

**Part B - RTD Proposals:
Description of scientific/technological objectives and workplan**

Cultural Heritage in Regional Networks

REGNET

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B3 OBJECTIVES

Scientific/Technological Objectives

"Internet trading communities and marketplaces with aggregated and customized catalogs, intermediary services such as auctions and reverse auctions, and information brokerage and syndication networks are all examples of Internet business models that combine or interconnect offerings or services from multiple businesses. The explosive and massively uncoordinated innovation in Internet technology and business models makes it an exciting time." This Statement from one of the world's leading organization working towards an interoperable framework in the world of e-commerce applies also to the field of Cultural Heritage. A wide range of EU-funded projects has delivered exciting results in the field of digitisation of 'cultural goods' as well as in the development of interoperable systems providing access to distributed and heterogeneous public catalogues residing in museums, libraries, archives, and galleries or similar organisations. But the concept of a 'European Digital Library' cannot be only based on a technical framework enabling access to digital goods - there is also a need to introduce new ways of cooperation between different stakeholders ('Cultural Organisations', Industries, Administrations, etc) as well as to 'reengineer' traditional business processes in the light of globalisation and world wide markets. The main activities within a 'support environment for i(nternet) markets' comprise: **Content Engineering**, **Platform Engineering**, and **Enterprise Engineering**. The REGNET-Project targets to all three areas: Content Engineering (content management and integration) is a cooperative task of experts in the different domains (libraries, museums, archives, etc) and information specialists from the IT and media industry, Platform Engineering (network management, operations & service management) is based on available standards and methods and executed by integrators and IT-specialists, and Enterprise Engineering (Business Process Engineering, Organisational Changes) is a collaborative work of all addressed stakeholders in the project.

The **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,
- Development 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 via **wireless application protocol** (WAP) using mobile phones,
- Run a **trial service** (demonstration phase) which should be followed by a regular service.

The **technical objectives** of REGNET are:

- Development of the 'REGNET building blocks' which are necessary to build up an appropriate infrastructure to access to catalogues (containing cultural & scientific data, product & service descriptions, etc) in the Cultural Heritage domain.
- Access to the 'REGNET System' via wired communication lines as well as via the wireless application protocol (WAP).

The building blocks of the REGNET system 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)

Work to be done covers the following areas:

- Content Engineering:
 - Digitization of 2- and 3-dimensional objects using data capturing systems already on the market
 - Use of Dublin Core Metadata to enable Cross Domain searches within the 'virtual union' catalogue (generation via an available Metadata Editor or Harvester)
 - Use of documentation standards in the different domains (UNIMARC, CIDOC, ISAD(G), ...)
 - Use or modification of existing Document Type Definitions (XML-DTDs) to describe objects and collections (eg. AMICO, or CIMI-based) as well as products
 - Storage of XML (Extensible Markup Language) structured data in data bases at the content provider's site
 - Development of Stylesheets (XSL) for data presentation in online or printed form (eg. dedicated and personalized catalogues)
- Platform Engineering:
 - Implementation of a B2B-commerce system based on XML-data transfer, following existing and emerging standards as specified by the ebXML community.
 - Implementation of a B2C-commerce system including an 'internet auction' system
 - Integration of a distributed search and retrieval (S&R) component based on Z39.50 standard or similar methodologies based on XML and http protocol, for accessing distributed Cultural Heritage related catalogues as well as product/Service catalogues in the eBusiness environment.

- Integration of a customer management system based on relational data base management supporting customer relationships.
 - Use of an appropriate integration environment for all the middleware components (B2B, B2C, S&R, RDBMS. Metadata Management, ...)
 - Usage of Open Software Standards and Software available preferable in the public domain (eg. LINUX)
 - Usage of low cost hardware
 - Integration of WAP access to the REGNET System
- Enterprise Engineering:
 - Definition of Core Processes for REGNET, comprising at least: 1) access and data entry to *distributed catalogues*, 2) a *shopping cart* system, 3) creation of a *personalized catalogue* based on retrieved data from the 'virtual catalogue' (in printed and electronic form), 4) an *auction system* (eg. duplicates of posters), and 5) a *delivery system* for physical goods (eg. goods from museum stores)
 - Use of XML/EDI (eg: Simple-eCo Elements like: Order, Invoice, Despatch, Report, ...) for exchange of business data (based on ebXML recommendations)
 - Definition of the workflow connected with the creation of a electronic publication (eg.: storyboard development, content management, compilation of data, production, delivery) as reference model for electronic publishing
 - Definition of appropriate 'business profiles' evolved from different functions and processes (eg: 'content manager') for the involved personnel (following the recommendations to the European Parliaments just being worked out).

B4 CONTRIBUTION TO PROGRAMME/KEY ACTION OBJECTIVES

REGNET provides a system which should enable European workers and enterprises, in particular libraries, museums, archives, galleries, and SMEs to increase their competitiveness in the global marketplace. The REGNET System is based mainly on integration work using components from the field of distributed searches, (cultural) data management, e-business, etc. To provide new ways of access to digital libraries REGNET integrates the WAP (wireless application protocol) enabling users to use mobile telephones for their communication needs. REGNET extends the traditional access facilities to distributed heterogeneous catalogues by integration of product and service catalogues managed by e-business systems. Because of the large REGNET consortium real world tests covering 6 European regions (a dozen states) are possible. Tests are carried within the demonstration phase of the REGNET Project. The REGNET-testbed covers both the Development and the trading of goods and services, in particular in the electronic marketplace, and takes into account the different requirements and capabilities of the individual worker (eg. curator, librarian, archivist, artist, journalist,...), consumer (public, tourists,...) and of businesses and organisations, by modelling and reengineering core business processes in the field of Cultural Heritage (CH). Especially the needs involved when accessing CH-related data and using it in personalised way will be addressed. The technical system is based on sound European developments (especially in the field of accessing digital goods using for example the Search & Retrieval Protocol Z39.50 involved in a series of projects within FP4-Telematics for Libraries) and will implement a 'Digital Libraries' concept which is targeted to provide income to all participating organisations (eg.: royalties for dedicated expertises and high quality images, charges for reproduction services, consulting, physical goods, IT-services, etc). REGNET is based on the application of current technologies and provides integration of state-of-the-art components. It will enable the co-operation between SMEs and organisations related to the domain of Cultural Heritage. The implementation of REGNET is built on customisable systems focussing to business-led standardisation work. The project will observe and take into account the ongoing and recent work of CEN/ISSS (Electronic Commerce Workshop) but will also look into recent activities like RosettaNet, eCo-Framework, OBI, etc. With respect to the Cultural Heritage domain recent activities in the field of Metadata (Dublin Core) and interoperability of catalogues (referring to Cultural & Scientific Data as well to 'business' related data) will be taken into account. The model developed for the REGNET-Testbed demonstrates tools and systems and a legal framework for a dynamic networked and virtual organisation - centred around 'Service Centres', facilitating co-operation and the inter-operation of business processes (Business To Business). REGNET will evaluate a networked organisation model (comparable to the Art Museums Image Consortium/AMICO in the United States) and the integration possibilities of tools and systems for co-operative working. The project will enable especially European SMEs (IT-Provider, media enterprises, etc) becoming participants in global business networks by taking advantage of opportunities provided by the latest technologies and business practices in this area (CH). Because of the involvement of different types of organizations (libraries, museums, archives, ...) which have already a wide clientel and different users types (expert, public, tourists, etc) REGNET is well suited to demonstrate the effectiveness and efficiency of the services and products supported by the technical system. The REGNET-network consists mainly not of large organisations but involves especially institutions of local and regional importance. REGNET also contributes to the meta data development which provides the basis for interoperability of systems and data exchange. The project extends the recent works by adding descriptions of business process, work flow, etc to this standards framework. REGNET considers meta data as part of an ontology related to the field of Cultural Heritage.

B5 INNOVATION

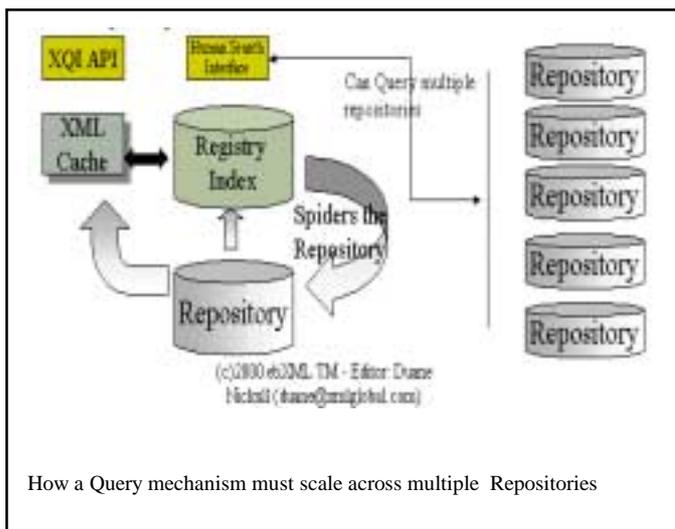
REGNET addresses several 'hot' topics in actual research and development activities: **interoperability** of data stores (catalogues), **content creation and management** in a standardised way, and **electronic business**. The consequence is the reorganisation of existing processes and introduction of computerised functions which makes it worth while making transactions for low money goods (eg. small copyright fees for digital images). Within the REGNET system there are three building blocks which can be considered as vertical functions: 1) **content creation and management** is based on actual standards efforts in the field of the different organisations involved. To provide interoperability of catalogues held in museums, libraries, and archives the semantics for the descriptions of collections and the collection items have to be harmonised. The inclusion of so called 'Dublin Core' meta data is as well an actual topic as the Z39.50-related standardisation work is, which is targeted to a harmonised search and retrieval facility across different domains. REGNET may influence the development of a so called Z39.50-application profile: the Bath-Profile. This technique, to make Online Public Access Catalogues (OPACs) interoperable, is essential to REGNET, since by this way the catalogue of the REGNET shopping system is generated dynamically according to the request of a user. It is foreseen within REGNET to provide digitisation of 2- and 3-dimensional objects. 2) The **platform management** is based on latest internet technology and is the basis for the middle ware being the agent between content and service supplier and the requester (user). It is expected that during the implementation of REGNET the first large trials of systems following the OBI reference architecture will deliver results (RosettaNet). 3) The **enterprise engineering** will focus on some selected business processes and functional units: access to *distributed catalogues*, a *shopping cart* system, creation of a *personalised catalogue* based on retrieved data from the 'virtual catalogue' (in printed and electronic form), an internet *auction system* (eg. offering duplicates of posters), and a *delivery system* for physical goods (eg. goods from museum stores).

On a 'horizontal' basis the XML/XSL-technology is used to structure data semantically and physically. This affects the creation of meta data, describing real (primary) objects (artefacts, naturefacts,...), media objects (photos, videos, ...) or bibliographic type objects (literature in the broadest sense). On the other hand all information within business transactions is wrapped within XML structures: Order, Invoice, Despatch, Report, ...). The recent developments in the field of XML/EDI standardisation will be used (ebXML). Another topic will be the definition of information products by appropriate document type definitions and style sheet. This should enable the 'non-media-professional' end user to generate catalogues or even CD-ROMs on demand. This might be the first step into the direction to create virtual exhibitions on demand by users themselves.

The innovative elements within the REGNET Projects are based on the convergence of different technologies and concepts:

- **Cultural Heritage (CH) related Information Systems vs e-Business Systems:**

Several projects have already dealt with mechanisms to distribute searches in parallel to different and heterogeneous information systems. As starting point experiences in the library field have been used (ISO 23950). The evolving XML standard is just underway to provide novel solutions to this problem (eg COVAX project/EU, MIX project/USA). But this problem now is also addressed by the e-business community: distributed product/service catalogues have to be queried in a unified way. The ebXML group has outlined this problem in the following way:



This figure demonstrates that there is a similar problem to distributed searching cultural heritage related data bases. In the framework of REGNET the addressed "Repositories" contain data referencing products in a museum store, services provided by museum experts, etc.

⇒ **REGNET will provide a unique access facility to query and retrieve simultaneously CH- and e-business related data via the search entry in the REGNET-Portal.**

- **Data formatting standards in CH vs EDI within business oriented systems**

To enable the exchange of and access to data two basic elements have been provided: 'compatible' semantics and data structures. XML provides a sound standard for both areas: CIMI the Consortium for the Interchange of Museum has run a test bed project demonstrating the usage of Dublin Core meta data wrapped in an XML structure within the domain of Cultural Heritage. The e-business is developing meta data systems based on EDI (Electronic Data Interchange) as starting point for the development of DTDs (document type definitions).

⇒ **REGNET will provide a unique facility to meta data definitions for both CH-related data and e-business related data via the REGNET - Ontology subsystem. REGNET addresses not only meta data related to objects, but includes also definitions of work flows, business processes, etc. which lead to the concept of Ontology within the Cultural Heritage domain.**

(*Ontology* "An explicit formal specification of how to represent the objects, concepts and other entities that are assumed to exist in some area of interest and the relationships that hold among them.")

- **Wireless communication vs wired access facilities**

Due to the participation of one of the world leading producer of mobile phones, REGNET can offer an WAP based access to the REGNET System. This provides a novell access method for: teleshopping, e-commerce, data base browsing, and virtual visit to museum or other masterpieces.

⇒ **REGNET will examine how next generation mobile networks can be exploited to widen the potentiality of WEB services in the field of Cultural Heritage. Appropriate gateway functions and interworking units will be envisaged to appropriately interface the REGNET architecture with the UMTS (Universal Mobile Telecommunication Systems) structure and**

ensure a seamless provisioning of REGNET services to mobile customers. Furthermore, the possibility of having access to the “mobile community” will enlarge the set of services that will be part of the REGNET demonstrator.

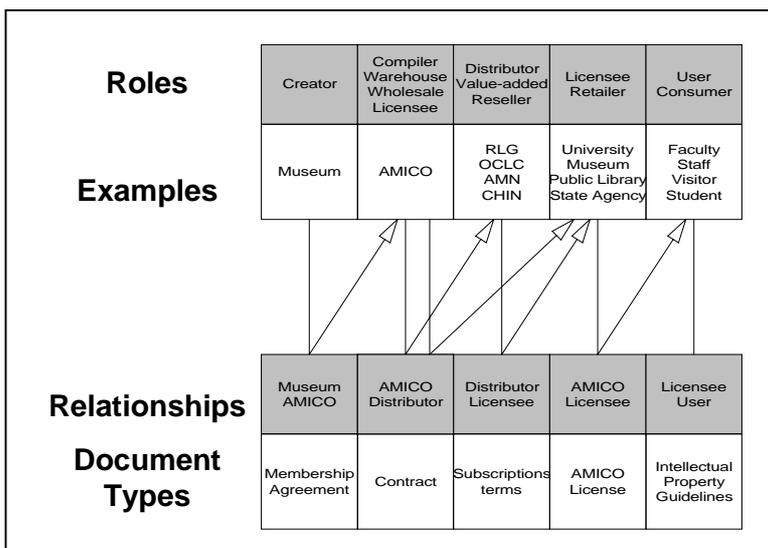
(REGNET aims at demonstrating such enhanced capabilities through a real UMTS network. However, even today, it is not clear when European mobile operators will be ready to open UMTS services and therefore the project will manage this risk through backup solutions. Since the UMTS backbone will rely upon the GPRS (General Packet Radio System) IP infrastructure, WEB services can be demonstrated through an existing GPRS network. This does not tamper the demonstrator goodness because most of the QoS (Quality of Service) issues to be evaluated during the experimentation (access delay, service quality) can be regularly assessed also through a GPRS system.)

The mobile branch of the REGNET activities will also open the possibility of investigating novel and further application that, although not explicitly incorporated in the project workplan, might show the way for future research activity. This encompasses the use of Bluetooth technology for accessing indoor LANs as well as the interfacing with broadband mobile systems being studied and standardized in ETSI projects (BRAN).

The applications developed within the REGNET project will be designed suitable to wireless applications as far as possible.

- **Traditional forms of organisations and business processes vs virtual enterprise concepts**

Organisations, operating in the field of Cultural Heritage are mostly accustomed to traditional ways how to do their day to day business. The global market and new possibilities of doing business open also new forms of co-operations and activities for that organisations. Besides the enabling (e-business) technologies it is essential to introduce new ways of partnerships. As an example the 'partnership model' worked out within the AMICO framework (Art Museums Image Consortium) might be taken. This model integrates different stakeholders (content providers/creators, Compiler Warehouse/Wholesale Licensee, Distributor/Value-added Reseller, Licensee Retailer, User/Consumer) via a legal framework and is targeted to enable income to the different partners of the system. Within the demonstration phase of REGNET a network of different partners (Content Providers, Regional Poles/Business Access Points, Service Providers) will be established. One of the partners has already set up a 'service centre' based on the basic ideas of one of the TEN-Telecom Projects (MOSAIC: Museums Over States and vRtual Culture).



MOSAIC was probably too ambitious and too early (1996), but the basic idea to form a network of cultural service centre was very appropriate to support organisations (es-pecially small and medium sized) in the Cultural Heritage domain.

⇒ REGNET will provide the technical infrastructure to set up even low costes service centres which can be integrated in a 'service network'. The REGNET

Legal Framework will govern this network which should enable income to the different stakeholders. Within this framework REGNET will be the 'layer' between Content Providers and Distributors or Value-added Resellers. The membership concept of the REGNET-service centres will generate critical mass of digital or physical goods contained in

Content Provider's organisations. To demonstrate the benefit of business to business (B2B) relationships the process of generating an electronic publication (eg. CD-ROM) will be modelled and implemented.

- **Legacy information systems vs scalable user oriented information systems**

In the field of Cultural Heritage traditional information and documentation systems are mainly used. Internet technology allows the introduction of scalable and ubiquitous documentation systems. A first step has been done already some time ago with the development of the 'Reggie' Meta Data Editor. This system enabled the entry of Dublin Core meta data delivering a structured record (selectable: XML, RDF, etc).

⇒ REGNET will provide a data entry facility using WEB-browsers and adaptable to different needs within different domains (Museums, Library, Archives). This facility will support existing standards (ICOM/CIDOC, UNIMARC, ISAD(G), etc) and is configurable by the REGNET System user. At the e-business level REGNET provides the generation of a customised shopping cart systems within the business to consumer (B2C) framework.

REGNET will integrate in an original way all these aspects into one single system which will be hosted on 'cultural service centres' providing 'business access points' to the CH related user community. The REGNET System will enable novel business processes and novel forms of interactions between users and data (information). The basic elements ('building blocks') of REGNET include:

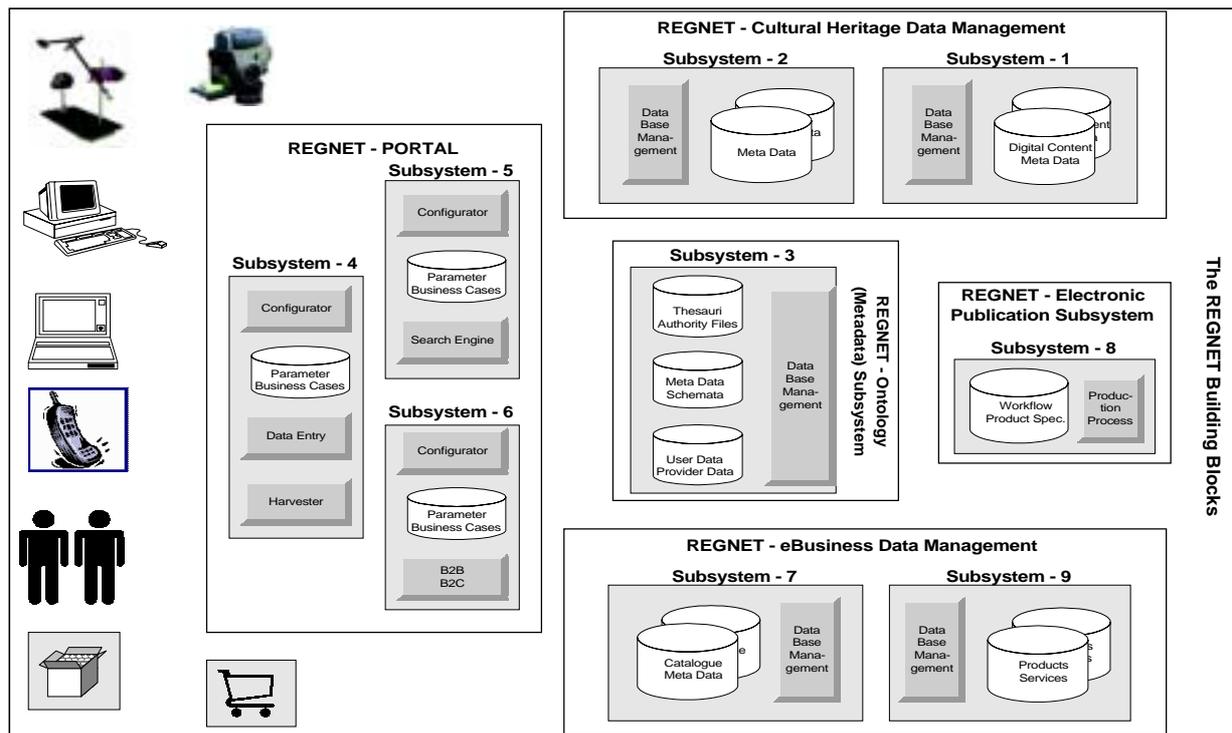
- REGNET-Portal,
- REGNET-Cultural Heritage Data Management,
- REGNET-eBusiness Data Management,
- REGNET-Ontology Subsystem,
- REGNET-Electronic Publishing System

The REGNET System will be an 'enabler' to set up an 'virtual enterprise' consisting of a network of service centres which are able to support also small and medium sized organisations especially located in regions where local (IT-) services in general are not available.

B6 PROJECT WORKPLAN

6.1 INTRODUCTION

The REGNET Project is developing building blocks to set up a service infrastructure for organisations and users in the field of Cultural Heritage. These blocks which constitute the REGNET-System are supporting access to cultural & scientific information as well as to product & service information offered by different organisations. The building blocks are outlined in figure 1.



To achieve the objectives of the REGNET Project the project is divided in two Phases:

Phase I is dedicated to the development and implementation phase to set up the service infrastructure which is build upon the REGNET 'building blocks' and consists of three work packages (WP1, WP2, WP3).

Phase II includes the trial service and is defined as Demonstration Phase (WP4).

Other activities include information dissemination, exploitation and project management (WP5, WP6, WP7) and will last during the whole project life time covering both phases.

Since the trial service is integral part of the REGNET project Phase II is not separated from the rest of the project; this means that WP4 (demonstration) is part of an overall and unique project structure.

Work packages are broken down in different **tasks** each of them having a responsible task manager. The content and targets of each task is contained in a 'task brief' which will be elaborated before a task starts by the responsible task manager according to the descriptions included in the work packages.

Due to the complexity of the project the **work plan** identifies three **work areas (A, B, C)** in Phase I and two **work areas (D,E)** in Phase II.

Work Area A refers to the content creation and content management,

Work Area B refers to the platform engineering (integration of middleware components) and the development of the REGNET building blocks, and

Work Area C covers the enterprise engineering (business process engineering, definition of work flow) and the development of a legal framework.

Work Area D covers the domain specific aspects of the REGNET-System.

Work Area E contains the management of the demonstration phase.

The different **Work Packages** contain:

- **WP1**
Analysis of the State of the Art and Development of Concepts
Definition of content to be provided, development of a documentation and digitalisation plan for content creation and management (Work Area A).
Identification of standards to be used, development of the user requirements and system requirements & specifications (Work Area B).
Development of the legal framework and partnership model, definition of supported business functions, identification of market (Segments) and user groups (Work Area C)
- **WP2**
Implementation of the System and Preparation of Services and Product Generation
Preparation of content and products (Work Area A).
System implementation; development of the building blocks; integration into the REGNET-System (Work Area B).
Settlement of the legal framework, business process (re-) engineering, market preparation (Work Area C).
- **WP3**
Validation of the REGNET-Demonstrator and Preparation of the Demonstration Phase
Validation of the REGNET-demonstrator; preparation of the demonstration phase.
- **WP4**
Demonstration
The REGNET-System will be used in a trial services which includes an initial testing phase (selected users). The REGNET-demonstration part of the project includes: execution of the demonstration phase (trial service); refinement of system and services where appropriate and necessary; analysis of the trial service.
- **WP5**
Development of an exploitation plan

Development of an exploitation plan on different levels (content providers, service providers, business access points). The plan has to include new models of co-operations and partnerships.

- **WP6**

Information Dissemination

Information dissemination will be done using different types of dissemination channels: Project WEB-Site, conferences, seminars, printed and electronic publications. Special attention will be drawn to the participation of project members in relevant standardisation committees and workshops.

- **WP7**

Project Management

This work package includes management, reporting, quality assurance, etc. The management activities are split up into contractual and technical matters and are covered by two different partners.

Risk management (Development)

Milestones are put after WP1, WP2 which are essential for the preparation and the success of the demonstration. The work done within these two WP's is well defined and dedicated to the three work areas. Failure of one of these work packages means termination of the project. To handle the complexity of the whole project the work areas have been introduced. Each work area has a work area manager. The risk in **work area A** consists in not having representative data for both 'data management blocks' (cultural heritage, e-business). This will be unlikely since there is a large group of content providers in the project most of them already having digitised data.

The work in **work area B** (mainly included in WP1+WP2) refers mainly to the integration of already available components preferable from the public domain. The use of standards like XML and different meta data schemas (relevant for both areas: cultural heritage and e-business) supports the exchange of data to a great deal. Interoperability (internally between the REGNET Subsystems and externally to foreign systems) is based on standard protocols like http and ISO 23950. The risk not finding a unique platform for the implementation of all subsystems and having problems in interfacing them might be minimal but there is also a task dedicated to that question. Partners working in area B have in most cases already being involved in relevant projects of FP4 or are just engaged in projects of FP5. Specification and development work will be based on sound methodologies and systems like UML.

Work area C refers to all legal and contractual matters. Partnership models will be based on experiences already made in other environments, eg. like the AMICO (Art Museum Image Consortium) project. The work related to business processes and functions can also be based on existing standards for example in the work flow domain.

To minimise the risk to handle a very large consortium a very detailed management structure down to the task level has been introduced.

The partners of the REGNET project are grouped in:

Group-1: Content Providers:	P2, P6, P7, P8, P14, P10, P12, P17
Group-2: Developers:	P3, P16, P20, P21, P24, P25, P26
Group-3: Regional Poles:	P5, P11, P15, P23, P18
Group-4: Developers/Poles:	P1, P4, P9, P13, P19, P22

Members of group-4 have two roles combined. Regional Poles are providing the technical infrastructure to run a REGNET-System and can be considered as 'nodes' of the REGNET-service network.

The subsystems of the REGNET -System as included in figure 1 are:

Subsystem-1 (Repositories):

Repositories containing digital surrogates of 'primary' (real world) objects. A repository may be accompanied by a metadata data base within this subsystem which can be accessed by standard protocols (http, ISO-23950). Using conversion facilities data from legacy systems or not compliant with the REGNET meta data framework can be imported into the REGNET environment.

Subsystem-2 (Reference System):

This subsystem contains meta data related to the Repositories included in Subsystem-1 or Subsystem-7. It allows distributed searches over those repositories. The metadata data base is populated by uploads of Subsystem-1 or Subsystem-7, or meta data generation done within Subsystem-4 (data entry, harvesting).

Subsystem-3 ('Knowledge Base'):

Subsystem-3 includes data about repositories, document types, domains, user profiles, product catalogues, terminologies, external systems, etc. It can be considered as a layer between the 'user access points' (Subsystem-4, -5, -6) and the different repository (content) related subsystems (Subsystem-1, -2, -7). It includes different administration tools for managing authority files, thesauri, meta data schemas, document type definitions, etc). This subsystem might be connected to external registries.

Subsystem-4 (Data Generation):

This subsystem enables the generation of meta data either via a (configurable) data entry facility (loaded into the user's browser) or by sending a harvester to repositories included in Subsystem-1. Meta data are either stored in Subsystem-1 or -2. The data entry and harvester process can be triggered by document type definitions (residing in Subsystem-3) according to the needs of the end user (librarian, archivist, curator). The client connected to this subsystem might even support multimedia and 2/3D data input of digital content.

Subsystem-5 (Search System):

The Search Subsystems allows distribution of searches to different repositories and the merging of different result sets delivered by repository subsystems. It includes a subject gateway which directs queries in a domain or user profile specific way to repositories. Besides this query mechanism which is well known in the library/archive/museum world (Z39.50 based), this subsystem also provides the user with the possibility to distribute queries to product catalogues related to e-commerce systems (eg. used by managing a museum store). Searches can be done on collection or item level.

Subsystem-6 (e-business):

Besides the pure access to digital collections of cultural and scientific content, REGNET supports business processes based on digital surrogates. This can be a simple buying function (B2C) of digital surrogates or real objects (museum shop) or even an order to produce a personalized CD-ROM based on raw data coming and preselected (shopping cart) from different repositories. The second case involves Subsystem-8 which supports the generation of digital goods and might involve several suppliers in a B2B case. All subprocesses (electronic payment, copy right management, data entry, etc) are invoked within this subsystem.

Subsystem-7 (Electronic Product Catalogue):

This subsystem includes meta data describing products (real or digital) offered by content providers up to services offered by service providers (eg. consultancy, digitisation projects, etc). REGNET allows also search and retrieval of distributed product (and service) catalogues (as included in the ebXML specifications). Doing this the user will be able to compare products which supports his/her buying decision.

Subsystem-8 (Production Process):

Raw data located in digital repositories combined with commercial available data are the basis for personalised electronic publishing. The products generated are bound to a workflow which specifies the production process. Underlying knowledge and methodologies are accessible via this subsystem. Besides the production of CD-ROMs (eg. using predefined story boards and workflows) the creation of virtual galleries or exhibitions or even WEB-sites are supported. The use of XSL and XML-DTDs in defining products will be investigated. Products or new workflow specifications, generated by Subsystem-8 can be used as new input to the existing range of products and services.

Subsystem-9 (Products and Services):

This subsystem provides access to products and services and transforms requests into real orders or logistic processes. Contractual matters and partnerships among the different stakeholders in the REGNET-System (Content Provider, Service Centres, Added Value Generator, Dealer, etc) are dealt with by this subsystem.

Technology

All subsystems are based on state of the art technical platforms (UNIX, Windows). Initially the demonstrator will be developed on LINUX server systems containing components available in the public domain: WEB-Server (eg. Apache), Data Base System (eg. MySQL), XML-Tools, Z39.50-Server as well as generic Internet Services like email, ftp, list management. An important issue (especially in Subsystem-8) will be a component supporting cooperative work. Protocols used comprise TCP/IP, ISO 23950 and e-business related as far as available (eg. ICE). WAP will be used to access the REGNET 'business assecc points'. Data exchange will be based on the different XML developments already available in the field of Cultural Heritage (XML/Dublin Core, EAD-XML, etc) and e-Business (eg. XML/EDI, ebXML, etc). Integration work on the subsystem level (each subsystem consists of a set of servers) will be done in Java as far as possible. Dedicated clients are in general not necessary, but an exception might be a client system connected to Subsystem-4 enabling 2D or 3D data capture. The repositories are either based on traditional relational data base systems (eg. integrated via DBD-DBI mechanism to the WEB-Environment or managed by XML Servers. There are three portals to the user (Subsystems 4 to 6) which might be integrated into one. These subsystems can be accessed via different devices and protocols. Special emphasis is put on the introduction of devices enabling wireless access to the REGNET access points implemented within subsystems 4 to 6.

To generate necessary specifications UML will be used.

		Leader	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22	P23	P24	P25	P26	
WP1	Analysis of the	P19	15	1	6	10	2	1	1	1	6	1	1	1	9	1	2	8	1	5	15	8	6	7	2	18	5	11	144
T1.1	Def.of Content	P19	1	1		2	1	1	1	1	1	1	1	1	1	1	1		1	1	1			1	1				20
T1.2	Doc&Dig.Plan	P4	1			2	1				1				1		1			1	1			1	1				11
T1.3	Ident.of.Standards	P4	1												1					2	1					2		1	8
T1.4.1	Repository	P9	1			2					2							2					2	2					11
T1.4.2	Reference System	P19	4														2												6
T1.4.3	Knowledge Base	P21	2																		1	2	4			2			11
T1.4.4	Data Generation	P13	2								2				4													2	10
T1.4.5	Search System	P16	1															4				2						2	9
T1.4.6	e-Business	P19																				4				4		2	10
T1.4.7	Product Catalogue	P19																				2				2			4
T1.4.8	Production Process	P3			4										2														6
T1.4.9	Products and Servic.	P19			2																	2							4
T1.4.10	GUI/Portals	P26																				2		2				2	6

Task decomposition and responsibilities (1)

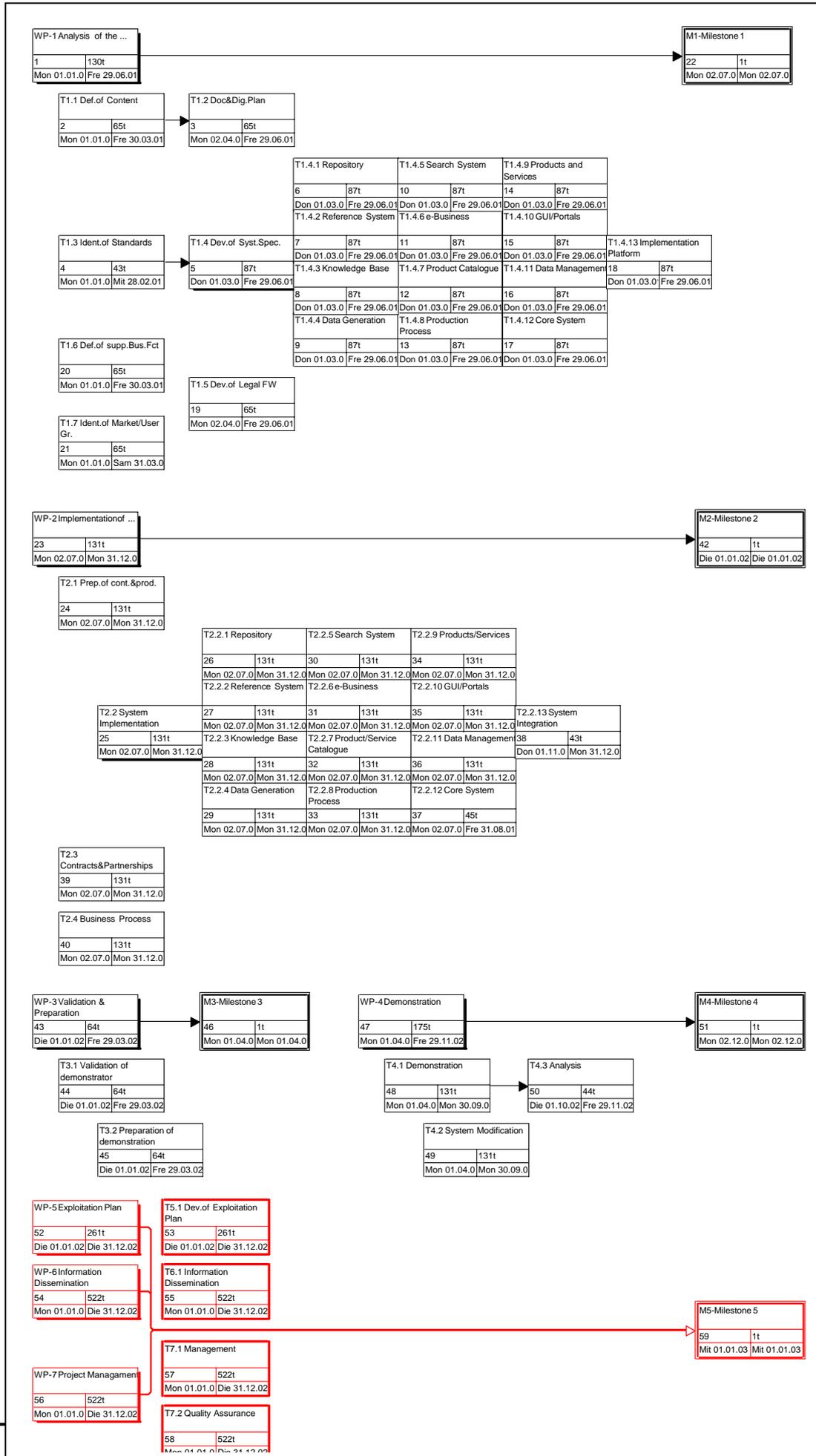
		Leader	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22	P23	P24	P25	P26	
WP2	Implementation ..	P24	22	2	9	10	2	2	2	2	8	2	2	2	11	2	4	12	4	3	17	9	9	12	2	22	8	15	195
T2.1	Preparation of ...	P4	2	2		3	2	2	2	2	2	2	2	2	2	2	4		4	2			4	2					43
T2.2.1	Repository	P9	3			3					3						3					3	3						18
T2.2.2	Referenc.System	P19	6														3												9
T2.2.3	Knowledge Base	P21	3																	2	3	6			2				16
T2.2.4	Data Generation	P13	3								3				6												2		14
T2.2.5	Search System	P16	3														6				3						2		14
T2.2.6	e-Business	P19																			6				6		2		14
T2.2.7	Product Catalog.	P19																			3				3				6
T2.2.8	Product. Process	P3			6										3														9
T2.2.9	Products and Ser.	P19			3																2								5
Γ2.2.10	GUI/Portals	P26																			3		3				6		12
Γ2.2.11	Data Managem.	P20																				3					3		6
Γ2.2.12	Core System	P24																			1				4				5
Γ2.2.13	System Integr.	P24																							4				4
T2.3	Contracts&Part.	P1	2																	1							2		5
T2.4	Business Process	P24				2																			3	3			8
T2.5	Market Engin.	P25				2																	2			3			7
WP3	Validation/Prep.	P4	4	1	0	4	2	2	2	2	4	2	2	2	4	2	2	0	2	4	4	0	0	4	3	0	0	0	52
T3.1	Val.demonstrator	P4	1	1		1	1	1	1	1	1	1	1	1	1	1	1		1	1	1			1	1				19
T3.2	Prep.demonstr.	P4	3			3	1	1	1	1	3	1	1	1	3	1	1		1	3	3			3	2				33
WP4	Demonstration	P9	4	3	1	4	4	3	3	3	5	3	3	3	5	3	5	1	3	4	5	1	1	3	3	2	1	1	77
T4.1	Demonstration	P9	3	3		3	3	3	3	3	3	3	3	3	3	3	3		3	3	3			3	3				57

Task decomposition and responsibilities (2)

Nr.	Activity	Q1 '01			Q2 '01			Q3 '01			Q4 '01			Q1 '02			Q2 '02			Q3 '02			Q4 '02		
		01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12
1	WP-1 Analysis of the ...	[Gantt bar from Q1 '01 01 to Q1 '02 03]																							
2	T1.1 Def.of Content	[Gantt bar from Q1 '01 01 to Q1 '01 03]																							
3	T1.2 Doc&Dig.Plan	[Gantt bar from Q1 '01 04 to Q1 '01 06]																							
4	T1.3 Ident.of Standards	[Gantt bar from Q1 '01 01 to Q1 '01 03]																							
5	T1.4 Dev.of Syst.Spec.	[Gantt bar from Q1 '01 04 to Q1 '02 03]																							
6	T1.4.1 Repository	[Gantt bar from Q1 '01 04 to Q1 '02 03]																							
7	T1.4.2 Reference System	[Gantt bar from Q1 '01 04 to Q1 '02 03]																							
8	T1.4.3 Knowledge Base	[Gantt bar from Q1 '01 04 to Q1 '02 03]																							
9	T1.4.4 Data Generation	[Gantt bar from Q1 '01 04 to Q1 '02 03]																							
10	T1.4.5 Search System	[Gantt bar from Q1 '01 04 to Q1 '02 03]																							
11	T1.4.6 e-Business	[Gantt bar from Q1 '01 04 to Q1 '02 03]																							
12	T1.4.7 Product Catalogue	[Gantt bar from Q1 '01 04 to Q1 '02 03]																							
13	T1.4.8 Production Process	[Gantt bar from Q1 '01 04 to Q1 '02 03]																							
14	T1.4.9 Products and Services	[Gantt bar from Q1 '01 04 to Q1 '02 03]																							
15	T1.4.10 GUI/Portals	[Gantt bar from Q1 '01 04 to Q1 '02 03]																							
16	T1.4.11 Data Management	[Gantt bar from Q1 '01 04 to Q1 '02 03]																							
17	T1.4.12 Core System	[Gantt bar from Q1 '01 04 to Q1 '02 03]																							
18	T1.4.13 Implementation Platform	[Gantt bar from Q1 '01 04 to Q1 '02 03]																							
19	T1.5 Dev.of Legal FW	[Gantt bar from Q2 '01 04 to Q2 '01 06]																							
20	T1.6 Def.of supp.Bus.Fct	[Gantt bar from Q1 '01 01 to Q1 '01 03]																							
21	T1.7 Ident.of Market/User Gr.	[Gantt bar from Q1 '01 01 to Q1 '01 03]																							
22	M1-Milestone 1	[Milestone diamond at Q1 '02 07]																							

Nr.	Activity	Q1 '01			Q2 '01			Q3 '01			Q4 '01			Q1 '02			Q2 '02			Q3 '02			Q4 '02		
		01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12
23	WP-2 Implementation of ...	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
24	T2.1 Prep.of cont.&prod.	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
25	T2.2 System Implementation	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
26	T2.2.1 Repository	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
27	T2.2.2 Reference System	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
28	T2.2.3 Knowledge Base	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
29	T2.2.4 Data Generation	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
30	T2.2.5 Search System	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
31	T2.2.6 e-Business	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
32	T2.2.7 Product/Service Catalogue	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
33	T2.2.8 Production Process	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
34	T2.2.9 Products/Services	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
35	T2.2.10 GUI/Portals	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
36	T2.2.11 Data Management	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
37	T2.2.12 Core System	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
38	T2.2.13 System Integration	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
39	T2.3 Contracts&Partnerships	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
40	T2.4 Business Process	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
41	T2.5 Market Engineering	[Gantt bar from Q3 '01 07 to Q4 '01 12]																							
42	M2-Milestone 2	[Milestone diamond at Q1 '02 01]																							

Nr.	Activity	Q1 '01			Q2 '01			Q3 '01			Q4 '01			Q1 '02			Q2 '02			Q3 '02			Q4 '02		
		01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12
43	WP-3 Validation & Preparation	[Gantt bar from Q1 '02 01 to Q1 '02 03]																							
44	T3.1 Validation of demonstrator	[Gantt bar from Q1 '02 01 to Q1 '02 03]																							
45	T3.2 Preparation of demonstration	[Gantt bar from Q1 '02 01 to Q1 '02 03]																							
46	M3-Milestone 3	[Milestone diamond at Q1 '02 04]																							
47	WP-4 Demonstration	[Gantt bar from Q1 '02 04 to Q2 '02 03]																							
48	T4.1 Demonstration	[Gantt bar from Q1 '02 04 to Q2 '02 03]																							
49	T4.2 System Modification	[Gantt bar from Q1 '02 04 to Q2 '02 03]																							
50	T4.3 Analysis	[Gantt bar from Q1 '02 04 to Q2 '02 03]																							
51	M4-Milestone 4	[Milestone diamond at Q2 '02 12]																							
52	WP-5 Exploitation Plan	[Gantt bar from Q1 '02 04 to Q4 '02 01]																							
53	T5.1 Dev.of Exploitation Plan	[Gantt bar from Q1 '02 04 to Q4 '02 01]																							
54	WP-6 Information Dissemination	[Gantt bar from Q1 '02 04 to Q4 '02 01]																							
55	T6.1 Information Dissemination	[Gantt bar from Q1 '02 04 to Q4 '02 01]																							
56	WP-7 Project Managment	[Gantt bar from Q1 '02 04 to Q4 '02 01]																							
57	T7.1 Management	[Gantt bar from Q1 '02 04 to Q4 '02 01]																							
58	T7.2 Quality Assurance	[Gantt bar from Q1 '02 04 to Q4 '02 01]																							



Workpackage list

Work-package No ¹	Workpackage title	Lead contractor No ²	Person-months ³	Start month ⁴	End month ⁵	Phase ⁶	Deliverable No ⁷
1	Analysis of the State of the Art and Development of Concepts	19	144	0	5	R	D1 D2 D3
2	Implementation of the System and Preparation of Services and Product Generation	24	195	6	11	R	D4 D5 D6
3	Validation and Preparation	4	52	12	14	R	D7 D8
4	Demonstration	9	77	15	23	D	D9 D10 D11
5	Development of an exploitation plan	26	12	6	23	R	D12
6	Information Dissemination	13	12	0	23	R	D13
7	Project Management	1	80	0	23	R	D14 D15
	TOTAL		572				

¹ Workpackage number: WP 1 – WP n.

² Number of the contractor leading the work in this workpackage.

³ The total number of person-months allocated to each workpackage.

⁴ Relative start date for the work in the specific workpackages, month 0 marking the start of the project, and all other start dates being relative to this start date.

⁵ Relative end date, month 0 marking the start of the project, and all ends dates being relative to this start date.

⁶ Only for combined research and demonstration projects: Please indicate R for research and D for demonstration.

⁷ Deliverable number: Number for the deliverable(s)/result(s) mentioned in the workpackage: D1 - Dn.

Deliverables list

Deliverable No ⁸	Deliverable title	Delivery date ⁹	Nature ¹⁰	Dissemination level ¹¹
D1	Content Creation and Content Management	6	R	RE
D2	Specifications and State of the Art	6	R	PU
D3	REGNET - Enterprise Engineering and Market Analysis	6	R	PU
D4	Available Content and Products	12	R	RE
D5	Code, User Documentation and Installation Manual	12	D	RE
D6	System Services and Business Processes	12	R	PU
D7	Validation of the REGNET System operation	15	R	PP
D8	Preparation of the REGNET - Demonstration Phase	15	R	RE
D9	6 REGNET System operation	24	R	RE
D10	7 Demonstration (Trial Service)	24	R	PU
D11	8 REGNET trial service and recommendations	24	R	PU
D12	9 Exploitation Plan	24	R	RE
D13	Information Dissemination Activities	24	R	PU
D14	10 Quality Assurance System	24	R	RE
D15	REGNET - Project: a successful European Initiative	24	R	PU

⁸ Deliverable numbers in order of delivery dates: D1 – Dn

⁹ Month in which the deliverables will be available. Month 0 marking the start of the project, and all delivery dates being relative to this start date.

¹⁰ Please indicate the nature of the deliverable using one of the following codes:

R = Report

P = Prototype

D = Demonstrator

O = Other

¹¹ Please indicate the dissemination level using one of the following codes:

PU = Public

PP = Restricted to other programme participants (including the Commission Services).

RE = Restricted to a group specified by the consortium (including the Commission Services).

CO = Confidential, only for members of the consortium (including the Commission Services).

Workpackage 1 Analysis of the State of the Art and Development of Concepts

Workpackage number :	1			Start date or starting event:						Month 1			
Participant number:	1	2	3	4	5	6	7	8	9	10	11	12	13
Person-months per participant:	15	1	6	10	2	1	1	1	6	1	1	1	9
Participant number:	14	15	16	17	18	19	20	21	22	23	24	25	26
Person-months per participant:	1	2	8	1	5	15	8	6	7	2	18	5	11

Objectives**Analysis of the State of the Art and Development of Concepts** (Phase I)Work Area A:

Task 1.1: Definition of content to be provided

Task 1.2: Development of a documentation and digitization plan for content creation and management

Work Area B:

Task 1.3: Identification of standards to be used

Task 1.4: Development of the System Specifications

Work Area C:

Task 1.5: Development of the Legal Framework and Partnership Model

Task 1.6: Definition of supported Business Functions

Task 1.7: Identification of Market (Segments) and User Groups

Description of workWork Area A:

Task 1.1: Analysis of collections and items located in libraries, museums, archives, research centres, etc in a participating region.

Task 1.2: Development of a documentation and digitization plan based on sound methods and standards, following best practice models.

Work Area B:

Task 1.3: Review of existing standards and methods relevant to REGNET

Task 1.4: Definition of the Functional Requirements; development of the REGNET- Architectural Design; identification of Software Components; detailed System Design; definition of hardware, system, and network requirements; identification of tools.

Work Area C:

Task 1.5: Development of a legal framework; development of Partnership Models; (stakeholders at regional, national, and international levels, service providers); development of a "Virtual Enterprise Concept"

Task 1.6: Analysis of existing and required business processes and business functions (including supply chains); development of a business model regarding the marketing and procurement of digital goods with reference to following market segments:

- Education
- (Cultural) Tourism
- Science and Research
- Recreational Economics

- Administration
- (Multimedia) SMEs & Industries
- Arts

Task 1.7: Collection of available market information according to the requirements outlined in task 1.6.

Deliverables

D1: Report: "Content Creation and Content Management"

D2: Report: "The REGNET - System: Specifications and State of the Art"

D3: Report: "REGNET - Enterprise Engineering and Market Analysis".

Milestones and expected result

M1: Review of the Analysis of the State of the Art and Development of Concepts.

It is expected that:

- the content providers have prepared their documentation plans and are ready for the preparation of contents
- the service providers and system integrators are ready to start the preparation of the necessary infrastructure in their organisations to run a trial service and are in the position to develop the system and the services.
- All partners agree to the legal framework which has to follow national and international laws; contacts have been established to potential partner organisations.

Workpackage 2 Implementation of the System and Preparation of Services and Product Generation
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Workpackage number :	2	Start date or starting event:								Month 7			
Participant number:	1	2	3	4	5	6	7	8	9	10	11	12	13
Person-months per participant:	22	2	9	10	2	2	2	2	8	2	2	2	11
Participant number:	14	15	16	17	18	19	20	21	22	23	24	25	26
Person-months per participant:	2	4	12	4	3	17	9	9	12	2	22	8	15

Objectives**Implementation of the System and Preparation of Services and Product Generation**

(Phase I)

The REGNET Support System will be developed based mainly on Open Software products. It should be based on a common system architecture which enables porting to different platforms (UNIX, Windows, ...). The system should be configurable by the users (experts at different CH related sites eg.museums, archives, libraries, etc) which offer services (eg. search services, shopping facilities, cooperative work, etc.) to their respective end users or users coming from other CH related sites.

Work Area A:

Task 2.1: Preparation of content and products

Work Area B:

Task 2.2: System Implementation

Work Area C:

Task 2.3: Settlement of the legal framework

Task 2.4: Business process (re-) engineering

Task 2.5: Market preparation

Description of workWork Area A:

Task 2.1: Preparation of existing content and products; creation of new content and products; preparation of guidelines and handbooks.

Work Area B:

Task 2.2: System development; system tests and verification of system functions; Establishment of services, test of production and service processes

Task 2.2.1: Subsystem-1 (Repository)

Task 2.2.2: Subsystem-2 (Reference System)

Task 2.2.3: Subsystem-3 (Knowledge Base)

Task 2.2.4: Subsystem-4 (Data generation)

Task 2.2.5: Subsystem-5 (Search System)

Task 2.2.6: Subsystem-6 (e-Business)

Task 2.2.7: Subsystem-7 (Electronic Product Catalogue)

Task 2.2.8: Subsystem-8 (Production Process)

Task 2.2.9: Subsystem-9 (Products and Services)

Task 2.2.10: Generic Core System for all Subsystems

Work Area C:

Task 2.3: Sign of contracts and partnership agreements

Task 2.4: Introduction or revision of business processes; (change management); training of REGNET-system administrators

Task 2.5: Market engineering, preparation of advertising material (in electronic and printed form)

Deliverables

D4: Status Report: "Available Content and Products"

D5: The REGNET - System: "Code, User Documentation and Installation Manual"

D6: Status Report and Guidelines: "System Services and Business Processes"

Milestones and expected result

M2: Review of the implemented system and the preparatory work.

It is expected that:

- Content (catalogues) and products are ready
- System is internally tested and running and services are available
- All contracts and agreements have been signed; market activities have been started
- REGNET system administrators are trained; The overall organisation and all business processes are documented
- Responsibilities are clear

Workpackage 3 Validation and Preparation

Workpackage number :	3			Start date or starting event:						Month 13			
Participant number:	1	2	3	4	5	6	7	8	9	10	11	12	13
Person-months per participant:	4	1	0	4	2	2	2	2	4	2	2	2	4
Participant number:	14	15	16	17	18	19	20	21	22	23	24	25	26
Person-months per participant:	2	2	0	2	4	4	0	0	4	3	0	0	0

Objectives**Validation of the REGNET-Demonstrator and Preparation of the Demonstration Phase)**

(Phase I)

Task 3.1: Validation of the REGNET-Demonstrator

Task 3.2: Preparation of the Demonstration Phase

Description of work

Task 3.1: Using the REGNET-Demonstrator and data developed and prepared in course of WP2 the system will be validated. Test users coming from different domains (library, museum, ...) and at different levels (end users, experts) have to be identified and will do experimental operations which cover the whole functionality of the system. If necessary the system and involved business processes have to be refined.

Task 3.2: The Service Supplier will set up the necessary infrastructure for running the demonstration phase. The Content and Service Providers will do the necessary training of staff for establishing 'business access points' within their organisations. Information brochures for potential users and questionnaires have to be developed. The legal framework has to be checked.

Deliverables

D7: Technical Report: "Validation of the REGNET System operation"

D8: Report: "Preparation of the REGNET - Demonstration Phase"

Milestones and expected result

M3: End of System Validation and Preparation of the Demonstration Phase.

It is expected that:

- The system validation was successful: system functions and business processes fulfill user needs.
- Necessary infrastructure at service centres is set up and working properly. Content Providers are ready to provide access to their (digital and real) goods; service access points (virtual as 'portals' - real as 'service desks') are prepared; staff has been trained.

Workpackage 4 Demonstration

Workpackage number :	4			Start date or starting event:						Month 16				
Participant number:	1	2	3	4	5	6	7	8	9	10	11	12	13	
Person-months per participant:	4	3	1	4	4	3	3	3	5	3	3	3	5	
Participant number:	14	15	16	17	18	19	20	21	22	23	24	25	26	
Person-months per participant:	3	5	1	3	4	5	1	1	3	3	2	1	1	

Objectives

Demonstration (Phase II)

The REGNET-System will be used in a trial services which constitutes with an initial testing phase (selected users) the REGNET-Demonstration part of the project.

- Task 4.1: Execution of the demonstration phase (trial service)
 Task 4.2: Refinement of system and services where appropriate and necessary
 Task 4.3: Analysis of the trial service

Description of work

- Task 4.1: Initialization of the service and maintenance; documentation of the system behaviour and performance; documentation of user responses
 Task 4.2: System modifications
 Task 4.3: Analysis of system behaviour and user responses, recommendation for the future service; development of a financial plan for regular operations

Deliverables

- D9: Technical Report: "REGNET System operation"
 D10: Report: "REGNET - Demonstration (Trial Service)"
 D11: Evaluation Report: "REGNET trial service and recommendations"

Milestones and expected result

M4: End of trial service and Decision concerning the introduction of REGNET as regular service network

It is expected that:

- The trial service was successful: services and products have been used and purchased
- Frequency of system usage is increasing
- Income has been generated
- The service can be operated on a regular basis and is based on a solid financial plan;
- There will be income within short and medium (3 years maximum) period;
- Demand will be raised for extension of the network (regional and service related);
- REGNET will be established as an own legal entity or taken over by one or more of the partner organisation(s);
- The REGNET system itself can be sold.

Workpackage 5 Development of an exploitation plan
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Workpackage number :	5			Start date or starting event:							Month 7			
Participant number:	1	2	3	4	5	6	7	8	9	10	11	12	13	
Person-months per participant:	1	0	0	1	0	0	0	0	1	0	0	0	1	
Participant number:	14	15	16	17	18	19	20	21	22	23	24	25	26	
Person-months per participant:	0	1	0	0	1	1	0	0	1	0	1	1	2	

Objectives**Development of an exploitation plan**

Task 5.1: Development of an exploitation plan

Description of work

Task 5.1: Development of an exploitation plan on different levels (Content providers, Service Providers, Business Access Points). The plan has to include new models of cooperations and partnership.

Deliverables

D12: "REGNET - Exploitation Plan"

Milestones and expected result

M5: End of the project.

It is expected that:

- REGNET has become a regular service
- Maintenance and further enhancements are granted.

Workpackage 6 Information Dissemination
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Workpackage number :	6		Start date or starting event:							Month 1			
Participant number:	1	2	3	4	5	6	7	8	9	10	11	12	13
Person-months per participant:	1	0	0	1	1	0	0	0	1	0	0	0	1
Participant number:	14	15	16	17	18	19	20	21	22	23	24	25	26
Person-months per participant:	0	1	0	0	1	1	0	0	1	0	1	1	1

Objectives**Information Dissemination**

Task 6.1: Information Dissemination

Description of work

Task 6.1: Information Dissemination will be done using different types of dissemination channels: Project WEB-Site, conferences, seminars, printed and electronic publications. Special attention will be drawn to the participation of project members in relevant standardisation committees and workshops.

Deliverables

D13: Report: "REGNET - Information Dissemination Activities"

Milestones and expected result

M5: End of the project.

It is expected that:

- REGNET is well known and established on the market place

Workpackage 7 Project Management

Workpackage number :	7			Start date or starting event:						Month 1			
Participant number:	1	2	3	4	5	6	7	8	9	10	11	12	13
Person-months per participant:	12	0	12	6	2	0	0	0	4	0	0	0	4
Participant number:	14	15	16	17	18	19	20	21	22	23	24	25	26
Person-months per participant:	0	0	3	0	4	5	2	2	4	0	6	2	12

Objectives

Project Management

Task 7.1: Project Management

Task 7.2: Quality Assurance

Description of work

Task 7.1: Project Management, including:

- Contract Management
- Reporting
- Organization of Meetings

There will be two management areas: administrative and technical covered by partners from different organisations.

Task 7.2 Quality Assurance includes both, the development of an appropriate QA-plan and the definition of QA-procedures valid throughout the project life time, as well as the regular QA-process. The QA-System has to be approved and accepted by all partners; QA-procedures shall be well defined and transparent to all partners.

Deliverables

D14: Report: "REGNET - Quality Assurance System"

D15: Final Report: "REGNET - Project: a successfull European Initiative".

Milestones and expected result

M5: End of the project.

it is expected that:

- The REGNET-Project has been successfully finished.