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1 Appendix 1 – EEIG national legislation

The following list of national legislation regarding the European Economic Interest Group is taken from the IPR Helpdesk Project of the European Commission DG Enterprise (http://www.certh.gr/cordis/t_en/home.asp.htm)

BELGIQUE
Law of 12 July 1989 containing various measures to implement Council Regulation (EEC) 2137/85 on the creation of an EEIG. (Moniteur Belge - 22 August 1989 - p 14385 et seq).
Law of 17 July 1989 on Economic Interest Groupings (Moniteur Belge - 22 August 1989 - p 14391 et seq).
Royal Decree of 27 July 1989 on the publication of the acts and documents of companies and enterprises (Moniteur Belge - 22 August 1989 - p 14400 et seq).

DENMARK
Law 217 of 5 April 1989 on the creation of EEIGs (Lovtidende A, lov 217, Hæfte nr 52, 11 April 1989).
Administrative implementing regulations 534 and 535 of 7 August 1989 (Lovtidende A, Hæfte No 80, 15 August 1989).

GERMANY
EWIV - Implementing law - 14 April 1988 (Bundesgesetzblatt 1988, I, No 16, p 514 et seq).
Eighth Regulation modifying the decree on the commercial register, 19 June 1989 (Bundesgesetzblatt I, No 28, p 1113 et seq).

GREECE
Presidential Decree 38 on measures to implement Council Regulation (EEC) 2137/85 on the EEIG in Greece, Official Journal of the Hellenic Republic 19 of 14 February 1992, p 325.

SPAIN
Law 12/1991 of 29 April 1991 on the Economic Interest Grouping, setting out various measures to implement Regulation (EEC) 2137/85; Boletín Oficial del Estado (BOE) 103, 30 April 1991, p 13638.
Royal Decree 1597/1989 of 29 December 1989 approving the regulation relating to the Trade Register previously allowing registration of EEIGs in Spain.

FRANCE
Law 89-377 of 13 June 1989 on EEIGs (Journal Officiel, 15 June 1989, p 7440 et seq).
Decree of 20 June 1989 on the registration of EEIGs (Journal Officiel, 30 June 1989, p 8101 et seq).

IRELAND
European Economic Interest Grouping Regulations, 1989 Statutory instruments 191 of 1989 - Government Publications Sales Office, Dublin.

ITALY
Decree-Law 240 of 23 July 1991, Gazzetta Ufficiale della Repubblica Italiana – Serie Generale, Anno 132° - Number 182 - 5 August 1991, p 6.

LUXEMBOURG
Law of 25 March 1991 on Economic Interest Groupings, Mémorial A 20 of 11 April 1991 p 452.
Law of 25 March 1991 setting out various measures to implement Regulation (EEC) 2137/85 on the creation of an European Economic Interest Grouping; Mémorial A 20 of 11 April 1991, p 459.

THE NETHERLANDS
Law of 28 June 1989 implementing Council Regulation (EEC) 2137/85 of 25 July 1985 on the creation of EEIGs (Staatsblad 1989, p 245 et seq).

PORTUGAL
Decree-Law 148/90, Diario da Republica, Series I, 106 - 9 May 1990, pp 2154-2155.
Decree-Law 2/91, Diario da Republica, Series I, 4 - 5 January 1991, pp 74-76.

THE UNITED KINGDOM
The European Economic Interest Grouping Regulations - Statutory Instruments (Great-Britain) 1989, No 638 - Her Majesty's Stationery Office.
E.E.I.G. (Northern Ireland) 1989 - Statutory Rules of Northern Ireland 1989, Nos 216 and 218 - Her Majesty's Stationery Office.

AUSTRIA
Law of 8 August 1995 implementing Council Regulation (EEC) on the institution of the European Economic Interest Grouping (EEIG) and amending the law relating to the trade register, the law relating to judicial auxiliaries and the law relating to judicial costs. (BGBL No. 521/1995).

FINLAND
Law 1299 of 22 December 1994 on European Economic Interest Groupings. (Svomen Säädoskokoelma, Julkaistu Helsingissä 27 paivänä joulukuuta 1994).

SWEDEN
Law 1994:1927 of 20 December 1994 on European Economic Interest Groupings. (SFS - Svensk Författningssammling, 30 December 1994).
Law 1994:1933 of 20 December 1994 on the register of European Economic Interest Groupings (SFS - Svensk Författningssammling, 30 December 1994).

2 Appendix 2 – Market engineering - background information

Regnet – Market-Engineering

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List of tables and figures

3 Product Description

REGNET aims at setting up a functional network of service centres in Europe which provides IT-services dedicated to Cultural Heritage organisations and will be an enabler of eBusiness activities for CH organizations. Multi media industries enabling the production of electronic publications will be integrated. It will provide access and use of digital data (scientific and cultural) as well as of physical goods as provided by museum shops. The four players within the network are the content providers, the service centre operators, the system developers and end users.

The content providers (museums, libraries, archives etc.) will provide access (via wired and wireless communication) to their digital contents, services and products and offer them to their clients (B2C). In return they can use the REGNET facilities for multimedia productions and data base management, or cooperate with other REGNET partners during the creation of data bases, generation of multimedia products or creation of a virtual exhibition (B2B). The service centre operators will generate income by providing the technical infrastructure (software/hardware) to content providers and other partners within the REGNET network. They offer additional IT-services and consultancies. And the system developers are selling the REGNET system to other cultural service centres and content providers. They implement additional components for the REGNET software system (additional 'nodes' like an 'exhibition creator', etc), and will generate income via licence fees for the REGNET system. For the end user the system will offer easy and wide access to cultural heritage data information and the purchase of CH related goods and services at one point, with stress on the production of personalized goods (e.g. CDROM) and services.

Main objectives of REGNET are:

- Development of a service infrastructure which enables business to business (B2B) transactions as well as business to consumer (B2C) transactions
- Development and use of existing - locally held - electronic catalogues (OPACS: Online Public Access Catalogues) referring to cultural & scientific objects contained in libraries, museums, archives, and galleries, as well as to goods and services.
- Integration of a distributed search and retrieval system to achieve a 'virtual union' catalogue of all OPACS and product/service catalogues held locally

- Definition of Information Products and Services including necessary 'supply chains' and the connected business processes and functions to deliver digital and physical goods (to provide high quality services an editorial committee will be installed)
- Setup of a legal framework necessary for all business transaction on the B2B and B2C level (containing payment features, copyright systems, authentication control, etc)
- Integration and test of existing components, standards, and methods in the field of distributed search and retrieval and e-commerce
- Access to the REGNET-WEB services with mobile devices via de facto standard protocols (such as wireless application protocol, WAP etc).
- Run a trial service (demonstration phase) which should be followed by a regular service.

4 Target Market

4.1. Target Institutions

REGNET network provides IT-services to cultural heritage organisations. It will integrate multi media industries enabling the production of electronic publications and will provide access and use of digital data (scientific and cultural) as well as of physical goods to the education and cultural community.

Therefore the main target institutions of the REGNET network are Archives, Libraries, Museums and Galleries of all Europe which are now facing the challenge of how to react to new ICT technologies whilst taking full advantage of this evolving e-world."

Only in Europe, there are about 100.000 cultural institutions, whose 25% has been estimated in year 1999 to have a web site. This number has been continuously growing in the last years also thanks to the support from the national governments to exploit the benefit of the new ICTs in the education and culture sector.

Among people, interest in culture online material is growing; as indicated by a specific survey carried out in April 2001 by the Department for Culture, media and Sport in UK (DCMS) 29% of English adults-representing 11.5 million people- are interested in visiting a web site "bringing them arts and culture from best national and local cultural organisations to their computers".

Museums enable people to explore collections for inspiration, learning and enjoyment. They are institutions that collect, safeguard and make accessible artefacts and specimens, which they hold in trust for society.

Internet and Information and Communication Technology (ICT) in general have had a profound impact in developed countries in both social and economic terms. Internet represents a powerful channel of communication and integration. Its socio-cultural importance is such that the British government, for example, has committed itself to providing universal access to Internet by the year 2005. Its scope and potential has not only given rise to the so-called new economy, but has also led to a re-evaluation of the role of public institutions in the modern world.

In the field of cultural heritage, Internet opens up a vast area of opportunity in terms of access to cultural heritage (CH) resources, the provision of new services, increased efficiency in institutions' dealings with the public, and (potentially) new sources of revenue.

Research among schoolchildren carried out by Resource in UK, in 2001, suggests that they still have a relatively positive attitude towards museums and galleries. However, the aim in future years must be to increase the current proportion of children (33%) who return to museums and galleries that they have visited with their school. In order to do this museums and galleries have to continue to evolve, not just on-site but also through audience development and marketing generally. Use of the internet is an obvious method which needs to be developed further - 27% of schoolchildren have visited a museum or gallery web site and 23% consider the internet to be the best place to learn outside school).

At the same time, the opportunities offered by modern technology and the new approach required if it is to be successfully exploited, raise numerous problematic issues. Major decisions need to be taken with regards:

a) whether access to public CH resources should be free or whether there should be charges for cultural services, given the enormous investment and running costs involved;
b) the issue of intellectual property rights. The potential for unlimited and unauthorized copying and distribution of copyright material on the Internet imposes severe restrictions on CH institutions in terms of digital access to their collections;
c) the question of interoperable standards. Seamless access to cultural databases implies homogeneity of metadata standards. At present, however, CH institutions not only use a wide range of metadata standards, but also, in many cases, use their own classificatory systems. Developing commonly shared standards is an organizational question rather a technological one.

REGNET network will provide CH institutions of West and East European countries a technical, legal and business infrastructure.

From a *legal point of view,* REGNET organisation, through the Regional Poles, will provide IPR consultancy and services for the online selling of digital products, images and contemporary works of art (online auctions).

From a *technical point of view*, REGNET will provide a full range of technical services, supported by the REGNET building blocks.

In fact, REGNET system is composed of several building blocks (nodes) which consist of:

- **REGNET – Portal** (access to remote data entry, distributed search, e-business)

- **REGNET – Cultural Heritage Data Management** (search over distributed meta data repositories connected to stores containing digital content)
- **REGNET – eBusiness Data Management** (e-commerce system allowing access to distributed product/service catalogues)
- **REGNET – Ontology (Metadata) Subsystem** (containing the specifications of all metadata needed in the Cultural Heritage domain as well as in the e-business domain; this subsystem also stores specifications of workflows and process related metadata)
- **REGNET – Electronic Publishing Subsystem** (allowing the production of personalised digital products based on standardised meta data and workflows)

From a *business point of view*, REGNET will be able to provide specific customised business planning consultancy services to Cultural Institutions aware of the fact that the application of ICT poses a challenge in terms of adapting to the new underlying logic and developing, as it were, a new mind-set.

REGNET organisation moves from the assumption that the digital world entails new forms of organization and new relationships with new (and old) audiences. Museums and galleries are one of the most popular cultural and learning activities all over the world and the demand of quality of services provided continues to rise year after year.

The new technology in itself is not enough to foster new working procedures: what is needed is a radical structural change in institutions to allow for an effective implementation of ICT. At present, many CH institutions do not have a clear strategy with regard to reorganizing to effectively exploit the opportunities offered by the digital world, both in terms of internal practices and processes and external service delivery and enhancement. Their level of development in terms of exploiting the potential of the world wide web is fairly limited and one-dimensional. In the conclusions of a report by the Quality, Efficiency and Standards Team (QUEST) ("Creating e-Value" - August 2000) on the development and application of Internet and e-commerce across Non-Departmental Public Bodies (NDPBs) funded by the Department for Culture, Media and Sport (DCMS) in the U.K., it is stated that: "The bulk of the use of internet initiatives to date has been focused primarily on putting information online. However, internet technology is evolving rapidly, and other organisations are using it to generate new relationships with their audiences and to develop their core services. Comparatively few of the NDPBs in the cultural sectors are yet poised to take full advantage of this evolving e-world."

4.2. REGNET contribution to the eChallenge of Cultural Heritage Institutions

At present, CH institutions need to have coherent strategies to cope with a number of challenges.
One challenge regards ***digitisation***: the key issues being the selection and management of digitised resources. The costs linked not only to the initial phase of digitising but also to the long-term maintenance of digital assets could lead to the decision to digitise only a certain portion of a CH institution's collection. This would also entail deciding on what criterion of selection to adopt. The second issue regards the management of digitised collections, whether consisting of "born-digitals" or digitised existing assets. This management process also includes the question of how best to preserve digital objects in the long term, given the rapid rate at which technology changes. The corollary, of course, is that of ensuring long-term access as well.
REGNET will provide full support to National and Regional CH institutions in setting up their digitisation programmes. The Archives, Libraries and Museums (ALMs) already involved in the network have agreed upon a theme approach as a criterion to select material for REGNET digitisation program. In addition, they have been provided guidelines on high quality digitisation techniques that better satisfy long-term and differentiated access requirements of digital collections.

A second challenge concerns sustaining ***"hybrid" services*,** that is, running traditional and digital services in parallel. CH institutions will clearly need to continue to provide existing location-based services and maintain their permanent physical collections. At the same time, they will need to provide and maintain digital services and collections. This means it will not be possible to redeploy resources from the traditional sector to the digital sector, with the consequence that the pressure to find additional funding will increase. Bridging the two sectors will require new overall solutions and will involve new workflows and procedures, as well as new instruments to collect, render accessible, exhibit, contextualize, and preserve these objects. This, in turn, will require skilled staff capable of coordinating and integrating both spheres.

REGNET is a supportive organisation offering technical know-how and skills to memory institutions in their reorganisation process of combining traditional and digital services. In offering personalised and customised technical, legal and business services to CH institutions through a network approach, it also supports small and regional institutions in identifying new services and exploiting new ways to reach a wider audience, while satisfying new emerging needs.

A third challenge regards ***cross-domain cooperation:*** integrating resources and knowledge from differently structured institutions to enable cross-sectoral access. Traditional boundaries between museums, libraries and archives represent a barrier to a seamless access to knowledge and resources. There is a compelling need for enhanced cooperation between CH institutions to ensure interoperability regarding standards, digitisation and new services. The more streamlining there is in terms of digital processes, the more a seamless and efficient access to resources can be guaranteed.
Another important consideration is the fact that from an end-user's point of view, ease of access is the predominant concern. Most users, in fact, do not distinguish between one CH institution's website and another. They are not interested in the differing infrastructural logic underlying different institutions, but in being able to track down information wherever it is to be found.

Examples of cross-domain cooperation are still very few[1], especially among different countries. REGNET could be considered unique, as it combines 25 different organisations; i.e. system developers and multi-media industries, cultural institutions and service centre operators from 10 European Union states as well as Bulgaria and Russia together. REGNET conceives cooperation as a central issue to unlocking the value of CH resources online. Along with the need to adapt to the requirements of

[1] In Sweden, the "Cultural Heritage of the Industrial Era of Sweden" initiative, and in Norway, the "Netting Local History" initiative are good cases showing how cross-domain cooperation can be encouraged through a thematic approach.

the rapidly changing information society, scarcity of resources can be seen as a compelling reason for cooperating more closely.

Interoperability can only be achieved by adopting a “network logic”, and REGNET network provides the means to effectively exploit the opportunities offered by ICT and new media, as well as the necessary infrastructure for cooperation. Cross-sectoral cooperation through REGNET is also central to being able to create value added services and rich digital environments for a wide range of user groups.

Adding value to CH resources and creating new contexts of presentation exploiting the potential of ICT and new media are important from the end-user perspective. The challenge, as in the case of traditional non-digital services, is to cater for and be relevant to user needs, as well as attract and keep new audiences. This is seen as an integral part of a CH institution’s mission. We find this viewpoint expressed in, for example, “Collections, Content and the Web” (Council on Library and Information Resources, Washington D.C. – January 2000): “Objects in a museum are objects out of context. The whole purpose of the modern museum, in terms of the public, is to create context – that is, meaning. In museums, we call the creation of context “interpretation”. Multiple contexts can be created for and around a given object in our collection. Our central challenge in responding to the public through electronic media is how to address these varied contexts and nuances to serve a diffuse audience of varied backgrounds, as well as multiple interests and needs. The electronic media provide a way to look at a collecting arena in more depth: to create virtual exhibitions that address topics and themes not represented in our exhibition galleries; to present multiple points of view, interpretations, and experiences; and to respond to the needs of several different audiences.” And further on: “…Internet products require the same critical review of content quality, the same consideration for audience, the same effort for design and production, and the same attention to evaluation as do our physical exhibits and public programs.…The visitors who enter our buildings now represent just a small part of our potential audience. Each of us must create a presence on the Internet, and we must be creative in the ways we position ourselves. It is not enough to simply announce our existence and the programs we produce. Information about our collections that includes images, interactive exhibitions, educational materials, and other engaging activities is essential:”

In the DigiCULT Report (“Technological Landscapes for Tomorrow’s Cultural Economy” – December 2001) we also find the view that enriched interactive environments and higher level contextualization are essential in terms of unlocking the value of CH resources: “Many […] institutions are aware of the fact that if new technologies are used just to display collections, the new opportunities offered by ICT will be missed. They realise that their core business has more to do with connections rather than collections, connecting people in-house as well as online to cultural artefacts by showing relationships between them, providing contexts, interpretations, explanations, and “telling stories”.” (7.4.3)

The figure below gives an overview of how the core functions of CH institutions are changing and how REGNET as an intermediary organisation is positioned.

Unlocking the value: core functions of cultural heritage organisations

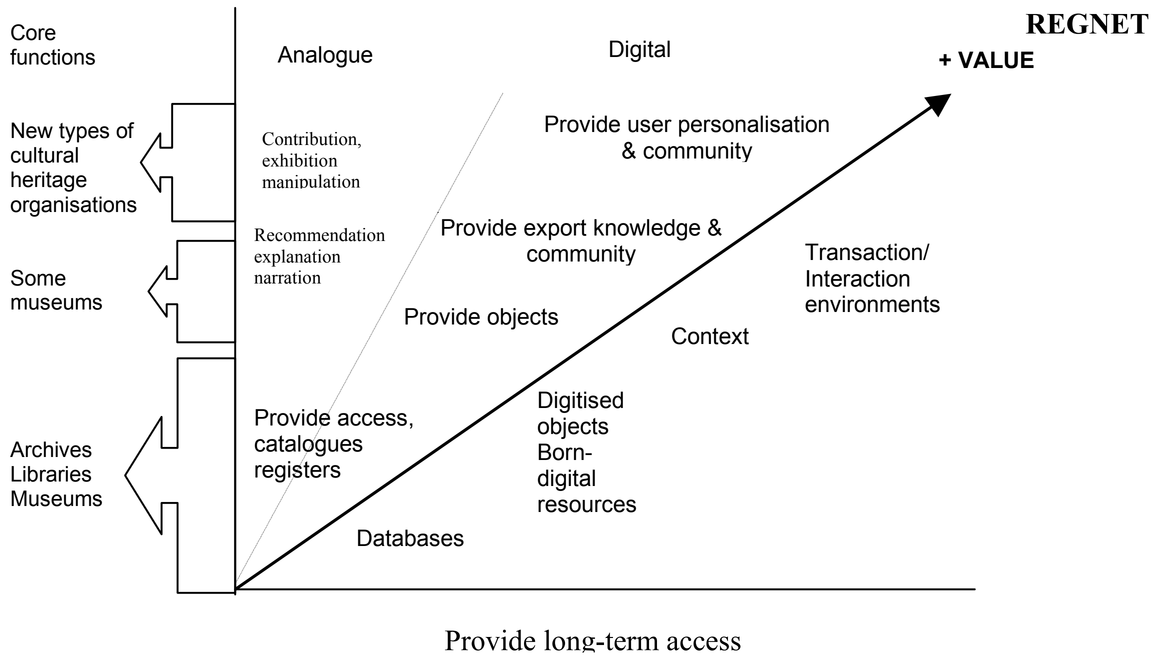


Fig. 1: Core functions of cultural heritage institutions
Source: Digicult report

To build such enriched environments would require project groups including cultural subject matter experts and specialists in interactive multimedia design and production. Given that few CH institutions have the resources to create the critical mass of rich content and services needed to attract and involve users, as well as generate new sources of income through value added components, the best approach would lie in a collaborative effort involving diverse institutions.

Intermediary organizations, such as REGNET, which build user platforms and environments can play an essential role in helping CH institutions bring the value of cultural heritage to broader audiences. In the view of the DigiCULT authors, intermediary organizations “play a key role in providing support, services and networked environments for the institutions. This might include e.g. supporting digitisation projects, offering a portal to digital collections of many different institutions, or building an integrated and protected environment for scholarly or educational uses of digital objects and documentation derived from cultural institutions. Such organizations are extremely valuable in bringing cultural heritage to certain interest groups (e.g. scholars, learners, tourists) and the public at large. Basic indicators for the success of cultural heritage in the Information Society will be the number of such organizations in existence and the intensity of use.” (7.3.4) This is echoed in a report from the National Museum Directors’ Conference (“A Netful of Jewels: New Museums in the Learning age”), which states that in order to guarantee the sophisticated technical data management, online activities and interactive environments on high capacity servers “it is likely that central or regional data delivery services, or kitemarked managed services, will be needed.”

The model suggested by the DigiCULT report, which is totally in line with the way REGNET is organised, is that of a splitting of functions between the supportive infrastructure organization and the CH institutions involved. The former, in this case, REGNET, would manage the digital resources of these institutions, providing the necessary consultancy and project management, digitisation equipment, skilled staff, technical support in creating products and offering online services, as well as support for the long-term preservation of digital collections. The institutions, on the other hand, would provide the knowledge and expertise related to their collections: metadata descriptions, interpretations and contextualizations. Outsourcing technical functions lying outside the core functions of a CH institution could be an efficient and cost-effective solution to the problem of limited budgets, lack of marketing and technological capacities, and shortage of ICT personnel. According to the report: “The optimal scenario would be the sharing of a technical support organisation with other institutions within or across the sector. In this scenario, the supportive organisation is managed by a trusted consortium and is based on agreed upon technologies, applications, standards and procedures, and financing mechanisms. Beside technical support functions, the organisation could also focus on goals and activities the individual institutions cannot accomplish themselves, because they lack the necessary expertise (e.g. negotiation of services of third parties, rights clearance, management of licences, certification). Which competencies should be kept or nourished within the individual institutions should be observed and decided upon on the basis of best practice and lessons learned in the cultural heritage sector.” (7.7.3)

REGNET is addressing all these issues and its supportive services are particularly appropriate for small and medium-sized CH institutions.

A major concern for the cultural heritage sector is the future position and role of smaller institutions in the digital environment. An estimated 95% of CH institutions in Europe are not in the position to participate in any kind of cultural heritage venture (DigiCULT 6.3). This because they lack not only the financial resources to participate, but also have a shortage of staff, essential skills, necessary technologies, and marketing capacities. There is both the need to increase the number of staff in smaller institutions and the need for modern training programmes to deal with ICT skill shortages.

REGNET would allow small and medium-sized institutions to become more visible in the information society and help promote their services and products.

It could be considered and answer to one of the mechanisms recommended by DigiCULT to allow small and under-resourced memory institutions to participate; i.e. “establishing a support infrastructure in the form of cultural Research & Development centres, (virtual) information service centres or specialised centres of excellence to foster know-how transfer.” (6.3.1 – Recommendation 6) Involving these institutions in projects run by larger experienced cultural organizations would also be a means of aiding knowledge transfer.

The importance given to intermediary organizations can be seen in the number of further recommendations put forward by the DigiCULT report. Thus: “Recommendation 26: Cultural heritage institutions should actively participate in the consortia that establish intermediary organisations and services.”; “Recommendation 28: National governments, regional authorities and funding organisations should actively support the establishment of intermediary organisations and services in the cultural heritage sector and their co-operation with services in other sectors as education and tourism.”; and “Recommendation 30: National governments, regional authorities and other funding bodies should invest in specialised organisations that particularly support small and medium sized cultural heritage institutions in setting up and managing digital collections (e.g. digitisation, collection management, online registration of users, licensing, and transactions).”

The report also indicates REGNET as an example of a supportive infrastructure in the making.

4.3. CH Institutions: General figures and sources of finance

4.3.1 A European perspective

The propensity to finance the cultural sector is different from State to State; in some countries (United Kingdom, Ireland, Sweden and Italy) State spending is higher than the sum of regional and local spending.

Public Spending on the CH				
	Central	**Regional**	**Local**	**Total**
Finland	48%	0	52%	100%
France	43%	4%	53%	100%
Germany	8%	34%	54%	100%
Ireland	87%	0	13%	100%
Italy	56%	13%	31%	100%
Netherlands	48%	5%	47%	100%
Sweden	63%	12%	25%	100%
UK	58%	0	42%	100%

Table 1. Public Spending on the Arts

Source: “Arts Council” of England’s International Data on Public Spending on the Arts in Eleven Countries (1998)

The big influence of State’s funding for European CH Institutions is also reiterated by an analysis carried out by the ECIA (“Emplois Culturel Internationaux Association”).

France

There are three main categories of museum in France:

State museums, comprising 34 national museums under the authority of the French Museum Board (Direction des Musées de France) Ministry of Culture, plus museums depending on another ministry (Education, Defence, etc.).

Local museums, run directly by the municipalities, departments or regions.

Private museums, some of which have signed agreements with the French Museum Board (Direction des Musées de France - DMF) at the Ministry of Culture.

In 1995 the cultural sector was publicly funded with a sum of 73.3 billion FF, of which 47,7% (36,4 billion) was donated by Central Government (the Ministry for Culture and other ministries), and the remaining 50,3% (36,9 billion) supplied by the regional and local authorities (30,3 billion by the local councils, 5,4 billion by the departments and 1,5 billion by the regional authorities).

Private financing is also increasing: in the nineties, commercial sponsorship of cultural activities generated 1,5 billion FF. At present companies which support culture can deduct up to 2,25% of their income before taxes, with a VAT charge (20,6%) for the beneficiaries.

The French Museum Board administers the national museums directly and regulates establishments with administrative and financial autonomy such as the Louvre or the Centre National d'Art et Culture Georges Pompidou.

The Cité des Sciences et de l'Industrie, under the joint supervision of the Ministry of Industry, Telecommunications and International Trade and the Ministry of Higher Education and Research, is another important public establishment in the museum world and has just launched a major new technology initiative as a 'showcase'.

Among the organisations under the authority of the Ministry of Culture, the Réunion des Musées Nationaux (RMN) is a public establishment with an industrial and commercial vocation. Its mission is to enrich the collections of the national museums and to improve their cultural dissemination, in which context it has become a leading figure in cultural multimedia with a CD-ROM catalogue of international repute.

The Ministry of Culture has been present on the Internet since 1994 on http://www.culture.fr. Comprehensive information is available under seven headings: ministry, news, publications, documentation, exhibitions, cybergallery, discovering France.

Ireland

The national museums are under the authority of the Department of Arts and Culture and (in regions where Gaelic is spoken) the Gaeltacht.

The two leading institutions are:

- The National Gallery of Ireland which has been engaged in the development of a very successful advanced kiosk system with assistance from IBM

- The National Museum of Ireland which is a partner in the RAPHEL VIKING project which aims at developing educational CD-ROMs to be distributed to all schools in Ireland.

In 1995 the Irish Department for Arts and Culture had a budget of 78,7 billion Irish Pounds, whereas in ‘96 the “Arts Council” had a budget of 18,4 million Irish Pounds. These figures included several sources of funds; i.e. those from the Lottery, administered by the “Arts Council”; funds for job training and creation, administered by the appropriate Authority (FAS); the Irish funds, which finance specific actions correlated to arts and culture in urban and rural centres; the European structural funds. Commercial sponsorship is still low (3% of the total funds), and applies mainly in the performing arts.

Italy

In Italy, the traditional financing model of direct public funding of CH institutions is still very strong.

However, in the first half of the Nineties, central public funding was considerably reduced: from 0,21 to 0,17 of the GDP between 1990 and ’97. This was mainly due by recent fiscal adjustment policies; and strong support by Local and Regional Governments. Their contribution was almost equal to that of the State. From 1997 onwards this declining trend in State spending was inverted, with a particular increase in capital expenditure for the preservation and restoration of cultural heritage, thanks to:

Additionally, from 1998 to 2000 the Lottery financed several projects in the arts domain with 900 billion Lire (300 per year).

In order to attract new private resources and improve incentives for public-private co-operation in the sector, specific laws have been issued and others are under discussion.

Germany

Due to Germany's federal political structure, there is no central Ministry of Culture, the 16 Länder being responsible for their own cultural affairs. Thus almost all museums of the 5,200 in the 'Blue List' (1996) are managed at the regional or local level although they are required to meet certain criteria in order to claim federal financial aid.

Central government has been financing museums only for 4% of their incomes (see table 1 above), while Regional ones have provided 34% and Local one 54%.

The local perspective has been considered advantageous in many ways but 'it has not proved conducive to the exchange of ideas on new technologies, to the definition of data standards or to the development of museum software' according to Monika Hagedorn - Saupe of the Institut für Museenkunde in Berlin responsible for museological documentation.

In the 1996 report of the Institut für Museenkunde , 5040 museums were analysed.
The following table gives an impression of the ownership of German museums.

Type of ownership	Number of museums
State	466
Municipalities, communities/district areas	2243
Other public institutions	280
Private associations	1102
Companies	180
Private foundations	57
Private persons	386
Private and public institutions	326
Total	5040

Table 2. N° of museums and type of ownership in Germany

Source: 1996 survey of Institut für Museenkunde

As can be seen there are a lot of different types. The largest group (nearly 50 %) is the group of museums which belong to and are run by towns and regional bodies like district areas. The second largest group (20 %) is the group of museums which belong to private associations (Vereine). Overall, about two third of German museums are in public ownership and about one third is owned by private institutions: associations, private persons, companies.

Independent of the ownership, museums try to raise their income by finding sponsors who give additional money. Often they are supported by a private association of friends or they can apply for financial support at ministries, public or private foundations a.s.o.

Unfortunately it is not possible to give complete information on the amount of money which is spent for museums in Germany.

There are two institutions in Germany which regularly collect data on museum personnel and on financing of museums.

One is the statistical office of the city Stuttgart which for the "Deutscher Städtetag" undertakes about every four to six years a survey on museums which are situated in cities with more than twenty thousand inhabitants.

The latest data available are from 1992. The results are published in the "Statistisches Jahrbuch Deutscher Gemeinden" (81, Jahrgang 1994).

This statistic states that all the municipalities together (without the three towns Berlin, Hamburg, Bremen) in 1992 spent 8.477.644.000 DM (which means 4,4 percent of their whole budget on cultural affairs. The situation in Berlin, Hamburg and Bremen is different because this cities are towns as well as federal states. Therefore their expenses for cultural affairs amounts to 6.109.323.000 DM (or 8,9% of their budget). There is this big difference because the federal states have to pay for universities a.s.o.

Looking at the municipalities from this 8.477.644.000 DM the amount of 1.024.881.000 DM (12 %) is spent for museums, i.e. about 0,5% of the whole budget is spent on museums.

Another statistic of the Deutscher Städtetag from 1992 which analyses answers from 1.739 museums, (83 % of all museums in that year's survey) gives some more information on the overall budgets of the museums:

This 1.739 museums together spent 2 139 150 000 DM in 1992. 43 % of this amount was spent for staff, about 7 % for acquisition of objects. The statistic shows that the same museums earned about 27 % themselves, this means through entrance fees, selling publications or renting of rooms a.s.o.

No Museum-Act in Germany

Germany has no "Museum-Act" (law). The German "Grundgesetz" (bill of rights) states that the responsibility for cultural affairs is not in the hand of the central government but instead on the "Kulturhoheit der Länder" (cultural sovereignity of the "Länder").
Every federal country runs one or more museums. Museums which are more of a local interest often are run by cities. But there is no law, that they have to run a museum. But according to the law they have a lot of other obligations. With less income on the one hand and more money to be spend for example for social security on the other, a lot of towns are in the process of rethinking their financing of museums and try to find new structures of administrating and organising museums. Private-public partnership is recently encourage.

Greece

Museum administration is the responsibility of the Ministry of Culture.

Museums are variously under the authority of: the State (notably archaeological museums since antiquities are State property), the Church, local authorities, other public and private bodies, and private individuals. A private body has the right to compile a collection of antiquities provided that special permission is obtained from the Ministry of Culture. Leading Museums such as the National Archaeological Museum or the Athens Byzantine Museum are departments attached to the Ministry of Culture. Other museums such as the Ethniki Pinakothiki (National Painting Museum) or the Greek Folklore Museum are public entities administered by Boards of Governors whose members are appointed by the Ministry of Culture. Finally, certain major museums such as the Benaki Museum and the Goulandris Ancient Art Museum of Greece and the Cyclades have their origins in private collections and enjoy special legal status.

The Netherlands

There are over 850 museums in the Netherlands. A major change has taken place since the beginning of the decade with the privatisation of national museums. In 1995, the museums acquired autonomous status, becoming non profit-making foundations no longer under the authority of the Ministry of Education, Culture and Science. The collections remain State property and the Ministry retains responsibility for financing these 17 former national museums.

In 1994 public funding was 2.170 million Dutch Florins, of which 245 million went to the performing arts, 97,9 million for architecture, design and visual arts, and the remainder was for museums and cultural heritage. The provincial and the local authorities have their own budgets for the Arts (in 1994 around 600 million florins). Business sponsorship amounted to just 25 million Florins, 2% of the sector funds.

Portugal

In 1995 Portugal's public spending on the Arts was 1,2% of total public spending. Commercial financing is significant, with business foundations playing an important role, as for example the *Calouste Gulbenkian Foundation*. Tax deductions in favour of sponsorships have been set up since the beginning of the nineties.

The Portuguese Institute of Museums (IPM) is a public service with a legal personality, possessing its own property and administrative autonomy. It covers 29 museums, the National Photography Archives and a Conservation Institute. The IPM is regulated by the Ministry of Culture. In addition to the museums depending on the IPM, particular mention must be made of museums housed in State palaces and grouped under the supervision of the Portuguese Institute of Architectural and Archaeological Heritage (IPPAR).

As the central regulatory and administrative organ, the IPM aims to create a National Museum Network, working within the major guidelines for the country's economic development. In this connection, the IPM strives to correct imbalances by creating facilities in the most deprived areas, and by contributing to the creation of small specialist companies in the fields of conservation, surveillance, cultural organisation or data processing. It should be emphasised that tourism plays an important role in Portugal's economic development. In 1995, the museums making up the IPM network were visited by 1,153,735 people (including 636,316 paying visitors and 436,604 foreigners).

Spain

The highly decentralised Spanish administrative system leaves the Autonomous Regions with total responsibility for cultural policy. The Ministry of Culture defines a national co-ordination policy which is implemented by the Fine arts and Archives Office.

The "Spanish Museum System", co-ordinates the action of institutions linked to museums, with a brief to establish standards for the documentation of collections, control of inventories, research and restoration of property. It comprises

- 101 State-owned museums (21 administered by the Fine Arts and Archives Office and 80 by the Autonomous Regions).
- 89 National Museums depending on the Ministry of Culture.
- Certain museums enjoying special status, with the approval of their Region.
- The Department of State Museums and the Institute for the Conservation and Restoration of Cultural Property.

United Kingdom

There is no absolute figure for the total number of museums in the UK. Official sources estimate between 2,000 and 2,500 (DCMS, 1998; Carter et al, 1999:5), although it has been suggested that there are probably between 1,250 and 1,500 which ‘realistically justify the title of museum in the sense that they deliver a certain quality of the visitor experience, meet standards of efficiency and effectiveness, and satisfy the government’s efforts to increase access and encourage lifelong learning’ (Middleton, 1998:15).

Between 1960 and 1999 there were nearly half as many closures and transfers to other bodies amongst local authority museums services as there were openings (Babbidge, 2001:19). Across the museums sector as a whole, nearly one museum a week opened between the early 1980s and late1990s. This was partly offset by a high number of closures, particularly amongst museums with less than 20,000 visits a year (Middleton, 1998: 21). However, the percentage of museums with small numbers of visits per annum has still increased, although their operations have been described as ‘marginal’. But even if some 50 per cent plus of museums attract less than 10,000 visits a year (or 30 visits a day at most) this means that combined they account for about 8.5 million visits (or over 10 per cent of the total market. Most establishments are controlled by their own Boards of Trustees. Local authorities provide services to museums and support independent museums. The museums are under the regulatory authority of the Department of Culture Media and Sports (DCMS) and are also financed by four other government departments: the Scottish, Welsh and Northern Ireland Offices and the Ministry of Defence.

Museums in the UK are divided into five principal categories: National museums (19),.University museums (300) , Military museums (200) , Local authority museums (800) and Independent museums (1100).

The official consultative body for all museums in the UK is The Council for Museums, Archives and Libraries launched in April 2000 in order to work with and for museums, archives and libraries within the UK, tapping the potential for collaboration between the sectors. Resource replaced the Museums & Galleries Commission and the Library and Information Commission and the new organisation now also includes the archives sector.

In 1993/94 Government spending for the cultural sector amounted to 446 million Pounds Sterling (33% of the total) and that of the local authorities was 215 million pounds (17%).
In the last two years the Department of Culture., Media and Sport has invested 500.000 Pounds to support training and IT development in museums. The private sector has

supported culture with 570 million Pounds, which is equal to 45% of total financing funding. This remarkable amount of private financing was divided in the following way:

- 38% from museum ticket revenue and sales of merchandise;
- 4% (a relatively high percentage) from business sponsorship, increased by a good tax incentive policy which provides tax concessions, not only for businesses but also for individual people;
- 3% from private support from “Charitable trusts” and foundations (also relatively high, if we consider that in this case tax incentives are not provided, neither in money or in goods).

The National lottery, set up by the British Parliament in 1994 to collect funds for six deserving projects (“sport”; “art”; “patronage”; “cultural assets”; “new millennium”; “new opportunities” –which included the “new millennium” percentage from 2001 onwards).
28% of the Lottery funds were allocate to Cultural assets. In year 2000 5.768 projects in all UK were financed corresponding to a value of more than 1.530.000.000 pounds: around 78% were designated to England, 12% to Scotland, 5% to Wales, 3% to Northern Ireland, and the remaining 2% to the rest of the United Kingdom. 721 museums and galleries have benefited from these subsidies. Both organisations and individual people can access the money granted be the “Heritage Lottery Fund” if their project belongs to one of the categories eligible for subsidies (natural habitat, including local and the national green areas and historical parks; archaeological sites; historical places and buildings; museum collections; historical and photographic libraries; national transport and maritime industrial heritage).

Sweden

There are about 250 museums in Sweden, of which 40 are the responsibility of the State (with 19 national museums situated for the most part in Stockholm). There are 26 regional museums receiving additional national funds and 60 museums supervised exclusively by local authorities, the remainder being privately run, for example by companies or local history associations.

The Ministry of Culture is responsible for museum subsidies and policy. The Ministry of Education is responsible for the university museums, the Ministry of Defence for military museums and the Ministry of Communications for postal, railway and telecommunications museums.

4.3.2 Zooming on Bulgaria

In Bulgaria, the state authorities support a chain of national and regional museums. The art galleries have been recorded as a category of specialized museums. The museums have been classified as:

- historical museums;
- specialized museums, including art galleries;

Therefore, our research targeted the activities and the services offered by museums. Available specific data on art galleries are shown.

The common attributes, applied for the museum category have been chosen as:

- number for museums/galleries for the region;
- number of visit recorded for 1999.(that was the last available information);
- number of art object, exhibited in the museums/galleries;
- the total income of the museums and art galleries;
- the subsidy of the state and it relative amount to the total income of museums;
- the income, resulted from visits and it relative amount to the total income of museums;
- the income, resulted from sponsorship and it relative amount to the total income of museums;

The total number of museums, supported by the state is 230. The n° of art gallery directly supported by the state is 44, representing 19% of the total museums domain. The relation between the type of museums, total income and its origin is presented on the table below.

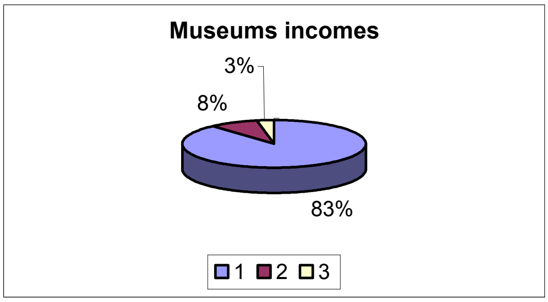
	Total	Visits	Objects	Total Income	State subsidy	%	from Visits	%	Sponsor-ship	%
MUSEUMS	230	5052854	5462556	11713439	9702432	83%	956726	8%	331851	3%
Historical	80	2209940	3864608	6599972	5625717	85%	483547	7%	213230	3%
Specialised	150	2842914	1597948	5113467	4076715	80%	473179	9%	118621	2%
incl. Art Galleries	44	1503382	169919	1682207	1509283	90%	84074	5%	50849	3%

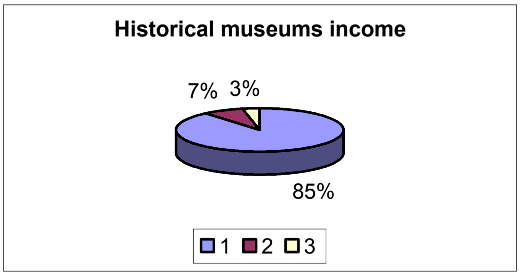
Table 3. Museums in Bulgaria in 1999.

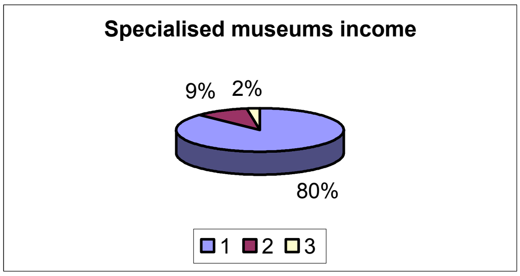
As indicated in the above table, the general part of the museums and art galleries are supported by the state. An average of 83% of the museums income is recorded. Very limited resources come from visits (an average 8% is estimated) and only a 3% of the total income comes from sponsorship.

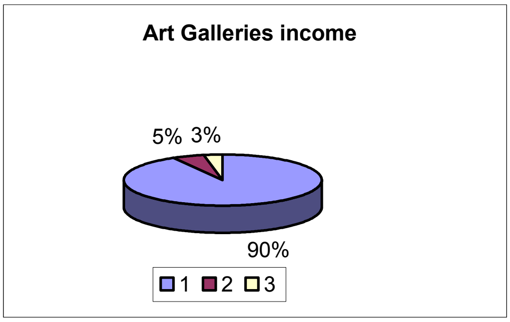
Hence the museums (galleries included) activities are strongly influenced by the state financial support. The following charts shows the % of Income from State (blu), from visits (mauve) and from sponsorship (yellow).

N°1= State Incomes
N°2= Visits incomes
N°3= Sponsorship incomes









To improve the relationship and the share of the income from different sources, the art galleries have to develop and to deploy new services and user applications. This will result in benefits in two directions:

- increase in the total amount of the museums/art galleries income;
- increase of the relative amount of resource which are not related to the state financial support;

Since the REGNET system targets the development and deployment of new services and ICTs technologies in the area of culture heritage, also in the East European countries, we can easily affirm that there exists real prerequisites for a successful REGNET deployment. The general market task will be to disseminate the REGNET potential, to train the museum personal in using new IT services, marketing and advertising REGNET services and products to potential user. The survey, made for 26 countryside regions in Bulgaria gives additional data about the financial behavior of the art galleries. The resulting data are given on the following Table.

Countryside museums in Bulgaria,1999.

	Total	Total Income	State subsidy	%	from Visits	%	Sponsorship	%
Burgas	11	379781	286280	75%	66315	17%	4616	1%
historical	5	287724	200950	70%	65867	23%	4616	2%
specialised	6	92057	85330	93%	448	0%		0%
incl. Art Galeries	2	50742	50194	99%	448	1%		0%
Varna	8	757475	694117	92%	54613	7%	6032	1%
historical	3	544396	495822	91%	42542	8%	6032	1%
specialised	5	213079	198295	93%	12071	6%		0%
incl. Art Galeries	2	94535	93415	99%		0%		0%
Veliko Tarnovo	14	508710	388545	76%	77891	15%	13091	3%
historical	5	445646	331924	74%	75717	17%	9340	2%
specialised	9	63064	56621	90%	2174	3%	3751	6%
incl. Art Galleries	3	39921	37853	95%	1498	4%	52	0%
Vidin	4	104257	101008	97%	2579	2%		0%
historical	2	88924	85675	96%	2579	3%		0%
specialised	2	15333	15333	100%		0%		0%
incl. Art Galleries	2	15333	15333	100%		0%		0%
Vratza	4	188844	179404	95%	5339	3%	4101	2%
historical	2	131295	129054	98%	2140	2%	101	0%
specialised	2	57549	50350	87%	3199	6%	4000	7%
incl. Art Galleries	1	2549	2549	100%		0%		0%
Gabrovo	8	750081	341582	46%	118650	16%	3236	0%
historical	4	174132	81185	47%	2274	1%	3006	2%
specialised	4	575949	260397	45%	116376	20%	230	0%
incl. Art Galleries	1	13000	12000	92%		0%		0%
Dobrich	7	250236	193820	77%	49440	20%	4827	2%
historical	4	190236	138177	73%	48401	25%	2009	1%
specialised	3	60000	55643	93%	1039	2%	2818	5%
incl. Art Galleries	2	52056	48165	93%	773	1%	2818	5%
Kardjali	2	76188	75859	100%	237	0%		0%
historical	1	14836	61023	411%	237	2%		0%
specialised	1	61352	14836	24%		0%		0%
incl. Art Galleries	1	76188	14836	19%		0%		0%
Kustendil	5	453709	352028	78%	98454	22%	3055	1%
historical	3	411389	309708	75%	98454	24%	3055	1%

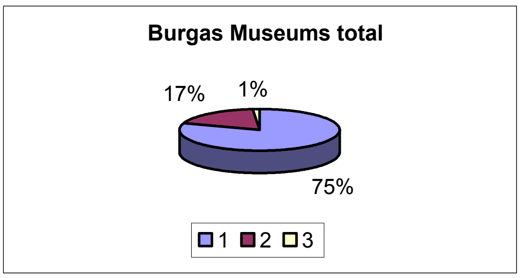
specialised	2	42320	42320	100%		0%		0%
incl. Art Galleries	2	42320	42320	100%		0%		0%
Lovech	5	150464	142636	95%	6245	4%		0%
historical	2	82881	80050	97%	1250	2%		0%
specialised	3	67583	62586	93%	4995	7%		0%
incl. Art Galleries	1	9898	9896	100%		0%		0%
Montana	8	113176	111934	99%	340	0%	400	0%
historical	3	80438	79241	99%	295	0%	400	0%
specialised	5	32738	32693	100%	45	0%		0%
incl. Art Galleries	2	16073	16073	100%		0%		0%
Pazardjik	10	305045	267199	88%	20246	7%	17600	6%
historical	5	225767	205156	91%	20011	9%	600	0%
specialised	5	79278	62043	78%	235	0%	17000	21%
incl. Art Galleries	1	28190	28190	100%		0%		0%
Pernik	2	79798	79798	100%		0%		0%
historical	1	74649	74649	100%		0%		0%
specialised	1	5149	5149	100%		0%		0%
incl. Art Galleries	1	5149	5149	100%		0%		0%
Pleven	13	561043	516868	92%	27157	5%	16706	3%
historical	1	179906	175801	98%	1293	1%	2500	1%
specialised	12	381137	341067	89%	25864	7%	14206	4%
incl. Art Galleries	2	45067	40942	91%		0%	4125	9%
Plovdiv	14	544731	459947	84%	55372	10%	26336	5%
historical	5	145813	123991	85%	3674	3%	18114	12%
specialised	9	398918	335956	84%	51698	13%	8222	2%
incl. Art Galleries	1	60898	58522	96%	1366	2%	792	1%
Razgrad	3	181344	160431	88%	1811	1%	12246	7%
historical	2	160799	140059	87%	1638	1%	12246	8%
specialised	1	20545	20379	99%	173	1%		0%
incl. Art Galleries	1	20545	20379	99%	173	1%		0%
Russe	4	234151	228194	97%	5497	2%		0%
historical	1	167142	162620	97%	4062	2%		0%
specialised	3	67009	65574	98%	1435	2%		0%
incl. Art Galleries	1	32000	31060	97%	940	3%		0%
Silistra	4	148850	140731	95%	8119	5%		0%
historical	2	87172	86009	99%	1163	1%		0%
specialised	2	61678	54722	89%	6956	11%		0%
incl. Art Galleries	1	40785	40485	99%	300	1%		0%
Sliven	12	294415	257780	88%	33452	11%	3183	1%
historical	3	122666	118549	97%	2714	2%	1403	1%
specialised	9	171749	139231	81%	30738	18%	1780	1%
incl. Art Galleries	2	74901	69970	93%	3931	5%	1000	1%
Smolian	4	122020	116238	95%	1591	1%		0%
historical	2	72341	69996	97%	494	1%		0%
specialised	2	49679	46242	93%	1097	2%		0%
incl. Art Galleries	1	28900	28900	100%		0%		0%
Sofia	30	3785074	3169201	84%	190875	5%	188631	5%
historical	3	1976119	1667412	84%	48421	2%	134740	7%
specialised	27	1808955	1501789	83%	142454	8%	53891	3%
incl. Art Galleries	5	802188	653367	81%	73145	9%	41762	5%
Stara Zagora	14	639625	505976	79%	23388	4%	1000	0%

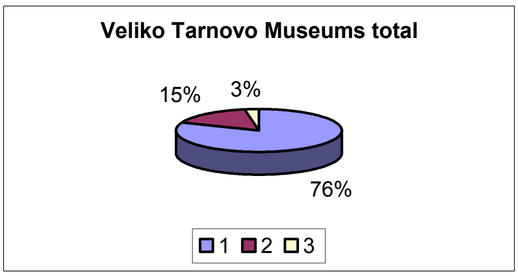
historical	3	192132	169540	88%	21306	11%	1000	1%
specialised	11	447493	336436	75%	2082	0%		0%
incl. Art Galleries	3	87615	85286	97%	1500	2%		0%
Targovishte	4	96821	94172	97%	99	0%	2150	2%
historical	3	69742	67093	96%	99	0%	2150	3%
specialised	1	27079	27079	100%		0%		0%
incl. Art Galleries	1	27079	27079	100%		0%		0%
Haskovo	6	105208	104908	100%		0%	300	0%
historical	2	73730	73730	100%		0%		0%
specialised	4	31478	31178	99%		0%	300	1%
incl. Art Galleries	2	17026	16726	98%		0%	300	2%
Shumen	9	378411	282502	75%	82355	22%	2798	1%
historical	1	167819	139040	83%	28779	17%		0%
specialised	8	210592	143462	68%	53576	25%	2798	1%
incl. Art Galleries	2	24852	24852	100%		0%		0%
Iambol	3	99321	98791	99%	500	1%	30	0%
historical	1	50989	50489	99%	500	1%		0%
specialised	2	48332	48302	100%		0%	30	0%
incl. Art Galleries	1	35749	35749	100%		0%		0%

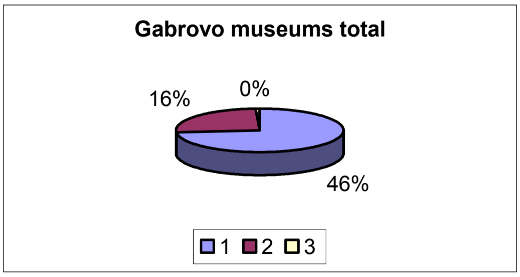
Table 4. Countryside museums in Bulgaria,1999.

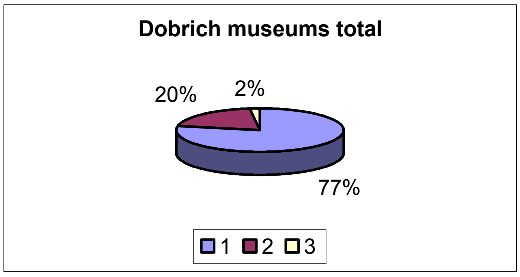
As estimated, all 26 countryside regions in Bulgaria have at least one art gallery. The general part of the gallery incomes originates from the state financial subsidy. The relative amount of this support is in the range of 75% till 100%. It exists an exception, which concerns the region of Gabrovo. The relative amount of the state subsidy is 46% from the total museum incomes. It means that this region successfully develops different channels of activities, which result in additional income. Particularly for this region a lot of hand made art goods are produced and offered for sale in folk regions and museums. As a result the museums are well supported and have a real market presence trading hand mode folk art objects: textile, woodcarving, metals.

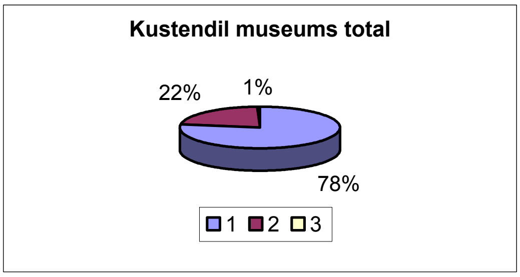
Several pie charts are given for the regions of Burgas, Veliko Tarnovo, Gabrovo, Dobrich, Kustendil, Pazardjik, Plovdiv, Razgrad, Sliven, Sofia, Stara Zagora, Shumen. For these regions the state financial support for museums and galleries is less than 90% of the total museums income. But the relative amount of the resources which origin from museum visits differs in the range of 5 till 22%.

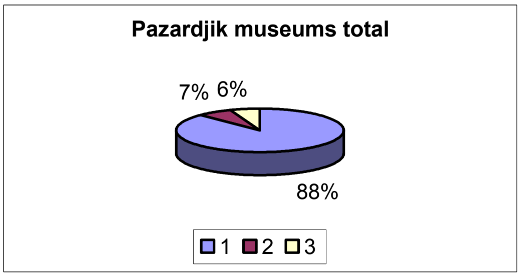


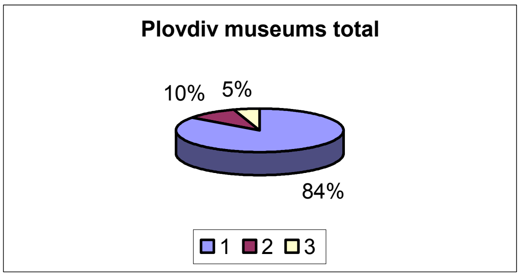


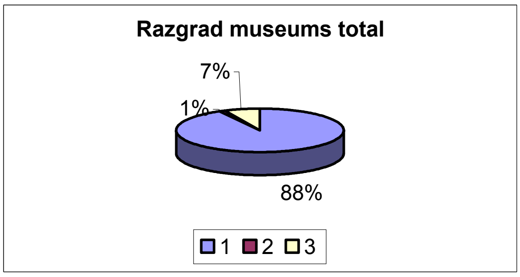


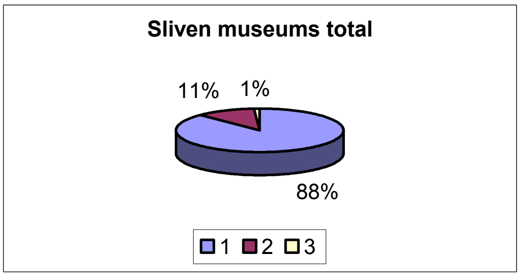


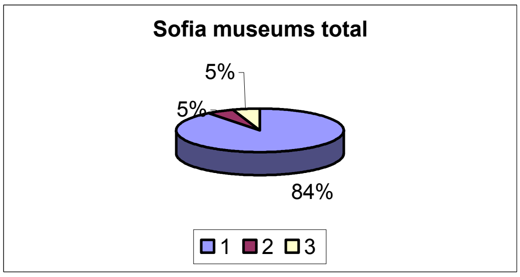


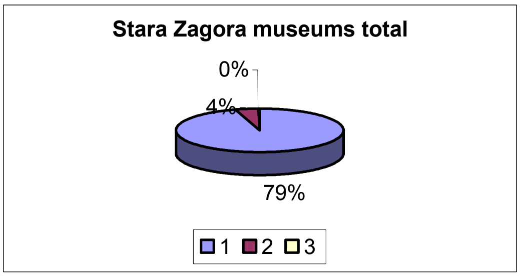


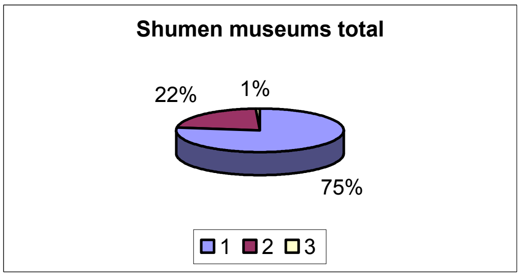












Hence for the countryside case it is also valid that new services and products, originated from REGNET will improve the financial behavior of the museum, related to it independence from the state subsidy.

In general, museums and art galleries of Bulgaria do not offer additional services, related to the art market and art services. The general source of support is the state subsidy, which is about 90% of the total museum income. The relative amount of the income, originated from visitors and visits varies in the range of 5% till 22%.

The development of new IT services, related to the art market will give benefits to the art galleries and museums. This is a real prerequisite for successful implementation of the REGNET services.

4.4 Target markets and Market Potential

REGNET addresses the so-called ***digital culture*** market which is the result of an interaction between "traditional" culture (content), the Multimedia/ICT sector[2] (technology) and services/distribution.

The great advantage of this sectoral definition is that it covers all value adding chains – horizontal and vertical - i.e. not only the sector we are interested in, with its content-oriented, creative activities, but also the whole sector of infrastructure suppliers and devices. The difference between traditional and digital culture is important in this context because in the new or traditional culture, new skills and therefore business opportunities are emerging at the interfaces between the different sectors, and not within the classic segments.

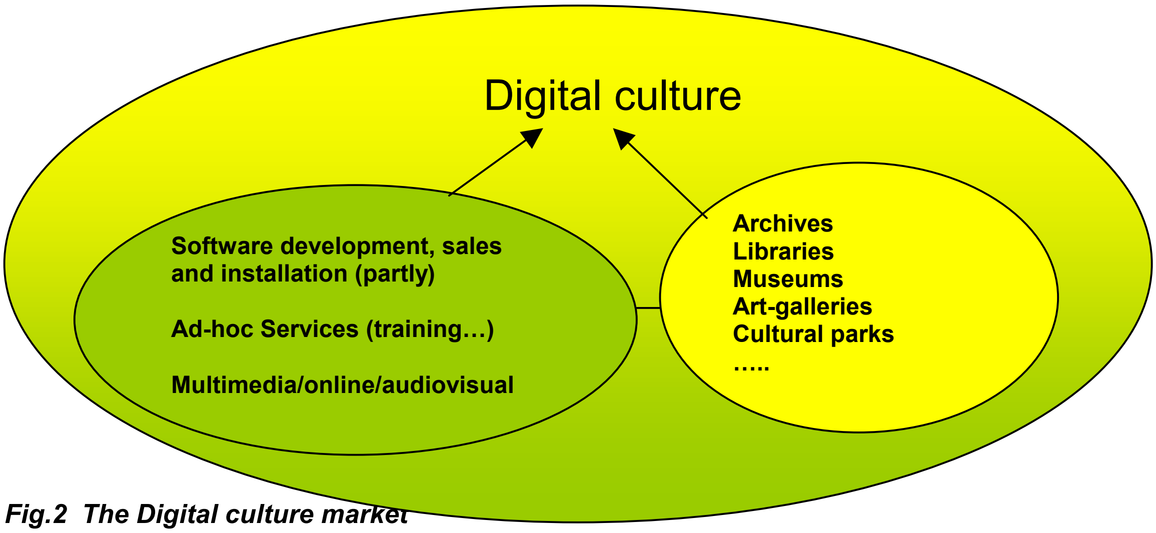


Fig.2 The Digital culture market

4.4.1. The size of the digital culture sector in Europe

Every business operators within the digital culture market is supported directly or indirectly by museums and galleries. Digital access will enable museums to provide them with a much better service. The print and publishing industries, for example, already make extensive use

[2] Within the Multimedia/ICT sector the whole audio-visual sector is included; i.e. the entire multimedia sector, including culture industry areas such as TV, publishing and the music industry.

of museum collections and images. The acquisition of digital reproduction rights has become one of most important new art markets in Europe.

Despite the recognised value of the digital culture market among Central Governments as well as local authorities, none of the countries of the European Union has provided formal statistical data on the value of the above market for their country.

In order to overcome this lack of data, Terra Incognita Europa has elaborated its own methodology to identify the value of the digital culture market in each country of the European Union, based on a unique mix of internal market data, economic data from official sources, estimations and extrapolations dependent on polled opinions of its own network of experts.

The figures presented below refers to 2000 and give an estimation of the value of the digital culture market for each country (in EURO bn).

The European digital culture market value

(year 2000)

Country	Digital culture market value in EURO bn
Austria	8,317
Belgium	9,300
Denmark	12,384
Finland	5,250
France	48,128
Germany	71,694
Greece	3,815
Ireland	3,266
Italy	36,677
Luxembourg	0,885
Netherlands	20,458
Portugal	3,470
Spain	20,247
Sweden	14,709
United Kingdom	54,110
EU 15	295,198

Table 5 : The European digital culture market value

Only in UK, digital culture has contributed over 4 per cent to the domestic economy and employ around one and a half million people. The sector is growing faster than, almost twice as fast as, the economy as a whole.
The contribution of the digital culture to the gross domestic product is greater than the contribution of any of the UK's manufacturing industries.

The biggest national digital culture market is the German one, with a slightly bigger value of EURO 70 bn. (It is worth to mention that in Germany there are more than 5000 museums against the 2500 in UK and the 4000 national museums in Italy).

Based on data provided by ICCS, TINC has also tried to estimate the value of the Bulgarian digital culture market. Although the data are not completely homogeneous with the ones on which the elaboration of the value for the EU countries is made, the estimation of a value of around 375 Meuro can be taken - with a grain of salt - as parameter of reference.

4.4.1.1 The ICT market in Europe

At the beginning of the new century, Europe has seen an extraordinary acceleration in the development of ICT and the Net Economy. Acceleration is expected to continue, despite the phase of general weakening in high tech/ dot.com values during the final part of year 2000.

In 2000 the number of the European web users has grown by 46% to some 120 million, representing some 31 % of the total population. According to the EITO survey of year 2001, in 2003 the Internet penetration rate will reach 55 % of the European population (215 million). The main factors are reduced telecommunications tariffs (even if they remain relatively high), easier and less expensive access, in-creased awareness, E-business diffusion, the emergence of new operators, new applications and websites, projects in E-government and E-marketplace initiatives, WAP and Internet mobile applications.

Web users by country, 2000-2003 thousands CAGR

	2000	2003	CAGR 2000-2003 %
F r a n c e	14,020	34 ,350	35
Germany	28,010	47,760	19
Italy	14,110	2 ,6 9 0	27
Spain	8,380	17,320	27
UK	2,670	38,720	15
Nordic	12,380	17,180	12
Other W. Europe	16,430	31,130	24
Western Europe	119,000	215,150	22

Table 6 : Web users by country
Source: IDC, 2001

Much has been said on country differences between actual and forecast Internet penetration rates, speed of adoption, attempts to catch up, and difficulties related to local content, language and culture. Many of these issues will continue to put a brake on creating a homogenous European Internet market. It is nevertheless true that the European Internet landscape is going to change quite fast. Germany was the largest Internet market in 2000, re-presenting some 23.5% of total Web users in Europe. The UK was the second largest market in terms of Web users while usage in the Nordic countries (Denmark, Finland, Norway and Sweden) accounted for 10.4% of total Western Europe (or 52% of Nordic population). By 2003, France, Italy and Spain will increase their share at the expense of these countries and will move respectively from 11.8 % to 16.0%, from 11.9% to 13.3% and from 7% to 8.1%.

Workplace users (people accessing the Inter-net from a work location) represented some 45% of total users in 2000. Focusing on the business environment, a significant 92% of companies (with more than 100 employees) had access to the Web in 2000 and some 73% had a home page. However the majority of these web-sites had the aim only to provide detailed information on product and services. Only a few (some 24%) offered sale transaction capabilities or online payment capabilities (4.5%). This con-firms that Western Europe is at an early stage of the E-economy that implies using the Internet as an additional channel or even as a new business, thus forcing a redesign and a re-engineering of organisational and business processes.

The new millennium has nevertheless re-presented the turning point in the shift from the traditional economy to the E-economy, with many E-commerce initiatives in place or announced throughout Europe.

The following paragraphs will concentrate on some of the key issues that characterise the evolution to the E-economy in Europe.

4.4.1.1.1. Wireless phones for 250 million Europeans

At the end of 2000, more than 250 million Europeans are wireless phone users with an increase of more than 60% on the year before. The German market has made an impressive jump, more than doubling GSM users in 12 months. The penetration rate in some countries is moving towards 100%. Half a billion users are expected in 2003, including Eastern and Central Europe.

Mobile phone demand for new users and for models replacement has dramatically increased. SMS has become a very popular communication system, especially among young people, while the WAP is opening the way to mobile Internet applications through the GPRS and the expected Third Generation. Use of the mobile phone as a “credit card with antenna” is rapidly spreading.

4.4.1.1.2 M-business as a new frontier for Europe

Based on the extraordinary expansion of mobile communications, Europe has a tremendous opportunity to lead the development of M-business/M-commerce in the global market. Mobile office, mobile jobs, mobile training, *mobile culture,* mobile communities, mobile government, mobile entertainment, and mobile gambling are some of the drivers which can successfully bring Europe into the M-scenario.

The advent of mobile E-commerce is illustrative of changing lifestyles: users require access to information anytime, anyplace, at home, at work and on the move.

There is scope for a wide range of B2B and B2C applications and players will seek to address both markets. User-friendliness of applications will be key t o ensuring successful adoption.

Western Europe has world leader potential in mobile E-commerce. The region benefits from a high mobile penetration and acceptance, a strong content and media industry, a sound banking and payment infrastructure and world leading technology suppliers in the mobile industry.

Ovum and EITO task force have predicted that the number of Western European mobile E-commerce users will grow from around 7 million at the end of 2000 to 175 million at the end of 2005.

Revenues from mobile E-commerce in Western Europe will grow to Euro 86.1 billion by the end of 2005.

Although a range of applications will be successful in many markets, there is currently a lot of confusion and uncertainty about what will be successful and who will make money from particular mobile E-commerce applications.

There are several potential business models, and tussles over who will control key areas, such as payment and settlement.

Partnerships are central to the success of mobile E-commerce and a series of players must be involved to make the applications work. A combination of skills and resources in mobile, content and payment is required to deliver the end-to-end experience.

4.4.1.1.3 Digital content is king

Europe is showing an increasing perception of the crucial role played by the development of a strong digital content industry. In all countries major content players are emerging, with global multimedia targets and competing not only on a European dimension, but on the global market.

Digital content and multimedia services will become a major battlefield for global competitors in the world markets. Europe has the basic resources to gain advantage in this strategic area, but the European industry must not lose momentum and must focus investment, developing a specific business model which exploits the assets and particular qualities of European knowledge and culture.

4.4.1.1.4. Huge investment in bandwidth capacity

All European countries are investing in broadband cabling in metropolitan areas and in a wide network of optical fibre backbones, creating enormous resources of bandwidth for multimedia convergence, both in business and consumer applications. Europe is becoming an interconnected net of digital cities and local communities.

Bandwidth capacity will become an abundant and cheap resource, permitting the exploitation of new business opportunities and the development of new markets, creating the infrastructure for a new industrial cycle, as the railways or electrical power did in the past.

4.4.1.1.5. E-business and an E-marketplace for the competitiveness of European enterprises.

More and more European enterprises are successfully implementing E-business structures with a corresponding impact on productivity, cost saving and general effectiveness. Awareness is growing that Business-to-Consumer (B2C) and Business- to-Business (B2B) are closely inter-related and that participation in an E-marketplace and an E- procurement environment provides immediate and evident benefits. All business transactions, involving both procurement and distribution, are moving to the Internet. What identifies the Internet economy of the future is that it will be integrated into each step of the business process as a medium for transactions as well as for communications.

In this new world, the focus is shifting from access to information and content to its value.

Revenue is generated by providing some type of value, rather than merely providing an information dump. Value is created either by tailoring the information to the specific requester or by putting it in a useful context.

Security concerns and channel conflicts remain key to Business-to-Consumer developments in Western Europe. Growth in this area is quite slow and Business-to-Business continues to account for the majority of E-commerce spending in Western Europe. By 2003, 87% of all E-commerce activities will be in the area of business-to-business.

Some of the reasons behind these different developments can be found in the strategies behind the two E-commerce approaches. Most of European businesses perceive the Internet as a strategic tool to achieve internal efficiency through a better integration with suppliers and targeted strategies to better configure relationships within and outside the organisation. This implies a redesign of business processes and a cultural evolution within the organisation but not to the same extent that B2C involves. A B2C strategy must reach a mass public and generate revenues. On one side customers have to be educated, on the other, companies must align their strategies, their services and their products to the Internet.

4.4.2. REGNET specific target market segments

REGNET aims to set up a functional network of service centres throughout Europe providing IT-services dedicated to cultural heritage institutions, as well as an e-commerce service infrastructure enabling business to business (B2B) and business to consumer (B2C) transactions. It will function as a centrally coordinated network integrating four key players: content providers, service centre operators, system developers and end-users. A technical and legal infrastructure will ensure maximum interoperability and collaborative support. It will also enable full exploitation of the revenue-generating potential of cultural heritage assets.

Reduced budgets, optimistic expectations regarding the economic potential of e-commerce, and a general neo-liberal market orientation have led to increasing pressure being placed on CH institutions to engage in commercial activities over and above those traditionally held to be legitimate, such as museum gift shops or licensing images to publishers. Financial pressures have brought about a conceptual shift regarding the nature of cultural heritage institutions, allowing for the idea that their public service objectives are not incompatible with using public assets to generate revenue. The view has gained ground that some form of return on investment is justifiable, especially if services are enhanced by value-added content.

This new orientation requires decisions being made as to which services should be exploited commercially and which should remain free of charge. These decisions have to be made by each CH institution, although governments could help the process by clarifying their policy on the commercial exploitation of public assets. The line drawn between the two types of services need not be of a mutually exclusive nature, in the sense that the content of a service could be seen in different lights according to whether or not value has been added, as well as considerations regarding future use and targeted market.

In the context of REGNET, services which have a market potential in terms of generating revenue are those in the areas of: e-retailing, digital commerce, online auctions and e-learning.

4.4.2.1. E-retailing

E-retailing means the sale of physical products over the Web. Purchasing, and often payment, take place online and delivery through the post (the weak link in the chain due to the costs involved).

Products relating to a CH institution's "assets" include:

- gift shop articles
- cultural CD-ROMs
- posters
- calendars
- prints
- books and
- exhibition catalogues.

E-retailing can be combined with a membership scheme with special offers and discounts for members.

The potential to generate revenue and reduce costs of transactions and fulfilment, however, needs to be tempered by limiting considerations. QUEST, for example, points out that "unless new markets can be tapped, online sales may simply be displacing those through traditional channels, creating a channel rivalry with the potential to increase rather than reduce costs." ("Creating e-Value" P.40) It also notes that in the case of NDPBs with a retail function in the U.K., this function is tied to physical location and "relatively few are set up for mail order or catalogue delivery shopping and so are poorly prepared for online retail sales." (idem). Establishing a retail brand is also an important consideration in this market and requires an extremely large customer base. It also entails developing and producing unique products, which in the multimedia field is still a risky and costly business. It seems "Returns from most off-line multimedia products have shown to be very limited, profit often not being more than 1-3%, with many products not reaching the break-even point." (DIGICULT – Final Report P.126) This effectively means that only large and well-known CH institutions have the capacity to generate enough trading to justify the investment needed.

Examples of success in this field are, in fact, limited in number. Among organizations in the U.K. which already have some form of e-commerce, it seems only the British Library, with its specialized document delivery service, is generating significant revenue. It currently generates 20% of annual funds through this service, which has grown since 1995 by 22%, from £21m to £25m, with more than 88% of orders received online. ("Creating e-Value"

P.41). In the U.S.A., the Boston Museum of Fine Arts generated around $1m (gross) from online and retail and membership sales in the second half of 1999, and projected online revenues for the year 2000 were $2.4m. (idem)

In the case of organizations with a small trading facility, affiliate marketing (referral or indirect retail) would be more relevant. In this system, the organization refers its users to an online retailer it is affiliated with, receiving a commission on any purchases made (generally 5-15%). This enables an organization to add value to its website with negligible risk or cost to the organization itself. There is also the fact that “Commercial organisations may be keen to partner high-profile cultural organisations which already have a high volume of traffic.” (QUEST report P.45) The most successful example of an affiliate model venture is Museumshop.com. This is a large online retail platform with more than 75 affiliated museums, showcasing more than 3,000 products. European partner institutions include the Musée d’Orsay, the Prado Museum, and the Victoria & Albert Museum. (DigiCULT P.128) In France, the Réunion des Musées Nationaux (RMN) has set up a retail e-commerce site for all its affiliated museums. This model, as well as outsourcing to a specialist third party supplier for occasional e-commerce needs, seems to be the best option for small CH institutions in particular.

4.4.2.2. Digital Commerce

Digital commerce is the selling or licensing of digital/digitised products, with the whole transaction (purchase, payment and delivery) ideally taking place completely online. Products include digital surrogates of cultural heritage objects and educational material (which will be looked at in the next section). In the case of digital surrogates or images, revenues are generated through licensing. Key markets are those which are content-driven such as *publishing, broadcasting and multimedia providers*. Advertising and corporate publishing also occasionally draw on content which a CH institution could provide. The authenticity and expert knowledge inherent in CH resources have a marketable value for publishers and broadcasters in particular. In a report commissioned by the Canadian Heritage Information Network (CHIN), it was found that across all market segments, photographs/images generally held the greatest interest and potential. Film and audiovisual recordings were also relevant, but to a lesser extent and mainly for broadcasters.

In the private sector there is a well developed image bank market, whereas in the CH sector, this market is, as yet, relatively untapped. Corbis, ImageBank, Comstock and Getty Images are examples of ventures in this field backed by large-scale investment. Getty Images, for example, has a 25% share of the image market. Its main customers are in the publishing and advertising sector, and about 40% of its sales are delivered over the Internet. An attempt on its part to expand from the Business to Business (B2B) market to the Business to Consumer (B2C) market, however, met with failure. A venture called Art.com offering prints and framing to consumers online, acquired in May 1999, was closed in May 2001 due to the high costs and low revenues.

In the public sector, BBCwild.com, the commercial arm of the BBC's Natural History Unit, has proved to be a successful small-scale venture, winning the FT public sector website award in 1999.

One of the main problems facing CH institutions in this market sector, though, is that related to intellectual property rights. The potential for unlimited and unauthorized copying and distribution of images on the Internet poses a risk to the dissemination of works which are not clearly in the public domain. In order to avoid liability, a painstaking and time-consuming process of obtaining item-by-item rights clearance is entailed. This inevitably impinges on a CH institution's ability to compete with the private sector in terms of providing a fast turn-around delivery service.

Other problems relate to weaknesses in management structure and licensing competency, as well as the considerable investment of time and resources needed to reach industry standard. The CHIN report states that "Industry representatives suggest that the cost of developing competitive licensing systems and processes, as well as developing and maintaining catalogues could be prohibitive to entering the market. They recommend an alliance or partnership with an existing agency or broker as an alternative to building an in-house system." The authors of the DigiCULT report, however, feel this would only be effective for institutions with highly valued art or unique collections. The problem would be to justify such a commercial alliance in the case of licensing less well-known resources online, as there would be little prospect of covering costs from its share of licensing fees. The implication is that only a part of a CH institution's collection would be commercially relevant. Operational costs, such as the re-allocation of personnel and other resources, as well digitisation, would necessitate a selective approach of this type. A market-driven approach dictating which resources should be digitised obviously clashes with the notion of increased access to the full range of CH resources.

Rather than restrictive joint ventures or competing on the same ground as private sector players, it would make more sense in the view of DigiCULT for CH institutions to draw on their own strengths and create their own niche market. These strengths reside in: traditional points of intersection with the publishing and broadcasting industry; the uniqueness and historic authenticity of CH resources; and the value-added aspect of the knowledge and expertise CH experts can bring to the selection and contextualization of resources. Establishing or further developing a cultural heritage brand grounded on authenticity, knowledge-based interpretation and contextualization, would not only generate value, but also be more consonant with the mission of CH organizations.

4.4.2.3. The art market online auctions

This section is intended to give an estimation of the art market based on available data from the world leader in art market information Art price (http://art-market.net.searchartprice.com). This estimation is useful to assess the importance and respectively the potential of the Regnet system, offering, among others, IT services to the art market.

The auction market value for art objects for the last 10 years are analyzed below. The index of the price of art objects for 1992 is set to 100%. The deviation of the index is given in the chart **index (t**), t = 1992 – 2001 year. Five art categories are presented: painting drawing, print-multiple, sculpture, photography. Each category is estimated in relation with the object size: very small formats, small, medium, large, very large, monumental. The dynamic of the business transaction per quarter/per year is given in reference to the index value. The market dynamics is presented per every art category.
An integral assessment of the market, performed as average evolution for all art categories for the period of 10 years is presented in the table below.

Art Market Index [June 2000 to June 2001 figures]

	Index (12/1992=100%)	Number of transactions	Volume of transactions (US $)	Maximum price (US $)	Average price (US $)	Benchmark (US $)
Painting	130.27	12,935	1,797,489,848	50,000,000	138,963	31,288
Drawing	95.83	14,013	323,244,037	17,550,000	23,067	5,497
Print, multiple	67.19	28,202	70,712,707	700,000	2,507	807
Sculpture	108.66	7,439	231,662,888	13,000,000	31,142	9,537
Photography	155.51	6,985	46,867,150	359,800	6,710	2,625
Index & Benchmark AMI Top 1000	106.42	69,574	2,469,976,630	50,000,000	35,501	9,452

Table 7. Art Market index, total, 1992-2001

As shown from Table 5 for the time period of 10 years, the relevant importance of photography has increased to 155,51, for painting - 130,27 and sculpture 108,66. Respectively the market importance of drawing is approximately kept on the same level (95,83) but the print art object index is considerably decreased (67,19).
As a whole, the art market index is 106.42 over the basis of 100 assumed for 1992 year. The above table gives information about the volume of transactions, maximum and overage

price, number of transactions (sells) for the 10 years period 1992-2001. The dynamics of the index, evaluated of the most 1000 successful market transactions per year are given in Fig. 2.

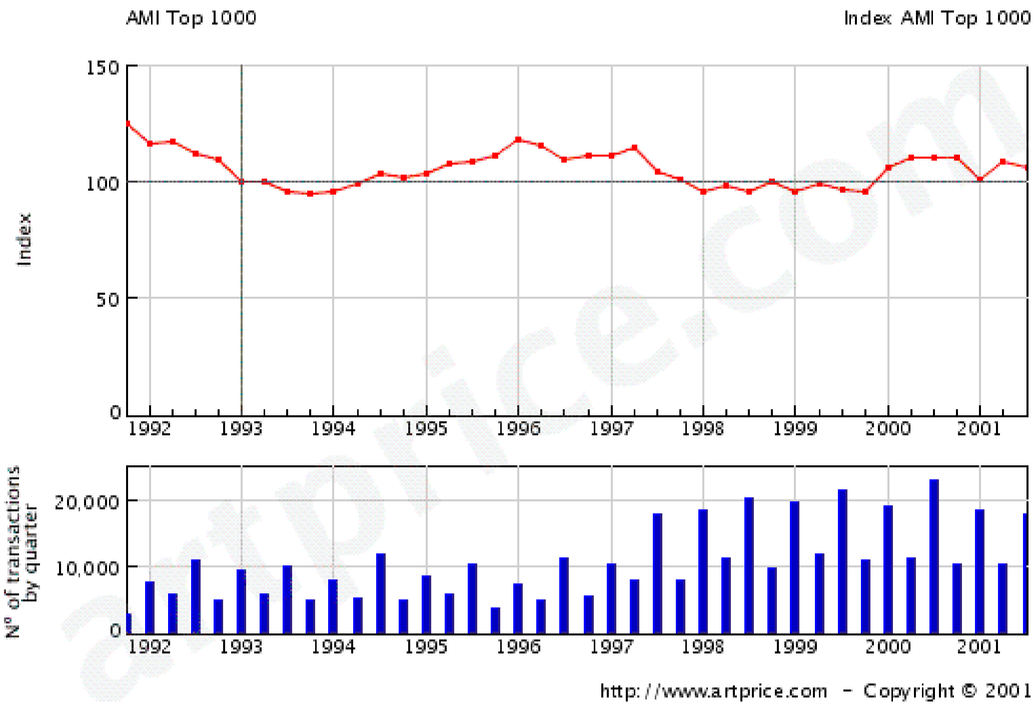


Fig.2 Index value for the top 1000 transactions, 1992-2001

This figure proves the fact that the relative importance and the value of the art objects are kept relatively constant through the years. Hence the investments in art objects preserve their value nevertheless the inflation rate. The behavior of the market state differs per art category. Here is few estimates of the art market.

4.4.2.3.1 Painting

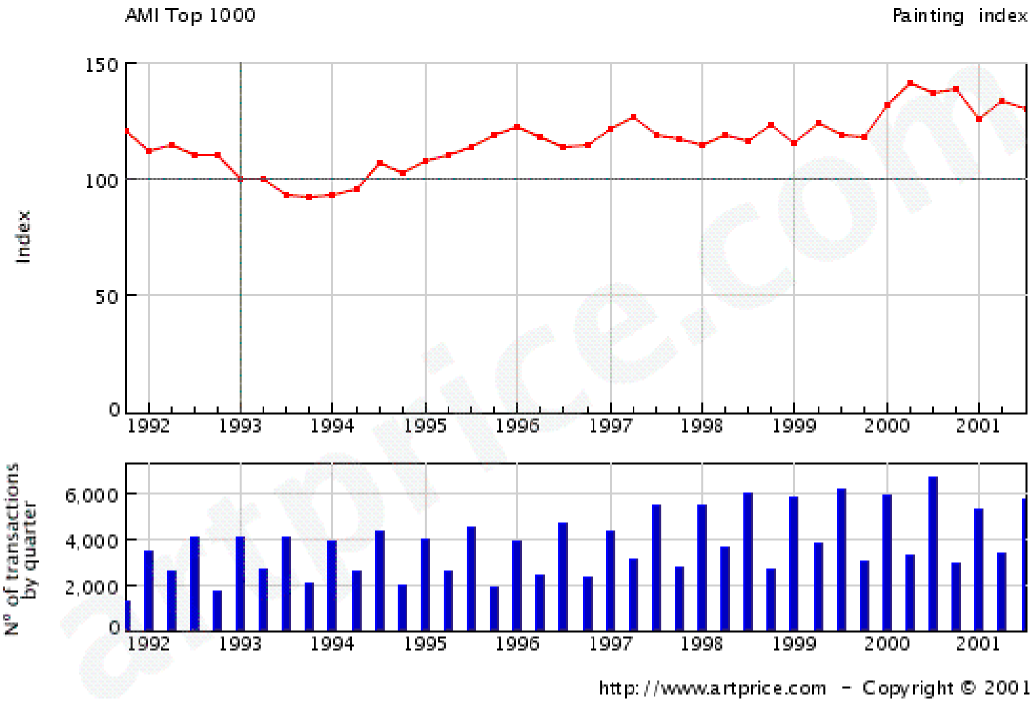
The average values of the painting index, related to the size formats are given on the table below.

Art Market Index Top 1000, Painting [June 2000 to June 2001 figures]

	Index (12/1992=100%)	Number of transactions	Volume of transactions (US $)	Maximum price (US $)	Average price (US $)	Benchmark (US $)
Very small formats	90.08	987	25,922,823	2,600,000	26,264	6,129
Small formats	111.66	2,995	205,716,245	16,200,000	68,687	11,128
Medium formats	125.23	5,518	736,487,755	50,000,000	133,470	20,646
Large formats	140.00	2,291	470,632,416	38,502,500	205,427	37,123
Very large formats	148.24	972	306,150,720	19,000,000	314,970	70,197
Monumental formats	152.71	172	52,579,889	7,700,000	305,697	122,170
Painting	130.27	12,935	1,797,489,848	50,000,000	138,963	31,288

***Table 8. Painting. Art market index*[3]**

The above table shows the relative dynamics. The market importance of all painting formats increase. The only exception is the case of very small format, which record a decrease of 10% (90,80) in comparison with the level of 1992. In general the art objects, related to painting support an increasing trend of the market sells. The dynamic of the index for painting is presented in Figure 3



[3] Five formats of the paintings are considered:
Very small format: dimensions below 500 cm^2 (20x25cm)
Small formats: between 500 cm^2 - 1600 cm^2 (40x40cm)
Medium formats: between 1600 cm^2 - 5000 cm^2(60x80cm)
Large formats: between 5000 cm^2 - 12000 cm^2(100x120cm)
Very large formats: between 12000 cm^2 - 40000 cm^2(200x200cm)
Monumental: above 40000 cm^2 (e. g. above 200x300cm)

Fig 3. Painting index, top 1000, 1992-2001

This comparison defines a non expected conclusion, that the most market sells are generated by the drawings with monumental formats. But the sells are most intensive per year for medium and small painting objects, which proves the importance of these art objects for the “art market”

4.4.2.3.2 Drawing

The importance of the art objects for the market are presented integrally in the table below.

Art Market Index Top 1000, Drawing [February 2000 to February 2001 figures]

	Index (12/1992=100%)	Number of transactions	Volume of transactions (US $)	Maximum price (US $)	Average price (US $)	Benchmark (US $)
Small formats	82.50	3,042	26,748,103	1,600,000	8,793	1,919
Medium formats	92.20	7,559	124,533,662	11,057,820	16,475	3,381
Large formats	91.97	4,554	114,195,070	4,800,000	25,076	6,233
Very large formats	135.12	691	49,720,021	3,800,000	71,954	19,187
Drawing	97.93	15,846	315,196,856	11,057,820	19,891	5,617

Table 9. Drawing: art market index

The results on the table show that only the importance of the very large formats of drawing is market increased (value of the index is 135,12). All others three categories record a decreasing market interest. Respectively the small formats of drawing are not well presented goods for trade.

The figures prove the relatively negative trend of the market importance for drawings.

4.4.2.3.3 Print-multiple

The printed objects, related to the art market meet considerable decrease in the market importance for the last 10 years.

Art Market Index Top 1000, Print, multiple [February 2000 to February 2001 figures]

	Index (12/1992=100%)	Number of transactions	Volume of transactions (US $)	Maximum price (US $)	Average price (US $)	Benchmark (US $)
Small formats	56.07	4,902	7,162,489	111,537	1,461	531
Medium formats	63.87	11,079	26,386,306	480,000	2,382	709
Large formats	75.90	11,158	33,105,182	700,000	2,967	822
Very large formats	79.68	4,523	20,838,474	720,000	4,607	1,482
Print, multiple	71.36	31,662	87,492,451	720,000	2,763	857

Table 10. Print, multiple: art market index

The leader in the negative market importance is the art object with small formats. The decrease of the market index is till 56,07. All other print formats also keep this negative market tendency.

Sculpture

The art objects, related to the sculpture sub domain keep a relatively constant place in the market as shown below.

Art Market Index Top 1000, Sculpture [February 2000 to February 2001 figures]

	Index (12/1992=100%)	Number of transactions	Volume of transactions (US $)	Maximum price (US $)	Average price (US $)	Benchmark (US $)
Small formats	71.84	2,772	19,757,319	600,000	7,127	2,018
Medium formats	80.08	4,108	97,943,045	12,750,000	23,842	4,261
Large formats	115.34	962	74,105,033	10,460,100	77,032	15,624
Monumental formats	131.94	175	42,002,937	13,000,000	240,017	44,692
Sculpture	102.99	8,017	233,808,334	13,000,000	29,164	9,039

Table 11: Sculpture: art market index.

It is important to notice that the relative market importance of sculpture whit small formats has decreased, but the importance of the large sculpture formats has recorded an increasing trend[4].

According to this selective difference in the market indexes of sculpture per formats, the average weight of the sculpture art objects is kept on constant level.

The dynamics of the market indexes of the sculptures as art objects show the decrease for the small and medium formats, but describe the increased importance of the largest sculpture objects.

4.4.2.3.4 Photography

The art objects related to photography is assessed in the table below.

[4] Four formats of sculptures are considered
small formats, high and weight below 30cm;
medium formats, between 30-80cm;
large formats, between 80-200cm;
monumental formats, above 200cm;

Art Market Index Top 1000, Photography [February 2000 to February 2001 figures]

	Index (12/1992=100%)	Number of transactions	Volume of transactions (US $)	Maximum price (US $)	Average price (US $)	Benchmark (US $)
Small formats	98.40	1,728	6,727,690	282,045	3,893	1,105
Medium formats	130.73	4,619	26,006,919	382,175	5,630	1,689
Large formats	142.70	935	16,550,821	480,000	17,701	5,711
Photography	141.77	7,282	49,285,430	480,000	6,768	2,393

Table 12. Photography: art market index.

This category of art objects has recorded a growing importance on the market. The average market index for the 10 years period is 141,77. Photography is therefore confirmed as an interesting area of investment.

It is worth to mention that the large formats photography are leaders in the market, even if in the considered period they have shown a relatively low market index. (Interest among public has been arising in the last 2-3 years.)

As for the medium formats photography, the market index keeps relatively constant positives trend and preserve the importance of the photography objects as market goods.

4.4.2.4. Education and e-learning

E-learning, or the digital provision of educational material and services, is in many ways the field in which CH institutions have most to offer. As expressed in a report by the Council for Museums, Archives and Libraries (CMAL) "A strategic plan for action" (and which can be interpreted as referring to all types of cultural heritage institution): "Museums, archives and libraries hold great richness and diversity of resources for the whole spectrum of learning, from formal education to the self-renewal gained from the chance encounter with a book, painting or forgotten fact. […] Learning at all stages of life is a crucial force for the improvement of individuals and communities…" ICT can uniquely help to integrate the cultural and educational sectors, and promote the important notion of lifelong learning. The value of providing for learning is reinforced by the findings of a survey in the U.K. carried out by the CMAL in 1998 on behalf of the Campaign for Learning. The survey found that:

- most adults were currently engaged in learning
- more than half did so outside the formal education system
- over half were learning in order to improve the quality of their lives rather than improve work skills or prospects
- the most popular methods of learning were studying or doing practical things alone and exchanging ideas and information with others
- people felt they learnt most at home (57%) or in libraries and museums (36% and 13% respectively); only 29% felt they learnt most at colleges and universities.

Through Web technology and ICT, homes and CH institutions can link up and cater directly to people's preferences in terms of learning, as well as contribute to expanding access and social inclusion from the perspective of creating a "learning society". As "A Netful of Jewels" puts it: "Museum collections and works of art have a special potential to engage people and act as a catalyst for debate and interaction with others and for personal research and enjoyment."

4.4.2.4.1. Services and user expectations

In order to engage people and act as a catalyst, content and services need to be user-oriented. This entails, firstly, content which is tailored to the interests and needs of the users, whether they are individuals, groups or communities of interest. Secondly, it entails as much interactivity as possible. The more users are able to interact and actively do something with the material provided, the greater will be the interest and the greater will be the learning taking place. Thirdly, it entails providing users with a user-friendly interface and simple online tools for manipulation, as well as navigation. Lastly, and related to the previous point, it entails providing the end-user with integrated access to information and resources. As pointed out in "Collections, Content and the Web" in relation to academic users: "…the important issue is not which institutions digitise which materials or on whose Web site they reside. The crucial need for academic users, both faculty and students, is to have the broadest possible access and the most powerful searching tools to locate digital resources wherever they may be found." The desire for integrated resources can be generalized to all end-users. Joining up services is also one of the key recommendations of the QUEST report: "Bringing services together to create a seamless experience for the user is central to the approach that both NDPBs and DCMS could adopt in future: both by NDPBs collaborating with each other as well as other organisations, and by the different constituent parts of the cultural sector being joined up online at a national level."

In order to cope with the high costs of developing high-quality interactive digital educational material, a subscription-based business model has been adopted by cultural organizations in this field. What proportion of online material should be free and what should be charged for is still an unresolved question. The U.K.'s National Grid for Learning seems to take the view that charging for access is acceptable, providing that enough free material is available for a potential subscriber to be in a position to make an informed decision as to whether to subscribe or not. The costs associated with providing content and services of high enough quality and attractiveness to justify monthly or annual fees, restrict this line of activity to major CH institutions, consortia, or new types of heavily funded CH organizations.

An example of a major cultural heritage institution in this field is Louvre.edu. It provides a an interactive space, a "virtual environment", with material that users, individually or as a group, can manipulate to produce something of pedagogic value. Realised by the Musée du Louvre and Pagesjaunes Edition, in partnership with the Ministère de l'Education Nationale. The environment builds on the Louvre's digital library resources and digitised collection objects. Users, who pay a subscription to access the space, are provided with a personal "virtual office", which has a set of functions enabling images, texts and audio commentaries to be combined and regrouped, then stored or downloaded for external use, such as a classroom presentation or on an educational website.

4.5. Prospect Description

4.5.1 REGNET potentialities

REGNET, as a distributed database network accessible through a portal and sub-network organization of regional cultural service centres, aims to introduce a new model of cooperation between the different players in the digital information society, tackling the issues which have been raised in previous paragraphs.

The Regional Poles in the REGNET system are in an ideal position to provide direct support for small and medium-sized cultural heritage institutions in terms of know-how transfer, training and technical assistance. The networked infrastructure provides the means to render these institutions more visible and help tackle their ICT skill shortages, by giving assistance, for example, in terms of project management or setting up databases. It also provides a platform helping them to market their activities, collections, services and products.

As an operational e-business network integrating multimedia industries, content providers and service centres, REGNET has the potential to create a large customer base and a critical mass of digital / physical products which can be marketed through a retail brand. The risks and costs connected to developing and producing unique multimedia products will be cushioned by the network approach. It also provides the capacity for online retail sales, which, as noted before, many CH institutions are poorly prepared for.

The collaborative structure of the REGNET system along with the multimedia facilities provided will ease the process of producing user-oriented high-quality interactive digital educational material.

The REGNET e-commerce platform has the potential for establishing or further developing a cultural heritage brand grounded on authenticity, knowledge-based interpretation and contextualisation, through its re-engineering of e-business processes. The pooling of knowledge and expertise can lead to a greater awareness of where a CH institution's strengths lie and what niche markets can be created.

The technical and legal framework put in place by REGNET streamlines and deals with licence management and intellectual property rights clearance processes. Fast turn-around delivery services become feasible and the investment of time and resources needed to reach industry standard is rendered more cost-effective.

The Cultural Heritage Data Management and Ontology Checker, building blocks of the REGNET system architecture, go towards ensuring interoperable metadata standards, providing a seamless access to the cultural databases on the part of users.

The provision of integrated access to information and resources is an essential feature, as seen, of a user-oriented system.

4.5.2 A UK initiative: Renaissance in the Regions

The UK has some of the finest museums and galleries in the world, and England's regional museums and galleries are a vital resource. They provide rich opportunities for learning; they promote social inclusion; they inspire and foster creativity; and they contribute to economic and social regeneration.

The Renaissance in the Regions report is the outcome of a Task Force set up in 2000 under then-Secretary of State for Culture, Media and Sport Chris Smith in response to people's growing concerns about the state of England's regional museums and galleries. Its recommendations present a once-in-a-lifetime opportunity to transform them.

The report recommends a new, integrated framework for the museums sector based on a network of regional 'hubs' consisting of one museum and gallery service with up to three partners.

Fig 4. Regional hubs in UK
Source: re:source

These hubs can then be developed to promote excellence and be leaders of regional museum practice, working alongside partner organisations such as national and university museums, and strategic bodies such as the new Single Regional Agencies.

Advantages of the new framework

This new framework will enable regional museums to increase their staffing levels; to finance new exhibitions; to partake in skill sharing; and to improve their educational facilities. As a result, the number of visitors will rise and access will be broadened so that people from all sectors of the community can share in the rich benefits their regional museums offer. With better facilities and increased access, museums will be able to play a bigger role in local tourism and regeneration initiatives. More objects will be acquired, so we can preserve more of the past for future generations, and more of the museums' collections will be displayed. And the learning potential of museums can be improved, with more outreach services, an increased investment in web-based education, an 'objects in schools' programme and the introduction of teacher training initiatives to encourage schools to work more closely with local museums, bringing history and community knowledge alive for our children.

Funding requirements

To support the improvements recommended in Renaissance in the Regions, Resource is asking for a significant investment from central Government over the next five years. Over £250 million is required, including some £70 million to be devoted to improving education and learning facilities; £90 million to be spent on increasing access, including improving outreach services; some £25 million on local tourism initiatives; and £27 million on information and communications technology to modernise museums.

Next steps

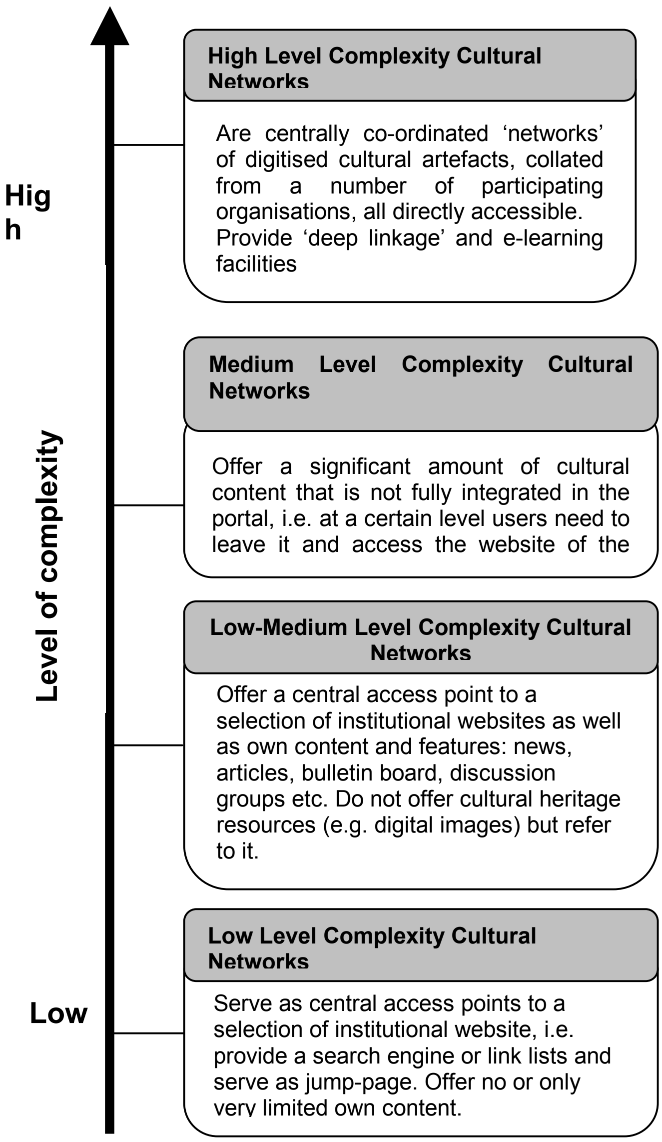
In January 2002 Baroness Blackstone, Minister of State for the Arts, announced her support for the proposals outlined in Renaissance in the Regions. Colleagues at the Government's Department for Culture, Media and Sport (DCMS) have welcomed the report, and the museum world itself has the Task Force's recommendations.

5 5. Competition Analysis

5.1 Main Competitors

A supportive infrastructure can take different forms according to the level of complexity involved. The diagram below illustrates the various types of network functioning as access points to cultural heritage.

Comparable cultural networks with a high level of complexity are AMICO and SCRAN, therefore being main REGNET potential competitors.



Examples:

REGNET: Cultural Heritage in REGional NETwork (www.regnet.org)

SCRAN: Scottish Cultural Resource Access Network (www.scran.ac.uk)

AMICO: The Art Museum Image Consortium (www.amico.org)

Picture Australia - www.pictureaustralia.org

CultureNet Denmark - www.kulturnet.dk

CultureNet Norway - http://kulturnett.no

24Hour Museum, UK- www.24hourmuseum.org.uk

L'Internet Culturel, France - www.portail.culture.fr

Austrianmuseums.net - www.austrianmuseums.net

CultureNet Canada - www.culturenet.ca

Fig. 5. Cultural networks
Source: Digicult study

REGNET, as a distributed database network accessible through a portal and sub-network organization of regional cultural service centres, *aims to introduce a new model of cooperation between the different players in the digital information society*, tackling the issues which have been raised in previous paragraphs.

In the U.K., The Scottish Cultural Resources Access Network (SCRAN), is a partnership of the National Museums of Scotland, the Royal Commission on the Ancient and Historical Monuments of Scotland and the Scottish Museums Council and was founded in Edinburgh in 1996 with an initial funding of £15 million from the Millennium Commission. Working in partnership with museums, galleries, archives, libraries and universities has created a searchable online resource base of one million digitised text and multimedia records; an enormous online interactive library with an extensive and diverse collection of records relating to culture, history and science. Access to the full resources is enabled through a licence, which is generally provided to individual educational institutions through deals negotiated with a central coordinating body (SCRAN IT Ltd). Digitised assets contributed to SCRAN are also governed by a licence agreement protecting the contributors' commercialisation rights. Licensed users can access and download copyright-cleared multimedia resources free at the point of use for educational purposes. At the moment, basic text and thumbnail images are available to all, while licensed users are provided with enhanced text, tools, full size high resolution images, video clips, audio clips, and virtual reality.

An e-shop application has been opened, offering a wide range of high quality CD-ROMs and Resource Packs , while new services such as data host and project management are now offered to cultural institutions. In the near future, SCRAN intends to enter the commercial picture library market through scran.com, extending its user-base beyond educational institutions. However a very conservative approach to its e-commerce facilities will be adopted. If immediate end-user purchase of on-line licences and CD-ROM titles appears to have potential, selective and appropriate additions will be made to the on-line shop.

SCRAN has over a thousand schools subscribing, with contracts with around two-thirds of Scottish schools and a number of English schools as well. A recent *Focus Group Study* carried out in the year 2000, revealed a very high degree of user satisfaction and non-user awareness of SCRAN's commercial products and services. Confirming its success is also the fact that its website recorded 1.75 million hits in the 22 months from its launch.

In May 2001, SCRAN entered into a broad collaborative agreement with The Art Museum Image Consortium (AMICO), an independent non-profit corporation made up of over 30 major museums in the United States and Canada. It, similarly uses a licensing system to permit access to its educational resources. The licence fees go towards the costs of content creation and administration on the part of the holding institutions. Member institutions sign licences and are entitled to designate categories of users. Member institutions support AMICO's activities through the payment of annual dues, scaled to their own budget, that range from $2,500 to $5,000. They contribute catalogue records, images, texts, and multimedia files regularly to the Library (in annual increments). In return, AMICO Members gain access to the entire AMICO Library under a museum license (AMICO 1999b), for use in their educational programs, in galleries, their reference library, curatorial research, and other museum activities. They also profit from the technical expertise and assistance of the central staff of the Consortium and attend the AMICO annual meeting. They govern the organization and participate in its Working Committees.

Developing networks like SCRAN and AMICO require a large-scale up-front investment. The costs of creating a centrally funded programme of digitisation and Web content production are extremely high. Cooperation and collaboration between institutions can help defray costs through economies of scale, but self-sufficiency in financial terms may not be possible. In a "Netful of Jewels" we find the view that "Experience in SCRAN and elsewhere shows that it is not possible to generate sufficient income to completely cover the cost of maintaining these resources and services. While a few museums with collections of high commercial reproduction value may enjoy large scale income, the vast majority of museums will not. In our opinion additional permanent funding will be needed, because museums will be providing more services, and maintaining more permanent public assets."

Networks can help ease funding pressures through economies of scale. Other advantages include:

a) the possibility of streamlining standards for digitisation, storage, captioning, indexing, usability, educational quality and interoperability. All factors ensuring seamless access to resources;
b) the possibility of strategically coordinating complex rights management issues;
c) the possibility of sharing ICT resources, know-how and expertise;
d) the possibility of enabling small CH institutions to participate in e-culture initiatives and make full use of opportunities provided by ICT.

This last point is particularly important, given that an estimated 95% of CH institutions in Europe are not in the position to participate in any kind of digital cultural heritage venture (DigiCULT – Final Report – 6.3) This because they not only lack the financial resources to participate, but also have a shortage of staff, essential skills, and the necessary technologies.

In the view of the experts who took part in the DigiCULT round tables, the lack of staff is the most limiting factor. The QUEST report "Creating e-Value" states that access to skills and people resources was the second most frequently cited problem among NDPBs in the U.K., with the difficulty of finding the necessary financial resources in first place. It is also noted that the highly specialized skills required by technical website development and management arte also in short supply in the commercial sector.

Along with the need to increase the number of staff in small CH institutions, there is also the need for modern training programmes to deal with ICT skill shortages. DigiCULT experts suggest setting up regional information centres or centres of excellence that would help small organizations develop the basic skills needed to participate. This is taken up in "Recommendation 6" of the DigiCULT report, with the recommendation to establish "a support infrastructure in the form of cultural Research & Development centres, (virtual) information service centres of excellence to foster know-how transfer." This is echoed by "A Netful of Jewels", which states that in order to guarantee the sophisticated technical data management, online activities and interactive environments on high capacity servers, "it is likely that central or regional data delivery services, or kitemarked managed services, will be needed."

Supportive organizations and infrastructures would allow small institutions to become more visible in the information society and help promote their services and products.

Involving these institutions in projects run by larger experienced cultural organizations would be a means of aiding knowledge transfer. Thus DigiCULT's "recommendation 7" advises: "setting up online networks and platforms where small cultural heritage institutions become more visible and market their activities, collections, services and products in co-operation with cultural tourism agencies and educational institutions", and "getting small institutions on board of larger projects and initiatives."

5.2 Licensing models/Pricing

Three basic licensing models for REGNET have been identified:

1. Licensing model for commercial purposes;
2. Licensing model for educational purposes;
3. Licensing model to individuals.

They regulate the copyrights and other rights of REGNET digitised objects, including images, texts, multimedia material, etc… granted to licensees.

The main differences among them are the following:

1. the licence for commercial purposes grants rights to profit organisations for the inclusion of digitised objects in commercially available products and services (e.g. CD-ROMs, books, guides, web-sites and so on);
2. the licence for educational purposes grants rights to cultural and educational institutions to provide their audience the possibility to access collections of digitised objects for inclusion in research and educational projects;
3. the licence to individuals allow them to access and use digitised objects for their own private non commercial interests.

For each of them, a licensing agreement has been described in full in the Legal Framework section. They have been adapted from the SCRAN licensing agreements. Pricing issues will be defined in the next period.

5.3 Distribution channels

REGNET distribution strategy is quite different from the one of SCRAN and AMICO. Regional Poles are much more than Distributors (e.g. AMICO model), they are regional supportive infrastructures to users and organisations in the need to access/provide information services and products related to local and international cultural heritage.

In this section, input from tasks 2.3 will be searched for in order to further exploit the legal framework governing the REGNET system and the Regional Poles.

5.4 Regnet Unique Selling Proposition

The value of the REGNET system lies fundamentally in its contribution to the European objective of providing low-barrier access to cultural heritage to all its citizens. Affordable, high-speed Internet access for everyone and networked convergence and interoperability for ease of access are key conditions for the realisation of this objective. Through the European Commission's e-Europe Initiative, national governments have committed themselves to making the implementation of new technologies a key element in regional development agendas, to help provide the necessary infrastructure to make high-speed Internet available in less favoured regions, where private investment alone is not sufficient. REGNET's contribution regards the second key condition for universal access: the possibility of seamless access across institutional and sectoral boundaries.

Seamless access demands agreeing on shared metadata standards for object description. REGNET addresses the issue of metadata definitions for both CH related data and e-business data through a harmonized search and retrieval facility across different domains. The technical and legal framework of the system will enable a collaborative process facilitating standardization, thus providing for seamless cross-institutional and cross-sectoral access.

A further, and equally important, contribution made by REGNET is that of supporting small CH institutions and regional cultural heritage initiatives. REGNET offers a supportive infrastructure helping small and medium-sized museums, galleries, archives and libraries to set up and manage digital collections. Through the system of Regional Poles, small and under-resourced CH institutions are given the chance to participate in e-culture initiatives and make full use of the opportunities offered by new technologies.

The Regional Poles are in an ideal position to connect regional initiatives to a higher level European framework, as well as enabling such initiatives to get on board larger initiatives or projects. Interconnections of this type, both horizontal and vertical, would help smaller institutions in terms of visibility and with regards maximizing the revenue-generating potential of their cultural assets.

The Regional Poles, as language and user-friendly access points to the system as a whole, have the advantage of being able to cater directly to a known environment and audience. They enable access through an interface meeting their audience's needs and are able to add value to services appropriately tailored for the specific communities of users.

The multi-cultural and multi-lingual situation present in EU member states, and the need to give a voice to diverse cultural identities, also lends weight to the value of a regional focus. The possibility of contextualizing services within a larger framework allows this diversity to express itself more effectively. thus expanding access to cultural heritage throughout Europe.

Annex 2: REGNET Mailing list database description

File format: Excel

Number of records: 318

Descriptive fields:

Surname;
Name;
Role;
Organisation;
Department;
Address;
City;
Country;
Cedex;
E-mail;
Tel;
Fax;
URL

Main sources:

KA3 Open House 25-26 September 2000, Luxembourg
The Second Open House on 12-13 March 2001
ICHIM 2001, Milan
DIGICULT ERT
IST UNIT D2 projects partners
CULTIVATE
ICCS internal database
TINC internal database
Updated to: 22/03/2002

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