

## Annexes

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## Lund Principles

The eEurope 2002 Action Plan was endorsed by EU Member States at the Feira European Council in June 2000. Objective 3(d) of the Action Plan is to stimulate European content in global networks in order fully to exploit the opportunities created by the advent of the digital technologies. Within that objective there is a specific action for Member States and the Commission jointly to: *create a co-ordination mechanism for digitisation programmes across Member States.*

On 4 April 2001, representatives and experts from Member States met at Lund in Sweden to discuss the issues involved and to make recommendations for actions that support co-ordination and add value to digitisation activities in ways that would be sustainable over time.

*Europe's cultural and scientific knowledge resources are a unique public asset forming the collective and evolving memory of our diverse societies and providing a solid basis for the development of our digital content industries in a sustainable knowledge society.*

The experts endorsed the findings of a preparatory meeting held in Luxembourg on 15/16 November 2000. They highlighted the value and importance of Europe's digitised cultural and scientific content which provides:

**An accessible and sustainable heritage.** Europe has unique and significant wealth in its cultural and scientific heritage. Digitisation of its resources is a vital activity for providing improved access for the citizen and for preserving Europe's collective cultural heritage (both past and future).

**Support for cultural diversity, education and content industries.** Digitised cultural assets are crucial in sustaining and promoting cultural diversity in a global environment. They are also a key resource for education and for the tourism and media industries.

**Digitised resources of great variety and richness.**

Member States have invested significantly in programmes and projects for digitising cultural and scientific content. Such digitisation activities cover a diversity of domains and content types, such as museum artefacts, public records, archaeological sites, audio-visual archives, maps, historical documents and manuscripts.

However, there are a number of key problems which risk limiting realising the potential of these resources, whether culturally, socially or economically. The main barriers identified are:

**Fragmentation of approach.** Though widespread, the digitisation activities to date are highly fragmented, depending on the policy instruments and mechanisms in the different Member States. Moreover, the absence of a coherent European view of what cultural content has been digitised or of how this content is selected for digitisation results in the potential duplication of resources, effort and investment.

**Obsolescence.** Digitisation is a costly exercise requiring high investments usually from public funds. There are significant risks to these investments due to the adoption of inappropriate technologies and standards. This can result in creating resources which are quickly obsolete and unusable or which require the investment to be repeated within a short time frame.

**Lack of simple, common forms of access for the citizen.** Access by the citizen to the different resources, at national and at EU level, is compromised by the lack of common approaches and technical standards as well as by lack of support and systems for multilingual access.

**Intellectual property rights (IPR).** The various stakeholders in the digitised content (e.g. original owners, intermediaries, and end-users) have different legitimate interests. These needs must be recognised and balanced. Solutions for handling and managing rights need to be understood and applied by the cultural sector if the economic value of the content is to be realised in a sustainable way.

**Lack of synergies between cultural and new technologies programmes.** There is an increasing need for improved linkages between cultural and new technologies programmes at national and EU level in order to identify priorities and where there is European added value to be gained.

**Institutional investment and commitment.** Digitisation requires a commitment from individual organisations, frequently the memory organisations such as archives, libraries and museums, to long-term, expensive and technically demanding actions. The use of digitisation technologies and tools requires the adoption of new skills and practices by the cultural institutions. In order to address these issues, it would be desirable if the Member States could commit themselves to:

- creating an ongoing forum for co-ordination, by establishing a co-ordinating group representative of

each Member State. This group should develop frameworks to support ongoing discussions and exchanges, and establish procedures for reporting to the Member States, both at European level and at national level;

- supporting and developing a European view of policies and programmes by establishing Web sites with current, publicly accessible and easily understandable information on their policies and programmes in line with an agreed baseline common profile, to which a central site should link;
- promoting and supporting good practice and its harmonisation and optimisation within Member States and across the EU, by continuing work on a qualitative benchmarking framework aiming at its adoption and implementation through appropriate national co-ordinating bodies and networks, and by working through a nominated group of experts to develop quantitative approaches to benchmarking processes. This requires also identifying mechanisms for the definition and collection of core indicators, and specifically the relevant eEurope indicator, and for liaison with national standards/statistical bodies;
- accelerating take-up of good practice and of appropriate skills by disseminating across Europe examples of good practice, identified according to agreed features (typology). This should support issues such as consistency of practice and process, assets and rights management, and lead to new definitions of the skills required;
- making visible and accessible European cultural and scientific content by setting up national inventories (of projects, or of selected content). These inventories should be aligned with the European infrastructure for digitised content by complying with standards and technologies which support quality and usability of the content, unified access for citizens, affordability and openness of software tools, and long-term accessibility and availability.

For these initial actions to be realised as fast as possible and to ensure that the solutions adopted can lead towards sustainable organisational and technical infrastructures, the European Commission, in the context of its current IST activities and other ongoing programmes, should work with Member States to:

- support practical co-ordination activities, by creating a secretariat or facilitating agency to support the activities of the co-ordinating group. The secretariat should manage any ad hoc technical advisory groups which may be required;
- advance the dissemination of good practice by promoting *centres of competence* which can provide leadership and support for stakeholders on key issues and technologies. Whilst current domains include metadata, multilingual support, imaging technologies

and digital preservation technologies, the establishment of competence centres must be open to emerging topics;

- foster the development of benchmarking for digitisation practices, by creating guidelines for data collection and by continuing development of qualitative and quantifiable indicators;
- optimise the value and develop shared visions of European content, by developing criteria and a framework for an EU collaboration plan for digital cultural and scientific content, together with an appropriate implementation means (Charter, MoU etc.). The plan should aim at establishing an eCulture infrastructure for access to digitised cultural and scientific heritage, through identifying added value conditions for European content (e.g. selection criteria) and establishing technical standards for conformance to interoperability requirements. This work should be carried out through the co-ordinating group and its secretariat;
- improve quality/usability of content, promote unified access for citizens and increase awareness of long-term preservation issues, through developing: agreements on interoperability standards; guidelines for digital preservation and content longevity; and coherent models and good practices for rights and asset management together with the development of associated eCulture business models.

In order for Member States to identify and implement strategies and agreements on content production, quality, discovery and use, a number of current and emerging technical issues need to be addressed through short and longer term RTD initiatives. The Commission should:

- advance the development of quantitative benchmarking, through background studies and ground clearing work on indicators and statistics;
- launch studies into digitisation in Europe and supporting technical and organisational infrastructures, and on promoting European cultural content, identity and diversity in support of accessibility to all citizens;
- support interoperability and the persistent discovery of resources, by launching work on metadata, registries and schemas;
- counter the risks of creating a 'digital dark ages', by developing advanced research agendas into: digital technologies and preservation of content; improved applications of advanced technologies for digitisation of cultural and scientific content (e.g. multi spectral imaging), adding value to the significance of the content over time. This work should be carried out in close collaboration with industry;
- investigate opportunities under the IST Programme for pilot projects reflecting the above research foci.

National  
Representatives Group:  
terms of reference

1. Introduction

1.1. In response to the obligation, as set out in the eEurope Action Plan, on the Commission and on Member States to establish co-ordination mechanisms for digitisation policies and programmes, the invited representatives and experts from Member States agreed at a meeting held in Lund on 4 April 2001 a series of conclusions establishing the principles of and a framework for action in this area. This meeting called upon Member States to establish a steering group for this activity.

1.2. The Resolutions on “Culture in the knowledge society” and on “The role of culture in the development of the European Union”, adopted by the Culture Council on 5 November, 2001, endorsed the importance of culture in the knowledge society as a social and economic good and recognised the contribution to be made through improving access to digitised cultural and scientific resources. The Council called *inter alia* for development of the exploitation of digital cultural content in support of cultural co-operation, for the promotion of the common cultural heritage, and for quality initiatives in cultural Websites.

1.3. The Council specifically called for the use of existing or new networks at European and national level to facilitate co-operation and exchange of information and good practice at European level.

2. National representatives group

2.1. A national representative group (hereafter NRG) is established as a steering group for the activities related to the co-ordination of digitisation policies and programmes, with special emphasis on cultural and scientific resources and on the contribution of public cultural institutions.

2.2. The mission of the NRG is to monitor progress regarding the objectives encapsulated in the “Lund Principles”.

2.3. The members of the NRG are nominated by the Member States through their official representatives to the Commission. Each Member State has a single voice on the NRG, as does the Commission which will

provide the secretariat. Each Member State can be accompanied as and when necessary by other national observers and technical experts.

2.4. The NRG will meet at least every 6 months, convened under the chair of the Presidency. Immediate past and future Presidencies will provide vice-chairs, who will deputise if necessary.

3. Objectives of the NRG

The objectives of the NRG are to:

3.1. share national experiences and to create a common platform for co-operation and co-ordination of national activities across the European Union

3.2. provide the focus for consensus building between Member States on the agreed actions for co-ordinating polices and programmes and for directing their follow up at national level including through national networks where appropriate

3.3. establish mechanisms for co-operation with other ongoing efforts and networks at the international level

3.4. identify emerging issues which affect these objectives and to agree and propose appropriate actions

3.5. promote good practice within and between Member States, and thereby to support skills development and training

3.6. encourage initiatives to support the visibility of quality cultural sites

3.7. identify and nominate experts for workgroups as necessary, and ensure dissemination and follow up of their results

3.8. produce every 6 months a report for the Member States on progress and including recommendations for future actions.

Lund Action Plan

Progress up to 2002 - Planning for 2003  
Progress Update: 31 December 2002  
Covering time: Jan-Dec 2003  
Revision time: mid 2003

Implementation Framework  
for coordination mechanisms  
for digitisation policies and programmes

Mission

This plan describes a first set of actions for improving the digitisation of cultural and scientific content in Europe and for achieving the objectives set out in the ‘Lund Principles’. The plan targets activities to be completed or launched assigning responsibilities for them to Member States, to European Commission or to others. The results of the actions will be fed into an evolving plan for a sustainable set of activities in support of the digitisation framework across Europe. Updates to the plan, including reports on progress and achievements, will be presented for endorsement to the National Representatives Group, established by the Member States, at its half-yearly meetings.

Structure

The Lund Action Plan takes as its reference the Lund Principles, identifying four main areas where specific actions are needed. For each action it defines objectives, the implementation approach and associated tasks, actors, and results achieved.

- Area 1: Improving policies and programmes through co-operation and benchmarking
- Area 2: Discovery of digitised resources
- Area 3: Promotion of good practice
- Area 4: Content framework

Area 1: Improving policies  
and programmes through cooperation  
and benchmarking

Action 1a: National Web sites  
for policies and programmes

Objective

To maintain exchange of compatible information between Member States on programmes and policies and to give visibility to national activities in order to exchange similar experiences and skills.

Implementation and tasks

Working with a small group of experts, a baseline profile for policies will be developed, based on the questionnaire data already provided by Member States. These data will be mapped to the profile and redistributed to Member States for mounting on national Web sites. The experts will also produce a minimum set of recommended quality criteria in respect of currency, multilinguality and availability and accessibility to the citizen. Each Member State will identify appropriate Web sites for this data, together with the updating and maintenance mechanisms needed. The Commission will host in the first instance a common page pointing to the national sites.

Actors

Member States, especially those with existing sites as exemplars, will nominate experts to work in defining the baseline profile. All Member States will work to establish sites and update mechanisms for maintaining their profiles. Commission will convene experts group and will map existing data to the agreed structure of the baseline profile.

Progress December 2002

Results: profile and Web format established and existing data mapped and returned to Member States; central linking page on [http://www.cordis.lu/list/ka3/digital/national\\_prof.htm](http://www.cordis.lu/list/ka3/digital/national_prof.htm) and MINERVA (<http://www.minervaeurope.org/>) Web sites. Eight MS profiles are available, namely DK, FR, UK, IT, FIN, EL, NL, ES. A report on the progress reached up to December 2002 by NRG activities has been published.

**Planning and priorities for 2003**

Inclusion of missing profiles for SE, BE, IR, PT, DE, A, LU. All MS to examine and report on strategies for maintaining the profiles at national level, to nominate a national contact point and establish an information exchange network at European level. A report on the progress reached up to December 2003 by NRG activities planned for publication.

Action 1b: Adoption of benchmarking framework<sup>1</sup> for policies and programmes

**Objective**

To endorse and implement the benchmarking framework as a key tool for co-ordination within as well as between Member States and to develop measures to show progress and improvement.

**Implementation and tasks**

A focus group of experts will be set up to refine the model in order to present it to Member States for agreement and for adoption. The experts will also develop a strategy for endorsement and implementation of the model, such as “Declarations of intent”. In order to underpin this activity, a network of correspondents in Member States will be set up as a forum for discussion, implementation and further development of qualitative benchmarking.

**Actors**

Member States will nominate experts for the benchmarking workgroup and establish national “Networks of correspondents and experts”. The Commission will support the workgroup for finalising the model through MINERVA.

**Progress December 2002****Adoption of the model**

“An open method for benchmarking digitisation policies - objectives, methodology and indicators” with draft qualitative indicators, together with an implementation plan and roadmap to advance the work, was agreed by Member States experts, December 2001. Action completed.

**Implementation of the model**

Ongoing in Member States (NL, GR). Benchmarking Workgroup established, data collection exercise with scored (mainly qualitative) indicators piloted in NL, GR, IE, IT, NL & UK. A data collection and analysis facility (via forms on Web site hosted via GR) established for short term data collection and an overview report produced.

**Planning and priorities for 2003**

MINERVA working group on benchmarking reviews processes based on the implementations of the

benchmarking model to date, and prepares, by the next NRG meeting, a position paper and recommendations on the model and its implementation. MINERVA working group will produce a report in August 2003. Preliminary results of the working group will be presented in Greece in June 2003 and updated during the Italian Presidency.

Action 1c: Development of indicators and collection of measures

**Objective**

To establish a framework for the benchmarking of the digitisation of cultural and scientific resources in Europe and to monitor the impact on eEurope objectives for European digital content in global networks.

**Implementation and tasks**

Starting from the policy benchmarking framework, a set of qualitative and quantitative indicators will be identified and developed together with the methodologies and partnerships with other agencies needed for their collection. Scoping work will be carried out by the Benchmarking Workgroup and supported by work on reference models for digitisation, including the definition of a suitable set of core indicators for benchmarking digitisation in Europe.

**Actors**

Member States will contribute through their nominated experts to the group and , set-up cooperation with other benchmarking initiatives and relevant IST projects.

**Progress December 2002**

Background work included in Commission call for tender for a study on August 2001 on “Reference models for digitisation practices and co-ordination” but no bids were received. Test collection of quantitative data on digitised objects and collections via ‘productivity form ; and piloted in FR, IT, IE, & SP ’, and a collection and reporting mechanisms piloted on Web site hosted by GR. An overview report was produced.

**Planning and priorities for 2003**

Ongoing collection of data via productivity form for input to report under Greek Presidency, mid-2003. MINERVA working group on benchmarking defines and tests qualitative, scored and quantitative indicators and defines approaches to collecting these data. The next step of collecting data extends the focus to cultural institutions. MINERVA working group will produce a report in August 2003. The Greek and the Italian Presidencies, produce and submit to the NRG meetings the key working

documents, addressing mainly the issue of indicators for the evaluation of digitisation projects.

Action 1d: Supporting coordination activities

**Objective**

To create an infrastructure supporting co-ordination between Member States.

**Implementation and tasks**

A number of actions will be instigated to continue and to develop the co-operation established to date. These will include: creating a co-ordinating group of representatives from Member States, to meet initially under the aegis of the Presidency; setting up online fora or discussion groups for dialogue and exchange of experience between those in Member States responsible for or active in digitisation of cultural and scientific content; providing a supporting secretariat or facilitating agency.

**Actors**

Member States will set up the co-ordinating group and agree its mandate. European Commission will support the secretariat, both through new activities and through clustering ongoing IST projects.

**Progress December 2002**

National Representatives Group (NRG) established & Terms of Reference agreed, December 2001. Chairmanship lies with the Presidency and secretariat provided by Commission. Meetings held twice yearly, 12 December 2001; 16 May 2002, Alicante; 10 December, Copenhagen. Minerva network launched, 1 March 2002, as operational secretariat for co-ordinating and managing workgroups and meetings.

**Planning and priorities for 2003**

Ongoing endorsement of NRG Terms of Reference by national authorities; publication of NRG Progress report, 2002; extension of Minerva network membership to all Member States; development of co-operation with CEE countries; promotion via Minerva of adoption of the Lund Principles and development of fora for exchange of experience with other related activities and projects. Next NRG meetings planned in Corfu in June and in Parma in November under the coordination of the Presidency in turn and the Minerva project. The Greek and the Italian Presidencies will bring together existing networks of excellence at two workshops (June and October 2003) to exchange experience. A priority will be to involve small and medium entities from the Cultural Heritage environment.

**Area 2: Discovery of digitised resources**

Action 2a: National inventories

**Objective**

To make visible and accessible European cultural and scientific content by setting up inventories of on-going digitisation projects based on national observatories.

**Implementation and tasks**

Based on existing activities or using examples from other Member States, national inventories of projects or of selected content will be developed. The inventories need to comply with quality standards for the content to be included (based on good practice guidelines – see action 3b) and for the access services they provide. A technical workgroup led by Member States with greatest experience in this area will define the possible platforms paying particular attention to open-source and free software and produce a set of guidelines to support other Member States in establishing usable and sustainable inventories.

**Actors**

Member States to establish guidelines of good practice through the work group and to promote existing or develop new national inventories of projects.

**Progress December 2002**

Meeting in Paris, 6 July 2001 convened by Ministère de la Culture. Agreed: piloting of French system with Italy; definition of agreed inventory descriptors and submission to Dublin Core Community; assessment of feasibility of adoption of French approach and national customisation of public domain tools. Meeting in Paris, 5 July 2002, a stronger cooperation with other workgroups have been realised.

**Planning and priorities for 2003**

State of the art report on approaches to inventories of digitised resources (March 2003); agreement on a common data format and prototype multilingual platform for inventory descriptions; customised public domain tools in XML (September 2003).

Action 2b: Discovery of digitised content

**Objective**

To define a sustainable technical infrastructure for co-ordinated discovery of European digitised cultural and scientific content.

**Implementation and tasks**

Inventories are usually a top-down exercise, but in order to make the digitised resources accessible work is also needed on defining the technical components and

1. See: ‘An open method for benchmarking digitisation policies - objectives, methodology and indicators’, draft working document proposed by the Commission ftp://ftp.cordis.lu/pub/ist/docs/digital/benchmarking-digitalisation-model.pdf



standards for identifying and harvesting eligible digitised content. This includes agreements on metadata, on harvesting tools, and on aggregation and retrieval services, with emphasis on public domain/open source tools and on support for multilinguality. An expert technical workgroup will examine metadata standards, taking into consideration also metadata requirements for national inventories, and make recommendations on technical strategies and on development/implementation test-beds.

**Actors**  
Member States will set up a work group to develop metadata recommendations and to report on strategies to the coordinating group.

**Progress December 2002**  
Meeting in Paris, 6 July 2001 convened by Ministère de la Culture.  
Meeting in Paris, 5 July 2002, a stronger cooperation with other workgroups have been realised, and agreement that use of the Open Archives Initiative – protocol for Metadata Harvesting may form a suitable approach. Within the MINERVA project, initial work commenced towards a pilot project.

**Planning and priorities for 2003**  
State of art review of interoperability-focused initiatives, including good-practice & technical standards; establish co-ordination and co-operation with other initiatives re IPR for digitised cultural content.

Area 3: Promotion of good practice

Action 3a: Good practice exemplars & guidelines

**Objective**  
Support skills and efficiency by encouraging take-up of good practice.

**Implementation and tasks**  
Member States should select and promote good practice examples from their projects in order to exchange experiences, skills and to collect consensus from different communities. Take-up projects in cultural heritage under the IST Programme will be analysed for potential contribution to good practice. Existing good practice guidelines will be identified and promoted in the short term, with a view to producing a set of consensus guidelines on good practice at a later date. Relevant standards will also be identified and recommendations about their application developed, for example through workgroups and projects.

**Actors**  
Member States to develop and promote their own examples of good practice and to validate good practice guidelines for dissemination in national languages; Minerva; with Commission and ongoing projects, to provide overview of existing guidelines and to propose structure or typology for consolidating guidelines.

**Progress December 2002**

Workshop on good practice, Alicante, 17 May 2002 and report, December 2002 (issued by Minerva).

**Planning and priorities for 2003**  
Validation of good practice guidelines, issued from Minerva; Member States to translate, if necessary, and to distribute to cultural institutions; ongoing updates of good practice examples. An Handbook on Good Practices, edited by the Minerva project, will be published and promoted at a workshop on high quality digitisation of cultural content, organised in June by the Greek Presidency.

Action 3b: Competence centres

**Objective**  
Promoting “centres of competence”.

**Implementation and tasks**  
Organisations or consortia of organisations with leading skills and competences in key technical domains should establish services to support and inform cultural organisations embarking on digitisation. These services may be established or promoted at national level or at European level,

including using the possibilities under the IST programme aimed at sharing and promoting European excellence and leadership.

**Actors**  
Member States, research organisations and industry.

**Progress December 2002**

Activity not yet started.

**Planning and priorities for 2003**

Identification through MINERVA of organisations and centres of excellence in key technical domains in order to establish groupings of such organisations with services to support and inform cultural organisations embarking on digitisation.

Area 4: Content framework

4a: Cooperative action plan for access to quality European digitised content

**Objective**  
To optimise the value and to develop shared visions of European content, by developing criteria and a framework for an EU collaboration plan for digital cultural and scientific content together with an appropriate implementation means (eg Charter, MoU, Terms of Reference).

**Implementation and tasks**  
Once the co-ordinating group is established, and with the eventual support of its secretariat, a cooperative approach for a European eCulture infrastructure (eCulture Portal) for access to digitised cultural and scientific heritage should be developed, based on identifying added value and quality criteria for the digitised content to be included, on technical standards and agreements on their implementation, and on service quality. The strategic means of implementing this should also be identified.

**Actors**  
Member States.

**Progress December 2002**  
Inclusion of quality issues in the Council Resolution (2002/C 32/01) on culture and the knowledge society of 21 January 2002 Establishment of working group on quality and development of Brussels Quality Framework (BQF) - draft framework of criteria for quality and accessibility of cultural web sites, presented in outline to NRG meeting, 11 December 2001, revised document agreed by experts of 10 Member States, May 2002. Test of W3C-WAI guidelines by Commission on digicult web pages and recommendations.  
(http://www.cordis.lu/ist/ka3/digicult/eeurope-overview.htm)

**Planning and priorities for 2003**  
Validation of criteria with Member States; development of implementation strategy, with proposals for recommendations from the quality workgroup. During the Greek Presidency, a collection and analysis of existing guidelines on digitisation and quality takes place. Under the Italian Presidency recommendations on quality criteria for cultural web sites will be proposed for approval and adoption at European level, during the MINERVA European conference in Parma on 19-21 November.

4b: Sustainable access to content

**Objective**  
ensure digitised cultural and scientific content is available over time.

Implementation and tasks

The application of standards and adoption of good practice provide some safeguards for the future availability of digitised content, but this is very limited. Research is needed into long-term preservation issues, into scoping and identifying the core problem areas, and in developing appropriate technical solutions. A research agenda for future actions needs to be developed to meet these goals. The DLM Forum and IST supported actions will input to this process.

Actors

Commission and industry.

Progress December 2002

DLM Forum 2002 Barcelona, May 2002, with support of Spanish Presidency, and industry position papers sent to Commissioner Liikanen. IST support action ERPANET on good practice and awareness for digital preservation (launched November 2002). Council Resolution (2002/C 162/02) of 25 June 2002 on “Preserving tomorrow’s memory – preserving digital content for future generations” under the Spanish Presidency. Research road map from EU-NSF joint working group on digital archiving. Workshop on preservation of digital memory; 11 December 2002 in Copenhagen under the Danish Presidency.

Planning and priorities for 2003

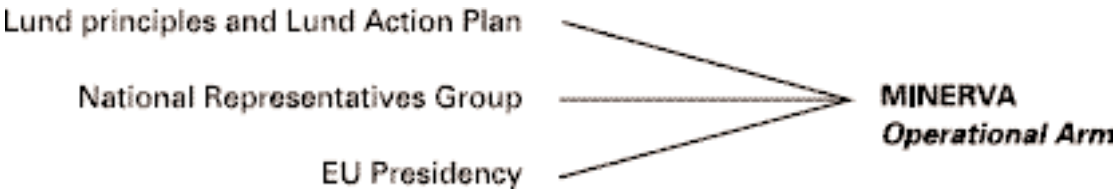
Commission to respond to Resolution’s invitation to develop an action plan, as appropriate; implementation of FP6 work programme 2003-2004 and of successful preservation proposals. A workshop will be held in June, organised by the Greek Presidency. An international Conference on preservation of digital memory in October 2003 in Florence, organised by the Italian Presidency.

Minerva Report

The Minerva Network

The Minerva project is funded by the IST Programme of the European Commission. It supports the work of the National Representatives Group in the creation of a European network for digitisation of cultural and scientific heritage. The Network, coordinated by the Italian Ministry for Cultural Heritage and Activities, was initiated in March 2002 by 7 European Ministries of Culture and related Agencies, and will be extended to include all the Member States. At the end of 2002 12 EU countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Netherlands, Spain, Sweden, United Kingdom) have joined the network. The expansion of the Minerva Network to other countries within the European Union and its candidate states is ongoing. The aim is to include as many European countries as possible, along with the Council of Europe. Contacts and synergies have also been established with other EC funded projects within the Digicult area in order to identify where links can be made. The period between the launch of the Project and the meeting of the National Representatives Group in Copenhagen (10-11 December 2002) covered the initiation of the project and the establishment of the project working groups.. It has been a productive period, in particular in the creation and establishment of the network and in the first stage of dissemination and promotion among the European countries.

The website of the Minerva network (<http://www.minervaeurope.org>) has been launched, and is being continuously developed and updated. Information about forthcoming meetings, planned activities and the results of the working groups are made available through the website. It intends to become the portal of European activities in the digitisation sector. It also includes an online forum to promote discussion on these issues. The Minerva project is also supporting Member States in preparing National Policy profiles and enabling them to update their National Status Reports. They will to reflect the latest developments in national digitisation policies, include actions being undertaken, the institutions involved, the state of development of National networks, and the priorities for future strategies for the NRG. Minerva is the operational partner of the NRG, supporting the implementation of the Lund principles, creating and monitoring working groups activated to develop recommendations and guidelines, identifying and collecting data, and organising benchmarking at a European level. Minerva will promote the integration of different approaches, the exchange of experiences, and participation in the working groups. The objective is to provide real European Added Value to the action lines defined by the NRG, building on the Lund Principles and on-going initiatives in each Member State.



European framework

National Representatives Group for digitisation policy

Each EU Member State has appointed a national representative to be involved in a European working group on digitisation. The objective of the group is to promote an open discussion about digitisation of cultural heritage at European level, in the framework of the convergence between archives, libraries, and museums. The role of NRG is to establish a close relationship between the Ministries of the Member States and the European Commission.

The overall work plan of the Minerva project includes activities to:

- organise work groups to provide the political and technical framework for improving digitisation of cultural and scientific content, and defining a common platform;
- facilitate the adoption of the Lund principles, both in European Union Member States and other European countries, to amplify the impact of the eEurope initiative;
- set-up an international Forum and electronic publication supporting collaboration on scientific research;
- publish, promote and exchange information about National Policy profiles concerning digitisation;
- identify users’ needs, define training schemes and develop recommendations;
- make available test-beds, defining mechanisms for evaluating models, methodologies, techniques and approaches, aiming at the selection of guidelines for harmonising activities and reaching a common agreement among Member States;
- implement the benchmarking framework on digitisation, to enable partners to compare and improve quality of national approaches and promote best practice across Europe;
- organise a plenary meeting every six months as well as hosting thematic workshops to present and discuss results achieved by the specific work groups;
- promote concertation events open to both European and other national projects, to support the creation of clusters of projects;
- promote dissemination and training activities at national level, acquisition of new skills and access to existing resources;
- identify Road Maps suitable for activities to be launched in the near future, to support Member States in the definition of their policy, through exchange of experience, priorities agenda and work programmes.

To meet these objectives, five working groups have been created to address the following topics:

- Benchmarking framework;
- Inventories, discovery of digitised content, multilingualism issues;
- Interoperability and Service provision;
- identification of user needs, content and quality framework for common access points;
- identification of good practices and competence centres.

A sixth group is taking care of providing information about the network, in order to increase the number of partners.

The following organisations, either Ministries of Culture, or their nominated representatives, are at the moment member of the network:

- Ministère de la Communauté Française (B)
- Eubam (D)
- Kultur Ministeriet (DK)
- University of Helsinki (FIN)
- Ministère de la Culture et de la Communication (F)
- Relais Culture Europe (F)
- University of Patras (GR)
- Ministero per i Beni e le Attività Culturali (I)
- Amitié (I)
- Ministerie van Onderwijs, Cultuur en Wetenschappen (NL)
- Ministerio de Educación, Cultura y Deporte (E)
- Riksarkivet (S)
- Resource: The Council for Museums, Archives and Libraries (UK)

Benchmarking framework and identification of good practices and competence centres

The Working Group was able to begin work on the basis of the progress already made by the National Representatives Group and in the two questionnaires (benchmarks and productivity) that it produced [URL]. “Benchmarking involves looking outward (outside your own company, organisation, industry, region or country) to examine how others achieve their performance levels and to understand the processes they use. In this way benchmarking helps explain the processes behind excellent performance. When the lessons learnt from a benchmarking exercise are applied appropriately, they facilitate improved performance in critical functions within an organisation or in key areas of the business environment” (source: www.benchmarking-in-europe.com).The Group developed a two-tier strategy:

- A short term strategy, gathering data aiming to collect 5 examples for each Member State. These initial results, collected for most Member States, were analysed and a report produced for the Copenhagen

NRG meeting in December 2002.

In addition, Greece established a national benchmarking website where results and ongoing analysis of more than 100 case studies were collected and analysed. The Netherlands also created a national benchmarking web site, including a tool for analysing the results. This will be used during 2003 as part of a comprehensive programme of activity. All of these activities were based on the same data collection questionnaire, agreed in Brussels in December 2001 by the NRG.

- A long term strategy involving the creation of a tool to enable ongoing data collection. . This will be available to all and will enable the continuous updating and analysis of qualitative and quantitative information through which a common database will be created.

The results of the Benchmarking process will include:

- A baseline profile of programmes and policies
- A set of qualitative and quantitative criteria
- Model of benchmarking framework
- Routines and mechanisms to enable the continuous updating of data on national web sites
- Set of core indicators for benchmarking
- Guidelines

The identification of good practices and competences centres aims:

- to support the development of skills and increased efficiency in digitisation
- to promote the adoption of good practice
- to identify and select guidelines.
- to encourage the nomination and promotion of ‘centres of competence’

An initial set of examples of good practice in digitisation have been identified from a range of projects and programmes within Member States in order to exchange experiences and skills and to collect consensus from different communities of users. Existing cultural heritage projects within the IST programme have also been analysed for their potential contribution to good practice.

Across the member States, a number of organisations with recognised skills and expertise in key technical areas will be identified as ‘centres of competence’. The purpose is to establish a “consortia” of such organisations with services to support, advise and inform cultural organisations embarking on digitisation projects.

As a start, existing good practices have been identified and promoted in the short term, with a view to producing a set of consensus guidelines on good

practices at a later date in the project. Relevant standards will also be identified and recommendations about their application developed. As a secondary activity organisations and centres with leading skills and competence in key technical domains will be identified and contacted.

Initial work in these areas has identified the close relationship between benchmarking and good practices, and that it is possible to propose a model for the provision of information, advice and support for the development of digitisation programmes and projects.

The key issues identified are:

- benchmarking and good practice in digitisation are ongoing activities; the importance of these activities must also be recognised and supported by Member States.
- a major focus must be on the benefits of taking part in benchmarking and identification of good practice to create a sustainable momentum
- benchmarking and good practice (guidelines, standards, recommendations, advice etc) work together to create a virtuous circle.
- benchmarking and good practices are closely related

Inventories, discovery of digitised content, multilingualism issues

This working group aims to enable the sharing of information on existing digitisation activities in partner countries. This is a necessary process to support the coherence of digitisation policies in Europe. This will lead to a first set of specifications for the common technical framework.

Collecting information on digitisation activities is considered under two points of view. On the one hand, organisational issues must be analysed to identify how, in each partner country, information can be collected on digitisation activities to create a national observatory and act as a relay for the European-level collection of information. On the other hand, the technical translation of collection activity, which is computer applications, must gather information collected on digitisation activities. Each national organisation and each national technical system must be interoperable, semantically, technically and in the organisation of data collection. Multilingualism issues have to be considered for exploiting transnational information into single coherent indicators.

From both points of view on inventories of digitised content, organisational and technical, we have drawn up a work plan, composed of two stages: an analysis of

the current situation and current initiatives and the definition of a common framework.  
The work plan defined three periods :

- analysis of the current situation
- defining possible way to describe digitisation initiatives
- publish specifications for a common platform

The analysis of the current situation and of the current systems includes the identification of national observatories and the distributed organisation of data collection. The working group has to study relevant experiences of inventories of digitisation activities, within partner countries as well as at international level. It must analyse national situations and define how to provide relevant information at European level. This will constitute a basis for benchmarking activities, the assessment of political issues and the identification of good practices.

Relevant experiences must be considered according to descriptive vocabularies in use, metadata sets and access issues. They must lead to a common understanding of the requirements of a European system.

Finally, technical solutions for dealing with multilingual issues shall be considered according to the needs of a common European framework. It will lead to the consideration of multilingual content publishing, retrieval and to terminological issues.

The common framework will enable the connection of existing systems and possibly include new systems of data collection. It can be a decision-making tool, a European scoreboard on digitisation activities, an orientation means for scientists, a means of disseminating good practices and a means of valorising collections. To do so, the framework's definition will include a data model for describing collections, projects and institutions, the definition of necessary metadata and vocabularies and the way it is possible to deal with multilingual issues. This will be gathered in a feasibility study of the common European framework for collecting information on digitisation activities.

Interoperability and service provision

This working group aims to recommend a framework for an information environment to enable easy and sustainable access by citizens to digital cultural content from across Europe.  
In order to improve quality, promote access and enable long-term preservation, it was agreed that

interoperability standards, guidelines for digital preservation and content longevity were needed, together with coherent models and good practices for rights and asset management and the development of associated eCulture business models. In more concrete terms, technical interoperability in the cultural sector should be invisible, ensuring that users can find the material that they are looking for, irrespective of the organisation that digitised the collection, the website on which it is held and the technology that they are using to access the material. Currently, it is common to find materials held on a website, with a URL that is generated by a database, and which changes each time the database is updated, that may be of uncertain quality and not linked to other similar materials.

A key issue in the development of interoperable services will be to demonstrate the benefits of the creation of user-focussed services – not just to the user, but also the benefits to the institution. An essential first step is to identify the programmes that are aiming to achieve best practice in interoperability. These were identified during the Benchmarking process being developed within the Minerva Project, and the technical approaches can then be compared. The results of this benchmarking fall into two categories:

1. Common Technical Standards - projects and programmes that are aiming to create content to an agreed set of standards.
2. Developing Services - programmes that are developing or deploying services linking materials together.

Common technical standards

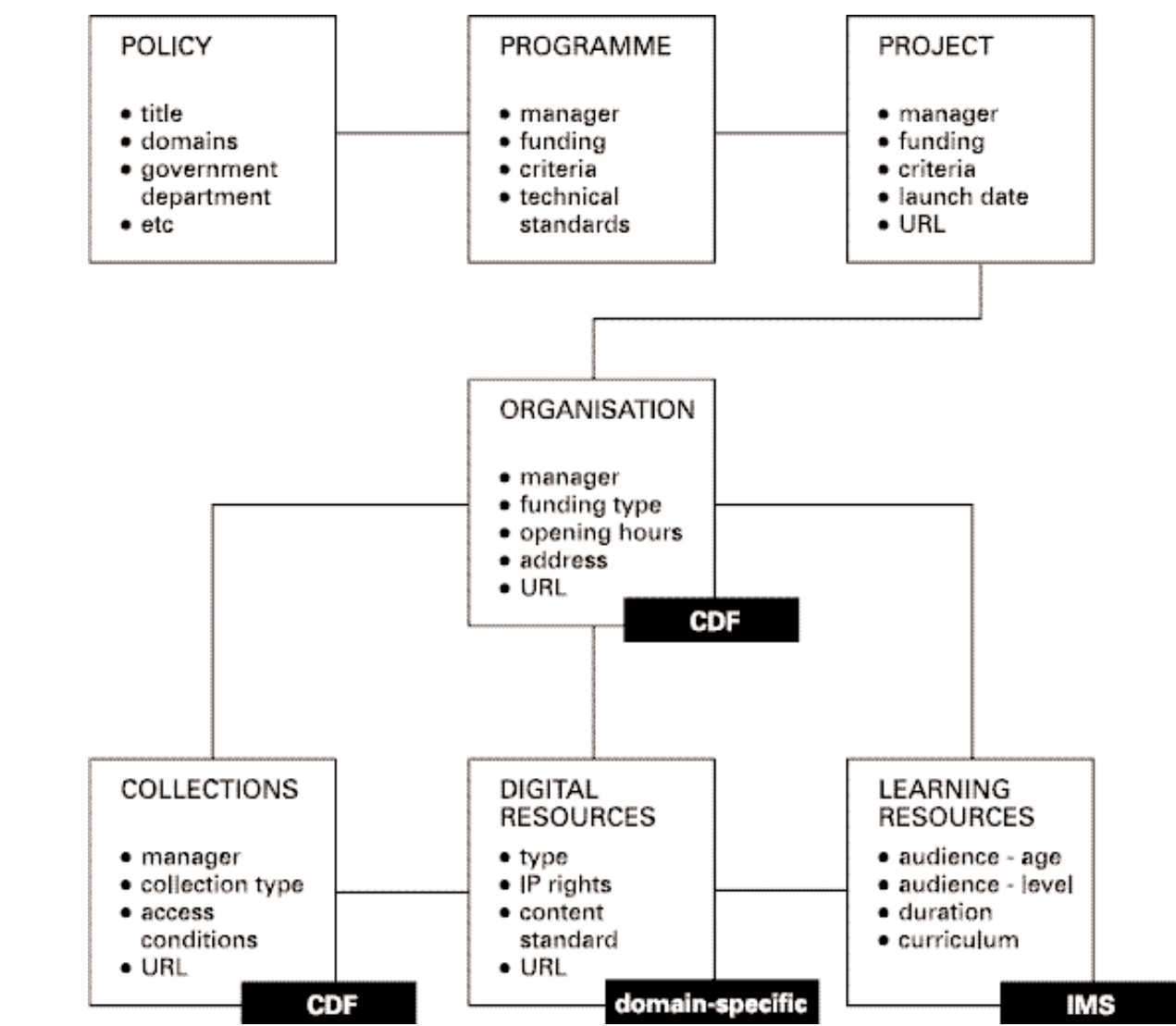
There has been a great deal of interest in the cultural sector in developing content to common technical standards. Some work has been carried out in this area, particularly in the UK where the NOF-Digitise programme has created a coherent set of technical standards to encourage the projects to see their role within the wider programme, and to enable the development of content that would be fit for re-use and re-purposing in the future. The technical standards are based on the life cycle model developed by Lorcan Dempsey (Dempsey, L. 1999), which identified the 5 key stages in the life of a digital resource: creation, management, collection development, access and repackaging.

Learning resources or digital collections

A key element of the Minerva project will be to examine the relationship between the target audiences and users of cultural materials, and the metadata that those different communities will use. The diagram below

gives an indication of some of the metadata requirements for each of the elements and indicates where schema already exist. At this stage, most metadata-based interoperability projects are in their infancy, using existing metadata from a single domain, or using an approach based on simple Dublin Core. A

basic set of Dublin Core qualifiers is proposed, called DC.Culture, in order to support the basic search requirements of users – enabling them to find answers to the key ‘Who’, ‘What’, ‘Where’ and ‘When’ questions. This approach will be tested and evaluated in an interoperability pilot project using OAI.



CDF – Collection Description Framework (<http://www.ukoln.ac.uk/>)  
Domain-specific – standardssuch as MARC (libraries), EAD (archives) or SPECTRUM (museums)  
IMS – IMS Learning Object Model (<http://www.imsglobal.org>)



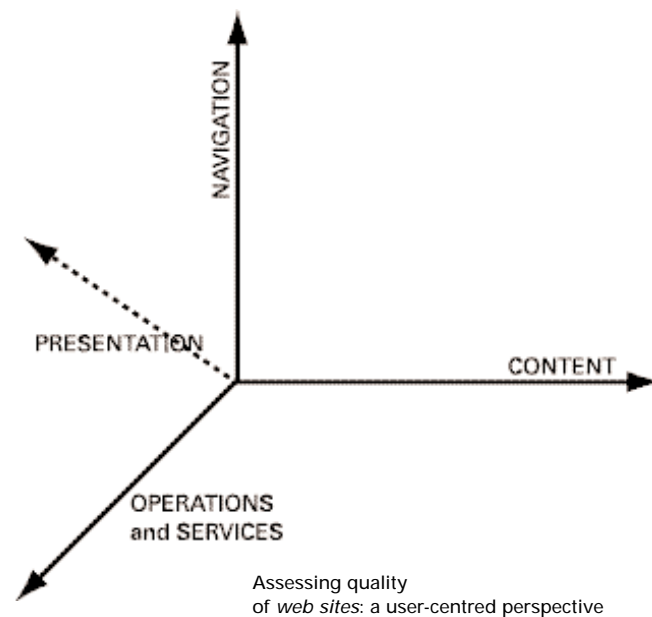
### Identification of user needs, content and quality framework for common access points

A quality framework is a conceptual tool that helps developers and users of cultural web sites to evaluate and improve the quality of the website that they have produced. The components of a quality framework are: criteria, a set of agreed methods to evaluate them, and a set of guidelines that help designers and developers build products that meet them.

There are many general approaches to quality, but no agreement on the definition of quality for cultural web sites. A quality framework in this domain can only be developed at a multinational level, involving cultural institutions and actors from different backgrounds and having different professional expertise (ranging from web development and human-computer interface design to cultural preservation and promotion). The framework is an evolving entity, which needs to be extended and improved over time. This improvement will be the result of experience and user research and will be informed by case studies. The process will be driven and enriched by the results of co-operation and shared efforts at the European level. The quality framework analysed by the Minerva project can:

- represent a reference model for comparing different cultural web-enabled products
- facilitate the development process of cultural web sites, since it provides guidelines on how to design and develop high quality products, and to perform more effective quality assessment and control during the development process
- provide an objective basis to evaluate the cost-benefits of efforts in digital content production and cultural web site development
- promote standards adoption and interoperability of cultural web sites
- generate a more critical attitude in the users of cultural web sites, and increase the maturity of the cultural web site market, if quality criteria are also made available to end users (e.g. in the form of on-line question lists)
- provide means to assess requirements for the creation of new programmes
- be used as a basis for training website designers and developers
- encourage co-operation among member states, and promote the establishment of networks of co-operation focused on quality issues
- participate in the harmonisation and the qualitative development of the promotion of the common cultural heritage of Europe

The activities carried out by this working group are developing from the Brussels Quality Framework presented in the resolution “Culture and Knowledge Society” adopted during the European Council of Culture Ministers of 5 November 2001.



### Dissemination - Strategic impact and enlargement of the network

A key objective of the project is to promote the activities carried out by the project, and to disseminate the outputs, tools, services, recommendations, guidelines developed or proposed by the Minerva working groups. To achieve this, the following activities are being organised:

- plenary meetings of NRG (the first National Representatives Group meeting took place in Alicante in May 2002);
- development of an online management tool for sharing information and results and facilitating discussion and exchange of information;
- producing and printing information and training materials;
- development of information material, brochures, press releases, organisation of conferences, seminars and thematic workshops.

In addition to the Plenary meeting of the NRG, the consortium has worked to enlarge the network, by involving as many European Ministries and Cultural institutions as possible. In particular, contacts with Eblida, IFLA, Council of Europe, AIB, and projects such

as Erpanet, Cultivate, Delos, Pulman, DLM Forum, Herein have been established and consolidated. On the 7<sup>th</sup> of June the Minerva network also submitted on behalf of the NRG, to the European Commission an Expression of Interest for the Call FP6.2000 - IST for Cultural Heritage, a concrete opportunity for the European research community to provide opinions and comments for the first calls of the 6<sup>th</sup> Framework Programme. A priority has also been given to provide information to other organisations potentially interested in joining the network, in order to facilitate the adoption of the Lund Principles. With this action Minerva intends to become a magnet to integrate the different actors in the cultural sector. It will work with international organisations, local cultural organisations and private associations, and to open a constructive dialog with research and industry bodies. This action is carried out in two directions, adopting different tools:

- *Membership Agreement*, to formalise the participation of Ministries in the Minerva Network;
- *Co-operation Agreement*, to formalise the participation of interested organisations in the Minerva Users Group.

Why should an organisation invest in order to bring its activities under the Minerva framework?

- to share knowledge and experiences, avoid the duplication of effort and repetition of mistakes,
- to co-ordinate national/local initiatives within a European framework, to create services for users and to exploit the results,
- to share technological platforms and tools, saving effort and money in replicating what already exists,
- to contribute to the ambitious common goal of implementing the Lund Action Plan.

### First results, recommendations and guidelines

- Collection of the National Policy Profiles from all the member states
- Activation of contacts amongst key organisations at a European level, involving libraries, archives, museums and the cultural sector.
- Signature of Co-operation agreements with partners and countries willing to participate in the network
- Setting up meetings with the European Commission, and support for the organisation of the NRG meetings
- Creation of an innovative model for the benchmarking framework
- Collection of good practices in digitisation of cultural heritage at European level

- Initiating new contacts and exchange of information with non-EU countries, with a special focus on accession and European Economic Area (EEA) countries

### Recommendations for Interoperability

- Ensure that data collection processes identify the technology being deployed for interoperability and mandatory technical standards documents.
- Complete a mapping between the Collections Description Schema and IMS Learning Object Model (IMS LOM)
- Investigate the Open Archives Initiative Protocol for Metadata Harvesting as the most likely basis for the building of interoperable services
- Examine the potential for a minimum set of Dublin Core qualifiers (DC.Culture) to support users of cultural information
- Develop a basic set of terms for Dublin Core TYPE, FORMAT and RIGHTS elements
- Examine the potential for the development of a basic set of terms for SUBJECT
- Research the potential of a Licensing Framework for the Educational Use of Cultural Materials
- Develop and maintain a watching brief on the development of Digital Rights Management Frameworks

### Quality criteria guidelines for public cultural Websites

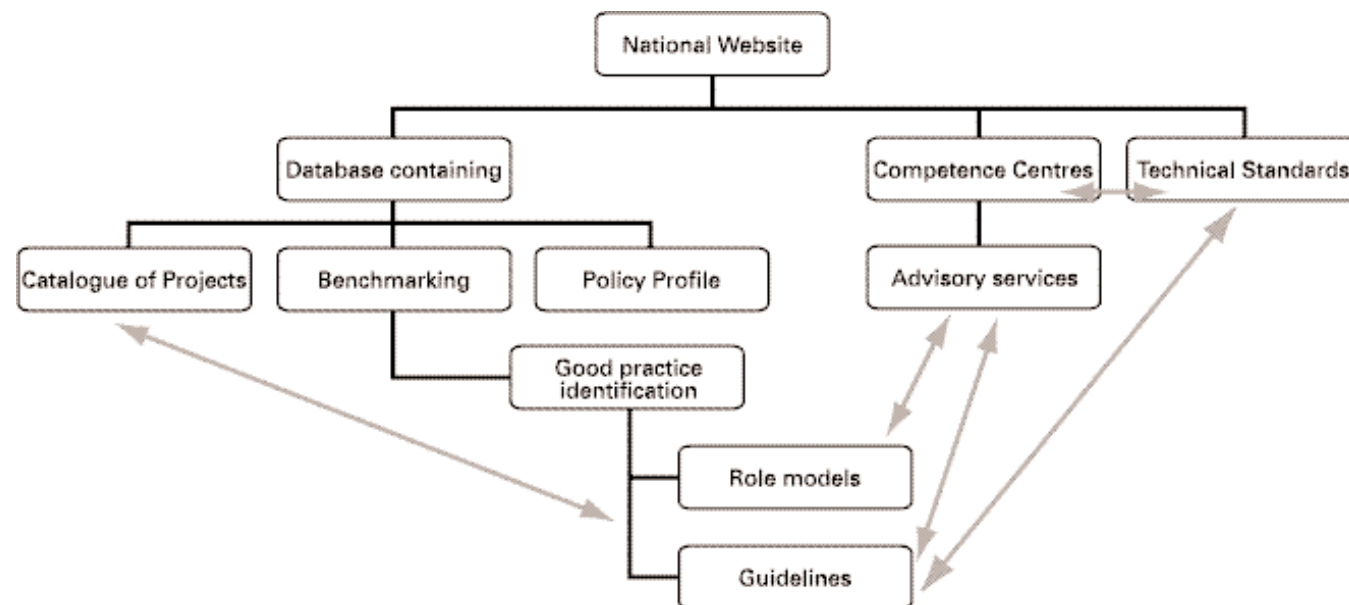
- Must reflect both in content, branding and design all those elements that build the identity of a cultural body
- Should be a linked to European thematic networks and portals to ensure that it can be more easily accessible and play its part in creating European added-value
- Must strive to reach the widest possible audience, and should define target audiences and key functional and thematic areas;
- Must be accessible to all, especially to the visually impaired
- Must apply all relevant national and EU legislation, particularly those relating to accessibility and data protection
- Must use languages and approaches that are appropriate for the target audiences, without compromising the quality of cultural communications. This may then result in the approach becoming progressively more specialist as the user reaches deeper levels of research;
- Must be related to all virtual and real-world communications strategies, research activities and organisational processes. This may require

significant organisational and cultural change or the creation on new organic organisational models

- In general terms, web sites should provide a common platform comprising: Information, Services, Activities and Communication. The most important elements should be presented in more than one language,

using a method that can be shared with other web sites of European thematic partners

- Should be characterised by clarity, ease of navigation, accuracy, comprehensiveness and logical organization
- Should use an appropriate Domain Name such as .org, .net , .eu or .museum



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