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Exploring Europe's Television Heritage in Changing Contexts

D7.6.1. Online Access to Audiovisual Heritage Status Report

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¹ OJ L 79, 24.3.2005, p. 1.

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EXECUTIVE SUMMARY

Introduction

EUScreen will provide access to >30,000 items which explores the history of European television and the history of Europe as shown on television, by creating a highly interoperable platform with digitised, audiovisual content. Increasing access to digitised audiovisual heritage in particular and cultural heritage in general, has become an important topic for institutions in the field of cultural heritage, policy-makers, national governments and the European Commission. This report focuses on access to audiovisual heritage in general and specifically, access in an educational setting.

Part 1 General access to audiovisual heritage – 2011 status report

Providing access for users through the digital content lifecycle

EUScreen will provide access to as wide an audience as possible and has identified four different user groups: education and research, media professionals, cultural heritage institutions and the general public. Four user scenarios have been developed for these user groups: research, learning, leisure and creative reuse.

Before users have can get access to digital audiovisual heritage, a number of steps have to be implemented. The model which can be used to analyse these steps is the digital content lifecycle. This contains the following steps: selecting, creating, describing, managing, preserving, discovering and using & reusing. Two of these steps, selecting and preserving, fall outside the lifecycle and are not further researched in this report. This report is about providing access to users, which is represented in the lifecycle by the steps discovering and using & reusing. For background purposes, the other three steps are only briefly described in this report:

- **Creating:** Access to audiovisual heritage is increased by large digitisation projects, nationally and internationally, but there are big differences in expertise between archives and cultural institutions. There is also a gap between those institutions which preserve cultural heritage and those which are actually digitising their collections (only 5.4%). Most of the content which is being digitised is archival record material and audiovisual content.
- **Describing:** Digitised audiovisual content is stored in archives and retrieved for various purposes. To retrieve this content it is necessary to add information, either metadata or contextual information. Metadata contains information about the object itself while contextual information describes the relation between the content and other sources, or provides background information to the source. Both kinds of information can be generated by the work of archivists, automatic retrieval by the computer or through crowdsourcing by users.
- **Managing:** Digital rights management is essential in creating access to digitised cultural heritage, including audiovisual heritage, because it defines whether the content can be accessed online after it has been digitised and described. Recently a great deal of work has been undertaken to solve problems regarding digitisation of public domain content, orphan works (works of which the author is unknown) and other works that are in copyright. Current solutions being used are collective licences

and open licences like Creative Commons. Another problem is the territorial restriction of rights. There is a need for a European or even a global licencing model.

Trends in online access

The report provides an overview of the relevant trends in online media consumption. The main focus for media consumption lies on developments in Europe, but since access to EUscreen is not restricted to European users, trends and developments outside Europe are also taken into account. In general, online access continues to increase throughout Europe. In some countries like the Netherlands or Luxembourg almost all households have Internet access at home. In other countries, like Romania or Greece, not even 50% of all households have an Internet connection.

There is also an increase of use. In 2005, about 43% of the individuals in Europe used the Internet at least once a week compared to 65% in 2010. The amount of individuals who used the Internet in 2010 on a daily basis almost doubled compared to 2005 (28% versus 53%). The same trend can be seen in education. Statistics about the student population within the age group 16 to 74 showed that 95% of the students regularly (at least once a week) used the Internet in 2010, compared to approximately 78% in 2005. The frequent usage (every day, or almost every day) amongst students witnessed an even bigger increase, from approximately 51% in 2005 to approximately 85% in 2010. (See the statistics in section 2.1 and 2.2).

The market for access to online video is still growing. The most popular online activity in the US is watching videos, even above the usage of social networks while the share of online video in worldwide Internet traffic by consumers will be almost 60% in 2013 (see the statistics in section 2.3). Also, in Europe the number of people using the Internet for listening to web radio and/or watching web television has risen steadily over the years. Video is incorporated more and more into social networks by users to enhance their profile or by uploading video to their blogs. Another reason for the increase in online video consumption could be the emergence of mobile video.

This report did not find exact figures on the amount of online user created content and creative re-use, because of a lack of relevant data and a lack of clearly formulated definitions. In November 2010, YouTube announced that every minute, 35 hours of video are uploaded to the platform. It is however, not known what percentage of this material consists of video which falls in the category of creative re-use. According to the blog of clicker.com, 13 % of the videos that are posted online are remixes of other videos. Statistics from Europe show that between 2% and 22% of individuals between 16 and 74 in Europe upload self-created content (see section 2.4). These percentages seems rather low, but other studies show that young people in their teens and twenties in particular, are creating content, and that there is an increase in the use of platforms which facilitate the sharing of self-created content.

Users are willing to pay for content, but a majority of Internet users want free content to remain free. Users are willing to pay for audiovisual heritage, as long as it has particular qualities, like authenticity, immediacy and accessibility. There are also factor that lessen the willingness to pay: content from services that users are already subscribed to, content that has the same quality as the free version and content that can be found elsewhere for free.

Business models and added value of online audiovisual collections

There are various ways of defining and using a business model, but one model that is rapidly gaining in popularity both inside and outside the cultural heritage sector is the one that has been developed by Osterwalder and Peigneur (2010). It combines multiple elements used in previous business models and places the user at the centre of the model. Osterwalder and Peigneur divide the business model concept into nine different building blocks, which together make up the business model canvas.

1. **Customer segments:** a business model can serve potentially diverse user groups or customer segments, and the same elements in a business model can be used to reach these diverse user groups. However, each group might require a different approach. Audiovisual platforms like EUscreen, can offer a single interface with different functionalities using one database, various interfaces that use the same database or one interface that aggregates content from various databases.
2. **Value proposition:** With the value proposition, customers are offered something unique that distinguishes a product or a service from others and offer organisations the opportunity to gain revenue. Creating added value for digitalized collections is one of the main challenges for archives and cultural institution and a more detailed description is given below.
3. **Channels:** This is a key way of reaching a (potential) user group, for instance, through a corporate website, websites from related partners, or special real-life events such as conferences. The main channel for EUscreen will be the portal itself but other channels like Web 2.0 activities also play an important role.
4. **Customer relationships:** This defines the ways in which to set up and maintain customer relationships and therefore is strongly related to “Channels” The EUscreen consortium has access to various networks and consults users on a regular basis through focus groups.
5. **Revenue streams:** Economic revenue can be generated in many different ways. Customers can be asked to pay a usage fee every time they use a service, or for a fixed subscription fee per time unit (week, month, year). In the case of EUscreen, revenue can be gained indirectly by pointing users towards the relevant archive where the content can be purchased. An overview of possible revenue models is highlighted in more detail below.
6. **Key resources:** This refers to the most important assets that are required to make a business model function. In the case of EUscreen, various key resources can be defined, like the content, metadata and interoperability.
7. **Key activities:** This describes the most important activities of a company. For EUscreen, this includes the platform development and digitisation.
8. **Key partnerships:** For EUscreen this comprises a network of suppliers and partners. EUscreen is based on the interoperability of the collections of its consortium partners and therefore partnerships are a fundamental part of the project design and function.
9. **Cost structure:** This describes all costs incurred to operate a business model.

These building blocks are used to construct and visualize the EUscreen business model canvas (see section 3.3 of the report).

There are various ways in which audiovisual archives can create a value proposition. The first is authenticity: the content comes from a reliable source that is led by professionals. The second is the desire of the public to have access to the unique, rare and valuable collections



available in European cultural and heritage institutions. These features cannot be offered, or at least in such a great extent, by other players on the market. As well the general possibilities for audiovisual archives, EUScreen will also offer three features that can be used to create a value proposition: multilingual access, an interoperable platform with access to various unique collections and contextualisation.

Gaining revenue by providing access to digitised cultural heritage is highly challenging for institutions. Most are recovering the costs of the maintenance of their digital collections by creating revenue through the sales of the digital items themselves. The only revenue model that proved profitable was licensing rights to use the materials commercially. A list of common revenue models is compiled in this report. Very few platforms use only one revenue model and well-known and large online video platforms like the Internet Archive, ITN Source, Getty Images and INA have incorporated three or more. Unfortunately, it was not possible to gather figures concerning the amount of revenue that was generated by the platforms, therefore it is difficult to speculate as to which models seem to work the best. What this analysis of the revenue models does suggest is that archives and cultural institutions in general and EUScreen in particular will have to be creative, and that it is important to keep investigating various ways in which the platform can sustain itself when the funding period ends.

Part 2 Access to audiovisual heritage in the educational domain

E-learning

Various studies (see for instance Laurillard, 2005; Barnes et al., 2007; Boling, 2008) highlight that there is a major shift in forms of teaching. A main characteristic of the new learning style is the shift from learning through content to learning through activity. These studies demonstrate how students have a more autonomous and independent attitude towards education and that there is a need for non-traditional learning materials, like online video. These forms of learning are also called e-learning and refer to the activity of learning through the use of ICT. Studies have also shown that students frequently perform better with a combination of e-learning and face-to-face learning. Students who used e-learning as a single method of learning performed better than students who adopted face-to-face learning.

Digitised cultural heritage has a large potential as an online educational resource and can help contribute to intercultural understanding. But this kind of content must have the ability to be incorporated in learning activities and processes before its potential can be fully deployed. It is also important to offer teachers the tools to help them effectively use this kind of material within a teaching and learning environment.

E-learning is often mentioned together with media literacy. Where e-learning mostly applies to primary, secondary and higher education, media literacy refers to all citizens. There are various contexts in which media literacy is used and in the policy of the European Commission, media literacy is also used in the context of learning. In this sense, media literacy can be seen as a means to enable e-learning and to provide students and teachers with the critical skills they need to assess the online learning materials.

Many educational platforms have been created to stimulate e-learning. This report included an inventory of 29 educational platforms. Most of these platforms provide access in English (22)

and only 2 provide multilingual access. The inventory contains platforms for all three educational levels. Some of them are aimed at more than one level, but none of them combines primary education with higher education.

A sample of six platforms from the inventory has been analysed in more detail by use of the Qualitative Weight and Sum Approach (QWS) as conducted in a study by Graf & List (2005). The QWS approach provides an insight into the general strengths and weaknesses. All the platforms score well on usability and for their communication tools. The user data and adaptability category on the other hand, has a relatively low score. An explanation for this could be the complexity: creating a truly adaptable learning environment requires both the option of personalisation and an automatic adjustment of the system based on the user interaction.

The platforms are also analysed by using a model by Laurillard (2002) that defines five learning styles:

- Attending and apprehending
- investigating or exploring
- discussing and debating
- experimenting and practising
- articulating and expressing

An ideal educational platform supports all five learning styles, but in practice, not every platform does. Learning styles that are supported by all platforms are 'attending & apprehending' and 'experimenting & practising'. The first applies to the more traditional form of learning where learners are passively educated, while the latter applies to the more innovative approach that e-learning represents.

Value proposition and revenue models in education

The results of the educational platform analysis are used to extract the specific value propositions for platforms which address the educational user group. Compared to other platforms with audiovisual content, educational platforms distinguish themselves by the kind of content and tools they offer. This can be regarded as a value proposition. Additionally, because of the shift from traditional learning to a more active form of learning where interaction with the content is just as important as the content itself, the offered learning experience is another value proposition.

The list of revenue models in chapter 3 was used to look at the revenue models that occur in the educational platform inventory. This exploration resulted in the following findings:

- The amount of revenue models (65) encountered in the inventory is far higher than the number of platforms (29) since many combine various models.
- 21 platforms offer free access and combine this revenue model with sponsoring and funding (12), advertising (6), donations (4), physical product sales (2), freemium (2), licencing (1) and pay-per-download (1).
- Sponsoring and funding often comes from national bodies, national departments of education, other educational institutions and sometimes the European Commission.
- Platforms that do not provide free access use subscription (5) or freemium (2) as a model to provide access.



The platform analysis also found other revenue models, which were not included in the list of possible revenue models. These are:

- Free after subscription: access or contribution is free, but only after free subscription, which is limited to teachers, students and other members of educational institutions.
- Crowdfunding: with crowdfunding, users are invited to donate money in order to realise the creation of content.

Based on the findings in this document, it is possible to list the strengths and weaknesses of EUscreen in providing access to the educational user group and a SWOT-analysis is composed in section 5.4. The main findings of this analysis are that although EUscreen has a lot of reliable, contextualised content to offer, a lack of multilingual translation of the content itself makes it harder to access. EUscreen will provide tools to help students and teachers access the content, like a personal workspace, yet tools that are also important for education, like sharing and importing self-created content will not be supported.

Based on the findings in this deliverable, a list of suitable revenue models can be made.

- Free: EUscreen will provide free access to audiovisual content to members of all user groups. There is an opportunity to subscribe and to create a personal account, but this is also free.
- Sponsoring/Funding: EUscreen is funded by the eContentplus programme of the European Commission and this enables free access. After the funding period, the sustainability costs will be shared by the consortium partners.
- Free-after-subscription: this free revenue model could be applied for educational users. IPR legislations are more flexible in the educational domain than in other domains and this revenue model could enable EUscreen to allow users to download videos for educational use.

Other revenue models which could be considered after the funding period are donations and crowdfunding. EUscreen also offers a platform for the contributing archives to create revenue through licensing and physical product sales.

Concluding remarks

The main findings of this report are clustered in the SWOT analysis. However, there are still some remarks that need further research and discussion. This includes the small number of institutions in Europe that have started to digitize their cultural heritage holdings and the lack of European or global copyright legislation. For EUscreen, issues which need to be discussed further include the increase of mobile video and the lack of opportunities to download, share or reuse the content.

INTRODUCTION

EUScreen provides access to the history of European television and the history of Europe as shown on television, by creating a highly interoperable platform with digitised, audiovisual content. To maximise its impact EUScreen is connected to Europeana. EUScreen supports user-led demands and interests for services and content, whilst also providing contextual information on the available resources. A core collection of >30,000 television items as well as references to digitised items of the institutional collections and catalogue entries will be available online by the end of the project. Comprised of 28 partners from 19 EU member states (plus Switzerland), EUScreen is enormously important in providing access to television heritage and (through its synergy with Europeana) will play an important role in the advancement of the European Digital Library.

Increasing access to cultural heritage and to digitised audiovisual heritage in particular has become an important topic for institutions in the field of cultural heritage, policy-makers national governments and the European Commission. The latter has requested a Comité des Sages (Reflection group) to provide recommendations for a new policy regarding digitised cultural heritage. The main principle underlying these recommendations is access.

“If one word should encompass and summarise the vision of the Comité des Sages, it would be ‘access’. When it comes to our common cultural heritage, there is no bigger challenge, there is no more urgent question than to secure the access of current and future generations to this heritage. Access to the largest population, both European and non-European. And access to one of the richest cultural heritages in the world, a universal common good.” (Comité des Sages, 2011, p.10)

EUScreen will be providing access to as wide an audience as possible and specifies four different user groups: education and research, media professionals, cultural heritage institutions and the general public. Four user scenarios have been developed for these user groups: research, learning, leisure and creative reuse. This report focuses on access to audiovisual heritage in general and on access in an educational setting. The other user groups and user scenarios will be addressed in the following ways:

- The next status report on access to audiovisual heritage (to be delivered in 2012) will look at access for media professionals and cultural heritage institutions, since these two user groups are closely connected.
- The working group that develops the EUScreen e-journal (led by Utrecht University) is doing extensive research on the research user scenario.
- The working group on virtual exhibitions (led by Royal Holloway, University of London) is looking at accessing audiovisual content as a leisure activity by the general public.
- The working group on rights issues (led by TAIK, Aalto University) is looking at providing access to content for creative re-use purposes.



About this report

Part 1 outlines the general status of online access to audiovisual heritage. The first chapter describes the user groups that are addressed by the EUscreen platform. The user scenarios are not included here, because the results of this research are not yet finalised.² The digital content life cycle is used to describe the various steps that are needed to provide access to users. The second chapter describes the various trends in online access to audiovisual content based on statistics from various research reports and Eurostat. Chapter 3, focusses on creating a business model for platforms with audiovisual content and on the value proposition of audiovisual content. Additionally, an overview of revenue models with examples is provided.

Part 2 describes the access to online audiovisual heritage from an educational perspective. Chapter 4 contains an inventory of educational platforms and a methodology for the analysis of these platforms. A selected set of platforms is analysed and the results are used in chapter 5 to outline the specific value propositions for education. Within this chapter the occurring revenue models are analysed and alternatives are presented. This chapter also contains a SWOT-analysis for an educational scenario within EUscreen.

² The first internal deliverable on this subject, D5.3 User scenarios in learning, research, leisure/cultural heritage and open cultural production was due a month before this deliverable, so D5.3. still waits for approval by the European Commission.



PART 1:

**GENERAL ACCESS TO AUDIOVISUAL HERITAGE – 2011
STATUS REPORT**

1 PROVIDING ACCESS FOR DIFFERENT USER GROUPS THROUGH THE DIGITAL CONTENT LIFE CYCLE

This chapter will provide the background for this report by looking at the various user groups which EUSCREEN is providing access to and considering the different aspects of providing access. Different users have different access needs and the section below provides a general overview. Access to digitised content for these user groups is provided by following the steps that are defined in the digital content lifecycle.

1.1 EUSCREEN: USER GROUPS

Education and Research

The user group Education and Research can be divided into three sub-groups: primary education, secondary education and higher education and research. Each of these groups has specific access needs to audiovisual heritage.

Primary education

This user group includes both teachers and pupils.

Needs of pupils:

1. Studying digital resources related to courses.
2. To gain knowledge about how to look for audiovisual information on the Internet.

With the assistance of teachers, pupils will learn how and what to look for when audiovisual material is needed in education.

Needs of teachers:

1. Assisting pupils in finding attractive material for that age, so pupils will learn how to search and what to look for when audiovisual material is needed in education.
2. Exploring relevant media resources in order to use them to support their teaching practice, and to recommend them to pupils.

Secondary education

The end users are the students in the schools. Use of pedagogical materials is guided by the teachers searching for suitable media material on topical subjects such as history, art, or media and in language teaching.

Needs:

1. Gaining knowledge about how to find and use audiovisual material for homework and research projects.
2. Selecting and grouping information about relevant audiovisual material to help students to get used to on-line audiovisual archives in learning.

Higher education and academic research

This user group is merely comprised of researchers studying differences between various cultures and doing comparative research on media coverage.



Needs:

1. Access to a large amount of audiovisual material with versatile metadata easy to use for research.

EUScreen allows academic researchers to search through a subset of the collections of the partner archives, contextualised and presented in an accessible online format and disseminated through the wider Europeana network.

Media Professionals

This user group consists of filmmakers, employees at production companies, broadcasters, researchers and journalists.

Needs:

1. Support for cross-cultural research.
2. Gaining knowledge about a foreign country's media scenery.
3. Re-use of audiovisual material.

By making available a large amount of audiovisual material of different television programmes from different countries in different languages, media professionals are able to compare coverage of various events in different countries, assess each country's media policies and gain background information of specific events.

Cultural Heritage Institutions

This group consists of professionals working in museums, cultural festivals, libraries and (audiovisual) archives.

Needs:

1. Increased revenues of their copyrighted material in new publications (documentaries, textbooks, etc.).
2. Combining wide ranges of different knowledge sources to establish new insights.
3. Enabling the creation of large inter-archival exhibitions thus adding new meaning or making them accessible to a different or larger audience.

General Public

The general public is a heterogeneous group of users with different backgrounds, with an interest in European television history, European countries and languages or (historical) events and topics.

Needs:

1. Gaining better knowledge of a European country.
2. Creative use and remix into user-generated content.

By having access to a foreign country's television programme in its own language, virtual and real travellers will be better informed about the cultural life of the given country.

1.2 THE DIGITAL CONTENT LIFE CYCLE

An important aspect in providing access is the sustainability of digitised content. The sustainability can be translated into a digital content life cycle, as displayed in the image below.

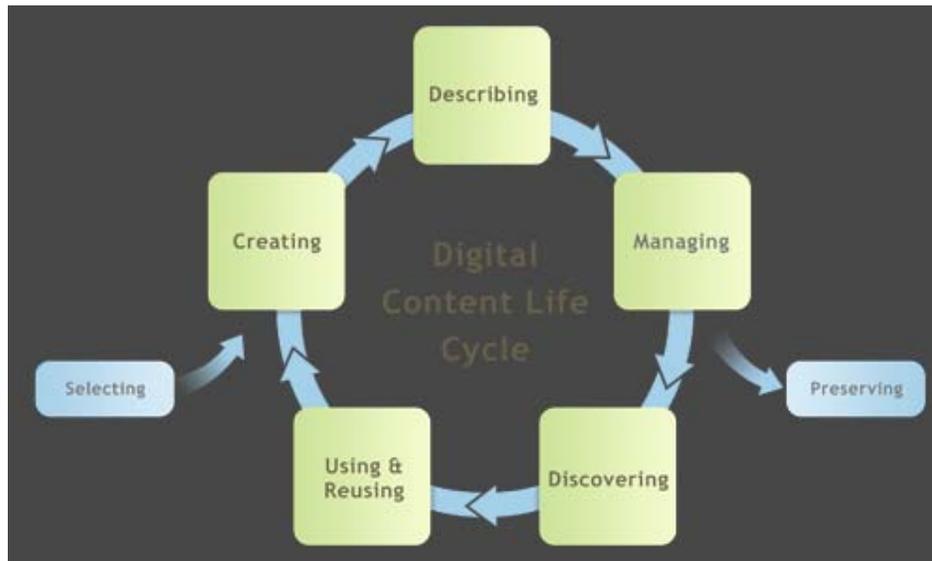


Fig. 1 The digital content life cycle. Source: [DigitalNZ](#)

This life cycle represents the steps that need to be taken to provide access.

- Selecting: the selection of content that needs to be digitised.
- Creating: the process of digitizing content.
- Describing: creating metadata and contextual information.
- Managing: dealing with IPR legislation.
- Preserving: content that will not be published online can still be preserved in a digital archive.
- Discovering: publishing the content online for users to explore.
- Using & Reusing: enabling the public to use and reuse the digitised content.

Selecting and preserving fall outside the lifecycle and are not further researched in this report. This report is about providing access to users, which is represented in the lifecycle by the steps discovering and using & reusing. For background purposes, the other three steps are only shortly described in the next three sections.

1.3 CREATING: STATUS OF DIGITISATION EFFORTS IN EUROPE

Access to audiovisual heritage is increased by large digitisation projects, nationally and internationally .Extensive research on this subject has taken place within the projects

PrestoSpace and PrestoPRIME.³ According to the findings in the annual report about Preservation Issues for European Audiovisual Collections, “(d)igital preservation is important to audiovisual archives, but audiovisual archives and audiovisual files are important to digital preservation.” (Wright, 2008, p.4, see also Wright 2010)

On a European level, EUscreen will provide access to over 30,000 items which form part of Europe's television history. These items mainly include video, but also audio, images and documents. Although EUscreen describes itself as a platform providing access to audiovisual heritage, it also provides access to other forms of cultural heritage, like texts.

Some of the archives in the EUscreen consortium are already involved in other digitisation projects, while others have just started this process. The archives gathered in EUscreen provide a snapshot of the broader situation in Europe, where some archives have digitised (a large part of) their audiovisual content and some still have their collection available only on analogue carriers. Digitisation is a prerequisite for providing online access.

A detailed overview of the current status in digitisation efforts of cultural heritage in Europe is the NUMERIC study, carried out by the NUMERIC project supported by the European Commission (Numeric, 2009). The researchers of this study have conducted a large-scale, quantitative study to measure the digitisation progress of collections from libraries, archives, museums and other cultural institutions in statistical terms. Together with national bodies they have made an inventory of institutions in the EU27 that preserve cultural heritage collections and also indicated in this inventory whether collections are being digitised or planned to be digitised. The image below taken from the study shows this relation:

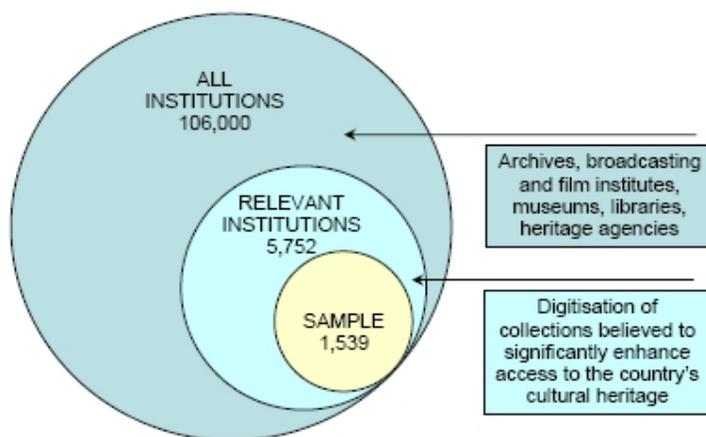


Fig. 2 Progress of digitisation efforts

As the image shows, there is a gap between the total amount of institutions that preserve cultural heritage and those that are digitising their collections (only 5.4%) The sample in the study is carried out within the 5.4% population that have started with their digitisation work. Institutions received a survey, which forms the basis for the statistical analysis carried out. The study contains detailed data and serves as an important benchmark for future work on

³ The public results of these projects are published here: <http://prestospace.org/project/public.en.html>. A lot of the research focuses on the various steps in the digital content life cycle and is accessible for further reading.

digitisation initiatives. Two tables with data taken from the study are included below, to provide an excellent overview of the current status in digitisation efforts arranged by type of institution.

The first table displays the current status per type of institution: the part of the collection, which is already digitised, which is planned and which is still waiting to be digitised. The term ‘order book’ in the table refers to the part of the collection that is subject to digitisation plans. The term ‘equivalent backlog’ refers to the entire collection and represents the outstanding part of the order book, compared to the entire collection.

Type of institution:	Part of collection digitised	'Order book'		Equivalent backlog
	% [1]	Completed %	Outstanding %	[3]/[2] [4]
Archives	5.1	10.3	89.7	8.7
A-V or film institutes	9.8	15.4	84.6	5.5
Broadcasting institutes	10.8	12.8	87.2	6.8
Art/archaeo museums	27.2	30.6	69.4	2.3
Science and tech museums	25.5	32.4	67.6	2.1
Other museums	17.5	23.1	76.9	3.3
National libraries	2.3	3.5	96.5	27.6
Higher education libraries	2.5	4.4	95.6	21.9
Public libraries	14.8	31.9	68.1	2.1
Special or other libraries	5.5	12.2	87.8	7.2
Other types of organisation	22.5	29.0	71.0	2.4

Fig. 3 Digitisation efforts arranged after institution

This table shows that museums in particular have digitised at least a quarter of their collection and have a low backlog percentage, while libraries show the opposite trend (except for public libraries) while A-V institutions, film institutions and broadcasting institutions seem to be in the middle.

The second table shows the digitisation efforts arranged per type of content. Not all institutions who reported their results in the table above were able to provide numbers for the more detailed table below. The progress listed in column 6 refers to the percentage of the analogue collection that has been digitised, based on the total number of institutions. Column 7 shows the same kind of percentage, but adjusted to the number of institutions that actually reported back about their numbers.

Type of material Held in collections	Measured in units: (1)	Analogue base		Digitised items		Progress %	Adjusted %
		Millions (2)	Insts. (3)	Millions (4)	Insts. (5)		
Archive records (1)	Metres	6.178	206	2.236	139	36.2	53.6
	(2) Volumes	2.538	6	0.010	5	0.4	0.5
	(3) Number	1,497.994	51	2.418	40	0.2	0.2
Books and serials	Volumes	223.523	383	4.061	240	1.8	2.9
Newspapers	Issues	248.238	269	16.734	171	6.7	10.6
Other printed matter	Number	146.326	244	5.213	192	3.6	4.5
Pictorial images	Number	177.909	403	10.170	342	5.7	6.7
Other physical objects	Number	207.342	196	9.175	154	4.4	5.6
Audio-visual materials	Hours	17.215	212	2.251	144	13.1	19.3
Unclassified other	Number	148.784	98	60.311	71	40.5	56.0
Mean progress (weighting all materials by the analogue collection) :						4.2	5.8

Note: "**Books and serials**" includes rare books; "**Other printed matter**" includes Manuscripts, Sheet music, and Microforms / Microfilms not counted under any other heading; "**Pictorial images**" includes Maps, Photographs, Engravings, Prints, Drawings, Posters, Postcards, Paintings and Other two-dimensional objects; "**Other physical objects**" includes Three-dimensional works of art, Man-made artefacts, Natural world specimens, Other items in collections and Monuments; "**Audio-visual materials**" includes Films, Video recordings and Audio materials.

Fig. 4 Digitisation effort arranged after content

The categories with the most digitised content in numbers are the unclassified category and archival records. Audiovisual content comes third. According to the authors the actual progress lies somewhere between the 6th and the 7th column, which would indicate that 13.1 to 19.3% of the audiovisual heritage in the European Union has been digitised. The table indicates that the status of the digitisation of audiovisual heritage in particular and cultural heritage in general, remains an important issue and there is still a lot of work left for institutions to do in digitising their collections.

According to De Lusenet, many of these digitisation initiatives are carried out at an institutional level, but it is necessary for institutions to establish a more integrated approach and to use standardisation, not only for efficiency reasons. Institutions that publish their cultural heritage online, have to think about their relation to other forms of online media, especially forms of social media like blogs and videosharing sites where content is being shared and reused (De Lusenet, 2007). EU screen and other European projects like the European Film Gateway and Europeana are all examples of such networks, where cooperation leads to standardisation. However, De Lusenet also envisions a scenario in which audiovisual content is part of a participatory culture where users can share and re-use audiovisual heritage. In practice, this creates difficulties for archives and cultural institutions.

1.4 DESCRIBING: METADATA AND CONTEXTUALISATION

Digitised audiovisual content is stored in archives and is retrieved for various purposes. To retrieve this content it is necessary to add information, since unlike text, audiovisual material can not be searched directly (Auffret & Bachimont, 1999). In most cases, archivists provide the information that makes the content searchable. In this respect, two forms of information are outlined here because they play an important role in EUScreen: metadata and contextual information.

Metadata

Metadata contains information about the object itself. There are different levels of metadata. Descriptive metadata is used to access the content, while technical and identifying metadata is used for preservation purposes (Schreiber, 2010). There are several existing standards that are used in archives. A very detailed overview can be found in the report by Guus Schreiber for the PrestoPRIME project (Schreiber 2010). In EUScreen, a lot of work has been done to align the existing standards of the various archives and to create an EUScreen metadata schema. This schema is based on EBUCore⁴, so that it can be aligned with other projects like Europeana.

Metadata can be regarded as a strategic component to structure the database of an archive (Weisse et. al. 2007). The metadata in itself defines the findability of the content. For instance, when a standard metadata scheme is used, users can use this scheme to retrieve content, but if there is no structure, the retrieved results will be quite random. High quality metadata makes content therefore better accessible.

Technical and identifying metadata (like an ID number or length) are usually assigned automatically to content during the digitalisation process, or later added manually. In order to generate descriptive metadata, archivists watch or listen to content and create a description based on their observations. This is a very time and money heavy process. Archives are looking for alternatives to generate descriptive metadata. Two other ways to generate metadata are:

- Computer-generated: This includes the use of technologies like speech recognition (see for instance Ordelman et. al, 2009) and concept detection (see for instance Huurnink et.al, 2010). With these kinds of technologies, visual and audible elements are translated into text, so that they can be searched by users.
- User-generated: This allows users to add metadata to content. A very popular example of this is the Steve Tagger from Steve Museum⁵ which allows users to tag museum content. An example from the audiovisual field is the game Waisda?⁶, where users can choose an episode from a television show and add tags to earn points.

These forms of metadata can provide an affordable alternative for archives, but still need monitoring by. Also, information about the content itself is not always enough for users: the context is also usually important.

⁴ <http://tech.ebu.ch/lang/en/MetadataEbuCore>

⁵ <http://tagger.steve.museum/>

⁶ <http://waisda.nl> The game is temporarily offline and the creators are working on a new version.

Contextual information

Contextual information describes the relation between the content and other sources and can refer to information that is not directly derived from the content itself. It is used to study the production, publication and reception of audiovisual heritage from different points of view (Auffret & Bachimont, 1999). In EUscreen, contextual information is regarded as essential to access the content because “without context and frameworks for interpretation, a cultural and material understanding of selected content remains limited. In the end this hinders the realisation of the full potential and use of audiovisual content for research, learning and leisure.” (EUscreen, DOW, p 4)

This contextualisation of EUscreen content is achieved in various ways:

- Providing access to additional sources like scripts, stills, programme details and schedules.
- Interoperability with Europeana. This links the metadata to other sources outside EUscreen.
- A content selection policy that links content to similar content from other archives.
- E-journal. The journal will contain various academic articles that feature content from EUscreen. Through these articles, new connections are made and new insights are offered.
- Virtual exhibitions that use EUscreen content and additional sources to create new layers of meaning and which offer innovative comparisons.

Adding contextual information to audiovisual content is a time and money heavy process, so computer-generated information and user-generated information could be used as an alternative. With linked data for instance, it is possible to automatically create links between different sources (Neubert, 2009). Users can be engaged by allowing them to contribute contextual information. An example of this is the ‘Beeld en Geluid Wiki’⁷ (Sound and Vision Wiki). With this wiki, users can contribute information about television programmes, famous television and radio personalities, genres, etc. Together with metadata, contextual information increases access to audiovisual content.

1.5 MANAGING: DIGITAL RIGHTS MANAGEMENT

Digital rights management is essential in creating access to digitised cultural heritage, including audiovisual heritage, because it defines whether the content can be accessed online after it has been digitised and described (Lauwers, 2010). If online access is not allowed, the content will stay in the archive. Digital rights management deals with copyright and related rights. Copyrights “is a set of exclusive rights granted by the law of a jurisdiction to the author or creator of an original work, including the right to copy, distribute and adapt the work.” (Wikipedia, 2011) Related rights “describe database rights, public lending rights (rental rights), artist resale rights and performers' rights. Related rights may also refer to copyright in broadcasts and sound recordings.”(Wikipedia, 2011) Both kinds of rights are important in the context of an audiovisual archive.

In EUscreen a pragmatic approach was chosen to address the issue of digital rights management. Archives will only publish material that is cleared from copyrights for

⁷ See: <http://beeldengeluidwiki.nl/index.php/Hoofdpagina>

streaming the content inside the EUscreen portal. Some audiovisual archives, in and outside the EUscreen consortium, hold the rights to the content they preserve, but others do not. In both cases, a number of steps have to be taken before the digitised content can be made available online. In his paper on national, international and regional copyright aspects, Adrian Sterling (2010) has outlined four challenges or steps that need to be taken if an audiovisual archive plans to publish content online:

1. Assessment of the rights status of each item.
2. Identification of the relevant rights holders.
3. Obtaining licences for copying and communication to the public.
4. Conforming to the requirements of observing moral rights (Sterling, 2010)

These four steps all pose some challenges regarding the online publication of audiovisual content and the steps are taken as a starting point to discuss some of these issues below.

Assessment of the rights status

The first step is to assess if there are copyrights and related rights at all. It could very well be that the content already exists in the public domain. The public domain “comprises all the knowledge and information – including books, pictures and audiovisual works – which do not have copyright protection and can be used without restriction (...).” (Europeana, 2010, p. 3). Works with expired copyrights automatically become part of the public domain.

According to the report by the Comité des Sages, the material in the public domain which is preserved by European cultural institutions should be made digital accessible to an audience as wide as possible (Comité des Sages, 2011). They envision access to the public domain as a right of all European citizens. The report builds on the findings in the Public Domain Charter, published by Europeana in 2010, which advocates the accessibility of the public domain.

In practice, digitisation of public domain content can also create restrictions on access, because cultural institutions claim new rights on the digitised copy of the content. Regulations regarding digitisation differ for each European country, so in some countries new copyrights can be claimed while in others they cannot (Europeana 2010, Comité des Sages 2011). Another threat to the public domain is the extension of the duration of copyrights and related rights. In some countries, copyrights last for 50 or 70 years after the death of the author and this duration is continuously prolonged. (Sterling, 2011) This caused a so-called black hole of the 20th century in the public domain (Europeana 2010, Comité des Sages 2011).

Identification of the relevant rights holders

If content does not exist in the public domain, the second step is to identify the relevant rights holders. This is relatively easy if the information about the rights holders is documented. However, in a number of cases, the rights holders cannot be identified. For instance, an estimated 21% of films held in an audiovisual archive, have unknown rights holders (Comité des Sages, 2011). These works are called orphan works and because the rights holders are unknown, permission for online publication cannot be obtained (Van Gompel & Hugenholtz, 2010). To increase the accessibility of orphan works, some countries allow limited possibilities of authorized use (Sterling, 2010). Again, this causes problems for publishing these works online if they can also be viewed in countries where this permitted use does not exist.

Obtaining licences

Archives that also produce their own content, for instance broadcasting archives, already possess the rights to publish the audiovisual content online. Other archives have to clear the rights for each item that has been digitised. The procedure that is used for the clearance of analogue content is no longer feasible to clear digitised items. Large amounts of analogue content is digitised at once (Lauwers, 2011) and because the Internet is a relatively new medium, permission for publication on the Internet are often not included in original licences (Kirkham, 2011, EUscreen, 2009). Clearing rights through collective licences can offer a solution if a broadcaster holds the rights to a large amount of content. The BBC and the Netherlands Institute for Sound and Vision, for instance, use this method of clearing rights (Lauwers, 2011, Kirkham 2011).

Another problem which has arisen with the publication of audiovisual content is the territorial restriction of copyrights. Copyrights and related rights are a national matter, while the Internet is not bound to national borders. “Licences allowing archives to make available online audiovisual content are more often than not restricted to national territories.” (Hugenholtz, 2011, p.49). Although harmonisation has taken place in Europe in the last few years, there are still differences in copyrights, which causes significant problems. There is a need for a European or even a global licencing model (see for instance Hugenholtz 2011, Despringre, 2011, Comité des Sages, 2011).

Rights holders can also renounce their rights or define under which circumstances the rights are already cleared. A well-known model is the Creative Commons (CC) licencing model. This model offers “everyone from individual creators to large companies and institutions a simple, standardized way to keep their copyright while allowing certain uses of their work — a ‘some rights reserved’ approach to copyright — which makes their creative, educational, and scientific content instantly more compatible with the full potential of the internet.” (Creative Commons, 2011) Various kinds of licences can be used to define the circumstances under which the content is allowed to be used.⁸

With a CC-licence, audiovisual content can be made accessible for reuse and sharing. Audiovisual archives are experimenting with providing this kind of access to parts of their collections by using a CC-licence (see for instance the projects Open Images⁹, Paris Remix¹⁰ and Berlin Remix¹¹). A movement that advocate these kinds of practices is the Open Video Alliance, which promotes open access for Internet users to online video. This does not only include open content, but also open standards and open software (Open Video Alliance, 2011). This goes even further than the licence granted in the CC-licencing model.

Conforming to the requirements of observing moral rights

This final step refers to monitoring the moral rights. Moral rights are “the rights of recognition of authorship and protection of the work against distortion, mutilation, etc.”(Sterling, 2011). Recognition of authorship can be achieved by including this information

⁸ See <http://creativecommons.org/licenses/> for an overview of all the different licences.

⁹ <http://www.openimages.eu>

¹⁰ <http://www.dailymotion.com/group/parisremix>

¹¹ www.dailymotion.com/sas/BerlinRemix



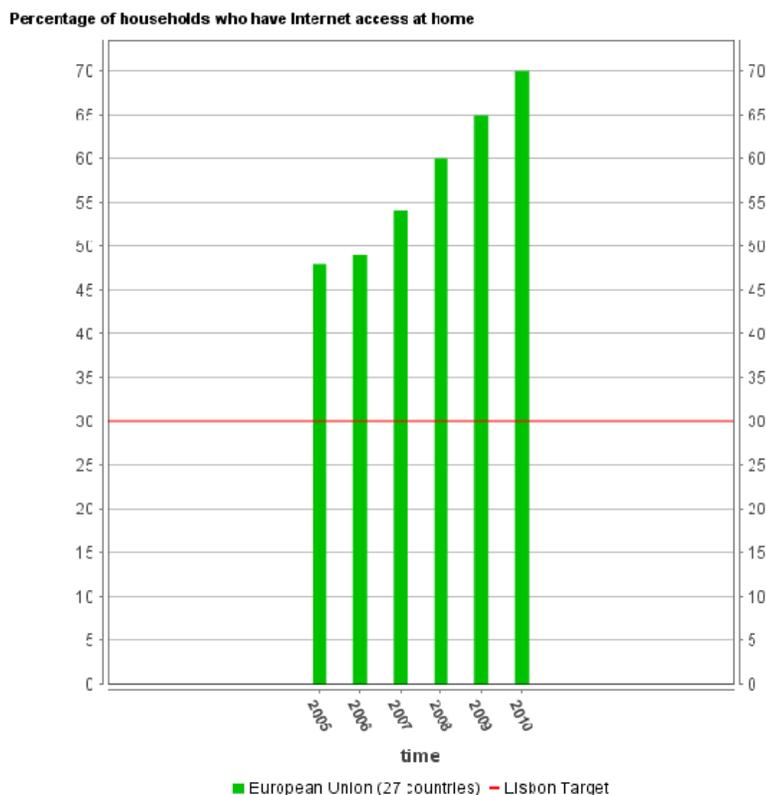
in the metadata. Protection of the work is much more complex, because it poses the question, what can be regarded as mutilation? For some authors creative reuse could already be a form of mutilation. Within EUscreen, the work undertaken work package 5 on scenarios for open culture productions deals with these issues and it will not be discussed here further.

2 TRENDS IN ONLINE ACCESS

This chapter provides an overview of the relevant trends in online media consumption. The main focus for media consumption lies in developments in Europe, but since access to EUscreen is not restricted to European users, trends and developments outside Europe are also taken into account. In Appendix 1, the graphs detailing the trends in every individual country in Europe can be found. The text below only contains an overview from the European Union, in order to increase the readability of the document. A first version of this analysis appeared in the internal market survey (EUscreen, 2010) with statistics from between 2005 and 2009. Where possible, these statistics are updated with the latest figures from 2010. When comparing these statistics with those from 2009 a general trend is already visible: online access keeps increasing throughout Europe.

2.1 INTERNET ACCESS AND USE IN EUROPE

The level of access to the Internet affects the potential use platforms with audiovisual content. The graph below shows the percentage of households that have Internet access¹² at home of every European country within the European Union.

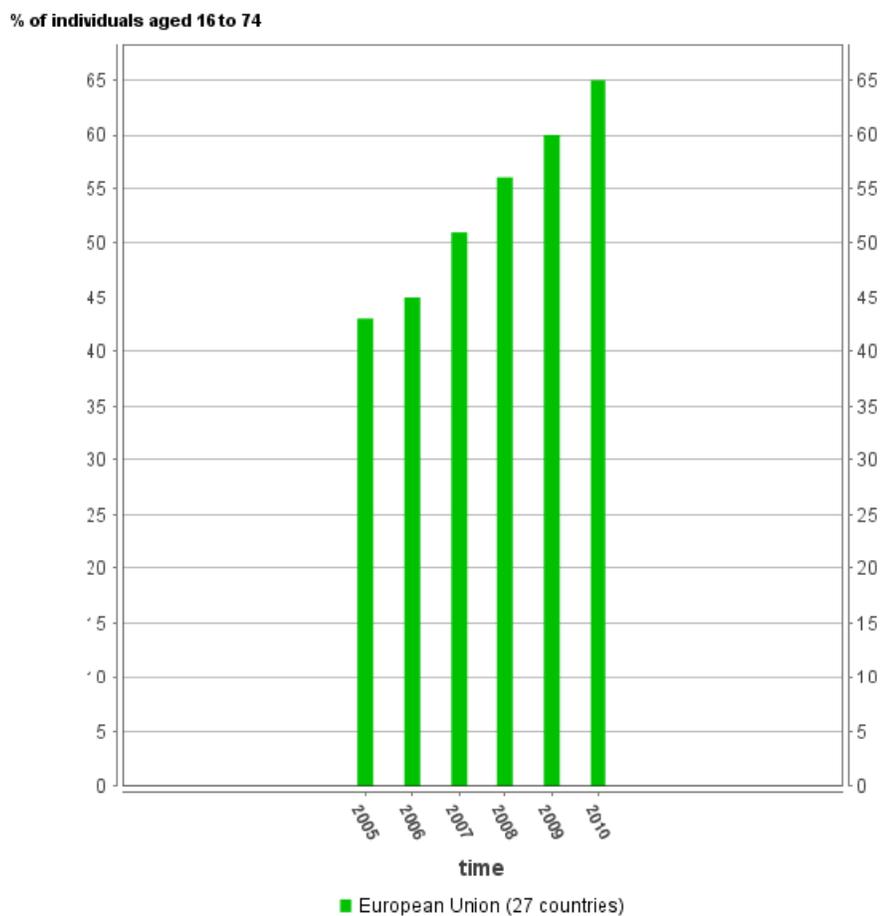


Graph 1: Households who have Internet access at home. Source: [Eurostat](#).

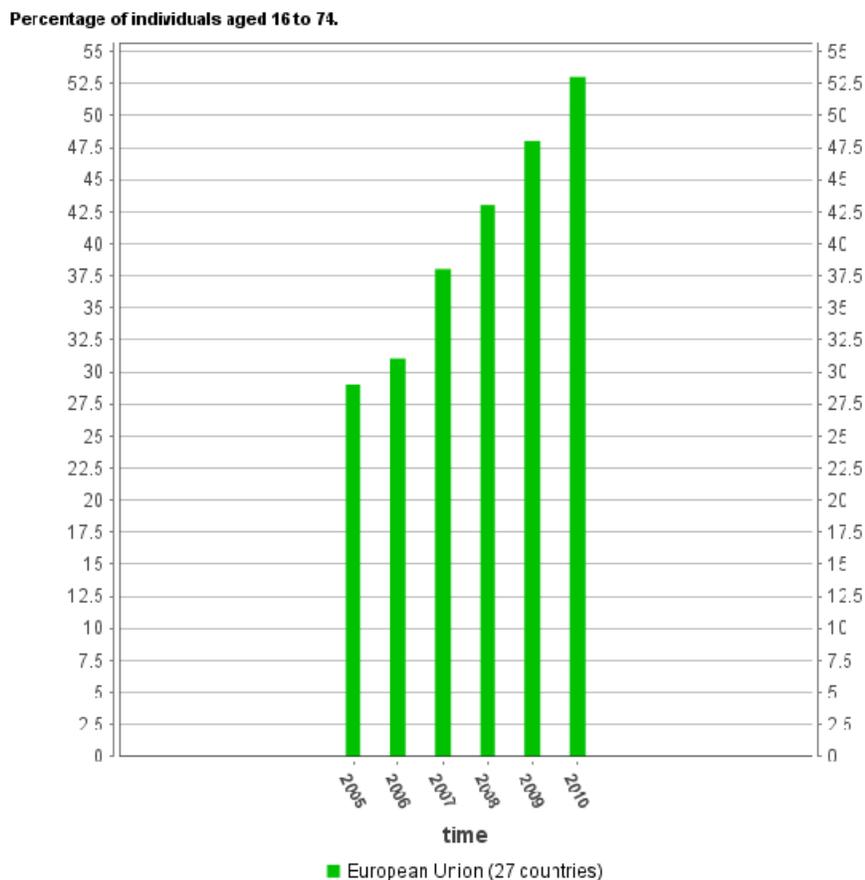
¹² This includes all forms of Internet access. The statistics do not specify which of this is broadband (suitable for multimedia use) and which isn't (less suitable for multimedia use).

In some countries like the Netherlands or Luxembourg almost all households have Internet access at home. In other countries, like Romania or Greece, not even 50% of all households have an Internet connection (see Appendix 1, graph 1a-c). Despite the difference between countries, the overall level of access is increasing every year.

There is also an increase of use. The following graphs show the percentage of individuals between 16 and 74 who regularly (at least once a week) and frequently (every day, or almost every day) use the Internet. In 2005, about 43% of the individuals in Europe used the Internet at least once a week compared to 65% in 2010. The amount of individuals who used the Internet in 2010 on a daily basis almost doubled compared to 2005 (28% versus 53%).



Graph 2: Individuals regularly using the Internet. Source: [Eurostat](#).

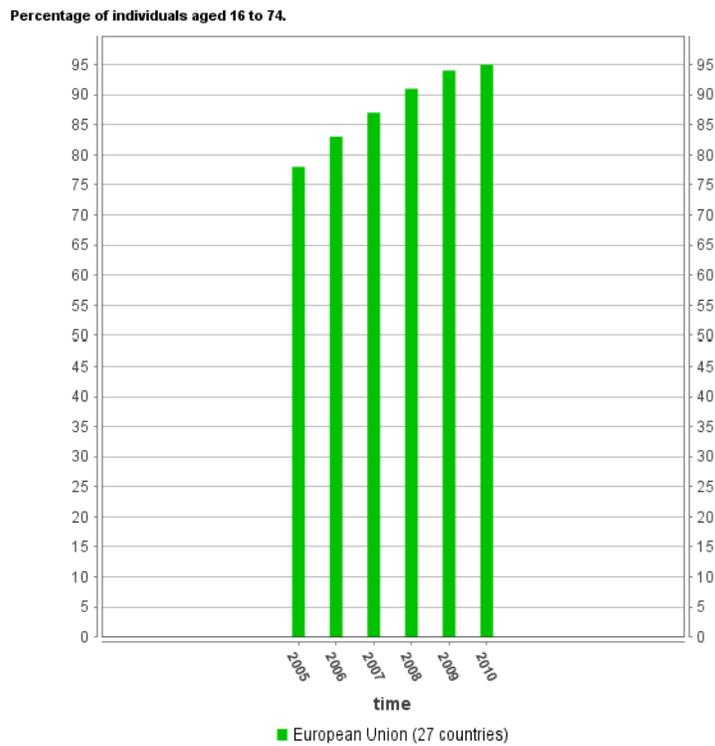


Graph 3: Individuals frequently using the Internet. Source: [Eurostat](#).

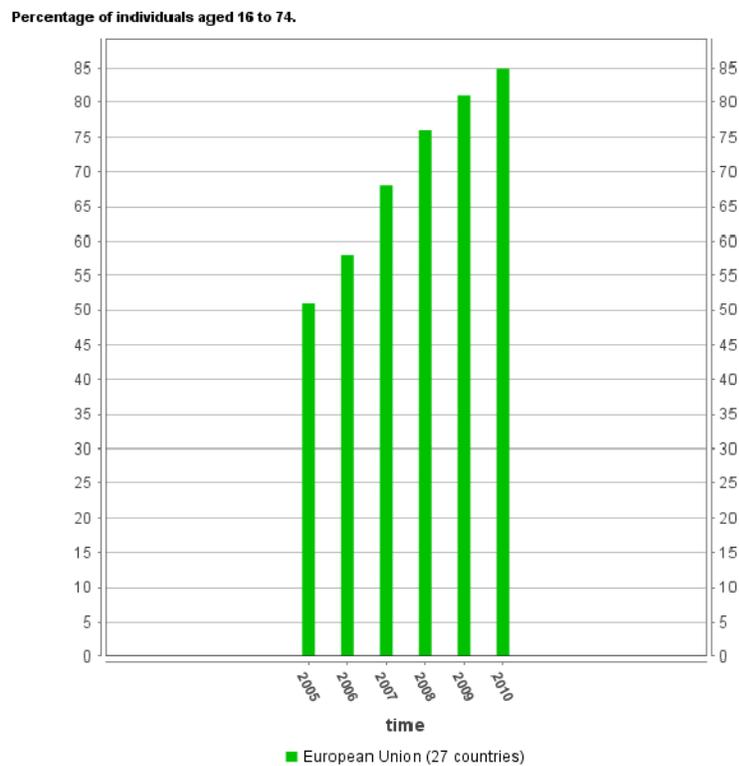
2.2 TRENDS IN ONLINE ACCESS IN EDUCATION AND RESEARCH

Statistics from Eurostat show there is an increase in the use of the Internet by students¹³ between the ages of 16 to 74. 95% of the students regularly (at least once a week) used the Internet in 2010, compared to approximately 78% in 2005. Looking at the percentages, it is very unlikely a 100% score will be reached in the next few years and it is expected that the number of students will not greatly increase. The frequent usage (every day, or almost every day) amongst students witnessed an even bigger increase, from approximately 51% in 2005 to approximately 85% in 2010.

¹³ The metadata from Eurostat does not contain a description of the student population. It is not clear if the term students refers to higher education only, or also to the upper grades from secondary education.

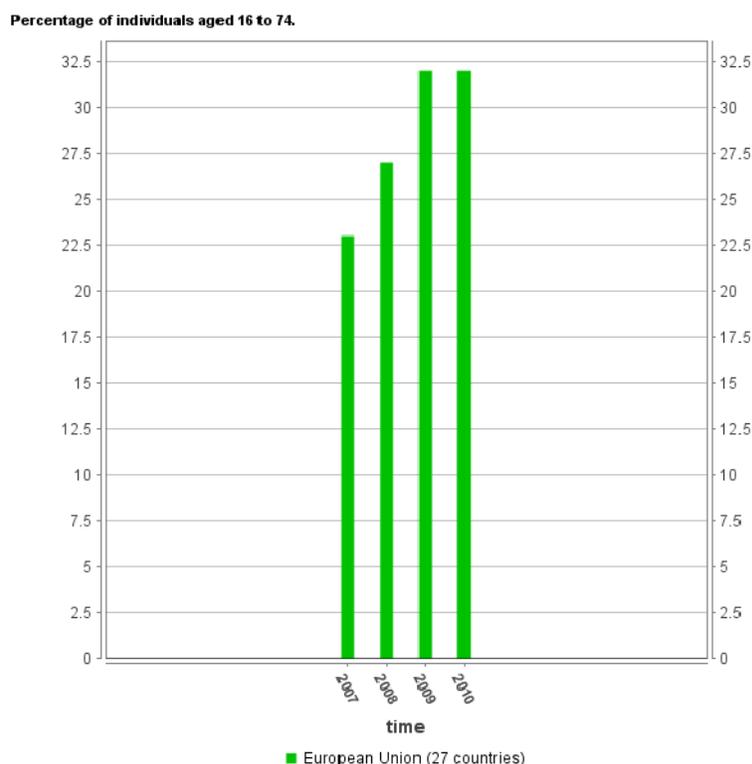


Graph 4: Students regularly using the Internet. Source: [Eurostat](#)



Graph 5: Students frequently using the Internet. Source: [Eurostat](#)

More than 30% of the Internet users between 16 and 74 in the European Union use the Internet to seek information for learning purposes. These figures do not include pupils from primary education and students from the first years of secondary education. The figures from 2009 and 2010 are almost identical. This indicates that the market is saturated, but this can only be conclusively suggested if this trend continues throughout 2011 and beyond. Based on these numbers, there is no increase in the number of individuals who use the Internet for educational purposes. On the other hand, there is an increase of 10% in two years time, so it could very well be that this number will increase in the next years.

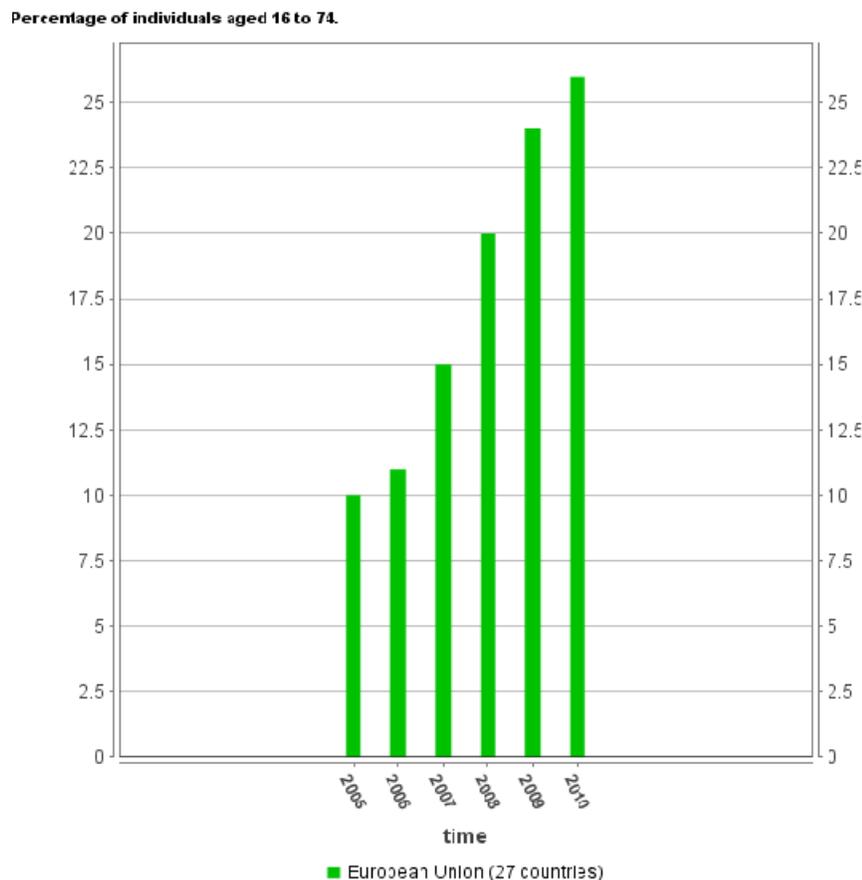


Graph 6: Individuals using the Internet for seeking information with the purpose of learning. Source: [Eurostat](#).

There is a difference between European countries concerning the use of Internet for educational purposes. In countries like Luxemburg, Denmark and Finland, this usage percentage is over 50%, while in Romania and the Netherlands only 20% of the Internet users seek information online for educational purposes (See Appendix 1, graphs 3a-c). In Germany and France, the number of people who use the Internet to educate themselves has decreased.

2.3 WATCHING VIDEO

Potential users of EUscreen may have an interest in consuming online video for different purposes, like education, research, professional use or leisure, and the market for online video is still growing. Research by the Pew Internet & American Life Project showed that the most popular online activity in the US is watching videos, even above the usage of social networks. (Madden 2009, p. 6) Cisco estimates that the share of online video in worldwide Internet traffic by consumers will be almost 60% in 2013. Also, in Europe the number of people using the Internet for listening to web radio and / or watching web television has risen steadily over the years. The graph below shows this increase.



Graph 7. Individuals using the Internet for listening to web radio/watching web television. Source: Eurostat.

Over 25% of the Internet users between the age of 16 and 74 use the Internet for listening to radio and watching television. Again, there is a big difference between countries (see Appendix 1 graphs 2a-c).

Universal McCann is undertaking extensive research in the domain of social media with the Social Media Tracker, an annual survey conducted amongst >22,000 daily Internet users (the so-called active users) in 38 countries from 2006 until 2009. During these years, the survey shows a major increase in online video consumption: in 2006, 32% of the active Internet users

watched video online, in 2009 83% of the active Internet users watched video online (Universal McCann, 2009).

The difference in percentages between Eurostat (almost 24% in 2009) and the study from Universal McCann (83% in 2009) could be caused by:

- Differences in definitions: online video is a much broader term than web television and web radio.
- Differences in the geographical dimension: European users versus users worldwide.
- Differences in population: Eurostat considers at all Internet users, Universal McCann only focuses on active Internet users. These active users are more likely to perform many different actions on the Internet, including watching online video.

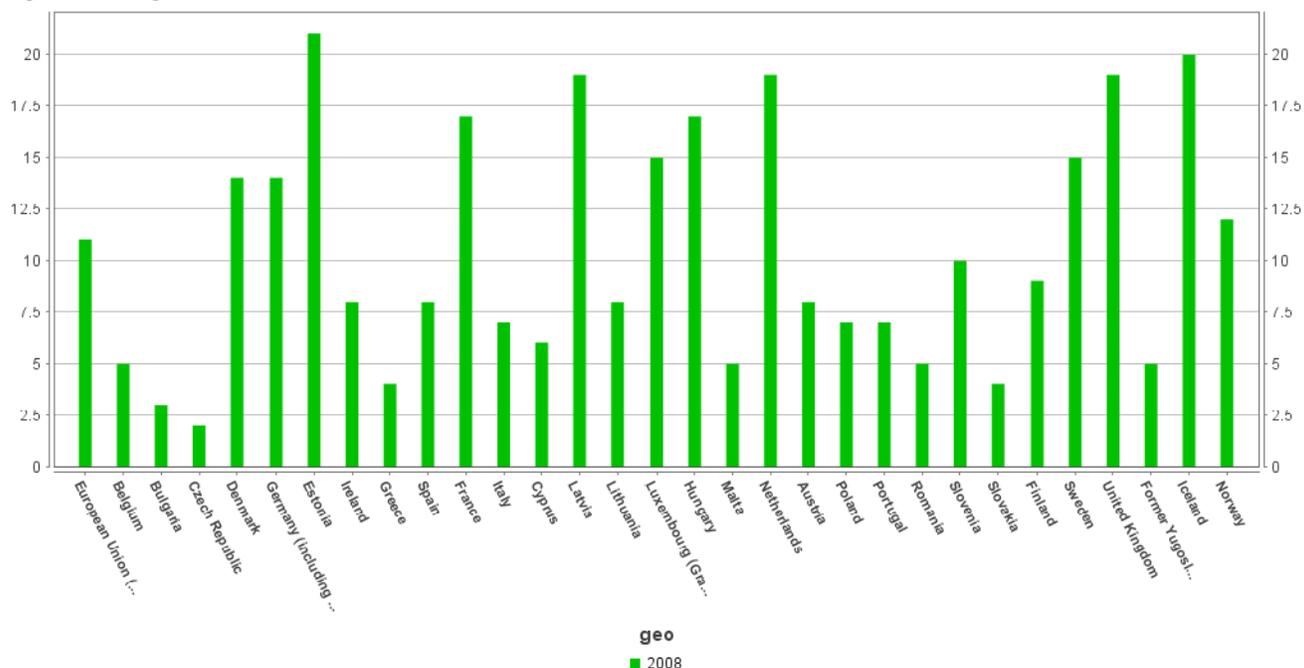
Despite the differences in the amount of users watching video online, both studies show a major increase in online video consumption over the last few years. Furthermore, video is incorporated more and more into social networks by users, for example to enhance their profile (33% of social networkers in 2009 in comparison to 16.9% in 2008) or by uploading video to their blogs (32% of bloggers in 2009, in comparison to 24% in 2008). (Universal McCann, 2009) Another reason for the increase in online video consumption is caused by mobile video. In the United States, the amount of people watching mobile video has increased in 2010 with almost 44% (Nielsen, 2010-2) and a study of five countries¹⁴ in Europe found a global increase of over 66% (comScore 2010-2).

2.4 USER CREATED VIDEO AND CREATIVE REUSE

Only few exact figures on the amount of online user created content and creative reuse were found during the research, among other things because of a lack of relevant data and a lack of clearly formulated definitions (Borgne-Bachs Schmidt et al., 2008). However, some statistics were found on online video market leader, YouTube. The platform has a 40% market share (in the U.S.) (comScore, 2010) and is regarded as the platform for user created video. In November 2010, YouTube announced that every minute, 35 hours of video are uploaded to the platform (YouTube, 2010-2). According to research done by Michael Wesch, over 80% of videos on YouTube is user-generated (Wesch, 2007). It is however not known what percentage of this consists of video falls in the category creative reuse. According to the infographic that was published on the blog of clicker.com, 13 % of the videos that are posted online are remixes of other videos (Clicker, 2010). There are also some statistics from Eurostat on user created content in general, like video, audio and text.

¹⁴ UK, Italy, Germany, France, Spain

Individuals using the Internet for uploading self-created content to any website to be shared
 Percentage of individuals aged 16 to 74.



Graph 8: Individuals using the Internet for uploading self-created content to any website to be shared.
 Source: [Eurostat](#).¹⁵

The graph above shows the percentages of users in Europe who upload self-created content. These percentages seem rather low, but other studies show that in particular it is young people in their teens and twenties who are creating content, and that there is an increase in the use of platforms that facilitate sharing self-created content (OECD, 2007). User generated content is often associated with so-called ‘amateurs’ and is defined as a practice that takes place “outside of professional routines and practices” (OECD, 2007, p. 18). The distinction between professionals and amateurs in this respect is becoming more and more problematic. Professionals are also creating and sharing content (Ibid.). Also, traditional television programs are incorporating user-generated content, like videos from YouTube, making traditional broadcasting no longer solely a field for the media professional.

2.5 PAYING FOR DIGITAL CONTENT

A study by Nielsen (Nielsen, 2010) about the willingness of consumers to pay for online news and entertainment found that a majority (85%) want free content to remain free. The willingness to pay for content or at least considering paying also depends on the kind of content:

“Online content for which consumers are most likely to pay – or have already paid – are those they normally pay for offline, including theatrical movies, music, games and select videos such as current television shows. These tend to be professionally produced

¹⁵ Parts of the geographical categories aren’t displayed in the graph, notably European Union (27 countries), Germany (including ex-GDR from 1991) and Former Yugoslav Republic of Macedonia.

at comparatively high costs. Consumers are least likely to pay for content that is essentially homegrown online, often by other consumers at fairly low cost. These include social communities, podcasts, consumer-generated videos and blogs.” (Nielsen, 2010, p. 1)

In a report by the Preserving Digital Public Television Project, the authors asked: “Given the proliferation of digital content, the question is: what can a repository for public television offer that would be of exceptional value to users, whether they be public television producers, educators, or researchers, or members of the public? What value can the repository create over and above the value of the content itself?” (Ng et al., 2010, p. 10) Their conclusion was that users are willing to pay for audiovisual heritage, as long as it has particular qualities.

The basis for this assumption was a blog article by Wired co-founder Kevin Kelly. (Kelly, 2008) In this article, Kelly lists eight different "generatives" or "uncopyable values" of content that have qualities that are so interesting for users that they might be willing to pay for it, even though they can have the content itself for free. These uncopyable values are:

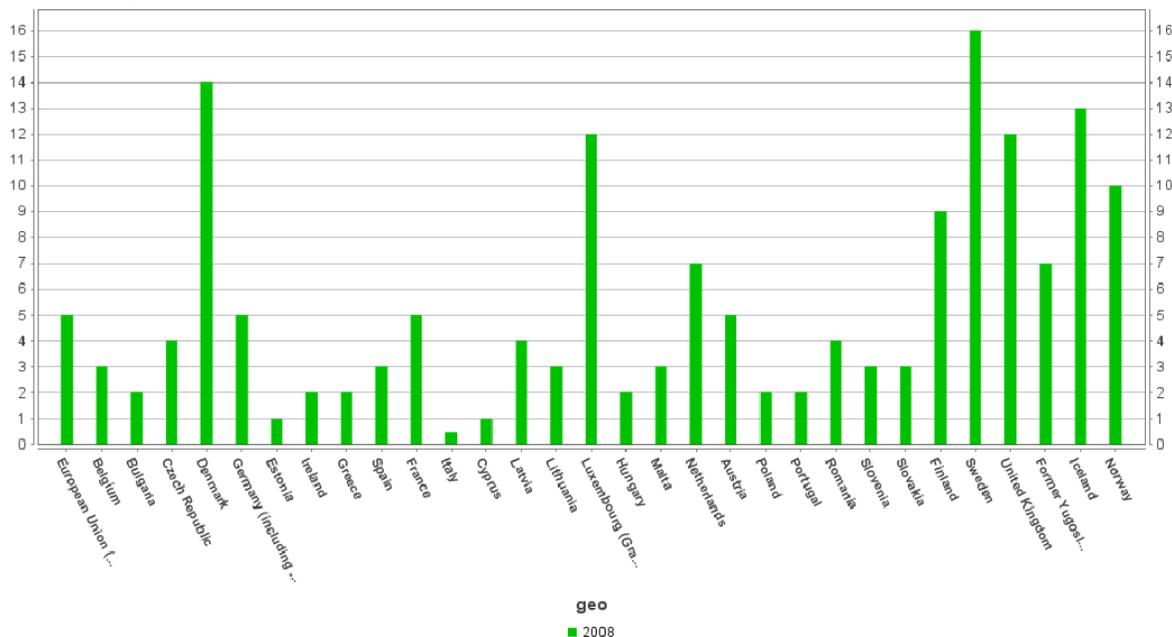
- Immediacy: the value of being able to access content in a relatively timely way.
- Personalization: the value of being able to access content in a form that meets specifically defined needs.
- Interpretation: the value of the availability of guidance and support in using the content.
- Authenticity: the value of the knowledge that the content is authentic.
- Accessibility: the value of having the repository be responsible for the safekeeping of the content so that it is always accessible when the user wants it.
- Embodiment: the value of high-quality versions of the content.
- Patronage: the value of the appreciation and loyalty that users feel toward the repository.
- Findability: the value of being able to find the content that the user is looking for. (Ng et al. 2010, p. 10-11)

The Nielsen study also found that there are factors that lessen the willingness to pay, notably:

1. content from services they are already subscribed to (78%).
2. quality of the paid content should be much better than the free version (71%).
3. content that can be found for free somewhere else (79%). (Nielsen 2010, p. 1)

There are statistics about the European situation in 2008. The graph below shows that only 5% of individuals between 16 and 74 within the European Union pay for online audiovisual content. Only in five European countries (not necessarily part of the EU) >10% of the individuals pay for audiovisual content in 2008.

Individuals paying for online audiovisual content
 Percentage of individuals aged 16 to 74.



Graph 9: Individuals paying for online audiovisual content. Source: [Eurostat](#).¹⁶

However, it could be that paying for audiovisual content becomes more popular. A recent study by the PEW Research Centre found that 65% of the Internet users in the United States have paid to download or access digital content. A part of this content consisted of audiovisual content and users have been willing to pay for music (33%), videos, movies & tv-shows (16%) and digital photos (12%) (PEW, 2010). These numbers show a much higher percentage of users willing to pay for audiovisual content compared to the 2008 figures for Europe. Although these statistics only refer to the situation in the US, we can assume that the numbers in 2010 have also increased in Europe, compared to 2008.

¹⁶ Parts of the geographical categories are not displayed in the graph, notably European Union (27 countries), Germany (including ex-GDR from 1991) and Former Yugoslav Republic of Macedonia.

3 BUSINESS MODELS AND ADDED VALUE OF ONLINE AUDIOVISUAL COLLECTIONS

3.1 DETERMINING A GENERAL BUSINESS MODEL

There are various ways of defining and using a business model, but one model that is rapidly gaining in popularity both inside and outside the cultural heritage sector is the one that has been developed by Osterwalder and Pigneur. It combines multiple elements for previous business models and puts the user at the centre of the model (DEN / Kennisland / OCW, 2009). In this section, the model will be further discussed in more detail, using EUscreen as an example of how such a business model can be designed.

Osterwalder and Pigneur define a business model as follows: “[It] describes the rationale of how an organization creates, delivers, and captures value.” (Osterwalder & Pigneur, 2010, p. 14) They call this the business model concept - a useful tool for conceptualising ideas. It provides an organisation with a framework for defining the course of action for new projects. The model does not just focus on capturing economic value, but can also be used to visualise and incorporate social and cultural value. Furthermore, the user is at the centre of this model. This means that the business model offered by Osterwalder and Pigneur is a great tool to use for conceptualising business models for EUscreen, since “one of the guiding principles of EUscreen is to support user-led demand and interest for services and content as well as the development of scenarios for using this content in different contexts (research, learning and leisure and for the benefit of open culture production).” (EUscreen, p. 8)

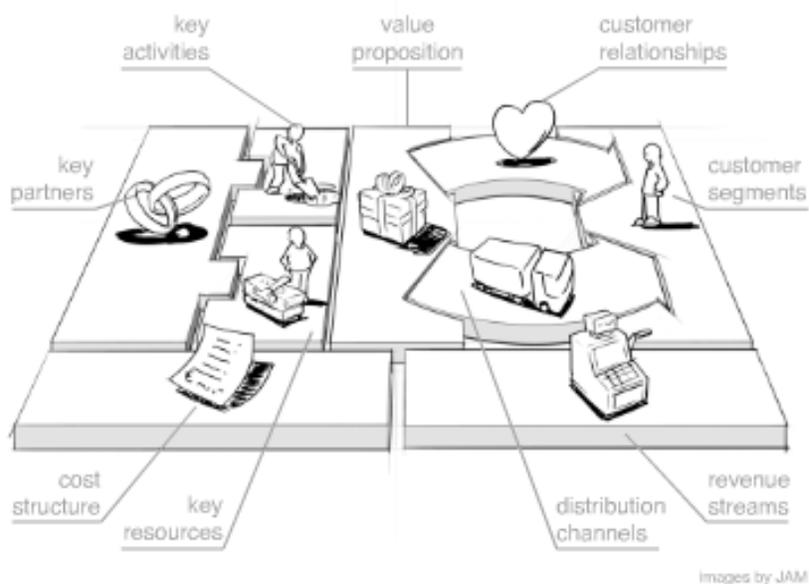


Fig. 5: Osterwalder & Pigneur's business model canvas

3.2 THE BUILDING BLOCK CANVAS

Osterwalder and Pigneur divide the business model concept in nine different building blocks, which together make up the business model canvas.

Customer segments

The “Customer Segments Building Block defines the different groups of people or organizations an enterprise aims to reach and serve”. (Osterwalder & Pigneur, 2010, p. 20) This indicates that a business model can serve potentially diverse user groups or customer segments, and that the same elements in a business model can be used to reach these diverse user groups. However, each group might require a different approach.

There are various choices in how to deal with the different needs of users. Audiovisual platforms can offer a single interface with different functionalities using one database, various interfaces that use the same database or one interface that aggregates content from various databases. The latter is the case for EUscreen and Europeana.

Value proposition

“The Value Propositions Building Block describes the bundle of products and services that create value for a specific Customer Segment.” (Osterwalder & Pigneur 2010, p. 23) With the Value Proposition, customers are offered something unique that distinguishes an organisation from others.

Creating added value for digitalized collections is one of the main challenges for archives and cultural institutions. IPR restrictions, content which is already part of the public domain or content that is also available elsewhere causes difficulties for defining the value proposition. This building block is often used as a basis for defining a business model and because of the challenges institutions are facing, section 3.4 will address this in more detail.

Channels

This building block “describes how a company communicates with and reaches its Customer Segments to deliver a Value Proposition.” (Osterwalder & Pigneur, 2010, p. 26) There are multiple ways of reaching a (potential) user group, for instance, through a corporate website, websites from related partners, or special real-life events such as conferences.

The main channel for EUscreen will be the product itself: www.euscreen.eu. A special work package in the project is responsible for dissemination, which includes communication with user groups and relevant stakeholders. Web 2.0 activities play an important role in the communication, as well as real-life events like conferences and workshops and publications in books and journals.

Customer relationships

“The Customer Relationships Building Block describes the types of relationships a company establishes with specific Customer Segments.” (Osterwalder & Pigneur, 2010, p. 28) There are various ways in which to set up and maintain customer relationships and this building block is therefore strongly related to “Channels”.

The EUscreen consortium has access to its users through the various networks consortium partners are connected to. Dissemination events and activities will be organised to reach out

to the users and to gain feedback from the EUscreen community. This can be through Web 2.0 channels like Twitter, but also on the portal itself. During the development phase, various user groups are regularly consulted, as has been done through the focus groups, surveys and user testing and evaluation, ensuring to stay in tune with the customers needs.

Revenue streams

“The Revenue Streams Building Block represents the cash a company generates from each Customer Segment (costs must be subtracted from revenues to create earnings).” (Osterwalder & Pigneur, 2010, p. 30) Economic revenue can be generated in many different ways. Customers can be asked to pay a usage fee every time they use a service, or for a fixed subscription fee per time unit (week, month, year).

A common revenue stream for audiovisual archives comes from licensing fees for specific materials. Another way to generate revenue is by selling a physical product, such as a DVD or a book. Public funding and grants can also be part of the revenue stream, but this could conflict with an important traditional revenue stream: advertising. If a project or institution has been funded, advertising is often not allowed as an extra source of generating income, because of the non-commercial nature of such projects. Also, advertising can conflict with the policies of an archive.

In the case of EUscreen, revenue can be generated indirectly by pointing users towards the relevant archive where the content can be purchased. This also creates more exposure for the individual archives, which can increase their revenue stream in the long term. Possibilities to gain revenue are strongly connected to the value proposition and are equally challenging for archives and cultural institutions. A more detailed overview of revenue models will be given in section 3.5.

Key resources

This building block “describes the most important assets required to make a business model work.” (Osterwalder & Pigneur, 2010, p. 34) Osterwalder and Pigneur categorise the assets as follows: physical, intellectual, human and financial.

In the case of EUscreen, various key resources can be defined. First of all it's the content and the metadata itself. The interoperability between collections can be considered as a second key resource, since this adds a new layer of meaning to the separate collections. The multilingual accessible platform would be a third. The collaboration between partners from various fields (education, research, cultural institutions, archives, universities) creates new forms of contextualisation, which is another key resource.

Key activities

“The Key Activities Building Block describes the most important things a company must do to make its business model work.” (Osterwalder & Pigneur, 2010, p. 36)

All key activities within EUscreen are divided into work packages and described in detail in the Description of Work. This includes the development of the platform and the digitization and the uploading of content, as well as activities to promote the results and to actively engage into the relevant networks.

Key partnerships



This building block “describes the network of suppliers and partners that make the business model work.” (Osterwalder & Pigneur, 2010, p. 38) Also, some suppliers or partners may perform key activities, which will have to be described in that specific building block.

For EUscreen, partnerships are inherent to the project itself, since it is based on the interoperability of the collections of its consortium partners. Through these partners EUscreen is connected to other networks in the educational field, academic research, media and cultural heritage. The connection with Europeana will also link the EUscreen collection to other collections.

Cost structure

“The Cost Structure describes all costs incurred to operate a business model.” (Osterwalder & Pigneur 2010, p. 40) Because Osterwalder and Pigneur look into more aspects of a business (or in the case of EUscreen, a project) than just the costs of adding value, this cost structure contains almost all costs within a business.

3.3 THE GENERAL EUSCREEN BUILDING BLOCK CANVAS

If all the building blocks are put together, a business model for EUscreen could look like this:

KP EUscreen consortium members Software supplier / developer	KA Platform management Enriching audiovisual materials KR Online platform Audiovisual content	VP Access to interoperable, multilingual, contextualised audiovisual heritage	CR Community CH Online channels (portal, Web 2.0) Partner networks Events	CS Education Media profs General public Cultural heritage institutions
C\$ Costs of maintaining infrastructure of the platform and licenses Costs per content partner for digitisation and storage Personnel costs Other costs		R\$ \$: Funding by the EU \$: Sales of high-res materials \$: Sales of educational packages Increase visibility / interaction with archival audiovisual materials through creative re-use		

Fig. 6: General EUscreen business model

This model can serve as a basis to further develop and understand what EUscreen can offer its users. At the end of year 3 (2012), a final exploitation strategy will be defined, based on the research that is done on business models and Best Practices during the project in the various deliverables.

3.4 CREATING A VALUE PROPOSITION

General value proposition of audiovisual archives

As stated in section 3.2, creating value can be challenging for archives, but not impossible. This section outlines the opportunities for creating a value proposition. First of all, the importance of authority and authenticity is mentioned in various studies. According to Kaufman, “one of the primary assets that a cultural institution has is its name and reputation.” (Kaufman 2005, p. 17) In the final report of the European DigiCULT project it also is stated that “Overall, it must be highlighted that it is only where the intrinsic, authentic nature of cultural heritage sources is perceived as valuable (and the expert knowledge related to relevant material is an essential plus) that a considerable market potential exists.” (DigiCULT, 2002, p. 177). Thus, the status that archives have is an important feature of the value proposition.

Furthermore, the public has a desire to have access to the unique, rare and valuable collections available in European cultural and heritage institutions (Tanner and Deegan 2003). Additionally, as was demonstrated in chapter 1, the market for online video is still growing strongly. Thus, the EUscreen portal can provide this growing market with unique audiovisual collections. Since EUscreen content will be connected to Europeana, this is a great benefit for the users of Europeana, especially since the amount of audiovisual content on this portal is still very low. (Heijink, 2009, p. 5)

In short, audiovisual archives can offer their (prospective) user groups two important unique features:

- The status of the archive, its authority and the authenticity it can provide.
- Central storage of unique resources, in this case audiovisual heritage.

These features cannot be offered, or at least to such a great extent, by other players on the market, and are therefore vital assets that guide the value proposition of audiovisual archives and cultural institutions that are developing online platforms.

Specific value proposition for EUscreen

Besides the two general value propositions for archives and cultural institutions, EUscreen will also offer three further features, notably:

- Multilingual access and use of audiovisual (television) content and metadata.
- An interoperable platform that offers centralised access to various unique collections.
- Contextualisation. In-house professionals can provide much needed context –this is a key resource for audiovisual archives.

In general, 56% of E.U. citizens speak at least one foreign language, and 38% speaks English besides their native tongue. (Eurobarometer, 2006, p. 9-12) From the User and Functional Testing Final Report from Europeana (2010) it has become clear that users found it problematic when materials are available in any language but their native tongue and English. Since multilinguality is one of EUscreen's key features (if materials are not in English, key metadata elements will be translated in English), EUscreen's multilingual nature will be highly attractive.

The results from the internal market survey (EUscreen, 2010) (EUscreen, 2010) showed there are very few online video repositories that offer multi-lingual access to content. YouTube now offers (automatic) closed captions for some videos, but this is very prone to errors, and the metadata on YouTube itself is often poor (especially when compared to archival metadata), and not multilingual by default. An example of a website that does offer multilingual video content is the TED website¹⁷. On this site, talks given by experts in the field of technology, entertainment and design can be viewed, and many of the talks have been subtitled and translated by the website's users. TED however offers access to a very limited archive that only contains videos recorded during the TED conferences. EUscreen would offer multilingual access to a vast collection of television heritage, unprecedented in scale, as was the case with Video Active.

In the first months of the project, focus groups have been held and questionnaires have been disseminated amongst teachers, academics, researchers and people working in the heritage sector. Results show that many researchers across Europe use both national and international video repositories for their research. A single portal through which a variety of repositories can be searched at the same time would be a great time-saver for these researchers. The metadata of a great number of collections from the EUscreen partners will be matched and thus interoperability will be achieved.

It has also become clear from the results of the focus groups and the questionnaires that there is a growing need for contextualisation. Context is needed for current and future users of audiovisual heritage to place it in its proper historical context (Shah, 2009, p. 177; Marchionini, 2009, p. 7). In-house information professionals of audiovisual archives can provide context for these collections in a number of ways: from adding rich metadata and descriptions, to indicating how the various collections are related to each other, to adding internal context data (such as photos, subtitle files) and external data (such as links to broadcasters' websites and scripts).

3.5 REVENUE MODELS

A study by HEDS Digitisation Services conducted in 2002 focused on charging models for digital cultural heritage in Europe (mostly digital images). Some of the conclusions related to making a profit or breaking even were: "The most powerful factor determining price was the perceived market value of the item (as defined by what similar organisations are charging) rather than the actual cost of creation and provision." (Tanner and Deegan, 2003) However, none of the institutions that participated in the study were recovering the costs of the maintenance and creating revenue through the sales of the digital items themselves. The only

¹⁷ <http://www.ted.com/>.

business model type that proved profitable was licensing rights to use the materials commercially.

As outlined in section 3.2, not every provider of audiovisual content will be able to create fully commercial services. Other forms of revenue models are needed. INA for instance, which is considered one of the most successful online audiovisual heritage portals is not economically independent from funding. However, as INA's marketing manager Swierczynski says: "As for revenue models, [...] we are trying almost everything." (Maron et al., 2009, p. 87)

To this end, a list of common revenue models has been included below. For each model, some examples are given of how each revenue model is implemented in platforms offering audiovisual content. This list has been composed for the internal market survey (EUscreen, 2010) (EUscreen, 2010) and can be found in Appendix 2. As can be seen in the Appendix, very few platforms use only one revenue model and well-known and large online video platforms like the Internet Archive, ITN Source, Getty Images and INA have incorporated three or more. Unfortunately, it was not possible to gather figures concerning the amount of revenue that was generated by the platforms when the market survey (EUscreen, 2010) was conducted. Therefore it is hard to conclude which is most successful. The key finding of the analyses of the revenue models is that archives and cultural institutions in general and EUscreen in particular will have to be creative, and that it is important to keep investigating various ways in which the platform can sustain itself when the funding period ends.

Free / Freemium

Many video platforms offer materials for free; Osterwalder and Pigneur call this the free model. In this model, free content or services can attract a large and diverse group of users. Often, free business models are supported in combination with other revenue models, like advertisements, donations, sponsoring (see Appendix 2). Another way of gaining revenue from free access is to collect the user data (with permission) and to sell it to third parties who are interested in that particular user group (Blom, 2010). Advertising is not a feasible model for a project like EUscreen, since implementing advertisements conflicts with the policies and opinions of many consortium partners. This also conflicts with the policies of Europeana (Cousins et al. 2008, p. 28). However, a great benefit of the free model is that open and free access raises the profile of the participating institutions and their collections, since a great deal of the material is now publicly accessible for the first time.

Another way in which to gain revenue by offering materials for free is through a freemium model. This model "works by offering basic Web services, or a basic downloadable digital product, for free, while charging a premium for advanced or special features." (Wikipedia, 2010) The users that opt to pay for extra features pay for the costs that are made to serve the non-paying part of the user base. The reason that this model can still be profitable is because the costs per free user are very low. If about 5% - 10% of the user base opts to pay, this can usually cover the costs of all the users, including the non-paying ones and may even generate profit, which is the case with online game and puzzle platforms such as Runescape and Club Penguin, and photo sharing website Flickr. (Anderson, 2008) This percentage of paying users that is needed to at least reach the break-even point is called the conversion rate. In general, Freemium can be a very attractive revenue model, since users are willing to pay for extras (PEW, 2010). A part of the costs can also be covered by other sources of revenue such as advertising.

Free examples: YouTube, Google Video (in combination with advertisements), Internet Archive (in combination with sponsoring and donations).

Freemium examples: British Pathé offers free, low-quality video streaming, but for a fee of £60 per month institutions belonging to the MLA Accredited Scheme can download unlimited broadcast-quality footage and stills (offer on website d.d. 26 March 2010¹⁸).

Licensing

The Licensing revenue model is often used by online video repositories which have media professionals who need high-resolution material for professional reuse as their main customers. Users can put desired materials in their shopping cart and acquire licenses for reuse either on the website itself, or indirectly through contacting the rights holders. Often various payment options are offered, and fees differ depending on the desired image quality, type of use (for instance advertising, corporate or education), the medium through which the materials will be distributed and the size of the audience. Licensing can also be combined with a pay-for-download revenue model (see below). Some organizations cannot provide licenses themselves, but do however charge a fee for helping with the license clearing.

Licensing examples: The Prelinger Archive combines the free model with licensing. People can use the online archive materials for free, but “at the fee level, you can get physical materials and written license agreements with your name at the top.” (Oomen 2009). INA, Getty Images and Corbis Motion also offer a range of licensing options and services. BBC Motion Gallery offers license clearance services for a fee.

Sponsoring / Funding

Many non-commercial online video platforms receive a form of sponsoring or funding. Though different in nature, these two sources of revenue are mentioned together here because they are both not related to the monetisation of the content itself, but ways in which money or resources can be secured for a longer period of time.

Sponsoring can be provided by a person or organisation that supports an initiative financially and / or by supplying goods and services. In return, a sponsor can, for instance, be mentioned on the website and in publications, which generates positive exposure for the sponsor. Funding is another way in which non-commercial online video collections can be supported. Most funding (such as subsidies and grants) is awarded for a longer period of time, and can be provided either by a non-profit, governmental or commercial organisation.

Sponsoring / Funding examples: UbuWeb is sponsored in kind by several universities and partners that offer the use of their server space and bandwidth. The other work to keep the platform running (UbuWeb, 2010) is solely done by volunteers. The Teachers’ Domain from WGBH is largely funded by the National Science Foundation, but also receives (financial) support from a great range of other public and private institutions.¹⁹ In general, the platforms that can be found in Appendix 2 that receive sponsoring or funding have a public and / or non-commercial mission.

¹⁸ <http://www.britishpathe.com/>

¹⁹ <http://www.teachersdomain.org/about.html>

Advertising

This type of business model is often combined with the free model, but can of course also function on its own. Advertising can be incorporated in the form of banners, adwords, or short clips that people have to watch before seeing the video they are interested in. The internal market survey (EUscreen, 2010) showed that most online video platforms that use advertising as a revenue model are commercial websites offering a wide variety of short clips (see Appendix 2). Although the market for online advertising is big, it “is still not supporting even those industries that increasingly depend upon it for survival”. (Maron et al., 2009, p. 2). Even Google, who acquired YouTube in 2006, was still trying to find a way to make the video sharing website profitable through advertising in 2008. (Google, 2008, p. 25) Another way of gaining revenue with advertising is to act as an intermediary between users or between a user and a company and to offer advertising space for a no-cure-no-pay principle. Social networks are also a powerful way of advertising, and revenue can be gained by rewarding people who use their network to promote a product or a service (Blom, 2010).

Advertising examples: YouTube, which sells a variety of advertising options, such as banners in videos, video ads screened before a video, banners in Channels etc. INA also uses advertising on its public, general website through banners.

Pay-per-download

If users want to download materials for (private) reuse, another option is to charge them a one-off fee per download. This can be done through micro payments that allow users to transfer a small amount for every download via payment methods like Paypal. Another option is to allow users to transfer a certain amount money to a local account, after which they can pay per download until their account is empty again. The advantage here is that people will not have to go through the whole transaction process every time they want to download materials. However, they might not want to transfer too much money into an account they might not use a lot. However, micro payments and transferring an amount of money to an account are not mutually exclusive - they can complement each other and both payment options can be offered. For larger money transfers, people could pay via credit card or be billed through their account. The key is to make any transaction very easy, to lower the threshold for users as much as possible.

Many stock footage websites for media professionals employ the pay-per-download revenue model. Per download, the media professional can indicate the type of license needed. So, the pay-per-download revenue model is often used in tandem with the licensing model (see Appendix 2). It is however mentioned here as a separate revenue model since it is a specific service that is not offered by all organizations that also provide licensing.

Pay-per-download examples: BBC Motion Gallery and Getty Images offer this service for media professionals, while INA offers the service for the general public.

Subscription

Subscription is a regular occurring feature on platforms, but, users are not always charged for this. Here we define subscription as a monetary transaction which allows users to access and use content and services for a specific time period. This model can be combined with the freemium model.

Subscription examples: Academia and ED*IT charge institutions for a fixed price per student and / or employee, who can in turn register for free if they can demonstrate their affiliation with the paying institution. British Pathé allows people to stream videos for free, but charges a monthly subscription fee to institutions that want unlimited, high-res access.

Donations

Non-profit platforms like Creative Commons and Wikipedia usually do not ask for a fee for the use of their services, but for financial donations by their users instead. Donations can be made through various payment methods, such as a traditional bank transfer or by sending a check, but donations via SMS and Paypal are possible as well. New types of donation revenue models are now also emerging. An example is yooook, a platform that “invents logistics for any professional digital or digitizable creation.” (yooook, 2010) One of their revenue models is called the Liberation poll. The content supplier can indicate the amount he or she would like to receive through donations. When this amount is reached, the content is released under a specified Creative Commons license, which ‘frees’ the content for public use.

Other interesting examples are Flattr.com and HumbleBumble. The first one acts as an intermediary between users who want to donate money and content parties. Users can indicate how much they want to spend on what and Flattr.com receives a fee after each transaction. HumbleBumble sells games, but buyers decide how much money they want to pay and how much of this money is donated to charity (Blom, 2010). Although this is a form of physical product sales, there is no fixed price and it is the user that decides the amount.

Donations example: WGBH received 12% of its total revenue via donations by individuals in 2008. (WGBH Annual Report 2008-2009, p. 15).

Physical product sales

Some platforms offer their users the option to buy books, DVD’s and CD’s that are related to their collections. Although media professionals can also buy physical copies of footage on Betacam or hard drives, this refers to materials that are meant for the consumer market.

Physical product sales examples: INA offers a multitude of products on its Boutique website²⁰. Users can buy CD’s, books and special DVD issues. Also, when users find footage on the INA website, they can order a custom DVD. WGBH Open Vault also provides users with the option to buy DVD’s to order for a small fee.

²⁰ <http://boutique.ina.fr/>



PART 2:

**ACCESS TO AUDIOVISUAL HERITAGE IN THE
EDUCATIONAL DOMAIN**

4 E-LEARNING

4.1 FROM TRADITIONAL LEARNING TO E-LEARNING

Various studies point out there is a major shift in forms of teaching and learning. A main characteristic of the new learning style is the shift from learning through content to learning through activity (Bang, 2008). Current students and pupils are part of the Net Generation (see for instance Beyers, 2009; Barnes et al., 2007; Carlson, 2005) or the V(irtual)-Gen(eration) (Proserpio, 2007). Barnes suggests that the current generation of students has an autonomous and independent attitude towards education and a need for non-traditional learning materials, like online video (Barnes et al. 2007). These forms of learning are also called e-learning. E-learning refers to the activity of learning through the use of ICT (Laurillard, 2004). This seems like a broad definition and can also relate to activities by students that do not have an educational scope, but where the student learns something. This could be the case with a regular computer game where the student trains its tactical skills. In the light of this report, we will therefore refer to e-learning as learning activities that contribute to the existing curriculum through the use of ICT. This definition can still refer to the use of non-pedagogical content, as long as the context is a pedagogical one.

The impact of e-learning compared to face-to-face learning has been intensely researched. The US department of Education conducted a large meta-analysis of 99 comparative studies and found that students had the best performance with a combination of e-learning and face-to-face learning. Students that used e-learning alone performed better than students that only had face-to-face learning (US dept, 2009). In Europe, e-learning is incorporated in various forms of schooling. Most of them are conventional schools where e-learning is blended with face-to-face learning. Virtual schools, which offer e-learning only, are becoming more popular as well, especially in higher education (Russell, 2006).

Digitised cultural heritage has huge potential as an online educational resource and contributes to intercultural understanding, but this kind of content must have the ability to be incorporated in learning activities and processes before its potential can be fully deployed (Bang, 2008). Brown et al. (2005) have analysed design issues that museums, libraries and archives have to address when designing an online environment for different target group. They distinguish three core target groups: the general public, researchers and schools. The researchers are regarded as experts who are able to make their own connections and create their own understandings while the general public is regarded as a group that lacks knowledge to create a meaningful interpretation of the collection themselves. The school is right in the middle of these two target groups, as shown in the model below:

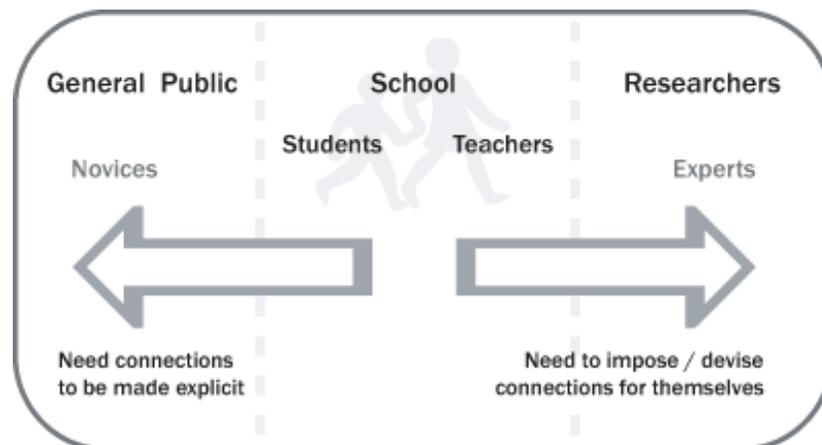


Fig. 7 Online target groups and their needs

According to this research teachers have more in common with researchers and can be regarded as an expert in their field, while students still have to acquire the knowledge (Brown et al. 2005).

Although teachers are marked as experts in their fields, they are not always experts in the use of e-learning. A study by Erica Boling (2008) found that e-learning is not automatically incorporated in the classroom due to technical issues and to difficulties in adapting a new teaching style. There may also be scepticism towards the quality and safety of online sources. According to this study, it is necessary to educate and guide teachers as well as students (Boling, 2008).

E-learning is often mentioned together with media literacy. Where e-learning mostly applies to primary, secondary and higher education, media literacy refers to all citizens. The European Commission has stated a recommendation to promote and stimulate media literacy. Because of the complex media landscape, “media literacy (...) is required to make informed choices and to provide the critical, evaluative skill necessary to navigate a complex and crowded audiovisual space.” (O’Neill, 2010, p.3).

There are various contexts in which media literacy is used:

- defining and measuring the ICT skills of citizens
- raising awareness about online safety and protection
- ability to access information (Buckingham, 2007)

In the policy of the European Commission, media literacy is also used in a fourth context: learning (O’Neill, 2010). In this sense, media literacy can be seen as a means to enable e-learning and to provide students and teachers with the critical skills they need to assess the online learning materials.

4.2 PLATFORM INVENTORY

Many educational platforms have been created to stimulate e-learning. An inventory of educational platforms has been made, based on the one made for the internal market survey (EUscreen, 2010) and a web search and an overview provided by ATiT (partner in EUscreen that is responsible for the user scenarios in education). This resulted in a list of 36 platforms from Europe and the United States. This list is narrowed down further by looking at the following criteria:

1. Platforms have to provide access to audiovisual content.
2. The primary goal of the platform is providing access to resources for educational sources. This excluded audiovisual stock platforms that could be used by educators and students, but do not have an educational focus.

This results in a non-exhaustive list of 29 platforms in various languages and aimed at various levels of education that can be found in Appendix 3.

Languages

Most platforms provide access in English (22), including multilingual access. The pie chart below shows the division in languages:

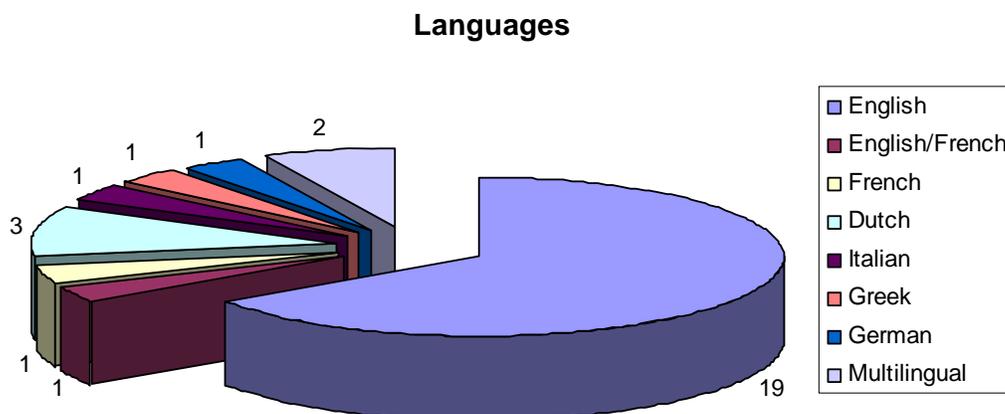


Fig. 8 Supported languages

The platforms that offer multilingual access are both European platforms developed as part of European Schoolnet²¹. This is a network of 31 Ministries of Education in Europe and beyond. Their aim is promote innovation in teaching and learning to relevant stakeholders. In a European context, multilingual access is essential, especially for languages like Dutch or Greek which are spoken by relatively small communities. These platforms are only accessible for a small group of users. For English language platforms, having multilingual access is less

²¹ <http://www.eun.org/web/guest/home>

of a factor, because of the widespread knowledge of English. This is however only the case for secondary and higher education students who learn foreign languages.

Levels

The inventory contains platforms for all three educational levels. Some of them are aimed at more than one level, but none of them combine primary education with higher education. This is not surprising, because the students have different needs (see section 1.1) There are platforms that address all user groups. The pie chart below shows the various combinations of these platforms:

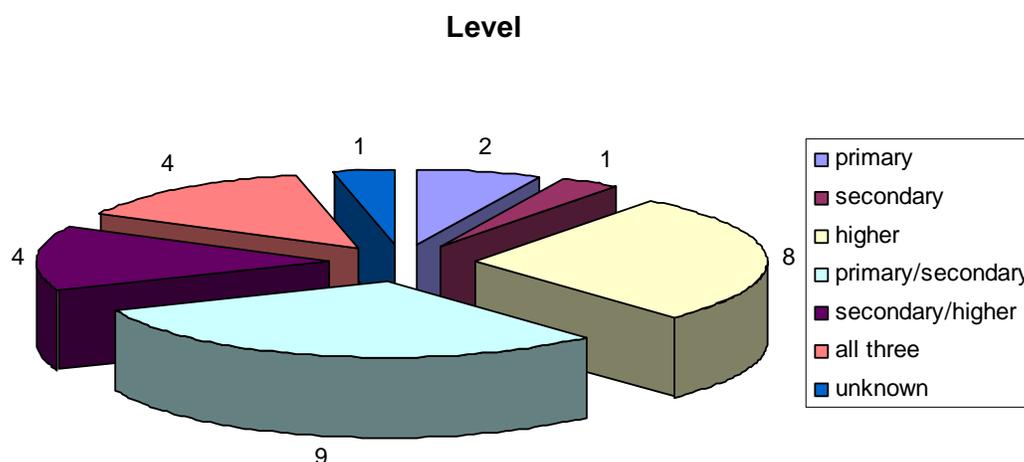


Fig. 9 Supported levels

The pie chart shows a balance between the platforms aimed at the K12 students (primary and secondary level) and higher education. There are 12 platforms in both categories. 4 platforms are aimed at secondary/higher education and 4 are aimed at all educational levels²².

4.3 VARIOUS APPROACHES FOR ANALYSIS

There are various approaches to analyse educational platforms (Graf & List, 2005), but there is not yet one consolidated approach (Ardito 2006). A search for case studies was carried out and the variety in results confirms these statements. Some of these analyses use usability guidelines as a basis to evaluate educational platforms (Ardito 2006, Chua & Dyson 2004). Another approach is the use of SCORM specifications (Garcia & Jorge, 2006). These specifications describe a standard for the development of e-learning environments that are mainly used by commercial platforms. Adaptivity is also an important element in the platform

²² One platform couldn't be analysed because it uses the Greek alphabet. Unfortunately, the authors of this deliverable are not capable of reading this.

analysis (Hauger & Köck 2007, Graf & List 2005). Both studies use a combined approach where they analyse the adaptivity of a platform, its functionalities, its learning content and its usability. These categories are divided into subcategories. The Hauger & Köck study uses a yes/no approach for every subcategory, e.g. a subcategory is either represented on the platform or not. The Graf & List study uses the Qualitative Weight and Sum Approach (QWS), which assigns a score to each subcategory. This allows for a more detailed analysis and is therefore used as a basis to create a suitable model for our own case study.

The QWS model uses symbols to assign a score to a subcategory. Every subcategory also has its own maximum score, so some subcategories have more weight than others (Graf & List 2005). To make the analysis more transparent, the symbols are translated into numbers, see the matrix below:

Original Symbol	New number	Meaning
E	6	Excellent
*	5	Very well supported
#	4	Well supported
+	3	Reasonably supported
	2	Hardly supported
0	1	Not supported

Using numbers instead of symbols makes it easier to calculate averages and final scores and it increases the readability of the scores. Although E/6 is mentioned here as a possible score, in practice, this maximum score is never assigned to the subcategories that are used. In the case study of Graf & List, the model is used to evaluate open source platforms. This case study however, does also include other platforms and deals primarily with access, so some of these subcategories (like technical aspects) are not very relevant in this respect and are left out. Some subcategories cannot be measured because they require access to the back-end. The list below shows all the original criteria and whether they are applicable or not.

Category	Subcategory	Applicable
Communication tools	Forum	Yes
	Chat	Yes
	Mail/Messages	Yes
	Announcements	Yes
	Conferences	No
	Collaboration	No
Learning objects (LOs)	Synchronous & asynchronous tools	No
	Tests	Yes
	Learning material	Yes
	Exercises	Yes
	Other creatable LOs	Yes
Management of user data	Importable LOs	Yes
	Tracking	No
	Statistics	No
	Identification of online users	Yes
	Personal user profile	Yes

Usability	User-friendliness	Yes
	Support	Yes
	Documentation	Yes
	Assistance	Yes
Adaption	Adaptability	Yes
	Personalization	Yes
	Extensibility	No
	Adaptivity	Yes
Technical aspects	Standards	No
	System requirements	No
	Security	No
	Scalability	No
Administration	User management	No
	Authorization management	No
	Installation of the platform	No
Course management	Administration of courses	Yes
	Assessments of tests	Yes
	Organization of course objects	Yes

Another modification to the model is the merging of the categories ‘management of user data’ and ‘adaption’ because these two are both dealing with the collection of user data. Although the adaption category is also connected to system requirements, it heavily relies on user data. For instance, if a user searches for a certain kind of video, this data is stored and other videos will be recommended based on this data. The ability of creating a user profile is also a form of system adaption based on user data therefore these two categories are merged. An example of the new model and the results of the analysis can be found in section 4.4.

The models described above, including the QWS model, lack the means to analyse the learning experience. To fill this gap, another model is used based on the conceptual framework by Diana Laurillard. Laurillard has linked learning experiences to various media forms and technologies (Laurillard, 2002). This framework has been used to analyse platforms with online collections and to set up requirements for various user groups (Brown et.al, 2005) and is useful as a framework for this case study as well. Laurillard distinguishes five learning experiences:

- Attending and apprehending: the learner as a passive recipient.
- Investigating or exploring: the learner engages with the material in an interactive way and decides when he or she is going to use the material.
- Discussing and debating: the learner exchanges ideas with others.
- Experimenting and practising: the learner enlarges his or her skills by experiments or exercises.
- Articulating and expressing: the learner communicates ideas through the creation of a product.

The learning experiences of the selected platforms are also analysed and the results can be found in the next section.

4.4 PLATFORM ANALYSIS

The adapted QWS approach and the learning styles will be used to analyse six platforms from the inventory of educational platforms. In every target group category (single or combined, see section 4.2.) one platform is selected. Four target group categories still contain more than one platform, so platforms from these categories are chosen randomly. The six selected platforms are:

1. ArtisanCam²³: primary education, English. The platform has been designed to help teachers in creating an arts curriculum and provides educational videos for children to develop their artistic skills.
2. Nanoyou²⁴: secondary education, multilingual. Funded by the European Commission's Seventh Framework Programme and aims to increase young people's basic understanding of nanotechnologies with videos, lessons, games and other kinds of content. The platform is aimed at secondary education. There are also activities organised for higher education, but these are independent from the platform.
3. Itunes U²⁵: higher education, English. With Itunes U, Universities and other institutes that support higher education can distribute their lectures through Itunes and create their own online space (either for students only or for all users)
4. ED*IT²⁶: primary/secondary education, Dutch. The platform offers access to content from Dutch cultural heritage institutions together with tools for students and teachers to create their own educational material from the content.
5. MoLeTV²⁷: secondary/higher education, English. MoLeTV is a media-on-demand service that encourages mobile learning with a focus on students and teachers in the UK. It is a collaboration between national institutions in the UK.
6. EduTube²⁸: primary/secondary/higher education, English. Educational platform that collects the best free online educational videos on the web. It offers tools to create channels and groups. The platform is moderated by an active community consisting of people working in the field of education.

Results of the QWS analysis

The table below shows the individual scores for each platform and each subcategory as well as the averages. The meaning of the scores can be found in section 4.3. The table has been split into two parts for readability purposes. The row with the maximum values displays the maximum score for each subcategory that can be granted to that specific category.

²³ <http://www.artisanacam.org.uk/>

²⁴ <http://nanoyou.eu/>

²⁵ <http://www.apple.com/education/itunes-u/>

²⁶ <http://www.ed-it.nu/>

²⁷ <http://www.moletv.org.uk/default.aspx?module=AllMovies>

²⁸ <http://www.edutube.org/nl/%252FAbout-edutube>

Category	Communication tools					Learning objects					Usability					
	Forum	Chat	Mail/Messages	Announcements	Average	Tests	Learning material	Exercises	Other creatable learning objects	Importable learning objects	Average	User-friendliness	Support	Documentation	Assistance	Average
Subcategories																
Maximum values	5	5	2	3	3.75	5	5	4	3	5	4.4	4	4	3	3	3.5
Artisancam	3	1	1	3	2	2	4	4	1	1	2.4	4	4	3	3	3.5
ED*IT	4	5	2	3	3.5	5	5	4	3	4	4.2	4	3	2	2	2.75
Edutube	5	1	1	2	2.25	2	3	2	2	3	2.4	3	4	3	3	3.25
Itunes U	1	1	1	3	1.5	2	4	2	1	4	2.6	4	3	3	2	3
MoLeTV	3	1	1	3	2	2	5	4	3	5	3.8	3	3	3	2	2.75
Nanoyou	5	1	2	3	2.75	4	5	4	2	2	3.4	4	4	3	3	3.5

Category	User data and adaption					Course management				Total average	
	Adaptability	Personalisation	Identification of online users	Personal user profile	Adaptivity	Average	Administration of courses	Assessments of tests	Organization of course objects		Average
Subcategories											
Maximum values	5	4	3	4	5	4.2	3	4	4	3.67	3.9
Artisancam	1	1	1	1	1	1	2	1	3	2	2.18
ED*IT	4	4	3	3	2	3.2	3	1	4	2.67	3.26
Edutube	3	3	3	4	2	3	1	1	3	1.67	2.51
Itunes U	5	4	3	4	2	3.6	2	2	3	2.33	2.61
MoLeTV	4	3	3	4	2	3.2	2	2	4	2.67	2.88
Nanoyou	3	1	1	1	1	1.4	3	4	4	3.67	2.94

All platforms, except one (3.26) have an average score between 2 and 3. This is well below the maximum score average of 3.9. The platforms can be ranked accordingly as follows:

1. ED*IT
2. Nanoyou
3. MoLeTV
4. Itunes U
5. Edutube
6. Artisancam

This analysis of platforms provides insight in the strengths and weaknesses of the individual platforms and educational platforms in general. By comparing the average maximum score, the average highest score and the average lowest score of the different categories, we see that all platforms score well on usability and communication tools. The user data and adaption category on the other hand, all have relatively low scores. An explanation for this could be the complexity: creating a truly adaptive learning environment requires both the option of personalisation and an automatically adjustment of the system based on the user interaction.

Results of the learning styles analysis

The same platforms are also analysed by looking at the learning styles. An ideal educational platform supports all five learning styles (Brown et al. 2005). A yes/no approach is used to see if learning styles are supported:

Yes = x

No = blank

	Learning styles				
	Attending & apprehending	Investigating & exploring	Discussing & debating	Experimenting & practising	Articulating & expressing
Artisancam	x		x	x	x
ED*IT	x	x	x	x	x
Edutube	x	x	x	x	
Itunes U	x			x	
MoLeTV	x	x	x	x	x
Nanoyou	x	x	x	x	x

The two platforms that had the highest score in the QWS analysis, ED*IT and Nanoyou, support all learning styles, together with MoLeTV. The other three platforms only support some of the learning styles, so in practice not every platform is entirely in line with the ideal model. Learning styles that are supported by all platforms are ‘attending & apprehending’ and ‘experimenting & practising’. The first one applies to the more traditional form of learning where learners are passively educated, while the latter applies to the more innovative approach that e-learning represents (see section 4.1).

5 VALUE PROPOSITION AND REVENUE MODELS IN EDUCATION

5.1 CREATING VALUE WITH EDUCATIONAL PLATFORMS

Section 3.4 describes the general value proposition for archives and cultural institutions that offer audiovisual content. This resulted in five value propositions for EUScreen:

- The status of the archive, its authority and the authenticity it can provide.
- Central storage of unique resources, in this case audiovisual heritage.
- Multilingual access and use of audiovisual (television) content and metadata.
- An interoperable platform that offers centralised access to various collections.
- Contextualisation: in-house professionals can provide much needed context –this is a key resource for audiovisual archives.

The EUScreen platform will be built for various user groups and the value propositions described above apply to all these user groups. The platform inventory that was done for the internal market survey (see Appendix 2 and EUScreen, 2010) included only three platforms that address all EUScreen user groups. Two of these (Video Active and Prelinger Archive) provided one access point for all user groups and did not include special tools for students or teachers. The third one (WGBH) used various access points and the educational platform WGBH Teachers Domain is included in the educational platforms inventory (Appendix 3).

The results of the analysis in chapter 4 can be used to extract the specific value propositions for platforms that address the educational user group. Compared to other platforms with audiovisual content, educational platforms distinguish themselves by the kind of content and tools they offer. This can be regarded as a value proposition. Because of the shift from traditional learning to a more active form of learning where interaction with the content is just as important as the content itself, the offered learning experience is another value proposition.

Value proposition 1: Tools and content

In the QWS model, all functionalities are important, but some are more important than others and a ranking with a short description is made below:

1. Availability of learning objects: this includes high quality content as well as tests and the ability for students and teachers to create and import their own learning objects. The possibility to interact with the content creates real educational value.
2. Tools to adjust the platform to the user's personal needs: the user here can be either regarded as an actual person or as an institution that is able to create its own working space and to manage its own content and access.
3. Tools to communicate with other students and teachers.
4. A clear organization of courses including test assessments.

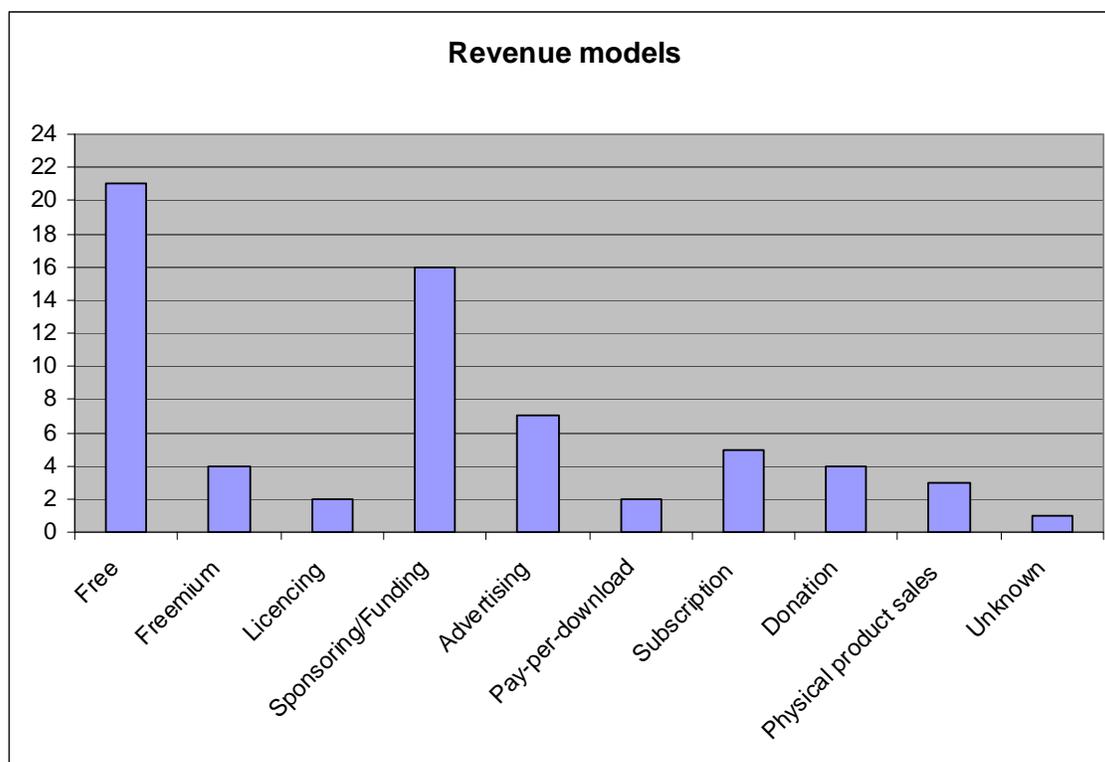
Usability is also important in the QWS model, but this applies to all forms of (web) applications and is therefore not a specific feature of educational platforms.

Value proposition 2: Learning experiences

The most important need of users of educational platform is to be educated, so it is essential that educational platforms offer some form of learning experience. All five learning experiences as described by Laurillard (Brown, 2005) are equally valued. A real value proposition for an educational platform would be to offer tools and content which support all five learning experiences.

5.2 OCCURRING REVENUE MODELS

A full overview of the different platforms and the revenue models they use can be found in Appendix 3. The models that have been discussed in section 3.5 are used as a starting point to classify the different models. The graph below shows the results.

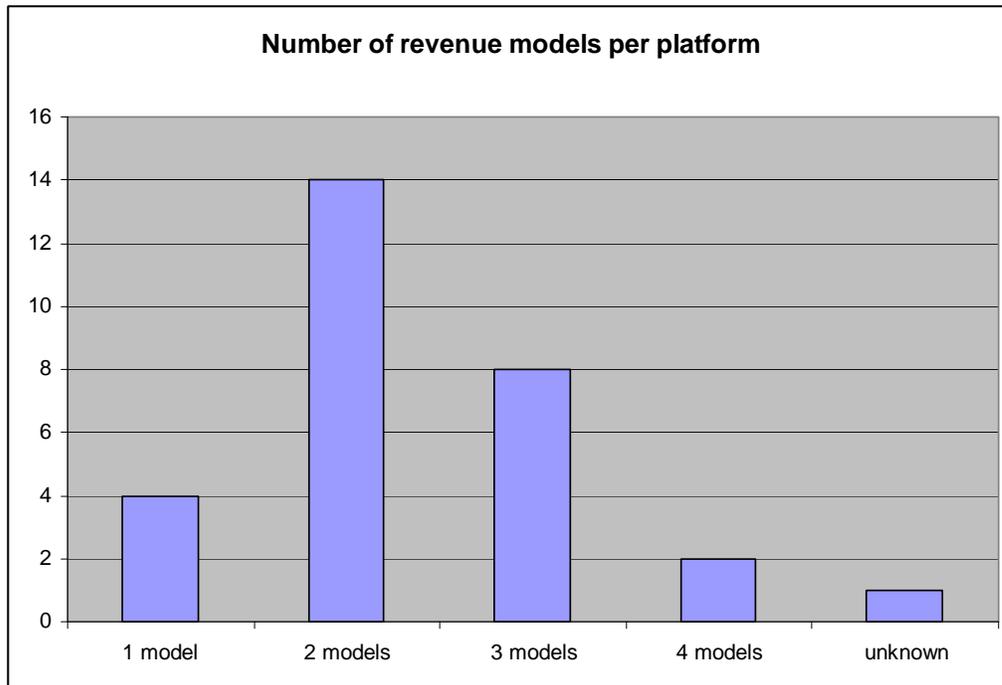


Graph 10 Occuring revenue models²⁹

The amount of revenue models (65) encountered in the inventory is far higher than the number of platforms (29) since many combine various models. 21 platforms offer free access and although this is listed as a revenue model, free access alone will not gain revenue. Therefore, these platforms also use sponsoring and funding (12), advertising (6), donations (4), physical product sales (2), freemium (2), licencing (1) and pay-per-download (1). The sponsoring and funding (16) often comes from national bodies, national departments of education, other educational institutions and sometimes the European Commission. Platforms that do not provide free access use subscription (5) or freemium (2) as a model to provide access.

²⁹ Unknown refers to the Greek platform that could not be further analysed due to language issues.

Most platforms use more than one revenue model, see the graph below:



Graph 11 Number of revenue platforms³⁰

The analysis of the use of revenue models by platforms with audiovisual content in general showed that many platforms combine various revenue models (see section 3.5) and this also appears to be the case for educational platforms. Based on these findings, it can be concluded that most educational platforms offer free access to their content and use additional models to gain revenue.

5.3 ALTERNATIVE REVENUE MODELS IN EDUCATION

Free after subscription

The platform analysis also found other revenue models, which were not foreseen in the list of possible revenue models. There are three platforms that use a free-after-subscription policy. This means that access is free, but only after free subscription, which is limited to teachers, students and other members of educational institutions. This allows platforms to publish material online that can be accessed for educational and research purposes but not for other kinds of use. Although this revenue model has a lot in common with the regular subscription model, it differs in the sense that access stays free, while the general subscription model requires a fee. Two platforms have a slightly different approach: they allow broadcasters and educators to subscribe for free so they can contribute content. Users can access the content without subscribing first.

³⁰ Unknown refers to the Greek platform that could not be further analysed due to language issues.

Examples of free after subscription: Screenonline, Education Highway, Teleblik all offer free-after-subscription. Athenaweb and MoLeTV offer a free upload account after subscription.

Crowdfunding

One platform (Canal Educatif) used crowdfunding as a revenue model. With crowdfunding, users are invited to donate money in order to realise the creation of content. In the case of this platform crowdfunding is used for the realization of educational videos. This kind of revenue may seem like donation but it differs in the sense that regular donation happens after the content is created. Users already know for which content they are paying. In the case of crowdfunding, it may very well be that the creation of a certain video, song or film never happens because lack of donations by others. Crowdfunding is a relatively new way of generating revenue and heavily relies on the use of social media (Belleflamme et. al. 2010).

Examples of crowdfunding: Canal Educatif uses crowdfunding for the creation of educational videos. Examples outside the educational field are Vodo³¹, Quirky.com³², Kickstarter³³ and the Blender Company³⁴. The latter also relies on other revenue models like funding.

5.4 LESSONS FOR EUSCREEN'S EDUCATIONAL SCENARIO

Based on the findings in this document, it is possible to list the strengths and weaknesses of EUScreen and their provision of access to the educational user group. EUScreen is already past its first phase of design, so current developments in the project regarding user requirements and the portal itself also need to be taken into account.

³¹ See: <http://vodo.net/>

³² See: <http://www.quirky.com/>

³³ See: <http://www.kickstarter.com/>

³⁴ See: <http://www.blender.org/>

SWOT analysis

<i>Strengths</i>	<i>Weaknesses</i>
<p>Content</p> <ul style="list-style-type: none"> • Unique, high-quality content from reliable sources. • Reliable contextual information. • Multilingual content and access. • A part of the collection will be offered under a CC-licence. <p>Tools</p> <ul style="list-style-type: none"> • Ability to communicate with other students and teachers. • Personal workspace. • Creation of learning objects. <p>Supported learning styles</p> <ul style="list-style-type: none"> • Attending and apprehending. • Investigating or exploring. • Articulating and expressing. 	<p>Content</p> <ul style="list-style-type: none"> • Lack of subtitles in various languages. • Contextual information needs to be adapted to a specific curriculum. • Content is limited to certain subjects and does not necessarily have a full educational scope. <p>Tools</p> <ul style="list-style-type: none"> • Most videos cannot be downloaded. • No opportunities to import own learning objects. <p>Learning styles not supported</p> <ul style="list-style-type: none"> • Experimenting and practising. • Discussing and debating.
<i>Opportunities</i>	<i>Threats</i>
<ul style="list-style-type: none"> • Demand for the use of online audiovisual content in the classroom. • Growing market with users who have access to the Internet. • Growing realization of the importance of media literacy amongst policy makers and educational bodies. 	<ul style="list-style-type: none"> • Intellectual Property Rights (which limit the ways in which the content can be used). • Competition (other initiatives that offer a comparable service and focus on education alone).

Strengths

Teachers are looking for reliable sources on reliable platforms and EUscreen provides this through its consortium of well-known archives and Universities. Teachers and students have access to the original metadata from the archives and a lot of this content cannot be found elsewhere. Access to the portal is multi-lingual and there is content available in almost every European language, which also makes the portal accessible to non-English speakers. The analysis of the educational platforms showed that only a few provide multilingual access, so this would be an attractive feature of EUscreen. Also, a part of the collection will be published under a Creative Commons licence.³⁵ This enables students and teacher to download this content to create their own learning objects.

EUscreen will offer various tools, like allowing users to comment and for teachers and students to communicate with others. But EUscreen does not offer a space were users can chat with one another. The platform will contain tools to create playlists and virtual exhibitions. These can also be used to create learning objects. The results of these activities

³⁵ Creative Commons has developed a number of variations on its licence that specify the terms of use. Which of these will be used for EUscreen still remains a question.. The different licences can be found on <http://creativecommons.org/licenses/>

can be stored in a personal workspace. The tools and content that will be available on EUscreen support three out of five learning styles: attending & apprehending, investigating & exploring and articulating & expressing.

Weaknesses

Since education is only one of the EUscreen user groups that will be addressed through the portal, the content and the contextual information are not specifically adapted for education. The same applies to available functionalities. This weakness is already foreseen during the construction of the initial user requirements. The research regarding the user requirements is done in work package 5 and in the first internal deliverable, it was concluded that: “it becomes clear that some essential educational functions are difficult to represent in EUscreen.” (D5.1, 2010, p.27) The contextual information and the content have no explicit link to existing educational curricula, so that teachers and students have to decide for themselves if content is relevant for their learning experience. However, this does not necessarily have to be a weakness: the shift in learning styles enables students and teachers to use content as learning objects that were originally not intended to be one.

A lack of subtitles is a more serious weakness, because it makes content largely inaccessible for students and teachers who have not mastered a particular language. Another weakness could be that there is no content available for all courses and curricula. For instance, there will be enough content that is suited for a subject like geography, but hardly any content to support mathematics. The lack of a function for students and teachers to download most of the content and to upload their own content makes it harder to use the content in the classroom. Also, with the current functionalities that are planned the learning styles experimenting & practicing and discussing & debating are not supported. As was concluded from the platform analysis, a number of educational platforms do support all learning styles and this could make EUscreen less attractive.

Opportunities

The analysis of the general trends and the trends in education showed that there is a growing market of users who have access to the Internet and that e-learning is increasingly becoming part of the regular curriculum. There is a need for high-quality platforms that offer reliable content that can be used for education, particularly a platform like EUscreen which focuses on television heritage and which contributes to the increase of media literacy amongst users.

Threats

Competition will always be a threat, especially in the field of education where there are already many platforms offering these kind of services. Another threat to EUscreen is IPR legislation (see section 1.4), which is different for every country and they create limitations for providing access to audiovisual content.

Suitable revenue models

Based on the findings in this deliverable, a list of suitable revenue models can be made.

- Free: EUscreen will provide free access to audiovisual content to members of all user groups. There is an opportunity to subscribe and to create a personal account, but this is also free.



- Sponsoring/Funding: EUscreen is funded by the eContentplus programme of the European Commission and this enables free access. After the funding period, the sustainability costs will be shared by the consortium partners.
- Free-after-subscription: this free revenue model could be applied for educational users. IPR legislations are more flexible in the educational domain than in other domains and this revenue model could enable EUscreen to allow users to download videos for educational use.

Other revenue models that could be considered after the funding period are donations and crowdfunding. EUscreen also offers a platform for the contributing archives to create revenue through licensing and physical product sales.

CONCLUDING REMARKS

The main findings of this report provide input for the development of the EUscreen portal as well as input for other, similar projects. Section 5.4 Lessons for EUscreens' educational scenario has clustered and summarized the results for an educational setting. However, there are still a few remarks that need to be addressed.

General observations for the cultural field

Although large digitisation projects have begun and are underway, only 5.4% of the institutions in the cultural field have actually started digitising their content. A lot still needs to be done to increase access to cultural heritage in general and audiovisual heritage in particular. Another problem is the territorial restriction of rights. There is a need for a European or even a global licencing model. Internet access and use is increasing in Europe, but there still is a gap between countries. In some European countries, access is still limited to a small part of the population.

Observations for EUscreen

Currently, the EUscreen platform is being developed for more traditional Internet use (e.g. on a computer or laptop). The trends show an increase in the use of mobile video, which has its own specific requirements. This has not yet been taken into account and this might be too ambitious for the next two years of EUscreen, but there are opportunities for a platform like EUscreen in that market segment.

Another important issue which has emerged is the issue of using and reusing content. The digital content lifecycle defines end-user access by the steps discovering and using & reusing the content. Currently, EUscreen plans to mainly offer tools to discover the content, but because of copyright restrictions, the content cannot be downloaded, shared or reused. However, the research in this report shows a need for this kind of access. This need is partly fulfilled by the experiments with a collection that enables the creation of open culture productions. Still, this remains an issue for critical thought, not only for EUscreen but for other projects and institutions as well.

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- Creative Commons. <http://creativecommons.org/licenses/>
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Open Images. <http://www.openimages.eu>

Quirky.com. <http://www.quirky.com/>

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TED. <http://www.ted.com/>

Vodo. <http://vodo.net/>

Waisda? <http://waisda.nl> NOTE: The game is temporarily offline and the creators are working on a new version.

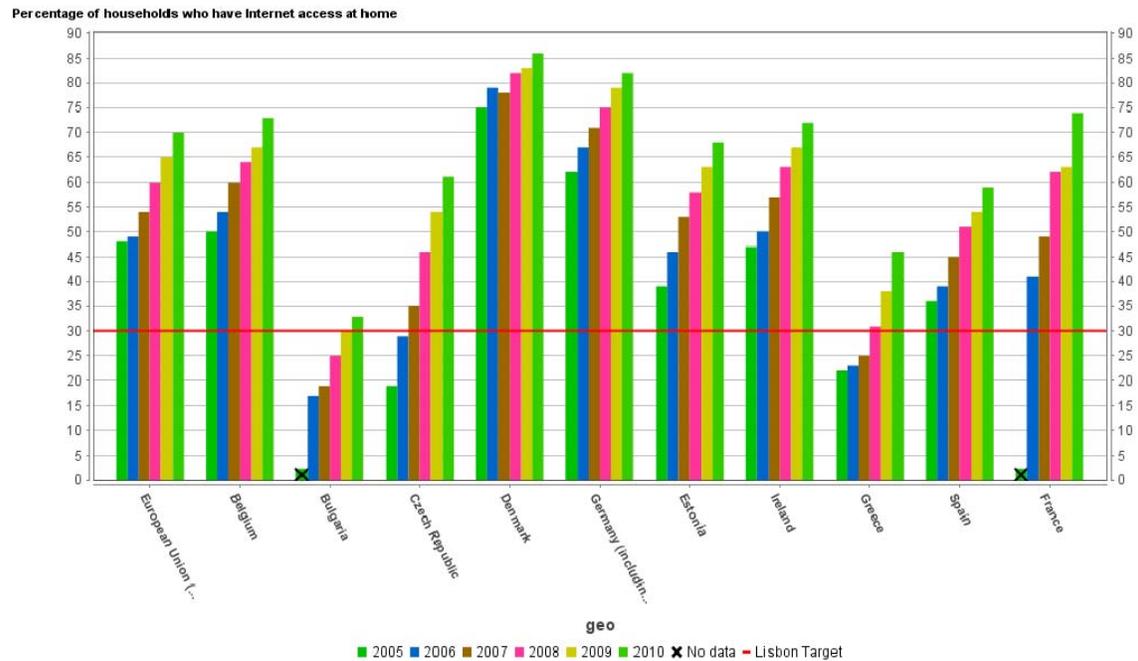


APPENDICES

APPENDIX 1: STATISTICS

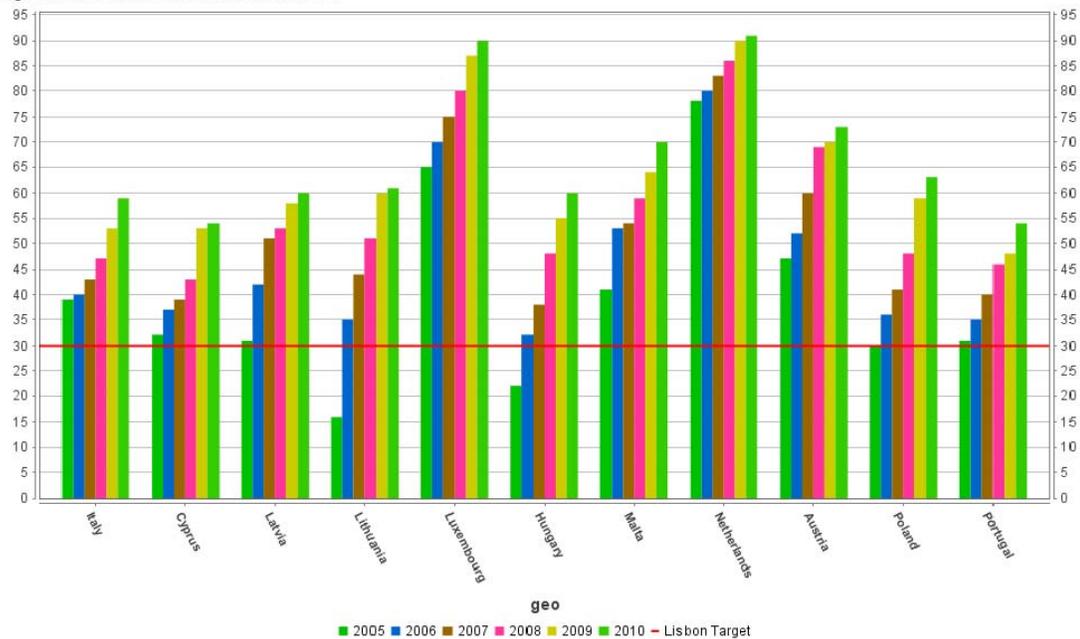
This Annex contains the statistics from the European Union and the individual European countries (also those that are not part of the EU) that are used in chapter 2. The graphs are generated from data from Eurostat. For readability purposes, the graphs are split into three separate graphs (a-c).

Graphs 1a-1c. Households with Internet access at home



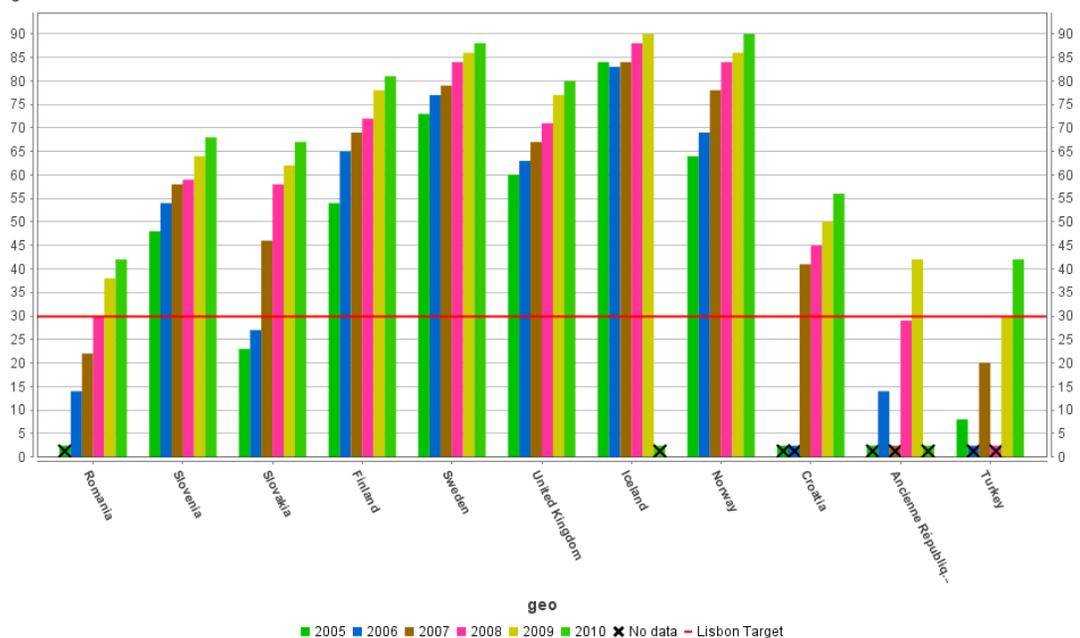
Graph 1a

Percentage of households who have Internet access at home



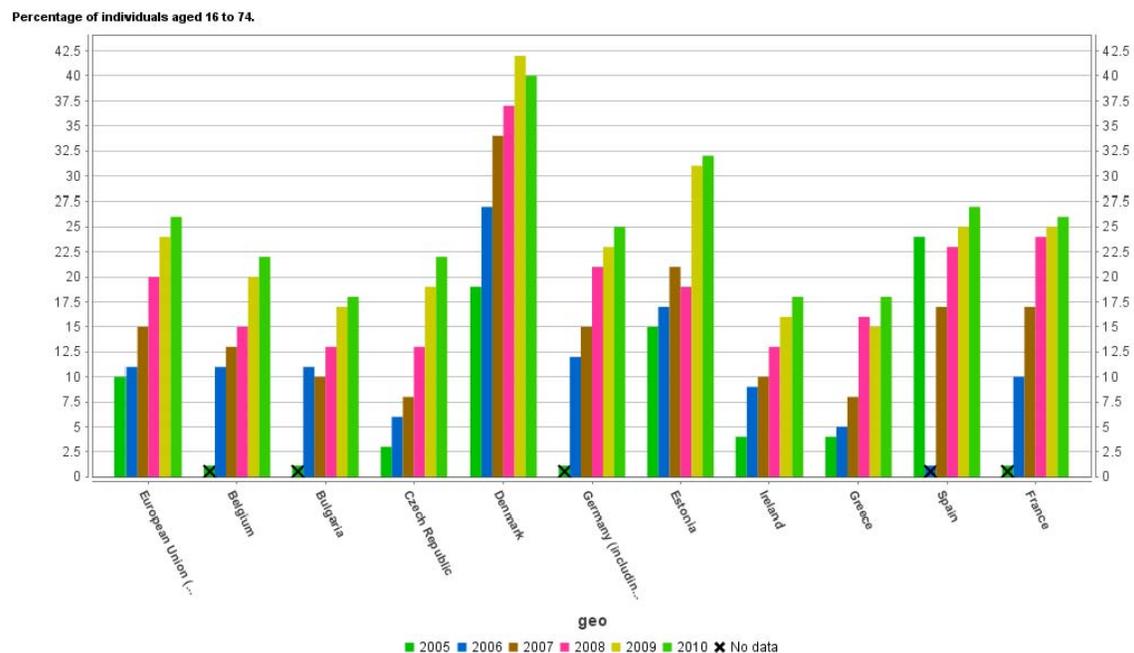
Graph 1b

Percentage of households who have Internet access at home

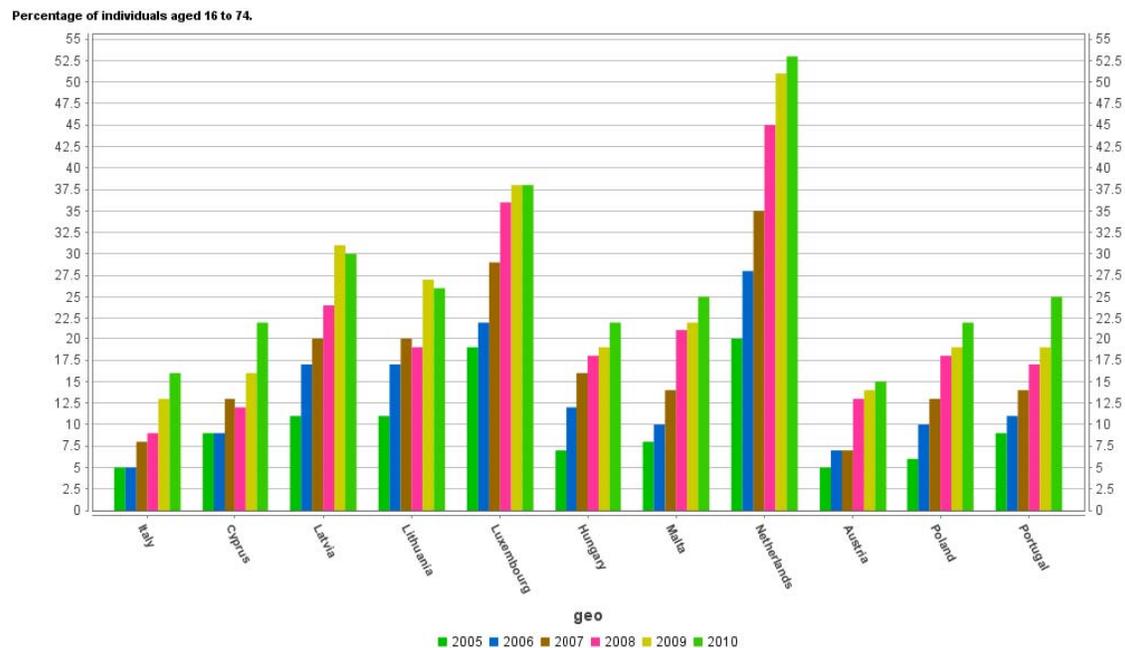


Graph 1c

Graphs 2a-2c. Individuals using the Internet for listening to web radio/watching web television. (The terms web radio and web television are not clearly defined by Eurostat.)

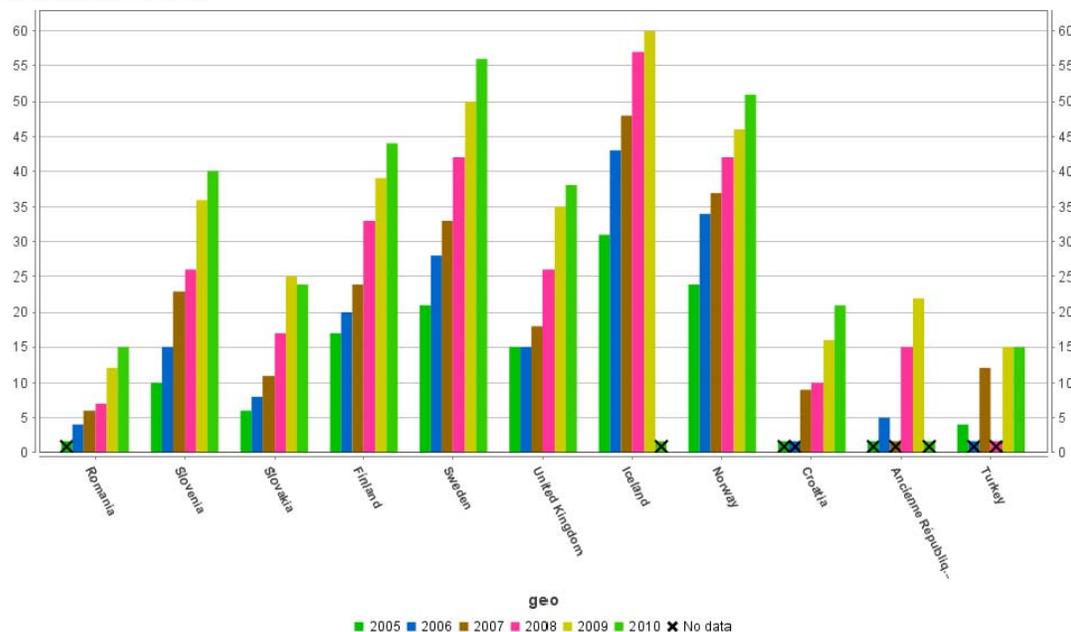


Graph 2a



Graph 2b

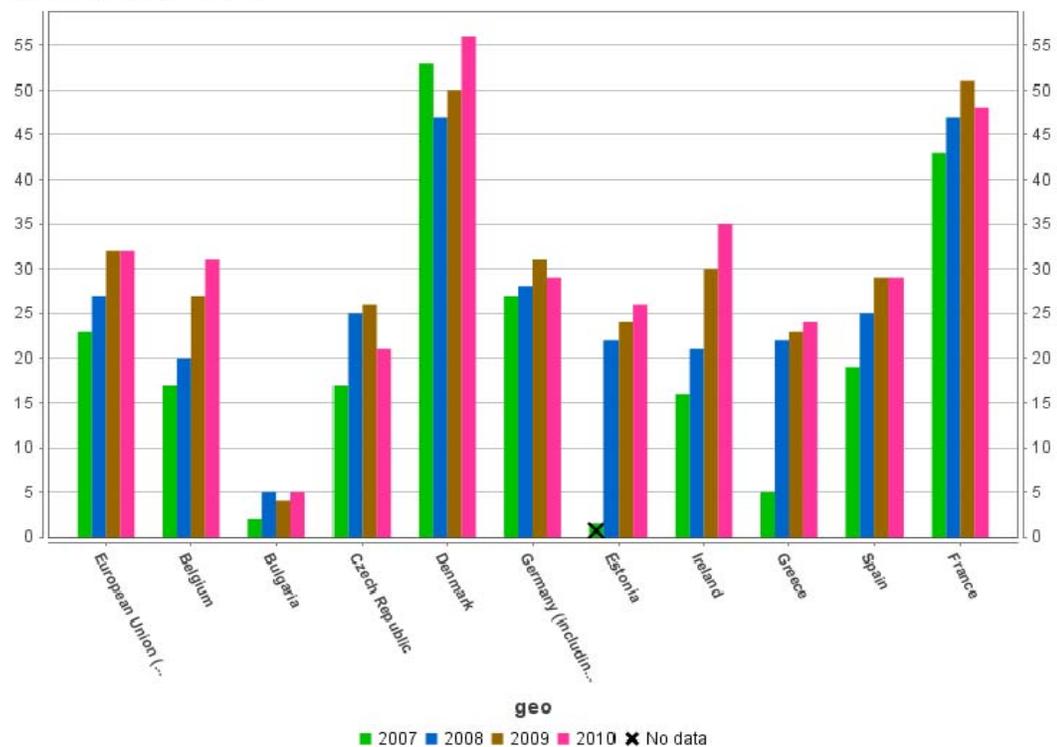
Percentage of individuals aged 16 to 74.



Graph 2c

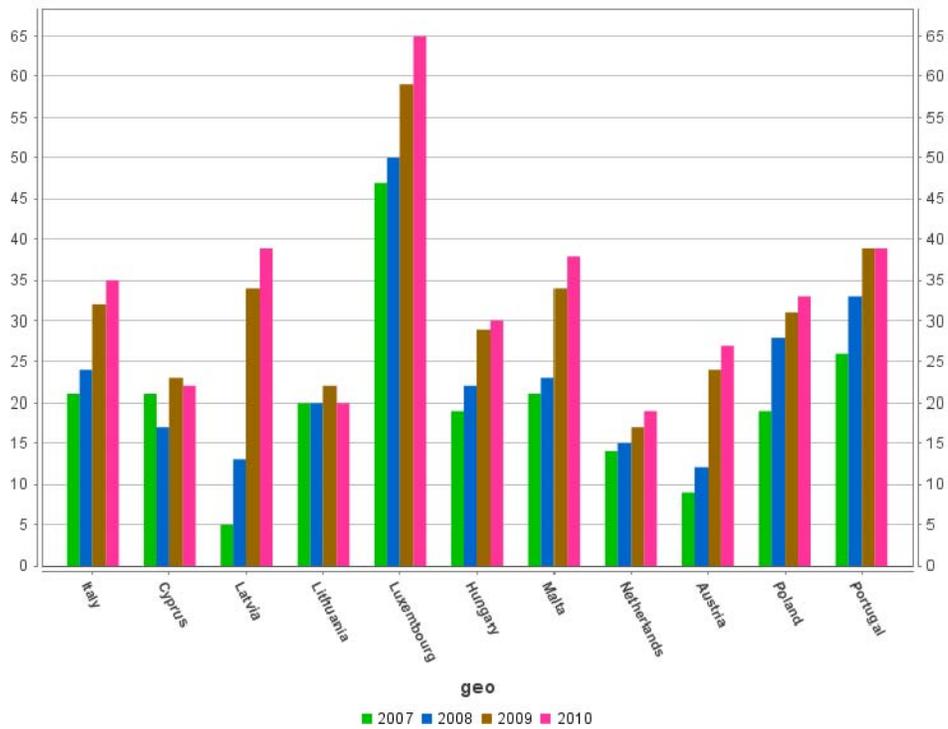
Graphs 3a-c. Individuals using the Internet for seeking information with the purpose of learning. (Learning is not further defined by Eurostat.)

Percentage of individuals aged 16 to 74.



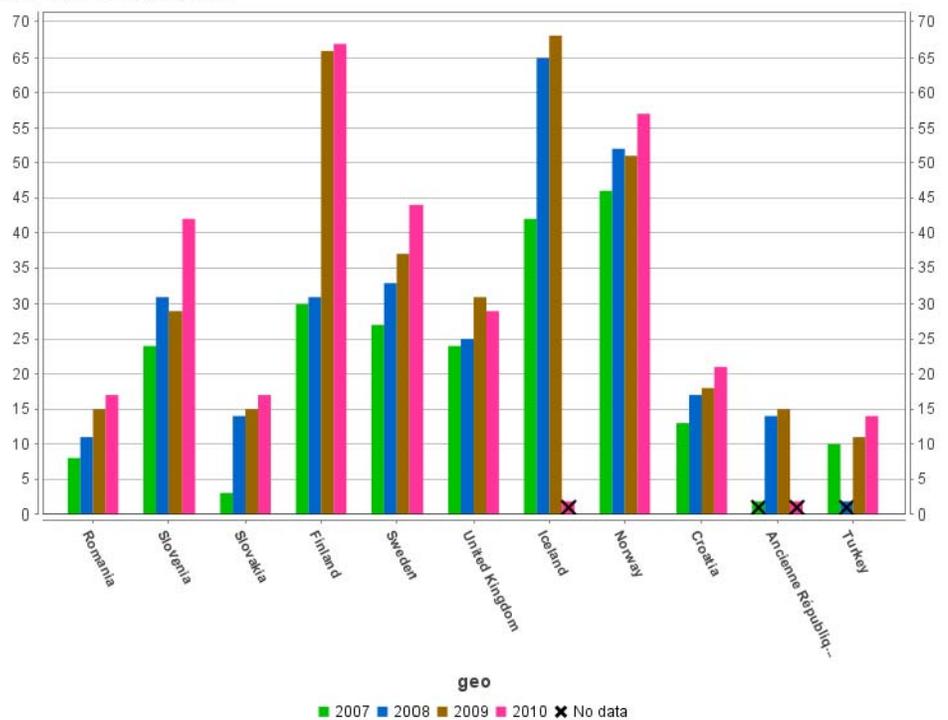
Graph 3a

Percentage of individuals aged 16 to 74.



Graph 3b

Percentage of individuals aged 16 to 74.



Graph 3c



APPENDIX 2: OVERVIEW OF THE PLATFORMS

Video platform	Type of content	Online access	Main target users	URL	Use	Revenue model
Academia	Contains over 25,000 television, radio and film production clips. Platform is specifically developed for higher education.	Fee for students and teachers. Online watching.	Education and research	http://www.academia.nl/	Watch Share Contextualise Re-use	Subscription (yearly, price per student / employee)
AP Archive – Associated Press Archive	Contains over 500,000 stories: coverage from news to entertainment to sport to the natural world.	Free access to search and metadata. Access to videos after registration.	Media professionals	http://www.aparchive.com/	Watch Re-use	Free, Licensing
BBC Motion Gallery	BBC Motion Gallery is the BBC's agent for the licensing and all footage from its archive.	Online database (free preview low res).	Media professionals	http://www.bbcmotiongallery.com/	Watch Re-use	Pay-per-download, Licensing



BFI Screenonline	Educational platform from the British Film Institute containing film productions.	Free subscription for schools, universities and libraries.	Education and Research	http://www.screenonline.org.uk/	Watch Share	Free subscription for UK educational organisations, Funding
Blinkx	Video search engine fed by automatic spiders that crawl the web for audio and video content.	Free online database.	General public	http://www.blinkx.com/	Watch Share	Free, combined with Advertising
British Pathé	News, sport, social history and entertainment from 1896 to 1970.	Online database (free preview low res).	Education and research Media Professionals Cultural Heritage institutions	http://www.britishpathe.com/	Watch Share Re-use	Freemium (Free combined with Subscription (for MLA Accredited organisations), Licensing
CNN ImageSource	Video collection of news, entertainment and lifestyle images.	Free lowres viewing. Highres material available for professional re-use.	Media professionals	http://imagesource.cnn.com/	Watch Re-use	Free (with watermark), Licensing



Corbis Motion	Stock footage moving images: people, lifestyles, business and technology, nature and wildlife, travel, time lapse, CGI and sports.	Online viewing en browsing. Paid re-use.	Media professionals Cultural Heritage institutions	http://www.corbismotion.com/	Watch Re-use	Free, combined with Licensing
ED*IT	Educational database with footage, images and educational material.	A small fee for every student and pupil is required .	Education (primary and secondary).	http://www.ed-it.nu	Watch Share Contextualise Re-use	Licensing, Subscription costs per student per year
Gaumont Pathé Archives	Political, economic, cultural and sports events in France and worldwide from 1895 to today.	Online search database, watching after registration.	Media professionals Cultural Heritage institutions	http://www.gaumontpathearchives.com	Watch Re-use	Free, Licensing
Getty Images	Broad collections of imagery and footage - including news, sport and entertainment content, plus rare and contemporary archival imagery.	Free lowres viewing. Highres material available for re-use.	Education and research Media Professionals Cultural Heritage institutions	http://www.gettyimages.com/	Watch Re-use	Free (with watermark), combined with Licensing, Pay-per-download and Subscription
Google Video	Search engine for online video.	Online video	General public	http://video.google.com	Watch	Free, combined with Advertising



INA – Institut national de l’audiovisuel	More than 25 000 hours of French television and radio.	Access to online database via user-id and password.	General public	http://www.ina.fr/	Watch Share Contextualise	Free, combined with Advertising, Licensing, Subscription and Physical Product Sales
_ INA - Inamediapro	The whole INA archives.	Free access after verified registration.	Media professionals	http://www.inamediapro.com/	Watch Re-use	Free, combined with Licensing
Internet Archive	Classic full-length films, daily alternative news broadcasts, cartoons, concerts, home movies.	Free access, and often free download.	Education and Research General public	http://www.archive.org/details/movies	Watch Re-use Contextualise	Free, combined with Donations and Sponsoring
ITN Source	Spans three centuries from 1896 to present day: represents television and film archives including British Pathé, ITN, Reuters Television, Fox News, and Channel 4.	A part of the collection can be viewed online.	Media professionals	http://www.itnsource.com/	Watch Re-use	Free (with watermarking), Licensing, Pay-per-download



NBC News Archive	60 years of TV news programmes: 75 years of radio: covering subjects like biographies, science, politics, arts, music, pop culture and business.	Access to online database via user-id and password.	Media professionals	http://www.nbcnewsarchives.com	Watch Re-use	Free (with watermarking), Licensing, Pay-per-download
Prelinger Archive	Over 2,000 films online: "ephemeral" materials, such as advertising, educational, industrial, and amateur films.	Free access	Education and research Media professionals Cultural heritage General public	http://www.archive.org/details/prelinger	Watch Contextualise Re-use	Free, Licensing (via Getty Images)
Screenocean	20 years of programme and film clips from Channel 4: includes music and arts, animation, documentaries, history, current affairs, comedy, science, nature, light entertainment, youth, culture.	Registered use: Searching and viewing content. Use of workspaces where users can store and share clips	Media professionals	http://www.screenocean.com/	Watch Re-use	Free, combined with Licensing



Studio Hamburg	Newsreels of ARD and NDR TV archive footage: since 1952: covering documentaries, light entertainment shows, music, culture, science, children's programmes: 800 hours of international rock and pop music, 10.000 music clips dating back to the mid-60s.	Online database, preview after registration.	Media professionals	http://www.studio-hamburg-archive.de	Watch Re-use	Free, combined with Licensing
Teleblik	Educational platform with videos for primary and secondary education.	Free access to watching and editing of Dutch public broadcasters' material.	Education (primary and secondary).	http://www.teleblik.nl/	Watch Share Contextualise Re-use	Free (for schools, after free registration)
UbuWeb	Avant-garde materials, among which are video and sound recordings.	Free	Education and research General public Cultural heritage institutions	http://www.ubu.com/	Watch	Free, combined with Sponsoring



Uitzending Gemist	Online video portal of the Dutch public broadcasters	Free access to (mostly recent) television broadcasts	General public	http://www.uitzendinggemist.nl/	Watch Share	Free, combined with Advertising, Sponsoring/Funding
Video Active	Predecessor of Euscreen	Free	Education and research Media professionals Cultural heritage General public	www.videoactive.eu	Watch	Free, Funding
WGBH	Four different platforms with specific content for each user group.	Free and paid access.	Education and research Media professionals Cultural heritage General public	See various portal URL's below	Watch Share Contextualise Re-use	See below
_ WGBH Lab	Diverse content, such as anthropological material, nature footage and historical images.	Free materials available for creative re-use.	Education and research Cultural heritage General public	http://lab.wgbh.org	Watch Share Contextualise Re-use	Free, Donations, Funding
_ WGBH Open Vault	Public television		Education and research General public	http://openvault.wgbh.org	Watch Share	Donation, Sponsoring



_ WGBH Stocksales	Public television from the 1950s to now	Free thumbnail viewing, more functionalities after registration.	Media professionals	http://www.wgbhstocksales.org/	Watch Re-use	Free (with watermark), Licensing
_ WGBH Teachers' Domain	Public television	Free for educational organisations	Education and research	http://www.teachersdomain.org/	Watch Re-use	Free, Funding
YouTube	Consumer media company for people to watch and share professional and user-made videos.	Free online database.	General public	http://www.youtube.com/	Watch Share Contextualise	Free, combined with advertising
ZDF.archive	Television material and stock footage.	Free online database.	Media professionals	http://www.clips.zdf-archive.com/	Watch Re-use	Free (with watermarking), Licensing



APPENDIX 3 EDUCATIONAL PLATFORM INVENTORY

No.	Name	URL	Primary education	Secondary education	Higher education	Language	Free	Freemium	Licensing	Sponsoring/funding	Advertising	Pay-per-download	subscription	Donations	Physical product sales
1	Academia	http://www.academia.nl/		x		nl							x		
2	ArtisanCam	http://www.artisancam.org.uk/	x			en	x			x					
3	Athena Web	http://www.athenaweb.org/			x	en	x			x					
4	BFI Screenonline	http://www.screenonline.org.uk/		x	x	en	x			x					x
5	British Pathé	http://www.britishpathe.com/			x	en	x	x	x						
6	Canal Educatif	http://www.canal-educatif.fr/		x	x	fr/en	x			x				x	
7	Discovery Education	http://www.discoveryeducation.com/	x	x		en		x			x				x
8	ED*IT	http://www.ed-it.nu/	x	x		nl			x				x		
9	Education Highway	http://www.eduhi.at/	x	x		de	x				x				
10	EduTube	http://www.edutube.org	x	x	x	en	x								
11	Espresso Education	http://www.espresso.co.uk/	x	x		en							x		
12	EuroCreator	http://www.eurocreator.com/		x	x	multi				x			x		
	Greek Educational TV (problem with reading the greek alphabet here)	http://www.edutv.gr/	Un- known	Un- known	Un- known	gr									
14	Internet Archive	http://www.archive.org			x	en	x			x				x	



15	Itunes U	http://www.apple.com/education/itunes-u/			x	en	x				x		
16	Le Site	http://www.lesite.tv/	x			fr			x		x	x	
17	MIT Open Course Ware	http://ocw.mit.edu/index.htm			x	en	x		x	x			x
18	MoLeTV	http://www.moletv.org.uk/		x	x	en	x		x				
19	Nanoyou	Http://nanoyou.eu http://www.planet-		x		multi	x		x				
20	Planet Scicast	scicast.com/about_scicast.cfm	x	x	x	en	x		x				
21	RAI Education	http://www.educational.rai.it/	x	x	x	it	x				x		
22	School Tube	Http://www.schooltube.com	x	x		en		x					
23	Smithsonian Education	http://www.smithsonianeducation.org/	x	x	x	en	x		x				x x
24	Teacher Tube	Http://teachertube.com	x	x		en	x	x			x		
25	Teachers TV	http://www.teachers.tv/	x	x		en	x		x	x			
26	Teleblik	http://www.teleblik.nl/	x	x		nl	x		x				
27	UWTV	Http://uwtv.org				en	x				x		
28	VideoLectures WGBH Teachers'	http://videolectures.net/				en	x		x				
29	Domain	http://www.teachersdomain.org/	x	x		en	x		x				