



Cultural heritage Digitisation, online accessibility and digital preservation

*REPORT on the Implementation
of Commission Recommendation 2011/711/EU*

2013-2015



EUROPEAN COMMISSION

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**Implementation of Commission Recommendation on the digitisation and
online accessibility of cultural material and digital preservation**

Progress report 2013-2015

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CONTEXT

This report reviews and assesses the overall progress achieved in the European Union in implementing Commission Recommendation of 27 October 2011 on the digitisation and online accessibility of cultural material and digital preservation (2011/711/EU)², as well as the related Council Conclusions of 10 May 2012³. The Commission presented a first report in 2008, with its Communication 'Europe's cultural heritage at the click of a mouse' (COM/2008/0513)⁴ and a second one in 2010⁵, both regarding Commission Recommendation 2006/585/EC⁶ on the same topic.

In 2011, the Commission recommended to the Member States an updated set of measures for digitising and bringing cultural heritage online, and for digital preservation, in order to ensure that Europe maintains its place as a leading international player in the field of culture and creative content and uses its wealth of cultural material in the best possible way. Such measures include further planning and monitoring of digitisation actions, setting clear quantitative targets, expanding funding and re-use conditions through public-private partnerships and structural funds, pooling digitisation efforts, improving access to digitised public domain material as well as conditions underpinning large-scale digitisation, cross-border accessibility of out-of-commerce works and long-term preservation of digital cultural material and web-content.

The Recommendation covers the 28 EU Member States, since the accession of Croatia shortly before the end of the last reporting period (1st July 2013). This report follows the first progress report issued in 2014 and is based on the second set of national reports submitted late 2015, early 2016 on the implementation of Recommendation 2011/711/EU, which calls on Member States to inform the Commission 24 months from its publication, and every 2 years thereafter, of action taken in response to it. Some countries (BG, HR) report for the first time. All reports received (27 reports at the time of writing) as well as the first progress report are available on the following Commission's dedicated webpage:

<https://ec.europa.eu/digital-single-market/en/digitisation-digital-preservation>

While these national reports are the main source of the information obtained, the overall assessment also makes use of the findings of the ENUMERATE survey⁷, funded by the Commission to measure progress in digitisation, as well as other sources at national and EU level, such as the Collections Trust survey on the cost of digitising Europe's heritage⁸. It combines a quantitative overview of the situation in all countries with more qualitative assessments based on examples from national reports (in italics). Pie-charts provide an instant picture on progress achieved regarding the reporting topics covered by the Recommendation, where feasible and appropriate.

The structure of the report follows that of the Commission Recommendation and Council Conclusions, focusing on three main areas: a) digitisation; b) online access; c) digital preservation.

² OJ L 283, 29.10.2011, p. 39

³ OJ C 169, 15.6.2012, p. 5

Council conclusions on the digitisation and online accessibility of cultural material and digital preservation:

http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/educ/130120.pdf.

⁴ <http://eur-lex.europa.eu/legal->

[content/EN/TXT/PDF/?uri=CELEX:52008DC0513&qid=1403786700813&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52008DC0513&qid=1403786700813&from=EN)

⁵ http://ec.europa.eu/information_society/activities/digital_libraries/doc/recommendation/reports_2010/2010%20Digitisation%20report%20overall.pdf

⁶ OJ L 236, 31.8.2006, p. 28

⁷ Survey Report on Digitisation in European Cultural Heritage Institutions 2015:

http://www.den.nl/art/uploads/files/Publicaties/ENUMERATE_Report_Core_Survey_3_2015.pdf.

⁸ http://nickpoole.org.uk/wp-content/uploads/2011/12/digiti_report.pdf

EXECUTIVE SUMMARY

Digital technologies and the internet bring unprecedented opportunities to access cultural material for leisure, study or work, reaching out to broader audiences, engaging in new user experiences and reusing it to develop learning and educational content, documentaries, tourism applications, games and other innovative applications.

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The Commission Recommendation on digitisation and online accessibility and digital preservation of cultural material (2011/711/EU), endorsed by the Council in May 2012, asked Member States to step up their efforts, pool their resources and involve the private sector in digitising cultural material, in order to increase online accessibility of European cultural heritage and boost growth in Europe's creative industries. The digitized material should be made more widely available through Europeana, Europe's digital library, archive and museum.

Support by Member States for the Recommendation overall and the underpinning topics remains wide. Member States consider that **the Recommendation continues to address an important policy area today**. More specifically⁹, the Recommendation is deemed to have been a **useful instrument for setting up national policies and coordinating activities**, as well as for raising awareness of the need for action, keeping up with progress, or giving momentum to existing policies. Among high impact provisions are those concerning national strategies for digitisation, digital preservation and Europeana, while some **Member States highlighted the importance of the "digital life cycle" approach**¹⁰ of the Recommendation.

The national progress reports on the implementation of the Recommendation 711/2011/EU during 2013-2015 provide a **clearer, more comprehensive picture** of the situation in the Member States compared to the reports for 2011-2013. Conditions in Member States are **more mature overall**, though there are still differences across Member States and across the different areas addressed by the Recommendation.

Overall, **almost all Member States have achieved good progress with the digitisation** of cultural material, reporting **continuity of plans** that have been established in the past few years, or **new developments** such as the inclusion of digitisation in an ambitious national strategy for the digital agenda in Romania. **Different approaches in planning** digitisation were again reported, with schemes ranging from national strategies (10 MS) supported by national funding programmes or implemented through domain-specific digitization plans, to domain-specific initiatives (6 MS) led by Ministries or by national institutions, to regional schemes or even planning based on strategies of individual institutions.

National networks for cross-domain coordination and cooperation have emerged in some MS as complementary measures to address digitisation planning. However, monitoring digitisation at national level needs to be more systematically addressed (with only 13 MS reporting some kind of national overviews) and a comprehensive overview of **digitisation progress at European level remains a major challenge**.

⁹ Member States were asked to provide a brief assessment of the impact of the Recommendation in their countries as part of the national progress reports for 2013-2015.

¹⁰ Digital life cycle means the whole chain from planning, monitoring and funding digitisation, to facilitating online access and reuse, to digital preservation.

The costs involved in digitising Europe's cultural heritage, estimated at 100 billion euro over a 10-year period¹¹, remain another major challenge, given the reductions in public sector spending on digitisation. Structural funds have been successfully used for financing the digitisation of cultural material and related services by fifteen Member States in the programming period 2007-2013, with certain countries (e.g. EL, LV, LT, PO and SV) using them as the main funding source for implementing their digitisation plans. Ten Member States already reported plans to use structural funds for digitisation and e-culture activities in the 2014-2020 period, among them BG, HR and RO where such funding programmes can play a crucial role.

Successfully engaging private partners in **public – private partnerships at local level** is again limited to the UK, FR and NL, while public-private partnerships with **major private partners** in libraries (Google, Proquest) or archives (FamilySearch) continue in a number of MS. Still, smaller MS report the difficulty in defining such partnerships given the small market size in their countries. **National sponsoring** from big foundations (e.g. Telefonica in Spain, Kone Foundation in Finland) and **lottery funding** (e.g. UK) have been reported again in this period as examples of alternative funding sources. In comparison, in the **ENUMERATE¹² survey results for 2015** (Figure 6.5), internal budgets were mentioned as a financial source for digital collection activities by 88% of institutions, followed by national public grants, mentioned by 35% of institutions.

Regarding steps **to optimise the use of digitisation capacity and achieve economies of scale, shared services** (such as repositories or IT tools) for the digitisation workflow of cultural institutions are new for this period, alongside previously reported **competence/digitisation centres**, collaboration projects between them and bundling of material for digitisation into single tenders. Cross border collaboration is mainly achieved through participation in European competence centres and networks, such as IMPACT, ENArC or CLARIN.

Public domain material remains an area of concern. The Rijksmuseum has widely opened up for free re-use their digitised public domain material in high resolution format and the Museum für Kunst und Gewerbe (MKG) Hamburg decided to publish substantial parts of its collection online, explicitly marking them, where possible, as public domain, but examples like these remain exceptional. Intrusive watermarking of public domain material often remains a challenge, as do low resolution or visual protection measures and the prohibition of reproduction or use of such materials for other than non-commercial purposes (e.g. on grounds of cultural heritage protection rules). This second reporting period shows some progress, albeit slow, in this area. Collaboration with the Wikipedian community is also being reported by some institutions as having a significant positive impact. However, it is fair to say that contractual or statutory constraints often still remain in the way of this Recommendation objective.

The **orphan works Directive**, adopted in 2012, will help in digitising and bringing copyrighted content online, now that its implementation has reached cruise speed in the

¹¹ *The Cost of Digitising Europe's Cultural Heritage*, Collections Trust, see footnote 8.

¹² Survey Report on Digitisation in European Cultural Heritage Institutions 2015:

http://www.den.nl/art/uploads/files/Publicaties/ENUMERATE_Report_Core_Survey_3_2015.pdf

vast majority of Member States (twenty four countries reported transposition measures, a twelve-fold increase with respect to the previous reporting period). **Legal backing of licensing solutions for the large-scale digitisation and cross-border accessibility of out-of-commerce works, called upon by the Recommendation, is gathering steam** with an increasing number of countries reporting initiatives in this area, particularly in the print sector. Encouraging progress was noticed, such as the legally-backed collective licensing solutions for wide-scale digitization of out-of-commerce works in CZ, DE, EE, FR, PL, SE, SK and UK, a four-fold increase with respect to the previous reporting period.

Europeana reached 48,838,150 objects in January 2016, of which 44,187,278 came from data providers in the EU Members States¹³, **significantly exceeding the overall target** of 30 million items by the end of 2015 set in the Recommendation. The target of two million sound or audio-visual objects by 2015 has reached 98%¹⁴. The percentages of meeting individual targets vary among Member States, but overall the effort of MS has been high. Eight MS reported obstacles to reaching their targets, mainly lack of financial resources, poor organisation or lack of infrastructure. It is worth noting that Member States stress the importance of considering **quality issues alongside quantity**, a preoccupation shared by the Commission.

Member States consistently report **initiatives to encourage cultural institutions** as well as publishers and other rightsholders to make digitised material available in Europeana. **National, cross-domain or domain-specific, aggregators** are well established in the majority of Member States (17 MS). Special **workshops, events and campaigns** to promote Europeana and **local networks** for sharing information and support are present in most MS. Nationally agreed recommendations and guidelines for metadata formats as well as aggregators **ensure the interoperability** of cultural institutions' metadata with the standards defined by Europeana. Though only in a few cases accessibility through Europeana is set as a **condition for public funding**, several Member States require that publicly funded digitised material is made available through the national aggregators which have links to Europeana. On the other hand, initiatives by Member States to **raise awareness** of Europeana **among the general public and notably in schools** are generally **lagging behind**.

This second reporting period has also witnessed **an increase in the number of countries supporting open cultural heritage data and promoting its re-use**, by making the data available through API services, or in some cases as linked open data. An **increased number of initiatives (projects, hackathons and other events) to explore the possibilities of open cultural data** have resulted in several experimentation prototypes and **some first applications** re-using open data (in AT, DE, ES and the UK, among others). These provide an improved experience of re-use compared to the previous reporting period, although there is clearly plenty of scope for further exploiting the re-use potential of these resources.

A growing number of countries are already implementing comprehensive **digital and long-term preservation strategies**, by testing the necessary digital infrastructure, standards and protocols, together with the required digital legal deposit arrangements and provisions to enable the collection of digital cultural materials such as web-harvesting. **In spite of a**

¹³ <https://ec.europa.eu/digital-single-market/news/content-contribution-europeana-well-above-commission-recommendation-targets>

¹⁴ 1,958,957 results (1 June 2016)

noticeable number of new countries reporting provisions under this heading (e.g. new digital legal deposit laws), this is an area where implementation of the Recommendation still requires further efforts, if we want our digital heritage to be properly preserved for future generations.

Implementation difficulties such as clashes with political realities, stakeholders' traditional practices or lack of resources, have also been mentioned. An update/reinforcement of certain areas of the Recommendation was suggested by several MS, to take into account latest developments (such as born-digital content, quality aspects when measuring progress or Europeana) as well as a review of low impact provisions (such as the provisions on masterpieces or PPPs).

1. DIGITISATION: ORGANISATION AND FUNDING

Member States have achieved good progress with the digitisation of cultural material, in most cases reporting continuity of plans established in the past few years, or ambitious new developments. Different approaches in planning digitisation were again reported, with schemes ranging from national strategies, supported by national funding programmes or implemented through domain-specific digitization plans, to domain-specific initiatives, led by Ministries or by national institutions, to regional schemes, or even planning based on strategies of individual institutions. National networks for cross-domain coordination and cooperation have emerged in some Member States as complementary measures to address digitisation planning. However, monitoring digitisation at national level needs to be more systematically addressed and a comprehensive overview of digitisation progress at European level remains a major challenge.

The cost involved in digitising Europe's cultural heritage represents another major challenge, given the reductions in public sector spending on digitisation. Structural funds have been successfully used for financing digitisation of cultural material and related services by fifteen Member States in the programming period 2007-2013, with certain countries (e.g. EL, LV, LT, PO and SV) using them as the main funding source for implementing their digitisation plans. Ten Member States already reported plans to use structural funds for digitisation and e-culture activities in the 2014-2020 period, among them BG, HR and RO where such funding programmes can play a crucial role.

Successfully engaging private partners in public – private partnerships at local level is again limited to the UK, FR and NL, while public-private partnerships with major private partners in libraries (Google, Proquest) or archives (FamilySearch) continue in a number of MS. Still, smaller MS report the difficulty in defining such partnerships given the small market size in their countries. National sponsoring from big foundations (e.g. Telefonica in Spain, Kone Foundation in Finland) and lottery funding (e.g. UK) have been reported again in this period as examples of alternative funding sources.

As steps to optimise the use of digitisation capacity and achieve economies of scale, along with the operation of mainly domain-specific competence/digitisation centres, collaboration projects between them and bundling material for digitisation into a single tender, reported also in the previous period, shared services (such as repositories or IT tools) for the digitisation workflow of cultural institutions have emerged. Cross border collaboration is mainly achieved through participation in European competence centres and networks.

1.1. Planning and monitoring digitisation

Point 1 of the Recommendation invites Member States to further develop their planning and monitoring of the digitisation of books, journals, newspapers, photographs, museum objects, archival documents, sound and audiovisual material, monuments and archaeological sites (hereinafter 'cultural material') by:

(a) setting clear quantitative targets for the digitisation of cultural material, in line with the overall targets mentioned under point 7, indicating the expected increase in digitised material which could form part of Europeana, and the budgets allocated by public authorities;

(b) creating overviews of digitised cultural material and contributing to collaborative efforts to establish an overview at European level with comparable figures;

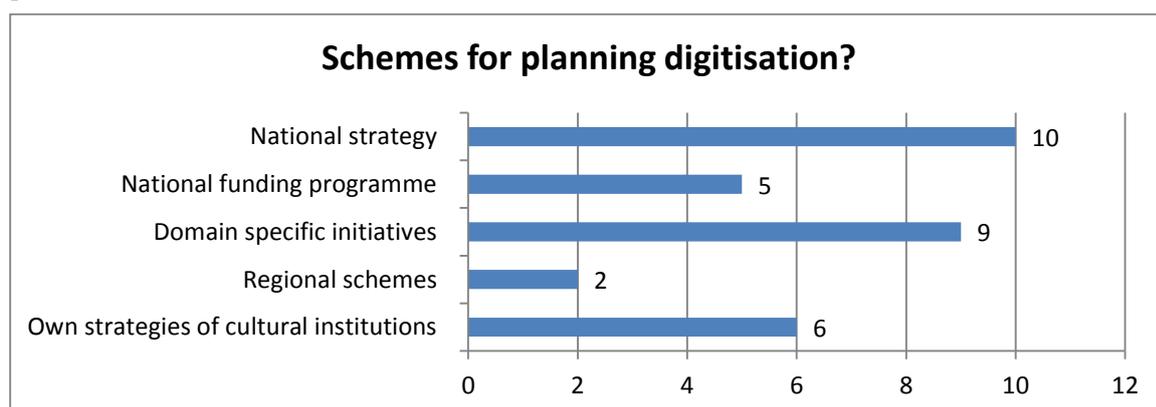
1.1.1. Schemes, quantitative targets and allocated budgets

Member States report different ways of organising digitisation planning. Overall there has been a continuity of the plans that have been established in the past few years in the Member States, with several positive developments, such as the inclusion of digitisation in the national strategy for the digital agenda in Romania, or the setting up of a national digitisation register in the Czech Republic.

Different approaches in planning include:

- National strategies or plans by 10 MS (continuing: CZ, EE, LT, LV, SE, SI; new: FI, PL, RO, SK), supported by national funding programmes (EL, HR, PL, RO, SK) or implemented through domain-specific digitisation plans (CZ, EE, FI, PL, SE). National strategies are, understandably, more common in small or medium countries.
- In other Member States decisions on digitisation are taken at lower levels. Domain-specific strategies and planning initiatives, by Ministries or by the major institutions/stakeholders, are reported by e.g. AT, BE, DE, ES, HU, MT, NL.
- Regional schemes (ES, NL) or planning at various levels, with no specific scheme, often based on strategies and initiatives of individual cultural institutions (BG, DK, IT, LU, PT, UK).

In some cases (DE, NL), decisions at the cultural institutions' or regional levels are complemented and supported by networks for cross-domain coordination and cooperation.



Depending on each scheme, as described above, quantitative targets are set at national, regional, programmatic or institutional level accordingly. For example, they range from targets at national level as part of a national strategy (LV, RO) or at funding programmes level (PL, SK) or at projects level (CZ, EL, FI, MT) to targets by domain (EE, ES, FI, FR, NL) or by individual institutions (AT, IT, LU, PT, UK) depending on their available/annual funding. Latvia, Finland, Poland, Czech Republic, Denmark, Netherlands have provided detailed figures in the relevant sections of their report.

Concerning budgets allocated for digitisation, national strategies are often tied to the use of Structural Funds (CZ, EE, LT, LV, PL). Other reported examples of national funding sources for digitisation, besides institutional budgets, include special funding (IT, NL), national sponsoring (ES, FI) and lottery funding (UK).

Examples of some of the schemes described in the progress reports are provided below, grouped by planning approach.

National strategies and funding programmes

Czech Republic: *State Culture Policy for 2015-2020 (with the view to 2025); Culture Content Digitisation Strategy for 2013-2020; Integrated Strategy of the Support of Culture to 2020; Libraries Development Concept for 2011-2015 including digitisation of libraries. The digitisation*

of the listed cultural heritage of the Czech Republic is done within the National Register – The Central Register of Cultural Heritage of the Czech Republic, which is managed by the National Heritage Institute, a heritage management professional body, in compliance with Provision 7 of Act No.20/1987 and its later amendments.

Estonia: The period 2013-2015 was covered by the National Strategy for Digital Cultural Heritage 2011-2016. The main aims of this strategy were: ensuring that digitisation becomes a routine, daily activity in memory institutions; improving the nationwide co-ordination of digitisation and preservation of digital cultural heritage; developing a shared framework of services based on digital cultural heritage. We have prepared a new operational programme for the national digitization strategy of cultural heritage. It covers the period of 2016-2020. A national funding programme will be opened 2016 using the EU structural funds."

Latvia: The Digital Cultural Heritage Development Strategy has been approved as an integral part of the State Culture Policy Guidelines 2014-2020 "Creative Latvia". The Strategy foresees activities to ensure digitisation, long-term preservation, access and re-use of Latvian cultural heritage..

Lithuania: Throughout 2013–2015, cultural heritage digitisation processes in Lithuania were carried out in accordance with the Strategy for the Digitisation of the Lithuanian Cultural Heritage, Digital Content Preservation and Access approved in 2009 and the digital agenda for the Republic of Lithuania approved on 12 March 2014. The Programme of Digital Cultural Heritage Actualisation and Preservation 2015–2020 approved on 4 March 2015 and the plan of its implementation measures throughout 2016–2018 have also been launched.

Poland: MULTIANNUAL PROGRAMME CULTURE+ (enacted by the Council of Ministers multiannual government programme for 2011-2015) Implementation of the "Digitalisation" priority was to contribute to mass digitalisation of the Polish cultural heritage and infrastructure development, so as to digitalise and create a network of digitalisation labs, in particular in libraries, museums and state archives throughout Poland. The priority enabled co-financing of digitalisation projects and investments in digitalisation infrastructure within the framework of the call for applications. Simultaneously, outside the contest process and within the framework of "Digitalisation" priority, the development of competence centres was funded with respect to digitalisation of different types of materials: (library, audiovisual, historical archives, museum objects, monuments). Priority 6 of the Programme of the Ministry of Cultural Heritage – 'Protection and Digitisation of Cultural Heritage' was designed to support digitalisation processes and sharing of cultural resources owned by non-governmental organizations, churches, denominational organizations and their legal persons, as well as universities.

Romania: The Romanian Government approved the National Strategy for the Digital Agenda for Romania 2020 in April 2015. Point 3.3. [ITC in Culture] states explicitly the objective to provide more than 750,000 items to Europeana by 2020. The National Programme for Competitiveness allocates explicitly more than 11 million euro for 'e-culture', for the 2016-2020 period. The chapter includes the development of an online platform to collect and expose digital cultural resources and the target to digitise 1 million cultural items.

Sweden: The National Strategy, described in the last report, covers the period of 2012-2015. In the Budget Bill for 2016 the Government states that it intends to come back to the issue of how the long-term, cross-domain, coordination of the cultural heritage shall be managed. During the reporting period, the national, state-funded institutions targeted by the strategy have been working with drawing up internal plans for their digitisation activities, to be presented for the Government before the end of 2015. This work has been coordinated by Digisam.

Hungary: The actions of the individual sectors are coordinated by the leading, national institutions (National Széchényi Library, Hungarian National Archive, Hungarian National Museum). It is also in these institutions that the strategic documents concerning digitization were created.

Finland: The National Audiovisual Institution (KAVI) is strategically concentrating on digitising domestic feature films. The National Library of Finland is part of the University of Helsinki. It has a digitisation policy (<http://urn.fi/URN:NBN:fi-fe201401151119>) and yearly digitisation programme together with other plans supporting digitalization. The targets are discussed with both the University of Helsinki and the Ministry of Education and Culture. National Archives has a regularly updated Digitisation Strategy. Collections to be digitized are chosen according to a yearly Digitisation Plan. National Board of Antiquities is coordinating an ongoing nationwide museum sector development project Museum 2015.

Coordination through national networks

Germany: In November 2013 the German Digital Library (Deutsche Digitale Bibliothek, DDB) organised a workshop with stakeholders from all cultural sectors and federal states to discuss the status quo and to ask how a better coordination of digitisation schemes could be achieved. The participants agreed that a national “Master Plan” on digitisation was not the way forward. The decision which objects to digitise, it was felt, should not be the result of a top-down-process. Instead, the separate cultural sectors/institutions should have the right (and the responsibility) to make these decisions themselves. However, the participants also agreed that there is a need for more coordination and networking between the separate players to achieve a better overview of ongoing projects.

Netherlands: The initiative to digitise lies with the cultural and governmental institutions. Under coordination of the Dutch Government a lot of effort was put in improving conditions for scaling of digitisation activities and cross-domain cooperation, with initiatives like strengthening cooperation between archives, libraries, museums, audio-visual archives and scientific institutions in a cross-domain Network on Digital heritage (Netwerk Digitaal Erfgoed) and presenting a joint National Digital Heritage Strategy in March 2015.

Domain-specific or regional initiatives

Belgium: In Flanders there is no specific scheme but the Flemish Institute for Archiving or VIAA digitises, stores and provides access to audiovisual material together with partners from the cultural, heritage and media sectors (www.viaa.be). For the federal institutions, a Ministerial Decision from 19.12.2013 DIGIT-03 is worth mentioning: a plan has been voted by the Council of Ministers on 19 December 2013 to create 3 complementary infrastructures for the digitisation and preservation of assets held by the different Federal Scientific Institutions (FSI) and the National Film Archives. The funding scheme has the objective to create 3 infrastructures : an infrastructure for the digitisation of content, an infrastructure for digital preservation and an infrastructure for use and reuse of digital content.

Spain: Libraries: National strategy in 2003, including a digital collections and digitisation projects database. Subsequent guidelines for digitisation projects, and development of HISPANA. Annual line of digitisation grants and annual contract for the Ministry's digitisation. Mandatory to check in Hispana for previous digitisations to avoid duplication of efforts. Archives: No national strategy. The Royal Decree 1708/2011 established the Archival Cooperation Council as a collegiate body (composed of Autonomous Communities, ministerial departments, Spanish Federation of Municipalities and Provinces etc) with the aim of channeling archival cooperation. Spanish Archives Portal PARES. The Institute of the Cultural Heritage (Instituto del Patrimonio Cultural Español) coordinated the design and implementation of a National Plan for the Preservation of Photography: <http://ipce.mcu.es/pdfs/PlanNPatrimonioFoto.pdf>. Museums: General Strategic Plan 2012-2015 of the Ministry: digitisation strategy for state museums, cataloguing and digitization campaigns, increasing high quality cultural contents on line.

Austria: The Austrian Federal Chancellery – Division for Arts and Culture (Bundeskanzleramt Österreich – Sektion Kunst und Kultur) has been continuing its efforts to force the digitisation of

the federal museums. Major cultural heritage institutions, such as the Austrian National Library, Österreichische Mediathek, Filmarkiv Austria, the Austrian Film Museum, and the University of Innsbruck have their own strategies for digitisation of their collections.

Own strategies of cultural institutions

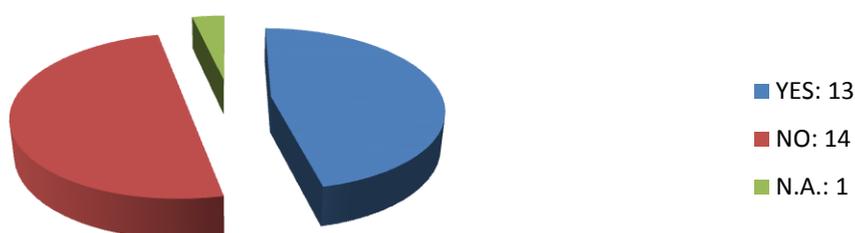
Denmark: Digitisation is generally considered an integrated part of the work of preservation institutions, and targets and priorities are set at individual institutions, not at the Ministry of Culture. The Danish Cultural Agency, however, monitors the progress of digitisation.

United Kingdom: While UK cultural organisations are very active in the field of Digitisation, there is no single plan or framework for the coordination and monitoring of digitisation of cultural material. At institutional level, individual museums, archives and libraries are developing Digitisation Policies and Strategies specific to their collections and the needs of their audiences. These tend to be funded and driven internally, with some external funding support on a project basis. At regional level, groups of organisations are coordinating some aspects of digitisation activity amongst themselves. On a national level, there is some coordination of digitisation on a thematic (as opposed to geographical) basis. Within the Home Nations (Scotland, Wales and Northern Ireland) there are overarching cultural heritage policies which make reference to Digitisation and online access to collections.

1.1.2 National and European overviews of digitised cultural material

Thirteen Member States (AT, CZ, DK, EE, EL, ES, IT, LT, LV, PL, SE, SI, SK) reported some kind of monitoring process to follow ongoing activities of digitisation of cultural material, such as yearly statistics or surveys on digitisation progress at national level, or the use of digitisation registers which may help avoid duplicity in digitisation efforts. In comparison to the previous period, more and more Member States perceive the importance of national statistics concerning digitisation and there has been significant progress in developing systems for the collection of digitisation data by certain Member States (such as CZ, LT, LV and PL). However, this area can be more systematically addressed across Member States and more significant progress can be expected in the following years..

Q. 1.2 National overviews of digitised material?



Austria: The Austrian Federal Chancellery publishes cultural statistics on a yearly basis. In this statistics, information about online accessibility of cultural material in museums can be found.

Czech Republic: The workflow of the digitisation at relevant institutions and the prevention of duplicity are helped by the **Digitisation Register** (<http://www.registrdigitalizace.cz/rdcz/>).

Denmark: Yes, the Danish Cultural Agency monitors the digitisation of cultural material (through self-reporting questionnaires)

Estonia: The Ministry of Culture has conducted regular surveys (2010, 2012, 2013) on progress with digitisation and for preparing the operational programme of heritage digitisation (2014). The survey covered all memory institutions regardless of their ministerial subordination. In Estonia digitisation has concentrated into larger memory institutions, therefore the number of organisations the Ministry works with has narrowed down. This facilitates co-ordination of reporting activities.

Finland: In the museum sector, monitoring of digitisation of the cultural material is included in a yearly statistics for the professionally-run museums. Monitoring of the digitisation of cultural heritage material in the national cultural heritage institution is an integral part of the reporting practices used for the performance agreements concluded with the Ministry.

Italy: Istituto Centrale per il Catalogo Unico (ICCU) monitors the projects results that are its responsibility, implemented by the Internet Culturale and the CulturalItalia aggregators. Indicators include: achieved results (consistency of number, content and size with expectations), effectiveness, quality of products (intermediate and final, with particular reference to the application of standards), technology problems/technical expertise and efficiency (cost of results).

Latvia: The Digital Cultural Heritage Development Strategy foresees annual monitoring of performance indicators.

Lithuania: Memory institutions contributing to the implementation of the above-mentioned documents on a yearly basis submit reports on the achieved results to the Ministry of Culture. On the basis of such reports, an annual report on the implementation of the Lithuanian cultural heritage digitisation policy, embracing both qualitative and quantitative aspects, is drawn. A **national digitisation monitoring system**, which will allow the automated collection of digitisation data from all the memory institutions is being developed. The final work on monitoring the system's adjustment is taking place at the moment, and the system is expected to be put into operation in 2016.

Poland: The National Audiovisual Institute has created the **Digitalisation Projects Database (baza.nina.gov.pl)** It is a clear compendium of knowledge about projects implemented in Poland, related to processes of cultural heritage digitalisation (projects assuming creation of technical infrastructure enabling digitalisation or storage in the institutions, as well as projects, in which digitalisation and sharing of resources play a crucial role). Within the framework of "Digitalisation" Priority of Multiannual Programme Culture+, five Polish Competence Centres prepare for the Ministry of Culture and National Heritage annual reports regarding implemented digitalisation activities, thanks to which it is possible to monitor the progress of digitalisation.

Slovakia: All digitised cultural materials are registered in the National register of digitisation, which was developed as part of the above mentioned national project Central application infrastructure and registry. Progress of digitisation was monitored regularly at the ministry level throughout the implementation period.

Slovenia: Data about progress in digitalisation are collected in annual statistical surveys for libraries. Data on the number of digitized objects of cultural heritage are compiled in the annual report of museums. Data are collected about amount of different types of analogue material that is digitised.

Spain: There is not a formal scheme. However libraries/archives/museums can use the national aggregator Hispana to plan their own digitization projects, so to avoid duplication of efforts.

Sweden: State-funded institutions have filled in a questionnaire that gives a good overview of the national situation. The importance of national statistics concerning digitisation and digital heritage is emphasized in a report that will be sent to the government in January.

ENUMERATE / EU level overview

The EC-funded project ENUMERATE has run three Core Surveys, in 2012, 2014 and 2015, aiming to collect high level data for monitoring progress on digitisation of cultural heritage across Europe. The report on the data collected through the 2015 survey is online¹⁵. From 2016 on, the ENUMERATE work was taken up by Europeana and the ENUMERATE Observatory¹⁶ was launched.

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Almost all reporting Member States (24/27) informed having encouraged and supported participation: AT (The Austrian Federal Chancellery acted as national coordinator), BE (coordination in Flanders, national coordination at federal level not possible due to the structure of the survey, but institutions were encouraged to participate), CZ (The Ministry of Culture and the bodies funded from its budget provide the inputs to ENUMERATE), EE (Ministry of Culture encouraged memory institutions), FI (Ministry of Education and Culture has invited Finnish institutions to answer), DE (The German Digital Library and the Institute for Museum Research, via their respective mailing lists), EL (but no specific plan for supporting contribution in upcoming surveys yet), LV (Culture Information Systems Centre), LT (Ministry of Culture), LU (taking part), MT (taking part), NL, PL, PT (National Library of Portugal), SI, ES, SE (Digisam), UK.

In some cases response rates have been high (ES, LT, LV, NL, SE), while in other cases response rates have been rather low (BE, UK...).

Hungary: *The involvement of the institutions in the process of data collection proved to be quite cumbersome. The institutions of cultural heritage do not perceive the significance of the project, it is not clear for them in what form they will be able to benefit from the results of the data collection.*

United Kingdom: *The lack of response was put down to the lack of compulsion to fill out the survey, and 'survey fatigue'. It is hoped the situation in Europeana-DSI will improve any figures from the UK.*

Initiatives for the systematic collection of digitisation data at national level and integration of indicators to the ENUMERATE indicators are also emerging:

Belgium: *Starting from 2014 the Enumerate indicators are largely integrated in the Flemish heritage monitor (Cijferboek cultureel erfgoed, www.erfgoedmonitor.be).*

Czech Republic: *It is envisaged that in next period the collection of the field data will be addressed under the National Digitisation Strategy in order that the National Co-ordinator would be able to provide the data to ENUMERATE for the entire sector on an ongoing basis.*

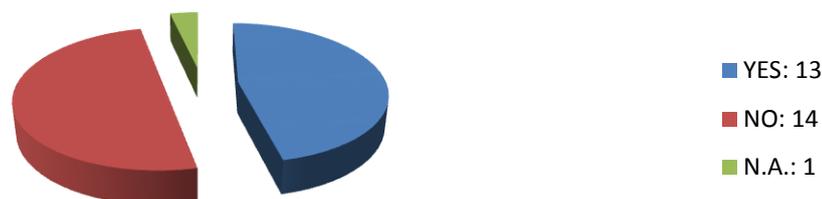
1.2 Public - private partnerships

Point 2 of the Recommendation invites Member States to encourage partnerships between cultural institutions and the private sector in order to create new ways of funding digitisation of cultural material and to stimulate innovative uses of the material, while ensuring that public private partnerships for digitisation are fair and balanced, and in line with the conditions indicated in the Annex.

¹⁵ http://www.den.nl/art/uploads/files/Publicaties/ENUMERATE_Report_Core_Survey_3_2015.pdf

¹⁶ <http://pro.europeana.eu/enumerate/>

Q. 2.1 Public-private partnerships for digitisation or facilitating access to CH?



No significant change since last reporting period, though the number of partnerships and institutions involved keeps growing in the Member States where PPPs are a well-established practice.

Google, Proquest (for libraries) and **FamilySearch** companies (for archives) continue to be the main private partners for large scale digitisation projects.

The Google Art Project was also mentioned as a form of PPP by Romania (three Romanian museums), although this initiative involves institutions in nearly all Member States.

Czech Republic: *Google and the Czech National Library for bulk digitisation of historic and rare materials has continued. Since 2014 the books have been prepared and conditioned in the Czech National Library and then digitised in the Google Digitisation Centre. So far 70 000 books, mainly old prints, have been digitised.*

Germany: *As a new sub-project of the PPP with Google, big parts of the State and City Library Augsburg's collection will now also be scanned by Google. Until 2017 more than 100,000 books are planned to be digitised using the existing Google/BSB infrastructure in the Bavarian State Library Munich.*

Malta: *The agreements that were in place in the previous reporting period are still in place. This includes the agreement with the Hill Museum and Manuscript Library and the Genealogical Society of UTAH (Family Search).*

Netherlands: *In libraries, the digitisation of printed material with Proquest and Google continue, with the Google-digitisation now being extended to university libraries, firstly in the University of Amsterdam. <http://uba.uva.nl/actueel/overige/over-de-uba/project-digitalisering-met-google---faq.html>.*

In addition to these major funders, local PPPs in France (BnF through BnF Partenariats) Netherlands, Italy and the UK, for digitisation, improved access to or for innovative use of cultural material:

France: *BnF-Partenariats continues established partnerships such as the « Collection sonore » (contract signed on November 2012 with the French online music distributor Believe Digital and the Belgian digitisation company Memnon Archiving Services) and has established 3 new partnerships: (1) Partnership with Ligarán (French editor) signed in May 2014; (2) Partnership with Arte (French TV) and UniversCine (French movie distributor); (3) Partnership « Press » with Immanens (French IT company)*

Netherlands: *In the project Erfgoed en Locatie (Heritage and Location; budget 3,4 m€) some new public-private partnerships have been established and some existing partnerships have been extended in order to improve the opportunities to present and access location based digital cultural heritage.*

United Kingdom: *As reported in previous biannual reports, the practice of Public Private Partnerships (PPP) is well-developed in the UK, with a particular emphasis on partnerships*

between national institutions (museums, archives and libraries) and private-sector partners with a specific interest in digital content and online services. PPP arrangements tend to be a contractual matter between the institution and the partner, and hence no central register is kept of them. UK institutions have been aware of the Recommendation and best practice for PPP, but have also been careful to negotiate preferential arrangements during contract to promote access and sustainability.

Smaller Member States such as Estonia or Luxembourg note again, as in the previous report, the difficulty in defining such partnerships given the small market size in their countries.

Moreover, FI, HU and LU reported well established contracts/non-commercial agreements with private partners/media publishers, to make newspapers, journals or other printed material digitally available.

1.3 Use of Structural Funds

Point 3 of the Recommendation invites Member States to make use of the EU's Structural Funds, where possible, to co-finance digitisation activities in the framework of regional innovation strategies for smart specialisation;

Fifteen Member States have reported using Structural Funds for digitisation of cultural material and related services in the programming period 2007-2013 (AT, CZ, DE, EE, EL, FI, HU, IT, LT, LV, MT, PL, SE, SI, SK). In particular, EL, PL, SV and LT reported having used Structural Funds 2007-2013 as the main funding source for implementing their digitisation strategies and/or programmes.

As regards the programming period 2014-2020, ten Member States (BG, EE, EL, FI, HR, LT, LV, PL, RO, SK) report their intention to use European Structural & Investment Funds for digitisation and e-culture activities. This represents a very positive development, particularly taking into account that in countries such as BG, HR or RO (reporting such initiatives for the first time) the use of Structural Funds would be crucial for digitising their cultural material.

Q. 2.2 Plans to use structural funds for the digitisation of cultural material in 2014-2020?



At the time of reporting, Poland, Latvia and Estonia had more developed plans, with already established operational programmes:

Poland: *The Digital Poland Operational Programme 2014-2020 foresees support concerning digitisation of cultural resources under priority axis II. E-administration and open government in specific objective 4. Increase in availability and use of public sector information (sub-measure 2.3.2. Digital sharing of cultural resources). The allocation guaranteed to this sub-measure is € 101,431,981 from the European Regional Development Fund, which, after taking into account the national contribution, constitutes a total allocation of ca. PLN 500 million. Projects related to digitalisation of library resources, audiovisual materials and historical archives, as well as improving the possibility of their re-usage, will be funded.*

Infrastructure and Environment Operational Programme 2014-2020, measure 8.1, Cultural Heritage Protection and Development of Cultural Resources. Financial support to, among others, projects related to maintenance and restoration of movable monuments, including their protection and sharing through the process of digitalisation, however, digitalisation may be implemented only as an element of the projects, namely, they may not be separate projects.

Latvia: *Operational programme “Growth and employment”, objective “To ensure increase in the re-use of public data and efficient interaction of the public administration and private sector”, programme “Digitisation of cultural heritage” is planned to be implemented between 2016-2022. Total planned funding of the programme is €14,000,000, including €11,900,000 ERDF funding and €2,100,000 state budget funding. Main planned actions of this programme are:*

- *Development of architecture and regulatory framework of the competence centers (2016)*
- *Improvement and standardization of digitisation processes (2016-2017)*
- *Development of joint digital content management system and storage architecture (2016-2017)*
- *Development of joint digital content distribution platform (2017-2022)*
- *Equipping of cultural centers with audiovisual content distribution infrastructure (2017-2018)*
- *Digitisation of cultural heritage and recording of cultural events (2016-2022)*
- *Development of copyright management system (2017-2022).*

Estonia: *During 2013-2015 the Ministry of Culture worked on establishing a dedicated measure for the digitisation of cultural heritage under the Structural Funds programme for 2014-2020, first call to be announced in 2016, 3-5 million euros.*

Other plans include:

Bulgaria: *The Ministry of Culture intends to apply under Operational Programme “Good Governance” 2014-2020 for the amount of 6 million BGN for the digitisation of Bulgarian movable and immovable cultural heritage.*

Croatia: *Plans to use 16 000 000 Euros through ERDF for the development of a unique cultural heritage digitisation infrastructure including an aggregation system and a permanent storage system.*

Lithuania: *During the period of investment of 2014–2020, funds of over EUR 35 million are planned to be used from the European Regional Development Fund. New electronic services based on digital content will be introduced for users and memory institutions, digitised contents will be adapted for education, tourism, genealogy research purposes, and access opportunities for people with disabilities will be increased.*

Romania: *Competitiveness Operational Programme: 10 million euro.*

1.4 Optimising use of digitisation capacity for economies of scale

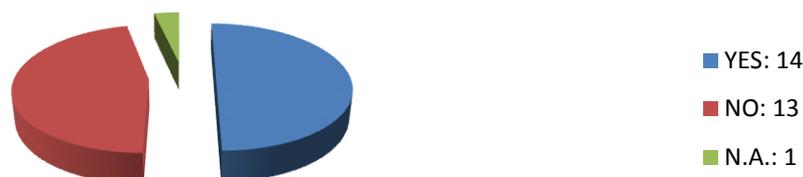
Point 4 of the Recommendation invites Member States to consider ways to optimise the use of digitisation capacity and achieve economies of scale, which may imply the pooling of digitisation efforts by cultural institutions and cross-border collaboration, building on competence centres for digitisation in Europe;

Fourteen MS (compared to 12 MS in the last reporting period) report steps taken to optimise the use of digitisation capacity and achieve economies of scale. These include pooling of digitisation efforts

through (mainly domain-specific) competence centres (CZ, DE, EE, LT, LV, PL) or digitisation centres (BG, CZ, DE, EE, ES, FI, SK), collaborative projects between centres (EE, LT), specific collaborative initiatives (HU, MT, NL), bundling of quantities for tenders for cost reduction (BE, ES), or shared services (repositories, IT tools, etc.) for the digitisation workflow of cultural institutions (PL, UK).

Concerning cross-border collaboration initiatives, the IMPACT¹⁷ centre of competence is mentioned again by Finland and Poland, Spain and Slovenia refer to ENArC (European Network on Archival Cooperation)¹⁸, while APEX (Archives Portal Europe Network of Excellence)¹⁹ and CLARIN²⁰ are mentioned by Spain and Finland respectively.

Q. 2 Practical measures to optimise use of digitisation capacity?



More specifically, large scale digitisation centres performing domain specific digitisation continue to operate in BG, CZ, DE, EE and SV:

Estonia: *We have established five digitisation competence centres for different types of heritage. National Library is the competence centre for printed heritage, National Archives for archival material, photography and video material, the Conservation and Digitisation Centre Kanut is a centre for artefacts, art and photography, Estonian Literary Museum for manuscripts. Collaborative projects between centres do exist. No cross-border initiatives have occurred thus far.*

Slovakia: *The principles on which the above mentioned digitisation projects were built include building specialized national digitisation worksite for each type of content held by cultural institutions – e.g. library materials are digitised in the Digitisation centre of the Slovak National Library, materials like paintings or statues in the digitisation worksite of the Slovak National Gallery etc., which make use of economies of scale and concentrate the specific know-how necessary to safeguard the quality of outputs in one place nation-wide.*

Germany: *The large scale digitisation centres in the public sector mentioned in our answer in the previous questionnaire continue to play the major role in digitisation efforts in Germany.*

In ES, LT, LV and PL competence centres continue to be mainly engaged with the coordination and support of digitisation activities (such as providing information, organising trainings for digitisation specialists of cultural institutions), collaboration with other competence centres for exchanging experiences, as well as with storing digital copies of digitised material. In Poland, digitisation services for smaller institutions are also envisaged.

Poland: *Five institutions play the role of Competence Centres –Digitalisation Competence Centres can safely archive resources digitalised within the projects. Beneficiaries of the contests within "Digitalisation" Priority of Multiannual Programme Culture+ were obliged to transfer the copies of digitalised resources (along with licenses) to the relevant Digitalisation Competence Centres.*

¹⁷ <http://www.digitisation.eu/>

¹⁸ <http://enarc.icar-us.eu/>

¹⁹ <http://www.apex-project.eu/>

²⁰ <http://clarin.eu/>

Additionally, in Competence Centres professional digitalisation labs were built, which may serve smaller institutions as a means of digitalisation of their collections.

A new trend is the development and use of **shared services** to achieve economies of scale and pooling of expertise in a number of the end-to-end digitisation workflow pipeline aspects:

United Kingdom: *There is a growing interest in UK for using shared services to achieve economies of scale and pooling of expertise in a number of the end-to-end digitisation workflow pipeline aspects, e.g. the Wellcome Library is developing a proof of concept for a Digital Cloud Library System for its own purposes which it has opened for others to participate in.*

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Poland: *In 2014, the National Library implemented an IT tool allowing cultural institutions (Polish and foreign) which do not have their own repository infrastructure to introduce to the National Library's Digital Repository digitalised or "digitally born" collections.*

Other reported initiatives for achieving economies of scale include:

Belgium: *In Flanders, VIAA organises its digitisation projects based upon the type of carrier/format. Carriers of all the content partners are considered, and their quantities are added. Technical requirements are agreed upon by all partners via a consultation process. All quantities are bundled and tendered as one lot. This way the digitisation prizes drop dramatically as compared to the tendering of smaller quantities. The federal level has also developed a strategy to pool similar material from multiple organizations for external digitisation in a **single tender for cost reduction**. This applies to for example books, newspapers, A4 formats, audio, microfilm and 3D objects from the Natural History Collections. For internal digitisation, infrastructures are shared between the organisations according to the different grouped assets.*

Finland: *National Archives has created a new more efficient digitisation process of cutting 20th century bindings and scanning them by a document scanner. Increase in digitisation effectivity is about 500% from year 2013.*

Hungary: *The first **National Cultural Digitisation Public Employment Programme**²¹ was launched on 1 November 2013, with 900 persons. The second Programme was launched on 1 June 2014, originally with the deadline of the end of November, however, after an extension the programme lasted until the last day of February 2015, in which digitization, processing of cultural data took place nationally with the participation of close to 500 persons, in 90 cultural partner institutions (150 in the previous programme) of 24 communities, using almost 400 digitization appliances, from small, local history collections to the largest public collections. The workers in public employment work for various partner institutions nationally: in local governments, in public collections and in public collections maintained by museums, or libraries, archives (maintained by foundations or churches), in institutions in charge of cultural functions, civil society and art organizations, forty hours per week. People working in cultural public employment are able to perform functions for which no human resources are available in small communities. It is up to the partner institution to decide what will be digitized within the institution and what kind of access will be authorized to the created digital data. MANDA performs coordination and professional management as the employer of persons in public employment. One copy of the digital contents and the pertinent descriptive data created in the framework of the programme are uploaded into the cloud-based database of MANDA. Owing to the public employment programme, over 170,000 public cultural values have been uploaded into the database of MANDA, of which 407 pieces are unique 3-D objects.*

²¹ Public employment gives a temporary job for those who had been seeking employment on their own for a lengthy period of time without success.

2. DIGITISATION AND ONLINE ACCESSIBILITY: PUBLIC DOMAIN MATERIAL

Over the reporting period web visibility of cultural content has improved, measures to limit watermarking/visual protection measures in the public domain material and increased use of the open formats and social networks to reach out to broader audiences have been reported. This in turn allowed innovative interactions with digitised content to take place e.g. in social media, blogs or wikis. Implementation of Directive 2013/37/EU on the reuse of public sector information, now covering also cultural material, alongside the wider availability of APIs, mobile apps and better resolution and metadata triggered wider reuse opportunities over the period.

Although initiatives like the Rijksmuseum's RijksStudio application - opening up for free re-use entire digitised public domain collections in high resolution format - remain the exception, a growing number of countries report solutions for facilitating reuse of digitised public domain resources, such as the Museum für Kunst und Gewerbe (MKG) Hamburg's decision to publish substantial parts of its collection online explicitly marking them, where possible, as public domain. The sharing of millions of open cultural metadata under CC0 Public Domain Dedication terms through the Europeana platform reflects this trend.

Point 5 of the Recommendation invites Member States to improve access to and use of digitised cultural material that is in the public domain by:

- (a) ensuring that material in the public domain remains in the public domain;
- (b) promoting the widest possible access to digitised public domain material as well as the widest possible reuse of the material for non-commercial and commercial purposes;
- (c) taking measures to limit the use of intrusive watermarks or other visual protection measures that reduce usability of the digitised public domain material.

2.1. Preserving public domain status after digitisation

Ten Member States (AT, BE, CY, CZ, DE, ES, IT, LT, RO, UK) reported obstacles in ensuring that public domain material remains in the public domain after digitisation, mainly in connection with photos and photographers' rights. The issue of possible rights triggered by the digitisation process itself in some cases is mentioned as a potential source of legal uncertainty. In general, the replies indicate that the legal stand of some digital reproductions of public domain works lacks clarity and requires further attention. The fear of losing control, need to generate income and difficulties to assert public domain status were also reported as possible obstacles, alongside technical issues in connection with upgrading of metadata quality of digital records and the need to create a level playing field (fair, proportionate and non-discriminatory reuse conditions) consistent with the revised PSI Directive.

Promoting the Europeana Public Domain Charter²² was mentioned by some Member States (DE, LU) as a means to implement this Commission recommendation, while another one (AT) reported some

²² http://pro.europeana.eu/c/document_library/get_file?uuid=d542819d-d169-4240-9247-f96749113eaa&groupId=10602

mixed feelings on its implementation by different institutions (some supportive, others complaining of uncertainty triggered by the most open rights labelling). Several Member States (DE, PT, SP) mentioned labelling of relevant digitized resources with PD or CC0 (public domain dedication) marks and a few reported training actions (DE, EE) or guidelines (HR, SE) to address this problem. One Member State (LU) pointed to the role of the Europeana Public Domain Calculator²³ and a new shared set of rights statements (www.rigtsstatements.org) developed in cooperation with the DPLA in improving public domain determination and cross-border accessibility.

Q. 5.1 Obstacles to digitised public domain remaining in the public domain?



Germany: *some cultural heritage institutions, especially museums, are still hesitant to label content which is clearly in the public domain (PD) in physical form as PD after digitization. Projects such as the German Digital Library and other aggregators are raising awareness of the European Public Domain Charter and related issues. However, a clear-cut legislation addressing this issue at the European level remains to be desired. For lobbying at the national level, the German Digital Library has established the Think Tank “Kulturelles Gedächtnis Digital” (Digital Cultural Memory). The Think Tank aims to improve the legal framework for German memory organisations.*

Austria: *Institutions reacted in different ways to the Public Domain Charter. Some were really open-minded and supportive from the start. Others reacted extremely hesitant, given that opening up their collections online under most open rights labels created some uncertainty. Smaller institutions did more likely see the positive effects than bigger ones, where more risk and liability was involved. Often this agitation was motivated by legal grey zones and lack of knowledge. This is why the Austrian national aggregator Kulturpool tried to clarify things and thus put a lot of effort in explanatory work with all the institutions to shed light on the importance of cultural heritage objects in the public domain. Generally speaking, since Europeana started the IPR campaign an open-minded approach has been slowly accepted.*

Spain: *Following the requirements from Europeana, HISPANA is asking data providers to state copyright conditions in their metadata. If their metadata don't have such statement, HISPANA places in the EDM or ESE registry the creative commons public domain statement. Anyway, open access to a diffusion copy (lower resolution) through these digital libraries is commonly widespread. The public use of such images and/or need of higher resolution images are normally charged, but not because of intellectual property issues, but for covering the service of image provision. Besides for cultural institutions this income (especially for museums) might be a substantial way of complementing the yearly shortening budgets.*

Italy: *Istituto Centrale per il Catalogo Unico (ICCU) puts a huge effort in convincing libraries and cultural institutions involved in the digitisation and aggregation initiatives to use the most open possible licences when publishing the digital objects online, for spreading knowledge and fostering reuse. Although libraries are traditionally open environments, sometimes they hardly accept the public domain approach as stated in the Europeana Public*

²³ <http://outofcopyright.eu/>

Domain Charter. The assumption that 'public domain' means 'free of charge' is misleading: the digitised public domain cultural asset may not be entirely available for public domain according to the Italian regulatory framework on cultural heritage. Even though the description and low resolution copies are usually freely provided to the public (but not the master or high resolution copies), public cultural institutions can ask fees for the reproduction of the digital images of their collections, notwithstanding they have been produced with public money.

Lithuania: *In some cases, restrictions on the applications of digitized objects have been imposed, for example: images of worse quality are placed online, and the repeated use of digitized objects is limited by various means of protection.*

United Kingdom: *the UK has implemented revisions to the PSI Directive. This means that level playing field terms and conditions should be applied to those wishing to reuse the public domain collections of cultural bodies. Given the reductions in public sector financing that cultural bodies are subject to a number of organisations are having to commercialise public domain items in order to create revenue streams.*

Sweden: *No obstacles worth mentioning, but in order to strengthen the development and a joint attitude among cultural heritage institutions regarding this question, Digisam has formulated the following statement (P9) in our Guiding Principles: "Materials with extinct rights that have been reproduced in new media does not generate new pieces of work, with new terms of protection. These resources shall not be licensed, but rights labelled in a machine-readable way".*

Cyprus: *As a coordinating body for cultural heritage institutions that are willing to contribute their digitized collections in Europeana we encourage all existing and potential providers to follow and embrace the public domain framework as part of their efforts to promote their collections in a European level.*

Belgium: *In Flanders and in Wallon Brussels Federation, the process of opening up data is slowly taking up by cultural heritage institutions. On a federal level the minority of the digitized assets are labelled public domain or CC-BY-SA.*

Hungary: *no intervention has occurred in this respect at legislative level. It is a typical arrangement that use of digitized contents for research purpose is free of charge, but services requiring human intervention and constituting high added value are chargeable.*

2.2 Access to and use of digitised public domain material

Twenty two Member States – two more than in the previous reporting period - report supporting actions for wider access or use of digitised public domain material. Support may take place at national, regional or lower level (local, institution or sector) and take a variety of forms. These range from the use of wikis, blogs, social networks, crowdsourcing, hackathons or web and media campaigns (BE, CZ, DE, FI, FR, NL, PL, SE, SK, UK) to dedicated portals, projects, programs, strategies and databases (BE, BG, CZ, EE, ES, FR, FI, HR, HU, LT, LV, NL, PL, SE, SK, UK), from open data policies/infrastructure, open licenses and PD²⁴ or CCO²⁵ labelling (AT, BE, CY, CZ, DE, EE, ES, FI, IT, LU, NL, PT, SE, SI) to metadata aggregators and data hubs (AT, CZ, CY, DE, EE, FI, FR, LT, NL, PL, SE). User interfaces and APIs, searchable indexes, open standards, search filters, digital clipping or other facilitating and customizing tools (CZ, DE, FI, PL) are also reported under this heading. Some

²⁴ Public domain.

²⁵ Creative Commons Zero or Dedication to the Public Domain.

countries report binding requirements in publicly-funded digitization arrangements for ensuring that digitized public domain materials remain in the public domain (ES, HE, LT) or publicly accessible/reusable (HR).

Virtual tours, exhibitions, collections, libraries or reading rooms, 3D-view, geo/historical-referencing, digital studios and similar apps were reported by eight countries (CZ, DE, EE, FR, LT, NL, PL, SE), others reported dedicated tenders/contests/awards to foster innovative services/reuse on the basis of digital resources (BE, EE, FR, LT, UK). Two countries (DE, LU) reported tools for standardizing rights labelling, assessing public domain status or filtering public domain material, nine (BG, CZ, DE, EL, FI, LT, PL, PT, SE, UK) reported promotional activities, collaboration with educational institutions, competence centres on digitisation or training, guidance and support provided to cultural institutions/innovators in order to promote access and use of digitised materials, including on handling rights clearance issues.

Three Member States (AT, CY, DE) reported awareness campaigns on the Europeana Public Domain Charter, others (BG, DE, NL, PL, UK) set up think tanks, working groups or labs to foster digitisation standards, metadata and strategies or cooperate with major platforms/foundations (e.g. Wikimedia, Wikipedia, Open Knowledge, Google Cultural Institute) for widest possible access to public domain material.

As far as re-use is concerned, several Member States (AT, CZ, ES, PL, UK) referred that this is being handled in the light of, and consistent with, implementation of the revised public sector information Directive²⁶ adopted in June 2013 (transposition deadline: 18 July 2015) and now also covering libraries, museums and archives.

However, two Member States (ES, LT) informed that, while the description and low resolution images of public domain works are usually freely provided to the public, higher resolution copies may not and repeated use may be restricted.

Lastly, some countries (FI, NL, PL) reported a set of **coordinated efforts to promote open access** and re-use of digitised material, including dedicated open platforms, virtual studios, metadata aggregation, hackathons/awards and APIs, user interfaces or apps to facilitate sharing, innovative reuse or customization of and interaction with digital resources.

Q. 5.2 Actions for widest possible access/use of digitised public domain?



Poland: *Polona National Digital Library (<http://www.polona.pl>) has been designed in such a way as to allow easy use of its digital resources through social media, mass media, meetings and virtual exhibitions. The National Library has been sharing its digital resources in high resolution on the [polona.pl](http://www.polona.pl) website, at the same time offering the possibility of downloading them and reusing by public institutions, commercial entities and citizens. In order to promote digitized collections, the National Library has created a blog where users can publish texts based on the sources found on Polona website (<http://blog.polona.pl>). The launch of the new version of the digital library in June 2013 was accompanied by a promotional campaign on Facebook, online dissemination of a film on cultural collections as well as a series of radio*

²⁶ Directive 2013/37/EU of the European parliament and of the Council of 26 June 2013 amending Directive 2003/98/EC on the re-use of public sector information, OJ L 175 of 27.06.2013, p. 1 (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:175:0001:0008:EN:PDF>).

and television programmes. At the end of 2015, the total number of publications made available on Polona is expected to exceed 1 million, including more than 500.000 press titles and scientific magazines. In 2015 a new user interface was prepared (<http://beta.fbc.pionier.net.pl>), which gives significantly wider possibilities of searching for digitised collections and sharing collected data through an open API. The Search the Archives site (www.szukajwarchiwach.pl) offers free of charge descriptions of archive materials from the State archives and other cultural institutions, along with their digital copies. The user has an unlimited access to downloadable scans. It is planned to incorporate Audiovis (www.audiovis.nac.gov.pl), a website presenting National Digital Archives online resources (photos and sound recordings) into www.szukajwarchiwach.pl website and expand it with social media features. The National Audiovisual Institute makes audiovisual materials available by means of functional portals targeted to a wide group of customers (also to disabled people through transcriptions and audio descriptions), such as NINATEKA's (www.ninateka.pl) online educational system and Muzykoteka Polski Shownik Biograficzny's (www.muzykotekaszkolna.pl) media database and educational games. In May 2015 a new venue was opened, which includes multimedia rooms, where the Institute's resources are made available. The National Institute of Museology and Protection of Collections supports resolution of doubts arising in the process of determining rights to sharing of digital materials, in direct contact with museums. The National Institute of Heritage conducts activities in the context of the CARARE project (<http://www.carare.eu/>) aimed at promoting the digitization of monuments and widen access to these resources through, among others, virtual tools 'zabytki w Polsce' mobile app (<http://e-zabytek.nid.pl>), giving access to digital images of monuments on mobile devices in the form of 3D models, pictures, descriptions and location data submitted to the Europeana portal (www.europeana.eu).

Finland: the Finnish Open Data Programme 2013-2015 was launched in Spring 2013, based on extensive cooperation between ministries, government agencies and institutions, local government, research institutes and developer communities, to accelerate and coordinate opening up of public sector data resources. Outputs include an open data and interoperability portal (<https://www.avoidata.fi>), and an open data development environment (<http://julkictlab.fi>). Digitised newspaper materials have been used in a hackathon arranged by the University of Helsinki and the National Library. The digitised newspapers and journals are also used in the Masters level Digital Humanities programme at the University of Helsinki in 2015-2016. The goal is to promote humanities research and usability of digital resources. The latest web service development for digitised newspaper, journal and ephemera material (<http://kansalliskirjasto.fi>) enables citizens and researchers to create digital clippings of the digitised content and therefore promotes reuse of the copyright-free materials and sharing them e.g. in social media. The Society of Swedish Literature in Finland (SLS) has made a number of high resolution photos available on Flickr without watermarks, some of which (unknown places) got a record number of viewers. SLS also publishes free-to-use archive material on Finna (www.finna.fi), e.g. images without watermarks. The National Board of Antiquities has opened part of its photo collection for special user groups such as schools to encourage reuse. Finnish National Gallery has had several projects during the years 2013-2015, such as opening of metadata concerning works of art CCO (API, data package, Wikidata) and access the whole art collection of Finnish National Gallery, several archive collections and library database in Finna. In addition, Finnish National Gallery has developed the accessibility and interaction within several applications and websites such as Kiasma Tunteella (<http://kiasmatunteella.fi/>) and Online Collection of Finnish State Art Commission (<http://kokoelmat.fnq.fi/app>).

The Netherlands: All the national sectoral institutions, the Dutch Government and other key players committed themselves to the principles laid down in the National Digital Heritage

Strategy (March 2015), in which improving uses and reuse of the digital collections is one of the main goals. Open Cultuur Data (<http://www.opencultuurdata.nl>) sets up workshops and hackathons to promote open use of digital cultural heritage. Several museums, archives and libraries are collaborating with the Wikipedia community, e.g. welcoming Wikipedians in residence for a fixed duration of time, with a substantial impact (an overview of activities can be found in <http://nl.wikipedia.org/wiki/Wikipedia:GLAM>). In November 2015, 586.000 items from Dutch heritage origin are available for reuse on Wikipedia Commons and the pages on which the images are posted have been viewed 2 billion times. Rijksstudio, (<https://www.rijksmuseum.nl/en/rijksstudio>), launched in 2014 by the Rijksmuseum Amsterdam, grants an annual Rijksstudio Award for the best creative reuse of content from the virtual studio (<https://www.rijksmuseum.nl/en/rijksstudio-award>).

Germany: The DDB, German Digital Library (<https://www.deutsche-digitale-bibliothek.de/>) and other portals, e.g. regional initiatives like Bavarikon (<http://www.bavarikon.de>) or Kulturerbe Niedersachsen (<http://kulturerbe.niedersachsen.de>) promote access and reuse of digitised public domain material. The content offered via the German Digital Library, for example, comes from 224 institutions and includes more than 6 million digital objects (September 2015). Last year, the Library introduced a search filter in the portal that allows users to restrict their searches to PD material only (1,343,100 objects labelled as public domain by September 2015). The Application Programming Interface (API) of the German Digital Library was introduced and opened to all interested parties in November 2013. Using the API, it is easy to reuse the public domain metadata in the DDB for commercial and non-commercial purposes. The amount of user access can be tracked using the API keys. An important event has been the cultural hackathon Coding da Vinci (<http://codingdavinci.de>). The event, organised amongst others by Wikimedia, the Open Knowledge Foundation and the DDB, brings together cultural heritage institutions and the programmer and designer communities to develop ideas and prototypes for the cultural sector and the public. The first hackathon in 2014 was already well received and in 2015 the number of institutions providing free data more than doubled to 33 overall. The apps created by the Coding da Vinci participants are documented in the projects website (<http://codingdavinci.de/projekte/>). The Museum für Kunst und Gewerbe (MKG) Hamburg (<http://www.mkg-hamburg.de/en/>) decided to publish substantial parts of its collection online, explicitly marking them, where possible, as public domain. This step, taken by a big and important museum, will hopefully serve as a lighthouse for the museum sector which has been comparatively reluctant to share its material in such an open way.

Sweden: the Swedish National Heritage Board and the National Library and to some extent the National Archives have an ongoing work with publishing and promoting use and reuse of open data (<http://data.kb.se> ; <http://riksarkivet.se/psidata>). The Swedish National Aggregator for museum information and monuments and sites (SOCH) is promoting reuse e.g. by using the SOCH API. An example of benefits from using the SOCH API is an application based on National Museums of World Culture (SMVK <http://www.varldskulturmuseerna.se>). SMVK pools collections that are distributed over different museum databases and makes it possible to search information and images, create digital exhibitions and explore the items virtually. Other good examples can be found at <http://www.ksamsok.se/goda-exempel>.

Italy: Istituto Centrale per il Catalogo Unico (ICCU) coordinates the efforts of 1,575 libraries from Italy, Vatican State and Republic of San Marino. It manages several services to promote access to the Italian digital cultural heritage. CulturalItalia (<http://www.culturalitalia.it/>) published a core set of records from the portal under the licence CC0 1.0 Universal Public Domain Dedication, which are available for reuse at the SPARQL end point <http://dati.culturalitalia.it/>. Internet Culturale, the portal of the digitised content of the

Italian libraries (<http://www.internetculturale.it/opencms/opencms/it/>) , gives an integrated access to 940,857 records corresponding to over 10M digital objects from various databases and repositories. It is fully integrated with CulturalItalia, the Italian culture portal, and is a major Europeana provider. Both general and specialised users can search bibliographical information and digital contents coming from different information sources (SBN, external digital libraries, etc.). OPAC SBN, the online catalogue of the National Library Service (<http://www.sbn.it>), gathers 5,884 Italian libraries distributed in 97 local poles that share the cataloguing infrastructure giving access to over 15M bibliographic news that are being linked to the existing digital resource (currently 690,000 links). MANUS, a database of descriptions and digitised images of the manuscripts owned by the Italian public libraries, churches and private bodies and citizens (<http://manus.iccu.sbn.it>) catalogues manuscripts in Latin alphabet from the Middle Ages to the present, including correspondence. 14-18 Documents and Images on WWI (<http://www.14-18.it>) an initiative by the ICCU and 50 other partners for gathering documentation about WWI currently contains about 330,000 images and archival material documenting the life of soldiers and common people, propaganda, etc., during WWI (+135% in comparison with the previous report).

France: the AtlasMuseum initiative (<http://atlasmuseum.org/>) aims at making online accessible cultural heritage in public places ('Musée à ciel ouvert'). Through an inventory work based on professionals' input (artists, developers, archive professionals, etc.) but also from the crowd, works of public art are listed, geo-referenced and documented by means of a semantic atlas and a mobile app. The call 'innovative cultural digital services' launched by the Ministry of Culture and Communication in 2014 provided the opportunity for archives to implement experimental projects, based on digital technologies, in line with new social usages. Participatory enrichment of online resources is a path growingly explored by archives: ca. 30 services already propose collaborative annotation templates to users. Other avenues are tested, such as the development of heritage discovery apps, for the feeding of which digitised documents are a privileged resource. These two lines of action – pursuing digitisation and developing innovative digital services – ought to build on the national portal Francearchives.fr (<http://francearchives.fr/>) under development, which will be a unifying access channel to national and local resources. The portal, supported by the Ministry of Culture and Communication in partnership with the Ministries of defence, Foreign Affairs and International Development, is expected to be deployed by end 2016 and facilitate the spotting and exploitation of documents, thus contributing to enriching the already running European archives portal and strengthening the presence of French archives there.

Spain: Like many national institutions, the National Library (BNE) is working on its RPSI plan (plan of measures to promote the reuse of public sector information) and design of specific portals to facilitate reuse thereof. Still some decisions are pending on the potential licensing for commercial use of public domain digital objects, as it will have to be evaluated whether or not any pricing should be applied. In July 2014, the BNE has issued a new regulation regarding the pricing of some of its services. Amongst other measures it mentions that charging might only be applied when commercial purposes are clear. Further licensing terms and conditions for more specific cases are still under consideration. By the end of the year it should be clearly stated that images in the public domain available through HISPANA (<http://hispana.mcu.es>) are under a Creative Commons NC BY SA licence. Commercial uses or reuse of higher resolution images would still be payable. The Ministry of Education, Culture and Sports (MECD) promotes the OAI protocol, EDM format and digitisation through HISPANA. These specifications are widely spread in Spain digitisation projects. Both MECD and BNE are developing tools in RDF (controlled vocabularies in SKOS, SPARQL search points...).

United Kingdom: In 2014, the Digital Scholarship Team at the British Library partnered with the Technology Strategy Board and IC Tomorrow in a Digital Innovation Contest (<https://ictomorrow.innovateuk.org/web/digital-innovation-contest-data>) to encourage and establish a feedback loop for tracking and measuring the use and impact of public domain content made available online. A successful proof of concept was developed with outcomes and next steps currently under consideration. In early 2013, the British Library established British Library Labs (<http://labs.bl.uk/>) with Andrew W. Mellon Foundation funding to support and inspire the public reuse of digital collections and data in exciting and innovative ways. This has included an annual competition, the release of 1 million images onto Flickr, and numerous collaborative projects: <http://britishlibrary.typepad.co.uk/digital-scholarship/bl-labs>).

Estonia: in 2013-2015 a common portal 'e-Varamu' to access cultural heritage was developed under international procurement, to be operational end 2015 (<http://www.elnet.ee/index.php/en/projects/estonian-e-repository>). At the same time, all data was made available as open data (RDF format) in the Museum Information System (http://muis.ee/en_GB) and the digital archive of printed heritage 'Digar.ee' was developed (<http://www.digar.ee/arhiiv/en>).

Czech Republic: the existing digital libraries – Manuscriptorium and Kramerius do not restrict access to public domain works. The National Museum handles the presentation of i.a. its public domain works at its e-Collection website 'eSbirky' (<http://www.esbirky.cz/>). In 2013-2015 the platform and its functionalities have been significantly enhanced and relevant Creative Commons licence marking added to provide better browsing of the content provided. The Creative Commons' and Europeana's approach that content digitized with public funds and not covered by copyright should fall under the public domain licence is neither sufficiently communicated with the relevant bodies in the Czech Republic nor adequately enforced. This needs to be changed. In the case of the e-Collection, the National Museum insists on this marking in its cooperation agreements with other partner organisations and it has already reiterated this at several workshops and conferences.

Belgium: In Flanders, VIAA's primary focus is on audiovisual heritage whose public consultation or reuse is very much restricted by current IPR rules. VIAA nevertheless has developed a public website (<http://viaa.be/en/>) which enables to consult public domain material. The most viewed material on this platform is the result of the project 'News from the Great War' with more than 270.000 pages from trench newspapers and magazines. A project called 'opencultuurdata' was conducted in 2013 by PACKED vzw. Opencultuurdata.be (<http://opencultuurdata.be/>) was (1) a campaign to raise awareness about open data in the cultural and heritage sector and (2) an app developing contest based on open cultural data sets. Through the opencultuurdata.be website information about open data was made available, e.g. why should a cultural organization open up its data and how to do it.

Portugal: there are no restrictions on the reuse of public domain material. The National Library (BNP: <http://www.bnportugal.pt/>) added CCO licences to the records available in Europeana through TEL and through the NLP aggregator RNOD.

Croatia: the National Strategy contains recommendations for promoting the widest possible access to all digitized data and also for the reuse of digitized public domain material. Prerequisite for allocation of funds is for all holdings which are being digitized to be publicly accessible and for all copyright issues to be resolved, thus all digitized holdings are currently accessible and can be reused.

Lithuania: memory institutions digitizing cultural heritage objects from the national budget

or the EU structural funds must make those objects available for public use without restrictions and without infringing upon the copyrights on those works. Presently, the national memory institutions' digitized content is available free of charge, but information on its possible applications is missing, as the memory institutions did not specify any conditions and purposes thereof. In some cases, restrictions have been imposed, such as images of worse quality placed online or repeated use of digitized objects limited by various means of protection.

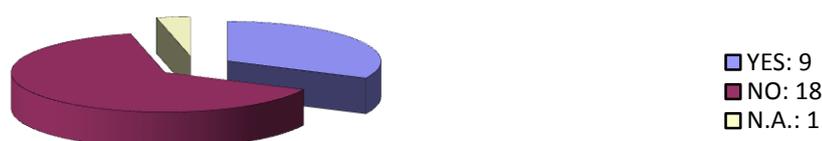
2.3 Unhindered usability of digitised public domain material

The Recommendation calls on Member States to promote unhindered usability of digitised public domain material by taking measures to limit the use of intrusive watermarks or other visual protection measures that reduce the usability thereof. Although generally speaking Member States adhere to this endeavor, only nine (AT, BE, CZ, EL, ES, HR, LT, PL, SK) have reported measures actually taken or being considered in order to implement it in practice, a 35% decrease from the last reporting exercise.

Measures range from removing/excluding the use of visual protection technologies altogether or in particular sectors, normally libraries or archives (CZ, ES, LT, SK) to limiting use of watermarks to non-visible/intrusive ones (ES, PL) or preventing protection measures in cultural institution's or government funding arrangements (AT, EL, ES, PL). One Member State has introduced specific regulations and guidance to prevent use of watermarks in specific materials (PL), another (HR) is setting up working groups to examine the issue and two Member States (ES, PL) are using or considering the use of (non-intrusive) watermarks to better track/monitor reuse or as labelling technique for specific materials (audiovisual), rather than to restrict reuse.

In most cases, initiatives taken for reducing visible watermarks remain fragmented or limited to smaller scale, sector-specific or institution-level efforts, rather than national-scale, overarching ones.

Q. 5.3 Measures for unhindered usability of public domain?



Spain: digitisation projects funded or hired by the General Sub-directorate for Libraries Coordination (SGCB) prohibit the use of invasive watermarks. BNE is studying possibilities to replace current watermarks by non-intrusive ones. So far, offered solutions for retrospective conversion and monitoring of reuse are too expensive. Since November 2014, intrusive watermarks have been avoided in digital images published through the archives PARES portal (<http://pares.mcu.es/>). In the museum sector there are no written rules preventing use of watermarks, but they are not recommended. Some institutions (e.g. Museo del Prado) have eliminated them in their images. Images in the Museum Collections Digital Network have no watermarks (<http://ceres.mcu.es/>).

Poland: digitized library resources do not have visual protections that would limit their usability or reuse. Taking into account the expectations of users of digital copies of archive material and in view of the requirements of the revised Directive on reuse of public sector information, it was decided to resign from placing watermarks on digital copies of archive materials published on the archives portal managed by the National Digital Archive

[\(http://www.szukajwarchiwach.pl/\)](http://www.szukajwarchiwach.pl/). The change has been introduced by regulation no. 14 drawn up by the Chief Director of State Archives on 31 August 2015 on digitization of resources of the State archives. The National Institute of Museology and Protection of Collections recommends limiting the use of prominently exposed watermarks and other visual protections restricting usability of digitized materials in the public domain. Some of the leading museums (National Maritime Museum, National Museum in Warsaw, National Museum in Cracow, national Museum in Gdansk, The Royal Lazienki Museum, Museum of King Jan III's Palace at Wilanów, The Royal Castle in Warsaw) do not use watermarks or identification marks on images or use only those which are not prominently exposed to enable reuse of the resources. Watermarks have not been used in audiovisual resources digitised within the scope of the activities of the National Audiovisual Institute. However, in the audiovisual sector, due to considerable financial value of production processes, complex techniques of labelling the materials are used in order to protect rights rather than restrict reuse. The National Institute of Heritage labels all digitized resources with its logo.

Czech Republic: in the Digital Library of Written Cultural Heritage Manuscriptorium (<http://www.manuscriptorium.com/>) watermarks have been removed by those organisations which consented to do so (most organisations, including the Czech National Library). However, they still remain on older data as the modification would involve a costly re-generation of the source data. For example, the Charles University in Prague still insists on keeping the watermarks on material made accessible (Maps Collection Project: <https://www.natur.cuni.cz/geography/map-collection>). As for public domain material, the National Museum tries to eliminate watermarks. The Museum leads a dialogue with partner organisations to improve the situation regarding their content too. The National Institute of Folk Culture (NÚLK) applies watermarks only exceptionally.

Austria: the use of watermarks or other visual protection measures reducing usability is not applied in digitization projects commissioned by the Austrian Federal Chancellery.

Slovak Republic: no visual protection measures are used in the digitized material generated under the Central Application Infrastructure and Registry programme (for managing and making available digitized content).

Estonia: museums do not use watermarks on digitized images. National Archives uses off-the-object watermarks. The National Library uses watermarks on the side of the object, which are non-intrusive for reading or exploring. Printout is without watermark.

Cyprus: we encourage our providers not to use watermarks on their collections. Though some cultural heritage institutions were able to comply we still have some providers who are willing to keep their watermarks since there is policy to limit their decisions.

Malta: the National Archives only uses watermarks where the assets are provided by third parties that are bound by particular licensing issues.

Croatia: the only visual protection measure we use is the uploading of content in very low resolution that has no value to be used for commercial purposes.

Bulgaria: the St. St. Cyril and Methodius National Library stipulates the reuse of digitized materials that are publicly accessible by providing free access to all digitized materials through its website and other portals. The Regional Library 'P. K. Yavorov' Bourgas use watermarks only for its digitized collection of old postcards on the web and upon request by users, the original is provided.

3. DIGITISATION AND ONLINE ACCESSIBILITY: IN-COPYRIGHT MATERIAL

The widespread transposition of the orphan works Directive, as well as adoption of legally-backed collective licensing solutions for wide-scale digitisation of out-of-commerce works in a growing number of countries, contributed to improve the conditions for bringing in-copyright content online. This along with the development of digital rights clearance platforms such as ARROW or FORWARD, significantly reduces the time and costs involved in clearing rights for the relevant type of content.

Point 6 of the Recommendation invites Member States to improve conditions for the digitisation and online accessibility of in-copyright material by:

a) rapid and correct transposition and implementation of the provisions of the Directive on orphan works and close monitoring of the Directive's application;

b) creating the legal framework conditions to underpin licensing mechanisms identified and agreed by stakeholders for the large-scale digitisation and cross-border accessibility of works that are out-of-commerce;

contributing to and promoting availability of databases with rights information, connected at the European level, such as ARROW.

3.1 Rapid and correct transposition of the orphan works Directive

Over one year after the transposition deadline of the orphan works Directive²⁷ (29 October 2014), twenty four Member States (AT, BE, BG, CZ, DE, EE, ES, FI, FR, HU, IT, LT, LV, LU, MT, NL, PL, PT, RO, SE, SI, SK, UK) have reported legislation to transpose it – a twelve-fold increase from the last reporting period - while others have tabled draft implementing legislation in their respective Parliaments (EL) or plan to do so soon. A few countries (e.g. CY, HR) are still consulting on the best way to transpose the Directive into their legal order.

It should be said that some Member States (DK²⁸, HU²⁹) already had legislation to enable digitisation and use of orphan works prior to the Directive, though with a different scope and features that ought to be updated in the light of the Directive³⁰.

²⁷ Directive 2012/28/EU of the European Parliament and of the Council of 25 October 2012 on certain permitted uses of orphan works, JO L 299 of 27.10.2012, p. 5.

²⁸ Consolidated Act No. 202 of 27 February 2010 on Copyright, § 50, subsection 2. For historic background see: http://www.bne.es/opencms/es/LaBNE/Docs/2010-04-13_Orphan_works_in_a_Danish_perspective.pdf.

²⁹ Act CXII of 28 December amending the 1999 Copyright Act, completed by Government Decree 100/2009, entered into force on 16 May 2009.

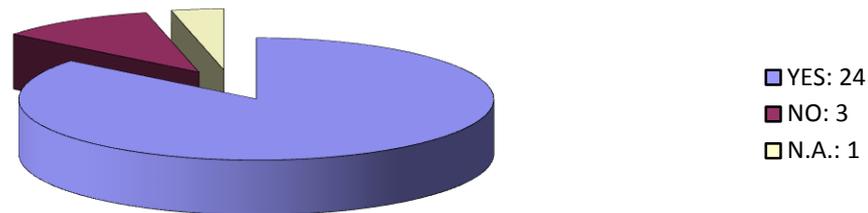
³⁰ The following reports provide more information on the issue of orphan works prior to the Directive: Agnieszka Vutulani, 'The problem of Orphan Works in the EU – an overview of legislative solutions and main actions in this field', European Commission (2008): http://ec.europa.eu/information_society/activities/digital_libraries/doc/reports_orphan/report_orphan_v2.pdf

'In from the Cold – An assessment of the scope of 'Orphan Works', JISC (2009): <http://www.jisc.ac.uk/media/documents/publications/infromthecoldv1.pdf>

Anna Vuopala, 'Assessment of the Orphan works issue and Costs for Rights Clearance', European Commission (2010): http://ec.europa.eu/information_society/activities/digital_libraries/doc/reports_orphan/anna_report.pdf

Some Member States (e.g. CZ, ES, IT, NL, PL, SK, UK) took the opportunity of incorporating the transposition of the orphan works Directive in broader updating of their copyright legislation, **notably to facilitate digitisation and online accessibility of copyrighted content under specified conditions**. Regardless of their orphan status, accompanying measures were adopted in support of its implementation (e.g. guidelines, national contact points, registries, training/awareness actions) or went beyond the scope of the Directive in terms of works and uses covered (e.g. UK).

Q. 6.1 Rapid and correct transposition of the orphan works Directive?



United Kingdom: In 2014 the UK transposed the orphan works Directive as well as introduced a licensing scheme for the reuse of orphan works for commercial purposes. The latter scheme also allows for the licensing of orphan works which are stand-alone artistic works that are excluded from the Directive, as well as for the licensing of unpublished materials beyond the scope of the Directive.

The Netherlands: the Netherlands have implemented the orphan works Directive in national legislation on 8 October 2014, by creating an extra copyright exception (next to the exceptions that were mentioned in the last report) that allows cultural heritage institutions (publicly accessible libraries, educational establishments, museums as well as archives or film and audio heritage institutions) to digitise and display (off line and online) orphan works in their collections in order to achieve aims related to their public-interest missions. These missions include preservation and accessibility of cultural heritage. The national competent authority for the Orphan Works Database is the Cultural Heritage Agency (Rijksdienst voor het Cultureel Erfgoed, RCE). The RCE started to organize this role within the field of cultural heritage and national networks that include the National Library, the National Archives, the Netherlands Institute for Sound and Vision and the Eye Film Institute. Additionally, the Cultural Heritage Agency and its partners participate in international networks such as Europeana. Given that the diligent search per work prescribed by the Directive is unfeasible for large scale digitization, the Dutch Government has decided to draft a proposal to introduce extended collective licensing (ECL) in Dutch copyright legislation in 2016. By letter of 12 October 2015, the Dutch Government informed the Parliament about this decision.

Czech Republic: the orphan works Directive has been transposed as part of Government amendment to the Copyright Act (Act no. 121/2000 Coll., as amended by Act no. 228/2014 Coll.), which came into force on 7 November 2014. The amendment contains mandatory provisions, i.e. introduction of an exemption for the use of orphan works and sound recordings for certain entities, including the relevant definitions, terms and conditions. The Ministry of Culture acts as the competent national authority and is registered as such in the EU Orphan Works Database at the OHIM. In June 2015, the Ministry of Culture has prepared another draft amendment to the Copyright Act, which contains, among other things, provisions concerning extended collective management and a special licensing scheme for the use of orphan works (and other orphan subject matter) going beyond the scope of the

orphan works Directive.

Slovak Republic: the Directive was incorporated into the Copyright Act in October 2014. Libraries, archives, museums and schools can use an orphan work (after diligent search has been performed) by making reproductions for the purpose of digitization, indexing, cataloguing, preservation, restoring and making available to the public without remuneration. Only non-commercial use is allowed and authors can opt-out. The Slovak National Library is the competent national authority for the Orphan Works Database.

Finland: Finland has implemented the directive of the European Parliament and of the Council of 25 October 2012 on certain permitted uses of orphan works (2012/28/EU) in November 2013 by an amendment to the Finnish Copyright Act (763/2013) and by a separate Act on the use of orphan works (764/2013). The Act entered into force in October 29, 2014. Section. The Act on the use of orphan works implements the Directive in detail, including a definition of orphan work, requirement of a prior diligent search being performed in an EEA country and provisions for re-appearing rightholders and how to compensate them. The Ministry of Education and Culture has given a decree (846/2014) that lists the sources that need to be consulted to conduct diligent searches for rightholders. These include the National bibliography, databases of archival institutions and Finnish or Finnish/Swedish Literature Societies, authors branch organisations and collective management organisations, the Finnish cultural portal 'Finna' (<https://www.finna.fi/?lng=en-gb>), relevant Finnish publishers, alongside some sector-specific sources for visual, audiovisual and phonographic works, ARROW Plus (<http://www.arrow-net.eu>), VIAF (Virtual International Authorities Files), ISNI (International Standard Name Identifier) and ISAN (International Standard Audiovisual Number). The results of the diligent searches shall be communicated to the Office for Harmonization in the Internal Market (OHIM), which keeps the central database of orphan works at EU level.

Germany: the orphan works Directive became German law on January 1st 2014. German institutions can register orphan works in the European Orphan Works Database after signing up as a user. For entries by German users, the German Patent and Trade Mark Office (Deutsches Patent- und Markenamt, DPMA) is automatically notified of new title additions and asked to confirm these. The German National Library, who was also involved in testing the European Orphan Works Database, is currently exploring ways of conducting the required diligent searches for rights holders to gather experience and establish an efficient in-house workflow.

Italy: the Directive was implemented by Legislative Decree n. 163 of 10 November 2014, which introduced new Articles 69-bis to 69-septies in the National copyright law, L. 22.04.1941, n. 633. Italy is implementing a research database where the beneficiary organisations will register their diligent searches. The Directorate General for Libraries transfers to the Orphan Works Database of the European Union Intellectual Property Office the results of the searches that led to declare a work or a phonogram orphan. The Directorate General also set up a technical consultation table regarding orphan works. The table defines guidelines for the diligent search for the different types of works, promotes initiatives to detect the presence of orphan works in the collections of the beneficiary institutions and identifies contact persons for each area of expertise.

Lithuania: on 16 December 2014, the Law on Copyright and Related Rights was amended by including Chapter VII – Orphan Works of Unidentified Rightholders and Terms and Conditions of their Use. The law explains i.a. the terms and conditions for the use of orphan works and phonograms, the diligent search and registration procedures, the search sources and the permitted uses of these works. Measures aimed at ensuring the registration of orphan works

in the common database of the European Union were implemented in accordance with Article 3, paragraph 6, of the orphan works Directive. These include (1) harmonizing the Lithuanian database of orphan works with the EU database at the OHIM, (2) carrying out diligent searches for orphan works in cooperation with Lithuanian institutions, (3) registering the results of diligent searches in the EU database, (4) development of a national structure for registration of diligent searches for orphan works to ensure interaction with the common orphan works database at OHIM, and (5) training courses for relevant Lithuanian institutions on diligent searches and submission of the corresponding results for registration at the orphan works database. An international seminar on this topic ('Digital Cultural Heritage is Opening to the World') took place in Vilnius on 7 October 2014.

France: France has transposed the orphan works Directive by Law 2015-195 of 20 February 2015 amending its Copyright Act ('Code de la propriété intellectuelle') with the addition of a new Chapter V in its Title II on 'Provisions on the exploitation of certain orphan works'. The provisions on the reuse terms for orphan works are contained in Articles L. 135-1 to L. 135-7 of this Act.

Spain: the orphan works Directive has been transposed to national legislation through Intellectual Property Law 21/2014, Article 37bis. Currently the Ministerio de Educación, Cultura y Deporte (MECD) through its Intellectual Property Subdirectorate is working on implementing regulation for orphan works through a specific Royal decree. It can be expected that cultural institutions won't have enough resources to envisage diligent searches as a priority task. In any case, applicability for cultural institutions would be limited. Diligent search remains too widely defined and proves to be expensive and time consuming. It entails not only human resource investment, but also economical as it might imply the use of non-freely available databases (e.g. registry of companies). Besides, there is a potential risk that such efforts in the end resulted in the declaration of non-orphan status and therefore the impossibility to digitise/make available certain material. Most of cultural institutions would have been interested in the Directive also covering stand-alone graphic works (drawings, photographs...). Due to this, most institutions will keep focusing on the digitization of public domain holdings. In view of the vague definition of diligent search, cultural institutions are a bit confused about how to accomplish this task. In this context, during 2014-2015 the Biblioteca Nacional de España (BNE) has collaborated with a research group of Universidad Complutense in order to identify a workflow for diligent searches. As a preliminary result, a technical report was recently presented to the library ('Proposals and practical solutions to face orphan works declaration in Spain'). In such report, the steps for a diligent search are identified for monographs and phonograms, but further deeper studies need to be undertaken (specially for audiovisual material). This technical report is only a draft document and as of 10 August 2015 remains unpublished. BNE will be reviewing the document and studying the options for its dissemination.

Sweden: the EU Directive was implemented in the Swedish Copyright law on 29 October 2014. Digisam is working towards developing the basic conditions for the use of photographs and other items of fine art and applied art that are in the collections and archives of heritage institutions. This work is done in conjunction with representatives from the Swedish Patent Office, cultural institutions and copyright organisations. In parallel, work is underway to develop national guidelines on copyright law, other laws that closely connected and useful contract templates in general.

Austria: Directive 2012/28/EU on orphan works has been transposed through an amendment to the copyright law which was published in the national gazette on 13.01.2015 and entered into force retroactively on 29.10.2014.

Portugal: the Directive was transposed through an amendment to the Copyright Act ('Código dos Direitos de Autor e Direitos Conexos'³¹) by Law no. 32/2015 modifying its Articles 75°, 178° and 183° and adding new Articles 26°-A and 26°-B, which entered into force on 24 April 2015. The National Library was appointed the national authority for orphan works.

Poland: the amendment to the Act on copyright and related rights transposing the orphan works Directive was approved by the Polish Parliament on 11 September 2015 and signed by the President of the Republic of Poland on 5 October 2015. The relevant regulations will become effective 30 days after the publication of the revising Act, along with implementing regulation specifying a catalogue of sources required to be checked through the process of diligent search and the way of documenting this process.

Romania: the Romanian Copyright Law (no. 8/1996) was modified by Law no. 210/2015 of 7 July 2015, which transposes the EU Directive on orphan works³².

Estonia: Regulation on orphan works was incorporated in the Copyright Act on 30.10.2014 (AutÕS §§ 27.2 – 27.8)..

Slovenia: the Slovenian Parliament approved Copyright Law changes on 29.7.2015 (Uradni list RS, 56/15) in order to transpose the orphan works Directive (2012/28/EU).

Latvia: the orphan works Directive has been transposed into national legislation with amendments to the Copyright Act on 18 December 2014, effective from 31 December 2014. The National Library of Latvia has been appointed the national competent authority and has started to promote the OHIM orphan works database among cultural institutions and to develop guidelines for diligent searches and use of the orphan works database.

Malta: the orphan works Directive has been transposed through Maltese legal order. The transposing legislation is entitled 'Certain Permitted Uses of Orphan Works Regulations' (S.L.415.05)³³.

Belgium: Law of 20 July 2015 transposed the orphan works Directive into Belgium national legislation.

Luxembourg: the orphan works Directive was transposed by the 'Law on certain permitted uses of orphan works' of 3 December 2015³⁴. Secondary legislation followed on 15th January 2016, consisting of the list of sources to consult when performing a diligent search (<http://www.legilux.public.lu/leg/a/archives/2015/0227/2015A4860A.html>).

Bulgaria: Decree No. 25 of 18 February 2015 amended the Copyright and Related Rights Act to regulate the use of orphan works by the organisations described in Article 71b(1) of said Act. The St. St. Cyril and Methodius National library participated in training actions by the Office for Harmonisation in the Internal Market (OHIM) in Alicante, on the setting up and functioning of the database of orphan works established by the orphan works Directive.

Hungary: the implementation of the Directive has been completed both at legislative and Government decree level. Amendment of Act CLIX of 2013, effective as of 29 October 2014, introduced a new chapter within the Act on Intellectual Property rights (Chapter IV/A),

³¹ Decreto-Lei no. 63/85 of 14 March 1985.

³² http://www.avocatnet.ro/content/articles/id_41096/Legea-nr-210-2015-completarea-Legii-nr-8-1996-privind-dreptul-de-autor-si-drepturile-conexe.html.

³³ <http://www.justiceservices.gov.mt/DownloadDocument.aspx?app=lom&itemid=12255&l=1>.

³⁴ <http://www.chd.lu/wps/portal/public/RoleEtendu?action=doDocpaDetail|id=6783#>.

supplemented by Government Decree 138/2014. (IV. 30.) on the detailed rules for the use of orphan works.

Croatia: we established several working groups to transpose the orphan works Directive. This is a specific case with many unresolved issues that are currently being considered. It is a case of joint ownership between former Yugoslavia countries. Most of our in-copyright materials are not owned only by Croatia because former Yugoslavia countries also have copyright on the same material. We are working to solve this specific political issue as soon as possible.

Greece: there is a draft bill for amending the Copyright Law (Law 2121/1993) with provisions regulating orphan works.

3.2 Legal conditions underpinning digitisation of out-of-commerce works

Four years after the Recommendation and of the Memorandum of Understanding on Out-of-Commerce Works³⁵, eight Member States (DE³⁶, EE, FI, FR³⁷, HR, PL, SK, UK) have already adopted legislation to underpin licensing mechanisms identified and agreed by stakeholders for the large-scale digitisation and cross-border accessibility of out-of-commerce works, **a four-fold increase from the last reporting period**. In addition, extended collective licensing (ECL) systems are also used in Denmark, Finland, Iceland, Norway, Sweden³⁸ and Hungary.

This means that fourteen countries already provide for some mechanism to facilitate digitisation and online accessibility of works which are out-of-commerce. Moreover, several Member States (e.g. CZ, NL) have proposed amendments to their copyright legislation to allow extended collective management of rights for the digitisation and the making available of out-of-commerce works, regardless of their orphan status.

Beyond the extended collective licensing schemes, mainly used in the Nordic countries for specific purposes and uses, the legal tool normally used to enable mass-digitisation takes the form either of mandatory collective management or of a legal presumption of representation by collective management organisations of non-represented holders for the exercise of the exclusive rights to reproduce/make available a bulk of specified works, which would otherwise require individual clearance. It normally applies to works of a particular sector (e.g. books or print material), published in the country concerned before a specified cut-off date and which are not or no longer commercially available.

Seven Member States (DE, EE, FI, FR, HR, HU, SE) reported recent projects for the mass digitisation and online accessibility of copyrighted works no longer in commerce based on legally-backed (extended) collective licensing schemes, mostly in the print sector. One Member State (SK) reported a similar scheme with no cut-off date, meaning even most recent material may be digitized and made online accessible. In some countries (e.g. FR, SK), these schemes involve the setting up a

³⁵ Memorandum of Understanding 'Key Principles on the Digitisation and making Available of Out-of-Commerce Works', 20 September 2011: http://ec.europa.eu/internal_market/copyright/docs/copyright-info/20110920-mou_en.pdf.

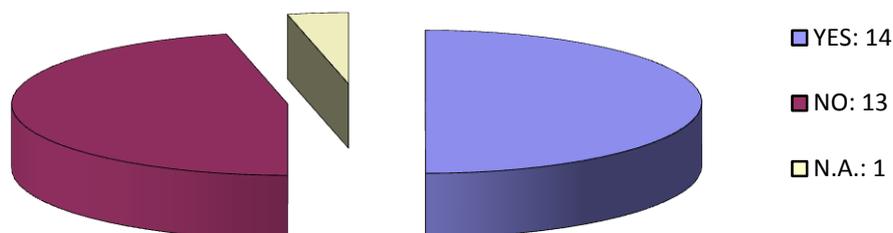
³⁶ Law of 27 June 2013 on the use of orphan and out-of-commerce works and further changes to the © Act: http://www.bundesgerichtshof.de/SharedDocs/Downloads/DE/Bibliothek/Gesetzesmaterialien/17_wp/UrheberR_verwaiste_Werke_BReg/bgbl.pdf?__blob=publicationFile

³⁷ Law n° 2012-287 of 1st March 2012 on the digital exploitation of out-of-commerce books of the 20th century: <http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000025422700&categorieLien=id>

³⁸ [Study](#) on the Application of Directive 2001/29/EC on Copyright and related Rights in the Information Society, De Wolf & Partners in collaboration with CRIDS, European Union (2013), p. 305.

dedicated collective management organizations specifically entrusted to manage the rights and collect/distribute revenues associated with exploitation of the digitized out of commerce works.

Q. 6.2 Legal conditions underpinning digitisation of out-of-commerce works?



Slovak Republic: legislation pertaining to the status and use of out-of-commerce works by cultural institutions was incorporated into Slovak copyright law at the end of October 2014 based on the 2011 MoU on Key Principles on the Digitisation and Making Available of Out-of-Commerce Works and as a result of previous negotiations among Slovak National Library (SNL), Ministry of Culture and the collecting society LITA acting on behalf of authors. All agreed that it would make sense to limit the use of out-of-commerce works as little as possible, while respecting the needs of libraries and their users, rights of authors and commercial interests of publishers. Is considered out-of-commerce a literary work expressed in printed form (e.g. monographs, journals, newspapers), including imbedded visual works like pictures, drawings, photographs, that is (1) part of the library's, archive's or museum's collection, (2) not commercially available on the market through primary distribution channels like bookstores or wholesale distributors (excluding second hand acquisitions) and (3) registered in the publicly accessible list of out-of-commerce works maintained by the National Library on its website. There are no defined time limits (such as only books published up to 1995 or in the 20th century), which makes it possible to treat relatively new works as out-of-commerce: presently, the SNL considers monographs published before 2013 and periodicals published before 2014 automatically as out-of-commerce, whereas newer documents are judged on a case-by-case basis. Anyone can propose a work to be registered in the list, the vast majority of proposals are made by the National Library itself, based on the list of works that had undergone digitization (ca. 40 million pages of Slovak-related materials as of now³⁹) and the time of publishing as previously indicated. Before a work is registered, the proposal has to be publicly accessible (via the SNL website) for a minimum of 3 months during which anyone can object that the work in question is actually commercially available (such requests usually come from publishers or distributors) or the authors can opt out from the scheme and say they do not want some/all of their works to be used as out-of-commerce (only the author can do this, not the publisher). After the 3-month period, the work is deemed out-of-commerce (the author can opt out anytime, even after the work has been registered as out-of-commerce). This status is dynamic, i.e. the work can lose it when it becomes commercially available again (e.g. via re-edition) and regain it again later. It is expected that publishers rely on the statistics on use of digitized out-of-commerce works to decide which works are worth re-publishing, due to heavy traffic by library users.

³⁹ 4 December 2015.

France: Law of 1 March 2012 on the digital exploitation of out-of-commerce books of the 20th century introduced provisions in the Copyright Act (Articles L. 134-1 to L.134-9 of the Code de la propriété intellectuelle') for the digital exploitation of rights on books published in France before 1st January 2001, which are still in copyright but no longer commercially available. A scheme for digitizing over 500.000 books is presently running under such provisions. Books are digitized and exploited in digital format, unless rightholders (authors, publishers...) oppose within specified periods. A Collective management organization with equal participation of authors and publishers (Sofia: <http://www.la-sofia-livres-indisponibles.org>) grants the necessary licences for their digitisation, online availability and commercial exploitation, and distribute revenues among relevant rightholders. The National Library 'Bibliothèque Nationale de France' has been entrusted with managing the online platform operating the Registry of Out-of-Commerce Books in Electronic Publishing 'ReLIRE' (Registre des Livres Indisponibles en Réédition Electronique: <https://relire.bnf.fr>).

Germany: Law of 27 June 2013 on the use of orphan and out-of-print works sets up a legal presumption in favour of collective management organisations (VG Wort and VG Bildkunst) for the licensing of the reproduction and make available rights on books published before 1st January 1966, which are no longer commercially available, if there is no opposition by the right-holders after 6 weeks of the work being put on the Registry of Out-of-Commerce Works run by the German Patent and Trade Mark Office. Following new legislation on out-of-commerce works of April 1st 2014, the Kulturministerkonferenz (assembly of ministers of education, research and culture of the German states), the VG Wort and the VG Bild-Kunst (the copyright collectives for written material and the visual arts respectively) have entered into a contract that regulates how to licence out-of-commerce works and what fees will be incurred. The contract's preamble explicitly states that the scans of out-of-commerce works shall be made available in digital libraries like Europeana or the German Digital Library DDB. At the moment, the contract applies only to monographs, an agreement regarding journals and newspapers will follow. The contract provides the basis for large-scale digitization projects of out-of-commerce works. The DDB has developed a licensing service (Licensing service for out-of-commerce works, VW-LiS: <http://www.dnd.de/EN/vwllis>) in cooperation with VG Wort and VG Bild-Kunst, as well as the German Patent and Trade mark Office. Libraries and other privileged institutions can register for this service for free in order to research out-of-commerce titles and purchase licences from the collecting society VG Wort. Further information on the registry of out-of-commerce works can be found at http://www.dpma.de/service/e_dienstleistungen/register_vergriffener_werke/.

United Kingdom: in 2014, the UK government introduced a general extended collective licence (ECL) although as yet no collecting society has applied to operate in extended mode. The cultural sector's view is that the overly complex way ECL has been introduced in the UK means that it is unlikely to facilitate any large-scale digitisation. Extended collective licensing does not allow access to the works of non-members from abroad, which is why geo-blocking is common in other ECL countries like Norway and Denmark.

Finland: the following small amendments have been made in Section 26.1 (607/2015) of the Copyright Act, effective June 1st 2015: 'The provisions of this Act regarding extended collective licences shall apply when the use of a work has been agreed upon between the user and the organization which is approved by the Ministry of Education and Culture and which represents numerous authors of works used in Finland. An approved organization is deemed to represent authors of other works in the same field under the licence. A licensee authorized by virtue of extended collective licence may, under terms determined in the licence, use all works by authors in the same field.' This amendment did not change the substance of the provision but it clarified that the approved collective management organization is in fact

deemed to represent even the rightholders who are not directly represented by it. Before, the same result relied on the expression 'extended effect of the contract'. Based on the extended collective licensing mechanism described above, the Ministry of Education and Culture, the National Gallery, the Copyright Organisation for Visual Artists (Kuvasto) and the Copyright Organisation Kopiosto have in Autumn 2014 concluded an agreement on making available to the public on the website of the National Gallery the whole repertoire of the Finnish visual artists that is included in the collections of the National Gallery. The 'virtual national art gallery' is intended to be fully available in the coming years within the limits of the resources of the National Gallery for browsing in Finland as well as in any other country.

Poland: the Act of 11 September 2015 amending the Act on Copyright and Related Rights introduces rules concerning works not commercially available, namely works published in books, journals, magazines or other printed publications, if such works are not commercially available with the rightholders' consent. Thanks to these rules, archives, educational institutions, universities, scientific and cultural institutions will obtain the possibility of acquiring licences for sharing collections of the out of commerce works on the internet within the framework of mass digitisation projects. The introduced solution is agreed and the right to grant licences on behalf of the rightholders will be acquired by collective management organisations in charge of copyright and related rights. The amendment to the Act on Copyright and Related Rights of 2015 introduces the possibility of digitizing on a wider scale and sharing the resources unavailable in trade (out-of-commerce). For instance, in accordance with the provisions of the Act, libraries can digitise the works unavailable in trade under an agreement signed with collective management organisations and make them available in digital libraries in such a way that each internet user has a possibility to access them at a chosen place and time. Entitled persons have the right to the relevant remuneration.

Czech Republic: in June 2015, the Ministry of Culture prepared an amendment to the Copyright Act, which contains i.a. provisions concerning extended collective management of rights for digitization and for making online accessible by libraries works that are not available in the market.

The Netherlands: the Dutch Government decided to draft a proposal to introduce extended collective licensing (ECL) in Dutch copyright legislation in 2016. By letter of 12 October 2015, the Dutch Government informed the Parliament about this decision. In 2014, THE BASICS for copyright management was presented. THE BASICS is a set of guidelines for the production, distribution and use of digital cultural heritage. The guidelines for copyright management set a standard for all Dutch heritage institutions to analyse the copyright status of their collections and to manage the digitization of these collections accordingly.

Hungary: on 15 July the Hungarian Intellectual Property Office released its detailed concept for consultation on a legislative regulation for the transposition of Directive 2014/26/EU on the collective management of copyright and related rights and multi-territorial licensing of rights in music works for online use in the internal market. The detailed concept includes a dedicated chapter on the collective management of rights on out of commerce works. The detailed concept on the use of out of commerce works submits a proposal on the adoption of a specific copyright management scheme for literary works published on or before 31 November 1999 (books, periodicals and the individual articles contained in these and other literary works as well as their illustrations). Essentially, the law on intellectual property would require authors of such literary and visual works to authorize reproduction and to grant on-demand rights through collective rights management for a dedicated community of users, beneficiary educational and cultural institutions [see Szjt. Article 38 paragraph (5)]. Presently,

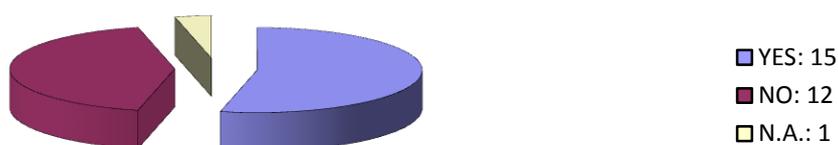
the outcome of the consultation is being assessed.

Croatia: Croatia is supporting two major projects of large-scale digitisation concerning e-book and e-publishing. (1) 'ToolBook' (<https://library.toolbook.com/>) is one of the first eLibraries in the world. Among the usual advantages of e-books, the ToolBook eLibrary brings a whole new reading experience. By activating the library subscription user can gain access to an attractive offer of over 800 (and counting) of the newest titles in Croatia. The ToolBook eLibrary currently hosts e-books from the leading publishers in Croatia: Fraktura, Znanje, Bulaja naklada, Jesenski & Turk, Meandarmedia, Fokus, Knjigotisak, Mala Zvona. (2) 'eLektire' (<http://lektire.skole.hr/>) is a new non-commercial project aimed at providing the obligatory school reading in e-form, with free access to all Croatian pupils, students and teachers, launched in 2009. It was the joint effort of the Croatian Ministry of Science, Education and Sport (which provided the list of titles and readers), Croatian Academic and Research Network (which provided the platform) and a young publisher, at the time already well experienced in multimedia publishing, Bulaja naklada (which provided the content).

3.3 Databases of rights information

Fifteen Member States (AT, DE, EE, FI, FR, HU, IT, LT, LU, LV, MT, NL, PL, PT, SK) reported their contribution to or promotion of availability of databases with rights information, normally in the form of participation or contributing to the ARROW database or in conjunction with the implementation of orphan works or out-of-commerce legislation. Both require the setting up of databases of works with the specified status and the corresponding rights. This represents significant progress, as six new countries (AT, EE, FI, FR and PL) report measures under this heading, on top of the twelve having done so in the previous reporting period (some of which abstained from reiterating already reported initiatives). One country (FI) finds the development and availability of databases with rights information an essential part of the functioning of the copyright system, which shows the pertinence of this topic to facilitate online accessibility of copyrighted cultural content.

Q. 6.3 Contribution to databases of rights information such as ARROW?



France: thanks to its partnership with ARROW, the French National Library (BnF) has been able to adapt its data workflows in order to comply with the requirements of the ReLIRE project for digital exploitation of out-of-commerce books.

Italy: ICCU was partner of the ARROW Plus project (2011-2013) as National Contact Point for the Italian libraries and participated in the validation process of Italian data. In 2013, after the conclusion of the project, ARROW turned into a non-for-profit organization where ICCU plays the role of 'ordinary member' of the Board of the Association. The Directorate General for Libraries transfers to the EU database of orphan works the results of diligent searches that led to declare a work or phonogram orphan..

Finland: Finland finds the development and availability of databases with rights information

an essential part of the functioning of the copyright system. The availability of rights information contributes to the effectiveness of licensing and distribution of remuneration. Effective and, if possible, open access to these databases can support also moral rights of rights holders and can help to lower the amount of orphan works. Copyright Society KOPIOSTO in Finland is participating in the development of various databases in different fields such as IPI (Interested Party Information) and IDA (International Documentation on Audiovisual works) through CISAC. It also follows ARROW.

Slovak Republic: ARROW is part of the national legislation transposing the orphan works Directive, as it is now mentioned in the Copyright Act as one of the primary sources to be checked when performing diligent searches.

The Netherlands: the Film Institute EYE has contributed ca. 700 orphaned films to the European Orphan Works Database.

Germany: the use of the European Orphan Works Database has been made mandatory for all who want to register orphan works. The German Patent and Trade mark Office, which plays a central role in the orphan works registration workflow, collaborates closely with the European Patent Office and the Office for Harmonisation in the Internal market, which operates the European Orphan Works Database.

Belgium: The Royal Library contributes to the ARROW Plus project in Belgium in cooperation with "La Maison des Auteurs – Het huis van de auteurs" and "boek.be". The Royal Library provides the Belgium National Bibliography. The launch of the ARROW Plus database is foreseen for 2013.

Portugal: The National Library of Portugal bibliographic data is available through NLP XML repositories (<http://repor.bn.pt/>; <http://urn.bn.pt/>) that are specifically provided to ARROW partners via TEL.

Hungary: Government Decree 138/2014. (IV. 30.) on the use of orphan works identifies, among the rules on diligent search for right holders concerning orphan works, searches in VIAF (Virtual International Authority Files) and ARROW (Accessible Registries of Rights Information and Orphan Works) databases, thus supporting access to these databases.

Estonia: orphan works are added to the OHIM database <http://oami.europa.eu/orphanworks>

Luxembourg: the National Library has started and finished a first batch of author data which will be made available in VIAF (Virtual International Authority File) one of the key identifier hubs for author related data.

Spain: VEGAP (Visual Entidad de Gestión de Artistas Plásticos) is a non-profit organisation that represents more than one hundred thousand authors from all over the world in Spain. It manages the authors' rights of painters, sculptors, photographers, illustrators, designers, video artists, net artists and architects which are listed on its website (www.vegap.es).

Lithuania: the Lithuanian Publishers Association became a partner of the ARROW work status identification system in 2011. The goal of the Association is to determine the relevance of the BiP (Books in Print) database and the copyright search/identification system in Lithuania, set up a national working group and coordinate the discussion and initiatives of relevant institutions around this topic.

4. EUROPEANA

Europeana reached almost 49m objects in January 2016, significantly exceeding the overall target of 30 million items by the end of 2015 set in the Recommendation (a target that was already reached, ahead of schedule, in November 2013). Progress regarding the sound or audio-visual objects has been slower, but the 2015 2m target has been virtually reached (98%). The percentages of meeting individual targets vary among Member States, but overall the effort of MS has been high. However, Member States stress the importance of considering quality issues alongside quantity.

Member States continue to report initiatives to encourage cultural institutions as well as publishers and other rightsholders to make digitised material available in Europeana, through the efforts of national aggregators, special workshops, events and campaigns, as well as through local networks for coordination and support. The Europeana Art 280 campaign provided a strong incentive for Member States to engage cultural institutions to bring public domain masterpieces to Europeana. On the other hand, initiatives by Member States to raise awareness of Europeana among the general public and notably in schools in this reporting period are generally lagging behind.

The Europeana Data Exchange Agreement is generally well accepted and opening up metadata for re-use at national level is more and more common practice. Although projects, hackathons and other events have resulted in some experimentation prototypes and some first applications that provide an improved experience of re-use compared to the previous reporting period, re-use of metadata is considered to a large degree a challenge.

Point 7 of the Recommendation invites Member States to contribute to the further development of Europeana by:

- (a) encouraging cultural institutions as well as publishers and other rightholders to make their digitised material accessible through Europeana, thus helping the platform to give direct access to 30 million digitised objects by 2015, including two million sound or audiovisual objects;
- (b) making all public funding for future digitisation projects conditional on the accessibility of the digitised material through Europeana;
- (c) ensuring that all their public domain masterpieces will be accessible through Europeana by 2015;
- (d) setting up or reinforcing national aggregators bringing content from different domains into Europeana, and contributing to cross-border aggregators in specific domains or for specific topics, which may bring about economies of scale;
- (e) ensuring the use of common digitisation standards defined by Europeana in collaboration with the cultural institutions in order to achieve interoperability of the digitised material at European level, as well as the systematic use of permanent identifiers;
- (f) ensuring the wide and free availability of existing metadata (descriptions of digital objects) produced by cultural institutions, for reuse through services such as Europeana and for innovative applications;
- (g) establishing a communication plan to raise awareness of Europeana among the general public and notably in schools, in collaboration with the cultural institutions contributing content to the site;

4.1 Increase in content contribution

Europeana reached 48,838,150 objects in January 2016, of which 44,187,278 came from data providers in the EU Member States, significantly exceeding the overall target of 30 million items by the end of 2015 set for the Member States in the Recommendation. At the time of publication of this report (June 2016) Europeana has exceeded 53 million objects. The target of two million sound or audio-visual objects has reached 98%⁴⁰.

Table 1 provides an overview of content contribution in January 2016⁴¹ against the Annex II to the Recommendation. As can be seen in the table, percentages of meeting individual targets vary among Member States, though overall the effort of MS has been high. Among non-EU countries, Norway has contributed 2.8 million objects, constituting 5.9% of the total amount of Europeana objects.

Reported obstacles to reaching targets include lack of financial resources, lack of national coordination, or infrastructure issues.

The issue of what constitutes a 'unit' for counting digitised objects has emerged, resulting in differences between target numbers and achieved numbers:

Czech Republic: *Due to the fact that Europeana considers a digital object as a single unit, which is represented by a monograph or periodic title, then meeting the quantitative indicators is a challenge for libraries (a single title can consist of several thousand pages).*

Luxembourg: *While the target number has been overshoot by almost 50%, it must be borne in mind that initial plans included long form objects such as books and movies of which none were digitised. Instead the large number of objects contains many small objects such as standalone photographs. It is also worth noting that every single issue of each periodical title was counted towards the final total.*

Several Member States refer to the importance of considering quality issues alongside quantity. For example:

Belgium: *Flanders would like to stress that it wants to focus on quality instead on quantity. The sustainable handling of digital cultural heritage is key, and Europeana can play an important role in order to achieve this.*

Germany: *German heritage institutions have also taken part in shaping Europeana's ideas on its role as a "Digital Service Infrastructure" which focuses on better (rather than just more) data.*

Member States continue to report initiatives concerning the encouragement of cultural institutions, publishers and other rights-holders to make digitised material accessible through Europeana. Similarly to the previous reporting period, these include:

- Supporting aggregation/provision of content through national aggregation initiatives (BE, CZ, DE, FI, HR, HU, IT, LT, MT, NL, PT, SE, SK, UK) or European aggregation projects (EE, FI, IT, LV, SE, SI, UK) which channel/provide digitised material to Europeana as well.
- Raising awareness about Europeana and encouraging participation through special workshops, events and campaigns (CY, HR, IT, MT, NL, RO,) local networks for sharing information and collaboration (BE, LT, MT, NL, PL) and promoting Europeana as a benefit to cultural heritage institutions, in the absence of a broader policy commitment (UK)

⁴⁰ 1,958,957 results (1 June 2016)

⁴¹ http://ec.europa.eu/information_society/newsroom/image/document/2016-6/contribution_to_europeana_13733.pdf

- Funding digitisation (EL, PL, SI), specifically digitisation projects that require compliance or sharing of the material to Europeana (EL, PL, SK)

In particular,

Romania: "Europeana Art 280"⁴² was used as an incentive for the cultural institutions to increase their exposure via Europeana.

The concept of 'local networks' has also emerged in this reporting period. For example:

Poland: Using the example of activity of Europeana Network, the Polish Ministry of Culture and National Heritage initiated the activity of the working "Europeana network", which gathers Polish institutions actively involved in cooperation with the European portal. The aim of the network is to strengthen the national communication system, exchange information and experience, as well as improve professional relationships with Europeana Foundation. The group meets not less frequently than two times in a year.

Germany reports a national initiative specific to the contribution of sound or audio-visual material.

Germany: Regarding sound material, the German Digital Library is in the planning stages for establishing a helpdesk dedicated to audio content. It will become active in the beginning of 2016 and will be situated at the State and University Library Dresden. The help desk will be instrumental in augmenting the audio content available in the German Digital Library and, therefore, Europeana.

Luxembourg reports that despite no specific measures, it is taken as a given that all digitised content from cultural organisations will be made available via Europeana.

4.2 Accessibility through Europeana as a condition for public funding

Five Member States (AT, CZ, ES, PL, SK) report having set accessibility through Europeana as a condition for public funding in some cases of project digitisation, as was also the case in the previous reporting period. Most commonly, Member States require that publicly funded digitised material is made available through existing national aggregators that deliver to Europeana (DE, HR, IT) or through other national portals and infrastructures that provide access points to the material for distribution and re-use (EE, UK) or that digitised material complies to interoperable and accessible standards so that it can be easily shared (BE, EL, HR). In some other cases (LU, LV, NL), no specific measures have been taken but the current trend is that material digitised by means of public funding is shared and therefore will also be made available through Europeana.

Germany: More and more, public funding of digitisation projects comes with an obligation or at least a strong recommendation to add the resulting digital objects to the German Digital Library. One of the goals of the German Digital Library's newly published strategy is fulfilling the role as the German national aggregator for Europeana. So the public funding that includes the condition to deliver data to the DDB profits Europeana as well.

Estonia: Estonia has developed its own digital archives and portals that provide digital heritage without limits where possible. We hope that Europeana will be able to use technology (such as RDF or similar) to collect data from these portals in the future. We have not made the condition to make heritage accessible in Europeana compulsory in digitisation projects, but they have to make heritage available through national repositories and portals that have links to Europeana.

⁴² <https://ec.europa.eu/digital-single-market/en/news/europeana-280-connecting-europeans-their-art-heritage>

Italy: Any new digitisation initiatives promoted and supported by ICCU has as final goals the enrichment of both the national aggregators and Europeana.

Netherlands: In general the policy in the Netherlands on making digital cultural collections available and connected is gradually shifting from being encouraging and supportive to 'comply or explain'. Making content accessible through the national aggregator, domain-aggregators and Europeana isn't conditional for funding, but approached more and more as a matter of course.

Germany also highlights the need to set similar requirements to EU-funded digitisation projects to contribute to national aggregators: *However, we would also like to mention that it would be helpful for the data delivery process (and to avoid duplicates) if the granting of EU funds for digitisation projects would be tied to an obligation of the beneficiaries to deliver the metadata of their digitised material not only to Europeana but to the national or regional aggregators as well.*

Table 1 : Overview of content contribution in January 2016 against Annex II to the Recommendation⁴³

Contribution to Europeana (28 Jan 2016) against Annex II to Recommendation				
	Number of objects		% of target	% of total
	Target by 2015	January 2016		
AUSTRIA	600,000	2,070,209	345.0%	4.2%
BELGIUM	759,000	1,357,805	178.9%	2.8%
BULGARIA	267,000	106,757	40.0%	0.2%
CROATIA		109,149		0.2%
CYPRUS	45,000	35,672	79.3%	0.1%
CZECH REP	492,000	602,130	122.4%	1.2%
DENMARK	453,000	1,330,710	293.8%	2.7%
ESTONIA	90,000	546,762	607.5%	1.1%
FINLAND	1,035,000	904,062	87.3%	1.9%
FRANCE	4,308,000	4,540,843	105.4%	9.3%
GERMANY	5,496,000	5,506,871	100.2%	11.3%
GREECE	618,000	617,658	99.9%	1.3%
HUNGARY	417,000	796,320	191.0%	1.6%
IRELAND	1,236,000	256,098	20.7%	0.5%
ITALY	3,705,000	4,208,788	113.6%	8.6%
LATVIA	90,000	143,421	159.4%	0.3%
LITHUANIA	129,000	165,987	128.7%	0.3%
LUXEMBOURG	66,000	160,437	243.1%	0.3%
MALTA	73,000	62,292	85.3%	0.1%
NETHERLANDS	1,571,000	6,295,413	400.7%	12.9%
POLAND	1,575,000	1,906,234	121.0%	3.9%
PORTUGAL	528,000	244,367	46.3%	0.5%
ROMANIA	789,000	172,186	21.8%	0.4%
SLOVAKIA	243,000	112,640	46.4%	0.2%
SLOVENIA	318,000	530,261	166.7%	1.1%
SPAIN	2,676,000	4,419,153	165.1%	9.0%
SWEDEN	1,936,000	3,632,563	187.6%	7.4%
UK	3,939,000	3,352,490	85.1%	6.9%
EU Member States	33,454,000	44,187,278	132.1%	90.5%
EUROPE (European projects where the country is not specified)		990,657		2.0%
ICELAND		372,436		0.8%
ISRAEL		20,631		0.0%
NORWAY		2,861,402		5.9%
RUSSIA		60,210		0.1%
SERBIA		66,734		0.1%
SWITZERLAND		206,645		0.4%
TURKEY		48,413		0.1%
UKRAINE		1,751		0.0%
USA		21,794		0.0%
VATICAN CITY		199		0.0%
NON-EU		4,650,872		9.5%
Total		48,838,150		100%

⁴³ http://ec.europa.eu/information_society/newsroom/image/document/2016-6/contribution_to_europeana_13733.pdf

4.3 Public domain masterpieces in Europeana

The definition of what should be considered as a masterpiece continues to be challenged in this reporting period; Member States continue to report that, as a result of the large scale digitisation of cultural material or of defining digitisation priorities, important materials have been included and are being shared (e.g. EL, ES, HU, LT, PL). However, several Member States (AT, BE, DE, ES, IT, LU, LV, RO, SI) mention their involvement in the 'Europeana 280' campaign as a good starting point to engage cultural institutions to bring public domain 'masterpieces' to Europeana.

Belgium: *Although Flanders prefers an inclusive approach, not only centred around masterpieces, Flanders is engaged in the Europeana 280 project in order to expose both some pieces of art and the museums that are shaping a sustainable framework for their future accessibility. The question however remains what should be considered as a masterpiece.*

Germany: *This goal could not be achieved. In its place, the "Europeana 280" project has been initiated. Hopefully, it will serve as a starting point to bring as many public domain masterpieces as possible into Europeana.*

Italy: *The Italian cultural heritage is extremely widespread. The concept of masterpieces is not subjected to a specific definition: the Botticelli Venus is undoubtedly a worldwide known masterpiece, but also an illuminated manuscript of a local library can be a masterwork and have a great relevance in a narrower territory. Each cultural institution is free to choose their masterpieces when approaching the digitisation process; this selection is not subjected to any indicator. Nevertheless ICCU contributed to the collection of the Italian masterpieces for Europeana 280 acting as a bridge with some data partner that brought masterpieces of the Italian art like the Bible of Borso d'Este of the Estense Library in Modena.*

Romania: *The interaction of the Ministry of Culture with the most important museums triggered by the "Europeana Art 280" project was the most significant action for the inclusion of the "masterpieces issue" on the professional agenda, at the national level.*

NL reports an already substantial availability of Dutch masterpieces in Europeana (e.g. collections from Teylers Museum, Van Gogh Museum, Rijksmuseum, etc).

4.4 National and cross-border aggregators

National aggregators

The majority of Member States (AT, CY, CZ, DE, DK, ES, FI, HR, HU, IT, LT, LV, NL, PL, PT, RO, SE, SI, SK, UK) report well established national, cross-domain or domain-specific aggregators.

Q. 7.4 National aggregator bringing content from different domains into Europeana?



Cross-border aggregators

Member States continue to report the participation of their institutions to EU-funded (CIP ICT-PSP) domain or thematic aggregators, such as: The European Library, APEX, EFG, AthenaPlus, OpenUp!, BHL, CARARE, EuropeanaFashion, Europeana Food and Drink, EUscreenXL, LoCloud, Europeana Photography, Europeana Space, Europeana 1989, CUBRIK. The Manuscriptorium European digital library of manuscripts is another continuing initiative.

Czech Republic: *The Manuscriptorium Digital Library carries on with the international aggregation of data in its area of expertise coming from organisations in 23 countries. In total it aggregates data of about 120 organisations, half of which are from the Czech Republic.*

Belgium: *The most effective cross-border projects have been the ones that happened in the vein of the CIP ICT-PSP funded projects.*

Greece: *The National Technical University of Athens have developed the MINT platform for content generation interoperability within European projects; MINT has been used in more than 20 Europeana projects, as well as by Europeana in their ingestion procedure. Currently this is also used by the CEF Europeana Digital Service Infrastructure in the fields of museums (MUSEO), Audiovisual (EU-Screen), Fashion and archaeology (Carare). The Athena Research Centre have developed and used the MORE Repository for cultural content, especially in the field of archaeology and in small cultural collection creation, in projects such as Carare, 3-D Icons and in Europeana DSI. NTUA have been developing a new platform for semantic content search, aggregation and personalised usage within Europeana projects (EU-Screen XL, EU-Sounds, E-Space).*

4.5 Use of Europeana standards and permanent identifiers

Common metadata standards (ESE, EDM)

Similarly to the previous period, Member States report nationally agreed or project-based recommendations for the use of standardized metadata format and controlled vocabularies by institutions digitising cultural material to achieve interoperability. In some cases, institutions use the metadata standards defined and used by Europeana (EDM or previously ESE) or domain standards (such as CARARE, LIDO, apeEAD) developed under the Europeana family of projects. Again, in most cases it is the aggregators (national, domain or thematic/projects) that ensure that metadata from cultural institutions that follow different standards are mapped and transformed into a Europeana compatible format (EDM or ESE) and are overall compliant to the Europeana technical requirements. The use of normative tools was mentioned by Belgium as an alternative way to ensure interoperability and a validation procedure for the results of digitisation projects was reported by Greece.

Greece: *The Digital Convergence Operational Programme has adopted a validation procedure, executed by the National Documentation Centre, for the generated digital content according to the following tests: a) can they be published as linked open data, b) is the repository interoperable, c) do they use persistent identifiers, d) do they use metadata standards, e) are metadata semantically compliant, f) are PDFs OCRred, g) is the image quality good. The Archaeological Company in Athens have adopted the Carare metadata schema for annotating archaeological monuments.*

Belgium: *In Flanders normative tools such as CEST and TRACKS should be mentioned here once again (for more information, see above). On a federal level mapping happens using the system of the previously mentioned international aggregators.*

Estonia: *Standards for digitisation have been agreed within individual domains and nationally. National legislation requires all public data sources to be published as open data. Following this requirement, the content of the Museum Information System is made available as linkable open*

data (RDF, relying on the CIDOC-CRM model). National Archives data are available in apeEAD standard for Europeana through Archives Portal Europe and in apeEAD and in RDF on institutional open data web page. National Library is publishing its open access digital collections as OAI-PMH sets.

(new) Common standards for the provision of content

New in this reporting period are common standards for the provision of content, following Europeana's evolution to a platform providing access to content (collections) besides metadata. The Czech Republic and Estonia mention such standards or frameworks developed and employed by Europeana to harmonise the delivery of content, namely the **Europeana Publishing Framework**⁴⁴ (which sets out four tiers for sharing content in Europeana) and the **Europeana Licensing Framework**⁴⁵ (which standardises and harmonises rights related information, including Rights labelling and CC licenses). The UK mentions also the **International Image Interoperability Framework (IIIF)** for access to image resources, with which Europeana has aligned its implementation.

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Czech Republic: For the e-Collections gateway ESE and EDM is used. The content of e-Collections is mapped in the LIDO format. We are going to enhance the quality and format standards both for digitised objects and metadata as required under the Europeana Publishing Framework, which Europeana have presented to National Aggregators. An important step in the Europeana standards implementation was the Europeana rights and Creative Commons licenses for the identification of content utilisation.

United Kingdom: A number of UK institutions have been working with international partners over the last reporting period to establish the International Image Interoperability Framework (IIIF) <http://iiif.io/> which aims to collaboratively increase access to image resources worldwide, the IIIF Consortium was formally formed in 2015.

Use of Persistent Identifiers (PIDs)

The systematic use of persistent identifiers is an area that has seen new developments in several Member States. In several MS, PIDs are now widely used on a national level (e.g. AT, EE, LV, NL, PL, SK, UK). Other MS report use of PIDs on an individual basis such as BE, CZ (Manuscriptorium), HU, IT (Culturalitalia), PT (National library) and SI (Digital Library). DE reported ongoing work for the establishment of a common PID system at national level, while other Member States reported discussions to reach consensus on this issue (CZ, LU, MT, SE). In France, the Ministry of Culture produced a *vademecum* on the use of persistent identifiers in 2014, as part of the 'Web 3.0 Roadmap' published in the beginning of 2016⁴⁶.

Reported examples of new developments towards the systematic use of persistent identifiers include:

Austria: The importance of persistent identifiers has been highly propagated and is now a common practice. It rarely happens that an institution has to face converting identifiers when changing their archival system.

Estonia: Since the beginning of 2015 every record in the Museum Information System has a permanent identifier. National Archives content uses permanent identifiers since 2014. Libraries have not agreed on a single PUID format, but for data libraries, DataCite is in use in one academic library.

⁴⁴ <http://pro.europeana.eu/publication/publishing-framework>

⁴⁵ <http://pro.europeana.eu/page/europeana-licensing-framework>

⁴⁶ <http://www.enssib.fr/bibliotheque-numerique/notices/64776-feuille-de-route-strategique-metadonnees-culturelles-et-transition-web-3-0>

Germany: The German National Library continues to operate a URN resolver that is available to public and/or scientific institution and publishing houses. However, since a similar service is still missing for archives and museums, the German National Library, the German Digital Library, the Federal Archives and the State Archives of Baden-Wuerttemberg are developing “CHE” (Cultural Heritage Entities) a new system of permanent identifiers which will be usable by all cultural sectors and can be used for all types of cultural heritage. It will work for digital as well as for physical (and not yet digitised) objects. A revised version of the CHE concept was published in February 2015 (<https://wiki.dnb.de/pages/viewpage.action?pageId=9909325>) but work on the concept is still ongoing.

Italy: CulturalItalia applies persistent identifiers to the records aggregated in the content base.

Netherlands: Within the framework of the National strategy for digital heritage, a project has started to develop a service based on the DOI (Digital Object Identifier). The goal is to enable especially smaller cultural heritage organisations to create Persistent Identifiers for object and metadata. The project will in 2016 result in a scalable and sustainable service hosted on a non-profit basis.

Hungary: In National Széchényi Library the new DSpace database uses a permanent identifier called Handle, while ELDORADO uses URNs and the catalogue VIAF identifiers.

Poland: The Polish Digital Libraries Federation (FBC) since the beginning of its existence (2007), has used permanent identifiers based on OAI Id mechanism. Data sent by FBC to Europeana contain references constructed on the basis of these identifiers. In 2015, FBC website's user interface was completely reconstructed, but thanks to using permanent identifiers, all references to objects uploaded to FBC have been left unchanged. Since 2011, the National Library has used permanent identifiers of digital resources (persistent identifiers) in the form of permanent links clearly identifying each digital object.

Slovakia: URN:NBN standard for permanent identification of digital objects was implemented on national level.

United Kingdom: Archival Resource Key (ARK) identifiers have been adopted by a number of UK institutions including the British Library as an assigning authority, there are now approximately 317 organisations spread across 15 countries registered to assign ARKs to support long term access to information objects: http://www.cdlib.org/uc3/naan_table.htm.l

4.6 Freeing metadata for re-use

There is an overall positive attitude to CC0 metadata in this reporting period. The Europeana Data Exchange Agreement is generally accepted. Open metadata is common practice in several MS (e.g. DE, EE, ES, HU, LT, RO, UK), often made accessible through APIs to a wide range of different platforms and services. At the same time, initiatives to raise awareness and encourage free metadata in the cultural and heritage sector were reported (e.g. BE, DE, IT).

Still, some difficulties were reported (AT, CZ, DE, EL, IT, NL) in this period too:

Austria: Initially it was rather difficult to communicate the importance of the Europeana Data Exchange Agreement to cultural heritage institutions. Major difficulties resulted from subsequent amendments in the requirements.

Germany: However, many museums regard their object descriptions, that in many cases have been written by scientists, as copyright protected and thus are not ready to provide these description texts under a CC0 license.

Greece: Cultural Institutions that provide content to Europeana, mainly through different thematic aggregators, sign the Europeana Data Exchange Agreement. In many cases, not all

annotations are presented to the public. For example, the Hellenic Ministry of Culture have selected a subset of the generated metadata that is publicly available and re-usable, while the rest are provided in smaller certified user groups, such as archaeologists and researchers.

Italy: ICCU, as coordinator of *CulturaItalia* and *AthenaPlus*, put a great effort in promoting the DEA and the CCO licence which the Europeana agreement is based on. This effort was generally fruitful but some cultural institutions, mainly museums, were afraid of losing the control upon the data and supplied Europeana with poor descriptions.

Experience of re-use of free metadata

Member States report an improved experience of re-use of free metadata⁴⁷ through experimentation and hackathons (e.g. AT, DE, EE, NL, PL, SE, UK) and even some first real examples of re-use have emerged.

Estonia: *Ajapaik.ee* – is using museums open data in its application. One example of using library metadata and content objects as linked data was within the YEAH! project, as a collaboration between the National Library and National Archives of Estonia.

Germany: Steps were taken in using free metadata in the educational sector. For example, *WebWeaver® School*, a commercial software that provides cloud services for schools and universities, offers its users content it receives via the German Digital Library's API. An event organised to raise awareness of the possibilities of open (meta)-data is *Coding da Vinci*. The projects resulting from this event can be found here: <http://codingdavinci.de/projekte/>.

Sweden: Good examples of using the SOCH API can be found here: <http://www.ksamsok.se/goda-exempel/>. An application based on the National Museums of World Culture (SMVK) can be highlighted. It links together SMVK's collections that are distributed over different museums databases and makes it possible for them (as well as anyone else) to search information and images, create digital exhibitions and explore the items virtually.

Austria: The re-use of free metadata is highly appreciated. The Kulturpool team has been experimenting with different users from the educational sector by exploring the possibilities of creative re-use with the tools *City Quest* and *School Trip*. Promoting re-use was also a goal of the integration of the Europeana Application Programming Interface (API) offering users the possibility of combining search results from Kulturpool and Europeana. Information could also be re-used in Kulturpool Smartworks. This functionality allows users to easily create short topic based articles with embedded information and and footnotes automatically declared in the correct way through the editor in use.

Netherlands: There have been several hackathons and other events in the Netherlands in which the re-use of free metadata has been encouraged and demonstrated. Among the best practices are the *Amsterdam Museum* and the dataset of national monuments.

Poland: *Europeana Jam* – the National Audiovisual Institute in September 2015 has organized workshop *NInA Festival Beta Version | Digital tales* which was aimed at development of the ideas on how to use Polish resources of Europeana. Along with practices related to creative activities in the network, ideas, messages and interactive tools were developed, aimed at popularization of these collections. The participants developed prototype solutions and ideas for promotion of Europeana collections (from Europeana cafe to virtual museum). The method applied was titled "Design Thinking" – Date: 25.09.2015.

United Kingdom: A number of UK institutions, including the British Library, have been experimenting with the provision of free metadata and making the data available in a variety of formats to support reuse by researchers.

⁴⁷ Experience of re-use of public domain content (not only metadata) is discussed in the section 2.2 Access to and use of digitised public domain material.

However, re-use of free metadata remains a challenge. For example, Belgium reports that *one of the experiences with Opencultuurdata.be is that if cultural datasets are made available, it is hard to find (app) developers willing to work with the datasets.*

On the other hand, Germany notes the difficulty in tracking re-use: *Since November 2013 the German Digital Library offers an open API that enables users to re-use its metadata. The service has been well received, from January till August 2015 there were already more than 50,000 requests per day. However, it is not possible to follow up on what the metadata was actually used for.*

4.7 Raising awareness of Europeana among the general public

Member States refer mainly to events or campaigns targeting the general public or schools organised in the framework of EU-funded projects, such as Europeana Awareness, Europeana 1989, or APEX. In LV, the Digital Cultural Heritage Development Strategy has set up a specific target by 2020 to ensure use of digital cultural content in general and higher education as well as in professional education in the field of culture and lifelong learning. In order to reach this goal, the National Library of Latvia as well as other cultural and memory institutions aim to promote the development of new educational resources and digital educational means by using digital cultural heritage.

A few examples of specific events or campaigns targeting the educational sector have been reported:

Austria: Kulturpool focused on the promotion of Europeana and the re-use of digital heritage content in the educational sector. As a best practice example, a cooperation with the upper secondary level school „Bundesrealgymnasium unter besonderer Berücksichtigung der sportlichen Ausbildung“ (www.sportgymnasium.at) led to the successful reinforcement of interdisciplinary education in their English class, integrating their work with and re-use of digital heritage content through the use of City Quest and School Trip tools. Valuable feedback from teachers and students has been gathered and was handed back to the creators of the tools in order to further improve them.

Bulgaria A national Competition “My Europeana” was organised by the Regional library “Pencho Slaveykov”, city of Varna for video or essay promoting Europeana. Further information available at http://www.libvar.bg/projects/Europeana_Awareness/My-Europeana.html

Croatia: In May 2015, the Ministry of Culture was represented at the cultural event for Children 'Action Culture!' with a workshop called 'Let's Go Digital', based on recreating famous paintings while using images from Europeana and VanGoYourself website. The response from children was amazing. The end result was a huge promotion for Europeana among all the schools that had visited the workshop.

Finland: The Finnish Europeana Awareness campaign was conducted in February 2014 in connection to the national Media Literacy Week between February 10th and March 2nd. The primary aim of the campaign was to promote Europeana among Finnish teachers and children in secondary school and in upper secondary school. The campaign consisted of a 'European Story' learning package (<http://www.kdk.fi/europeana/>), an online competition 'Europeana Hahmo', and the campaign concluded in the event 'European Culture in the New Digital Age: Open Knowledge and Digital Natives'.

Poland: The National Audiovisual Institute was in charge of conducting various activities involving users of Europeana, including the Akademia Ruchu pilot storytelling platform (March 2015) and the Europeana Video Remix contest for school pupils (April-May 2014).

5. DIGITAL PRESERVATION

Member States report a wide variety of long-term preservation strategies or schemes, from the (exceptional) creation of a dedicated body (e.g. DE, SE) to simple preservation schemes or plans limited to a specific sector or institution. Exchange of information often takes place within the framework of dedicated EU-funded projects or platforms such as PrestoCentre (<https://www.prestocentre.org/>)⁴⁸, which also acts as the European competence centre for audiovisual material, and the Digital Cultural Heritage Roadmap for Preservation (<http://www.dch-rp.eu/>). Two competence centres launched in 2011, PrestoCentre for audiovisual material and Impact (<http://www.digitisation.eu/about/>) for text material, provide new cross-border platforms for sharing expert knowledge and state-of-the-art experience in this area. Important progress has been made in the last two years with several countries (e.g. CZ, ES, FI, LT, NL, SE) launching bold initiatives to improve digital preservation of cultural resources. A growing number of countries report explicit provisions to allow format-shifting and migration of cultural material for preservation purposes or specific arrangements for long-term preservation of digital-born material. Progress was also noticed in the area of web-content preservation (e.g. provision for multiple copying, format migration or web-harvesting). However, delivery of works without technical protection measures for legal deposit libraries is not always ensured, or only for some types of materials (e.g. films) and much remains to be done to prevent wide variations of Member States' legal deposit arrangements.

The Recommendation invites Member States to strengthen long-term preservation strategies and implementation plans by exchanging this information with each other. They are invited to provide in their legislation for multiple copying and migration of digital cultural material by public institutions for preservation purposes, whilst making arrangements for the deposit of digital-born material to guarantee long-term preservation. Their efficiency should be ensured by (1) requiring deposit of protection-free material to enable acts required for preservation purposes, (2) making legal provision to allow exchanges between legal deposit library, and (3) allowing preservation of web-content by mandated institutions through appropriate collecting techniques such as web-harvesting. When establishing or updating policies and procedures for the deposit of digital-born material, Member states are also invited to take into account developments in other Member states, in order to prevent a wide variation of deposit arrangements.

5.1 Long-term preservation strategies and action plans

Twenty one Member States (AT, BE, CZ, DE, DK, EE, ES, FI, HR, HU, IT, LT, LV, LU, MT, NL, PL, SE, SI, SK, UK) have reported to have long-term preservation strategies under way or being designed at national, regional, sector or institution's level, several of them already running operational plans to implement those strategies. Measures reported range from multi-annual programmes and strategies, roadmaps or action plans (including dedicated budgetary lines), to studies and guidelines, to updating of workflows and digital infrastructure (including open, future-proof standards) or increased participation in dedicated projects (many of which EU funded) such as SCAPE, APARSEN, PERSIST, DARIAH, PREFORMA, APEX, e-ARK, DCH-RP, IIPC or OPF.

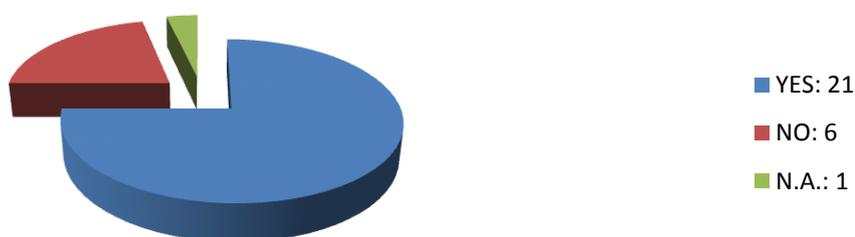
Exchange of information often took place within the framework of EU-funded projects or platforms

⁴⁸ Funded by the EU's Seventh Framework Programme for Research, governed by the PrestoCentre Foundation and managed by Presto4U (<https://www.prestocentre.org/4u>) for the period 2013-2014.

such as PrestoCentre (<https://www.prestocentre.org/>)⁴⁹, which also acts as European competence centre for audiovisual material, or DCH-RP, the Digital Cultural Heritage Roadmap for Preservation (<http://www.dch-rp.eu/>).

Some countries reported under this heading dedicated digital preservation bodies (AT, DE, PL, SE, UK), new digital legal deposit laws or implementing legislation (ES), policy documents or guidelines to facilitate digital preservation (ES, SE). One country (SE) reported a comprehensive set of measures to address the sustainability of digital cultural content, including a dedicated body, specific studies, roadmaps and infrastructure, disseminating customized guidelines, testing solutions in real-life environments and adapting legal deposit rules to enable web-harvesting/preservation of digital-born material. Lastly, one country (PL) reports a dedicated priority/budget line within its multi-annual programme.

Q. 8 Strategy for long-term preservation of digital material, implementation plans, exchange of information?



Sweden: *Digisam has been commissioned to develop a proposal on how a coordinated and cost-effective long-term preservation of collections and archives can be achieved by government cultural institutions. As a first step of that work, Digisam has conducted a pilot study on digital preservation. In the pilot study, the current state of storage and preservation at cultural heritage agencies and institutions was examined and compared with the current 'state of the art'. A short version of the report is available in English⁵⁰. Building on the results of the pilot study, another study is about to be initiated by Digisam together with the Swedish NREN (National Research and Education Network) SUNET (<http://www.sunet.se/>). Digisam has been involved in the European project DCH-RP that has developed a roadmap describing how one should proceed in order to preserve the digital heritage through an integrated digital infrastructure. Several Swedish heritage institutions have been involved in the tests and Digisam coordinated their participation.*

United Kingdom: *While there is no strategy for the long-term preservation of digital material, considerable efforts are being made to address the sustainability of digital cultural content on a distributed basis. Both the British Library and the National Archives are founding members of Digital preservation Coalition (DPC, <http://www.dpconline.org/>), a UK-based organization with the remit of helping members to advance their digital*

⁴⁹ Funded by the EU's Seventh Framework Programme for Research, governed by the PrestoCentre Foundation and managed by Presto4U (<https://www.prestocentre.org/4u>) for the period 2013-2014.

⁵⁰ http://www.digitalmeetsculture.net/wp-content/uploads/2014/06/DCH-RP_WP5_DigitalPreservationAt-SwedishCHInstitutions-3.pdf.

preservation knowledge and solutions as part of a wider community. The DPC led the organization of a major digital preservation conference in the UK in 2014, and runs the bi-annual Digital Preservation Awards (<http://www.dpconline.org/advocacy/awards>). The British Library is a founding member of the Open Preservation Foundation (<http://openpreservation.org/>), and both the British Library and the National Archives are also active in the International Internet Preservation Consortium (IIPC, <http://www.netpreserve.org/>). The British Library's Digital Preservation Strategy is available online⁵¹ and directs the work of the Library in developing digital preservation capacity. The National Archives provide advice on their website on development of a digital preservation strategy. The British Library is represented on the programme committee of the International Digital Curation Conference (IDCC) and the iPres Conference, the latter as co-chair in 2015. The Library is working closely with colleagues in a small number of Member States, as well as Australasia, to further advance shared aspects of digital preservation infrastructure.

Spain: in the 2013-2015 period, there have been some achievements at national level regarding digital preservation. The approval on 10 July 2015 of Royal Decree regulating the legal deposit of online publications, assigning the conservation centres (legal deposit libraries and the National Library BNE) the responsibility to identify, select and harvest or claim the content contents that are to be preserved, either by web harvesting or by other ways of transferring the content to be preserved, agreed between the corresponding publishers and the conservation centres. A draft 'Policy for the electronic document management' has been prepared within the Ministry of Education, Culture and Sports (MECD), identifying responsibilities, management process, procedures and metadata models to be implemented as best practices guidelines for electronic document management and consequent digital preservation in institutions depending on the Ministry. The National Library is currently ingesting digitised material in its digital preservation system, a double faced solution (hardware and software AOIS compliant) developed by a Spanish company called Libnova (pioneering the field in Spain). The mass digitisation project has played a key starting role for extending digital preservation standards to the rest of digital niches present in the library. In this system, BNE has already ingested more than 80TB and is still pending the preservation of 200 TB more. Extension of this solution to other type of digital information is still under study (electronic documents, web harvesting files...). The SGCB digital libraries have hired recently a preservation system for their digital preservation materials, also a double faced solution (hardware and software OAIS compliant) developed by Spanish company Arte Digital. Recently, Galicia has started implementing a preservation system for all its digital documents (archives', libraries' and museums' collections). Other Spanish institutions or networks have implemented or are going to implement preservation systems. Institutions often use some strategies for long-term preservation of digitised cultural material as PREMIS metadata, images with a checksum or use of remote servers of restricted access. For the State Archives, digital preservation is conducted by the SRD (Document Reproduction Centre), in charge of archiving and copying for preservation of all the digital images produced in the National Archives and in other centres after the submission of a reproduction and digital preservation agreement. The digital preservation policy is based on the maintenance of multiple copies both in digital format (LTO3 mainly) and in analogue format (microfilming of digital images), as well as periodic migration and format conversion. Since the publication of Law 11/2007 on electronic access of citizens to public services, an important

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http://www.bl.uk/aboutus/stratpolprog/collectioncare/digitalpreservation/strategy/BL_DigitalPreservationStrategy_2013-16-external.pdf.

core of legal regulations and technical standards has been published at national level. Long term preservation of electronic records produced by the Spanish administration is mandatory and subject to the same rules of appraisal and preservation as traditional paper records. Most administrative bodies are developing their own electronic records management systems in which digital preservation policies are included. All legislation, interoperability scheme and technical standards, along with practical guidelines and tools, are available online⁵². There is no digital preservation policy in museums. There are partial recommendations without a long-term monitoring.

Finland: according to the national plan of long term preservation digital information stored for long term or permanently by organisations that store cultural heritage and operate within the administrative branch of the Ministry of education and Culture will be covered by the centralized digital preservation system. The common digital preservation system will be scalable as the volume and types of data, and number of partner organisations increase. The Ministry of Education and Culture have identified first organisations and their collections that should be submitted to the centralized digital preservation system. The national Digital Preservation Service currently ensures that the original digital data (bit stream) of the information remains unchanged and can be preserved on up-to-date storage media. In the future, the Digital Preservation Service will ensure that the digital information remains also intelligible and that the actual information can also be accessed by future generations. In this phase the focus will be on logical preservation and preservation methods (e.g. file migrations) will be deployed. Also the necessary hardware, services, processes and management will be built for the shared use of the partner organisations. Considering the nature of digital preservation, a continuous development of operations, processes and skills is essential. On the other hand, updating the technical environment (including software, hardware and network links) in regular cycles in the coming decades must be taken into consideration, but particular focus must be on the continuous development of a common approach and services.

Belgium: Federal Belgium has initiated a strategy for the long-term preservation of digital material. A workgroup has been set up for guidance. One of the results is the development – after a public procurement of services – of a secure and trustworthy digital preservation platform. The platform will act as a digital dark archive for born digital (e.g. research data) and digitised assets. The project setup started on 1st October 2015 with an initial capacity of 2 Pb. The Flemish Institute of Audiovisual Archiving (VIAA) uses a digital archive designed as much as possible according to open standards. An important point of reference is the Open Archival Information System (OAIS), which describes both the processes and the technical requirements for storage, management and access with respect to digital archives. In the long term, VIAA aims to nurture a relationship of trust between VIAA and the users of this service in order to become a Trustworthy Digital Repository or TDR. The general Delegation for the digitisation of cultural heritage of the French Community Plans to develop a small OAIS-compliant preservation infrastructure (between 100 and 200 TB) for the preservation of files resulting from its own digitisation campaigns. The Royal Institute for Cultural Heritage and PACKED, centre of expertise on digital heritage, are partners in European project Preforma (<http://www.preforma-project.eu>) dedicated to the development of conformance checkers for LTP standards.

Czech Republic: Government Resolution No. 30 of 30 January 2013 approved the Cultural

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http://administracionelectronica.gob.es/pae/Home/pae_Estrategias/pae_Interoperabilidad_Inicio.html?idioma=en .

Content Digitisation Strategy and the National Cultural Policy for 2015-2020 was approved by Government Resolution No. 266 of 15th April 2015. In the Library Sector Development Strategy for 2011-2015, preservation of digitised material is a top priority. In 2014, the Library Advisory Board (an advisory body to the Minister of Culture dealing with library-related issues) adopted a draft national strategy for long-term preservation of digital data in libraries. In the National Digital Library project there is a long-term data repository where the data from the Czech National Library and some data generated by the Ministry of Culture programmes are kept and preserved. The plan for long-term preservation of digital data is being drafted and a centre of competence to enhance standards for digital data generation is also envisaged. As part of the Czechiana project OPŘIT Department plans the acquisition of a long-term archive to store the metadata of digitised objects. R&D is also focussed on the development of applications supporting long-term preservation (permanent identifiers, validation tools). The experience is shared and information exchanged at the international level, particularly in the Central European region. Electronic publications are included in the Ministry of Culture R&D Programme in the area of National and Cultural Identity and this issue is covered by the "management of Electronic Publications in the Network of Libraries in the Czech Republic". As part of this initiative, standards were proposed for a long-term data preservation of electronic formats (e-books) access to the Czech National Library's long-term preservation system (LTP repository) has been tested. Implementation should be completed by pilot operation late 2015. The museum sector is partly covered by the ISO Programme – the Integrated System of Tangible Cultural Heritage Protection (<http://www.mkcr.cz/cz/kulturni-dedictvi/muzea-galerie-a-ochrana-moviteho-kulturniho-dedictvi/granty-a-dotace/integrovaný-system-ochrana-moviteho-kulturniho-dedictvi-70574/>), which stipulates the principles for database generation. Since 2008, the National Institute of Folk Culture has been operating the central data repository where data generated by digitisation or developed by the Institute are stored.

Germany: Nestor, the German competence network for digital preservation, continues to play a major role in organising and coordinating long-term preservation matters in Germany. Furthermore, in Autumn 2014, a new committee was created, the Council on Information Infrastructure (Rat für Informationsinfrastrukturen, <http://www.gwk-bonn.de/informationsinfrastruktur/>), which coordinates and gives advice on the challenges that digitisation brings to the natural sciences and the humanities. Long-term preservation for research data is one of the topics tackled by the Council on Information Infrastructure. A joint working group of the German National Library/German Digital Library, the Federal Archives and the State Archives of Baden-Württemberg has developed a concept for a persistent identifier for all kinds of digital and digitised materials from archives, museums and other heritage institutions.

The Netherlands: in 2014, the National Coalition for Digital Preservation (NCDD) carried out a study into the possibilities for developing a network of nationwide facilities at public organisations for ensuring sustainable access to digital information in the Netherlands. The result of this study is a clear definition and understanding of what an infrastructure for long-term access should be. Besides, a scenario for growth to a network of distributed services has been described. A distinctive feature of this scenario is that institutes retain their own facilities where necessary. Wherever possible, facilities are shared. This scenario provides for three lines: development of a network of technical facilities (like storage facilities); assistance and consultation (involving services like training, research, persistent identifiers and certification); distributed applications for digital preservation. Research Data Netherlands is an alliance between 3TU.Datacentrum, Data Archiving Network and Networked Services (DANS) and SURFsara. With this coalition, which is also open to other parties, the three data archives join forces in the area of long-term data archiving. The

collaborating organisations work together on implementing strategies for long-term preservation of research data. They are well-embedded and involved in international data organisations (such as the RDA) and data-archiving projects (such as EUDAT).

Slovenia: for the period 2012-2015 there was a strategy for building e-archives, the result of which is E-ARH.SI. Currently, a new strategy is being prepared for the 2016-2020 period for further improvements of this system on a national level. Exchange of information for archives in the EU is ensured through the common EU project E-ARK, dedicated to the long-term preservation of e-archives. Slovenia accepted OAIS standard as national standard in June 2013. The National Library has prepared document "Strategija trajnega ohranjanja digitalnih virov v Narodni in univerzitetni knjižnici" (Digital preservation strategy in National and University Library 2012-2020).

Lithuania: the Programme for Digital Cultural Heritage Actualisation and Preservation 2015-2020 drawn in 2015 sets the strategic goal of promoting the diversity of the electronic services and products developed on the basis of cultural heritage, including online accessibility and long-term preservation. The Programme also aims at developing a national system for the long-term preservation of digital cultural heritage. At present, the task of long-term preservation of digitised content is delegated to the digitisation centres, but the decision was already adopted in Lithuania to create consolidated national data centres for the preservation of digital contents, which will ensure more effective management and use of the country's information resources.

Luxembourg: a digital preservation system is currently being set up by the National Computing Centre, the National Library and the National Archives. The long term strategy will be that material will be hosted at several datacentres under the control of the National Computing Centre, ingest and delivery will be under tight control of each institution and active preservation, when needed, will be done in a collaborative way so as to maximise knowledge transfer and minimize resource expenditure.

Italy: Internet culturale collects metadata and digital objects that are preserved with the resolution of 150 dpi. The CINECA consortium makes regularly the back up of these items while the libraries providing the digital collections preserve the digital master copies. ICCU participates in the Indigo – DataCloud EU project coordinated by the Istituto Nazionale di Fisica Nucleare (INFN) whose main goal is the establishment of a European cloud infrastructure for the researchers (<https://www.indigo-datacloud.eu/>). From 2012 to 2014, the ICCU coordinated the project DCH-RP on digital preservation of cultural content through the eInfrastructures, whose main outcome was the "Roadmap for Preservation of Digital Cultural Heritage Content" (<http://www.dch-rp.eu/getFile.php?id=440>).

Hungary: there is no comprehensive strategy on digital preservation, but at institutional level awareness has been rising in this respect. National Széchényi Library is already required by statute (EMMI Decree no. 30/2014 Article 8. § (1)1) "to digitise, in order to ensure broad accessibility and long-term preservation, the library documents held in its collection, according to a digitisation plan". The library is currently working on its programme of long-term preservation.

Slovakia: materials digitised within the cultural heritage digitisation projects are preserved in the Central Digital Archives of the University Library, which is an up-to-date long-term preservation repository meeting the highest standards of protection of digital cultural materials.

Latvia: the strategy for the long-term preservation of digital materials is part of the Digital Cultural Heritage Development Strategy. To ensure long-term preservation of digital cultural heritage, the Strategy foresees the following actions: (1) to develop a long-term preservation infrastructure (conception by 2016; technical implementation by end 2018) and (2) to ensure long-term preservation of digitised and digital-born cultural heritage (plan and guidelines by 2016; long-term preservation services to state and local cultural institutions by 2020). The National Library of Latvia has joined the Open Preservation Foundation in 2015 to enhance its expertise in this field.

Estonia: the National Library and the National Archives have digital archives. Museums will have a digital archive by the end of 2015. The strategy for long-term preservation is an important part of the Operational Programme for Digitisation 2016-2020. Institutional strategy documents for developing digital archive capacity exist both in the National Archives and the National Library. We have participated in a number of EU projects on digital preservation: Protage, 4C, Preforma, APEX, eArk, DC-Net, DCH-RP.

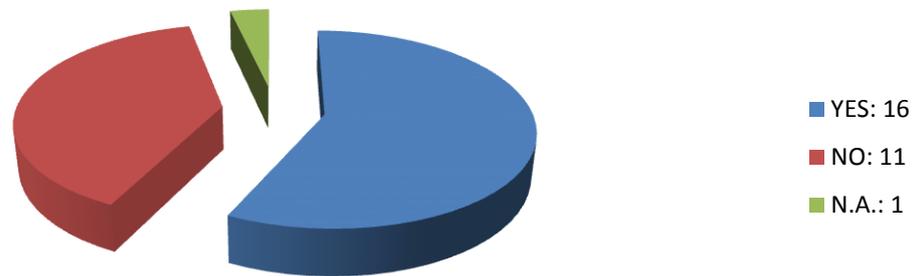
Croatia: cultural heritage digitisation is one of the investment priorities of the Europe 2020 Strategy. The Strategy plans to set up a new infrastructure including the establishment of a network of repositories, a system of aggregation, allocation of unique identifiers to digital objects, new business models. With the digitisation of holdings adequate technological infrastructure will be implemented based on previously defined criteria that will contribute to growth, creating new jobs and improving quality of life. Main focus is put on digitisation and preservation of cultural heritage including printed materials (books, magazines and newspapers), photographs, museum holdings, archive documents, audiovisual materials, monuments and archaeological sites.

Bulgaria: no nation-wide picture yet on how the already digitised objects will be preserved and made accessible in the long term. The problem with long-term storage is mostly related to the significant financial investment involved, which many a library (museum, archive) cannot afford.

5.2 Multiple copying and migration

Fifteen countries (BE, DE, CZ, DK, EE, ES, FI, LU, MT, NL, PL, PT, SE, SI, UK) have reported explicit provisions in their national copyright or archival law allowing multiple copying and/or migration of digital cultural material by public institutions for preservation purposes. Some, however, are only applicable to some sectors, institutions or government layers, or lacking the necessary comprehensiveness for a fully-fledged migration or format-shifting of all cultural material, wherever required for preservation purposes. Although the number of countries under this heading increased only slightly with respect to the previous reporting period (2011-2013), some progress has been achieved for five new countries (DK, ES, MT, SE, UK) report measures under this heading, on top of the fourteen having done so in the last report (some of which abstained from reiterating already reported provisions).

Q. 9 Legislative provision allowing multiple copying/migration of digital material for preservation purposes?



United Kingdom: in 2014 UK copyright law was updated to allow multiple copying and migration of digital cultural material by public institutions for preservation purposes. However, migration is not the only preservation solution and support for emulation is less clear as the current UK legislation does not explicitly state the software/representative information required to interpret the digital resources is in scope. This part is most closely related (<http://www.legislation.gov.uk/uk/si/2013/777/regulation/17/made>), but the wording implies any software, keys or documentation must come from the publishers themselves. It would be beneficial if legislation to support digital preservation was widened to bring dependencies held by third parties into scope (at least those that are publicly available). If software were brought directly in scope under Non-Print Legal Deposit (NPLD) this would also improve solutions available for digital preservation purposes.

Finland: multiple copying i.e. the copying deemed necessary for long-term preservation and migration is allowed under Section 16. According to Section 16 of the Copyright Act (821/2005) an archive, library or museum open to the public (as determined in a government decree) may, unless the purpose is to produce direct or indirect commercial gain, make copies of a work in its own collections i.a. for the purpose of preserving material and safeguarding its preservation.

Czech Republic: in June 2015 the Ministry of Culture prepared an amendment to the Copyright Act including provisions on extended collective management of rights to enable – subject to agreement between the libraries (represented by the National Library) and collective management society – multiple copying and migration of digital cultural material for preservation purposes. Moreover, the provision in the Copyright Act which allows libraries to make a copy of a work for their own archiving and conservation purposes will specify that such copies can be made in formats and amounts necessary for the archiving and conservation remit.

Poland: Amendment to the Polish Act on Copyright and Related Rights of 11 September 2015 introduced changes to the content of Article 28 of the Act, under which it is allowed for libraries, archives and schools to prepare copies of common works in order to complete, preserve or protect their own collections (Article 28, section 1, point 2). In accordance with the new wording of the provisions, the personal catalogue has been supplemented with museums educational institutions other than schools, universities, research and scientific institutes of the Polish Academy of Sciences. It was also supplemented with the personal scope of the provision, allowing particular entities to complete, preserve or protect collections by preparing digital copies.

Spain: Regarding electronic publications, a new law on Legal deposit was enacted in 2011 to cover – among other updates – this kind of publications for preservation purposes and to provide future access to this cultural heritage online. The royal decree that regulates the non-print legal deposit has eventually been adopted on 10 July 2015.

Austria: in an amendment to the Austrian Copyright Act, which entered into force on 1st October 2015, it was made clear that publicly accessible libraries and archives can make one or more copies of the material in their collections for preservation purposes.

Germany: Certain rules do provide for this although not applicable to all public institutions but, first and foremost, to the German National Library. In recent years some of the federal states have introduced similar rules to provide for the preservation remit of their own libraries. However, laws that allow all public institutions multiple copying and migration still remain a desideratum.

Slovenia: the legislation relating to archives in Slovenia defines measures for long term preservation (including copying and migration). More in detail are technically defined provisions of the Uniform Technological Requirements – which are issued based on the archive legislation. The legal deposit law includes provisions that allow the National and University Library to copy and migrate online legal deposit materials for long term preservation purposes.

Estonia: the Copyright Act allows reproducing collections in archives, libraries and museums for preservation purposes. In public cultural institutions long-term preservation is defined in the Legal Deposit Act, Archive Act and National Broadcast Act.

Lithuania: the Law on Copyrights and Related Rights provides the right for archives, libraries educational establishments and museums to reproduce their preserved works for preservation purposes, but repeated reproductions are only permitted if they are not interrelated. This clause does not apply to works placed on the internet. It must be noted that the Amendment to this Law of 16 December 2014 introduced the right for the users of orphan works to reproduce orphan works in their collections for the purposes of their digitization, public access, indexation, systematization or preservation, and to make them publicly accessible via wires or wireless means of communication (e.g. via computer networks).

Luxembourg: multiple copying and migration for preservation purposes is covered by copyright law.

Denmark: Danish legislation contains such legal provisions.

5.3 Digital legal deposit

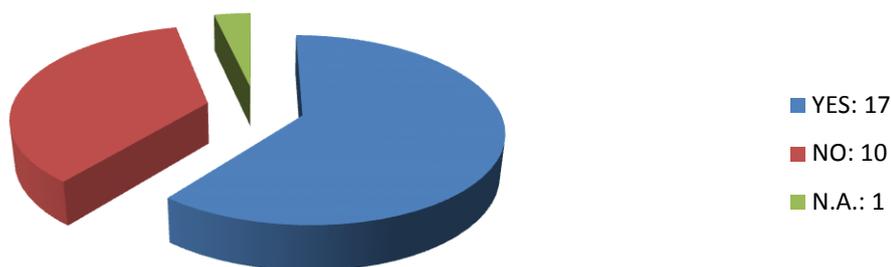
Sixteen countries (AT, BG, EE, EL, ES, HR, HU, LT, LU, MT, NL, PL, PT, SE, SI, UK) have reported measures for the deposit of digital-born cultural materials by digital legal deposit libraries, without technical protection measures or accompanied by the means to ensure they do not hinder the long-term preservation of said materials. In some cases (e.g. UK), this involves the obligation for the publisher to deliver a copy of any computer program or any information necessary to access the deposited work, such as manual or guides. Although the number of countries under this heading remains stable with respect to the previous reporting period (2011-2013), progress has

been achieved by four new countries (BG, ES, HR, HU) which report legislative measures under this heading, on top of the sixteen having done so in the last report (some of which abstained from reiterating already reported provisions).

Some obstacles have been reported though, such as funding (e.g. BG) and legal (e.g. FR), as standing in the way of a fully operational digital legal deposit scheme.

One country (CY) reports that no arrangements were made, since there was no conflict between the technical protection measures and the acts that libraries have to undertake to guarantee long-term preservation.

Q. 10.1 Arrangements made to ensure no technical protection measures hinder long-term preservation of digital-born material?



Austria: current legal deposit determines that material has to be submitted without technical protection measures.

Sweden: According to the Legal Deposit Act for Electronic Materials, in Sweden each item shall be accompanied by information: (1) about the place and time of publication, (2) about the material's format, (3) regarding passwords necessary to access these materials and (4) as to how the particular material is related to other material under compulsion to be submitted either by the Legal deposit Act for Electronic Materials or the Legal Deposit Act (1933:1392).

Luxembourg: the legal framework for legal deposit is in place since 2004 and has been clarified in respect of specific requirements of digital content in 2009 (Réglement Granducal relatif au dépôt legal de 2009). The legal requirement to deposit is only fulfilled if the National Library or the National Audiovisual Centre are able to make high quality copies of the digital content and all relevant metadata. If no such copies can be made, the depositor is obliged to provide, on demand, any information or tool required to make such a copy. However, implementation of this law is still pending.

Poland: the Act on mandatory library copies of 1996 and the Regulation of the Ministry of Culture and National Heritage of 6 March 1997 on the list of libraries authorized to receive mandatory copies of particular types of publications, as well as on principles and modes of their transfer, impose on publishers an obligation to submit to the National Library and Jagiellonian Library publications saved on electronic data carriers. These documents do not take up the issue of technical protection measures, though publishers deliver publications in open and protection-free formats that are suitable for long-term archiving.

Spain: according to Article 161 of IPR legislation in force, rightholders who have set technical protection measures (TPM) to protect their works are obliged to facilitate

beneficiaries of IPR limitations (cultural institutions) a way to avoid them. If they don't do it voluntarily, beneficiaries can address themselves to the corresponding jurisdictional authority. This is not applicable to works which have been acquired under licencing, which might be a barrier to digitally preserve these collections. In the recently enacted Royal Decree on Electronic Legal deposit, it is envisioned that the publisher should provide the means to the library institutions (not only the National Library, but also the regional ones enabled by the law) in order to provide access and to copy or replicate the documents for preservation purposes, in full respect of intellectual property rights legislation.

United Kingdom: Guidance provided on the Legal Deposit Libraries (Non-Print Works) Regulation 2013 state that the publisher must deliver, in relation to off-line work and online work with an agreed method of delivery: a copy of any computer program and any information necessary to access the work (including any information necessary to allow the reader to read the work), and a copy of any manual or other material that accompanies the work and is made available to the public. This is intended to cover any additional material, such as computer programs or manual/guides, which are published to accompany off line formats such as CD ROMs, but also any technical protection measures that apply to off line works and any programs or information which is necessary to access on line works delivered in a manner agreed between the publisher and the deposit libraries. This provision does not cover work which is web harvested as it is not considered that additional programs or material will be relevant to such work.

Bulgaria: according to Article 3. (5) (new – SG. Issue 42 of 2009, effective as of 6.07.2009) works in digital format, published in electronic communication networks to be read or otherwise perceived, distributed for public use by Bulgarian natural or legal entities, shall be deposited at the St. St. Cyril and Methodius National Library. Due to lack of the required possibilities, such activity is still pending. For its implementation, the National Library shall be further provided with additional targeted funding to purchase the necessary technical equipment and personnel, and only then do we expect to start: (1) receiving deposited copies of electronic documents with remote access, (2) establishing a national archive of electronic documents with remote access, (3) switching to registration of electronic documents with remote access in the national bibliography and (4) enabling the use of electronic documents with remote access.

Malta: entities are taking individual provisions for long-term preservation. Heritage Malta is abiding by W3C standards. On the other hand, the National Archives are in the process of investing in a dedicated server to link with APEX. Through this move, other digital assets in hand, such as the National Memory project and Oral History project, will be hosted on this system. The content of this server will be backed up by an infrastructure suitable for long-term preservation.

Portugal: digital content is not yet explicitly covered in the legal deposit law, but in general copies for preservation are allowed by a specific provision of the copyright law.

Lithuania: discussion on establishing a procedure for the mandatory copying of digital works, in particular electronic books, is currently taking place in Lithuania. Together with representatives of libraries, publishers and authors, the most effective ways to ensure preservation of such content are being searched for.

France: the legislative and regulatory framework on legal deposit in France do not allow to date the lifting of technical protection measures affixed to documents received under the legal deposit scheme. These technical protection measures preclude fulfilment by the

French National Library (BnF) of its preservation and perennial communication missions. BnF is currently looking for solutions for getting the deposit of documents without technical protection measures.

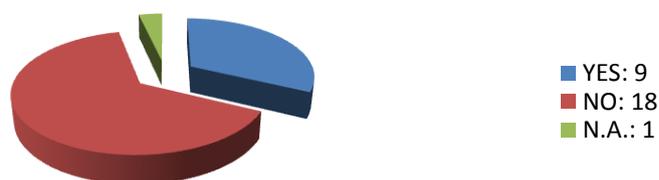
Hungary: *an amendment enacted in 2015 of Act CXL of 1997 on museums, public library services and community culture includes in the definition of archiving the retention of electronic documents in such a manner that excludes the possibility of subsequently changing their contents and furthermore protects the electronic documents against deletion, destruction, accidental destroying, damage and unauthorized access, while ensuring that they shall remain capable of being interpreted and read through the application of technical solutions enabling the display of such documents.*

Italy: *the Presidential decree 252/2006 regulates the legal deposit of the documents of cultural interest, including the born digital resources. The deposit of digital resources is done on a voluntary basis. The portal Deposito Legale (www.depositolegale.it) gives access to PhD theses gathered by the national libraries of Florence and Rome, born digital publications and the National Bibliographic Number (NBN) procedures. This activity involves the National Central Libraries of Florence and Rome for the storage capacities, and the Venice Marciana Library for the dark archive service. The aim is to build a backbone that serves for the long term preservation of the digital resources of Italian cultural institutions.*

5.4 Provision for transfer of digital legal deposit (LD) works between LD libraries

Five years after the recommendation, only nine countries (AT, CZ, DK, ES, FR, HR, LU, PL and UK) reported provisions in their copyright, archives or media legislation allowing the transfer of digital legal deposit works among legal deposit libraries. Albeit still relatively small, this figure reflects significant progress, considering that four new countries (CZ, ES, FR, HR) report measures under this heading, a 50% increase with respect to the previous reporting period (2011-2013). Some of these provisions only apply to a specific sector (e.g. archives or libraries) and in other cases, legislation to allow this is envisaged, being prepared or pending adoption. Countries not having digital legal deposit legislation have obviously been counted as not providing for the transfer possibility of digital legal deposit files among (non-existing) digital legal deposit libraries.

Q. 10.2 Provision to allow transfer of digital legal (DL) deposit works among DL libraries?



United Kingdom: *yes, delivered material is made available to all deposit libraries. Specifically the regulations state: access to non-print works that have been delivered to the deposit libraries under the regulations is restricted to computer terminals on premises controlled by the deposit libraries. In the case of legal publications delivered to the National Library of Scotland, access will also be available from the Facility of Advocates' library, in line with current arrangements for access to legal publications in print format. There are no restrictions on how many computer terminals a deposit library may have. The computer terminals, however, must be situated on premises controlled by the deposit libraries and*

only readers who are on premises controlled by the deposit libraries can be allowed access to (i.e. can view) the work on a computer terminal.

Spain: yes, it has been included in the Royal Decree as an ancillary way to have access to the material that cannot be collected through web harvesting. This is specifically envisaged by Article 8, which states that editors or producers of restricted access web sites or online publications must enable their harvesting by conservation centres or at least transferring their content by network communications or via other ways. Currently the Spanish National Library (BNE) in collaboration with Red.es is developing a shared network (the already existing Central Administration network) amongst all the Spanish library institutions with responsibilities on this matter, in order to provide the same access to the same corpus of non-print legal deposit works for all Spanish administrations.

Poland: the issue of transfer of collections between libraries is regulated by the Act on Libraries. Article 27 on the national library network (in passage 5, item 4) states that public libraries included in the library network are obliged to interaction with regard to exchange and transfer of library materials and information. According to Article 5 of the Act on libraries, materials include, among others, electronic documents. Mandatory copies become library materials along with their incorporation to the libraries' collections. Mandatory copies of the publications saved on electronic carriers are stored at present only in the National Library and Jagiellonian Library, in accordance with the Regulation on the list of libraries authorized to receive mandatory copies, as well as on the principles and mode of their transfer.

Luxembourg: there are two beneficiaries for (digital) legal deposit: the National Library and the National Audiovisual Centre. There is no explicit transfer rule in the legal framework, but it is commonly understood that the access and preservation infrastructure will be shared at a minimum for all online works which are not neatly separable as either 'print' or 'audiovisual' works. Example: videos on newspaper sites or text on TV sites. As such, the need to transfer copies should not arise. However, implementation of this law is still pending.

Austria: the transfer of digital legal deposit works is regulated in the media law.

Czech Republic: such scheme is included in the proposed amendment to the Copyright Act prepared by the Ministry of Culture in June 2015.

Sweden: the legal deposit act of electronic material only deals with 'collecting' the material. The government will work further on the question of accessibility. In practice, this means that we don't make the e-legal deposit material available to anyone so far, not even within the National Library's premises.

Estonia: the Legal Deposit Act and the new draft Legal Deposit Act state that only the National Library collects and preserves digital legal deposit. Current Legal Deposit Act states that one other library has an authorized workstation to access legal deposit copies, but it is not allowed to save or make copies of publications that are under copyright or have restricted access from these workstations. In the new draft Legal deposit Act, the number of libraries with workstations under the same conditions will be increased to four.

Croatia: since the Ministry of Culture has an overview of all digitization projects, if several institutions have different holdings of the same topic, we instruct them to cooperate and

exchange holdings. It is also planned to connect all holdings by introducing a system of PURL (<https://purl.oclc.org/docs/index.html>) data.

Lithuania: during the 2013-2015 reporting period, the question of the mandatory copying of digital books was discussed and an agreement was reached on crucial principles, including an agreement on the submission of mandatory copies of digital books by their publishers to only one institution, i. e. the Martynas Mažvydas National Library of Lithuania.

Slovenia: no, NUK is the only legal deposit library for online publications. Only printed legal deposit works are also kept by other regional and university libraries.

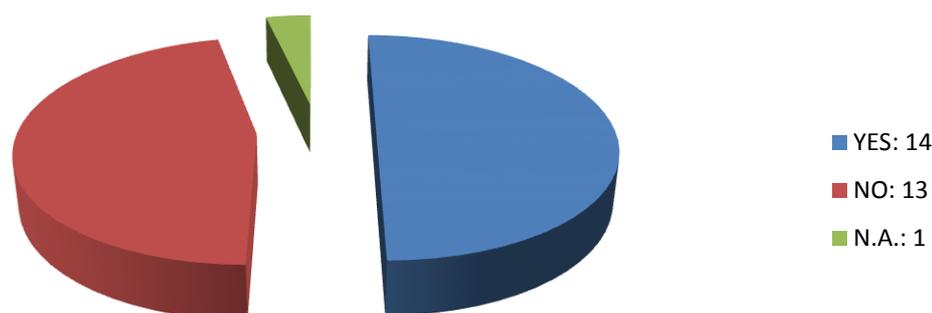
Denmark: the legal deposit libraries in Denmark give joint access to legal deposit works.

5.5 Web harvesting

Fourteen countries (AT, DE, DK, EE, ES, HR, LT, LU, NL, PT, SE, SI, SK, UK) reported measures to allow preservation of web content using techniques for collecting cultural material from the web such as web harvesting. Normally these provisions target works published in websites with the relevant country's domain name or otherwise connected with the country doing the harvesting. Although the number of countries under this heading remains stable with respect to the previous reporting period (2011-2013), progress has been achieved by four new countries (ES, HR, LU, SK) which report measures under this heading, on top of the fourteen having done so in the last report (some of which abstained from reiterating already reported provisions).

One country (CY) reports that no measures had to be adopted to allow preservation of web content.

Q. 10.3 Measures to allow web content preservation using techniques to collect content from the web such as web-harvesting?



Spain: Royal Decree of 10 July 2015 was enacted to develop the electronic legal deposit, web harvesting being one of the tools that would enable the preservation of this content. The Decree implements the Legal Deposit Law of 2011 (*Ley de Depósito Legal de 2011*) which boosted the Spanish web archive by stating that online publications were also material subject to legal deposit. The Spanish National Library (BNE) has coordinated the writing of this royal decree in collaboration with all autonomous communities (regions). There is a working group on legal deposit and digital heritage (within the Librarian

Cooperation Council (CCB), coordinated by the BNE, which is facilitating the collaboration with all autonomous communities. Besides, internally in 2013 the BNE has created a working group of web curators with librarian employees which will help to direct selective harvestings. In 2011, BNE installed its first testing environment in order to set up its own infrastructure for web archiving (thanks to the agreement signed with Red.es). Testing began with its own web page and some other 23 domains; we also did subject oriented harvestings (15 March social movement, Pope's visit to Spain, the end of ETA...). In July 2013, BNE organized the working session 'Documentary Heritage in Internet' with the participation of experts from IIPC, BL's web archive projects, Basque Country and Cataluña. In 2014, the testing environment has changed and currently consists of NetArchive Suite (NAS, developed by Danish Royal Library) and Wayback Machine tool (developed by Internet Archive) for retrieval, but also some advances have been made on implementing keyword indexing by using the Solr open-source data-handling tool. By end 2014, the web archive collection harvested by Internet Archive was eventually transferred to BNE physical premises. Its current size⁵³ is 114 TB with 2.47 thousand million unique URLs. In spite of the e-government boost in Spain, no general measures have been adopted for the preservation of web content in the museum sector, therefore it is up to each institution or management unit to decide on how to cope with this. Some State Museums do preserve back-up copies of their webpages when faced with the corresponding renewal.

Portugal: web content is harvested and preserved by the Fundação para a Computação Científica Nacional (FCCN), which acts as the Portuguese web archive: http://sobre.arquivo.pt/portuguese-web-archive-2?set_language=en.

The Netherlands: the National Library preserves a selection of Dutch websites: at this time 7600 websites are preserved, 16TB of data. There is no legal deposit legislation for this activity. The Netherlands uses the opt-out method after asking permission from the website owner by letter.

Croatia: the NUL, in collaboration with the University of Zagreb's University Computing Centre started the project Design of the System for Capturing and Archiving Legal Deposit of Croatian Web Publications in 2003. The objective was to establish a tool for collecting and archiving the legal deposit copy of Croatian publications on the internet while preserving, to the largest possible extent, the original contents, formats and functionalities, in order to ensure access and use in the future. The archive is based on the concept of selective capturing of web resources. Each resource has a full level of description and is retrievable in the online catalogue. The Croatian Web Archive is integrated with the library information system and is running as a service since January 2004. In 2010, the name Digital Archive of Web Publications was changed to Croatian Web Archive. The new name describes more precisely the aim and purpose of archiving web resources and does not confuse the user about the scope of the service. The collected resources complement the national collection with content of scientific or cultural significance. Digital born content is collected with particular care, as it documents the everyday stuff like social trends, popular events and important sports competitions, political, cultural and other types of events. More about the project: <http://haw.nsk.hr/en>.

Austria: the new Austrian Media Law was approved by the national Assembly in January 2009 and became operative in March 2009. This amendment to the law is the legal basis for web archiving and governs the collection of online publications of the Austrian National Library. In principle, the webpages with the domain ".at" and pages that are geographically

⁵³ 4 November 2015.

situated in or have a specific connection with Austria, are collected. Currently, the Austrian National Library hosts more than 2.4 billion web pages.

Luxembourg: Web-harvesting falls under the same law as general e-legal deposit and there is no legal impediment to harvesting and preservation of webharvested data. Access is restricted by existing copyright, right-to-be-forgotten, personal data protection and other laws. However, implementation of this law is still pending.

Sweden: the National Library of Sweden is mandated by the Legal deposit Act for Electronic Materials/Documents (2012:492) to receive documents publicly accessible in Sweden on electronic networks. The act contains guidelines for the submission of electronic documents and articulates the three main criteria for documents which are subject to the Act, namely their (1) public accessibility, (2) uniqueness and (3) distribution through electronic networks. Publishers of such materials shall submit all documents drafted after December 31, 2014 to the National Library of Sweden. Organisations compelled under the law to submit materials are: (1) all that are guaranteed freedom of speech and press by Chapter 1, paragraphs 6 and 9 of the Swedish Constitution (Freedom of Press Act), (2) business enterprises which create or distribute electronic material and/or other pronouncements and (3) all municipal and federal authorities. The National Library of Sweden has performed web harvesting of the Swedish web ('.se' domain and servers geographically located in Sweden) since 1997. It is considered as an important complement to the Legal Deposit Act for Electronic Materials/Documents (2012:492). The collections preserved consist of: (1) harvested web-pages not submitted under the Legal Deposit Act for Electronic Materials, (2) e-books, articles, video, audio, reports, web-tv/radio, podcasts, text, etc. received through the Legal deposit Act for Electronic Materials.

United Kingdom: an overview of the work of the UK Web Archive was given at the 2015 IIPC General Assembly: <http://britishlibrary.typepad.co.uk/webarchive/2015/09/ten-years-of-the-uk-web-archive-what-have-we-saved.html>.

Germany: since 2006 the German National Library is obliged to collect digital publications and websites. However, due to continuing technical problems and limited resources not all but only ca. 900 selected German websites are being harvested twice a year. In 2014, the German National Library (DNB) also conducted its first experimental domain crawl.

Estonia: according to a provision in the Legal deposit Act, the National Library is responsible for harvesting and preserving the web. In the new draft Legal deposit Act this provision will be improved.

Lithuania: the Martynas Mažvydas National Library of Lithuania archives and catalogues Lithuanian websites. Electronic resources available online for public access are collected automatically by a harvesting method. The collection of electronic resources starts from several homepages: a special program follows them through the existing links until the greatest part of the Lithuanian internet field is covered. In such a way, over 2-3 weeks, a 'snapshot' of the Lithuanian internet space is made by the library. Some electronic resources, including autonomous ones, are placed into the archive separately, by receiving them from publishers under signed agreements.

Slovenia: the Common Technological Requirements define what kind of web content will be transferred and preserved. However, these instructions are not yet in full practice. As per legal deposit law, Slovenian websites are harvested and archived by NUK for long-term preservation purposes. A broad definition of online publications provided by the law ensures

that all online material in Slovenian language, made by Slovenian authors or pertaining to Slovenia should be collected and preserved by the National Library.

Denmark: Web harvesting of Danish content is provided for by the Danish legal deposit act.

Slovak Republic: the web content is being harvested on a voluntary contractual basis by the University Library of Bratislava (Digital resources – web-harvesting and archiving of e-born content project, co-funded by the EU).

Poland: the issue of web harvesting is connected with the functioning of regulations related to mandatory copies. However, it should be noted that presently the Act on mandatory library copies in Poland does not allow the possibility of conducting web resources archiving.

5.6 Co-ordinated approaches on legal deposit arrangements

Seventeen Member States (AT, CZ, DE, DK, EE, EL, ES, FR, HR, HU, LU, MT, NL, SE, SI, SK, UK) reported taking into account other countries' experiences, or assisting them in the development of existing schemes, when establishing or updating policies/practices regarding legal deposit of digital-born material. Although the number of countries under this heading remains stable with respect to the previous reporting period (2011-2013), progress has been achieved by five new countries (EL, FR, HR, HU, SK) which report measures under this heading, on top of the seventeen having done so in the last report (some of which abstained from reiterating already reported initiatives).

Most often these exchanges take the form of collaboration in cross-border projects, working groups/task forces or networks/infrastructures - such as IIPC⁵⁴, OPF⁵⁵, CESSDA⁵⁶, PERSIST⁵⁷ or COAR⁵⁸ - as well as exchanges with partner institutions abroad regarding technical or legislative initiatives in this field. Several EU-funded projects for digital preservation have been quoted in this connection, such as Scape⁵⁹, Aparsen⁶⁰, e-Ark⁶¹, CLARIN⁶², DARIAH⁶³ and APEF⁶⁴, alongside exchange or advisory *fora* like the European Archives Group (EAG)⁶⁵, the European Board of National Archivists (EBNA)⁶⁶ or the Member States Expert Group on digitisation (MSEG)⁶⁷.

⁵⁴ <http://www.netpreserve.org/> .

<http://openpreservation.org/> .⁵⁵

⁵⁶ <http://cessda.net/> .

⁵⁷ <https://www.unesco.nl/digital-sustainability> .

⁵⁸ <https://www.coar-repositories.org/> .

⁵⁹ <http://www.scape-project.eu/> .

⁶⁰ <http://www.alliancepermanentaccess.org/> .

⁶¹ <http://www.eark-project.com/> .

⁶² <http://clarin.eu/> .

⁶³ <https://www.dariah.eu/> .

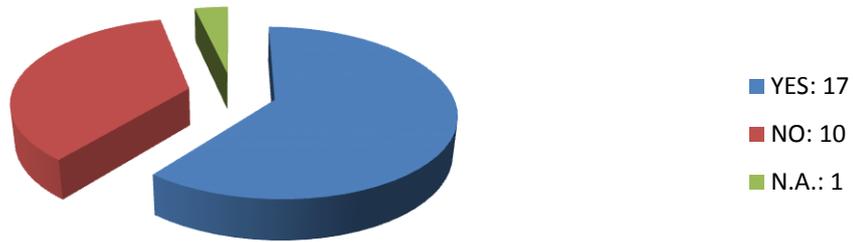
⁶⁴ <http://www.archivesportaleuropefoundation.eu/index.php> .

⁶⁵ http://ec.europa.eu/archival-policy/eur_arch_group/index_en.htm .

⁶⁶ <http://ebna.eu/about-ebna/> .

⁶⁷ <https://ec.europa.eu/digital-single-market/en/member-states-expert-group-digitisation-digital-preservation>

Q. 11 Taking into account developments in other Member States to prevent wide variation in deposit arrangements?



Austria: the Austrian national Library has been and still is a partner in several EU-funded projects related to digital preservation e.g. Scape, Aparsen and is in contact with other national libraries on a bi-lateral basis or via several working groups. The Austrian National Library is also member of the International Internet preservation Consortium (IIPC) and of the Open Preservation Foundation (OPF). The Österreichische Mediathek has developed a system for video digitization: DVA-Profession is a complete solution for digitising video for archival purposes. It manages the whole workflow, from digitization (FFV1) to analysis, generating preview images and a preview video (MPEG), manual quality control, documentation of all process metadata and the final deposition of the files on a digital mass-storage. All steps of the workflow are designed and optimized for an economic operation and preparation for long-term archiving. This product is available under a Free Software Licence (GPLv3 – GNU General Public Licence) and can be downloaded at the website of the Österreichische Mediathek. FFV1 also works as a format for long-term archiving of digital-born material and is meanwhile used worldwide. As an active member of both the International Federation of Film Archives (FIAF) and the Association of European Film Archives and Cinémathèques (ACE), the Austrian Film Museum can stay abreast of the ongoing international developments with regard to the deposit and storage of digital-born audiovisual works. In addition, individual staff members have been or continue to be involved in a number of international expert groups, providing additional input that can benefit the Museum's work in this area. The University and Regional Library Tirol has been the coordinator of the eBooks on Demand (EOD) project, which ended officially 1 April 2014. However, the EOD service is running at 40 libraries in 12 European countries as a self-sustained service. As a result of the EOD network, the University and Regional Library Tirol is in contact with other scientific, regional and national libraries either on a bilateral basis or via the network itself. Yearly meetings are taking place, which provide the opportunity to exchange knowledge and best practices also regarding long-term preservation of digital materials.

France: the French National Library (BnF) is a partner of the International Internet Preservation Consortium (IIPC), which includes members from 45 countries. It aims at improving the tools, standards and best practices for web archiving, while at the same time favoring international cooperation and a wider access and use of web archives by research and heritage institutions. BnF is also a partner of the OPF (Open Preservation Foundation) competence centre.

The Netherlands: discussions and pilot projects were carried out in order to get more insight on the the problems within the different domains (archives, libraries, museums, science). This resulted in sharing preservation policies amongst each other as a first step towards deposit arrangements to be made in the near future. Exchange of experiences and

specific policies led to a better understanding of processes and issues regarding the ingest of digital materials in the Netherlands. The Netherlands has been a driving force behind UNESCO's initiative PERSIST, which developed guidelines for the collection and preservation of digital-born cultural heritage⁶⁸.

Spain: in order to optimize efforts and knowledge exchange at international level, the Spanish National Library (BNE) became a partner of the Internet Preservation Consortium (IIPC) in 2010 and since 2014 is taking part of its Executive Committee (which implies acknowledgement of its work on Spanish web archiving). Besides, the BNE has taken part in the ISO working group (ISO TC 46/SC 8/WG 9) which elaborated the technical report about "Statistics and quality aspects of web arc hives (TR 14873).

Croatia: as a young Member state, Croatia did not have to go through the initial unknowns and rapid technology development but got the answers by learning from the other countries. Croatia uses the best other EU countries practice and apply them in their cultural heritage digitization systems. We regularly monitor developments in other countries to ensure we are up to date on latest ones in the digitisation field.

Germany: COAR, the World Confederation of Open Access repositories (<http://www.coar-repositories.org/>) is an association of repository initiatives and networks that unites and represents more than 90 institutions worldwide and places the interoperability of open access repositories at the heart of its mission. With nine German members (including the chairman of COAR) Germany is well represented in this important initiative.

Slovenia: exchange of information for archives in the EU is ensured by the common EU project e-Ark, dedicated to long-term preservation of e-archives.

Malta: the National Archives are participating fully in the European Board of National Archivists (EBNA), European Archives Group (EAG), Digitisation of Cultural Heritage Expert Group (MSEG), Archives Portal Europe Foundation (APEF) and keeping abreast of developments.

Slovak Republic: new legal deposit legislation is envisaged for the 2016-2020 legislative term, which should unify the deposit approaches.

Luxembourg: during the writing of the legal framework (2009) there was extensive consultation of practices in other Member States and internationally, as well as consultation of academic texts. However, as implementation of the existing e-deposit law is still pending, there has been no further consultation. Once implementation proceeds, renewed extensive consultation is planned.

Estonia: Estonia is a member of the International Internet Preservation Consortium (IIPC).

Hungary: At government level, in the establishment of the legislative environment we review the international practices and develop our own regulations in view of these and the directives and recommendations of the European Union. The Hungarian cultural institutions are active in the field of European cooperation. They participate in several international projects in which they have an opportunity to explore the good practices developed in other Member States.

⁶⁸ <http://www.ifla.org/files/assets/hq/topics/cultural-heritage/documents/persist-content-guidelines.pdf> .

CONCLUSIONS

During the first four years of implementation of Recommendation 711/2011/EU on digitisation and online accessibility of cultural material and digital preservation, progress has been made in areas such as digitisation planning and coordination, accessibility and re-use of public domain material, the bringing of copyrighted content online or long-term digital preservation. However, there is still room for improvement, as such progress falls short of covering all points in the Recommendation, or of being evenly spread across sectors and borders.

Monitoring and reporting procedures have improved with respect to the first reporting period (2011-2013), with more countries reporting and doing so on time and in a more comprehensive fashion, covering all relevant sectors (libraries, museums and archives). But they do not always give an accurate picture of the progress achieved, particularly at national level, nor are they always supported by reliable digital cultural indicators to enable more comparable figures and accurate/comprehensive overviews of the pan-European picture in this area. In spite of progress in the last two years, the overall picture of cultural heritage digitisation remains fragmented and patchy, widely dependent on cultural institutions' initiatives or funding, with a limited overview of digitisation activities across sectors and borders. Use of public-private partnerships and structural funds has improved but remains under-exploited and unevenly spread, with some countries reporting none of these tools recommended by the Recommendation to co-fund digitisation.

Despite progress in some areas (e.g. provisions for avoiding intrusive watermarking or visual protection measures) barriers still subsist in bringing public domain material online. Intrusive watermarking, low metadata quality or resolution or cultural institutions policy and contractual or statutory constraints (e.g. cultural heritage protection laws) still in some cases stand in the way of wider use and re-use of these materials, encouraged by the Recommendation. Significant progress was made on facilitating online accessibility of in-copyright material with the number of countries reporting transposition of the orphan works Directive increasing twelve-fold (from two to twenty-four) and of those reporting legal backing of licensing schemes for wide-scale digitisation and cross-border accessibility of out-of-commerce works increasing four-fold (from two to eight). Progress was also noted with respect to the implementation of rights information databases connected at European level, with seven new countries reporting initiatives in this area, on top of the twelve that already did so in the first reporting period (2011-2013).

In-copyright and audiovisual material has increased but still remains under-represented in digital cultural platforms like Europeana, as do public domain masterpieces from mainstream museums. Updated digitisation action plans and implementing strategies, as well as the exchange of information on these, remain a challenge in many cases, as do the provisions for multiple copy/format migration and other arrangements for long term preservation of cultural material, particularly digital-born ones. Wide variations persist among the national legal deposit arrangements (some mandatory others voluntary, with different scope and reach) and technical protection measures barring preservation acts by digital deposit libraries have not been completely set aside. The provision for inter-library transfers of digital legal deposit works or web-content preservation remains exceptional, in spite of a notable increase in the number of countries reporting digital legal deposit provisions for long-term preservation of digital cultural material, including web content.



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