



Survey on national/federal policies and strategies on the preservation of digital heritage

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Preface

Digital information is difficult to preserve over longer periods of time. Carriers like hard disks have a short life span, and even if one manages to keep the bits and bytes, the risk that current hard- and software is unable to process the old data is very real. Archives, libraries and other memory institutions are acutely aware of these problems, yet they cannot find solutions on their own. The UNESCO PERSIST Project stimulates the debate between these institutions, government and the ICT-industry in order to promote digital sustainability.

With a worldwide survey PERSIST will try to get a global overview of the existence and implementation of policies and strategies and to assess the role that governments assume therein. The study will also show some selected cases.

The survey results are aggregated in this final report to UNESCO and will help identify governmental trends in and needs for national/federal preservation policies. The names of individual organizations and of the individuals responding on behalf of their organizations will not be shared in the survey results or other reports.

The Policy Working Group of PERSIST appreciates the input given by institutions and governmental organisations.

The survey took place between September and December 2016, with the option to send in additions until the end of May 2017.

1. Background information

1.1 Introduction

One of the outcomes of the UNESCO PERSIST meeting in Abu Dhabi (14-16 March 2016) was the decision to organize a global survey about governmental policies and national strategies on long-term preservation of digital heritage. This report presents the results of this global survey that was commissioned by the PERSIST Policy Working Group.

The aim of this survey is to know whether governmental policies and/or a national strategy is used, and also what the role has been of governments and/or national policy makers in the area of long-term preservation of digital heritage. One of the central questions in this perspective is what methodology is applied and in which context a policy or strategy has been created and embedded. E.g. is the policy or strategy domain specific, who is responsible for reporting and follow-ups, etc.

1.2 Objectives of this survey

The main objective of the survey was to obtain information on the following themes:

- give a global overview of current policies and/or strategies in UNESCO Member States;
- assess the involvement and role of governments or national policy makers on long term digital preservation;
- give insight in the implementation of those policies and strategies (domain specific vs. cross domain, responsibilities, follow-ups, etc.);
- give a short description of some selected examples.

The survey results are reported in aggregate form in this final report to UNESCO and can be helpful to identify governmental needs for and trends in national preservation policies.

1.3 Methodology of Data Acquisition

Invitations to participate in the survey were sent by email to major stakeholders and representatives of relevant national organisations in Europe, Australia, Canada, China, Egypt, Japan, Singapore, the United States, South Africa and Central and South-America. Unfortunately we were unable to use the networks that UNESCO (potentially) has, like the Permanent Delegations, National Commissions or the National MoW Committees to support the survey in their countries or regions.

IFLA, SEAPAVAA (South East Asia-Pacific Audio Visual Archives Association) and FIAT/IFTA circulated the survey link to its members.

The PERSIST Policy Working Group had an overall responsibility for the quality and execution of this survey.

The survey was carried out between September and December 2016. Survey Gizmo was used as survey instrument and the questionnaire consisted of 18 open and closed questions. Some questions invited respondents to add comments and/or explanations. These comments are interpreted qualitatively rather than quantitatively. Relevant comments are sometimes anonymised and listed in the report. A sample of the questionnaire is shown in Annex 1.

None of the questions were required. This resulted in a varying number of respondents that have answered questions.

2. Results

2.1 Introduction

In total, 48 respondents from 33 countries (see figure 1) filled out the complete survey. The completion rate is 16%. From some countries more than one survey was sent in: Costa Rica (6 x), Canada (4 x), Australia (4 x), Malaysia (2 x), New Zealand (2 x), Philippines (2 x), United Kingdom (2 x) and United States (2 x) returned more than 1 survey.

303 participants opened the survey between September and December 2016. 57% of the participants dropped off on page 2 (questions on national/federal policies).

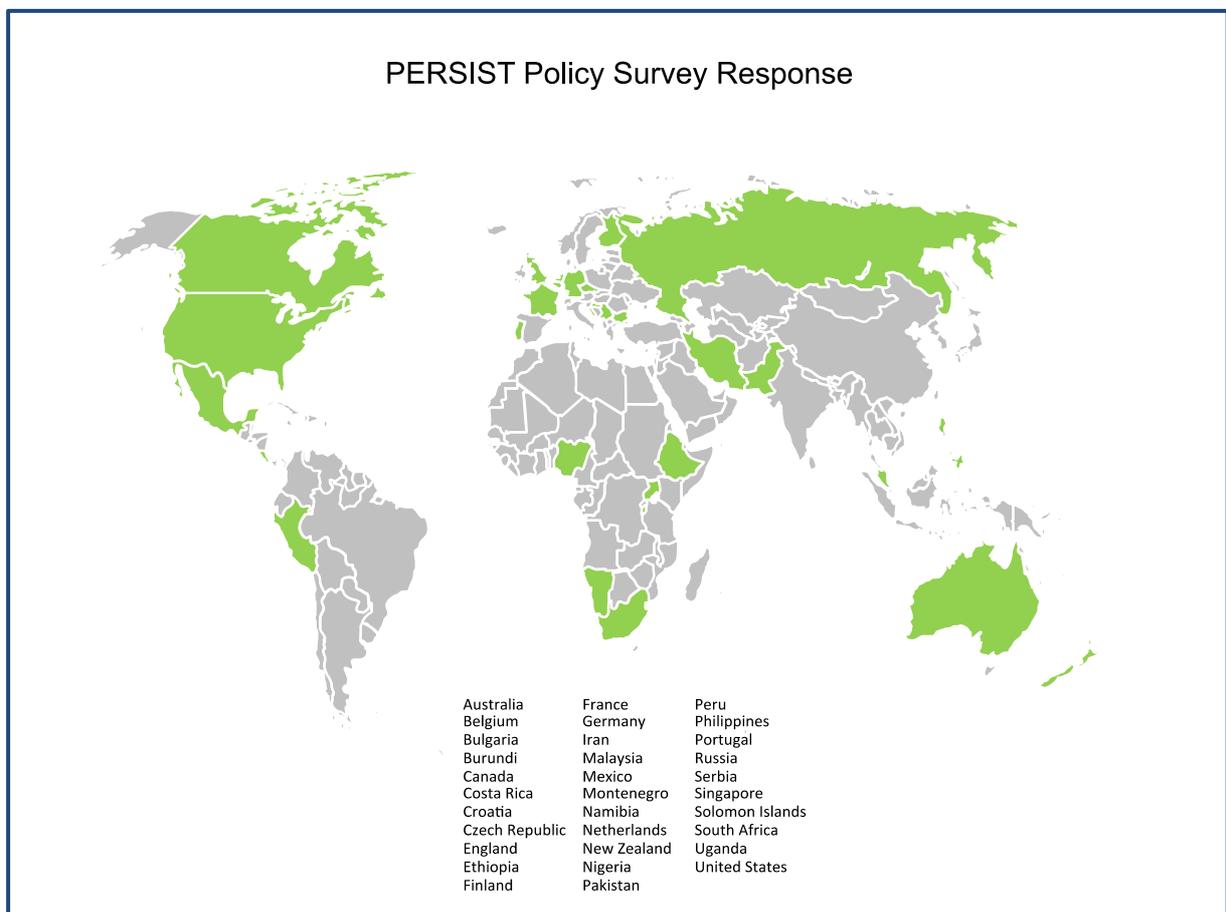


FIGURE 1. COMPLETED SURVEYS - COUNTRIES

The majority of the respondents (37 of 48 in total) have a position in a (national) library or archive (see figure 2). This is not that surprising since most national libraries and national archives have a mandate in long-term digital preservation. 11 respondents described themselves as archivists/records managers (most of them working in a national archive). One of the respondents came from a government

department/public sector. 3 respondents are working in a combined library and archival institution. There was no respondent from the museum domain.

It turned out that it is challenging to address governments or federal representatives directly with a survey on national/federal policies on long term digital preservation.

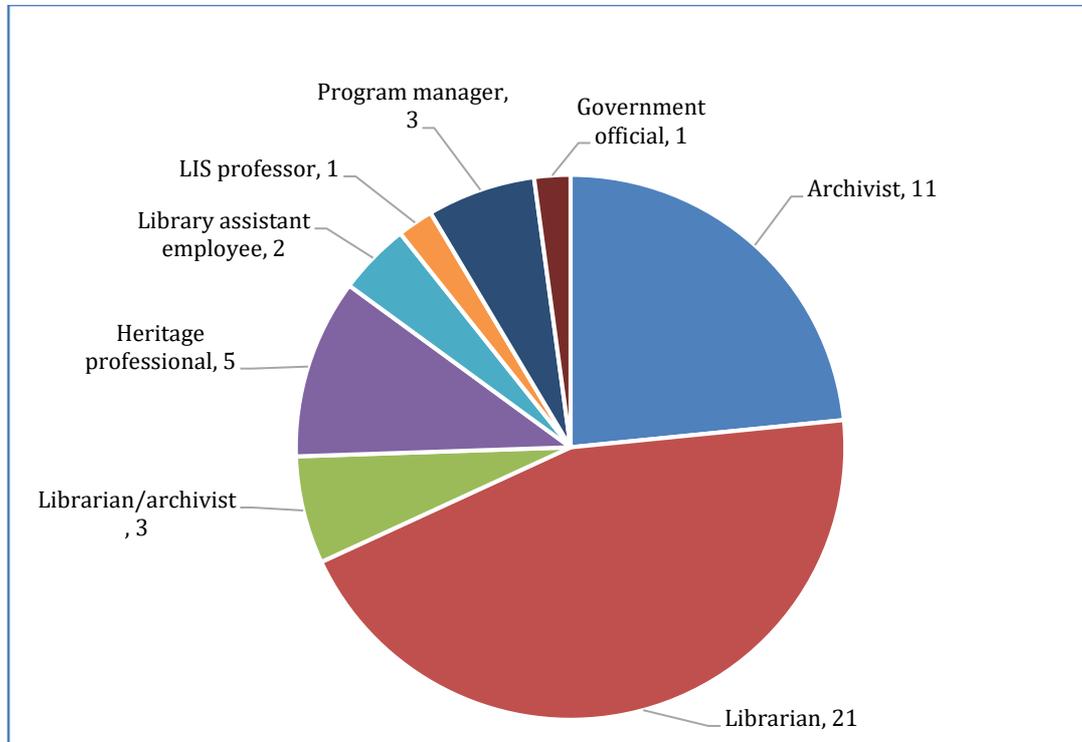


Figure 2. Types of professions (N=48¹)

2.2 Responses

Question 1:

Is there in your country a written national strategy for the long term preservation of digital heritage?

More and more heritage institutions are, as holders of digital collections, mindful of the need for long term digital preservation. On an institutional level, individual archives, libraries and museums are developing digitisation policies and strategies specific to their collections. Gaining more insight in digital preservation policies at the national level is one of the main purposes of this survey. To what extent are countries using a written federal or national strategy? Are these strategies cross domain or domain specific?

The majority of the respondents (77%) reported that in their country there is no written and cross domain national or federal strategy.

It is sometimes suggested that the absence of a national strategy can be explained by a decentralised form of state. As one of the respondents commented: *'...and a system of government that grants considerable powers to the states, make it unlikely that federally imposed digital preservation policies would be effective or enforceable. Federal agencies can, however, serve a useful role in advocating for preservation efforts and raising public awareness.'*

¹ The 'N' refers to the number of respondents that have answered this question.

6% of the respondents reported a national cross domain strategy and 13% of the respondents were aware of national domain specific strategies.

Casus: national policy in South Africa

There are a limited number of primary stakeholders, which are the custodians of South African heritage and these demand special mention in terms of the scope of this policy. Each of these stakeholders will require its own strategy to meet its specific requirements. These stakeholders are positioned at the national, provincial and local spheres of government and its associated bodies and include the National Archives and Record Services, the National Library and all other Legal Deposit Libraries, the National Library for the Blind, the National Film, Video and Sound Archives (NFVSA), the cultural institutions identified within the Cultural Institutions Act, SAHRA, the National Heritage Council (NHC), and all universities. It is not possible to find a “one-size-fits-all” policy and this policy is thus required to address general issues, while the more specific needs are required to be accommodated within the institutional strategies.

One overriding challenge is how the digital heritage will be preserved for the future, given that it is feasible that our entire future recorded history may be digital in nature and the risks that this poses if the digital heritage is not preserved. The preservation of older computerized formats has not been of major concern until recently, resulting in early digital archives being inaccessible or being difficult to access. This challenge has been addressed at the outset of this policy document.

Source: National Policy on the digitisation of heritage resources, final draft for public review, August 2010

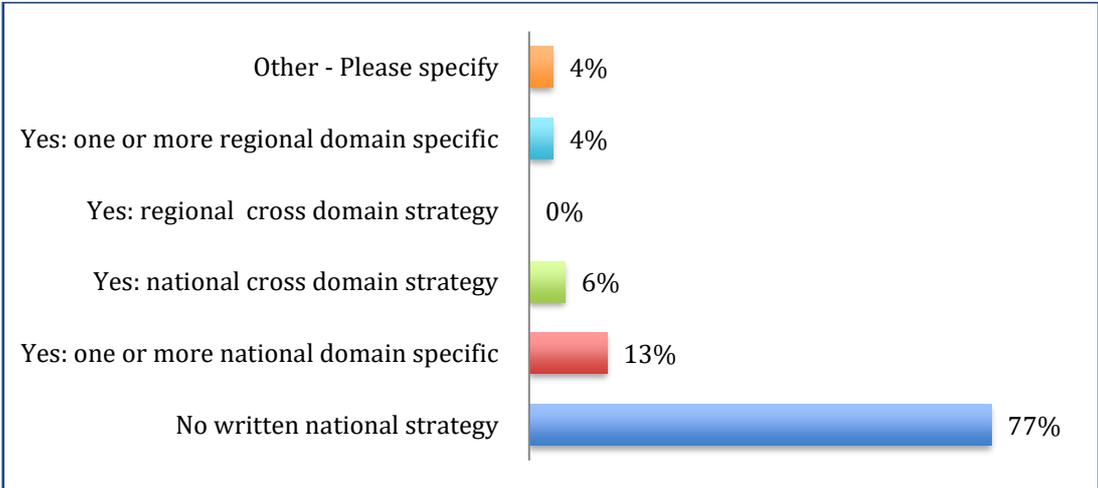


FIGURE 3 - STRATEGIES ON NATIONAL LEVEL (N= 48)

Selection of relevant comments on national strategies:

- We have national long term preservation strategy for libraries, currently being finalized
- Guidelines for records and archives preservation, not yet for digital heritage
- Looking into preparing a policy on digital preservation
- Some digital heritage is being preserved within the framework of traditional heritage policy
- Strategies are typically organisational rather than national, though they may originate from national institutions.

- There are some institutional based and departmental level strategies, policies or guidelines for heritage preservation etc.
- There is no national strategy for the long-term preservation of digital heritage.
- Within [...] there is some awareness of the potential for a whole of country approach to digital preservation but overall awareness and readiness is low at all levels.

Three respondents gave examples of their strategies:

- Flemish Archival Decree (Regional Level)
- Law on the German national library and archives, laws on the state level, nestor competence network on digital preservation Council for Scientific Information Infrastructures (rfii.de)
- National Policy on Digitization of Heritage Resources drafted in 2010 by the Department of Arts and Culture (South Africa)

Question 2:

If you have domain specific strategies, please specify the domain(s).

The survey revealed a lack of written strategies about preservation of digital heritage on a national or federal level. With this in mind, it is interesting to learn to what extent countries have developed domain specific strategies. Compared to other domains, archives and libraries are in the majority of having domain specific strategies, followed by academic and research institutes. Academic and research institutes are more and more involved in cultural heritage, for example in the field of e-humanities. The majority of domain specific strategies are focused on archives and libraries (resp. 63% and 56%).

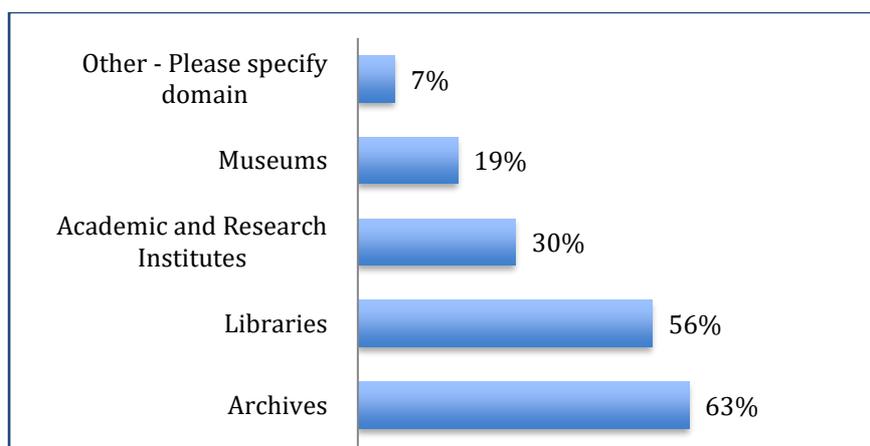


Figure 4: Domain specific strategies (N=27)

Casus: cooperation between library and archive New Zealand

The National Library of New Zealand and Archives New Zealand, as business units within the Department of Internal Affairs have a shared digital preservation strategy and policy development process.

It is becoming clear that digital preservation has a wider application within New Zealand than just fulfilling the National Library and Archives New Zealand collecting mandates. With the vast proliferation of digital information being created, the need for and understanding of digital preservation has also increased and so has its potential application across a range of information sectors. The National Library and Archives New Zealand frequently requests regarding their position on the provision of digital preservation services.

[...]

While we will need to consider what it would look like if we make an intentional choice to jointly govern and manage the long term safekeeping of the nation's digital assets, there is an opportunity here to model a deeper level of collaboration in a domain that is still new in New Zealand and has very little sunk cost in terms of multiple competing players. This should matter to all of us whether our aim is to collect the digital expression of New Zealanders across a wide range of disciplines or to ensure that our organisations are able to provide our customers with access to the full range of New Zealand's culture and heritage in digital form in the future. We hope to be able to partner with other interested organisations in the development of Digital Preservation New Zealand service in the years ahead.

[...]

Digital Preservation will leverage the investment made (approximately \$50 million) in the existing digital preservation systems and infrastructure and the expert capability that the National Library and Archives New Zealand has developed over time.

Source: <https://digitalpreservation.natlib.govt.nz/current-projects/dpnz/>

Relevant comments on domain specific strategies:

- Because the competent authorities and the National Archive of [...] have not developed standardized electronic documents we have begun to develop one internally in the institution where I work but is in the process
- National Library, National Archives, National Academic Data Archives
- There is a bylaw on preservation of library material and part of it is preservation, and digitization is stated as a form of preservation.
- All they have it on their departmental / field level

Question 3:

Is there in your country a law in place, which relates to digital preservation, such as a deposit law or a law relating to the national archive?

Some countries have some kind of legislation in place to regulate digital preservation. This can be directly (laws) or indirectly (for example as part of a deposit law or a law related to the national archive is an implicit regulation of digital preservation). IFLA's statement on legal deposit is not mentioning explicitly digital documents, in some countries legal deposit laws have been amended to include digital documents as well as printed. An example of this are the legal deposit practices for web archives.

The International Internet Preservation Consortium (IIPC, see <http://www.netpreserve.org/legal-deposit>) summarized countries that are collecting web archives as part of their country's copyright deposit legislation. A Preservation Working Group of IIPC has a focus on policies, practices and resources in support of preserving the content and accessibility of web archives. This working group aims to understand and report on how approaches used for other kind of digital resources might be used with

web archives, as well as the special characteristics of web archives that might require new approaches. It will provide recommendations for additions or enhancements to tools, standards, practice guidelines, and possible further studies/research.

In the case of such legislation on deposits, governments might expect that no further regulation/policy on digital preservation strategies is necessary. Figure 5 shows that 65% of the respondents is aware of a kind of legislation on digital preservation.

According to the National Library of Australia, digital history was made on 17 February 2016 as amendments to the legal deposit provisions in the Copyright Act 1968 came into effect, extending the legislation to capture the online publishing landscape. The Civil Law and Justice Legislation Amendment Bill 2014 was passed in August 2015. The Library will now collect electronic books, journals, magazines, newsletters, maps, sheet music and websites to preserve them for the community and future generations. Publishers can now upload their electronic publications directly using the libraries edeposit service.

Source: <https://www.nla.gov.au/news/2016/02/11/new-legal-deposit-service>

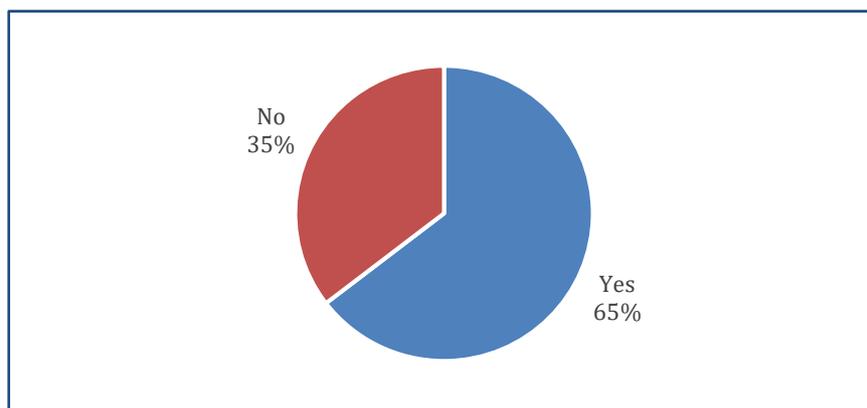


FIGURE 5: LEGISLATION ON DIGITAL PRESERVATION (N=48)

Relevant comments on legislation on digital preservation:

- Act on Collecting and Preserving Cultural Materials (1433/2007) covers also online materials.
- As to libraries, legal deposit for electronic publications is being prepared; there is no law for web archiving
- Both the National Library of New Zealand Act 2003 and the Public Records Act 2005 provide for the collection of digital materials. The Legal Deposit provisions of the NLNZ explicitly allow for the collection of digital materials and their long-term preservation
- [...] only for archival materials (regional level), not for publications
- De Archiefwet (1995) / Archiefregeling (2009). There is no deposit law for the National Library.
- Deposit Material Act 1986 (Act 331) in Malaysia. However it does not specify on digital preservation
- Deposit law in which we are in the process to include more and more digital works
- In the Law on publishing there is obligation of the National library to collect and curate e-publications of all kinds.
- Legislation covering the legal deposit of digital publications came into effect in February 2016 for the National Library of Australia

- The Mandatory Deposit of Printed and Other Works Act, 2001 includes works in electronic format. However, the deposit of electronic works is still not implemented
- The law on legal deposit explicitly covers e-publications. The archival law covers digital archival records as any other archival records
- There is a law Sistema 7202 National Archives but is very general and not specifically refer to digital documents. 8454 also is the law of certificates, digital signatures and electronic documents but like the above makes no reference to digital preservation
- There is only the Law for Legal Deposits, related exclusive to printed publications

Question 4

One specific challenge of digital preservation is obsolescence of both software and hardware. Do you address this specifically in any long-term preservation policies?

Digital obsolescence will become a growing problem in future because of the rapid evolution and proliferation of software and hardware, such as operating systems, general or specialized software, files, platforms such as Microsoft Windows, data storage media and even standards for encoding images, video and film.

In order to prevent digital obsolescence, it is important that digital preservation policies regularly evaluate and explore current technologies and evaluate long-term accessibility of both software and hardware. For 50% of the respondents this challenge is part of their long-term preservation policies. Several comments were made on the fact that this issue is challenging and not yet formalized in their digital preservation policies.



FIGURE 6: POLICIES ON OBSOLESCENCE OF HARD- AND SOFTWARE (N=46)

Relevant comments from respondents on policies on obsolescence of hard- and software:

- In the archives domain, this is further advanced than other domains
- It is a situation that is unclear how to approach
- It is important to use open format documents. The hardware to preserve information for a long time is also very necessary to define the best for it.
- We are working on a preservation and information access plan. The main goal is the digital preservation of our national heritage. Once the plan will be active the [name of national library] implement measures to all units inside of National Libraries System.
- We are currently transcoding files that are at risk of falling behind the obsolescence curve and considering options to replace a RAID system.
- We are not aware of any national policies specifically for this issue.

Question 5

Do you consider digital preservation strategies and policies to be an intrinsic task of the national (or federal) government?

The majority of the respondents on this question (89% of the respondents) suggest that the government should play an active role in digital preservation strategies and policies. Several comments were made on the fact that the task of digital preservation is too big for individual institutes. It transpires from the comments that were sent in (see below) that the respondents value the involvement of national/federal governments in national digital preservation strategies.

As one of the respondents commented: *"All the public, private and financial services are going to be digital so it is necessary to have digital preservation strategies and policies, the government has to develop it for now"*. Legal aspects and the role of the government were also addressed: *"Certain legal issues should be addressed in the federal legislation in order to enable legal use of specific technologies and methods. Pressure from federal government would be helpful too"*.

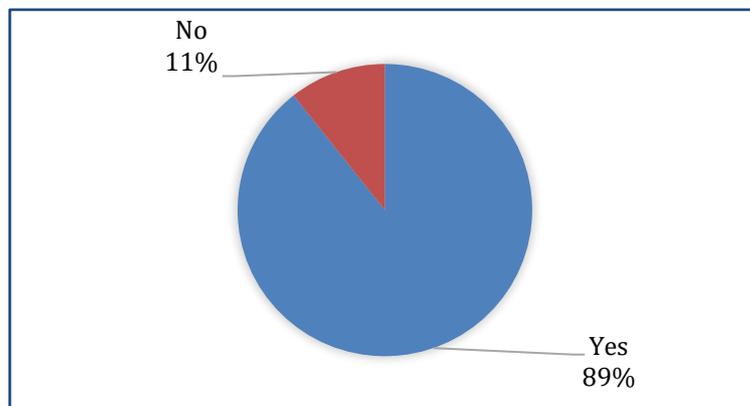


FIGURE 7: DO YOU CONSIDER DP POLICIES AND STRATEGIES AN INTRINSIC TASK OF THE GOVERNMENT (N=47)

Casus: Joint effort of federal agencies and institutions

A collaborative effort in the USA by federal agencies formed as a group in 2007 articulate a common sustainable set of technical guidelines, methods, and practices for digitized and born digital historical, archival and cultural content. Long known as FADGI, the acronym's meaning was updated in 2017 from Federal Agencies Digitization Guidelines Initiative to the Federal Agencies Digital Guidelines Initiative to reflect this growing area of work. The participating agencies share the belief that common guidelines will enhance the exchange of research results and developments, encourage collaborative practices and projects for digital material among federal agencies and institutions and provide the public with a product of uniform quality. They will also serve to set common benchmarks for service providers and manufacturers.

[...]

The agencies involved in this initiative also share a common philosophical approach to developing technical guidelines; namely that:

- guidelines should be based on clearly articulated objectives;
- methodologies and requirements should be based on recognized approved standards or empirical data to the extent possible;
- the efforts undertaken through this federal initiative be conducted in a transparent manner, sharing not only conclusions but the approach and reasoning;
- the participating members actively seek input from the public, governmental and academic institutions, as well as corporate entities and trade organizations.

Federal agency participation is voluntary and non-binding. Participants are expected to provide input, share information and resources (when possible), and provide their opinions on priorities, methodology of the initiative, and approval or disapproval of draft guidelines, and respond to external recommendations or queries. Adherence by the participating agencies to the guidelines developed under this initiative is not required, nor is it expected to be practical under all circumstances. It is expected that participating agencies make a good faith effort to translate the guidelines into standard operating procedures and performance criteria for contracted services or purchases.

All United States federal agencies and institutions involved in the creation or collection of digitized or born digital content of a cultural, historical or archival nature are welcome to participate.

Source: <http://www.digitizationguidelines.gov/about/>

Selected quotes from respondents:

- Certain legal issues should be addressed in the federal legislation in order to enable legal use of specific technologies and methods. Pressure from federal government would be helpful too
- Delegated to national memory bodies as appropriate
- For the federal government organizations
- For the records kept by the federal institutions
- Ideally yes. But it seems that digital preservation is deemed low priority
- It should be the task of National Archives and Library of the country to propose and take the initiatives
- Las estrategias de preservación digital deben ser tomadas a nivel nacional para garantizar la permanencia de la memoria social y el patrimonio cultural.
- The fast obsolescence of digital formats and technology forces to establish guidelines, policies, and recommendation to guarantee the future access to information. All this should be adopted by all public institutions
- Yes, I believe so because the lead by the federal government would pull all the other stakeholders along
- Efforts are made but not concrete
- It is essential for national government
- Too big task for individual institutions, even for whole particular domains - financial sustainability for digital heritage has to be secured and guaranteed by national government.

Question 6

Is your government promoting the importance of digital preservation policies and strategies for the digital heritage at a national (federal) level?

This question is related to question 5. Slightly less than half of the responses (39% of the respondents) indicated that the government is not active in promoting the importance of having strategies for digital heritage preservation at a national level. In some countries the division and implementation of strategies is delegated to the national memory organisations, primarily archives and libraries. In other countries the relation between national heritage institutions and the government is closer. In those cases the government use the most obvious governmental agency at hand to devise and implement a strategy. 18% of the respondents indicated that there are cross domain strategies on a national (federal) level.

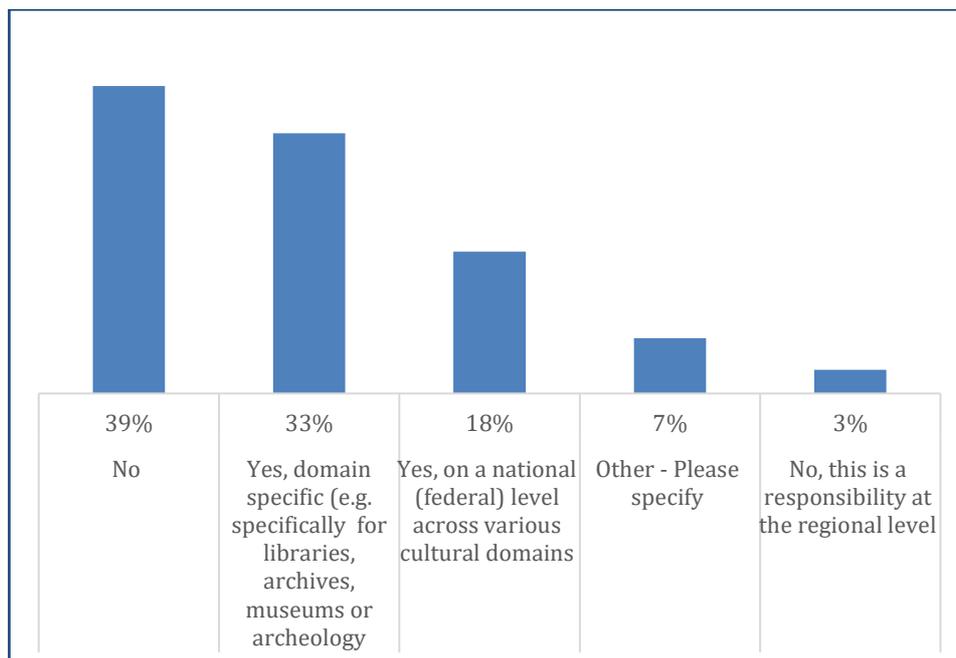


FIGURE 8: IS YOUR GOVERNMENT PROMOTING DIGITAL PRESERVATION? (N = 48)

Selected quotes from respondents:

- Although the national archives, as well as academic or institutions related with the topic are doing promotion, said promotion has a poor result on what is being done
- We are addressing this through the GLAM Peak Bodies group (<https://www.alia.org.au/which-sector-are-you-interested/glam-peak-bodies>)
- It is delegated to the national memory organisations, primarily archives and library
- Other than implicitly through the National Library of New Zealand and Archives New Zealand
- The Copyright Commission is trying to include in the new revised copyright act provisions to cover digital preservation.
- The National Research Foundation has been coordinating efforts on national basis
- Currently it is being done at regional/ departmental level

Question 7:

Are there any national priorities or actions, which should have a place in a national strategy on long-term digital preservation?

Participants were asked to indicate priorities in digital preservation strategies on a national (federal) level. Respondents indicate a clear demand for strategic planning on digital preservation on a national (federal) level. Respondents are also suggesting that a national preservation infrastructure program is helpful as well as awareness raising amongst stakeholders.

An example given by one of the respondents of strategic planning on digital preservation are the activities of the Australian GLAM Peak Bodies Group. This group recently published a national strategic framework for digital access, which encompasses also digital preservation².

A minority of the respondents expressed interest in the evaluation of gaps and bottlenecks, as priority of a national strategy.

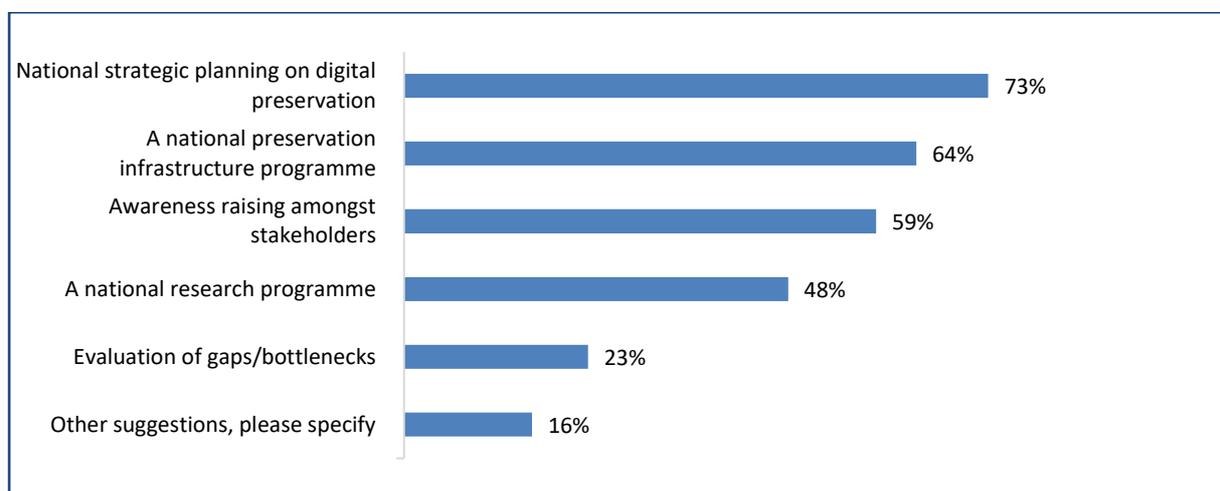


FIGURE 9: PRIORITIES IN NATIONAL/FEDERAL DIGITAL PRESERVATION STRATEGIES (N=44)

Selected quotes from respondents:

- Digital preservation is in its infant period in Iran
- Establishing relevant study topics on universities (i.e. digital preservation or broadly digital heritage life-cycle management including digital preservation)
- Some of this work is already happening driven by peak bodies and national institutions rather than government
- The Australian GLAM Peak Bodies group has proposed a national strategic framework for digital access, which would encompass digital preservation. The same piece of work would also involve a roadshow for smaller institutions e.g. volunteer-run museums and an awareness raising campaign targeting the general public. We are also promoting Trove (<http://trove.nla.gov.au/>) as part of our national research infrastructure
- Intellectual and copy rights

² <https://www.alia.org.au/sites/default/files/GLAM%20Peak%20-%20Draft%20National%20Framework.pdf>

Question 8

Do you have mechanisms at the national (federal) level for monitoring implementation of a national strategy and policies on digital preservation in heritage institutions?

Long-term digital preservation needs to be monitored and developed. Having a (national) strategy on long-term preservation can work as a catalyst for formulating and implementing tools and services at the level of individual organisations.

At this point, a minority of the respondents (20%) reported the existence of mechanisms at the national/federal level for monitoring the implementation of a national strategy or policies on digital preservation.

One of the respondents commented: *'Note that this is implicit in the roles of the National Library of New Zealand and Archives New Zealand, However, neither of their mandates explicitly provide for a whole of country approach to digital preservation'*.

Some respondents mentioned that their countries are working on the monitoring of digital preservation and that more detailed documents are drafted. In some cases, federally funded cultural heritage organisations are required to report to their government and this reporting does provide varying levels of information about digital preservation activities.

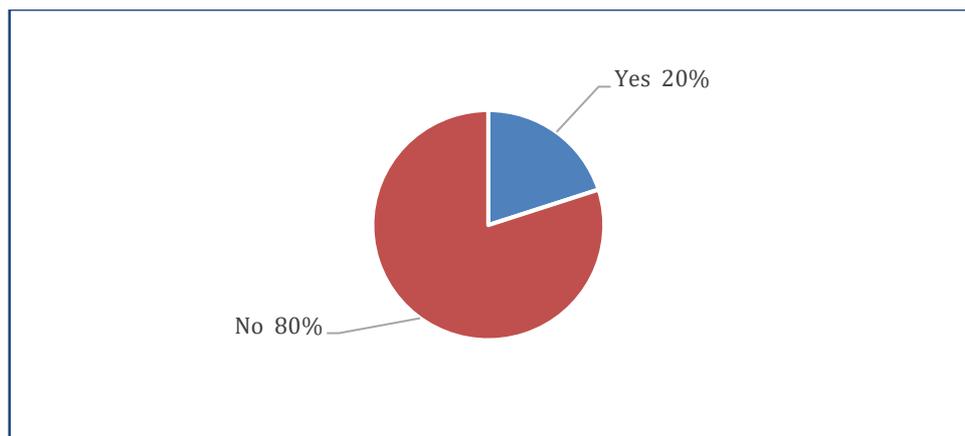


FIGURE 10: MECHANISMS FOR MONITORING NATIONAL/FEDERAL DIGITAL PRESERVATION STRATEGIES (N = 45)

Selected quotes from respondents:

- Again, this would be part of the GLAM Peak Bodies national framework
- Digital preservation is monitored via the EU ENUMERATE project
- National Research Foundation
- The Archiefsinspectie for national governmental organisations
- The future policy of National Digital Preservation must be foreseen and applied
- We need a realistic strategy; monitoring its implementation won't be a problem
- Might be possible it is work in progress but not in any final / approved form

Question 9:

Is there anything which would help your government to implement a strategy for the long term preservation of digital heritage at a national (federal) level?

This question summed up different options as example of the kind of help that governments can use in implementing strategies for digital preservation. Respondents could indicate more than one option and were also asked to make, if possible, suggestions: commitment of top leadership, IFLA, UNESCO, ICA and sharing experience were mentioned.

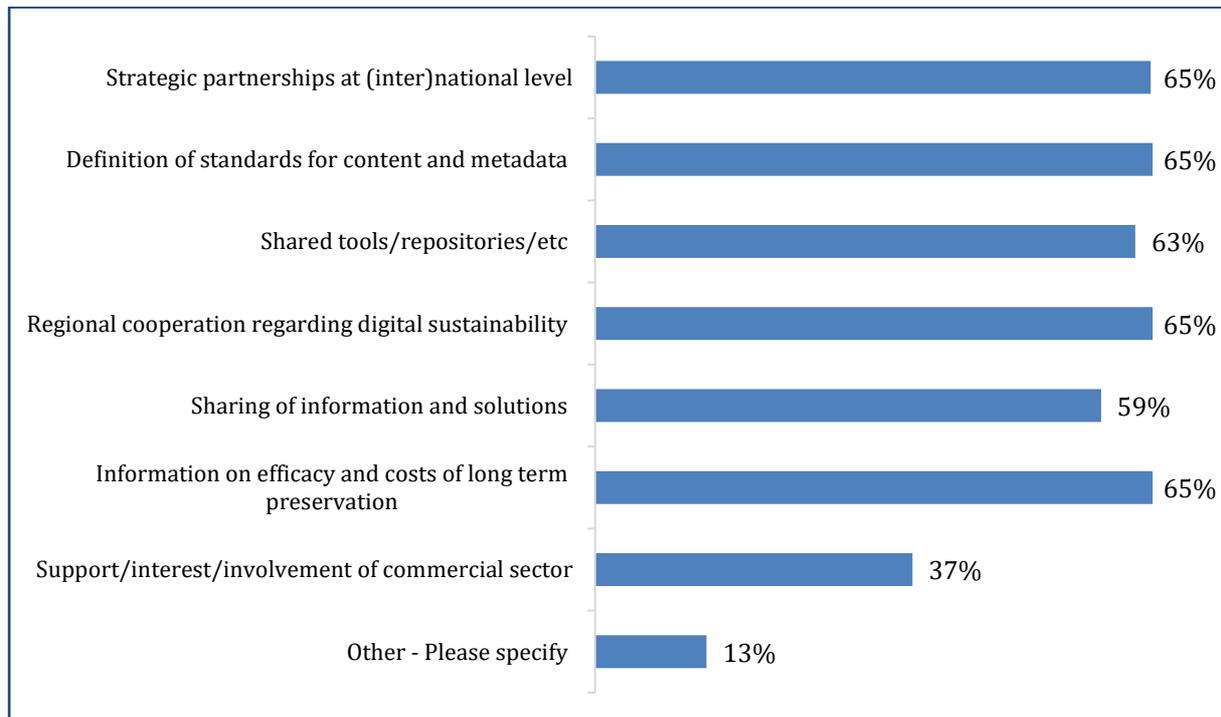


FIGURE 11: SUGGESTIONS TO HELP GOVERNMENTS TO IMPLEMENT A STRATEGY (N=46)

Selected quotes from respondents:

- All of the above are features of our collaborative digital access project
- BNP requires all the options. But if it should choose one will be the Definition of standards for content and metadata
- In Costa Rica we have the electronic signature with all the legal possibilities so the people can choose to use it in the public service, it is very important that government promotes this tech tool.
- There must be allowances for specific domains, types of collection materials, collecting strategies and collection development policies
- We have an organisation called SADI (South African Digitisation Initiative)
- Would need to agree on the need for a national strategy first; thereafter to prioritise strategic partnerships within the UK and the business model
- The collaboration of countries which have digital preservation standards

Casus: strategic partnership Germany as suggestion for help

*"The Federal Government wants to accelerate the digital transition in science through the National Digital Agenda. The new Council for Scientific Information Infrastructures will help towards that goal."
(Johanna Wanka, Federal Minister of Education and Research, 2014)*

The RfII recommends the establishment of a Nationale Forschungsdateninfrastruktur (National Research Data Infrastructure, or NFDI), which will serve as the backbone for research data management in Germany. The NFDI should be implemented as a national collaborative network that grows over time and is composed of various specialized nodes. The establishment of such a network is recommended on a step-by-step basis, as this will ensure the overall management system remains flexible while also facilitating the productive integration of diverse resources. The NFDI will provide for coordination, cooperation, and common standards. As a network-based, dynamic organizational structure, the NFDI will be composed of nodes of various sizes. Some of these nodes will take the form of broad-based "service centers", while others will be specialized "centers of excellence" for specific subareas. These centers can be established within various existing organisations and institutions. The difficult issue of developing intelligent solutions for the long-term archiving/provisioning of research data will be among the areas addressed by the NFDI.

Source: <http://www.rfii.de/en/category/documents/>

Question 10:

Do heritage institutions in your country have access to specific funds for the long-term preservation of digital heritage?

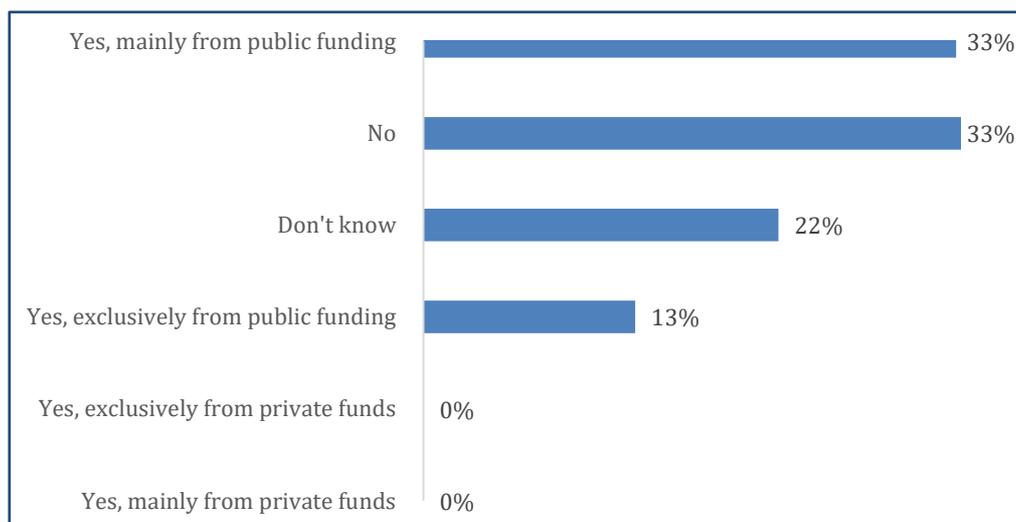


FIGURE 12: FUNDS FOR LONG-TERM PRESERVATION (N=46)

Selected quotes from respondents:

- Depend on the availability of resources and government priorities
- For the Flemish region, this is largely limited to preservation of audiovisual materials
- It's patchy, some more than others. Limited government understanding that this is an ongoing process (not just a do it once and forget it process). Limited understanding of the significant costs involved. An erroneous view that there is capacity within the cultural sector to do substantially more if collaboration occurs
- Some institutions rely on entirely public funding whereas other institutions (including the smaller ones) are dependent on obtaining support from philanthropic sources
- Subject to budget priorities from the government
- Such funding is limited and is not enough for nation-wide efforts

- The digital preservation programmes within the Department of Internal Affairs business units - the National Library of New Zealand and Archives New Zealand
- The funds are mostly for R&D; some (national) institutions receive additional funding for their digital archives
- The relevant agencies normally enjoy annual funding through annual appropriations.
- There are no specific funds, but grants have been made available (some of them very substantial) for digitisation.
- EU funding (H2020...)

Question 11:

If you have a national strategy in your country on preservation of digital heritage, what were the main drivers for arriving there?

Many respondents did not answer this question. The majority of the respondents had indicated that no national strategy exists (see question 6). In some countries activities of professional associations, national heritage institutions and governmental organisations helped in bringing a national strategy into existence.

Selected quotes from respondents:

- No national strategy
- A policy was drafted by the Department of Arts and Culture, which was used to work out costs and funding needed. Since then (2010) no funding allocations yet
- Addressing digital preservation in the wider context of the digital transformation of society in general and the cultural heritage sector in particular
- I think that the main drivers are the members of Burundian's Association of Librarians, Archivists and Documentalists in collaboration with National Archives Service of Burundi
- It should be one that is backed up by law
- Ministry of Education Ministry of Culture and National Library
- None yet but I believe it would be done very soon
- Not yet an specific strategy for digital heritage only for records and archives
- The key drivers are economies of scale, the lack of financial/personnel resources to run multiple programmes, the obviousness of the national library as a central point for a national programme, the threat to digital materials not being collected by core cultural heritage institutions
- There is just LTP strategy for libraries. The main drivers were probably increasing amount of digitized books and periodicals
- Unfortunately this is not a priority for our government
- A national archive; a strong archives community; collaboration work between archivists and informatics, archival world and university

Casus: Preserving digital heritage: a network centric approach (Portugal)

Preserving digital objects is no longer an exclusive technological challenge. Correlated with informatics development and use, social and organizational issues are mandatory in order to obtain complete and accurate preservation solutions.

Three orders of reasons contribute to this situation: the first one is that digital preservation is a pervasive problem that spreads to every organization and individual that produce professionally or individually digital data.

The second one is that lack of preservation actions drive very quickly to obsolescence, which is a condition that can actually stop business continuity. Today's organizations are beginning to grasp this reality as the digital data that has being produced for the past years accumulated into a proportion to which digital obsolescence is already being strongly perceived..

The third reason is that preserving digital objects is a costly activity that demands a lot of expertise and highly qualified people but also a considerable investment in equipment and development as well as a high fixed cost in order to keep digital repositories. This reality presently highlighted by financial crash and general economic depression may lead to establishing partnership between institutions that need to preserve digital material sharing costs and knowledge. A powerful and dedicated info structure and human capacitation on order to deal effectively with it it's a business that is better managed together.

Preserving digital objects is a solidarity activity and not an egotistic one.

Source: http://purl.pt/26107/1/DLM2014_PDF/05%20%20Preserving%20digital%20heritage%20a%20network%20centric.pdf

Question 12:

Please briefly describe up to three of the biggest challenges regarding (setting up) a national digital preservation strategy

45 respondents described their biggest challenges regarding a national digital preservation strategy. In general the answers can be aggregated into four main subjects:

- Lack of leadership
- Lack of knowledge
- Lack of funds
- Lack of consensus between domains/institutions

Selected quotes from respondents:

- Funding - Managing shared systems and services for the long run - Actively involving smaller institutions (incl. payment for services)
- Gaining top leadership's commitment and support - Removing remaining legal barriers - Funding
- Low budget for the cultural sector - Underfunded libraries - Lack of public and government awareness
- Make different institutions work together - Shared infrastructure and tools
- Repositorios digitales - Formatos de los documentos y esquema nacional de metadatos - Estrategia a nivel nacional
- Broader awareness of the problem - Lack of national research programs - Cooperation across various domains
- Enacting the relevant legislation to support it - Lack of advocacy for the need - Absence of a leader to champion the establishment of the strategy

- It is not on the Federal Government's list of priorities - Government finances are under intense pressure and anything not at the top of the priority list is unlikely to be funded - The diversity of collecting institutions in terms of location, governance, sector, size, funding, staff, capability, and the collections, especially in terms of format
- Lack of will to cooperate across the domains - Federal versus State interests - Lack of funds - Organisations at different levels of digital maturity
- Promoting the importance and need for preservation of cultural heritage on digital format
- Balancing competing interest of public and private sector to facilitate digital legal deposits and project sponsor
- Lack of knowledge regarding the importance of digital preservation among top policy makers - Lack of expert human force - Weak international relations differing governmental departments and state/federal jurisdictions
- Awareness raising amongst stakeholders is the first step before we can possibly think of a specific fund dedicated to this challenge
- Capacity around staff - too few people to do too many things – Cost unknown for the long term - Having a leader to get started
- Complex form of government within our country - Lack of funding - Lack of awareness on a government level
- Continual reduction in funding/resources - Competing priorities - Consensus between domains and/or institutions
- Differences between the heritage communities, their needs and the resources available
- Education, training and updating on digital records/archives, maintenance and preservation from archival practices view as well as about on other disciplines related to, accepting the interdisciplinary for best preservation practices - Research, mainly case studies that might offer knowledge and theory, not only theory
- Lack of Finance - Lack of knowledge and skills - Lack of practices/models
- Lack of government will
- Lack of awareness for the need for one strategy - Lack of resources to assign to the work
- Lack of leadership in this area - Dispersed nature of digital heritage - Lack of coordinated policy at the national level
- National preservation infrastructure
- Negotiating with the partners involved.
- Readiness of 3rd party institutions to engage in a national programme both financially and in terms of understanding what, of their holdings, actually has long term value.
- The first biggest challenge is to change the culture and thinking of the people and start seeing things from a digital perspective - The second challenge is to develop legal instruments that generate confidence and legal security - Other challenge is bring to the people tools and apps using digital technologies to seek a better quality of life
- Vision - the country should have a long-term and steady vision Funding - Budget should be provided to support this long-term vision Manpower skills - Knowledgeable and skilled personnel to undertake the digitization project

Question 13:

If there is no national digital preservation strategy, what is preventing your government from implementing such a strategy? (Select all that apply)

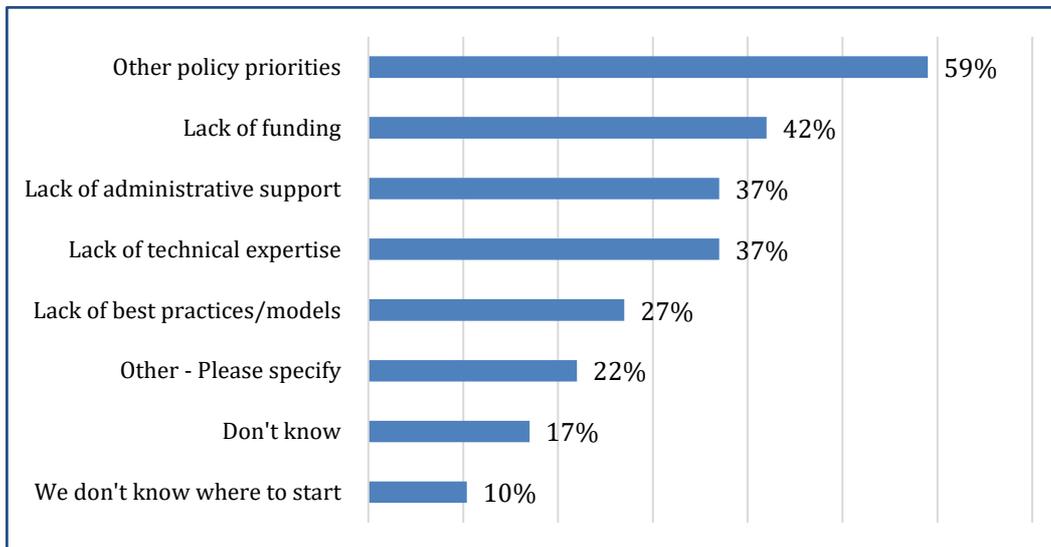


Figure 13: What is preventing a national strategy? (N=41)

Selected quotes from respondents:

- Lack of intellectual and copyright sense and lack of knowledge on preservation worth
- Politicians should be made aware of risks of loss of South African knowledge and collections

Question 14

Are you willing to share your national policy tools and/or strategy documents on preservation of digital heritage?

The results show that there is in the sector a broad willingness to share experiences with colleagues.

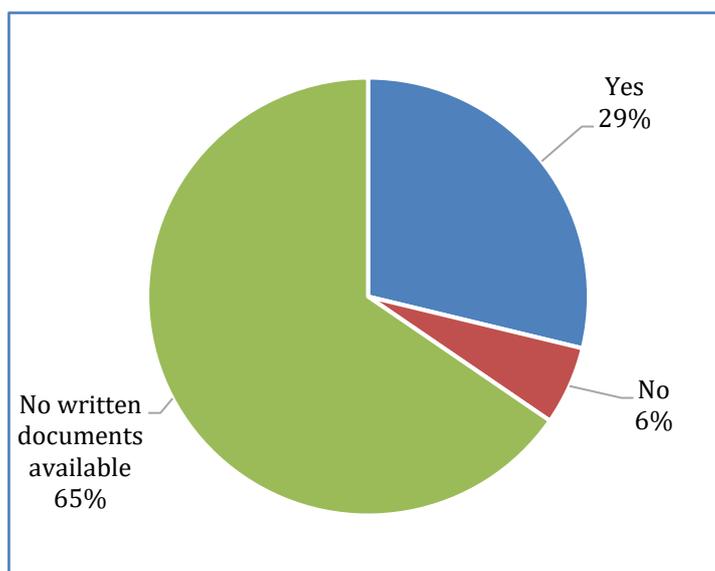


FIGURE 14: ARE YOU WILLING TO SHARE YOUR POLICIES? (N=54)

Question 15

Is there any best practice regarding digital preservation that you would like to share?

26 respondents completed this open question.

Best practice: Digital Preservation Handbook (Digital Preservation Coalition)

One of the respondents suggested: *'Lots, best covered by the recent edition of the Digital Preservation Handbook'*.

The Handbook is intended for a wide and diverse audience, from those who are only beginning to consider managing digital materials to practitioners who have already accumulated considerable theoretical and/or practical experience. It has been written with the intention of allowing quick and easy access to the most appropriate sections.

Each section is preceded by an 'at a glance' guide to its intended primary audience, their assumed level of knowledge, and the purpose of the section. The table below will help you decide which sections are likely to be most relevant to you. It is however not intended to be rigidly prescriptive and anyone wishing to, can of course read the Handbook in its entirety!

The Executive Lens, Manager Lens, and Practitioner Lens of the DigCurV Curriculum Framework for Digital Curation (DigCurV, 2013) have been used within the wider Handbook as primary audience classifications.

Source: Digital Preservation Handbook, 2nd Edition, <http://handbook.dpconline.org/> Digital Preservation Coalition © 2015 licensed under the Open Government Licence v3.0.

Selected quotes from respondents:

- Digital Preservation systems and tools should be standards-based. Appropriate technical metadata must be retained with digital objects. Appropriate storage that adheres to ICT ISO standards regarding storage. Having a migration plan
- Implement bit-level preservation as a foundation for longer-term preservation. Implement a digital preservation management software system to manage digital preservation masters. Work with digital content creators to ensure that preservation is enhanced not hindered by their choice of software/format
- Consider it an enterprise class activity. Do as much as you can now to minimise impact on colleagues in the future (we know the most about today's digital stuff today)
- Implementing or using trustworthy persistent identifiers system (including resolver) for digital documents which is not dependent on URLs (i.e. URN:NBN or Handle or DOI) and assigning identifiers in the beginning of the life-cycle of digital objects (e.g. during digitization).
- La estrategia o política de preservación digital en proceso de elaboración por parte del Archivo Universitario Rafael Obregón Loría de la Universidad de Costa Rica
- Lots, best covered by the recent edition of the Digital Preservation Handbook
- National cross domain cooperation is formalised as the National Coalition on Digital Preservation (NCDD, www.ncdd.nl)
- Our documentation is mostly in Finnish or in Swedish
- Some very detailed reports with guidelines by the NRF (National Research Foundation)
- Yes, I'm interested in the Australian practices
- eLegal deposit introduced February 2016 (<https://www.nla.gov.au/news/2016/02/11/new-legal-deposit-service>) and the Trove platform (<http://trove.nla.gov.au/>)

3. Conclusions

3.1 Key findings

It proved to be difficult to reach policymakers or staff of governmental organisations and let them fill out a questionnaire on such a specific, niche subject as long-term preservation strategies.

This can at least partly be explained by the way in which this survey was disseminated; we were unable to use the networks that UNESCO (potentially) has, like the Permanent Delegations, National Commissions or the National MoW Committees. It is our hope that these will become available for this kind of questionnaires when Member States will have to report on the implementation of the 2015 Recommendation.

Most of the respondents are working in archives and libraries. We didn't receive reactions from the domain of museums.

66% of the respondents reported that in their country is no written and cross domain national or federal strategy. Few respondents commented that they are working nation-wide on how digitized cultural heritage will be preserved and made accessible in the long term. In some countries is the problem of long term digital preservation closely related to the significant financial investments that are needed and which archives, libraries and museums cannot afford.

Compared to other domains, archives and libraries are in the majority of having domain specific strategies, followed by academic and research institutes and museums. 66% of the respondents mention having a kind of legislation on digital preservation.

3.2 Some conclusions

The majority of the respondents (90%) suggest that the government should play an active role in national digital preservation strategies and policies. Several comments were made on the fact that the task of digital preservation is too big for individual institutes.

45 respondents described their biggest challenges regarding a national digital preservation strategy. In general the answers can be aggregated into four main subjects:

- Lack of leadership
- Lack of knowledge
- Lack of funds
- Lack of consensus between domains/institutions

UNESCO cannot help in all these domains. Sharing of knowledge and building global consensus and standards is however within the orbit of the organization.

The results show that there is in the sector a broad willingness to share experiences with colleagues.

Appendix. Questionnaire

UNESCO PERSIST Policy Survey

Introduction

Digital information is difficult to preserve over longer periods of time. Carriers like hard disks have a short life span, and even if one manages to keep the bits and bytes, the risk that current hard- and software is unable to process the old data is very real. Archives, museums and libraries are acutely aware of these problems, yet they cannot find solutions on their own. The UNESCO PERSIST Project stimulates the debate between these institutions, government and the ICT-industry in order to promote digital sustainability. More information about PERSIST can be found at the section on digital sustainability of the website of the Dutch Unesco Commission: <https://www.unesco.nl/digital-sustainability>

This survey on national or federal policies and strategies on the preservation of digital heritage is very short! There are 18 questions including multiple choices and open questions. It should take you only 10-15 minutes.

With your generous help, PERSIST will try to:

- give a global overview of current policies and/or strategies in Unesco Member states
- assess the involvement and role of governments or national policy makers on long term digital preservation
- give insight in the implementation of those policies and strategies (domain specific vs. cross domain, responsibilities, follow-ups, etc.)
- give a short description of some selected examples

The survey results will be reported in aggregate form in a final report to UNESCO and will help identify governmental needs for and trends in national preservation policies. The names of individual organizations, the individuals responding on behalf of their organizations will not be shared in the survey results or other reports.

We deeply appreciate your input. If someone else in your organization should receive this questionnaire, please copy or forward it.

The survey will close on 15/10/2016.

Thank you for your participation! If you prefer to reply by e-mail, please write to wilbert@helmus-advies.nl

Questions on national/federal policies

1) Is there in your country a written national strategy for the long term preservation of digital heritage?

Yes: national cross domain strategy

Yes: one or more national domain specific strategies

Yes: regional cross domain strategy

Yes: one or more regional domain specific strategies

No written strategy

Other - Please specify: _____

Comments:

2) If you have domain specific strategies, please specify the domain(s).

Archives

Libraries

Museums

Academic and Research Institutes

Other - Please specify domain: _____

Comments:

3) Is there in your country a law in place which relates to digital preservation, such as a deposit law or a law relating to the national archive?

Yes

No

Comments:

4) One specific challenge of digital preservation is obsolescence of both software and hardware. Do you address this specifically in any long term preservation policies?

Yes

No

Comments:

5) Do you consider digital preservation strategies and policies to be an intrinsic task of the national (or federal) government?

Yes

No

Comments:

6) Is your government promoting the importance of digital preservation policies and strategies for the digital heritage at a national (federal) level?

Yes, on a national (federal) level across various cultural domains

Yes, domain specific (e.g. specifically for libraries, archives, museums or archeology)

No, this is a responsibility at the regional level

No

Other - Please specify: _____

Comments:

7) Are there any national priorities or actions which should have a place in a national strategy on long term digital preservation?

National strategic planning on digital preservation

Awareness raising amongst stakeholders

A national preservation infrastructure programme

A national research programme

Evaluation of gaps/bottlenecks

Other suggestions, please specify: _____

Comments:

8) Do you have mechanisms at the national (federal) level for monitoring implementation of a national strategy and policies on digital preservation in heritage institutions?

Yes

No

Comments:

9) Is there anything which would help your government to implement a strategy for the long term preservation of digital heritage at a national (federal) level?

Strategic partnerships at (inter)national level

Sharing of information and solutions

Support/interest/involvement of commercial sector

- Information on efficacy and costs of long term preservation
- Definition of standards for content and metadata
- Regional cooperation regarding digital sustainability
- Shared tools/repositories/etc
- Other - Please specify: _____

Comments:

10) Do heritage institutions in your country have access to specific funds for the long term preservation of digital heritage?

Please provide details of specific funding programmes, or large-scale projects.

- Yes, exclusively from public funding
- Yes, mainly from public funding
- Yes, mainly from private funds
- Yes, exclusively from private funds
- Don't know
- No

Comments:

11) If you have a national strategy in your country on preservation of digital heritage, what were the main drivers for arriving there?

12) Please briefly describe up to three of the biggest challenges regarding (setting up) a national digital preservation strategy

13) If there is no national digital preservation strategy, what is preventing your government from implementing such a strategy?

(select all that apply)

Other policy priorities

We don't know where to start

Lack of best practices/models

Lack of funding

Lack of technical expertise

Lack of administrative support

Don't know

Other - Please specify: _____

Comments:

Documents and written policies

14) Are you willing to share your national policy tools and/or strategy documents on preservation of digital heritage?

Yes

No

No written documents available

If yes, please fill in the form

Name of national strategy / Governmental policies for the long term preservation of digital heritage

How can we find a copy (www, ISBN, publication reference, etc.):

Brief description

15) Is there any best practice regarding digital preservation that you would like to share?

Follow-up details

16) Would you be willing to be contacted in follow-up work (if necessary)?

No

Yes (please fill in contact details below)

Contact details*

Your name: _____

Your job title: _____

Your country: _____

Email Address: _____

17) Would you like to be acknowledged in the survey report?

Yes

No

18) Would you like to receive a summary of our findings?

Yes

No

Thank You!