DELIVERABLE

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D4.3 Report on e-Infrastructure Concertation

Revision: Final

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Revision History

Revision	Date	Author	Organisation	Description
0.1	6/05/2014	Mirjam Rääbis, Rosette Vandenbroucke	EVKM, Belspo	Report of the concertation meeting on the intermediate roadmap held in Tallinn
0.2	During May and June	DCH invitees to the workshop		Check and adaptation of the DCH presentation summaries
0.3	15/06/2014	Rosette Vandenbroucke	Belspo	Finished the DCH organisations part
0.4	20/06/2014	Mirjam Rääbis	EVKM	Finished the e-infrastructure part
0.5	21/06/2014	Rosette vandenbroucke	Belspo	Added final conclusions and recommendations
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1.0	01/07/2014	Claudio Prandoni	Promoter	Final version for submission

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1   EXECUTIVE SUMMARY

A concertation workshop was held between the DCH-RP partners, representatives of DCH organisations from several European countries and representatives of e-infrastructures. The main topic of discussion was the intermediate roadmap for the preservation of digital cultural heritage of which a copy was sent to all participants. Viewpoints were given by DCH organisations and e-infrastructures alike and were followed by fruitful discussions. The two-day event was closed by the presentation of the final conclusion of all discussions that gave rise to a series of recommendations for the final roadmap.

2   INTRODUCTION

The DCH-RP DoW included the organisation of an e-Infrastructure Concertation meeting in the second year of the project in order to discuss in more detail the strategy and recommendations presented in the Roadmap study and the intermediate roadmap and to prepare for future cooperation. This event was held in Tallinn on the 23rd and 24th of April 2014 at the University of Tallinn. The concertation meeting was organised in the form of a closed workshop with invited attendees.

The choice of attendees was carefully done in order to provide a balanced mix of experts in both the Digital Cultural Heritage and the e-infrastructures areas. The procedure followed is elaborated in Chapter 3.

The workshop not only featured presentations with room for questions but also included ample time for two panels; one focused on inputs from the digital cultural heritage domain while the second one captured inputs from the e-infrastructures. The program is presented in Chapter 4.

Presentations and panel discussions proved to be very useful for the construction of the final DCH-RP roadmap. Chapter 5 and 6 summarise the panel discussions and chapter 7 presents the final conclusions. Recommendations for the final roadmap are formulated in Chapter 8.

3 THE DELIVERABLE

3.1 STRUCTURE OF THE DOCUMENT

This document describes the organisation and the results of a concertation workshop between DCH-RP partners, DCH organisations and e-infrastructures that was organised on 23-24 April in Tallinn.

Chapter 4 describes the organisation of the workshop including the procedure followed for the invitation of participants. The programme of the workshop is presented in Appendix A.

Chapter 5 and 6 summarize the presentations and the corresponding panel discussion of respectively DCH organisations and e-infrastructures.

Chapter 7 presents the final conclusion of all presentations and discussions.

Finally chapter 8 lists the recommendations for the final roadmap.

3.2 OBJECTIVES OF THE DELIVERABLE

This deliverable aims to reflect the presentations, discussions and outcome of the concertation workshop between DCH-RP partners, DCH organisations and e-infrastructures.

4 PREPARATION OF THE CONCERTATION WORKSHOP

Obtaining the widest possible feedback on the intermediate roadmap was a very important challenge for the DCH-RP project. Feedback and input mean a better roadmap and can represent a useful step towards the involvement of all stakeholders in the future implementation of the roadmap.

Hence we could not depend on participants reacting to a general invitation that would not ensure that we had a representative discussion forum. The project also wanted to keep the number of participants limited in order to be able to have fruitful discussions and also to cope with a limited budget for the organisation of this workshop. Hence during a previous project meeting in Catania it was decided that the concertation workshop would be limited to 50 persons, and that not more than half would be associated with the project partners, thus leaving room for 25 external invitations. These 25 invitations should be sufficient to achieve a good mix of representatives of DCH organisations, e-infrastructures and relevant policy making bodies. Concerning the DCH organisations it was clear that we should also reach out to countries that do not have partners in the DCH-RP project.

Therefore, invitations went to a selected and available DCH organisation in each DCH-RP partner country, to DCH organisations that were already active on virtual platforms, to known DCH organisations in countries not represented by the previously mentioned organisations, to Dariah, to EGI, to EUDAT, to APARSEN, to TERENA, to e-IRG and to the ESFRI Social and Cultural Innovation workgroup. Note that 15 countries were approached for participation from their DCH communities.

The final list of invited persons that could attend was as follows:

Kuldar	Aas	National Archives	Estonia
Hilke	Arijs	Royal Institute for Cultural Heritage	Belgium
Šarūnas	Bagdonas	National Arts Museum	Lithuania
Holger	Brocks	APARSEN	
Marco	de Niet	Stichting Digitaal Erfgoed Nederland	Netherlands
Michel	Drescher	EGI	
Jacques	Dubucs	ESFRI	France
Licia	Florio	TERENA	
Jürgen	Keiper	Deutsche Kinemathek	Germany
William	Kilbride	Digital Preservation Coalition	UK
Leif	Laaksonen	e-IRG	Finland
Lauri	Leht	National Archive	Estonia
Marie-Véronique	Leroi	Ministry of Culture	France
Remigiusz	Lis	Silesian Digital Library	Poland

Maurizio	Messina	National Library of St Mark	Italy
Tarvi	Sits	Ministry of Culture	Estonia
Eva	Stensköld	Ministry of Education and Research	Sweden
Hardi	Teder	EENet	Estonia
Maté	Toth	National Library	Hungary
Laila	Valdovska	Culture Information Systems Centre	Latvia
Vania	Virgili	DARIAH/Consiglio Nazionale delle Ricerche	Italy

The programme was drafted by the organisations in consultation with the speakers and panel leaders and is presented in Annex 1.

5   REPORT ON THE DCH PRESENTATIONS AND PANEL

5.1   SUMMARY/HIGHLIGHTS OF THE PRESENTATIONS

5.1.1   Marie-Véronique Leroi, Patrimoine Numérique, Catalogue des collections numérisées, France

The interim roadmap was studied by the departments the Ministry of Culture and Communication DREST (Department for Research, Higher Education and Technology) and SIAF, (Interministerial service for France archives) of the Ministry of Culture and Communication, by the French National Library and the very big research infrastructure TGIR Human-Num. This means that an important part of the French DCH area has been able to give comments on the document. Comments have been categorised under "general remarks" and "specific remarks". The general remarks pertain to the target of the roadmap including economic, legal and political aspects and the strategy for different types of digital objects. They can be summarised by a number of observations: the roadmap is too technically oriented, economic aspects should be more detailed, legal and political aspects need to be added, and that a distinction should be made between the preservation of the different types of digital objects. Specific remarks question the degree of influence on and cooperation with EUDAT, suggest a mention of the Paris declaration and the Charter of UNESCO, ask for reflection on which aspects of preservation harmonisation are relevant, ask questions on the interoperability of data and metadata and finally challenge the use of e-infrastructures and the need for more detailed DCH requirements.

5.1.2   Maurizio Messina, Biblioteca Nazionale Marciana, Italy

The primary concern from this organisation is fitting DP into digitisation workflows. Italy has good experience of library networking and integration between museums and archives, there is common use of resource discovery metadata and a growing integration between memory institutions and e-infrastructure. But there have been significant financial problems for the sector, relatively slow staff turnover, poor awareness of DP and limited commercial involvement in DP in Italian cultural heritage institutions. The libraries – the whole sector – is waiting for "preservation as a service" that can be implemented easily including safe storage, certified trusted digital repositories, ease of management of SIP and DIP functions, federated authentication services, persistent identifiers and a business model that gives financial sustainability. The roadmap should address the possibilities of e-infrastructures in addressing these requirements. Other problems that have to be tackled include relations with publishing companies and issues of licensing.

5.1.3   Hilke Arijs, Royal Institute for Cultural Heritage, Belgium

There is a large need for preservation of digital cultural heritage. Digital preservation is not always well understood and the reality is often far removed from the theory. For example, simple backup operations are sometimes taken for preservation. There exist standards and tools but they are mostly not efficient to use and in general are not user friendly. Challenges for the roadmap are to also address topics like trust and security, practical deployment, costs and awareness. There needs also to be reflection on what we want to preserve. Multiple solutions can be considered for a preservation system. Each of them has drawbacks especially with regards to loss of data upon transfer of data, incompatibility between storage infrastructures,

trust/security issues and requirement for trained staff. And the need for advocacy and training certainly needs to be addressed.

5.1.4   Eva Stensköld, Ministry of Education and Research, Sweden

An e-infrastructure landscape exists at national, regional (Nordic), European and global levels. Together they illustrate the needs for both e-infrastructures and collaboration at all levels. The main threat to implementation of the road map is the gap between the cultural heritage sector and the science sector which are funded from different sources, have different governance models and have different expectations. In Sweden we have initiated efforts to try to bridge this gap, where the cultural heritage institutions are currently engaged in communicating with the research institutions and the e-infrastructure providers. The roadmap for preservation should present a common vision (common policies, processes and protocols) between the cultural heritage and science sectors, avoid duplication of effort, look into federated infrastructures, and define timelines, priorities and actions.

5.1.5   Kuldar Aas, National Archives of Estonia, Estonia

For the National Archives of Estonia the DCH-RP roadmap should make it possible for each cultural heritage institution to define its own practical action plan with a realistic timeframe for the implementation of the different stages. Funds are often limited so there is a need to define what to keep in house and what to put into an e-infrastructure. A cloud e-infrastructure is good but different cloud models – IaaS, PaaS and SaaS – may be needed for different organisations. And there is a strong requirement for interoperability between the different service providers, between data providers and between European public administrations. National agencies could run the infrastructure for all concerned as part of e-government and government clouds.

5.1.6   Marco de Niet, Stichting Digitaal Erfgoed Nederland, the Netherlands

The Netherlands takes a decentralised approach to policies and practices in the cultural heritage sector but also wants to strengthen its national infrastructure in an EU context. Only one third of cultural heritage institutions has a preservation policy and only one quarter is connected to a digital infrastructure which can offer preservation. The majority of the institutions rely on in-house collections management systems. Many institutions don't report on possible loss of digital data, but of those who do, more than half have experienced data loss. There is a cultural coalition on digital preservation (CCDD) which has its own working plan that has 4 phases of work for the period 2013-2018 and which actually aligns pretty closely with the DCH-RP roadmap. There is no strong sectoral leader in the cultural sector to drive digital preservation and although there is need for more coordination, digital preservation solutions need to be based on a collaborative and representative approach. Because of the fast growing amounts of digital heritage collections, there is an urgency for digital preservation but in the field the sense of urgency varies between institutions and depends on the maturity of information policy. To counter this, it is considered best to get as close as possible to existing workflows. However, object-driven preservation dominates and there is a need for more process focused preservation and a different way of thinking about repositories. And we cannot consider preservation without taking access issues into account (including e.g. persistent identifiers).

5.1.7   Vania Virgili, DARIAH and Consiglio Nazionale delle Ricerche, Italy

DARIAH is an international research infrastructure for arts and humanities with a vision to facilitate long-term access to, and use of, all European Arts and Humanities digital research data.

5.1.8   Remigiusz Lis, Silesian Digital Library, Poland

Digitisation is often a marginal activity for institutions, is mostly project based, and the emphasis is on descriptive metadata and presentation: archiving is therefore a gap in what is already a marginal and fragmented activity. There is a need for the archiving of master files and metadata for long term archiving. That is the context that the roadmap would have to deal with in Poland. It would be nice to be able to use the roadmap for starting discussion of a national strategy in Poland. The roadmap is for the moment focused on technical solutions in theoretical ways but it should also include a social dimension.

5.1.9   Šarūnas Bagdonas, National Arts Museum of Lithuania, Lithuania

Integrated museum information systems for Lithuania are provided at the national level as an infrastructure serving diverse audiences. No new digitisation efforts are foreseen and therefore the trick is to use what has already been digitised. It's easier in some sense to preserve physical objects in the museums than to preserve the digital ones. Use or abandon! Systems, software, infrastructure etc have to be a service in the broadest sense: but the terms software and infrastructure are not interchangeable. It is important when developing a preservation system to look where user needs are, provide use cases and develop a platform as a set of reliable and relevant services. The intermediate roadmap is not clear about the use of PaaS. The roadmap needs to start from use cases and be clear about the services that will be provided.

5.1.10 William Kilbride, Digital Preservation Coalition, UK

Digital preservation qua time frame means different things for different people or different situations. Digital preservation is done for a large number of reasons and creates and protects opportunities given by digital data. Digital preservation is not just about data, access and tools but essentially about people and opportunities. But money (or lack of it) can be a major problem. The data is growing much faster than the storage capabilities and the funding. DCH-RP has to prove that working with e-infrastructures and people collaborating on preservation make preservation cheaper and remove existing barriers. DCH-RP needs to consider how implementation of its four basic components deliver financial advantage.

Concerning the roadmap, is it describing harmonising data storage and preservation or does it speak about the harmonisation of workflows? Is enhancing interoperability as described in the roadmap really just about digitisation? And do not forget the people. Community building is harder than technology building. There is also a distrust of cloud providers in the DCH sector. The majority of DCH institutions are small, making them hard to reach. There is a significant skills gap. Staff is often limited. The digital preservation community is highly fragmented. Regarding the remarks about establishing conditions for cross sector integration it seems that there is an assumption that this is not already happening (but it is: see the COPTR registry service). The section about establishing a governance model assumes that there are not already organisations that could provide the needed governance.

5.1.11 Laila Valdovska, Culture Information Systems Centre, Latvia

Having in mind the Latvian situation where there is a huge gap between DCH institutions and e-infrastructures (both legal and institutional barriers) the speaker wants DCH-RP to prove that the collaboration with e-infrastructures is a more effective solution than others. Useful practice in this matter in other European countries would be very useful to know. In "setting the scene" it would be good to add some economic considerations (costs, different business models, …). The text about digital repository software and developed digital preservation systems is not very clear. More explanation is needed. The intermediate roadmap also mentions the EUDAT project and the conceptual model that it developed as the infrastructure model for distributed digital preservation but it must be noted that this project is unknown in the DCH world and should be explained. It is not possible to conclude from the text whether this is the only viable model.

A general comment on the "Action Plan" is that it cannot be handled by ordinary DCH organisations. It is only appropriate for DCH institutions with an IT staff.

Concerning the timeframe of the document, the roadmap should describe more than a short term vision. The short term on which an action plan is presented finally is only about 8 months.

Annex 3 should be removed or replaced by more recent information.

5.1.12 Māte Toth, National Széchényi Library, Hungary

DCH-RP should take into account that there are still problems within the DCH sector concerning digitisation; these include a lack of content (e.g. isolated projects taking care of specific collections) and a lack of awareness of the importance of cross-sector interaction, technical interoperability, semantic interoperability and re-use, cooperation both at domestic and international level and knowledge on existing content.

Concerning potential cooperation between e-infrastructures and the DCH domain, well-defined services need to be made available (e.g. NRENs working with SLAs, the support of DCH organizations to exploit those services). Awareness of the possible cooperation should be raised.

Awareness of long term preservation requirements should also be raised among content producers. The roadmap should also think about content that cannot be preserved over a long period (programmed multimedia).

When using the cloud for preservation purposes there should be an analysis of whether this is the right solution for all kinds of content, also with regard to the likely use of that content.

A problem that should also be tackled is the "trust" issue, especially for content that cannot be made publicly available and has to be encrypted (but against a background of possible obsolescence of encryption methods). A concept of " safe storage" could be elaborated.

5.1.13 Jürgen Keiper, Deutsche Kinemathek , Germany

A general comment on the intermediate roadmap is the absence of any mention of the film domain and its specific demands. In the roadmap the role of small and medium archives is unclear.

Some specific remarks can be made concerning the audio/video (av) sector for the roadmap. This sector deals with extremely large files where bit errors can be fatal: this leads to a need for advanced (and often expensive) file management systems. The av sector is also dealing with

proprietary formats that do not exist for a long time. For preservation the whole chain from recording a movie to postproduction, to release and to archiving must be considered. Digital rights management will also be an issue when going for preservation. Copyrights related to codecs are a problem, as are format, file and signal validation and the color model and profiles.

5.2 SUMMARY OF THE PANEL DISCUSSION

Raivo Ruusalepp led the panel discussion with the DCH speakers. He chose to tackle three large issues on the table. This began with a discussion on the Goal or objectives of the project so that all stakeholders were on the same level for subsequent discussions on the "Road" and the "Map" – the main elements of the roadmap!

5.2.1 Goal

Business case for the use of e-infrastructures

One of the main assumptions in the roadmap is the cooperation between the DCH sector and e-infrastructures. During the day several speakers commented on this cooperation, requesting proof that it gives better value for money than other solutions or asking to add a business case for the use of e-infrastructures by the DCH sector. A generic business model should be introduced and afterwards a few use cases have to be elaborated. When defining the business case it must be understood that e-infrastructures are not for free, that there do not exist many commercial preservation systems, that e-infrastructures do not know about preservation but that they know about data management, and that if e-infrastructures have to develop a preservation system it will cost money but they can benefit from economies of scale.

Target of the roadmap

The initial target of the roadmap was the DCH sector but it seems to be clear that policy makers should be included. They have to be made aware of the socio-economic impact of preservation that could influence innovation in the cultural sector (tourism, publishing sector,etc.). But policy makers could also contribute to making the DCH sector aware of the necessity of preservation. Policy makers are also necessary for guaranteeing the sustainability of a preservation infrastructure.

The roadmap might also be too technical for policy makers and should include more social, economic and legal considerations.

What do we preserve

During the day a discussion was already initiated on what needs to be preserved, on what can be preserved and how to make the choice. Memory institutions might have a public commitment to preservation (including legal deposits, state archives). Different types of data could require different types of preservation. These issues need to be tackled in the roadmap.

Awareness

Cries for raising awareness for preservation in the DCH sector are loud. There needs to be training for memory institutions about the whole preservation issue. This needs to be included in the roadmap.

5.2.2   Map

The map draws the landscape of preservation for the DCH sector and is based on the current situation but should in fact be based on how the situation will be in the future. Much depends on the maturity of both preservation in the DCH sector and the preservation services available from the e-infrastructures.

The landscape is also changing and at different levels; technical, political and legal. Government clouds are becoming increasingly prevalent and some DCH institutes may be forced to make use of them. Data infrastructures with a portfolio of services are being built.

Societal changes should also be taken into consideration.

5.2.3   Road

The road in the roadmap points to the action plan. Actions are needed in the following areas: Tools, Services, Persistent identifiers, Authentication, Trust, Governance models, User requirements, Funding models and business models, Skills / training / awareness.

It is clear that many of these challenges are relevant not only for digital preservation but exist also in other domains. It should not be forgotten that DCH data is also research data and the most common problems are shared with the traditional research data

5.2.4   More discussion

On the use of e-infrastructures for preservation

Part of the discussion focused on the business case for using e-infrastructures. What is the value chain that DCH and e-Infrastructures can create together? What is the value proposal of DCH sector for the e-Infrastructures? A win-win scenario should be drafted.

On awareness raising

Raising awareness of the need for preservation of digital culture heritage was mentioned in several of the presentations made by representatives of DCH organisations. Education and training on the concept of preservation should be widely organized.

On sustainability

We can speak about the sustainability of the roadmap or the sustainability of the preservation infrastructure to which the roadmap leads. For the sustainability of the roadmap and thus to ensure a clear direction in the long run a mechanism could be put in place. The roadmap needs an endpoint and should be maintained as long as this endpoint has not been reached. Of course it might be necessary to adapt the roadmap to changing circumstances or even eventually to draft a new roadmap.

For the sustainability of the preservation infrastructure funding and opting for a pan-European solution is a must. The audience agrees on the fact that digital preservation cannot be realized without funding at national and European level (storage, software, etc) and that we are a long way from a digital preservation arrangement that "runs itself". It is also noted that for a sustainable system there must be willingness and cooperation between DCH organizations at national and pan-European level, otherwise the roadmap will remain an abstract document.

6   REPORT ON THE E-INFRASTRUCTURE PRESENTATIONS AND PANEL

6.1   SUMMARY/HIGHLIGHTS OF THE PRESENTATIONS

6.1.1   Leif Laaksonen, e-IRG, Finland

The roadmap relies on two presumptions, firstly that national e-infrastructures are capable of delivering a variety of services needed for the goal and secondly that it is possible to achieve common policies, processes and protocols for the DCH sector to access e-Infrastructures. The basic question is: "Who will do what, with money from whom?" The answer is that one needs to answer a series of other questions. Who will pay for the e-infrastructure and is there a long term solution for financing? How should the global or European e-infrastructures involved be made available for the goal? What about international standards, processes and agreements and are they ready to be used? How ready is the DCH sector to handle preservation solutions and work with e-infrastructures. Is it important to have an understanding of the future of the technology within the framework of this roadmap?

For example in Finland the government has initiated The National Research Data Initiative (TTA), which provides and pays for different services for actors in the Finnish research system.

It is unclear whether the Roadmap is led by technology or actual needs?

Building a roadmap needs negotiation between different parties and probably willingness to have compromises using different possibilities.

6.1.2   Jacques Dubucs, ESFRI, France

When we talk about born-digital cultural heritage one has to really ask, what meaning does the word "cultural" have in this context. For example all the paper books ever written amount to 50 billion bytes when digitized. This seems like a large number, but when we look at the number of bytes of information produced in 2006, we find that is 150 quintillion bytes. When dealing with big data there are two possibilities when addressing the word cultural. Firstly we can preserve everything that looks "genuinely cultural", but who decides and is there a way to standardise the process? Or we could change the way of thinking by not searching for "cultural" anymore, but rather trying to preserve data that is "processed in such and such way".

Bigger challenges in the world today for the DCH sector and also for the roadmap are: crossing data (scalability, health, ideology, ...), connecting Infrastructures (CESSDA, SHARE, ESS, ….), geo-localization of data, privacy and rights issues (particularly when cryptography is requested).

6.1.3   Michel Drescher, EGI. The Netherlands

The biggest challenge for the roadmap is sustainability and long-term funding. Cloud is a good solution, but one must not forget that it is not merely a technology – it is a business model. Stakeholders are very important – who owns the data, who curates it, who preserves it. And who will pay for it - are the policies supportive about the goal.

EGI is already involved in several preservation projects in Europe. It is important and useful from the DCH sector not to forget that digital preservation is not only about cultural heritage. DCH is only a small part of the market. If we want to keep the preservation sustainable we need

to have a revenue stream, but revenue requires paying customers. Capex turns into Opex. Gatekeepers turn into customers

6.1.4   Hardi Teder, EENet, Estonia

EENet is a national e-infrastructure provider for academic infrastructures in Estonia; they provide services for more then 250 organisations. They have a wide international collaboration platform – GÈANT, EGI, eduGAIN, Kalmar2, eduroam.

Sustainability is one of the key problems to be addressed. Open standards and more international collaboration is needed for success. How to optimize resources - locally and globally? It should be borne in mind that different target groups need different resources (IaaS vs PaaS vs SaaS). Do we want low cost or high quality and who will pay? The resources should be easily accessed, but what about security?

6.1.5   Holger Blocs, APARSEN

It is very useful to make a condensed version of the roadmap. Who are the stakeholders targeted in the roadmap? How is the roadmap going to be improved in the final version? Reading the roadmap there is certainly a common vision between APARSEN and DCH-RP: keywords for APARSEN are trust, sustainability, usability and access. As for the intermediate roadmap, it stands for harmonization of data storage and preservation, improved interoperability, establishment of conditions for cross-sector integration and governance models for infrastructure integration.

Which is the target group? This should be addressed more clearly in the final version of the roadmap. The policy level needs to understand its crucial role in the process.

More focus should be placed on how to apply semantic technologies. Is it realistic to have agreements on the common terminologies within the community?

An interesting idea would be how to embed the preservation function into the digitisation process, not least since DCH includes both digitized and born-digital content.

6.2   SUMMARY OF THE PANEL DISCUSSION

Tim Devenport led the panel discussion involving the e-infrastructure speakers. He chose to concentrate on the main topics and questions the speakers raised. The question that stood out above the rest was: who will pay to who for what?

6.2.1   On sustainability

To keep preservation processes ongoing it is probably most important to have continued funding. But of course that is where we need to have a clear understanding of who is paying for this. Funding parties, governmental or otherwise, should be on board.

Consultations with the target group is another key aspect for sustainability. Awareness of the human resources involved in preserving DCH content is crucial.

6.2.2   Validation model

We cannot talk about digital culture preservation without talking about its value. The question arises sharply due to the huge amount of digital material produced and waiting to be preserved.

Which kind of validation model should be chosen? And who are the people validating the importance of particular artifacts or data sets? What is important to some is not necessarily important to others.

6.2.3   Obstacles related to the content

Different countries have different rules about preserving data. It is for example not always possible to preserve valuable data outside a particular country or on a commercial server. The relevant laws and policies have to be taken into account. At the same time what kind of proper disaster management policies are there in cases of emergency within one country?

Good metadata is crucial for the discovery and usage of digital cultural heritage. For example when documenting geolocalizing data all the content providers should be aware whether they are documenting the real location or the provenance of the data. There should be communication between data curation and digital preservation

Another important aspect is how VREs or other desktop tools are embedded into preservation processes. Preservation and access needs to have a dynamic approach. It is important that the preservation process does not remain only a post-production task.

6.2.4   More research

During the e-infrastructure panel session the question of whether enough work has been put into the roadmap was asked on several occasions. More evidence is needed that we have consulted the target communities. Could there be a validation step before the final conclusions are published? Some of the participants wondered whether there is enoughknowledge about existing and future cloud and grid domains? Before the final roadmap is published, some representative scenarios should be developed in order to make it more usable. Scenarios should be considered a part of the roadmap. But is it realistically possible to take into account all the excellent advice.given during the workshop?

Many other projects are dealing with the same topics and questions; DCH-RP should consider this as much as possible.

7 FINAL CONCLUSIONS

Jean Moulin from Belspo voiced the final conclusions of the two-day workshop.

He started with thanking all participants for a very rich and useful meeting and noted that the Intermediate Roadmap was well received and appreciated. Contributions, comments and suggestions made during the workshop will be taken into account (technical, organizational, etc) when writing the final roadmap. The final Roadmap will be very different from the intermediate one.

The contributions, comments and suggestions received can be classified into various main categories: Target groups, Objectives/Content, Alliances/Closer collaboration/Synergies, New opportunities and Miscellaneous.

Target groups

Target groups of the roadmap should be made clear and the content directed towards these groups. Identified target groups are: Policy-makers (EC and Member States), DCH institutions and e-Infrastructure providers.

Objectives / Content

Some comments and suggestions pointed directly to the content of the roadmap. To be noted are:

- The addition of specific recommendations for the various target groups;
- The coverage of political, legal, financial, organisational and technological dimensions; the roadmap is not only a technology roadmap;
- A concentration on services, making the document less technical in some parts;
- Taking into account that social and cultural factors are also major general drivers;
- The provision of tools: user-friendly and not complex;
- The provision of an overview of tools;
- Taking into account that different groups have different needs: IaaS, PaaS, SaaS;
- An emphasis on the cost aspects; very clearly, "who will pay" is a major question;
- The identification of probable institutional/political barriers: fragmentation, diversity of regulations, funding systems, etc;
- Add the need for raising awareness and training on digital preservation in DCH organisations;
- Add something on the future of the roadmap process itself to the action plan. The roadmap is only a start, providing up to date information and recommendations (based on a broad consultation process) aimed at raising awareness and rallying stakeholders in Europe.

Alliances / Closer collaboration / Synergies

The discussions emphasized the need for strong relations between the different stakeholders in the digital preservation area. Alliances, closer collaboration and synergies should be established or strengthened between DCH and:

- the "Research world":
- the Ministries of Education and Research

- the Ministries of Culture
- the Research e-Infrastructures

A win-win cooperation should be created. DCH can reinforce the SSH research field and contribute to multi- and interdisciplinary research topics (also in the context of addressing societal and environmental global challenges). DCH can provide a huge amount of "research data". The DCH sector is facing problems and challenges similar to those encountered by the hard sciences. DCH research is an integral part of the "Research world".

New opportunities

New opportunities should also be explored within the framework of e-government initiatives, in particular for archives.

Miscelleanous

Several other issues that are also concerned with the content of the roadmap and that should be addressed more clearly include the following:

- Preservation and access are different concepts but closely interlinked and inseparable: need to develop a dynamic approach.
- What do we want to preserve? A selection process should be implemented, to face the ocean of data. Selection criteria should be defined to identify the "cultural material" that must be preserved. An interdisciplinary approach is mandatory. Big data issues: preserve the possible hidden relevant data/knowledge sources (data mining, statistics).
- Sustainability (political, financial, institutional/organisational, technological). Which model should be encouraged: market/business approach with customers vs universal public service with users.
- The crucial role of human resources: awareness raising, training and communication are an integral part of the action plan to be set up.
- Socio-economic aspects/ impact of digital preservation and access:
  - a complementary part of the arguments in favour of strong support for digital preservation;
  - a possible source of additional incomes ("commercial" services: e.g. tourism, publishing);
  - links to be established with publishers and more generally the private sector.

8 RECOMMENDATIONS FOR THE FINAL ROADMAP

The DCH organisation and e-infrastructure representatives and all participants in the workshop provided a great deal of positive input to the project team in transforming the intermediate roadmap into the final roadmap, as already shown in the previous chapters.

General recommendations:

- Make the roadmap less technical:
- Concentrate on services.

More detailed recommendations:

- Remove the main technical parts to an annex as the current roadmap is too technically oriented;
- Keep information about trust and security;
- Describe who are the target groups of the roadmap;
- Cover political, legal, financial, organisational and socio-economic aspects;
- Cover collaborations needed between stakeholders;
- Cover the sustainability of the roadmap and of the final endpoint of the roadmap (preservation infrastructure);
- Explain the value chain anticipated by making use of e-infrastructures for preservation;
- Add in argumentation about what to preserve and strategies for different types of digital objects;
- Consider the fact that other disciplines have to cope with the same kinds of preservation problems;
- Add the need for awareness and training;
- Add use cases as part of the roadmap;
- Add recommendations for the different target groups;
- Consider cocering a larger timeframe than the "short term";
- Remove Annex 3 (the old information from DC-NET).

In short, the roadmap should move to recommending a (federated) preservation infrastructure as a service.

9 CONCLUSION

The concertation workshop has been very fruitful and proved to be an important part of the stakeholders consultation process.

ANNEX 1 PROGRAMME OF THE CONCERTATION WORKSHOP

Details of the program of the concertation workshop were as follows.

Venue

The seminar was held at Tallinn University (http://www.tlu.ee), Narva road 29 (Astra building), room A121, in Tallinn, Estonia.

Workshop Programme

Day I: 23.04.2014

09.30-10.00 Registration and coffee

10.00-10.15 Welcome - Tarvi Sits, Ministry of Culture, Estonia

10.15-10.45 Introduction to the roadmap - Börje Justrell, RA, Sweden

10.45-13.00 Session I: DCH institutions view on the roadmap

Purpose of the session: presentations from DCH institutions

Chair: Mirjam Rääbis

10:45   Marie-Véronique Leroi
        Patrimoine Numérique, Catalogue des collections numérisées, France
11:00   Maurizio Messina
        Biblioteca Nazionale Marciana, Italy

11:15 – 11:30 Coffee break

11:30   Hilke Arijs
        Royal Institute for Cultural Heritage, Belgium
11:45   Eva Stensköld
        Ministry of Education and Research, Sweden
12:00   Kuldar Aas
        The National Archives of Estonia, Estonia
12:15   Marco de Niet
        Stichting Digitaal Erfgoed Nederland, the Netherlands
12:30   Vania virgili
        Dariah and Consiglio Nazionale delle Ricerche, Italy
12.45   Remigiusz Lis
        Silesian Digital Library, Poland

13.00-14.00 Lunch

14.00-16.00 Session II: DCH institutions view on the roadmap

Purpose of the session: presentations from DCH institutions

Chair: Rosette Vandenbroucke

14:00 Šarūnas Bagdonas
        National Arts Museum of Lithuania, Lithuania
14:15 William Kilbride
        Digital Preservation Coalition, UK
14:30 Laila Valdovska
        Culture Information Systems Centre, Latvia
14:45 Māte Toth
        National Széchényi Library, Hungary
15:00 Jürgen Keiper
        Deutsche Kinemathek , Germany

15.30-16.00 Coffee break

16.00-18.00 Session III: Panel

Purpose of the session: Discussion, roundtable

Chair: Raivo Ruusalepp

18.00 Close of the day

Day II: 24.04.2014

9.00-9.30 Morning coffee

9.30-11.00 Session IV: e-Infrastructures and related organisations

Purpose of the session: views on the roadmap from e-infrastructures and related organisations

Chair: Sanja Halling

09:30 Leif Laaksonen
        e-IRG, Finland
09: 45 Jacques Dubucs
        ESFRI, France
10:00 Michel Drescher
        EGI, the Netherlands
10:15 Hardi Teder
        EEnet, Estonia
10:30 Holger Blocs
        APARSEN

11.00-11.30 Coffee break

11.30-12.30 Session V: Panel

Purpose of the session: Discussion, roundtable

Chair: Tim Devenport

12.30-13.00 Conclusions and closing of the meeting
        Jean Moulin

13.00 -14.00 Lunch