBC offer their podcasts and audio content free of charge. However, in the case of national broadcasters supported by advertising, such as in France and Italy, this model remains for online radio content.

Lessons from the commercial sector

Regarding non-commercial use of audio content, the wide experience of the private sector could be particularly useful for the public sector. The diffusion of mobile broadband has had a great impact on business models in the music sector, and new services are focusing on mobility. As a result, two main business models have arisen in the sector that might be applicable to public content: **subscriptions** and the **download-to-own model**.

Box 17: Institut National de l'Audiovisuel

INSTITUT NATIONAL DE L'AUDIOVISUEL (FRANCE)

The Institut National de l'audiovisuel of France is a repository of all French radio and television archives. In 2006 the website was launched.

This website offers extracts of historical programmes. Users can hear or watch an extract via streaming free of charge, but they have to pay if they want to download the archive and enjoy it in its entirety. There is also the possibility of ordering a DVD with selected content. The website is also funded by advertisements from different companies.

The advantage of this website is that it offers the purchase of digitised old radio programmes that are not available anywhere else.

Source: www.institut-national-audiovisuel.fr. Accessed in December 2012

3.4.1.3. Image

Images are the most common digital content in the hands of cultural institutions.¹⁹⁶ Images are usually available for downloading free of charge for non-commercial use.

Most business models built on digital images are still based on physical solutions, e.g., purchasing printed quality copies online.

Lessons from the commercial sector

Some of the most innovative business models being applied to this type of content are:

- **"Freemium" models:** these types of services include the possibility of downloading a low-quality version of the image free of charge and the possibility to pay for a premium service that includes high-quality images or extra features.
- **Development of applications:** some organisations, particularly museums, are creating their own apps for mobile devices that allow the acquisition of digital images and include extra features such as videos and texts. In the case of museums, these kinds of applications may replace the traditional paper catalogue and include enriched content, or may offer new services and experiences like contextualising works on maps.

Boxes 18 and 19 illustrate examples of "freemium" models and applications for the distribution of digital content respectively.

¹⁹⁶ Around 66% of content in Europeana are images.

Box 18: BPK**BILDARCHIV DER PREUSSISCHEN KULTURBESITZ (BPK) (GERMANY)**

BPK is a central service institution of Stiftung Preussischer Kulturbesitz (Prussian Cultural Heritage Foundation) in Berlin. It owns about 12 million pictures, for a large part of which it holds the exclusive copyright.

Any use of pictures from BPK is subject to the payment of reproduction fees. Fees depend on the purpose and scope of the use of the content. For non-commercial use (downloading) it offers a “freemium” service consisting of two options:

- Registered Users
- Free download of watermarked picture data in low resolution.
- Paid-for downloads of €5.00 per picture data in high resolution.
- Non-Registered Users: pictures can be requested via e-mail and a minimum service fee of €20.00 applies for up to four delivered images.

Source: <http://bpkgate.picturemaxx.com>. Accessed in December 2012

Box 19: Victoria and Albert Museum**FIGURES & FICTIONS (UNITED KINGDOM)**

The application Figures & Fictions is based on the contemporary South African Photography exhibition at the Victoria and Albert Museum showing the work of 17 photographers living and working in South Africa today.

This app contains the complete exhibition catalogue, including all the texts and illustrations, video interviews with the curator Tamar Garb and a selection of the artists, audio interviews with a selection of the artists, together with an audio guide to the installation narrated by the curator.

It costs £16.99 – whereas the paper catalogue would be £58 – and includes extra features the paper catalogue does not have. It is available for iOS and Apple. All rights belong to MACK and Trustees of the Victoria and Albert Museum.

Source: www.vam.ac.uk, accessed in December 2012, and iTunes (2012)

3.4.1.4. Text

Text digital content refers to digitised printed materials consisting of written works. It should be noted that a large part of printed materials like maps, music score sheets, microforms and microfilms, engravings or drawings are digitised in image form, so they fall under the previous category. For this reason, analysis in this category will focus on newspapers, magazines, books, and scholarly/scientific journals and papers.

There are two main ways of accessing text content from cultural institutions in Europe:

Open and free access: contents are freely accessible electronic publications, mainly for downloading in PDF format.

Registration required: some institutions, mainly archives and libraries from educational institutions, require users to register to access the content. Registration might be free of charge, as in the case of the Bundesarchiv in Germany, or via payment, such as the JISC Collections in the UK,¹⁹⁷ and is mainly open to educational and research institutions.

An important issue regarding digitisation of text is the high cost of transforming digital images of scanned books into electronic texts.¹⁹⁸ Creating a full-featured electronic text of historical documents allows contents to be reutilised and generates extra added value, permitting the development of a greater variety of business models.

Newspapers

Digitalised newspaper libraries provide mainly open and free access to the general public with no restrictions for non-commercial use. Digitised newspapers are available for downloading in pdf or html formats preferably.¹⁹⁹

In some cases access is restricted to scholars and research users, and registration is required. This is the case, for instance, in the National Library of Sweden.

Business models via payment are being implemented based on private sector experience. The models are:

- **Subscriptions:** complete access to the catalogue in return for periodical payments.
- **Pay-per-view:** works can be accessed online for individual payments.
- **Pay-per-download** (e.g. scholarly articles/papers)

Institutions normally offer more than one option to users. This is the case, for instance, of the British Newspaper Archive, which offers both subscriptions and pay-per-view options. Payment is also required for works in the public domain. This is the model used by the Oxford Journal from Oxford University Press.

Box 20 provides an example of an institution providing a mix of free access and subscription models.

¹⁹⁷ Called Big Deal (i.e. where institutional subscribers pay for access to online aggregations of journal titles through consortial or site licensing arrangements).
http://www.deff.dk/fileadmin/user_upload/dokumenter/DEFF/projekter_oq_tilskud/Houghton_rapporten.pdf. Accessed in December 2012.

¹⁹⁸ Impact project website <http://www.impact-project.eu>. Accessed in December 2012.

¹⁹⁹ This is the case with most national newspaper libraries, like the Austrian, Belgian, Dutch, French, Italian, Portuguese, Spanish, etc.

Box 20: DigiZeitschriften**DIGIZEITSCHRIFTEN (GERMANY)**

Göttingen State and University Library, University of Göttingen, Germany

DigiZeitschriften is a German-language archive of scholarly journals, created in 1997 with funding from the German Research Foundation. It has been available online since 2005. It offers access to 200 German academic journals from 19 subject areas of knowledge.

Content in the public domain is available at the Open Access section free of charge. The remaining content is only available for users from the subscribed public institutions, especially universities, libraries and scientific institutions. Prices vary depending on the type of institution and the number of users.

All articles are available for downloading in PDF Format and printing. This financial model covers the operating costs of the service.²⁰⁰

Source: www.digizeitschriften.de/startseite/. Accessed in December 2012

Books

Access to public domain digitalised books is mostly open and free to users for non-commercial use, while access to in-copyright materials is commonly to short extracts only, with information on how to access the full document. Often this information consists of details on locating the physical copy (original) of the work and catalogue information, including MARC records.²⁰¹

In limited cases, access to all content is geographically restricted, as is, for instance, The National Library of Norway, which is only accessible to users with a Norwegian IP address. Books not protected by copyright may be browsed on the institution's website or downloaded. When digital copies of protected documents are available online, users may buy them in e-book formats. Purchase is normally made through links to specialised portals like iTunes and online libraries. This access is available under specific terms, according to the specific agreement of the rights holders.

Purchasing copies of e-books online is the most common business model for in-copyright works among cultural institutions in Europe nowadays. It is normally supplemented by an online shop where merchandising and paper copies of books can be purchased.

Gallica, the digital library of the Bibliothèque Nationale de France (BnF), has developed this model.

²⁰⁰ Maron, N., Kirby, K., & Loy, M. (2009): *Sustaining Digital Resources : An On-The-Ground View of Projects Today. Ithaka Case Studies in Sustainability*. JISC content http://sca.jiscinvolve.org/wp/files/2009/11/sca_ithaka_sustainingdigitalresources_fullreport_with-casestudies_uk.pdf.

²⁰¹ A MARC record is a Machine Readable Cataloguing record, the widespread standard for bibliographic data.

Box 21: Bibliothèque Nationale de France and Gallica

BIBLIOTHEQUE NATIONALE DE FRANCE (FRANCE)

Bibliothèque Nationale de France (BnF) is one of the most important libraries in France and in the world. Its digital library, Gallica, was established in 1997.

Its catalogue includes both in-copyright content and public domain content. Public domain content is free for users to see online, to download a copy onto their device or buy a printed copy. The in-copyright content is linked to an online bookstore from which user can buy a copy. In such cases, users have free access to cover pages 1 and 4, the table of contents and, in some cases, a summary.

This model provides advantages for the BnF, publishers and users. The BnF is increasing the number of documents available online, publishers the visibility of their products and users can seek public domain and copyrighted information on the same website. Moreover, this model fully respects copyright rules.

The idea is the same as Google books but with an important difference: in the Gallica library, publishers are in charge of the digitisation and dissemination of their books on the website, therefore the intellectual rights are clear.

Source: <http://gallica.bnf.fr>. Accessed in December 2012

Subscriptions as already applied widely in the United States for non-commercial use²⁰² are slowly appearing in European public libraries mainly and exclusively for specialised users. It consists of the digitisation of the traditional library card, allowing online reading or temporary downloading. Box 22 illustrates one of these models in use in the USA.

Box 22: Kindle

PUBLIC LIBRARY BOOKS FOR KINDLE (UNITED STATES)

In 2011 Amazon launched a service in collaboration with United States Public Libraries. It currently collaborates with over 11,000 libraries and allows e-books to be borrowed through the website of a local library, and have them sent directly to a Kindle device or reading apps where they are available for a specified period of time, just like a regular library book. Public Library Books for Kindle provide the same features as Kindle books (notes synchronizing, highlights, etc.).

Source: www.amazon.com. Accessed in December 2012

Lessons from the private sector

As with the book industry (commercial sector), public initiatives around public text content are still a reflection of the paper world. However, there are some lessons from the private sector that may be applied to public content

- New business models: one of the new business models being developed by the private sector is the “**freemium**” model. This service is a transfer of services already used in the music sector (like Spotify) to the book sector. One example is

²⁰² Around 75% of public libraries in the USA already have e-book lending services, according to "Libraries Connect Communities: Public Library Funding & Technology Access Study 2011-2012", published by the American Library Association and the Information Policy & Access Center (University of Maryland), June 19th 2012.

the Spanish service 24symbols analysed in the previous chapter on commercial content. Renting is the second model in the private sector that could be applied.

- Users must be at the centre of the model: a general lesson learned from the successful experience of Amazon is that **simplicity** is the key success factor when trying to apply payment models, together with a correct pricing policy.
- Standardisation: the book industry has also converted to **common standards**, particularly ePUB, and the public sector should follow this trend to facilitate easy access to public content.

3.4.2. Commercial use of public content

It is generally accepted that cultural institutions should make their content available as widely as possible, not only to private users, but also to creative industries to re-use them and generate new content, services and knowledge.²⁰³ This re-utilisation for commercial purposes could be free of charge or via payment, although there is a general feeling that payment for commercial use is an effective way of making digitisation sustainable in the long-term.²⁰⁴

There are two main business models regarding payment for commercial use of public content:

- One-off payment
- Revenue sharing

These models might be applied both to public domain content and content in copyright.

Although the proposal for a directive, amending Directive 2003/98/EC on re-use of public sector information, states that charges should be "*limited to the marginal costs incurred for their reproduction and dissemination*" it makes an exception for cultural institutions: "*Libraries (including university libraries), museums and archives may charge over and above the marginal costs for the re-use of documents they hold.*"²⁰⁵

Most organisations do not yet offer ways (or licences) to make commercial use of their content, and policy in this respect is not clear; contact with the institution is required to find out about of commercial use and terms and conditions of that use.

To facilitate commercial exploitation of content, business models must be specifically designed for this purpose, creating simple licences that boost reutilisation.

Some projects are already addressing "*the need for greater streamlining of copyright licensing to make it more suitable to the ever-changing demands of the digital age*".²⁰⁶ The Museums Digital Content Exchange (MDCE) in the United Kingdom is an example of such recent initiatives.

²⁰³ Comité des Sages of the European Commission (2011): *A New Renaissance*. Brussels, Belgium.

²⁰⁴ Ibid.

²⁰⁵ Marginal costs of the reproduction of digital contents is generally considered as being zero (or tending to zero), however reproduction (particularly if we include dissemination as the Directive does) includes other costs such as those derived from storage and curation. Section 3.5.2 *Funding models* provides more details on full costs of digitisation of content.

²⁰⁶ Hooper, R. & Lynch, R. (2012): *Copyright works: Streamlining copyright licensing for the digital age*. Intellectual Property Office, United Kingdom.

Box 23: MDCE**THE MUSEUMS DIGITAL CONTENT EXCHANGE (MDCE)**

The MDCE is a non-profit agency aiming to centralise image licensing for museums and galleries in the UK. The objective is to reduce costs for institutions in the management of licences and to provide a single online marketplace for British museums' content.

The service simplifies access to licences for creative industries and enables the creation of innovative licensing options, while offering a comprehensive catalogue of images. Centralised management reduces licensing costs and offers a platform with wider international visibility to many museum partners to present their collections without building their own distribution infrastructure.

Similar initiatives have been launched in France (Réunion des Musées Nationaux de France) and Germany (Bildarchiv der Preussischen Kulturbesitz), and an international marketing partnership has been established.

Source: Hooper, R. & Lynch, R. (2012)²⁰⁷

3.4.3. Orphan works

According to the Association of European Cinémathèques an estimated 21% of films held in audiovisual archives are orphaned²⁰⁸ and 85% of European film heritage is out-of-commerce, and hence not accessible.²⁰⁹ The British Library estimates that 40% of its in-copyright collections are orphan, as is approximately 90% of photographic records in UK cultural institutions.²¹⁰

Although there have always been orphan works, the transition to the digital era and the resolution of making all European content accessible to citizens and industry have intensified the problem, creating the "20th Century black hole".

The impossibility or difficulties in identifying or locating the rights holders of works creates problems for institutions that have collections, preventing them from making this content accessible. These problems have been addressed by Directive 2012/28/EU of the European Parliament and of the Council of 25th October 2012 on certain permitted uses of orphan works.²¹¹ However the final text leaves many questions unresolved:

- Legal uncertainty: the lack of legal determination of orphan works and the lack of harmonisation of legislation throughout Europe leaves institutions uncertain. The new Directive tries to solve this situation, although here, too, there are vague concepts like: *diligent search and good faith maintain legal uncertainty for collection holders*.

²⁰⁷ Hooper, R. & Lynch, R. (2012): *Copyright works: Streamlining copyright licensing for the digital age*. Intellectual Property Office, United Kingdom.

²⁰⁸ Comité des sages (2011): *A New Renaissance*. Brussels, Belgium.

²⁰⁹ http://europa.eu/rapid/press-release_SPEECH-12-858_en.htm. Accessed in December 2012.

²¹⁰ Comité des sages (2011): *A New Renaissance*. Brussels, Belgium.

²¹¹ Lex Europa website.

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:299:0005:0012:EN:PDF>. Accessed in December 2012.

- Economic uncertainty: if the rights holder of a work considered an orphan work appears after a work has been digitised and disseminated, (s)he may claim for the rights over the work, including financial compensation. The Commission's text of the Directive included compensations for future uses of the work to the rights holder, but the final text includes compensation for past usage as well, generating a great financial risk for institutions making orphan works available.
- Limitation of beneficiaries included in the Directive: only public entities are allowed to use orphan works in the final text of the Directive, so PPPs will not be possible in cases where agreements include the use of works by the private partner. This is an important limitation considering that many mass digitisation projects, particularly in libraries, are currently being developed in the form of PPPs and that this type of agreement is encouraged by European institutions.

Over and beyond legislative initiatives, other projects have been launched to address the problem of orphan works. Successful initiatives refer to collaborative projects between institutions at European level and the use of technological solutions to simplify the search for rights holders and the management of IPR. One example is the ARROW Project, which helps to determine if a work has fallen into the public domain and, therefore, can be made available to the public. The ARROW Project is one particular example of how technology can help to manage IPR and identify rights holders.

Box 24: ARROW Project

ARROW PROJECT

The Accessible Registries of Rights Information and Orphan Works towards Europeana (ARROW) is a tool to facilitate rights information management in any digitisation project involving text and image-based works. ARROW infrastructure enables streamlining of the process of identification of authors, publishers and other rights holders of a work, be it orphan, in or out of copyright or still commercially available.

ARROW is a project of a consortium of European national libraries, publishers and collective management organisations. ARROW was launched in 2008, and in 2011 was enriched with ARROW Plus.

The ARROW system allows the user to submit a request to digitise and exploit publication or copyright material. ARROW then queries a network of databases connected to the system and collects the best available rights information on the work and delivers it to the user. In the event of unavailable rights on the work at the end of the process, the results feed into the Registry of Orphan Works. Currently, the system can be used to search for works published in France, Germany, Spain and the United Kingdom, but an enlargement to new participating countries is foreseen in the next years.

The project is coordinated by the Italian Publishers Association (AIE) and funded by the European Commission and EU member states, especially when digitisation projects are foreseen. ARROW is designed to be business-neutral (it serves both national/government digitisation initiatives and private initiatives).

The European consortium taking part in the ARROW project shows in practice how issues of copyright in the digital world can be addressed positively through collaboration between major players in the book value chain and the innovative use of technology.

Source: www.arrow-net.eu. Accessed in December 2012

3.5. Funding

3.5.1. Funding of digitisation

Digitisation is a costly process, particularly considering that digitisation is just one part in the chain of selection, preparation, movement, meta-description, rights clearance, delivery, use and preservation. For that reason, although there is a general agreement on the benefits of digitising, there are increasing concerns about sustainability, return on investment and long-term cost.²¹²

So far funding for digitisation of cultural heritage has come from public sources, with some exceptions, mainly in the book sector, where large scale projects emerged some years ago led by commercial enterprises such as Google or Microsoft.²¹³ The following table shows an estimation of the source of funding for digitisation per country made by the NUMERIC Project in 2010.²¹⁴

²¹² Poole, N. (2010): *Report for the Comité des Sages of the European Commission "The Cost of Digitising Europe's Cultural Heritage"*. The Collections Trust. United Kingdom.

²¹³ Ibid.

²¹⁴ It has to be considered that cultural heritage institutions are mainly part of the public sector and therefore its own resources (or internal budgets) come mainly from public budgets.

Table 16: Sources of funding for digitisation per country

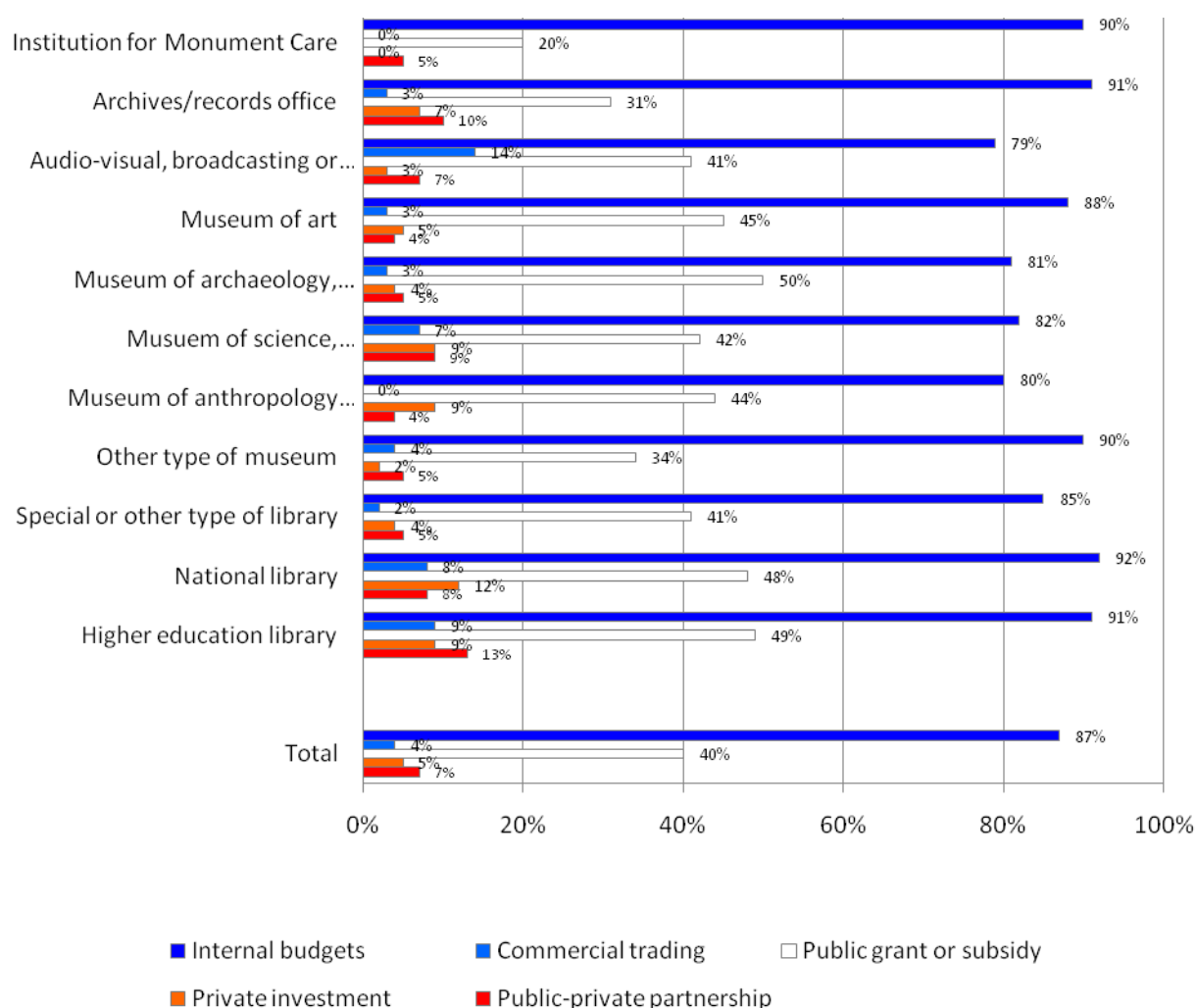
EU countries	Own resources	Government programmes	Private donations	Other support
AUSTRIA	67%	12%	12%	9%
BELGIUM	76%	23%	1%	1%
BULGARIA	55%	35%	1%	9%
CYPRUS	18%	39%	39%	4%
CZECH REP	50%	49%	0%	1%
DENMARK	63%	31%	5%	0%
ESTONIA	69%	22%	2%	7%
FINLAND	76%	9%	10%	5%
FRANCE	67%	27%	4%	3%
GERMANY	80%	15%	3%	2%
GREECE	40%	49%	0%	11%
HUNGARY	46%	43%	4%	7%
IRELAND	71%	23%	0%	7%
ITALY	38%	57%	1%	5%
LATVIA	94%	5%	0%	1%
LITHUANIA	92%	8%	0%	0%
LUXEMBOURG	63%	38%	0%	0%
MALTA	0%	0%	0%	0%
NETHERLANDS	59%	31%	9%	1%
POLAND	77%	19%	0%	4%
PORTUGAL	54%	28%	1%	17%
ROMANIA	87%	0%	8%	5%
SLOVAKIA	22%	78%	0%	0%
SLOVENIA	48%	52%	0%	0%
SPAIN	47%	44%	4%	6%
SWEDEN	26%	65%	1%	8%
UNITED KINGDOM	31%	24%	26%	18%

Source: NUMERIC Project (2009)

Table 16 shows important differences among Member States regarding the funding sources, particularly private donations. Financing and policy traditions in Member States strongly influence the applicability and feasibility of funding models,²¹⁵ limiting the direct extrapolation of models or lessons from one country to another.

Figure 37 shows a breakdown of types of sources of funding, including a differentiation between various types of private contributions.

²¹⁵ Moons, A., Van Passel, E., & Nulens, G., 2009. Eindrapport: Financieringsmogelijkheden en – modellen voor de digitalisering van cultureel erfgoed. Brussel, Departement Cultuur, Jeugd, Sport en Media.

Figure 37: Sources of funding for digitisation per type of institution

Source: ENUMERATE Project (2012)

As also shown in Table 16, internal budgets of institutions (Own budget) and public grants or subsidies (*Government programmes* in the NUMERIC Project) are still the main source of funding for the digitisation of cultural heritage, but PPPs account for around 10% of the funding sources for most types of institutions. Higher education libraries and archives are types of institutions with higher levels of funding coming from this type of partnership. Private investment is more relevant for national libraries, and commercial trading accounts for 14% of funding for audiovisual, broadcasting or film sector, due to the fact that in this category national broadcasting institutions are represented.

3.5.2. Funding models

The process of making public digital content available in Europe has so far been funded by a model with the following characteristics:

- Funding has been centred solely on digitisation;
- Funding sources are fragmented, even within Member States;
- Funding relies on a short-term project basis; and
- Funding has come largely from public sources

Digitising content is only the first step to making content available online. After content is created (digitally created) it has to be preserved and a service to make the content available has to be developed.²¹⁶

In 2009, the British Library's LIFE Project created a model of the nature of costs of digitisation, digital curation and publication of content that distinguishes five types of costs: acquisition, ingest, bit-stream preservation, content preservation and access.

Figure 38: Digital lifecycle model

Creation or Purchase	Acquisition	Ingest	Bit-stream Preservation	Content Preservation	Access
	Selection	Quality Assurance	Repository Administration	Preservation Watch	Access Provision
	Submission Agreement	Metadata	Storage Provision	Preservation Planning	Access Control
	IPR & Licensing	Deposit	Refreshment	Preservation Action	User Support
	Ordering & Invoicing	Holdings Update	Backup	Re-ingest	
	Obtaining	Reference Linking	Inspection	Disposal	
	Check-in				

Source: The LIFE Project²¹⁷ (2009)

Funding for digitisation projects has so far mainly focused on the creation of digital content (basically on acquisition and ingest), and preservation has not as yet been appropriately addressed in Europe,²¹⁸ thereby jeopardising the long-term sustainability of projects.

Alongside its limitations, funding models for the digitisation of public content have traditionally been characterised by dispersion of funding sources and the limited time-frame of projects.

Investments have come either from budgets of institutions involved in digitising works, or through public grants, both national and European,²¹⁹ for short-term projects.

This has created a fragmented funding structure even within Member States,²²⁰ resulting in a lack of coordination among initiatives and duplication of efforts. Fragmentation has prevented the creation of synergies and the improvement of efficiency.²²¹

²¹⁶ Curtis & Cartwright (2009): *Understanding the costs of digitisation*. Joint Information Systems Committee (JISC). United Kingdom.

²¹⁷ Wheatley, P. & Hole, B. (2009): *LIFE: Predicting Long Term Digital Preservation Costs*. The British Library. West Yorkshire, United Kingdom.

²¹⁸ Comité des sages of the European Commission (2011): *A New Renaissance*. Brussels, Belgium.

²¹⁹ SEC(2011) 1274 final.

²²⁰ JISC and the Consortium of Research Libraries (CURL) (2005): *Digitisation in the UK – the case for a UK Framework*. United Kingdom.

In addition, the short-term project basis of funding does not allow for appropriate management structures and creates a short-term vision of initiatives that does not help to create the necessary long-term commitment of the institutions funded.²²²

A clear economic model that supports preservation and management costs must be part of any digitisation project, otherwise the value of the investment will be lost in the long-term.²²³ This means changing the current funding digitisation model.

As explained by Mr Stuart Dempster, Director of the Strategic Content Alliance, “we need to overcome the project-centred approach used so far. Funding has come so far in the form of project grants (national, regional or European) through a competitive process that did not take into account long-term consideration. Project managers design and run their project within a fixed term, 3-5 years, and do not consider technological innovation, quick change and customers’ behaviours. These initiatives do, however, need a complete economic model that includes expectations, changes and innovation, and captures the sophistication of its nature”.²²⁴

Lastly, both cultural institutions’ own budgets and funding through project-based grants are public sources, and it is estimated that less than 10% of investments have come from the private sector, e.g. donations, revenues from commercial arrangements, or PPPs.²²⁵

In a period of economic crisis and budgetary constraints, the investment required to continue digitisation, preserve digitised content and guarantee access, has increased the pressure on institutions to find new sources of revenue and new sources of funding: “*The Comité des Sages considers that the public sector has the primary responsibility for making our cultural heritage accessible and preserving it for future generations. It should therefore bear the largest part of the costs involved. (...) However, the task of digitising Europe’s cultural heritage is gigantic and (...) the private sector must be involved in funding the digitisation effort.*”²²⁶

Regarding improvements in funding, and in line with the Comité des Sages, the Commission Recommendation of 27th October 2011 on the digitisation and online accessibility of cultural material and digital preservation (2011/711/EU) recommends: “*encouraging public-private partnerships to create ways of funding digitisation of cultural material.*”

3.5.2.1. Public-Private-Partnerships (PPP)

Public Private Partnerships (PPP) are being encouraged by the European Commission as a way to finance digitisation projects: “*Public-private partnerships for the digitisation of content should be encouraged to make information available online, as well as the private sponsoring of digitisation projects.*”²²⁷

²²¹ Comité des sages of the European Commission (2011): *A New Renaissance*. Brussels, Belgium.

²²² Digital Preservation Coalition, the Digital Archives Department of the University of London Computer Centre (ULCC) and Portico. (2009): *JISC Digitisation Programme: Preservation Study*. United Kingdom.

²²³ Poole, N. (2010): *Report for the Comité des Sages of the European Commission “The Cost of Digitising Europe’s Cultural Heritage”*. The Collections Trust. United Kingdom.

²²⁴ Interview held with Mr. Dempster on 23/10/2012, in the frame of this report.

²²⁵ European Commission (2011): *Commission Staff working paper. Accompanying the document “Commission Recommendation on the digitisation and online accessibility of cultural material and digital preservation”*. (SEC/2011/1274 final). Brussels, Belgium.

²²⁶ Comité des Sages of the European Commission (2011): *A New Renaissance*. Brussels, Belgium.

²²⁷ Viviane Reading at the third meeting of the High Level Expert Group (HLEG) on Digital Libraries, held in Brussels, Belgium 18 April 2007.

PPP is generally described as a partnership between a public body and a private organisation to implement a project and achieve complementary objectives: a partnership in which each partner contributes with different assets.²²⁸

There are different types of PPP:²²⁹

- **Sponsoring/donation:** the private partner may sponsor using a branding/advertising strategy, or make donations for philanthropic means. In the latter case, PPPs may enjoy tax benefits, and in both cases they can enhance their corporate image.

Boxes 26 and 27 illustrate this kind of PPP in Estonia and Spain respectively.

Box 26: National Archives of Estonia

NATIONAL ARCHIVES OF ESTONIA

The Estonian National Archives are carrying out a digitisation project to preserve historical archives. Documents are being digitised according to the following criteria:

- Interest of the document to users
- Physical condition of the document, meaning that the ones in greatest danger of being destroyed are digitalised first for preservation reasons
- Importance in the general national interest, mainly for preserving historical records on the recent history of Estonia (such as War and Independence records)

A significant part of digitalisation works have been financed by the European Union through different funds and projects (around two thirds of the content). The rest of the budget has come from national funds. Additionally, around 10% of the catalogue currently digitalised by the Archive has been financed through an agreement with the Genealogical Society of Utah, a non-profit organisation run by the Mormon Church. The Society sponsors the digitisation of genealogy archives for religious purposes and does not receive direct or indirect financial benefits from it. The Society keeps a copy of the documents which are also openly available to the public, as are the rest of the documents digitised by the Archives.

Source: <http://rahvusarhiiv.ra.ee>. Accessed in December 2012²³⁰

²²⁸ High Level Expert Group on Digital Libraries (2008): *Final Report on Public Private Partnerships for the Digitisation and Online Accessibility of Europe's Cultural Heritage i2010 European Digital Libraries Initiative*. http://ec.europa.eu/information_society/activities/digital_libraries/doc/hleg/reports/ppp/ppp_final.pdf. Accessed in December 2012.

²²⁹ SEC(2011)1274 final.

²³⁰ Interview with Mr Koit Saarevet, Project manager for digital archives at the Estonian National Archive. 18/09/2012.

Box 27: Biblioteca Virtual Miguel de Cervantes

BIBLIOTECA VIRTUAL MIGUEL DE CERVANTES (SPAIN)

The Library was launched in 1999 as an initiative of Alicante University. In 2001 the Miguel de Cervantes Virtual Library Foundation was created to manage the Library. The Foundation is a public-private partnership made up of public institutions such as the Ministry of Culture and Alicante University, non-profit organisations such as the Botín Foundation, the Germán Sánchez Ruipérez Foundation, and private companies such as the Santander Bank and the media group PRISA. The President is Mario Vargas Llosa.

The Foundation is a cultural institution that aims at disseminating and preserving the Hispanic cultural heritage, and building links between Spanish-speaking cultures. The funds of the Foundation came mainly from the contributions by the private partners, although there are also some specific projects funded by public institutions, mainly European.

The Library is not an aggregator but a repository, and all digital content is stored on the Library servers. It has more than 130,000 items, which can be accessed openly and free of charge via the website www.cervantesvirtual.com and are in various formats: text, images, video, audio and combined formats.

Private partners deduct their contributions to the Foundation according to Spanish taxation laws and benefit in terms of branding, reaching a wide audience in Spain but also in Latin America. The portal also has limited advertisements from projects and activities of the members of the Foundation.

The Library has a scientific committee that selects and catalogues content, which provides important added-value to the digitisation of content.

Source: www.cervantesvirtual.com. Accessed in December 2012

- **Indirect commercial exploitation:** the private partner obtains indirect benefits by indirectly exploiting the results of digitisation. This is the case of Google Books, explained in Box 28.

Box 28: Google Books

GOOGLE BOOKS

Google's Library Project, initiated in 2004, is based on Public-Private Partnerships that consist of mass digitisation projects for the in-copyright and out-of copyright books of public libraries. The public partner, a library, provides the books and identifies the material to be digitised, in collaboration with Google. Google digitises the content and includes it in its Google Book Search service. In exchange, the library receives a digital copy of the books, which allows libraries to make their resources more widely available.

As of March 2012, the number of scanned books was over 20 million.

The initial project partners were Harvard University, the New York Public Library, Stanford University, the University of Michigan and the University of Oxford. Other institutions were included gradually, among them some from Europe, such as the Bavarian State Library, the Complutense University of Madrid and the Ghent University Library.

For Google, an indirect commercial benefit from the project would be enhancing the quality of its search engine thanks to the content digitised.

The initiative has been hailed for its potential to offer unprecedented access to what may become the largest online body of human knowledge and promoting the democratisation of knowledge, but it has also been criticised for potential copyright violations by not seeking prior permission to digitise and provide online access to in-copyright works. This led to litigation in the USA and France.²³¹

In October 2012 the Association of American Publishers (AAP) and Google announced a settlement agreement after seven years of litigation.

The agreement states that publishers can choose to make available or choose to remove their books and journals digitised by Google for its Library Project. Those deciding not to remove their works will have the option to receive a digital copy for their use.²³²

Source: <http://books.google.com/intl/es/googlebooks/history.html>. Accessed in December 2012, and Wikipedia

- **Direct commercial exploitation:** the private partner obtains direct benefit from the content but requires exclusivity, for a limited period, of commercial exploitation of content, after which content is available openly. Such exploitation may consist of direct commercialisation of content or the creation of new services based on the content. Box 29 illustrates this model.

Box 29: ProQuest

PRO QUEST- BIBLIOTECA NAZIONALE CENTRALE DI FIRENZE (ITALY)

The Early European Books Program developed by ProQuest aims to digitise printed sources from continental Europe from its origins up to 1700. This project is the successor to Early English Books Online, a project launched in 1999 that converted 125,000 ancient English books into TEI-compliant SGML/XML texts.

The Early European Books Program started in Denmark in 2009, when ProQuest reached an agreement with the Danish Royal Library. It later established new partnerships with the National Central Library of Florence, the National Library of the Netherlands and the Wellcome Library in London. Now the program comprises more than 18,000 books that are scanned from original volumes and provided in high-resolution colour. They are also catalogued: the result of an agreement with CERL Thesaurus.

These PPPs represent a balance between the interests of two partners: libraries get their content digitised at a low level of institutional investment with the right to make content accessible in their own country free of charge, and ProQuest gains the right to commercialise the content outside the country of origin of the books. ProQuest commercialises the content through subscriptions from universities and other higher education institutions as well as public and specialised libraries.

Source: www.proquest.com/en-US/aboutus/pressroom/10/20100519.shtml. Accessed in December 2012

²³¹ High Level Expert Group on Digital Libraries (2008).

²³² <http://publishers.org/press/85/>. Accessed in December 2012.

- **Collaborative digitisation:** private individuals collaborate with the public partner by providing funds (micro-funds) or manpower (micro-tasks). In these crowdfunding initiatives many private agents collaborate for philanthropic reasons or for public recognition. Box 30 summarises one example of this innovative model applied in Finland, and Box 31 one from the Netherlands.

Box 30: Digitalkoot

DIGITALKOOT (FINLAND)

Digitalkoot is a program for the digitisation of Finland's historical documents and material. The program, the first of its kind in Europe, harnesses the power of crowdsourcing to mobilise people to help digitise millions of pages of archive material. Online volunteers complete small portions of work, or micro-tasks, to help correctly digitise historical content in text format. Carried out as two online games, the program combined entertainment and volunteer work.

In the first game, called "Mole Hunt", players were shown two different words, and they had to determine as quickly as possible if they were the same. It uncovered erroneous words in archived material. In "Mole Bridge", players had to correctly spell the words appearing on the screen. The program was launched in February 2011 by the National Library of Finland and Microtask, and was closed in November 2012. Over 110,000 people participated and more than 8 million microtasks were completed. A new phase is planned, which will be expanded to target more serious history specialists.

Source: Sterling, B. (2011) ²³³

Box 31: Velehanden

VELEHANDEN (THE NETHERLANDS)

Velehanden (Many Hands) is a Dutch crowdsourcing project for indexing archival documents. It was launched in 2011 and is a collaboration between sixteen archives in the Netherlands, led by Amsterdam City Archives.

The project aims at guaranteeing the quality of the archives index. Quality is guaranteed since scans are indexed by two independent volunteers and then checked for differences: first, the computer determines whether the results are identical and, if so, the check is finalised. If two indexers provide different results, the scan and the indexing results are passed on to a third person for revision.

Velehanden has a system of rewards: volunteers get points for submitting a complete indexed scan. These points can be exchanged for different things depending on the project, but normally consists of the download of archive material.

The first project that the volunteers had to tackle was indexing Dutch military registers. This project is currently 99% completed and four other projects have been added. Velehanden has more than 1,500 registered users.

Source: <http://velehanden.nl>. Accessed December 2012

²³³ Sterling, B. (2011): *Digitalkoot, a 'game-ified' social Finnish cultural endeavor* and Website of Digitalkoot.

Although PPPs are being successfully applied in many projects and are strongly supported by European Institutions and experts, interviews carried out in the framework of this study have shown that both private and public stakeholders have their reservations regarding such partnerships when implemented in short-term projects.

From the public side, the most common argument against PPPs is that this kind of project is only suitable for big institutions with a critical mass of potentially high-value content which can maintain control over the project. Otherwise the private partner tends to select content for its own interests, forgetting about general interest and directing the whole process.

The private sector argues that public institution projects are too often led by people disconnected from the real market, without the right skills and subsidy-orientated. Thus seen, the private partner does not have sufficient control over the project to be able to gain maximum benefits or obtain profits from it.

On the other hand, the experience of long-term PPP initiatives with no direct economic purpose, such as the Virtual Library Miguel de Cervantes, shows them to be both successful and sustainable.

3.6. Access to public digital content in the age of content platforms

Media and content distribution is nowadays dominated by a platform approach, where US giants Google, Apple, Amazon and Microsoft control to a great extent the media and content ecosystem.

This approach has proved to be the most successful in the transition to the digital era with regard to content distribution, but it makes it difficult for the public sector to be part of it without being cannibalised.

At the same time, this approach is shaping the way citizens, particularly young people, access information and content, creating “expectations” on how access to content should be, which will also apply for public content.

Some public institutions are using these existing platforms to distribute their content, such as YouTube or Google Books. However, the structure and characteristics of the European public media and content sector – fragmented and made up mainly of small organisations – results in weak bargaining capacity.

The great potential of public information and content – economic and social – depends on its reutilisation by the industry and society. For information and content to be reused it has to be accessible, but it also requires an adequate ecosystem around content that includes metadata standardisation, distribution platforms and IPR management systems.

Europeana, the portal launched by the European Commission in 2008, has partially assumed these challenges and aims at becoming the platform for European heritage and cultural content.

Europeana

*Europeana*²³⁴ is an initiative endorsed by the European Commission aimed at becoming the single access point for European heritage digital content. It was launched in 2008 and it aggregates and distributes European cultural content through its portal and provides support to cultural institutions in the sector.

As an aggregator, Europeana does not digitise content, it collects digitised content, standardises its describing data, applies linked data techniques to enrich it and promotes persistent identifiers to locate it in the long term.²³⁵ Europeana provides end users with metadata, a thumbnail and the link to the digital object at the provider's website. This is provided to Europeana by the institutions and aggregators. Metadata is published as open data under the terms of the Creative Commons Zero Public Domain Dedication (CC0), and every digital object has a label describing its copyright status.

Europeana contains over 22 million digitised objects in its database from more than 2,200 institutions in 34 countries all over Europe, with Germany, France and Sweden being the top contributors to this portal.

Table 17: Country contributions to Europeana in number of digital objects, top 15 countries only

Country	Total	Percentage
Germany	3,490,716	15.64%
France	2,519,154	11.29%
Sweden	2,228,281	9.98%
Netherlands	2,092,067	9.37%
Spain	2,012,039	9.01%
Norway	1,557,609	6.98%
United Kingdom	1,488,575	6.67%
Italy	1,211,072	5.43%
Ireland	953,455	4.27%
Europe	893,058	4.00%
Poland	859,504	3.85%
Finland	697,031	3.12%
Austria	472,158	2.12%
Belgium	323,679	1.45%
Slovenia	249,962	1.12%

Source: Europeana professional. November 2012

These percentages do not show the overall digitised collections for each country, only for the *Europeana* project.

²³⁴ *Europeana* (<http://www.europeana.eu>) is both a celebration and a consolidation of European cultural identity on the Web. By providing a single, multi-lingual point of access to digital cultural material, it acts as a gateway to Europe for a global audience. In addition to its public role, *Europeana* has contributed in bringing together professional and technical cultural heritage communities and in driving innovation, collaboration and the creation of new content.

²³⁵ Europeana Strategic Plan 2011-2015.

In terms of the type of content which has been digitised, the table below shows how the vast majority of it corresponds to images (photographs are the most digitised object type), while video and sound items still remain very low in number.

Table 18: Europeana content by type

Type of content	Items
IMAGES	15,549,798
TEXTS	10,602,899
SOUNDS	448,653
VIDEOS	171,195
3D OBJECTS	13,533
TOTAL ITEMS	26,787,078

Source: Factsheet Europeana: Facts and Figures (March 2013)

Europeana is not only an aggregator and distributor of content, it also works to support cultural institutions through content technology transfer, knowledge sharing and policy development. It organises working groups, conferences and dissemination activities, but its main added value rests on its advocacy role. In this role, it has worked extensively on various areas for turning public domain content into a permanent asset for citizens and companies, for example publishing the *Europeana Public Domain Charter* and *User Guidelines for Public Domain Works*, creating in association with Creative Commons the *Public Domain Mark* and developing the *Public Domain Calculator*,²³⁶ a tool for determining which work has passed into the public domain in various jurisdictions.

Europeana is governed by the Europeana Foundation, legally established in the Netherlands. Its Board of participants consists of 17 members that represent European associations of cultural and scientific heritage organisations.

Turing Europeana into the single online access point for all cultural content in Europe, as suggested by the *Comité des Sages*,²³⁷ requires considerable investment. The budget estimated for Europeana in the period 2011-2015 is EUR 25,522,000.

Figure 39: Funding Europeana 2011-2015

Year	2011	2012	2013	2014	2015
INCOME (thousands)					
□ Operating Income	4.923	4.978	4.856	5.261	5.504
•Long term subsidy European Commission	-	-	-	4.661	4.894
•Subsidy from projects	4.061	4.336	4.241	480	488
•Subsidy Ministries to support projects & overhead	857	637	610	110	112
•Other Income	5	5	5	10	10
Total operating income	4.923	4.978	4.856	5.261	5.504

Source: Europeana Strategic Plan 2011-2015 (p. 20)

The business plan for 2012 aims to generate a minimum of EUR 528,000: EUR 328,000 from financial commitments from Ministries of Culture, EUR 100,000 from subcontracting for projects and EUR 100,000 from sponsors.

²³⁶ Public Domain Calculator website <http://www.outofcopyright.eu/>. Accessed in December 2012.

²³⁷ Comité des Sages of the European Commission (2011): *A New Renaissance*. Brussels, Belgium.

From interviews conducted for this study it was learned that the added value of Europeana for cultural institutions depends on its capacity for becoming the “search engine” of cultural content for users. Interviewed institutions of minority languages better appreciate the role of Europeana (and its multilingual approach) as a window to making their content available than institutions of English-speaking countries or Spain. The latter do not consider Europeana’s role as an access point to be such a key issue and stress the need to be easily reached by users, even if this is done through tools such as Google.

In this sense, most cultural institutions envisage Europeana as a “monopoly” that takes visibility away from them. In the digital era the existence of these institutions depends and will depend on their ability to engage with users and assume relevancy in the digital sphere; Europeana being the single gateway to content is seen as a competitor that will diminish the value and preservation of their own research functions (and may also affect their budgets and opportunities for funding).

The librarian origin of Europeana has also been mentioned by institutions such as museums as another obstacle to the success of the initiative.

However, the value of Europeana as a driver of demand for the re-use of cultural content and its efforts for the clearance of copyrights is highly valued by stakeholders.

3.7. Obstacles in the transition to the digital era

Considering all the analysed aspects on access to digital content, and based on the results of the interviews and surveys carried out for this study and the research carried out within the study, the following barriers for digital content distribution in Europe have been identified for public content:

Obstacles specifically identified by stakeholders:

- **Lack of funding for digitisation**

Budgetary restrictions and the high costs of digitisation are threatening the continuation of the digitisation process of public content. Most funding for digitisation comes from public funds, mainly from institutions’ budgets and grants for projects. These funds are not sufficient and are currently clearly at risk due to the persistent economic crisis in Europe.

- **High costs of digitisation and unclear returns** (or returns to other players)

Digitisation costs are very high and place a demand on resources. Resources include manpower, but also fast-changing technical requirements; users demand increasing quality and new features, which forces many institutions to update their digital catalogue periodically. Returns on investment are either not clear or do not benefit the investing entities.

- **Lack of maturity of appropriate business models**

Returns on investment are not clear because business models have not been sufficiently tested and revenues are not yet predictable enough to build realistic business plans. Although lessons might be learnt from the private sector, its application to the public sector is not straightforward, and IPR have very important effects on its transposition.

- **Lack of adequate content rights management**

- **Orphan works**

One of the obstacles most mentioned by stakeholders, IPR management, is the key to guaranteeing access to public content and to the development of business models, both for public and commercial use. International management is an issue, but also management within Member States' borders is considered a main barrier. The dispersion and huge number of rights holders makes identification extremely complicated. This is particularly true in the case of orphan works and out-of-commerce works.

Other issues regarding IPR that are in the way of development of re-use of content is the lack of clear and harmonised licensing systems. Licences must be straightforward so it is easy for the industry, or private users, to determine costs and conditions of use in a quick and simple manner.

- **Lack of economies of scale and cultural heterogeneity**

Europe's cultural diversity hampers the creation of economies of scale in the digital content sector. The Internet is a great tool for creating economies of scale and allows for reaching wider audiences with low or no marginal costs, but Europe's cultural heterogeneity limits demand of cultural content.

Coordinating digitisation projects would optimise costs and the use of shared infrastructures, such as software or ultra-broadband infrastructures, both fixed and mobile, would help reduce the high costs of digitisation.

Additional barriers or obstacles identified by the research team:

- **Uncertain path in the transformation of public services to the digital domain**

The duty of cultural institutions is to research (and support research), preserve and disseminate heritage as widely as possible. They execute their public service mainly with public money. In the transition to the Digital Era a great debate has emerged regarding the way in which these aims should be sought by public institutions and the concept of public value itself. The debate faces the Open Access paradigm head on²³⁸ and the need to fund new ways of making access to digital content sustainable, while keeping the objectives of public service and societal welfare.

- **Lack of coordination among initiatives at cross-sectional/regional/national/European level**

Lack of coordination of initiatives has resulted in a fragmentation of funding, duplication of tasks and the organisation of efforts in the form of short-term projects with low mid-term sustainability vision.

²³⁸ The Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities of 22nd October 2003 is one of the milestones of the open access movement. One of its main principles states: *The author(s) and rights holder(s) of such contributions grant(s) all users a free, irrevocable, worldwide, right of access to, and a license to copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship (community standards, will continue to provide the mechanism for enforcement of proper attribution and responsible use of the published work, as they do now), as well as the right to make small numbers of printed copies for their personal use.*

- **Lack of appropriate skills within public institutions**

The fast-changing nature of technology and the evolution of users' demands require the public sector to collaborate with trained professionals capable of working in such conditions. In the digital era professionals need to be creative and innovative in a traditionally rigid and conservative environment such as the public sector.

Appropriate skills are particularly needed for the creation of PPPs, since the public sector has to acknowledge the needs of the industry and has to be able to lead high complex projects.

- **Lack of bargaining power with existing digital platforms/existence of multiple and divergent small-scale negotiations**

The distribution of content is dominated by big private platforms (mainly from the USA) like Amazon, iTunes, Google Play, etc. The public sector in Europe has so far carried out dispersed and uncoordinated negotiations with existing platforms resulting in small transactions where public actors have a weak bargaining power.

- **Lack of user awareness on digital European heritage**

Demand for digital European heritage is still low and heterogeneous; there is little awareness of the potential of this content for the creative industries and end users. Increased awareness to possibilities for use and reuse of contents is needed, as well as better dissemination of initiatives.

In accordance with the elements analysed within public content, these barriers can be categorised as follows:

Table 19: Barriers by area of analysis

BARRIERS		
DIGITISATION	ACCESS/BUSINESS MODELS	FUNDING
High costs and unclear returns	Lack of maturity of appropriate business models	Lack of funding
Lack of appropriate skills within public institutions	Lack of adequate content rights management Orphan works	Lack of economies of scale
Lack of coordination	Cultural/linguistic barriers	Lack of coordination
	Uncertain path in the transformation of public services to the digital domain	Lack of bargaining power with existing digital platforms
	Lack of appropriate skills within public institutions	Lack of user awareness on digital European heritage
	Lack of user awareness on digital European heritage	

Together with these barriers, some drivers in cultural content distribution in Europe have been identified by stakeholders:

- **Strong internal market (high internal demand)**

Considering the relevance of language barriers in Europe, a strong internal demand is one of the main driving forces for digitisation and distribution of public content identified by stakeholders. Countries and sectors with higher demand have gone further in the digitisation process and have better-developed business models, for example the broadcasting sector in the United Kingdom.

- **Availability of highly-qualified professionals**

Since lack of appropriate skilled professionals is a main barrier to delivering content and creating innovative business models, the increase of highly-skilled professionals will facilitate the development of these industries, both in the public and the private sectors.

- **Government support: direct financial support (grants, loans, etc.)**

Digital cultural content in Europe currently depends on 90% public funding, and therefore public investment is the key driver for digitisation and making content accessible.

- **Government support: appropriate EU/national regulatory frame (fight against copyright infringement, cultural heritage protection, national/local languages, privacy regulation, etc.)**

In addition to direct funding, other government initiatives are considered main drivers by stakeholders, mainly legislation.

In accordance with the elements analysed within public content, drivers can be categorised as follows:

Table 20: Drivers by area of analysis

DRIVERS		
DIGITISATION	ACCESS/BUSINESS MODELS	FUNDING
Availability of high-qualified professionals	Enjoy a strong internal market (high internal demand)	Government support: direct financial support (grants, loans, etc.)
	Availability of high-qualified professionals	
	Government support: appropriate EU/national regulatory framework (fight against copyright infringement with consistent regulation between countries, as this seems not to be the case in agents' opinion, cultural heritage protection, privacy regulation, etc.)	

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4. GENERAL CONCLUSIONS AND RECOMMENDATIONS

Traditional media and content industries are facing a new scenario driven by digitisation

Media and content industries encompass a heterogeneous set of sub-industries composed of music, film, video, videogames, publishing (books, newspapers, magazines) and other information services (news agencies, portals, directories, etc.). They include a range of activities – recording, publishing, performing, distributing, broadcasting, retailing, etc. – arranged in a value chain with three main stages: creation, production, distribution and consumption.

Media and content were a relatively mature industry characterised economically by high returns to scale and scope. As a consequence, the industry structure displayed high barriers to entry and was prone to concentration. Markets were culturally segmented, implying substantial advantages for large and homogeneous communities and also creating a “natural” territorial distribution of activities. From the public perspective, the externalities in media and content were the main argument for adopting different types of positive public policy and regulation, including direct provision of content and information through variations on public service.

Within this framework, technology has brought about radical transformations. It has drastically modified each of the stages of the value chain, but not its structure, dramatically decreasing distribution costs and considerably reducing production costs, simplifying and empowering creation, sharing and interaction with information and content, and enhancing the role of users as “prosumers” (consumers as producers of content and information). In addition, in the case of public information and content, the key differences to commercial products have decreased considerably, at least from the consumer perspective. These changes have given rise to a wealth of innovations in applications, services and business models, but they have also disrupted the structure of the legacy industries and posed new challenges.

Impacts of digitisation in the value chain

Digitisation is affecting the whole value chain of the media and content industries. Professional production of media and content is currently adapting to a new context of cross-media experience. Regarding the distribution process, the media and content industries initially followed a process of disintermediation and are now embracing a new process of re-intermediation with new digital agents assuming the lead role. Consumers are experiencing a diverse range of new possibilities in the usage and enjoyment of media and content.

Two main factors have contributed to the disruption of media and content industries as a result of digitisation: online copyright infringement has reduced the chances of a smooth transition to the digital era, together with myopic and conservative behaviour of the industry, unable to adequately exploit the advantages of digitisation to create innovative solutions to compensate the effects of copyright infringement. This lack of strategic vision on the part of the traditional media and content industries has allowed new players to enter the chain, who have mainly taken advantage of the gap in digital distribution. In general, the new all-digital players are aiming at commoditisation of content, as their main business

models are only indirectly connected with the production of media and content, therefore they do not necessarily share the “cultural” values traditionally associated with this industry. Similarly, the current structure of the industry presents new forms of potential market dominance, such as platforms and the ecosystems around them. Policy-making has so far failed to deploy efficient solutions to these issues, thereby proving a lack of understanding of the consumer perspective.

Business models in media and content are evolving to keep pace with these modifications in the value chain. Traditionally, the revenue streams of media and content industries came from subscriptions, direct sales to consumers and advertising. However, each of these is faced with its own difficulties in being translated to a digital environment. In the case of advertising, a relevant part of it is moving from traditional into social media (and search engines) where it is more effective and able to reach wider and dispersed groups of interested consumers, and where business models involving audience personal information is becoming more prominent. Digital pay-for solutions are still in their infancy, with digital subscription services – where the cloud is taking on an increasingly important role – replacing traditional product purchasing. The value of these models lies in usage, not in ownership. Some new business models have also appeared, such as virtual items or in-app purchases, typical in gaming. In general, digitisation allows the introduction of more flexible business models, better suited to the specific demands of consumers, but in general has not compensated the decline of traditional revenue streams.

As a consequence of digitisation, the consumption process is also undergoing major changes. Users are increasingly transferring part of their consumption to these new media and they have modified their patterns of consumption, including interaction, production of content, and complementary and simultaneous use of several media. Digital distribution of content has deeply modified the consumer experience and has facilitated the emergence of platforms where several sides of the market are taken on board – developers, producers, advertisers and consumers – to create a full ecosystem around the platform.

Apart from the reduction in costs of production and distribution, and the rise of possibilities for interaction and personalisation of the media experience, new media enjoy reduced costs for service at a distance, thereby creating incentives for de-territorialisation and making traditional regulation more difficult. The capacity for personalisation of digital media also allows for – at least theoretically – better ease of use. Lowering entry barriers to non-professional content and information has also created new forms of social innovation where consumers can express themselves more easily than ever, challenging both the legacy industries and existing regulation. Consumption of digital media and content is taking place in an increasingly-connected, more interactive, more mobile, more personal and more social environment.

The specific challenges of commercial content markets – film, videogames, books and news

In Europe, the film (cinema, video) market is dominated by US films, with significant EU local productions aimed at domestic markets. The main digital challenges are the quest for a suitable modification of the release window system to cope with new media, and the threat from online copyright infringement to achieve a legal, sustainable offer of digital films. From the consumer perspective, there is insufficient provision of digital videos and films across territories due to licence limitations. Digitisation of films reduces costs, simplifies post-production and allows the implementation of innovative business models,

better suited to the demands of users regarding impulse purchase, reproduction quality, price or type of access device.

The Videogames industry is already a digital industry in terms of production, consumption and, partly, distribution, and is a showcase for techno-economic innovations, able to attract increasing demographics to gaming. In fact, among the investigated media and content industries, the videogames industry has the highest percentage of revenue derived from online distribution. This on-going shift to online distribution is altering the traditional value chain of the sector, increasingly blurring the role of traditional agents, such as publishers and distributors. EU publishers hold a reasonably strong position, accompanied by quite a large number of innovators and entrepreneurs in the games development area, particularly in the growing online or mobile gaming segments. The disintermediation process is favouring the direct relationship between games developers and online retailers, or even final customers. The overlap between videogames and the ICT sector has facilitated the creation of an innovative ecosystem with new technologies and business models. Multiple business models are adapted to the needs of users in areas such as access mode, payment, or game devices. One of the business models created by the videogames industry, the “free to play” model (or “freemium” model), may be of interest for the provision of public content, as it allows for a simple distinction to be drawn between public service, basic objectives and further commercial interests.

The Book industry is in general the latecomer to the digitisation process. This fact has given the industry an opportunity to learn from the experience of other media and content industries. From the EU perspective, it is the only market in the media and content industry where European companies hold a leading position. However, US companies are leading in the transition to the digital era. In addition, online distribution is dominated by companies outside the book publishing industry, and it is only very recently that publishers have started to launch initiatives to deploy their own market digital platforms to sell e-books online. This e-book market today is just a digital version of the paper market, with the same business models. The key element in the development of the market are the new reading devices: e-book readers and tablets. Currently, two models coexist: closed models, linked to specific devices, in which the user can only acquire books in the store of the device manufacturer and cannot access them from any other device; and open models, based on online platforms with books reproducible on any device. The advent of e-books has altered the cost structure as has already happened in other media and content industries. Public initiatives regarding digitisation processes of existing literature are competing with private initiatives. This situation is causing a shift of intervention based on regulation towards contract or partnerships models.

The Newspaper industry is witnessing a decrease in circulation, and a strong fall in revenue, due to the impact of digitisation. In many ways, the traditional printed-press sector was the first to be affected by the success of the Internet as a source of information. However, the demand for online news has also been growing, together with an explosion in types of format and models of production and dissemination of news online. Therefore, online journalism has often been referred to as having a potential compensatory effect, even if its structure, skills and possibly values differ considerably from traditional journalism. The overall newspaper business model is particularly hard hit in that models of paying for and reading a daily newspaper are quite different from reading online free of charge. As a consequence, declining print and advertising revenues are not sufficiently offset by increases in online advertising revenues. Digital newspapers have attempted to replicate online the business models of the print versions, including models of payment per copy, subscription and advertising revenue with mixed results. Finally, the emergence of

tablet PCs and e-readers seems to be offering opportunities to the digital press sector. Several newspapers have launched services for these devices with a subscription model to access content. However, this is still too incipient, to extract general, valid conclusions.

The challenges of public information and content in the digital era

Although the EU and its Member States have made a huge effort to make digital content more accessible over the last decade, public content is still in the early stages of digitisation. Digitisation is a costly process especially when considering that the actual technical conversion to digital form is only one part of the process. Clarifying copyrights and reaching agreements with all copyright holders is particularly costly. The process of making public digital content available in Europe has so far been focused on the digitisation process itself. It has been rather fragmented both at the European and Member State level, consisting in mainly short-term projects with funding coming largely from public rather than private sources. Encouraged by the European Commission, a number of Public-Private Partnership (PPP) models have been implemented. Although sometimes successful, there have also been problems with these models. Among other things, the public sector argues that it needs to be in control of projects in order to safeguard public interest, while the private sector argues that public institutions often lack the necessary commercially oriented skills.

Given the restricted budgets, the economic uncertainty and the high costs of digitisation, new business and access models have been devised to allow a wider access to cultural content while guaranteeing the copyrights and related intellectual property rights of third parties, and to create revenues to guarantee the long-term sustainability of projects and services. These business models for public content can be categorised according to who holds the copyright (public domain, copyrighted, orphan content) and how content is exploited (commercial use or non-commercial use). The provision of public content to commercial players for exploitation may either be free or involve one-off payments or revenue-sharing schemes (normally at marginal costs). For non-commercial use public content in Europe is mainly provided free of charge on an open access basis. However, business models already in place for commercial content in other industries are increasingly being applied by heritage and cultural institutions for reasons of sustainability. Most cultural institutions do not yet offer ways (or licences) to make commercial use of their content and, with respect to this, policies are not clear. To facilitate the commercial exploitation of public content, business models must be specifically designed for this purpose, creating simple licences that boost re-utilisation. In particular, orphan works constitute a large share of available content. These works pose problems for digitisation and online distribution. In spite of the recent EU Directive 2012/28/EU, several problems persist: legal and economic uncertainties as well as limitations regarding beneficiaries included in the directive.

Clearly, public content is still at a very early stage of digitisation and confronted by a number of barriers to progress. In particular, funds for digitisation are lacking, due to: the reluctance of public administrations, immature business models, high costs and dubious returns. In addition, there is an absence of a clear path in the transformation to the digital domain and a lack of coordination among initiatives and at all administrative levels – including the EU level. Further to it, there is a shortage of adequate content management, at least for orphan works, and a deficit in user awareness in general. There is also a keen shortage of appropriate skills within public institutions, and the multiple and divergent small-scale negotiations with existing digital platforms are limiting the bargaining power of the public bodies involved.

On the positive side, there is a potentially high demand for public content, waiting to be adequately satisfied with the right combination of highly-qualified professionals working for the public sector and government support – both direct and through regulation. A higher level of coordination would be also needed in intellectual property rights management, and in the digital provision of public content, including a better-harmonised framework for digital intellectual property rights. Finally, user awareness and involvement (social innovation) seems to be a determining factor in the success of future digital provision of public content.

Recommendations

Common opportunities across the media and content industries that are still not fully exploited in the EU include: production of cross-media content, creation of innovative user experiences from the wealth of public content, the usage of online distribution to improve content dissemination beyond national borders, and tapping commercial initiatives and social innovation to meet the objectives in public production and diffusion of content.

In spite of the many advantages and opportunities brought about by digitisation, a number of challenges across the media and content industries remain. On the supply side, the main challenges lie in that the advantages of digitisation often accrue to different players in the value chain than those who invest in digitised content, creating a resistance to fully embrace it. In addition, digitised goods are threatened by copyright infringement. On the consumer side, there is still a notable lack of innovative solutions able to satisfy their demands on usability and usefulness – the difficulties with multi-territorial licences in video and film being a main example. More precisely, a simple and effective multi-territorial licensing framework should be the main policy and regulatory challenge for media and content in the EU, together with an intellectual property regime able to promote innovation and creation and to acknowledge society's new perspectives of media and content.

Within this general framework, a number of **recommendations** are outlined to address the challenges identified in the transition to the digital era and an information-based society, as identified in the study.

The first set of recommendations of the study focuses on the need for **further funding** of digitisation, preservation, and technical and business innovations. This investment is needed because of the positive economic and societal externalities arising from digitising content. However, funding schemes need to be re-thought. Further funding should:

- involve continued support for the digital transformation of media and content industries;
- focus on research into and development of technical and business innovations;
- consider cross-media production as a prime opportunity;
- establish new forms of long-term orientated funds, particularly for non-profit organisations;
- create specific programs and tools for entrepreneurs and innovators in digital media and content;
- aim at creating European multi-sided platforms and ecosystems in digital media and content, in particular using the sectors and areas in which Europe is leading;
- promote cross-sector and cross-border production and distribution of content;

- encourage PPP in the public domain for the acquisition of expertise, the use of existing technologies and for funding initiatives; and
- re-design existing programs to avoid duplication of initiatives.

Together with funding, European policies should also be orientated towards **increasing coordination and creation of economies of scale** in the use of technical infrastructures:

- create economies of scale both in technical infrastructures and management units for production and distribution of digital content and media;
- encourage centralised or coordinated rights management agencies;
- investigate and reduce transaction costs in the provision of digital media and content throughout Europe;
- fight insufficient provision of digital content and media across EU territories due to market barriers;
- coordinate activities in the digital public provision of content, including production, distribution, consumption and negotiations with existing platforms;
- bring content to wherever the user is, e.g. by placing content in existing platforms;
- foster coordination among initiatives, and at all levels, in the digital provision of public content particularly in their relationship with commercial initiatives; and
- adopt a harmonised framework and package of measures – promotion of legal offers, user awareness, collaboration of players involved in transactions with content and media, specific legal measures – to fight online copyright infringement to “keep honest users honest”.

Specific recommendations regarding the improvement of **multi-territorial licences and revision of the intellectual property regime**:

- improve harmonisation of framework for digital intellectual property rights and review the intellectual property regime to foster innovative and creative developments, which is particularly needed for orphan works;
- consider an improved multi-territorial licence regime – including speedy implementation through coordination of existing licences – for media and content to bypass existing barriers to distribution and consumption inside the EU;
- explore, research – and promote – new avenues in the intellectual property regime (common policies, open licences, etc);
- promote open access to orphan and out-of-commerce works; and
- guarantee educational use of public content under special conditions (open access is recommended).

The fourth set of recommendations is orientated towards the **improvement of access to public content and the promotion of innovation** around it:

- re-think public policy on media and content, including the assessment of direct provision of content and information through diverse variations on public service;
- consider in particular commercial initiatives and social innovation to meet the objectives in public production and diffusion of content;


- create an ecosystem around public content: open data and distribution platform initiatives;
- experiment and use – for specific types of public content – new flexible business models taken from commercial content initiatives; in particular consider the “freemium” model as it makes a clear distinction between public service, basic objectives and further commercial interests;
- investigate and promote the role of users as “prosumers” of content of public interest; and
- promote the creation of innovative user experiences from the wealth of public content, eliminating the current barriers so that innovators and entrepreneurs can use it fairly.

The final set of recommendations is orientated towards raising **user awareness** and **education of highly skilled professionals**:

- raise user awareness of digital European heritage;
- invest in talent: create positions in the public sector with the required digital expertise; and
- create a forum with the industry to work on a European curriculum for the media and content sectors.

As a final summary of recommendations, two main elements influencing availability and accessibility of content have been identified and a table with key ideas has been drawn up: **business models, IPR management and regulation**. The table summarises recommendations for the public sector on these two topics by content type, based on its copyright: in the public domain, in copyright and orphan works.

Table 21: Summary of recommendations for the public sector on business models and IPR management and legislation by type of content copyright

		Public domain	Under copyright	Orphan Works
Non-commercial use	Business models	- Open Access, or - Charges up to marginal costs	- Clear and simple business models: pay-per-view, download-to-own, subscriptions or "freemium" - Special conditions for educational use	- Open Access; or - Charges up to marginal costs
	IPR	Public Domain Mark 	Uniform, easy and clear licenses. Need for a Copyright Clearance Centre (CCC) type of organisation or equivalent coordination mechanism	Requires specific legislation to avoid claims/litigation
Commercial use	Business Models	- One-off payments - Share of revenues	- One-off payments - Share of revenues As agreed with rights holders	Hardly possible in the current intellectual property framework. Case by case solutions might be possible
	IPR	Single license like the UK <i>Open Government Licence</i>	Uniform, clear and easy licences. Need for a Copyright Clearance Centre (CCC) type of organisation or equivalent coordination mechanism	

Opportunities within the Creative Europe 2014-2020 Programme

The Creative Europe Programme is the new framework programme for the cultural and creative sector within the Multi-Annual Financial Framework 2014-2020.²³⁹

The new Programme, currently under discussion in the Council of EU Ministers and the European Parliament, will bring together the existing Culture, MEDIA and MEDIA Mundus programmes. The programme comprises three strands:

- A Cross-sectoral Strand addressed to all cultural and creative sectors;
- A Culture Strand addressed to the cultural and creative sectors;
- A Media Strand addressed to the audiovisual sector.

The Cultural and Media Strands remain separate and are the successors to the Culture and MEDIA programmes. The Cross-sectoral Strand is aimed at improving access to funding for SMEs and small organisations, enabling synergies across the different sectors and enhancing the transnational circulation of works and professionals. It has two parts, one is

²³⁹ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, "A Budget for Europe 2020", COM(2011) 500 final, 29.6.2011.

the establishment of a Financial Facility to improve access to finance, while the second includes measures to enhance transnational policy cooperation.

The budget of the Creative Europe Programme amounts to a total of €1.8 billion, a 37% increase on current spending levels.²⁴⁰

The architecture of the Programme responds to some of the problems identified in Chapter 3.7 and includes some of the recommendations made in this study, namely:

- it continues financial support to the sector and establishes a steady funding until 2020;
- it promotes transnational coordinated actions and cross-sector production and distribution;
- it focuses on capacity building;
- it has the objective of improving user awareness by reaching new audiences;
- it addresses, to a certain extent, the fragmentation of funding and the short-term perspective of projects.

However, some of the above recommendations should be further developed in this programme:

- a) Cross-media production of content (film, video and gaming industries mainly, but also books and magazines)
- b) Cross-border online distribution of media and content (all sectors)
- c) Placing of EU public content in existing digital platforms (all sectors)
- d) Creation of a uniform European Curriculum (all sectors)
- e) Education and hiring of highly-skilled professionals in digital media and content (all sectors)
- f) Support for open public content (all sectors)
- g) Coordination of digital provision of public content (all sectors) and use of infrastructures
- h) Venture capital/initial investment (gaming industry)
- i) Common/coordinated online distribution platforms (public content, newspaper industry)

²⁴⁰ Despite the increase of the budget in general terms (and particularly if the current economic situation is considered), some stakeholders have pointed out that if considered in the context of the EU's overall budget and in relation to the economic contribution of the sector and its potential growth, the increase should not be considered as significant (European Parliament, 2012).

ANNEX I: FACT SHEETS OF SELECTED NATIONAL MARKETS OF DIGITAL CONTENT

The following fact sheets show the main indicators of seven national markets of digital content. Those national markets are: Estonia, France, Germany, Italy, Spain, Sweden and the United Kingdom, representing, respectively, major EU countries (France, Germany and UK), one Scandinavian country (Sweden), one Eastern country (Estonia) and two Southern countries (Italy and Spain).

ESTONIA

1. Population:²⁴¹

1,339,662 citizens

2. Internet access:²⁴²

	2007	2012
Internet users ²⁴³	63.6%	78.4%
Households with Internet access	52.9 %	75%
Households with broadband connection	47.6%	74.2%

3. Devices for Internet access:²⁴⁴

	2011
Households with desktop or portable computer	67%
Mobile devices users	35%
Households with Smart TV	4%

4. Average expenditure on cultural services:²⁴⁵

	1994	1999	2005
% of total household's expenditure on cultural service	NA	NA	1.1%

5. Industry of the media and content industries:

Employment²⁴⁶ (2007):

Number of working persons	Annual average growth rate (%)
46,000	2.6%

Value added²⁴⁷ (2007):

VA (M€)	VA as share in total national economy (%)	Annual average growth rate 1995-2007 (%)
749	8.1%	7.3%

Enterprises²⁴⁸ (2007):

Number of enterprises	Annual average growth rate 1995-07 (%)
1,753	9.7%

²⁴¹ Eurostat (Population at 3 January 2012).

²⁴² Eurostat (Consulted 3 January 2013).

²⁴³ Individuals who have used Internet in the last 3 months.

²⁴⁴ Eurostat. Households with access to Internet, by device for accessing via PC, digital TV, mobile device.

²⁴⁵ Eurostat (Population at 3 January 2012).

²⁴⁶ Leuridijk, A., Silvain de Munck, Tijs van den Broek, Arjanna van der Plas, Manshanden, W., Rietveld, E., (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*, JRC technical reports (EC) 2012.

²⁴⁷ Ibid.

²⁴⁸ Leuridijk, A., Silvain de Munck, Tijs van den Broek, Arjanna van der Plas, Manshanden, W., Rietveld, E., (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*, JRC technical reports (EC) 2012.

Trade balance²⁴⁹ (2007):

TB (x1000)	National trade balance as share of total European trade (%)	Annual average growth rate trade balance 1995-2007 (%)
3	-0.2%	-8.2%

5.1 Video (2011)²⁵⁰

Film Box Office: €10,051,315

Annual state support for film industry: €5,517,186

Market Share of Domestic Films: 7%

5.2. Video games²⁵¹

Market size: NA

Online game players who connect to Internet: NA

Internet users²⁵² who purchased online video games' software and upgrades (2012): 2.5

5.3. E-books²⁵³

Market size (2010): turnover of all book-publishers €115 million

Market share digital (2012): 0.3% of all book sales

Individuals who purchase e-books online (2011):²⁵⁴ 2.3%

5.4. Music²⁵⁵

Market size (2007): €134.08 million²⁵⁶

Market share digital: NA

Individuals who purchase online films/music (2011): 1%

5.5. Newspapers and magazines²⁵⁷

Market size (2011): €24.38 million (advertising market in Estonia).

Market share digital (2011): All Internet advertising in Estonia €11.22 million

Internet users²⁵⁸ who have online subscriptions to news services or products to receive them regularly (2011): 6.5%

Individuals who use Internet to read or download newspapers/news (2012): 71.2%

²⁴⁹ Leuridijk, A., Silvain de Munck, Tijs van den Broek, Arjanna van der Plas, Manshanden, W., Rietveld, E., (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*, JRC technical reports (EC) 2012.

²⁵⁰ Baltic Films, Eurostat, Europa Cinemas.

²⁵¹ Eurostat (Population at 3 January 2012).

²⁵² Percentage of individuals who used Internet within the last year.

²⁵³ Eesti Statistikaamet (Consulted 29 January 2013).

²⁵⁴ Either books/magazines/e-learning material, delivered or upgraded online.

²⁵⁵ Eurostat (Population at 3 January 2012).

²⁵⁶ Survey and Mapping of the Creative Industries in Estonia, Institute of Economic Research, Tallinn, 2009

²⁵⁷ News, Baltic media news, <http://www.balticmedianews.ee/99-trukimeedia-valjaannet-varakevadel-2012>, Accessed in January 2013.

²⁵⁸ Individuals who have used Internet in the last 3 months.

6. Cultural/heritage content:

6.1. Participation in Europeana (2011):²⁵⁹

% of all records: 0.4%

6.2. Source of funding of digitization process (2009):²⁶⁰

Own resources: 69%

Government programmes: 22%

Private donations: 2%

Other support: 7%

7. Overview of media and content sector:

7.1. Commercial content

1. Video

Movie distribution is increasingly turning digital in Estonia. Prominent cable operators (e.g. Elion, Starman) are offering video-on-demand platforms via their Set Top Boxes. This increase of access models to movies via cable operators has also had a positive impact on the reduction of online copyright infringement in the video and film sector in Estonia. Alternative business models of online-downloads for movies are yet operating in Estonia.

2. Video games

Video game industry is tied to global video games industry. Mobile games have become a hit in recent years with some providers of popular titles being based in Estonia (e.g. Creative Mobile Ltd's "Drag Racing").²⁶¹

The industry in the country is being enhanced thanks to various initiatives (private initiatives with public support), such as GameFounders, Europe's first gaming start-up accelerator launched in 2012, and the organization of the I INTERGAME 2013 at the end of January.

3. E-books

E-books have gained popularity in recent years as e-book readers and software has become increasingly available. Number of titles, published in digital format, is increasing, whereas the total number of titles published is steadily decreasing. One of the largest digital books' publishers in Estonia sold 7,500 digital books in 2011.²⁶² Estonian readers are also actively reading books in foreign languages; however there is not available data on these sales. E-books have a VAT of 20% in Estonia, whereas traditional books have a 9% VAT.

²⁵⁹ Europeana Office (2011).

²⁶⁰ Numeric 2009.

²⁶¹ Newspaper „Äripäev“, 29.01.2013.

²⁶² Portal, Delfi, <http://www.delfi.ee/archive/2011-aastal-muudi-eestis-7500-eestikeelset-e-raamatut.d?id=63862308>. Accessed in Jan 2013.

4. Music

Until recent years legal digital music offer in Estonia was very limited. iTunes music store was launched in 2011 and services such as Spotify (only available in Estonia for Premium costumers) and Rdio (that offers free services) were also launched recently. These services are expected to reduce the level of online copyright infringement in the country.

5. Newspapers and magazines

Reading newspapers and magazines online is very popular. Newspapers are putting increasingly more effort on their digital versions as well as also experimenting with different ways of monetizing the digital access to content. Tablet versions of newspapers are offered for subscription. Single articles are also sold to readers via a mobile-phone payment.

7.2. Public content and government strategies

Estonia has emerged in recent years as one of the most advanced e-societies in the world, thanks to a clear government strategy and important foreign investing, mostly Nordic, into high technology and communication networks. As a result, the Estonian telecommunications sector is one of the most developed in Central and Eastern Europe and has the highest broadband penetration rate of all the Eastern European countries²⁶³. Widespread broadband usage has underpinned Estonia's emerging internet economy, supported by the public strategy named "e-Estonia".²⁶⁴ It has made Estonia one of the most advanced e-Governments in Europe.

Within the e-Estonia strategy, the Estonian ICT Demo Center and Estonian ICT Export Cluster have been created to promote the ICT industry (including creative and media sectors), fostering the development of new solutions and the creation of new products and improving the companies' competitive ability in the international market.²⁶⁵

Among initiatives regarding public information and content, the Open Data initiative is particularly relevant. The Estonian government places high hopes in "Open Data" initiatives, which are meant to increase the economic efficiency of Estonia and create higher GDP. The aim is to publish openly all information which does not contain personal data.

All larger initiatives regarding ICT and e-government have been made through PPP's with private companies and non-profit organizations.

²⁶³ However, there is still pending the revision of the regulation of the telecom sector in Estonia, and the European Commission has urged the government to ensure impartial regulation. http://europa.eu/rapid/press-release_IP-12-630_en.htm.

²⁶⁴ About Estonia, Estonia.eu website, <http://estonia.eu/about-estonia/economy-a-it/e-estonia.html>. Accessed in January 2013.

²⁶⁵ ICT export cluster, E-estonia, <http://e-estonia.com/ict-export-cluster>. Accessed in January 2013.

Digitisation of public content

Recent years have brought about more concentrated efforts for increasing the availability of content via digital channels. Estonian Government's development plan on "Digital Cultural Heritage"²⁶⁶ outlines the importance of digitizing content for the development of a knowledge society, providing better access for cultural values to a wider set of people from Estonia and abroad.

Different organizations are making efforts in digitizing their catalogues of books, artefacts, videos and items, and making the information available online. The first stage is digitization of catalogues and the following is digitization of the content.

As of 2011, there was around 600 Terabytes of content digitized in Estonian memory-institutions. The aim was to increase the amount of digitized content to 5 Petabytes by 2014. Most of it would be digitally produced and stored content from the Estonian National TV and radio. This amount includes both data available online and off-line. Most of the funding for digitization comes from public sources and EU-funds, however some digitization is also funded via selling the services of digitization to private sector customers. When a material has been digitized on request of a particular customer, then later it will become available for subsequent people for free.

Usual practice of digitising content in Estonian libraries is to start from older and more unique materials, moving on to newer materials and wider topics. Future direction is to move to a wider digitization of not particular materials, but all of the items in particular collections. Main institutions responsible for digitizing content are: Estonian National Library, Estonian Public Broadcasting, Conservation Centre KANUT, Estonian National Museum and National Archives.

A number of smaller museums, libraries and other institutions also make efforts in digitization of content. Main funding to digitization of content comes from the budgets' of the institutions involved or from EU-funding.

²⁶⁶ Valdkonna arengukava "Digitaalne kultuuripärand" 2011-2016, www.kul.ee/webeditor/files/Digi_Kult_AK_2011_2016_l6plik.pdf. Accessed in January 2013.

FRANCE

1. Population:²⁶⁷

65,436,552 citizens

2. Internet access:

	2007	2012
Internet users ²⁶⁸	77.8%	81.4%
Households with Internet access ²⁶⁹	55.1%	80%
Households with broadband connection ²⁷⁰	48.9%	77.2%
Mobile penetration rate ²⁷¹	NA	106%

3. Devices for Internet access:²⁷²

	2010
Households with desktop or portable computer	72%
Mobile devices users	29%
Households with Smart TV	5%

4. Average expenditure on cultural services:²⁷³

	1994	1999	2005
% of total household's expenditure on cultural services	0.6%	1.4%	1.4%

5. Media and content industry:**Employment**²⁷⁴ (2007):

Number of working persons	Annual average growth rate (%)
1,786,000	2.4%

Value added²⁷⁵ (2007):

VA (€m)	VA as share in total national economy (%)	Annual average growth rate 1995-2007 (%)
89,635	6.1%	6.2%

Enterprises²⁷⁶ (2007):

Number of enterprises	Annual average growth rate 1995-07 (%)
82,093	7.9%

²⁶⁷ Eurostat (Population at 1 January 2012).²⁶⁸ Individuals who have used Internet in the last 3 months.²⁶⁹ Eurostat (Consulted 3 January 2013).²⁷⁰ Ibid.²⁷¹ Arcep website: observatoires/services mobiles www.arcep.fr/index.php?id=35. Accessed in January 2013.²⁷² Eurostat. Households with access to Internet, by device for accessing via PC, digital TV, mobile device.²⁷³ Eurostat (Population at 3 January 2012).²⁷⁴ Leuridijk, A., Silvain de Munck, Tijs van den Broek, Arjanna van der Plas, Manshanden, W., Rietveld, E., (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*, JRC technical reports (EC) 2012.²⁷⁵ Ibid.²⁷⁶ Ibid.

Trade balance²⁷⁷ (2007):

TB (x1000)	National trade balance as share of total European trade (%)	Annual average growth rate trade balance 1995-2007 (%)
-202	15.6%	2%

5.1 Video (2011)²⁷⁸

Market size:²⁷⁹ €1.3 billion

Consumer spending on physical video software:²⁸⁰ €1.3 billion

Consumer spending on digital video and TV VOD:²⁸¹ €330.2 million

5.2. Video games

Market size (2011):²⁸² €3.2 billion

Online game players who connect to Internet (2012):²⁸³ 44%

Internet users²⁸⁴ who purchased online video games' software and upgrades (2012): 8.6%

5.3. E-books (2011)²⁸⁵

Market size: €12.5 million

Market share digital: 1.8%

Individuals who purchase e-books online:²⁸⁶ 3.8%

5.4. Music (2011)²⁸⁷

Market size: €668.9 million

Market share digital: 21.3%

Individuals who purchase online films/music: 6%

5.5. Newspapers and magazines

Market size (2011):²⁸⁸ €9.2b

Market share digital (2011):²⁸⁹ 10%

²⁷⁷ Leuridijk, A., Silvain de Munck, Tijs van den Broek, Arjanna van der Plas, Manshanden, W., Rietveld, E., (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*, JRC technical reports (EC) 2012.

²⁷⁸ International Video Federation (2012) – *European Video Yearbook 2012*.

²⁷⁹ Total market figures include revenues from legacy formats not broken out separately (eg, VHS, HD-DVD, UMD) where relevant.

²⁸⁰ International Video Federation (2012) – *European Video Yearbook 2012*.

²⁸¹ The purchase or rental of movies and TV series delivered over the open internet through transactional models (also known as EST, DTO, Internet VOD) or on a subscription basis.

²⁸² Adese (2011). *Anuario de la Industria del videojuego 2011*.

²⁸³ ISFE (2012): *Videogames in Europe: Consumer study. European Summary Report*.

²⁸⁴ Percentage of individuals who used Internet within the last year.

²⁸⁵ The Global eBook Market: Current Conditions & Future Projections and Eurostat.

²⁸⁶ Either books/magazines/e-learning material, delivered or upgraded online.

²⁸⁷ IFPI (2012) *Recording Industry in numbers 2011* and Eurostat.

²⁸⁸ Project de loi de finance pour 2013, http://fr.scribd.com/doc/111019066/Plf2013?secret_password=2j8syfa0w1xhh409tiak. Accessed January 2013.

²⁸⁹ Ibid.

Internet users²⁹⁰ who have online subscriptions to news services or products to receive them regularly (2011): 4.2%

Individuals who use Internet to read or download newspapers/news (2012):²⁹¹ 30.8%

6. Cultural/heritage content:

6.1. Participation in Europeana (2011):²⁹²

Total of all records	France	% of Total
23,595,557	2,586,409	10.96%

6.2. Source of funding of digitization process (2009):²⁹³

Own resources: 67%
 Government programmes: 27%
 Private donations: 4%
 Other support: 3%

7. Overview of media and content sector:

7.1. Commercial content

1. Video

The French audiovisual sector is impacted by the multiplication of viewing terminals and the emergence of connected TV. Both are deeply modifying the consumption habits as well as the value chain. The stakeholders react by adapting the produced programs, notably through transmedia, and by changing the regulation including media chronology as well as fiscal and regulatory equity with the great US distribution platforms addressing the French market from European countries with a more favorable fiscal policy.

2. Video games

The French video game industry is also greatly impacted by the success of social networks (social gaming) and mobile terminals (mobile gaming). The infatuation regarding those two phenomena is explained by the fact that barriers to entry in those markets are lower than in the traditional PC and console universe, hence stimulating the development of new actors. Beyond its traditional territory, the video game is penetrating progressively other economic sectors, notably through serious gaming or gamification.

3. E-books

In 2011, the physical market is predominating with 384 million sold items accounting for €4.27 billion. This is explained by a strong distribution network: 15,000 retail outlets on the French territory. Reading remains one of the favourite activities in France: a French person spends around 5h25 reading a week. The digital sector is hence minimized, representing only €12 million (market size).

²⁹⁰ Individuals who have used Internet in the last 3 months.

²⁹¹ Eurostat.

²⁹² Europeana Office (2011).

²⁹³ Numeric 2009.

French digital editors support, on an equity basis, the harmonization of the book single price.

4. Music

Two new music consumption models have emerged in France: the single unit purchase (e.g. iTunes) and streaming (using a subscription or a free limited access funded by advertising). In 2011, for the first time, in France, the digital market (both streaming and single unit purchase) exceeded the number of selling in volumes. In 2012, the music market in France shrank 4.4%, accounting for €589.7 million (in total). The digital market share represents 21%.

5. Newspapers and magazines

Nowadays, the majority of the French press sector cannot live without government subventions, accounting for 10% of the annual turnover of the sector (€10 billion).

The “pureplayers” distribution models funded by advertisement are not sustainable. Nonetheless, the subscription model for information journalism (e.g. Mediapart) has proved its effectiveness.

7.2. Public content and government strategies

The first French eGovernment strategy was laid down in the ADELE programme (2004-2007). ADELE (ADministration ELEctronique – namely ‘eGovernment’) The main objective of ADELE consisted in implementing an electronic administration accessible to all, which would move from simply providing information to delivering interactive services enabling users to perform full administrative procedures remotely.

On October 2008 The Development Plan for the Digital Economy by 2012 was unveiled, with responsibility for Forward Planning, the Assessment of Public Policies and the Development of the Digital Economy. This Development Plan formulates over 150 actions which are structured around four core priorities: enabling all citizens to access all digital networks and services; developing the production and supply of digital content; increasing and diversifying the use of digital services by companies, Public Administrations and citizens; and modernizing the governance of the Digital Economy. The plan also focuses on the development and availability of the infrastructure for everyone, over the entire territory, with a set target of 100% access to fixed broadband Internet in the near future. Another key element of the plan lies with digital content. The Development Plan furthermore provides for actions intended to promote the use of digital content and services by all citizens and companies. The enhancement of digital trust stands as another priority aspect of the Development Plan.

In July 2007, the Prime Minister launched the General Review of Public Policies (RGPP). This new reform method has been designed to provide foundations for the conception of ‘Public Services 2012’. In June 2010, RGPP entered a new phase, with an initial assessment of the completed measures and the adoption of a new series of measures for the years 2011-2013. In total, more than 300 reform decisions were made in the framework of the RGPP to date.

With the publication of a decree on 31 October 2012, the French government has created a new agency for the modernization of public administration. The new agency is a combination of existing agencies and programs concerned with the modernization of government services and open government data, bringing them all under one banner, and falling under the responsibility of the office of the Prime Minister. Most notably, the national French open data program Etalab is a part of this new agency. It also combines the DISIC (inter-ministerial directorate for information systems and communication) and the DGME (directorate general for the modernization of the state).²⁹⁴

In the digital domain, the most significant actions of the plan *France Numérique 2012* were: universal access to broadband Internet; transition to digital terrestrial television; high-speed internet and high-speed mobile internet; the creation of the French Digital Council (*Conseil National du Numérique*).²⁹⁵

There are intentions to develop the international attractiveness of France in the digital world. A large digital area will be created in Paris or suburbs to make Paris the capital of digital creative and cultural industries.²⁹⁶

The main challenges for digital economy 2020 are: digital divide among the people with social difficulties or disability; protection of personal data and privacy; neutrality of the Internet; cloud computing; improving the digital ecosystem for boosting initiatives supporting innovation and support entrepreneurs.

Digitisation of public content

In France, the issue of public-private partnerships, namely the relationship between French cultural institutions and Google, has assumed a relatively high profile in the political debate.

PPPs reported by national organizations include:

- an agreement between the National Library (BnF) and the National Publishers Association (SNE) to pilot a common access solution through Gallica for both copyright works and works in the public domain.
- an agreement between the National Audiovisual Institute (INA) and the television channel TF1 to commercially exploit its news archives under a world – exclusivity clause for professional use.²⁹⁷

The Bibliothèque nationale de France (BnF) began digitizing its collections in the early 1990s. After the implementation of mass digitization projects (the European Digital Library, Francophone digital library, Google Book Search, Open Library, etc.), BnF is stepping up its digital activities, in particular via its online library [Gallica](#). At the outset of the Gallica digital library, a detailed documentary charter focusing on national heritage precisely defined the criteria used to select the some 5-6,000 printed documents digitized each year. The three major current focuses of BnF's digitization policy are national heritage, international

²⁹⁴ European Public Sector Information Platform <http://epsiplatform.eu/content/all-french-government-open-data-efforts-under-one-banner>. Accessed in January 2013.

²⁹⁵ Economic and financial portal, French government www.economie.gouv.fr/france-numerique-2020/france-numerique-2020-0. Accessed in January 2013.

²⁹⁶ Portail du Gouvernement, *La stratégie du Gouvernement pour le numérique*, www.gouvernement.fr/gouvernement/la-strategie-du-gouvernement-pour-le-numerique. Accessed in January 2013.

²⁹⁷ *Second progress report on the digitisation and online accessibility of cultural material and on digital preservation in the European Union*, http://ec.europa.eu/information_society/activities/digital_libraries/doc/recommendation/reports_2010/2010%20Digitisation%20report%20overall.pdf. Accessed in January 2013.

programs, a corpus of works and materials dedicated to all aspects of Europe. BnF digitizes all types of materials (printed materials such as monographs and periodicals, manuscripts, prints, maps and plans, photographs, sound recordings, etc). Materials are digitized either in their original form or on microform (microfilm and microfiche). At present and over the next few years, BnF is committed to digitizing and making available online the following: 100,000 printed materials (monographs and periodicals) every year for three years (from 2008 to 2010); several thousand press books; several thousand graphic materials.

BnF has also launched the SPAR project. The objective is to store in a secure and permanent manner the digital objects based on a strong and performing framework, SPAR standing for Scalable Preservation and Archiving Repository. BnF participated in R&D European projects such as Europeana, the European Library (TEL), IMPACT (Improving Access to Text), ARROW, Europeana Regia, IDP-CREA (The International Dunhuang Project – Cultural Routes of Eurasia), BHL-Europe (Biodiversity Heritage Library for Europe) and KEEP (Keeping Emulati on Environments Portable).²⁹⁸

Within the legal deposit framework, INA has been archiving programmes from all national terrestrial radio and television broadcasters since 1995, cable and satellite channels since January 2002, and DTT channels since 2005. These “legal deposit” archives are intended for heritage purpose and may only be accessed for study and research. INA has had a policy of making its archives available for educational and cultural purposes, and since 27 April 2006 (shortly before YouTube was launched), the general public has had direct access to over 300,000 television and radio programs on the Ina.fr website, where programs can be viewed, downloaded or even ordered via an on-demand DVD service. On the *EUscreen* portal, there is a selection of about 1,000 archives from INA’s collection. INA has participated in such European projects as PRESTOPRIME and OT Media.²⁹⁹

The French Ministry of Culture also provides a [collection of useful information and links](#) on the digitization of cultural heritage on its website.

Towards new regulation modes of the broadcast universe

The current broadcast universe is increasingly marked by the convergence of the audiovisual world (regulated by the CSA,³⁰⁰ an independent authority to protect audiovisual communication freedom) and the electronic communications networks one (regulated by the ARCEP,³⁰¹ the French telecommunications and posts regulator). The current government is seeking to bring those two institutions closer or merging them as the UK with OFCOM.³⁰²

Reflections and perspectives regarding the French cultural exception

Acknowledging the weakening of the traditional sources of cultural creation due to the upheaval of the value chain and illegal download of works, the French government has set up a mission in order to adapt the basis of the French cultural exception (quota policy, production obligations, etc.) and rethink the public policy regarding copyright infringement on the Internet.

²⁹⁸ Digitization, National Library of France, www.bnf.fr/en/professionals/digitization.html. Accessed in Jan 2013

²⁹⁹ Exploring Ina: the French National Audiovisual Institute, CST online, <http://cstonline.tv/exploring-ina>. Accessed in January 2013.

³⁰⁰ Portal, ESA france, www.esa.fr. Accessed in January 2013.

³⁰¹ News, Arcep, www.arcep.fr/index.php?id=1&L=1. Accessed in January 2013.

³⁰² Homepage, Ofcom, www.ofcom.org.uk/. Accessed in January 2013.

GERMANY

1. Population:³⁰³

81,843,743 citizens

2. Internet access:

	2007	2012
Internet users ³⁰⁴	72.4%	82.4%
Households with Internet access ³⁰⁵	70.7%	85.5%
Households with broadband connection ³⁰⁶	49.6%	81.5%

3. Devices for Internet access:³⁰⁷

	2010
Households with desktop or portable computer	80%
Mobile devices users	34%
Households with Smart TV	3%

4. Average expenditure on cultural services:³⁰⁸

	1994	1999	2005
% of total household's expenditure on cultural services	1.7%	2.2%	: NA

5. Media and content industry

Employment³⁰⁹ (2007):

Number of working persons	Annual average growth rate (%)
2,844,900	1.6%

Value added³¹⁰ (2007):

VA (€m)	VA as share in total national economy (%)	Annual average growth rate 1995-2007 (%)
116,808	5.8%	3.8%

Enterprises³¹¹ (2007):

Number of enterprises	Annual average growth rate 1995-07 (%)
61,304	4%

³⁰³ Eurostat (Population at 1 January 2012).

³⁰⁴ Individuals who have used Internet in the last 3 months.

³⁰⁵ Eurostat (Consulted 3 January 2013).

³⁰⁶ Ibid.

³⁰⁷ Eurostat. Households with access to Internet, by device for accessing via PC, digital TV, mobile device.

³⁰⁸ Eurostat (Population at 3 January 2012).

³⁰⁹ Leurdijk, A., Silvain de Munck, Tijs van den Broek, Arjanna van der Plas, Manshanden, W., Rietveld, E., (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*, JRC technical reports (EC) 2012.

³¹⁰ Ibid.

³¹¹ Ibid.

Trade balance³¹² (2007):

TB (x1000)	National trade balance as share of total European trade (%)	Annual average growth rate trade balance 1995-2007 (%)
-2,099	162.5%	3.6%

5.1 Video (2011)³¹³

Market size:³¹⁴ €940 million

Consumer spending on physical video software:³¹⁵ €1.6 billion

Consumer spending on digital video and TV VOD:³¹⁶ €109.1 million

5.2. Video games

Market size (2011):³¹⁷ €1.989 billion

Online game players who connect to Internet (2012):³¹⁸ 32%

Internet users³¹⁹ who purchased online video games' software and upgrades (2012): 9.9%

5.3. E-books (2011)³²⁰

Market size: €9.691 billion

Market share digital: 1%

Individuals who purchase e-books online:³²¹ 3%

5.4. Music (2011)³²²

Market size: €1019.7 million

Market share digital: 16.4%

Individuals who purchase online films/music: 8.9%

5.5. Newspapers and magazines³²³

Market size: €8.52 billion

Market share digital: NA

Internet users³²⁴ who have online subscriptions to news services or products to receive them regularly (2011): 6.5%

³¹² Leurdijk, A., Silvain de Munck, Tijs van den Broek, Arjanna van der Plas, Manshanden, W., Rietveld, E., (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*, JRC technical reports (EC) 2012.

³¹³ International Video Federation 2012 – *European Video Yearbook 2012*.

³¹⁴ Total market figures include revenues from legacy formats not broken out separately (eg, VHS, HD-DVD, UMD) where relevant.

³¹⁵ International Video Federation 2012 – *European Video Yearbook 2012*.

³¹⁶ The purchase or rental of movies and TV series delivered over the open internet through transactional models (also known as EST, DTO, Internet VOD) or on a subscription basis.

³¹⁷ German Trade Association of Interactive Entertainment Software (BIU) – Market Figures.

³¹⁸ ISFE (2012): *Videogames in Europe: Consumer study. European Summary Report*.

³¹⁹ Percentage of individuals who used Internet within the last year.

³²⁰ The Global eBook Market: *Current Conditions & Future Projections* and Eurostat.

³²¹ Either books/magazines/e-learning material, delivered or upgraded online.

³²² IFPI(2012) *Recording Industry in numbers 2011* and Eurostat.

³²³ Federation of German Newspaper Publishers (BDZV) – *The economic situation of newspapers in Germany 2011*.

³²⁴ Individuals who have used Internet in the last 3 months.

Individuals who use Internet to read or download newspapers/news (2012):³²⁵ 54.9%

6. Cultural/heritage content:

6.1. Participation in Europeana(2011):³²⁶

Total of all records	Germany	% of Total
23,595,557	3,643,846	15.44%

6.2. Source of funding of digitization process (2009):³²⁷

Own resources: 80%
 Government programmes: 15%
 Private donations: 3%
 Other support: 2%

7. Overview of media and content sector:³²⁸

7.1. Commercial content

1. Video

In 2011, 35% of the German population spent almost €1.7 billion on video software (across all formats DVD: Blu-ray and EST/VoD – both retail and rental market). The retail market grew by 1.7% and the rental market contracted by 1.1%.³²⁹

The digital format and digital online distribution is becoming more and more popular in Germany. While video stores still dominate the physical rental market, VoD and PpV meanwhile stand for 14% of the rental sales volume. In 2011, transactions via streaming increased by 55% to 9.4 million, compared with 6.1 million rental transactions in 2010.

2. Video games

The video games market in Germany reached €1.989 billion in 2011.³³⁰ This figure represents an increase of 3.5% compared to 2010. The sales of video games via physical distribution and downloads (portable consoles, mobile phones or smart phones) account for 79.1% of the total market. The incomes from subscriptions fees and premium services account for 9.2% of the total market and incomes from virtual items selling account for the remaining 11.7%. This last business model has increased by 70% between 2010 and 2011, being the sole responsible of the total increase of the market (both incomes from physical distribution/downloads and subscription fees have decreased in 2011).

3. E-books

Germany's book market is among the three largest in the world, but e-books still represent a very small percentage of overall sales.³³¹ End-of-year sales in 2011, however, offered

³²⁵ Eurostat.

³²⁶ Europeana Office (2011).

³²⁷ Numeric 2009.

³²⁸ AMETIC (2011), *Informe 2011 de la Industria de Contenidos Digitales*.

³²⁹ International Video Federation 2012 – *European Video Yearbook 2012*. Germany.

³³⁰ German Trade Association of Interactive Entertainment Software (BIU). *Market Figures*.

³³¹ O'Leary S., (2012): *E-book Market in Germany Profitable for "A Small Minority"*.

signs that Germany is making a shift toward a digital future, where more and more publishers are investing in their e-book business, despite the current lack of overwhelming demand from readers.

The last report from eBook.de,³³² the major e-book retailer in Germany, declares that e-book sales tripled in the final quarter of 2012, and for the first time they sold more e-books than printed books. A survey they conducted shows that e-book readers in the 40 to 49 year-old range accounted for 32% of sales, and those over 60 accounted for 20%. Nearly half of the purchasers of e-readers read more digital than print books, and about a quarter read only e-books.

Currently, German e-books tend to cost about 20% less than their print counterparts, but perhaps the biggest hill to climb on the pricing front is the discrepancy between the VAT customers pay for printed books: 7% on print vs. 19% on e-books.³³³

4. Music

Germany now ranks as the largest music market in Europe, according to international music trade body IFPI,³³⁴ and once again has the world's number three music market (after the U.S.A and Japan).

The music industry in Germany has announced that in 2012 its citizens legally downloaded over 100 million music files. Overall the number of music downloads rose from 94 million in 2011 to around 115 million legally downloaded songs and albums in 2012.³³⁵

iTunes is the dominant digital player on the market. On-going licensing negotiations between ad-supported subscription services and German authors' collecting society GEMA,³³⁶ a group that represents 65,000 German composers, songwriters and music publishers, have also restricted the growth of its digital market.

5. Newspapers

The German newspapers market has increased a slight 0.71% in 2011, up to €8.52 billion, being one of the few national markets in Europe that does not decrease. Regarding the advertising sales, this income source amounted to €3.64 billion, with a decline of 1.5%, continuing the general decrease of the share of newspapers industry in overall advertising sales (29% in 2000 and 21% in 2011).

7.2. Public content and government strategies

In 2010, the German Federal Government launched "Digital Germany 2015". This ICT strategy sets out the priorities, tasks and projects for the period up to 2015 in the ICT field. With the implementation of the ICT Strategy, the Federal Government wants to promote sustainable economic growth, create new jobs and increase social benefits. The strategy acknowledges the social and policy significance of Internet and ICT, and promotes dialogue on the appropriate role of government in the future organisation of the Internet, chasing to

³³² Start, Ebook.de, www.ebook.de/. Accessed in January 2013.

³³³ O'Leary S., (2012): *E-book Market in Germany Profitable for "A Small Minority"*.

³³⁴ IFPI 2011 Report: *Global Recorded Music Sales*.

³³⁵ "Germany racks up 115 million legal music download in 2012", Dave Neal January 2013.

³³⁶ Homepage, Gemma, www.gema.de. Accessed January 2013.

improve the regulatory policy framework.³³⁷ This strategy is aligned with the Digital Agenda for Europe, and for its implementation it will take into account the activities developed at the European level.

In 2010, a State Treaty also established the IT Planning Council that aims at coordinating cooperation between the Federation and the *Länder* on information technology issues, IT interoperability and IT security standards and managing e-government projects.³³⁸ The IT Planning Council is complemented with the National E-Government Strategy which specifies future tasks for cooperation between levels of government, as a model for coordinated actions, an agenda and a roadmap for implementation.

Digitisation of public content

Culture and the related infrastructures in Germany are a decentralised responsibility of the 16 States. Therefore, many digitisation activities lie within the responsibility of the 16 States and their Ministries for Culture or Science. Furthermore, many initiatives have been independently developed by universities, libraries, archives, museums, research centres, academies, private associations and publishers within their specific legal frameworks. The Federal Government assumes responsibility only in some areas and performs a coordinating role in some others,³³⁹ although big projects are normally led by a national organization in the field, such as the German Federal Archives (*Bundesarchiv*), the German National Library (*Deutsche Nationalbibliothek*), the German Museums Association (*Deutscher Museumsbund*) or the German Film Institute (*Deutsches Filminstitut*).³⁴⁰

Federal Government and Federal State coordinate their actions regarding culture and heritage preservation and dissemination also through institutions such as the Prussian Cultural Heritage Foundation, one of the world's major cultural organisations, that embodies the shared governmental responsibility for culture in Germany.³⁴¹

The Foundation currently holds the administrative office of the Deutsche Digitale Bibliothek (DDB), the most relevant initiative making accessible public digital content in Germany. The portal was launched in 2009. DDB is the central portal to Germany's cultural and scientific heritage and aims at bringing together and network digital content from all of Germany's cultural and scientific institutions. It currently gives access to content from 1,921 institutions, including books, archived items, images, sculptures, pieces of music and other sound documents, as well as films and scores. Access to all content is free at the moment, and institutions responsible for the object set their own rules of utilisation. The establishment of prices for the commercial exploitation of works is under consideration at present.³⁴²

Digitisation of public content is mainly funded from public sources, mostly coming from institutions' own budgets and, to a lesser extent, government programs, as the ones launched by the Deutsche Forschungsgemeinschaft, the German Research Foundation, which finances research in the area of digitising cultural heritage across sectors.³⁴³

³³⁷ Federal Ministry of Economics and Technology. *ICT Strategy of the German Federal Government: Digital Germany 2015*.

³³⁸ IT-Planungsrat, *National E-Government Strategy*.

³³⁹ Hoppe, B. *Digitisation in public libraries: challenges and practice in Germany*.

³⁴⁰ Centre of Expertise (HEC) (2007): *Quality assurance in digitisation of Cultural Heritage in Europe*.

³⁴¹ About us, The Prussian Cultural Heritage Foundation, http://hv.spk-berlin.de/english/wir_ueber_uns/profil.php?navid=2. Accessed in January 2013.

³⁴² Search, BETA, www.deutsche-digitale-bibliothek.de. Accessed in January 2013.

³⁴³ Centre of Expertise (HEC) (2007): *Quality assurance in digitisation of Cultural Heritage in Europe*.

ITALY

1. Population:³⁴⁴

60,820,764 citizens

2. Internet access:

	2007	2012
Internet users ³⁴⁵	38.3%	55.8%
Households with Internet access ³⁴⁶	43.4%	62.9%
Households with broadband connection ³⁴⁷	23.3%	55.1%

3. Devices for Internet access:³⁴⁸

	2010
Households with desktop or portable computer	55%
Mobile devices users	25%
Households with Smart TV	0%

4. Average expenditure on cultural services:³⁴⁹

	1994	1999	2005
% of total household's expenditure on cultural services	1.2%	0.4%	0.9%

5. Media and content industry:

Employment³⁵⁰ (2007):

Number of working persons	Annual average growth rate (%)
1,193,400	5%

Value added³⁵¹ (2007):

VA (€m)	VA as share in total national economy (%)	Annual average growth rate 1995-2007 (%)
38,891	5.4%	6.6%

Enterprises³⁵² (2007):

Number of enterprises	Annual average growth rate 1995-07(%)
102,408	5.9%

³⁴⁴ Eurostat (Population at 1 January 2012).

³⁴⁵ Individuals who have used Internet in the last 3 months.

³⁴⁶ Eurostat (Consulted 3 January 2013).

³⁴⁷ Ibid.

³⁴⁸ Eurostat. Households with access to Internet, by device for accessing via PC, digital TV, mobile device.

³⁴⁹ Eurostat (Population at 3 January 2012).

³⁵⁰ Leurdijk, A., Silvain de Munck, Tijs van den Broek, Arjanna van der Plas, Manshanden, W., Rietveld, E., (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*, JRC technical reports (EC) 2012.

³⁵¹ Ibid.

³⁵² Ibid.

Trade balance³⁵³ (2007):

TB (x1000)	National trade balance as share of total European trade (%)	Annual average growth rate trade balance 1995-2007(%)
-532	41.2%	-1.3%

5.1 Video (2011)³⁵⁴

Market size:³⁵⁵ €216 million

Consumer spending on physical video software:³⁵⁶ €355.1 million

Consumer spending on digital video and TV VOD:³⁵⁷ €98.6 million

5.2. Video games

Market size (2011):³⁵⁸ €993 million

Online game players who connect to Internet (2012):³⁵⁹ 34%

Internet users³⁶⁰ who purchased online video games' software and upgrades (2012): 2.2%

5.3. E-books (2011)³⁶¹

Market size: €3,408 million

Market share digital: 1.5%

Individuals who purchase e-books online:³⁶² 1.4%

5.4. Music (2011)³⁶³

Market size: €158.1 million

Market share digital: 22.5%

Individuals who purchase online films/music: 1.5%

5.5. Newspapers and magazines

Revenues from newspapers (2011):³⁶⁴ €3,190 million (€690 million from advertising + €2,500 million from copy sales)³⁶⁵

Internet users³⁶⁶ who have online subscriptions to news services or products to receive them regularly (2011): 2.4%

³⁵³ Leurdijk, A., Silvain de Munck, Tijs van den Broek, Arjanna van der Plas, Manshanden, W., Rietveld, E., (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*, JRC technical reports (EC) 2012.

³⁵⁴ International Video Federation (2012): *European Video Yearbook 2012*.

³⁵⁵ Total market figures include revenues from legacy formats not broken out separately (eg, VHS, HD-DVD, UMD) where relevant.

³⁵⁶ International Video Federation (2012): *European Video Yearbook 2012*.

³⁵⁷ The purchase or rental of movies and TV series delivered over the open internet through transactional models (also known as EST, DTO, Internet VOD) or on a subscription basis.

³⁵⁸ Adese (2012): *Anuario de la Industria del videojuego 2011*.

³⁵⁹ ISFE (2012): *Videogames in Europe: Consumer study. European Summary Report*.

³⁶⁰ Percentage of individuals who used Internet within the last year.

³⁶¹ R. Wischenbart (2011): *The Global eBook Market: Current Conditions & Future Projections* and Eurostat.

³⁶² Either books/magazines/e-learning material, delivered or upgraded online.

³⁶³ IFPI(2012) *Recording Industry in numbers 2011* and Eurostat.

³⁶⁴ Federazione italiana editori giornali (FIEG) 2011.

³⁶⁵ This is an estimation from the Osservatorio FCP-FIEG.

Individuals who use Internet to read or download newspapers/news (2012)³⁶⁷: 30.5%

6. Cultural/heritage content:

6.1. Participation in Europeana (2011):³⁶⁸

Total of all records	Italy	% of Total
23,595,557	1,273,103	5.4%

6.2. Source of funding of digitization process (2009):³⁶⁹

Own resources: 38%
Government programmes: 57%
Private donations: 1%
Other support: 5%

7. Overview of media and content sector:

7.1. Commercial content

1. Video

Due to the economic crisis, in 2011 Italian consumers' purchasing power was reduced and household spending declined, affecting significantly the video industry. A further decline of the industry as a whole is expected in 2012.³⁷⁰

However, in 2011 online video revenues increased more than three times compared to 2010 thanks to the online offers (Streaming/EST) by both international and local operators. Nevertheless, the share of online video remains relatively low on the home entertainment market (0.4% in 2010, 1.8% in 2011).³⁷¹ Italy has become the second country (after the United States and even ahead of China) in Video on Demand TV revenues (VoD), and advertisement from online video in Italy grew by 60% during the first semester of 2011.³⁷²

2. Video games

Italy represents the fifth largest video game market in Europe, after the UK, France, Germany and Spain, with around 9% of Western European market share. Italian video game industry, as the rest of cultural industries, has suffered in the crisis, and in 2011 it decreased by 7.1% compared to 2010.

The sector shares its main problems with the rest of Europe: lack of funding for the SMEs and lack of appropriate skills. The Italian government has started working in 2012 on tax measures to support the sector³⁷³ that accounts for 16.4% of the total creative and cultural industry in Italy.³⁷⁴

³⁶⁶ Individuals who have used Internet in the last 3 months.

³⁶⁷ Eurostat.

³⁶⁸ Europeana Office (2011).

³⁶⁹ Numeric 2009.

³⁷⁰ International Video Federation (2012): *European Video Yearbook 2012*.

³⁷¹ Ibid.

³⁷² "L'Italia che verrà. Industria culturale, made in Italy e territori. Rapporto 2012". Symbola Foundation.

³⁷³ Comunicati Stampa, AESVI, www.aesvi.it/cms/view.php?dir_pk=902&cms_pk=1863. Accessed in January 2013.

³⁷⁴ Symbola Foundation(2012): *L'Italia che verrà. Industria culturale, made in Italy e territori. Rapporto 2012*.

3. E-books

After a slight rise in 2010 (0.3%),³⁷⁵ 2011 meant for the Italian publishing industry a decrease in the general turnover of 3.7%. In the first nine months of 2012, turnover shrank by another 8.7%.³⁷⁶ Although in 2011 supply grew and diversified and the e-book segment consolidated (the e-book market grew by 20% in 2011), the industry lost 723,000 readers compared to 2010.³⁷⁷

Three publishing companies – GeMS/Messaggerie, Rcs, and Feltrinelli, representing a combined market share of about 30% of Italian trade publishing – joined forces in 2010 to create a consortium platform for the distribution of e-books, branded eDigita.³⁷⁸ eDigita serves a broad selection of Italian online retailers. It is expected that the Italian e-book market will grow to a volume of €60 to €70 million by 2015.

4. Music

According to the Italian Music Industry Federation (FIMI), during the first semester of 2012 digital music grew by 43% (including downloads and streaming), representing already 33% of the music market in Italy. Downloads represent 61% of digital revenues and accounted for €10.9 million in the six first months of the year. Despite the important growth of the digital market, revenues still do not compensate the losses of the physical market, and the music industry as a whole continues to decrease. The CD segment fell by 23% and revenues from the offline market accounted for €35.7 million during the mentioned period.

A key element for this growth is the success in the fight against digital copyright infringement, since visits to the infringing sites dropped by 70-80% in Italy in 2011.³⁷⁹

5. Newspapers and magazines

Italian press publishers had a gross profit margin in 2011 of €100 million, thanks to the important reduction of operational costs in the period 2008-2011, when costs were reduced by 14%. However, the sector has lost in five years more than one million readers of paper paid copies, and the revenues from advertisement for the whole industry dropped by 3.8% in 2011. Online advertisement grew by 12%, and although revenues from digital activities of the industry's enterprises grew by 83% between 2010 and 2011, these revenues still account only for around 1.5% of total turnover.³⁸⁰

7.2. Public content and government strategies

The Italian government announced in March 2012 a new Digital Agenda (ADI)³⁸¹ and a new governance structure involving the Ministers for Public Administration and Innovation, for Education and for Economic Development. The main priorities are broadband, smart cities and open government. The initiative stresses the importance of digital technologies to support growth and dramatically improve government efficiency. The Digital Agenda

³⁷⁵ Associazione Italiana Editori (AIE) (2011): *Report on the state of publishing in Italy 2011*.

³⁷⁶ Associazione Italiana Editori (AIE) (2012): *Report on the state of publishing in Italy 2012*.

³⁷⁷ Publishing in Italy, *Giornale della Libreria*, www.giornaledellalibreria.it/topmenuen/PUBLISHINGINITALY.aspx. Accessed in January 2013.

³⁷⁸ Homepage, Edigita, www.edigita.it/. Accessed in January 2013.

³⁷⁹ Resources, FPI publishes Digital Music Report 2012, www.ifpi.org/content/section_resources/dmr2012.html. Accessed in January 2013.

³⁸⁰ Associazione Stampatori Italiani Giornali (ASIG) (2012): *Rapporto 2012 sull'industria dei quotidiani in Italia*.

³⁸¹ Homepage, Agenda digitale, www.agendadigitale.org/. Accessed in January 2013.

includes important legislative measures to support the creative and cultural industries such as tax incentives.

Digitisation of public content

The structure of the coordination mechanisms for digitisation activities comes under the Ministries of Culture and/or Education. Funding for digitisation of content projects come essentially from public sources (government and European programmes).

Some of the most important projects for digitalization of cultural content in Italy have been European projects, such as the Minerva Project³⁸² or ARIADNE project,³⁸³ lead by the University of Florence in collaboration with the Central Institute for the Union Catalogue of Italian Libraries, and Bibliographic Information (ICCU).

One of the most important initiatives is "Internet Culturale", the Italian digital library portal, launched in 2005 and aimed at collecting and exhibiting the digitalization projects promoted by the General Directorate for Libraries and Cultural Institutes. These projects were coordinated by a steering committee, monitored by the ICCU. It currently offers access to more than 8 million digital files from 70 partner institutions. Its primary goal is to promote knowledge of cultural heritage of Italian libraries offering, cultural insights on library collections through digital and multimedia resources, dedicated to literary, scientific or musical documents.

Conversely, in the last period PPP's for digitising libraries have been launched, in collaboration with private entities. The most important one is the agreement between the Italian Government and Google. They have signed a partnership to digitize millions of books not subject to copyright which are preserved in the national libraries of Rome and Florence. It is a relevant contribution to the preservation and dissemination of important works of Italian cultural heritage, and the agreement will allow for the first time that anyone in the world can access digital works of authors such as Dante or Petrarca.

³⁸² Homepage, minervaeurope , www.minervaeurope.org. Accessed in January 2013.

³⁸³ Homepage, otebac, www.otebac.it/. Accessed in January 2013.

SPAIN

1. Population:³⁸⁴

46,196,276 citizens

2. Internet access:

	2007	2012
Internet users ³⁸⁵	52.0%	69.8%
Households with Internet access ³⁸⁶	44.6%	67.9%
Households with broadband connection ³⁸⁷	39.2%	66.7%
Lines per 100 hab. with fixed broadband ³⁸⁸	20.2%	24.2%
Lines per 100 hab. with mobile broadband ³⁸⁹	2.6%	42.6%

3. Devices for Internet access:³⁹⁰

	2010
Households with desktop or portable computer	58%
Mobile devices users	24%
Households with Smart TV	2%

4. Average expenditure on cultural services:³⁹¹

	1994	1999	2005
% of total household's expenditure on cultural services	1.1%	0.6%	0.8%

5. Media and content industry:

Employment³⁹² (2007):

Number of working persons	Annual average growth rate (%)
1,193,400	5%

Value added³⁹³ (2007):

VA (m€)	VA as share in total national economy (%)	Annual average growth rate 1995-2007 (%)
38,891	5.4%	6.6%

³⁸⁴ Eurostat (Population at 1 January 2012).

³⁸⁵ Individuals who have used Internet in the last 3 months.

³⁸⁶ Eurostat (Consulted 3 January 2013).

³⁸⁷ Ibid.

³⁸⁸ CMT 2008-2012.

³⁸⁹ Ibid.

³⁹⁰ Eurostat. Households with access to Internet, by device for accessing via PC, digital TV, mobile device

³⁹¹ Eurostat (Population at 3 January 2012).

³⁹² Leurdijk, A., Silvain de Munck, Tijs van den Broek, Arjanna van der Plas, Manshanden, W., Rietveld, E., (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*, JRC technical reports (EC) 2012.

³⁹³ Leurdijk, A., Silvain de Munck, Tijs van den Broek, Arjanna van der Plas, Manshanden, W., Rietveld, E., (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*, JRC technical reports (EC) 2012.

Enterprises³⁹⁴ (2007):

Number of enterprises	Annual average growth rate 1995-07 (%)
41,475	8%

Trade balance³⁹⁵ (2007):

TB (x1000)	National trade balance as share of total European trade (%)	Annual average growth rate trade balance 1995-2007 (%)
-417	32.3	-0.1

5.1 Video (2011)³⁹⁶

Market size:³⁹⁷ €311.5 million

Consumer spending on physical video software:³⁹⁸ €259.2 million*

*(117% increase since 2010)

Consumer spending on digital video and TV VOD:³⁹⁹ € 52.3 million

5.2. Video games

Market size (2011):⁴⁰⁰ €499 million

Online game players who connect to Internet (2012):⁴⁰¹ 31.0%

Internet users⁴⁰² who purchased online video games' software and upgrades (2012): 4.1

5.3. E-books

Market size (2010): €2,890 million⁴⁰³

Market share digital (2010): 2.4%⁴⁰⁴

Individuals who purchase e-books online (2011):⁴⁰⁵ 2.2%

5.4. Music (2011)

Market size⁴⁰⁶: €114.2 million

Market share digital⁴⁰⁷: 31.2%

Individuals who purchase online films/music: 1.7%

³⁹⁴ Ibid.

³⁹⁵ Ibid.

³⁹⁶ International Video Federation (2012): *European Video Yearbook 2012*.

³⁹⁷ Total market figures include revenues from legacy formats not broken out separately (eg, VHS, HD-DVD, UMD) where relevant.

³⁹⁸ International Video Federation (2012): *European Video Yearbook 2012*.

³⁹⁹ The purchase or rental of movies and TV series delivered over the open internet through transactional models (also known as EST, DTO, Internet VOD) or on a subscription basis.

⁴⁰⁰ Adese (2012): *Anuario de la Industria del videojuego 2011*.

⁴⁰¹ ISFE (2012): *Videogames in Europe: Consumer study. European Summary Report*.

⁴⁰² Percentage of individuals who used Internet within the last year.

⁴⁰³ Wischenbart, R. (2011) *The Global eBook Market: Current Conditions & Future Projections*.

⁴⁰⁴ Ibid.

⁴⁰⁵ Either books/magazines/e-learning material, delivered or upgraded online. Source: Eurostat 2011.

⁴⁰⁶ IFPI (2012) *Recording Industry in numbers 2011* and Eurostat.

⁴⁰⁷ Noticias, Promusicae, www.promusicae.org/espanol.html. Accessed in January 2013.

5.5. Newspapers and magazines

Market size of advertisement in newspapers (2011):⁴⁰⁸ €930.9 million

Market size of advertisement in newspapers online (2011): €118.3 million

Internet users⁴⁰⁹ who have online subscriptions to news services or products to receive them regularly (2011): 5.1%

Individuals who use Internet to read or download newspapers/news (2012):⁴¹⁰ 52.9%

6. Cultural/heritage content:

6.1. Participation in Europeana (2011)⁴¹¹:

Total of all records	Spain	% of Total
23,595,557	2,118,297	9%

6.2. Source of funding of digitization process (2009):⁴¹²

Own resources: 47%

Government programmes: 44%

Private donations: 4%

Other support: 6%

7. Overview of media and content sector:⁴¹³

7.1. Commercial content

1. Video

Although new Set Top Boxes (STBs) and Smart TVs open up new possibilities of distributing movies directly through the television, new business models in Spain still do not represent, today, an alternative to physical distribution, which is in constant decline since 2009.

2. Video games

The video game industry continues to be one of the most dynamic within the digital content market in Spain. In this area it is necessary to highlight the importance of the new distribution model of applications for mobile devices, annually growing around 10%. Another element that revolutionizes the video game market is the Internet connectivity to the television. However, the video game piracy rate in Spain reached 61.7%⁴¹⁴ in 2011, a major problem for the industry.

3. E-books

In 2010 Spanish publishers opted definitively for books in digital format, significantly increasing the number of titles available (10,000 in 2010), coinciding with the consolidation of the e-readers' market. However, the existence of some barriers (cost of equipment,

⁴⁰⁸ i2p de Arce Media y Media hotline.

⁴⁰⁹ Individuals who have used Internet in the last 3 months.

⁴¹⁰ Eurostat.

⁴¹¹ Europeana Office (2011).

⁴¹² Numeric 2009.

⁴¹³ AMETIC (2011): *Informe 2011 de la Industria de Contenidos Digitales*.

⁴¹⁴ Adese (2012): *Anuario de la Industria del videojuego 2011*.

format incompatibilities, complicated procurement processes, 21% VAT, etc.) stills hampers the market penetration of the market in 2010 reached 2.4% of the total book market.

4. Music

The Spanish music market continues to fall, for the eleventh consecutive year, and in 2011 recorded a decrease of 10.7%, despite the fact that the digital market rose by 9.8% and represents now 31.2% of the business.⁴¹⁵

From 2010 there is an emergence of two new models: the streaming service subscriptions and free access to the user, funded by advertising. Although both were present on the market for several years it was not until 2010 when their turnover can be considered outstanding, with a 19.8% growth compared to 2009.

5. Newspapers and magazines

As in the rest of Europe, economic data show that traditional business models in Spain are on the wane, both advertising and selling copies. However, the appearance of tablets has led to the emergence of new business models like online subscription that can potentially revitalize the sector. Although still far from compensating the decline of revenues in traditional business models, the outstanding growth figures portend a more positive future for the newspaper industry, led by the success of Orbyt (Unidad Editorial).

7.2. Public content and government strategies

The Spanish Government has launched at the end of 2012 a Digital Agenda for Spain⁴¹⁶ as a frame of reference to establish a roadmap on Information Technology and Communication (ICT) and eGovernment, and to establish Spain's strategy to achieve the objectives of the Digital Agenda for Europe, maximizing the impact of public policy on ICT to improve productivity and competitiveness. One of the main objectives of this agenda is promoting inclusion and digital literacy and ICT training, mobilizing talent for innovation and entrepreneurship, as well as improving accessibility of services and benefits of the digital ecosystem.

The main initiative for the support and development of the media and content industries is the Plan Avanza, launched in 2005 "to achieve convergence in the field of Information Society, both with the most progressive European countries and among our autonomous regions".⁴¹⁷ Between 2006 and 2009, the Plan dedicated more than €6,500 m to this objective.

In 2010 the Council of Ministers approved the 2011-2015 Strategy for Plan Avanza 2. This second stage gave continuity to Plan Avanza's course of action. This new phase consists of five action areas: Infrastructures, Trust and Security, Technological Training, Digital Content and Services, and ICT Sector Development.

⁴¹⁵ Noticias, promusicae, www.promusicae.org/espanol.html, Accessed in January 2013.

⁴¹⁶ Agenda Digital para España Propuesta a los Grupos Parlamentarios, https://agendadigital.gob.es/images/doc/Agenda_Digital_para_Espana_Propuesta_Grupos_Parlamentarios.pdf. Accessed in January 2013.

⁴¹⁷ Executive Summary Plan Avanza2. www.planavanza.es/InformacionGeneral/Executive/Paginas/ExecutiveSummary.aspx, Accessed in January 2013.

It included projects already in progress and updated initial objectives to adapt them to the new challenges of the network society. One of the objectives is strengthening the digital content sector and intellectual property rights in the current technological context within the Spanish and European legal framework.

Digitisation of public content

Spain has made a great effort digitising its cultural heritage, particularly libraries, and is one of the co-founders of the European project, showing the great determination of this country to digitalize its heritage.

Funding for digitisation of content has come mainly from public sources, with a great contribution from the government and European programmes. However in the last decade PPP's for digitising libraries have been launched in collaboration with Google and other private sponsors.⁴¹⁸

The main national project to digitalize public content has been The Hispanic Digital Library (BDH)⁴¹⁹, an online resource that allows the free enquiry of tens of thousands of documents held in the collections of the Spanish National Library (BNE). This site was created in 2008 with the aim of contributing to fulfil the mission of conservation, management and dissemination of Spanish Bibliographic Heritage in any medium assigned to the BNE. It is also a way to give visibility to a large systematic digitization project that has been initiated. This project received a boost thanks to the sponsorship for five years (2008–2012) from Telefónica.

Due to the decentralization of Spain's Administration, the responsibility for cultural heritage is shared among the various authorities: the General State Administration, the authorities in the Autonomous Communities and the Local Corporations. This has resulted in a great fragmentation of projects and funding sources.

However, some coordination efforts have been made by the Ministry of Culture and the Ministry of Industry, the most relevant being the portal Hispana:⁴²⁰

Hispana gathers digital collections of archives, libraries and museums in accordance with the Open Archives Initiative promoted by the European Union. It works similar to Europeana in relation to European repositories, i.e. is a content aggregator of digital databases. Among its collections, it includes institutional repositories of Spanish universities and the digital libraries of the Autonomous Communities that provide access to growing sets of all kinds of materials (manuscripts, printed books, photographs, maps). It currently gives access to 4,302,484 digital objects from 184 repositories and incorporates the online catalogue of the Digital Network of Spanish Museum's Collections (*Red Digital de Colecciones de Museos de España*), CERES.⁴²¹

Hispana also includes a directory of digitisation projects in progress in Spain at all levels, to allow for greater coordination.

⁴¹⁸ Commission Recommendation of 27 October 2011 on the digitization and online accessibility of cultural material and digital preservation (2011/711/EU).

⁴¹⁹ *Proceso de digitalización en la biblioteca nacional de España, enero 2011*, www.bne.es/es/Catalogos/BibliotecaDigital/docs/ProcesoDigitalizacionBNE_10012011_version3.pdf. Accessed in January 2013.

⁴²⁰ Inicio, Hispania, <http://hispana.mcu.es/es/estaticos/contenido.cmd?pagina=estaticos/presentacion>. Accessed on January 2013.

⁴²¹ Homepage, Red digital de colecciones de Museos de España, <http://ceres.mcu.es>. Accessed in January 2013.

SWEDEN

1. Population:⁴²²

9,482,855 citizens

2. Internet access:

	2007	2012
Internet users ⁴²³	80.1%	93.2%
Households with Internet access ⁴²⁴	78.6%	91.7%
Households with broadband connection ⁴²⁵	66.6%	87%
Lines per 100 hab. with fixed broadband ⁴²⁶	68%	64%
Lines per 100 hab. with mobile broadband	NA	17%

3. Devices for Internet access:⁴²⁷

	2010
Households with desktop or portable computer	88%
Mobile devices users	44%
Households with Smart TV	13%

4. Average expenditure on cultural services:⁴²⁸

	1994	1999	2005
% of total household's expenditure on cultural services	0.3%	1.2%	1.6%

5. Media and content industry:

Employment⁴²⁹ (2007):

Number of working persons	Annual average growth rate (%)
404,100	1.4%

Value added⁴³⁰ (2007):

VA (€m)	VA as share in total national economy (%)	Annual average growth rate 1995-2007 (%)
15,418	6%	6.1%

⁴²² Eurostat (Population at 1 January 2012).

⁴²³ Individuals who have used Internet in the last 3 months.

⁴²⁴ Eurostat (Consulted 3 January 2013).

⁴²⁵ Ibid.

⁴²⁶ Swedish Post and Telecom Agency, Individundersökningen 2011 (*N.B. there are no figures for 2012 yet, instead information from 2011 is used*).

⁴²⁷ Eurostat. Households with access to Internet, by device for accessing via PC, digital TV, mobile device.

⁴²⁸ Eurostat (Population at 3 January 2012).

⁴²⁹ Leurdijk, A., Silvain de Munck, Tijs van den Broek, Arjanna van der Plas, Manshanden, W., Rietveld, E., (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*, JRC technical reports (EC) 2012.

⁴³⁰ Leurdijk, A., Silvain de Munck, Tijs van den Broek, Arjanna van der Plas, Manshanden, W., Rietveld, E., (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*, JRC technical reports (EC) 2012.

Enterprises⁴³¹ (2007):

Number of enterprises	Annual average growth rate 1995-07 (%)
40,015	8.9%

Trade balance⁴³² (2007):

TB (x1000)	National trade balance as share of total European trade (%)	Annual average growth rate trade balance 1995-2007 (%)
224	-17.3%	6%

5.1 Video (2011)⁴³³

Market size:⁴³⁴ €134.4 million

Consumer spending on physical video software:⁴³⁵ €296.5 million

Consumer spending on digital video and TV VOD:⁴³⁶ €27.6 million

5.2. Video games

Market size (2011):⁴³⁷ €242 million

Online game players who connect to Internet (2012):⁴³⁸ 45%

Internet users⁴³⁹ who purchased online video games' software and upgrades (2012): 14.7%

5.3. E-books (2011)⁴⁴⁰

Market size: €0.85 billion

Market share digital: 0.37%

Individuals who purchase e-books online: NA

5.4. Music (2011)⁴⁴¹

Market size: €102.7 million

Market share digital: 99.3%

Individuals who purchase online films/music: 9.6%

⁴³¹ Leurdijk, A., Silvain de Munck, Tijs van den Broek, Arjanna van der Plas, Manshanden, W., Rietveld, E., (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*, JRC technical reports (EC) 2012.

⁴³² Ibid.

⁴³³ International Video Federation (2012): *European Video Yearbook 2012*.

⁴³⁴ Total market figures include revenues from legacy formats not broken out separately (eg, VHS, HD-DVD, UMD) where relevant.

⁴³⁵ International Video Federation (2012): *European Video Yearbook 2012*.

⁴³⁶ The purchase or rental of movies and TV series delivered over the open internet through transactional models (also known as EST, DTO, Internet VOD) or on a subscription basis.

⁴³⁷ Adese (2012): *Anuario de la Industria del videojuego 2011*.

⁴³⁸ ISFE (2012): *Videogames in Europe: Consumer study. European Summary Report*.

⁴³⁹ Percentage of individuals who used Internet within the last year.

⁴⁴⁰ The Swedish Publishers' Association, Branschstatistik 2011.

⁴⁴¹ IFPI (2012) *Recording Industry in numbers 2011* and Eurostat.

5.5. Newspapers and magazines

Market size (2011): €2.23 billion⁴⁴²

Market share digital: NA

Internet users⁴⁴³ who have online subscriptions to news services or products to receive them regularly (2011): 6.1%

Individuals who use Internet to read or download newspapers/news (2012):⁴⁴⁴ 80.2%

6. Cultural/heritage content:

6.1. Participation in Europeana (2011):⁴⁴⁵

Total of all records	Sweden	% of Total
23,595,557	2,228,281	9.44%

6.2. Source of funding of digitization process (2009):⁴⁴⁶

Own resources: 26%

Government programmes: 65%

Private donations: 1%

Other support: 8%

7. Overview of media and content sector:

7.1. Commercial content

1. Video

In 2011, the video market in Sweden declined in terms of distributors' revenues by 19.3%, and consumer spending on video software declined for a second year in the row by 15.9%.⁴⁴⁷

Video on demand is performing fine on the Swedish home entertainment market, showing significant growth. An example is the Apple iTunes Store, launched in 2011, offering multiple retail choices to the Swedish consumer.

The easy availability of illegal content on the Internet is still affecting the entertainment market in Sweden, particularly video, music and video games. The Enforcement Directive⁴⁴⁸ was implemented in Sweden in 2009, and this legislation provides authors and copyright owners with the opportunity to use the courts to seek subscriber information for suspected file sharers.

⁴⁴² Presstödsnämnden, "Dagspressens ekonomi" NB: only newspapers included in this statistics.

⁴⁴³ Individuals who have used Internet in the last 3 months.

⁴⁴⁴ Eurostat.

⁴⁴⁵ Europeana Office (2011).

⁴⁴⁶ Numeric 2009.

⁴⁴⁷ International Video Federation(2012): *European Video Yearbook 2012*.

⁴⁴⁸ Law amending the Act (1960:729) on copyright to literary and artistic works, Swedish Official Journal (SFS 2009:109).

2. Video games

Swedish game development is an export industry and acts on a highly globalized market. The game industry has in a couple of decades grown from a niche embraced by enthusiasts, to a global industry with a considerable cultural and economic impact. Swedish game developers nearly doubled their turnover in 2011, amassing a 96 % growth to a total of €257 million. The majority (60 %) of the companies is profitable and the industry reports a combined profit for the third year in a row.⁴⁴⁹

3. E-books

The market for e-books consists of only a small part of the overall book market, and 90% of the sales go to libraries. Albeit the market is small, it is expanding. Between 2010 and 2011, the sales of e-books doubled. They are deemed to have a larger growth potential, especially if the VAT for e-books is lowered to the level that applies for ordinary books.⁴⁵⁰

4. Music

The sales of music in non-physical formats amount to roughly one third of all music sales in Sweden. In 2010 the sale of streamed music, which amounted to 23% of the market passed the sale of downloaded music in formats, which amounted to 11%. From an international perspective, Sweden can be highlighted when it comes to the area of copyright since Sweden has very high copyright-related revenues generated in the domestic market, in relation to its population.⁴⁵¹

5. Newspapers and magazines

Both newspapers and magazines have experienced a decrease in advertisement investments between 2005 and 2010. There is also a trend where newspaper readership is declining, however at the same time there has been a sharp increase in the online consumption of traditional media. Within the magazine market, competition has been increasing. In general there is a structural transformation from paper products to online products. Most of the companies are, however, still struggling to find profitable business models. More and more newspaper companies are therefore evaluating and implementing payment models for access to the content on their sites.⁴⁵²

7.2. Public content and government strategies

To meet the challenges that exist both internationally and nationally, the Swedish Government wishes to make use of the opportunities offered by digitisation, and has therefore taken a decision on ICT for Everyone – A Digital Agenda for Sweden⁴⁵³ and in 2012 proposed a new goal for ICT policy, stating that Sweden should become the best in the world, exploiting the opportunities of digitisation.

The Digital Agenda identifies needs for efforts in four strategic areas based on the user's perspective: easy and safe to use, services that create benefit, the need for infrastructure and the role of ICT for societal development.

⁴⁴⁹ Swedish Games Industry (2011:), *Game developer index 2011*.

⁴⁵⁰ The Swedish Publishers' Association (2011): *Bokbranschen i siffror*.

⁴⁵¹ The Swedish Agency for Economic and Regional Growth (2010): *Musikbranschen i siffror, statistik för 2010*.

⁴⁵² Swedish Media Publishers' Association (2011): *TU Marknadsinsikt september 2012* & Nordicom: *Sveriges Mediabaro-meter 2010 and 2011* & Nordicom: *Den svenska mediemarknaden 2011*.

⁴⁵³ The Ministry of Enterprise, Energy and Communications (2012): *ICT for everyon – A digital agend for Sweden*.

The Government sees that its principal task is to create good conditions through rules, to formulate policy goals and to eliminate obstacles to development. However, if Sweden is to become the best in the world at exploiting the opportunities offered by digitisation, everyone, beside the Government, has a role to play, individuals, businesses and organisations and municipalities, county councils and regional cooperation bodies. They see it as important to work strategically on long-term ICT policy issues associated with the agenda, while also monitoring and analysing development. The Government has therefore set up a Digitisation Commission which will be tasked with coordinating the effort.

In December 2012, the Digitisation Commission presented their action plan and laid out three areas on which they would focus on:

- Digital inclusion and equality
- Schools, education and digital literacy
- Entrepreneurship and enterprise development

Digitisation of public content

The Ministry of Culture has developed a national strategy for digitisation,⁴⁵⁴ digital preservation and accessibility of Sweden's cultural heritage. The strategy spans from 2012 to 2015, and guides the work of the national cultural institutions that collect, preserve and present information and material related to the cultural heritage.

The aim of the strategy is that cultural activities, collections and archives increasingly should be preserved digitally and be made available electronically to the public. All concerned public institutions working with cultural heritage material and cultural information should have a plan for digitisation and accessibility.

An office at the National Archives of Sweden called Digisam⁴⁵⁵ coordinates the work. By coordinating and promoting collaboration within the culture heritage sector, Digisam's role is to support the goals set up by the Government in the national strategy of digitisation of cultural heritage. In this work, Digisam, among other things, is tasked to:

- Present recommendations for coordinated digital information management of collections and holdings.
- Develop proposals for cost-effective long-term digital preservation of collections and holdings.
- Define roles and responsibilities for the work on aggregation, access and preservation of digital cultural heritage information.

⁴⁵⁴ The Ministry of Culture (2012): *Digit@lt kulturarv - nationell strategi för att digitalt bevara och tillgängliggöra kulturarvet*.

⁴⁵⁵ Homepage, Digisam, <http://digisam-ra-eng.blogspot.com.es/>. Accessed in January 2013.

UNITED KINGDOM

1. Population:⁴⁵⁶

62,989,550 citizens

2. Internet access:

	2007	2012
Internet users ⁴⁵⁷	71.9%	85.4%
Households with Internet access ⁴⁵⁸	66.7%	82.7%
Households with broadband connection ⁴⁵⁹	56.8%	80.4%

3. Devices for Internet access:⁴⁶⁰

	2010
Households with desktop or portable computer	79%
Mobile devices users	38%
Households with Smart TV	6%

4. Average expenditure on cultural services:⁴⁶¹

	1994	1999	2005
% of total household's expenditure on cultural services	1.5%	1.3%	1.9%

5. Industry:

Employment⁴⁶² (2007):

Number of working persons	Annual average growth rate (%)
2,578,300	1.4%

Value added⁴⁶³ (2007):

VA (M€)	VA as share in total national economy (%)	Annual average growth rate 1995-2007 (%)
144,555	9.5%	6.8%

Enterprises⁴⁶⁴ (2007):

Number of enterprises	Annual average growth rate 1995-07 (%)
123,510	5.1%

⁴⁵⁶ Eurostat (Population at 1 January 2012).

⁴⁵⁷ Individuals who have used Internet in the last 3 months.

⁴⁵⁸ Eurostat (consulted 3 January 2013).

⁴⁵⁹ Ibid.

⁴⁶⁰ Eurostat. Households with access to Internet, by device for accessing via PC, digital TV, mobile device.

⁴⁶¹ Eurostat (Population at 3 January 2012).

⁴⁶² Leuridijk, A., Silvain de Munck, Tijs van den Broek, Arjanna van der Plas, Manshanden, W., Rietveld, E., (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*, JRC technical reports (EC) 2012.

⁴⁶³ Ibid.

⁴⁶⁴ Ibid.

Trade balance⁴⁶⁵ (2007):

TB (x1000)	National trade balance as share of total European trade (%)	Annual average growth rate trade balance 1995-2007 (%)
2,558	-198.1%	-6.2%

5.1 Video⁴⁶⁶ (2011)

Market size:⁴⁶⁷ €1.5 billion

Consumer spending on physical video software:⁴⁶⁸ €2.3 billion

Consumer spending on digital video and TV VOD:⁴⁶⁹ €363.7 million

5.2. Video games

Market size (2011):⁴⁷⁰ €2.6 billion

Online game players who connect to Internet (2012):⁴⁷¹ 29%

Internet users⁴⁷² who purchased online video games' software and upgrades (2012): 20.5%

5.3. E-books⁴⁷³ (2011)

Market size: €3.6 billion

Market share digital: 6%

Individuals who purchase e-books online:⁴⁷⁴ 9.2%

5.4. Music⁴⁷⁵ (2011)

Market size: €953.3 million

Market share digital: 30.3%

Individuals who purchase online films/music: 13.6%

5.5. Newspapers and magazines

Revenues from advertising⁴⁷⁶ (2011): £1.5 billion

Revenues from digital newspapers advertising (2011)⁴⁷⁷: £190 million

⁴⁶⁵ Leurdijk, A., Silvain de Munck, Tijs van den Broek, Arjanna van der Plas, Manshanden, W., Rietveld, E., (2012): *Statistical, Ecosystems and Competitiveness Analysis of the Media and Content Industries*, JRC technical reports (EC) 2012.

⁴⁶⁶ International Video Federation (2012): *European Video Yearbook 2012*.

⁴⁶⁷ Total market figures include revenues from legacy formats not broken out separately (eg, VHS, HD-DVD, UMD) where relevant.

⁴⁶⁸ International Video Federation (2012): *European Video Yearbook 2012*.

⁴⁶⁹ The purchase or rental of movies and TV series delivered over the open internet through transactional models (also known as EST, DTO, and Internet VOD) or on a subscription basis.

⁴⁷⁰ Adese (2012): *Anuario de la Industria del videojuego 2011*.

⁴⁷¹ ISFE (2012): *Videogames in Europe: Consumer study. European Summary Report*.

⁴⁷² Percentage of individuals who used Internet within the last year.

⁴⁷³ *The Global eBook Market: Current Conditions & Future Projections* and Eurostat.

⁴⁷⁴ Either books/magazines/e-learning material, delivered or upgraded online.

⁴⁷⁵ IFPI (2012): *Recording Industry in numbers 2011* and Eurostat.

⁴⁷⁶ Estimation of Enders Analysis 2011.

⁴⁷⁷ Ibid.

Internet users⁴⁷⁸ who have online subscriptions to news services or products to receive them regularly (2011): 7.8%

Individuals who use Internet to read or download newspapers/news (2012)⁴⁷⁹: 45.1%

6. Cultural/heritage content:

6.1. Participation in Europeana (2011):⁴⁸⁰

Total of all records	UK	% of Total
23,595,557	1,556,402	6.6%

6.2. Source of funding of digitization process (2009):⁴⁸¹

Own resources: 31%
 Government programmes: 24%
 Private donations: 26%
 Other support: 18%

7. Overview of media and content sector:⁴⁸²

7.1. Commercial content

1. Video

It is estimated that 80% of British consumers engaged in digital activities watch free, catch-up or ad-funded streaming services. Nearly half of the digital video market value in the UK belongs to TV-VoD, the most successful platform.⁴⁸³

The number of UK homes with digital TV is 96.2% (Q1 2012) from the total number of TVs in the UK (60 million by the end of 2011). Total UK TV industry revenues increased by 4.9% in 2011, reaching £12.3 billion. This was driven by increases in subscriptions (up 8.3%) and advertising (up 2.1%).⁴⁸⁴

New service providers such as Netflix and YouView came on stream in 2012. Improvements to other digital service providers such as Sky, Virgin Media and the BBC iPlayer continued during 2012.

2. Video games

In the 2012 UK Games Market report by Newzoo, the United Kingdom is Europe's largest video game market and the third largest in the world. The total time spent on games was on average 11 hours per person per week. Notably, the report claims that in 2009, the profits of Britain's video game industry exceeded those from its film industry for the first time.

⁴⁷⁸ Individuals who have used Internet in the last 3 months.

⁴⁷⁹ Eurostat.

⁴⁸⁰ Europeana Office (2011).

⁴⁸¹ Numeric 2009.

⁴⁸² AMETIC (2011): *Informe 2011 de la Industria de Contenidos Digitales*.

⁴⁸³ International Video Federation (2012): *European Video Yearbook 2012*.

⁴⁸⁴ Ofcom (2012) *The Communications Market 2012 (July)*, <http://stakeholders.ofcom.org.uk/market-data-research/market-data/communications-market-reports/cmr12/>. Accessed in January 2013.

Many major video game franchises are developed in the UK, including Grand Theft Auto, Tomb Raider, Burnout, LittleBigPlanet, Wipeout and Dirt. The country's main video game publisher is the ELSPA, and the primary video game developer is currently Tiga.

3. E-books

The demand and market for e-books in the UK has now surpassed print. Whilst in-roads have been made towards technological innovation that makes it easier for consumers to buy books, a single retailer – Amazon – dominates the digital distribution channels. In the UK, about 90% of e-books are sold through Amazon, giving it great influence over how they are priced and promoted.

4. Music

Digital sales account for more than a third of UK music industry income. The growth in digital revenues grew in 2011 (25%), but there was a small decrease in total industry income (3.4%). Digital albums demonstrated the largest increase in monetary terms, generating £117.8 million, £35.5 million more than in 2010, an increase of 43.2%. In doing so, digital albums almost caught single track revenue which stood at £120.5 million.

Losses in physical format sector were £84 million, down 14.1% in 2011. Despite this, CD albums are still the industry's largest format sector and accounted for 64.6% of turnover in 2011.

Subscription is growing in importance. The success of Spotify and other services in immigrating users from free tier services into paid subscriptions is producing meaningful results. This sector generated more than £23 million in 2011, 8.3% of digital income. Ad-supported or free streaming services contribution to industry revenue was relatively flat in 2011, increasing slightly to £11.4m.⁴⁸⁵

5. Newspapers and magazines

The KeyNote Newspapers Market Report 2012 forecasts that the newspaper industry in the UK will decline by 4.9%, to an estimated value of £5.49 billion, in 2015. Over the last decade, many newspaper publishers have worked to develop digital alternatives, e.g. online sites, mobile apps, etc. These are more popular among consumers, but significantly less financially valuable. Despite this, however, the emphasis on an online presence has led to falling production costs, as less revenue is required when distribution and production decline, while for many their focus has changed as they move efficiently into the digital era.

7.2. Public content and government strategies

The UK Government Digital Strategy⁴⁸⁶ aims to deliver “by digital by default”, which mean digital services that are so straightforward and convenient that all those who can use them will choose to do so whilst those who cannot are not excluded.

The UK Government estimates that moving services from offline to digital channels will save between £1.7 and £1.8 billion a year. The UK Government aims to improve the way it

⁴⁸⁵ British Recorded Music Industry (2012): *BPI Yearbook*.

⁴⁸⁶ Government Digital Strategy, November 2012, <http://publications.cabinetoffice.gov.uk/digital/strategy/government-digital-strategy.pdf>. Accessed in January 2013.

provides information by moving to a single website, GOV.UK. Transactional services now present the biggest opportunity to save people time and save the government money.

People will only choose to use government services digitally if they are far more straightforward and convenient. The vast majority (82%) of the UK population is online, but most people rarely use online government services. The government provides more than 650 transactional services. There is only a handful of these services where a significant majority of people who could use the online option do so. Many have a digital option, but few people use it. Half of these do not offer a digital option at all.

The UK Government is releasing public data to help people understand how government works and how policies are made. Some of this data is already available, but data.gov.uk brings it together in one searchable website. Making this data easily available means it will be easier for people to make decisions and suggestions about government policies based on detailed information.

Digitisation of public content

Historically, funding for digitisation of content has come mainly from public sources, to serve differing, yet often overlapping priorities. The JISC eContent⁴⁸⁷ programme has now been running for 10 years and has been responsible for digitising tens of thousands of images, manuscripts, film clips and ephemera for an educational and research audience. Through this pioneering work, academic and often public online access to a plethora of material has been enhanced that has previously been 'hidden' in a range of physical collections sites.

Heritage Lottery Fund (HLF)⁴⁸⁸ has also recently announced its commitment to creating digital material through HLF-funded projects. This is designed to ensure the maximum public benefit from its investment. However, whilst museums, libraries and archives continue to digitise, it should be noted that out of the 500 million books, records and objects used by UK memory institutions, only 5% are digitised.⁴⁸⁹

Recently, community collections projects whereby digital content collections are created and/or enhanced by developing engagement with the communities or the public have taken on a new momentum. Today, people are becoming partners in the creation of digital content. An example of this is The Great War Archive Project⁴⁹⁰ at the University of Oxford, which contains over 6,500 items contributed by the general public between March and June 2008. Every item originates from, or relates to, someone's experience of the First World War, either abroad or at home. Contributions were received via a special website and also through a series of open days at libraries and museums throughout the country. This model is now being used by other initiatives, most notably the Europeana 1914-1918 project⁴⁹¹ which is gathering further stories and memorabilia from the First World War at public open days being held across Europe.

⁴⁸⁷ Digitisation and content, Jisc, <http://www.jisc.ac.uk/whatwedo/programmes/digitisation.aspx>. Accessed in January 2013.

⁴⁸⁸ Home, Heritage Lottery fund, <http://www.hlf.org.uk/Pages/Home.aspx>. Accessed in January 2013.

⁴⁸⁹ Survey Report on Digitisation in European Cultural Heritage Institutions 2012 by Enumerate <http://www.enumerate.eu/fileadmin/ENUMERATE/documents/ENUMERATE-Digitisation-Survey-2012.pdf>. Accessed in January 2013.

⁴⁹⁰ The great war archive, <http://www.oucs.ox.ac.uk/wwlit/gwa/>. Accessed in January 2013.

⁴⁹¹ Home, Europeana 1914-1918, <http://europeana1914-1918.eu/en>. Accessed in January 2013.

However, tightening of organisational budgets and economic uncertainty threatens many digital projects, which are struggling to develop coping strategies when the funding that supports core operations and/or essential development is not forthcoming.

Public private partnerships have been one business model that has been in the ascendancy with the examples such as the National Archives' (TNA) 'Licensed Internet Associates (LIA) programme'⁴⁹², which delivers TNA royalty income as well as the rapid digitisation of TNA's documents at an extremely low cost, outsourcing the function to its licensing partners. Also, in the last decade, PPP's for digitising libraries have been launched in collaboration with Google. Other private sponsor support has also been employed with positive results, e.g. the private donation which has helped to establish the Cambridge Digital Library.⁴⁹³

Notably, an area identified to reduce fragmentation of contents and to encourage connections is the development of open data and aligned metadata schemas. This has been explored by the JISC-funded Discovery programme⁴⁹⁴, which was launched in May 2011 to create 'a metadata ecology' to support better access to vital collections data in libraries, archives and museums and facilitate new services for UK education and research.

⁴⁹² Home, The national archives, <http://www.nationalarchives.gov.uk/>. Accessed in January 2013.

⁴⁹³ Home, Cambridge digital library, <http://cudl.lib.cam.ac.uk/>. Accessed in January 2013.

⁴⁹⁴ Home, Discovery programme, <http://discovery.ac.uk/>. Accessed in January 2013.

ANNEX II: ONLINE SURVEY CONDUCTED AMONG PRIVATE AND PUBLIC ORGANISATIONS IN THE FIELD OF DIGITAL CONTENT

- Website
- Contact person
- Telephone number
- E-mail
- Country
- Type of organization
 - Public stakeholder
 - Private stakeholder
- Sector of activity
 - (If private)
 - Music
 - Film/Video
 - Interactive content (video games, apps, serious games, etc.)
 - Books
 - Newspapers
 - Others (open answer)
 - (If public)
 - Archives – documents (maps, etc.)
 - Archives – sound (radio, phonographic)
 - Archives – video (film/tv)
 - Museums
 - Libraries
 - Others (open answer)
- What kind of content do you distribute online? (In case you distribute more than one option, please select all of them)
 - Cultural/Artistic content (music, films, books, images, etc.)
 - Historical content (historical document digitised, etc.)
 - Informative content (newspapers, records, etc.)
 - Others (open answer)
- What business model do you use to distribute your type of digital contents? (In case you use more than one option, please select all of them)

- (If private)
 - Advertisement (free for users)
 - Periodical subscriptions
 - Pay for access or download
 - Freemium (free access and pay for premium features)
 - Contributions from affiliates/members or sponsorships
 - Crowdfunding (i.e. Wikipedia-style) or voluntary contributions
 - Secondary business models: merchandising, bundled with other products or services, etc.
 - Others (open answer)
 - (If public):
 - Free open access to all types of users
 - Free access to general public (non-commercial use)
 - Free access only to specialized users (researchers, NGOs, etc.)
 - Free access to view the content online and pay for download
 - Contributions from affiliates/members or sponsorships
 - Pay for commercial exploitation of information
 - Pay for enhanced features (i.e. free access to download low-resolution images and pay for download and use of high-resolution images)
 - None (although in possession of digital contents, they are not currently being accessed/distributed online)
 - Others (open answer)
- What percentage of your income comes from online distribution of digital content?
 - We do not have incomes from online distribution of digital content
 - Less than 10%
 - Between 10% and 25%
 - Between 25% and 50%
 - Between 50% and 75%
 - More than 75%
- (If public) What percentage of your users accesses to your content online?
 - Less than 10%
 - Between 10% and 25%
 - Between 25% and 50%
 - Between 50% and 75%
 - More than 75%
- Regarding public contents in your sector, in your opinion what business models (if any) could be more suitable to improve their dissemination and exploitation?

Business model	Very suitable model	Suitable model	No suitable model
Advertisement (free for users)			
Periodical subscriptions			
Pay for each access or download			
Freemium (free access and pay for premium features)			
Contributions from affiliates/members or sponsorships			
Crowdfunding (i.e. Wikipedia-style) or voluntary contributions			
Secondary business models: merchandising, bundled with other products or services, etc.			
Free open access to all types of users			
Free access to general public (non-commercial use)			
Free access only to specialized users (researchers, NGOs, etc.)			
Pay for commercial exploitation (for public content)			
None (as there are no sustainable business models) for this type of public content			

- What are the funding sources have you used to launch and maintain your services for digital content distribution? (Select all that apply)
 - (If private)
 - Own internal funding
 - Seed capital from family, friends, etc
 - Seed capital from business angels
 - Private equity/venture capital
 - Public funding (grants, loans, public venture capital, etc.)
 - Bank loans
 - Reinvestment of benefits
 - Other (open answer)

- (If public):
 - Part of the national/regional/local budget
 - Own budget
 - National/regional/local programme
 - European funds (Please specify:...)
 - Private sponsorships
 - Other (open answer)
- According to your experience, which would be the main drivers in your country to boost the digital content distribution in your sector?

Drivers	Very important	Important	Less important	Not important
Enjoy a strong internal market (high internal demand)				
Enjoy a high export capacity (external demand)				
Increase competition both from national and international firms/organizations				
Limit competition both from national and international firms/organizations				
Government support: direct economic support (grants, loans, etc.)				
Government support: indirect economic support (tax incentives, etc.)				
Government support: cultural protectionism (cultural exception, cultural subsidies, etc.)				
Government support: appropriate EU/national regulatory frame (fight against piracy, cultural heritage protection, national/local languages, privacy regulation, etc.)				
Enhancement of ecosystem of innovation (R&D clusters, start-ups, etc.)				
Increase of the amount of high-qualified professionals				

- Could you identify any other driver to boost digital content distribution at national level? [open question/name at least two]
- According to your experience, which would be the main drivers for EU cross-country success of digital content distribution/access in your sector? [open question/name at least two]
- According to your experience, which are the main barriers for the distribution of digital content in your sector and country?

Barriers	Very important	Important	Less important	Not important
Existence of widespread online piracy				
Lack of adequate content rights management				
Limits from data protection regulation				
Changes in VAT policy (applying standard rate VAT to digital content)				
Cost of digitization				
Lack of private/public funding				
Lack of maturity/in appropriate business models				
Low perceived value of digital contents among consumers				
Low ICT penetration				
Cultural/linguistic barriers				
Lack of economies of scale				
Too much competition from national/international firms/organizations				
Too little competition from national/international firms/organizations				

- Could you identify any other barrier that could impede digital content distribution at national level? [open question/name at least two]
- According to your experience, which are the main barriers for EU cross-country success of digital content distribution/access in your sector? [open question/name at least two]
- Could you identify the best practices in your country regarding models of access to digital content, both commercial and/or public? Try to identify at least two (please provide the name of the initiative, the name of the organization responsible and website if possible)
- Could you identify any unsuccessful projects in your country regarding models of access to digital content, both commercial and/or public? Try to identify at least one.
- What EU policies do you think could improve digital content distribution in your sector?
 - Content rights harmonization, improved transparency and accountability
 - Multi-territorial licences (one-stop shop)
 - Competition in rights management
 - Looking at and eventually adopting alternative models of digital content rights
 - Enforcement of digital privacy
 - Loosening digital privacy regulations
 - Investigating (eliminating) dominant positions in digital rights
 - Introducing market principles in content market regulation
 - Applying further the principle of subsidiarity and allowing each MS to apply special measures to content sectors (reinforcing the cultural exception principle)
 - Fostering European cultural heritage abroad
 - Support for digitization of European cultural heritage (specific programmes, etc.)
 - Promotion of ecosystems of innovation in digital content across Europe including special measures as required (creation of clusters, tax exemptions, etc.)
 - Specific funding programs of digital contents distribution/access
 - Improving education of digital content professionals
 - Dissemination of best practices
 - Raising user awareness on the availability of EU digital content
 - Improving ways of access to European digital content through enabling technologies (ultra-broadband, mobile apps, etc.)
 - Others (open answer)

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