

# Global Resource Center for Information Studies



**Acronym:** domusBITae

**Scheme:** Combination of Collaborative Project and Coordination and Support Action: Integrated Infrastructure Initiative (I3)

**Topic:** INFRA 2011-1.2.2: Data Infrastructures for e-Science

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7	Aalborg University	Denmark
8	Technische Universität Wien	Greece
9	Universitat of Barcelona	Spain
10	Unified Theory of Information Research Group	Austria
11	Agrupación Empresarial Innovadora para la Seguridad de las Redes y los Sistemas de Información	Spain
12	China Center for Overseas Social and Philosophical Theories	China
13	Social Information Science Institute	China
14	Science of Information Institute	USA

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# 1. Scientific and technical quality

## 1.1 Concepts and Objectives

In the last decades, many communities of information studies –as well in the natural science pole as in the humanities and social sciences- have been created, trying to promote a deep understanding of the manifold information phenomena, but with diverse approaches and interests, and usually focusing on different aspects of reality. However, the need for interdisciplinarity in information concerns has been proven and claimed as well in scientific issues as in the realm of societal problems especially arisen in contemporary societies spinning around information (Díaz & Salto 2009). Thus the nowadays relative lack of communication and cooperation among communities of information studies –due to the clefts existing in the academic life and geographically– has been a hinder to promote a more qualitative and effective approach to information, having the consequence of a less efficient use of resources and a mayor limitation in the commitment to scientific and societal problems. The European effort to build an inclusive, trustworthy, safety, democratic and citizen-friendly Information Society requires bringing at stage this needed interdisciplinarity on information concerns and doing it at the international level (RISEPTIS 2009, rec.1, 2, 6).

A cross fertilisation among information studies might be fostered if their respective knowledge is shared, discussed and contrasted. In this sense the electronic infrastructures represent a clear opportunity to jump over the obstacles of the academic life and to allow an interdisciplinary approach, enabling the emergence of a better knowledge on information concerns, accessible to all participants of the information society and better reflecting their real problems.

This proposal aims at fostering this interdisciplinary stage by means of developing a system for networking communities of information studies at the European and international level. The proposed system is planned aiming at: (1) sharing resources and results, improving its availability, linkage, quality assessment, curation and annotation, (2) improving communication and interaction means, (3) fostering discussion, scientific knowledge and innovation, (4) promote collaborative and cooperative research, (5) offering educational means, (6) enabling the access and participation of social actors in information research, (7) disseminate results.

To this end, the “resource center for information studies” (*domusBITae* from now) is proposed for developing a structured-, interactive, and integrated scientific information system suited to: a) community-driven development of information sciences including the deployment of services for data generation, quality assessment, verification, curation, annotation, navigation and management so as to promote the sharing of information assets and the developing of trust (3<sup>rd</sup> objective of the call); b) the provision of advanced tools for the integration, retrieval and visualization of relevant data and virtual interaction (4<sup>th</sup> objective). Furthermore, it pursues: c) a flexible integration based upon an innovative approach using metadata, semantics and ontologies directly connected to the on-going research and being a part of it. On the other hand our approach: addresses education, social participation, the deployment of open standards and open source contents and technologies.

## 1.2 Progress beyond the state-of-the-art

In contrast with the existing virtual communities chiefly designed under a paradigm of project and enterprise content management (Gottlieb 2005, Pérez-Montoro 2007, Spender 2007, Stavarakis 2007), the proposed initiative plans a design and deployment of the e-Infrastructure adapted to the *peculiarities of the scientific work* concerning innovative criteria of: *usability*, user experience and *information architecture* (Pérez-Montoro 2009b). The user’s experience is planned to be a substantial part in design, development and maintainance.

In the security and trustworthy concerns (Shadbolt 2008), the initiative aims at achieving the most innovative ICTs technologies and practises following criteria elaborated under EC survey (RISEPTIS 2009).

### 1.3 Methodology to achieve objectives

In order to achieve the proposed objectives, domusBITae is planned to be modularly integrated by 5 interrelated subsystems:

- 1<sup>st</sup>) A **domusBITae Gate** basically composed by: (i) a confederated set of communities using a *specialised Content Management System* (dB-CMS) adapted to the needs of the communities in information studies and providing immediate access to the domusBITae resources; and (ii) a user interface based on social interactions enabling the engagement of users as active participants.
- 2<sup>nd</sup>) A **Directory** of Communities of Information Studies providing immediate linking among domusBITae e-Communities (i.e. confederated by using the dB-CMS, as well as linkage among communities, contents and information about communities in information studies);
- 3<sup>rd</sup>) A **Repository** of documents and other open access digital assets in the field of information studies, in which the community and any user can self-archive according to a policy of progressive access regarding liaison and under an evaluation scheme to provide quality assessment.
- 4<sup>th</sup>) A **Collaborative and Educational Toolkit** (C&E tools) for the parallel constitution of emerging collaborative teams and e-learning platforms within domusBITae and integrated by tools for: (a) interoperability with resources and community and (b) effective e-Venues enabling empowering interaction. This combination of tools offers the basis for the constitution of e-Campus in interdisciplinary information studies for both research and education.
- 5<sup>th</sup>) A **virtual community glossary** with a twofold objective: (a) promoting interdisciplinary clarification and disambiguation on common terms and problems, and the concerned viewpoints; (b) providing a semantic network for the interoperability and knowledge integration of the infrastructure. The already working platform **BITrum glossary** (since 2008), in which the proponents are involved, conforms the ground for this module, which inherits its name.

The whole system architecture –composed by these modules- should be designed in order to provide the most effective functionality regarding the work within the communities themselves and the collaborative stage. With this purpose, a thorough analysis of the global community needs has to be carried out as a first step of development and axis of the whole system. The modules will be built on following an *analysis – design – testing – implementation* cycle (Morville 2007).

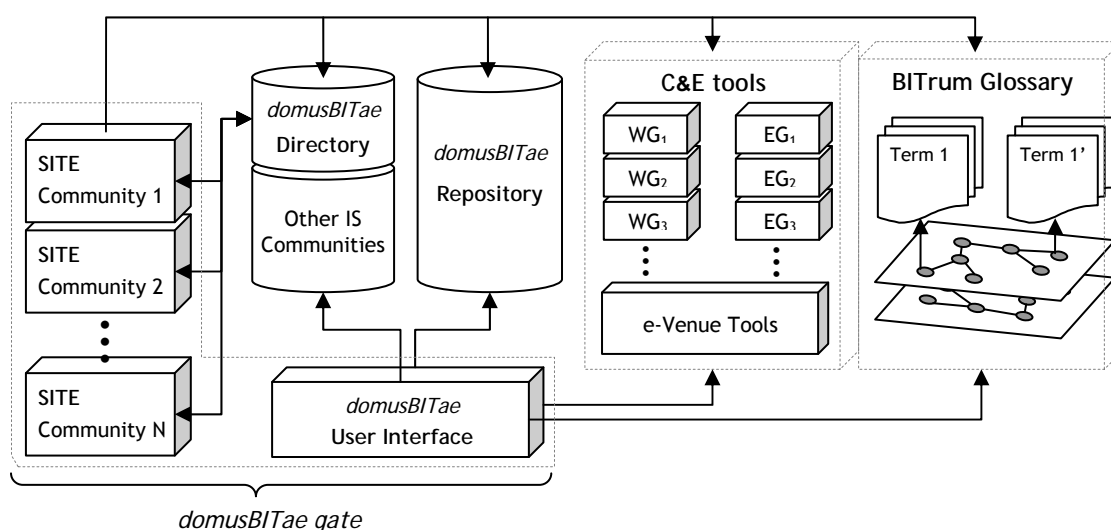


Figure 1.2: Structure of the domusBITae System

The accessibility, openness, safety, friendly usability and effectiveness of resources, will be a specific target of the system design as a whole, not only attained to the following of standards but also aiming at innovation, granted by the expertise of consortium members.

The domusBITae proposal, addressing to a target community of over 300 groups in more than 40 countries (see §3), converges as well with the ESFRI Road Map regarding e-infrastructures by contributing to the erection of the so called “virtual research environment” (ESFRI 2008), as with the emergence of a new scientific domain, the “Science of Information”, where information studies articulates in a efficient production of knowledge that has been oft envisaged as a stance for potential solutions to several scientific conundrums and societal problems (Díaz & Salto 2009, Doucette et al 2007, Lyre 2002, Marijuán 1998). Whereas the scientific and societal interest strives for the institutionalization of this emerging discipline (e.g., attempted in USA or China) Domus BITae proposal offers to the EU the possibility to lead the process and helping “to make the European Research Area attractive at a global level” (ESFRI 2008, p.5).

### 1.3.1 Overall strategy (combination of networking, service and research)

For the achievement of the objectives, and corresponding to the programme structure a combination of networking, service and research programmes is planned in order to promote a culture of cooperation between partners (networking); maintenance and progressive upgrading of high quality services to the target community (service); and the development of major improvements combining the advice and assessment of the councils instituted in the networking planning and the work of specialised teams (joint research). Before detailing the specific programme for networking, service and research activities separately in the next sections, table 1.3a and figure 1.3 show the distribution of all planned activities.

WP	Networking activities	WP	Service activities	WP	Joint research activities
1.1	Project Management	2.1	dB Gate deployment & Man.	3.1	dB Gate development
1.2	Global design & assessment	2.2	Directory deployment & M.	3.2	Directory development
1.3	Security & Trust council	2.3	Repository deployment & M.	3.3	Repository development
1.4	Usability & User Experience Council	2.4	C&E Tools deployment & Management	3.4	C&E Tools development
1.5	Interoperability Council	2.5	Glossary deployment & M.	3.5	Glossary development
1.6	Dissemination Management				

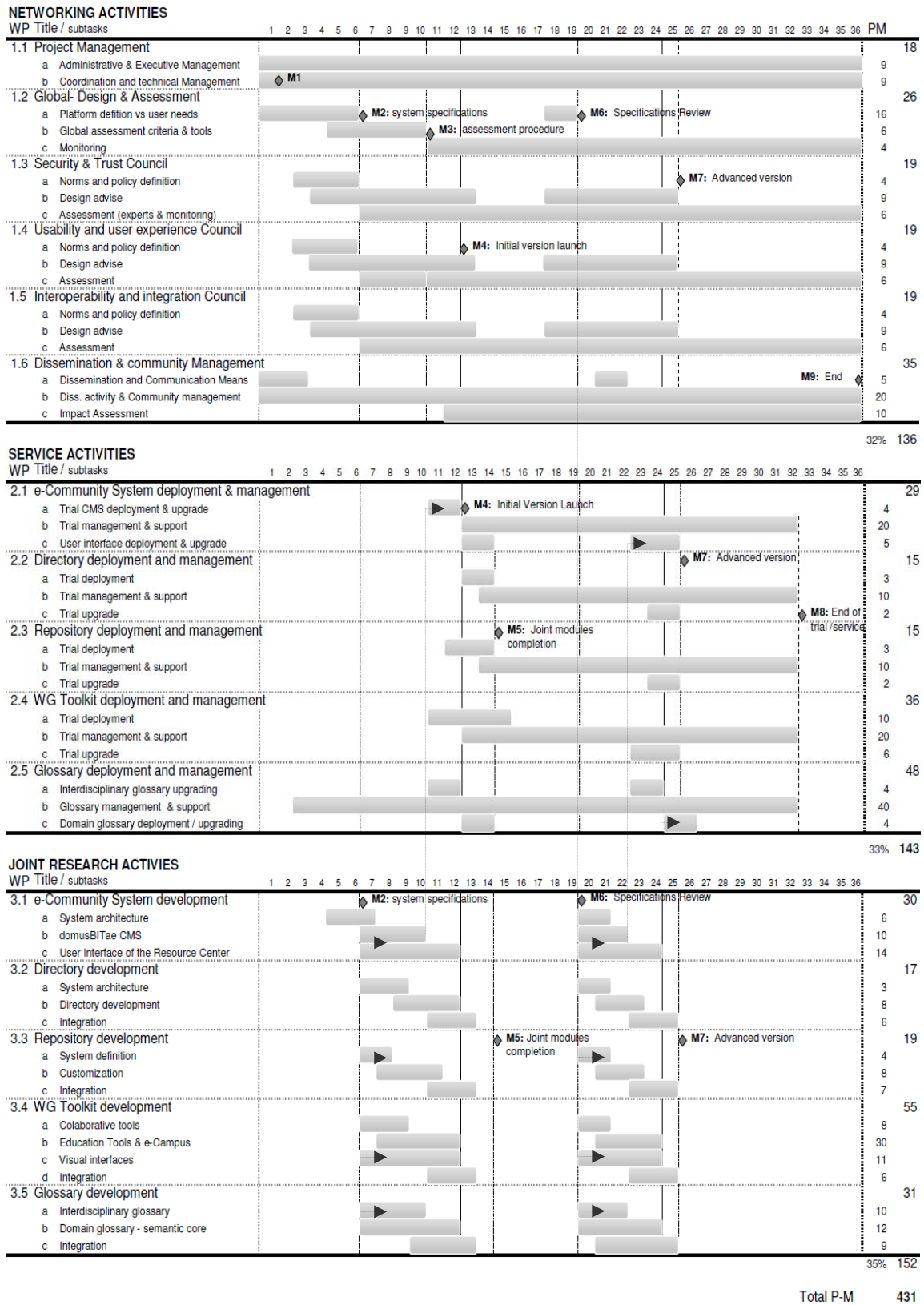


Figure 1.3: Combination and interdependencies of networking, service and joint research activities

## 1.4 Networking Activities

### 1.4.1 Networking - Overall strategy

The strategy to develop domusBITae system starts with its design as a knowledge & collaboration based system suited to the needs analysed in a wide set of communities in information studies, as well as to achieve an optimal adaptation to the user experience, a maximal integration of modules, and high standards of security, trust, usability and visualization.

The project will be initiated by the exposition to the consortium of the general guidelines concerning goals, dissemination- and development strategy (**1<sup>st</sup> milestone**). Subsequently, the detailed design of its parts –modularly arranged as depicted in figure 1– will be agreed by the whole consortium under advise of the scientific board and steered by early controlled testing on target users and the application of best practises and design guidelines determined by the design councils. This collaborative design will be substantiated in the system specifications guide (**2<sup>nd</sup> milestone**). After this system specification the development of the constituted modules will start up (WP 3.1 to 3.5). Interacting with early research development, the design councils will determine specific best-practise, design plans and assessment criteria to be used in development, service management and global assessment (**3<sup>rd</sup> milestone**).

Right after being concluded the specialised Content Management System of the domusBITae Gate and while other modules are under development, some representative communities (at least, SCII, UTI, SISI, BITrum), will be dumped into the system (as part of the service activities WP 2.1) aimed at an early modular deployment and assessment of integrated services, as well as progressive dissemination among worldwide communities in the field (**4<sup>th</sup> milestone**). This early launch of independent communities providing direct linking to domusBITae integrated services will enable progressive debugging of the related modules before full module integration is completed. The launch of the system with full capability and probed interoperability of the constituting modules will be officially announced (**5<sup>th</sup> milestone**). After this domusBITae system launch, efforts will concentrate in gathering the target community and providing services to the community of users (WP 1.6 and 2.1 to 2.5). At the same time, this initial and progressively increasing community will allow a progressive increase of contents of research and educational value and a general assessment of system functionality and impacts (WP 1.2 to 1.5) as basis to initiate a second development cycle.

As a first step for this development cycle, the consortium as a whole –under design review by the specialised councils and the advise of the scientific board- will agree a full review of the system specifications (**6<sup>th</sup> milestone**). This will be immediately followed by the development of each domusBITae in order to achieve improved features (WP 3.1 to 3.5). In correspondence to the progressive completion of the involved modules the operating services will be upgraded to ensure an step by step progressive integration of the upgraded system (WP 2.1 to 2.5). After completion of this process the advanced version will be launched (**7<sup>th</sup> milestone**) and disseminated, while system service will be supported under the project scope until the end of trial services (**8<sup>th</sup> milestone**). The system will be further operated by the community as decided by the consortium, the involved research institutions and stakeholders, though there is an initial commitment of the University of León and the Supercomputing Center of Castilla y León to ensure the long-term allocation and support of the e-infrastructure.

A last period in the project time-line will be devoted to the global assessment (concerning: general objectives –including impacts- as well as security & trust, usability and interoperability goals). This assessment will allow a last upgrade of the best-practice guides on security & trust, usability and interoperability, and recommendations for further developing (**9<sup>th</sup> Milestone**).



1.4.2 Timing of Working Plan for networking activities

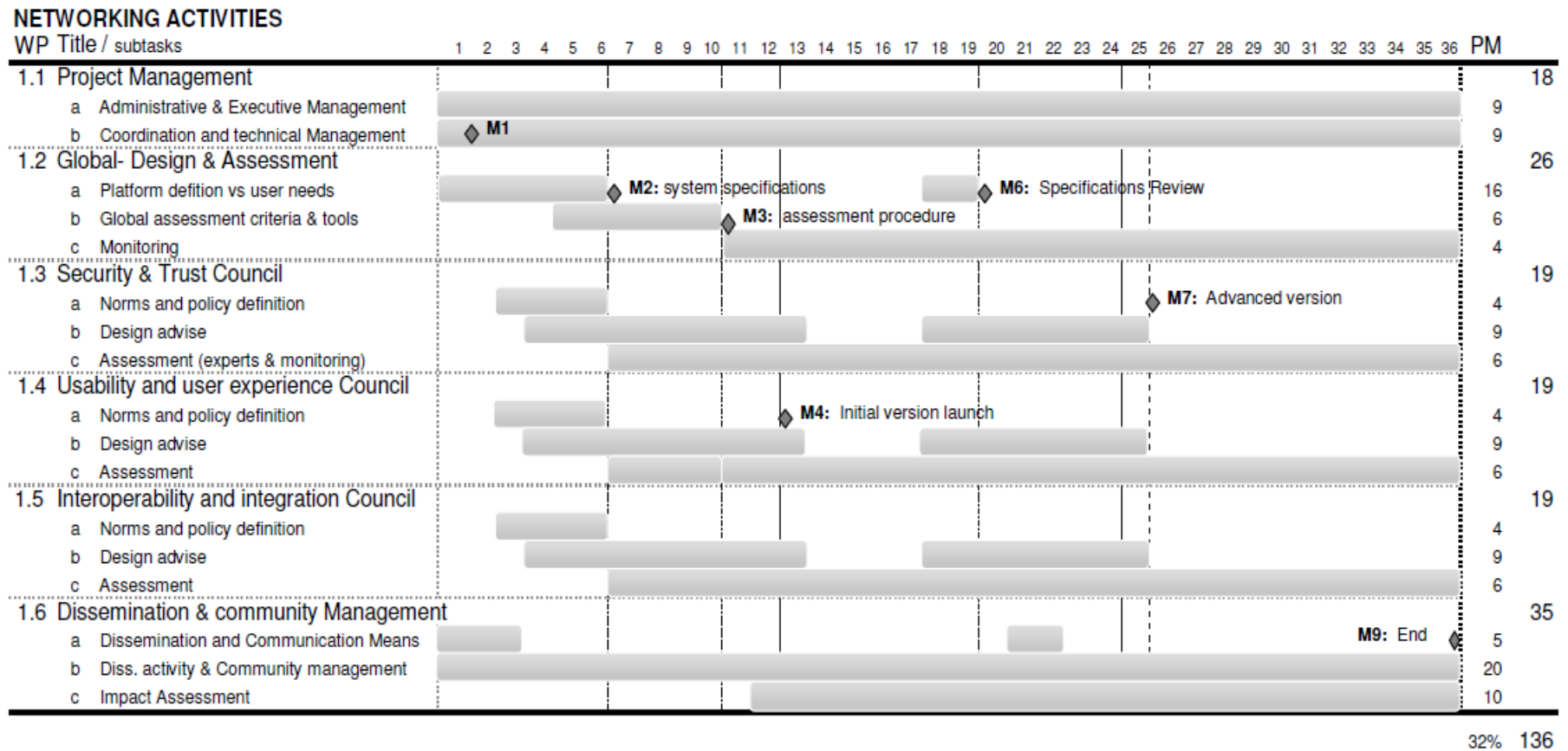


Figure 1.5 a: Gantt chart – Networking activities

### 1.4.3 Detailed Work description

**Table 1.4 a:** Work packages

WP Number	Work package title	Type of activity	Lead partic. No.	Lead partic. short name	Person-months	Start month	End month
1.1	Project Management	MGT	5	ULE	18	1	36
1.2	Global- Design & Assessment	COORD	3	ULE	26	1	36
1.3	Security & Trust Council	COORD	3	UAE	19	3	36
1.4	Usability and user experience Council	COORD	1	AAU	19	3	36
1.5	Interoperability and integration Council	COORD	1	UC3	19	3	36
1.6	Dissemination & community Management	COORD	1	ULE	35	1	36
<b>TOTAL:</b>					<b>136</b>		

**Table 1.4 b:** Deliverables

Deliv. Number	Deliverable name	WP	Nature	Dissemination level	Delivery date (Pr. Month)
D1.1.a	Consortium and technical meetings minutes report	1.1	R	CO	1
D1.1.b	Quality and Risk Management Plan	1.1	R	CO	6
D1.1.c	1 <sup>st</sup> Periodic Management Report	1.1	R	CO	12
D1.1.d	2 <sup>nd</sup> Periodic Management Report	1.1	R	CO	24
D1.1.e	Final Management Report	1.1	R	CO	36
D1.2.a	User requirements and technical scenario definition Report	1.2	R	PP	3
D1.2.b	System Specifications	1.2	R	PP	6
D1.2.c	Assessment- criteria & tools	1.2	O	PP	10
D1.2.d	System Specifications Review	1.2	R	PP	19
D1.2.e	1 <sup>st</sup> Monitoring Report	1.2	P	PU	22
D1.2.f	Final Monitoring Report	1.2	R	PU	36
D1.3.a	Security & Trust (S&T)- Plan and Best Practises Guide (ST-G)	1.3	R	RE	10
D1.3.b	1 <sup>st</sup> S&T Design recommendations minutes report	1.3	R	RE	13
D1.3.c	1 <sup>st</sup> S&T Assessment Report and ST-G review	1.3	R	RE	19
D1.3.d	2 <sup>nd</sup> S&T Design recommendations minutes report	1.3	R	RE	25

D1.3.e	Final S&T Assessment Report (Recommendations for further developments)	1.3	R	RE	34
D1.4.a	Usability & User experience – Plan and Best Practises Guide (U-G)	1.4	R	PP	10
D1.4.b	1 <sup>st</sup> Usability Design recommendations minutes report	1.4	R	PP	13
D1.4.c	1 <sup>st</sup> Usability Assessment Report & U-G review	1.4	R	PP	19
D1.4.d	2 <sup>nd</sup> Usability Design recommendations minutes report	1.4	R	PP	25
D1.4.e	Final Usability Assessment Report (Recommendations for further developments)	1.4	R	PU	34
D1.5.a	Interoperability - Plan and Best Practises Guide (IO-G)	1.5	R	PP	10
D1.5.b	1 <sup>st</sup> Interoperability Design recommendations minutes report	1.5	R	PP	13
D1.5.c	1 <sup>st</sup> Interoperability Assessment Report & IO-G review	1.5	R	PP	19
D1.5.d	2 <sup>nd</sup> Interoperability Design recommendations minutes report	1.5	R	PP	25
D1.5.e	Final Interoperability Assessment Report (Recommendations for further developments)	1.5	R	PU	34
D1.6.a	Promotional material: logo, website, templates	1.6	O	PU	2
D1.6.b	Dissemination and Communication- Policy and Best Practises Guide	1.6	R	RE	4
D1.6.c	1 <sup>st</sup> Dissemination Report	1.6	P	PU	12
D1.6.d	Press Release announcing system launching and open call for participation	1.6	O	PU	14
D1.6.e	2 <sup>nd</sup> Dissemination Report	1.6	R	PU	24
D1.6.f	Final Dissemination Report	1.6	R	PU	36

Table 1.4 c-1

<b>Work package no.</b>	1.1													<b>Starting date or event:</b>	1
<b>Work package title</b>	Project Management														
<b>Activity type</b>	MGT														
<b>Partic. No.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
<b>Partic. Short name</b>	ULE	UAE	UC3	CBS	HM	FUN	AAU	TUW	UB	UTI	AES	CCO	SIS	SII	
<b>Person-months</b>	18	0	0	0	0	0	0	0	0	0	0	0	0	0	

Objectives
<ul style="list-style-type: none"> <li>— Ensuring the achievement of internal goals.</li> <li>— Coordinating liaison with the EU Commission.</li> <li>— Coordinating the activities of the consortium.</li> <li>— Administrative and technical monitoring of the project participants.</li> <li>— Convening and organising the necessary meetings to carry out the programmed actions.</li> <li>— Preparing the mid-term and final reports.</li> </ul>

Description of work (possibly broken down into tasks) and role of partners
<p>Unique participant: ULE</p> <p>The project management is a permanent activity that aims at ensuring the project progresses and the fulfilment of the assumed commitments, tracking as well partner needs. Activities must be coordinated with partners and with the commission and the periodic progress reports will be gathered and overseen. Meetings must be rationally convened according to project needs.</p> <p><b>Task 1.1.a: <i>Administrative and Executive Management</i></b></p> <ul style="list-style-type: none"> <li>— Administrative and contract management: Management of the Grant and Consortium agreement and the liaison with the FP7 office and includes overall legal, ethical, financial and administrative management.</li> <li>— Planning and internal reporting</li> <li>— Interdisciplinary coordination</li> </ul> <p><b>Task 1.1.b: <i>Coordination and Technical Management</i></b></p> <ul style="list-style-type: none"> <li>— Project planning and control</li> <li>— Maintenance of the Project's Grand Vision</li> <li>— Ensuring Knowledge sharing of the consortium and communication within it</li> </ul>

Deliverables (brief description)	delivery month
D1.1.a Consortium and technical meetings minutes report	1
D1.1.b Quality and Risk Management Plan	6
D1.1.c 1st Periodic Management Report	12
D1.1.d 2nd Periodic Management Report	24
D1.1.e Final Management Report	36

Table 1.4 c-2

<b>Work package no.</b>	1.2													<b>Starting date or event:</b>	1
<b>Work package title</b>	<b>Global- Design &amp; Assessment</b>														
<b>Activity type</b>	COORD														
<b>Partic. No.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
<b>Partic. Short name</b>	ULE	UAE	UC3	CBS	HM	FUN	AAU	TUW	UB	UTI	AES	CCO	SIS	SII	
<b>Person-months</b>	3,5	3,5	3,5	1	1,5	2,5	2,5	0,5	2,5	1,5	0,5	1	1,5	0,5	

### Objectives

- domusBITae general system definition based upon an inquiry on user needs and user experience, as well as on the criteria defined by the specific councils on: security and trust, usability, and interoperability and integration.
- With the purpose to warranty impacts at the global level beyond European audiences, the Chinese, and North and Latin American audiences will be specifically considered.

### Description of work (possibly broken down into tasks) and role of partners

Lead participant: ULE

With the participation of all partners the general requirements and platform characteristics of the infrastructure must be determined based upon design-implementation-testing cycles and the guidance of the convened advice councils.

#### **Task 1.2.a: Users' requirements and platform definition**

Partners involved: ULE: 2, UAE: 2, UC3: 2, CBS: 0.5, HM: 1, FUN: 2, AAU: 1, TUW: 0.5, UB: 2, UTI: 0.5, AES: 0.5, CCO: 0.5, SIS: 1, SII: 0.5

- Progressive definition of the system architecture and user requirements based on a methodology of controlled testing and evidence on user experience.
- A preliminary description of each module will be exposed to the consortium for previewing a progressive integration of all subsystems (both the interoperability related to a semantic background criteria and the visualization and easiness of use play here a key role).
- Final specification after assessment of trial version services.

#### **Task 1.2.b: Global Assessment- criteria and tools**

Partners involved: ULE: 0.5, UAE: 0.5, UC3: 0.5, CBS: 0.5, HM: 1, FUN: 2, AAU: 1, UB: 2, UTI: 0.5, CCO: 0.5, SIS: 1, SII: 0.5

- Regarding the general objectives and early tentative assessments on user experience a global assessment criteria will be determined after collection of criteria developed by each advice councils and solving the eventual inconsistencies.
- According to that assessment and tools for automatic monitoring of the on-going services.

#### **Task 1.2.c: Monitoring**

Partners involved: ULE: 1, UAE: 1, UC3: 1, AAU: 1

- Periodic and analytical recollection of the automatic monitoring and other assessments from the specific councils and reports editing.

Deliverables (brief description)		delivery month
D1.2.a	User requirements and technical scenario definition Report	3
D1.2.b	System Specifications	6
D1.2.c	Assessment- criteria & tools	10
D1.2.d	System Specifications Review	19
D1.2.e	1st Monitoring Report	22
D1.2.f	Final Monitoring Report	36

Table 1.4 c-3

<b>Work package no.</b>	1.3													<b>Starting date or event:</b>	3
<b>Work package title</b>	Security & Trust Council														
<b>Activity type</b>	COORD														
<b>Partic. No.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
<b>Partic. Short name</b>	ULE	UAE	UC3	CBS	HM	FUN	AAU	TUW	UB	UTI	AES	CCO	SIS	SII	
<b>Person-months</b>	0,5	9,5	0	0	0	0	0	0	0	0	9	0	0	0	

### Objectives

- Defining the security policy and means of the platform
- Defining the trustworthiness policy and means to achieve it
- Determining best practises for the global design concerning security and trust
- Supervising and advising in the design of the different modules on security and trust concerns
- Assessing the security and trust of the modules and the launched platform as a whole
- Determining means for monitoring security and trust

### Description of work (possibly broken down into tasks) and role of partners

Lead participant: UAE

#### Task 1.3.a: Norms and policy definition

Partners involved: UAE: 2, AES: 2

- Specification of applicable standards on security and search for proactive methodologies to improve S&T while pursuing the most possible open character.
- Determining access criteria according to general design policies and based on the easiness of use and trust.
- Determining a plan and best practise guide concerning security and trust issues based upon an early identification of potential risks and adapted methodology to prevent them.
- Defining assessment and testing procedures on security and trust.

#### Task 1.3.b: Design advise

Partners involved: ULE: 0.5, UAE: 4.5, AES: 4

- According to the assessment criteria the on-going modular developments will be assessed and correspondingly advised when some lacks regarding security or trustworthiness.
- Collection of design advice for further guidance and reviewing of the best practises guide.

**Task 1.3.c: Assessment (experts & monitoring)**

Partners involved: UAE: 3, AES: 3

- After trial executions along a period in which the social community has chance to fully respond, a global assessment will be done for reviewing the best practises and design guide.
- Final assessment of the infrastructure as a whole and the specific modules and evaluation report concerning the achievement of the pursued goals.
- Providing an analysis of detected risks and guidelines for future work in order to improve S&T.
- Final review of the best practises manual for public delivering.

<b>Deliverables</b> (brief description)	delivery month
D1.3.a Security & Trust (S&T)- Plan and Best Practises Guide (ST-G)	10
D1.3.b 1st S&T Design recommendations minutes report	13
D1.3.c 1st S&T Assessment Report and ST-G review	19
D1.3.d 2nd S&T Design recommendations minutes report	25
D1.3.e Final S&T Assessment Report (Recommendations for further developments)	34

**Table 1.4 c-4**

<b>Work package no.</b>	1.4											<b>Starting date or event:</b>		3
<b>Work package title</b>	Usability and user experience Council													
<b>Activity type</b>	COORD													
<b>Partic. No.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>Partic. Short name</b>	ULE	UAE	UC3	CBS	HM	FUN	AAU	TUW	UB	UTI	AES	CCO	SIS	SII
<b>Person-months</b>	0	5	0	0	3	0	6,5	0	2	0	0	0	2,5	0

**Objectives**

The objective of this work package is to stipulate design guidelines, oversee implementation and carried out assessment and testing of all the technological solutions for assuring innovative and state of the art user-centered interfaces for the whole infrastructure, including internal tools for content management and public accessibility, intended for sharing, communicating and disseminating knowledge through collaborative technological platforms.

Description of work (possibly broken down into tasks) and role of partners
<p>Lead participant: AAU</p> <p><b>Task 1.4.a: Norms and policy definition</b></p> <p>Partners involved: UAE: 1, AAU: 2, UB: 0.5, SIS: 0.5</p> <ul style="list-style-type: none"> <li>— Defining the usability policy and best practises guidelines aimed at achieving a real usefulness of the infrastructure in the scientific work, cooperative design, education and generic user interaction and innovative user-center interfaces for the DomusBITae system</li> <li>— Defining testing procedures on usability and based on user experience.</li> <li>— Mid-term review of these guidelines after trial assessments.</li> </ul> <p><b>Task 1.4.b: Design advise</b></p> <p>Partners involved: UAE: 2, HM: 2, AAU: 3, UB: 1, SIS: 1</p> <ul style="list-style-type: none"> <li>— Oversee implementation under the stipulated design guidelines</li> <li>— Provide specific design advise regarding supervision of the on-going solution</li> <li>— Collection of design advice for further guidance and further reviewing of the best practises guide</li> </ul> <p><b>Task 1.4.c: Assessment</b></p> <p>Partners involved: UAE: 2, HM: 1, AAU: 1.5, UB: 0.5, SIS: 1</p> <ul style="list-style-type: none"> <li>— After trial executions along a period in which the social community has chance to fully respond, a global assessment will be done for reviewing the best practises and design guide.</li> <li>— Final assessment of the infrastructure as a whole and the specific modules and evaluation report concerning the achievement of the pursued goals regarding users satisfaction.</li> <li>— Providing guidelines for future work and a final review of the best practises manual for public delivering.</li> </ul>

Deliverables (brief description)	delivery month
D1.4.a Usability & User experience – Plan and Best Practises Guide (U-G)	10
D1.4.b 1st Usability Design recommendations minutes report	13
D1.4.c 1st Usability Assessment Report & U-G review	19
D1.4.d 2nd Usability Design recommendations minutes report	25
D1.4.e Final Usability Assessment Report (Recommendations for further developments)	34

Table 1.4c-5

Work package no.	1.5											Starting date or event:	3	
Work package title	Interoperability and integration Council													
Activity type	COORD													
Partic. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Partic. Short name	UJE	UAE	UC3	CBS	HM	FUN	AAU	TUW	UB	UTI	AES	CCO	SIS	SII
Person-months	0	3	8,5	1,5	0,5	2	0	0	2	0	0	0	1,5	0



**Objectives**

The objective of this council is to search and determine best practises and design guidance as well as assessment criteria on the interoperability as a key issue to the effective integration of the infrastructure (understanding for interoperability the capability to exchange and use information between systems, subsystems and users, enabling a fruitful and effective interaction). By that means on the subsystems can interweave for meeting knowledge oriented needs, like searches, connecting with appropriated groups, scientist, and digital assets. The meta-data structure will be determined for the design of all modules. Special care will be taken in the inter-linguistic relations and interdisciplinarity of the intended infrastructure.

**Description of work** (possibly broken down into tasks) and role of partners

Lead participant: UC3

Interoperability best practises will be determined and assessed according to an early definition of the semantic meta-structure of the system and an ongoing semantic network for enabling the desired integration of the modules. The interoperability will be pursued within the domusBITae system and with other systems for an automatic interaction.

In sum, the interoperability will unless other means are further determined by:

- Employment of public metadata vocabularies
- Formalization of documents in RDF language
- Implementation of standards enabling accessibility
- Persistent URIs
- A light ontology to cope with the multi- and inter-disciplinary approaches to information

The interoperability assets will be close related to the BITrum glossary module, since it will state the semantic network, alignments and relevance weighting for providing linkage to contents and participants, whereas the interdisciplinary glossary will benefit the interaction with the researcher, and learner providing the clarification and disambiguation of term usage among domains and languages not covered by the automated semantic network. The role of the semioticians, linguists and translators from different languages and research domains will pursue a further integration with intercultural and interdisciplinary users.

**Task 1.5.a: Norms and policy definition**

Partners involved: UAE: 0.5, UC3: 2, CBS: 0.5, FUN: 0.5, UB: 0.5

- Definition of general guides for the development of the modules using a determined metadata structure, protocols and archiving policy for the effective deployment of interoperability means.
- Definition of assessment methods for evaluating the interoperability achievements.
- Definition of user test requirements for early evaluation and analysis of the interoperability with target users.

**Task 1.5.b: Design advise**

Partners involved: UAE: 1, UC3: 4, CBS: 1, HN:0.5, FUN: 0.5, UB: 1, SIS: 1

- Oversee implementation under the stipulated design guidelines
- Design advice by assessment of the on-going developments.

**Task 1.5.c: Assessment**

Partners involved: UAE: 1.5, UC3: 2.5, FUN: 1, UB: 0.5, SIS: 0.5

- After trial executions along a period of usage and community response, a global assessment will be done for reviewing the best practises and design guide.
- Final assessment of the infrastructure as a whole and the specific modules and evaluation report concerning the achievement of the pursued goals regarding interoperability

<p>achievements within the system, with the user community (regarding their semantic and knowledge expectancies) and with other systems.</p> <p>– Providing guidelines for future work and a final review of the best practises manual for public delivering.</p>
---

<b>Deliverables</b> (brief description)	delivery month
D1.5.a Interoperability - Plan and Best Practises Guide (IO-G)	10
D1.5.b 1 <sup>st</sup> Interoperability Design recommendations minutes report	13
D1.5.c 1 <sup>st</sup> Interoperability Assessment Report & IO-G review	19
D1.5.d 2nd Interoperability Design recommendations minutes report	25
D1.5.e Final Interoperability Assessment Report (Recommendations for further developments)	34

Table 1.4 c-6

<b>Work package no.</b>	1.6													<b>Starting date or event:</b>	1
<b>Work package title</b>	<b>Dissemination &amp; community Management</b>														
<b>Activity type</b>	COORD														
<b>Partic. No.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
<b>Partic. Short name</b>	ULE	UAE	UC3	CBS	HM	FUN	AAU	TUW	UB	UTI	AES	CCO	SIS	SII	
<b>Person-months</b>	6	3	2	2,5	2,5	3	1,5	1,5	1,5	2,5	1,5	3	3	1,5	

<b>Objectives</b>
<ul style="list-style-type: none"> <li>– Disseminate the domusBITae platform and the obtained results among the public raising awareness of the necessity to reduce distances among sciences and cultures in order to achieve a better understanding of information and cope with the challenges of the information society</li> <li>– Engage scientific communities into the system as external trials users</li> <li>– Ensure collaboration of academic, scientific and industrial stakeholders to the project objectives and final results</li> <li>– Ensure further maintenance by academic, scientific and industrial stakeholders warranting the open access and free usage</li> <li>– Work closely with other projects under the e-Infrastructures EC projects taking part in the ESFRI forum and the eIRG aiming at sharing best practises, results and avoiding effort duplications.</li> </ul>

Description of work (possibly broken down into tasks) and role of partners
Lead participant: ULE
<b>Task 1.6.a:</b> <i>Dissemination and Communication Means (policy, mechanism deployment, assessment criteria)</i>
Partners involved: ULE: 2, UAE: 2, UC3: 2, CBS: 0,5, HM: 1, FUN: 2, AAU: 1, TUW: 0,5, UB: 2, UTI: 0,5, AES: 0,5, CCO: 0,5, SIS: 1, SII: 0,5
<b>Task 1.6.b:</b> <i>Dissemination activity &amp; Community management</i>
Partners involved: ULE: 3, UAE: 1,5, UC3: 1, CBS: 1, HM: 1,5, FUN: 1,5, AAU: 1, TUW: 1, UB: 1, UTI: 1,5, AES: 1, CCO: 2, SIS: 2, SII: 1
<b>Task 1.6.c:</b> <i>Impact Assessment</i>
Partners involved: ULE: 2, UAE: 1, UC3: 0,5, CBS: 0,5, HM: 0,5, FUN: 1, AAU: 0,5, TUW: 0,5, UB: 0,5, UTI: 1, AES: 0,5, CCO: 0,5, SIS: 0,5, SII: 0,5

Deliverables (brief description)	delivery month
D1.6.a Promotional material: logo, website, templates	2
D1.6.b Dissemination and Communication- Policy and Best Practises Guide	4
D1.6.c 1st Dissemination Report	12
D1.6.d Press Release announcing system launching and open call for participation	14
D1.6.e 2nd Dissemination Report	24
D1.6.f Final Dissemination Report	36

**Table 1.4 d:** List of milestones (only the means of verification related to networking activities are here specify; for the service and joint research activities see the correspondingly Milestone list)

Milestones number	Milestone name	Work package(s) involved	Expected date	Means of verification
1	Kick-Off Meeting	1.1	1	D1.1.a
2	System specifications	1.2, 1.3, 1.4, 1.5	6	D1.1.b, D1.2.a, D1.2.b, D1.3.a, D1.4.a, D1.5.a
3	Assessment Procedure	1.2, 1.3, 1.4, 1.5	10	D1.2.c
4	Initial version launch	1.1, 1.6	12	D1.1.c, D1.6.c
5	System specifications review	1.2, 1.3, 1.4, 1.5	19	D1.2.d, D1.3.c, D1.4.c, D1.5.c
6	First full version of the joint system	1.6	14	D1.6d
7	Advanced version launch	1.1, 1.3, 1.4, 1.5	25	D1.1.d, D1.3.d, D1.4.d, D1.5.d
8	End of trial services	1.6	36	(see table 1.5 d)
9	End of project	1.1	36	D1.1.e, D1.2.f, D1.3e, D1.4e, D1.5e, D1.6f

Table 1.4 e: Summary of effort

Parti. No.	Partic. short name	WP 1	WP2	WP3	WP4	WP5	WP6	Total person months
1	ULE	18	3,5	0,5	0	0	6	28
2	UAE	0	3,5	9,5	5	3	3	24
3	UC3	0	3,5	0	0	8,5	2	14
4	CBS	0	1	0	0	1,5	2,5	5
5	HM	0	1,5	0	3	0,5	2,5	7,5
6	FUN	0	2,5	0	0	2	3	7,5
7	AAU	0	2,5	0	6,5	0	1,5	10,5
8	TUW	0	0,5	0	0	0	1,5	2
9	UB	0	2,5	0	2	2	1,5	8
10	UTI	0	1,5	0	0	0	2,5	4
11	AES	0	0,5	9	0	0	1,5	11
12	CCO	0	1	0	0	0	3	4
13	SIS	0	1,5	0	2,5	1,5	3	8,5
14	SII	0	0,5	0	0	0	1,5	2
<b>Total</b>		18	26	19	19	19	35	<b>136</b>

## 1.5 Service activities and associated work plan

### 1.5.1 Service - overall strategy

After consortium agreement of the full project strategy (**1<sup>st</sup> milestone**), service support will be provided to BITrum glossary since it represents the module under current operation with higher impacts (WP 2.5). The service provision and management of this module –including content provision by the involved institutions- might ensure higher degrees of interoperability, scientific usability and impacts of the infrastructure after system launches.

Right after the specialised Content Management System of the domusBITae Gate is concluded (WP 3.1.b) some representative communities (at least, SCII, UTI, SISI, BITrum), will be dumped into the system (as part of the service activities WP 2.1.a) aimed at an early modular deployment and assessment of integrated services, and early service provision to the involved communities (**4<sup>th</sup> milestone**). Subsequently the modules completed will be deployed for progressive provision of services before and after the launch of the domusBITae initial full version (**5<sup>th</sup> milestone**). Services will be provided to the gathered community during a first trial phase, which will be followed –in parallel to service provision– by the second development phase (WP. 3.1 to 3.5). In correspondence to the progressive completion of the involved modules the operating services will be upgraded to ensure an step by step progressive integration of the upgraded system (WP 2.1 to 2.5). After completion of this process the advanced version will be launched (**7<sup>th</sup> milestone**) and disseminated, while system service will be supported under the project scope until the end of trial services (**8<sup>th</sup> milestone**).

### 1.5.2 Timing of Working Plan - Service activities

To deploy the described strategy the work is planned to be split in the following working packages to be carried out in the schedule depicted in the Gantt chart, where mentioned milestones are shown:

WP-2.1: domusBITae Gate deployment & management

WP-2.2: Directory deployment and management

WP-2.3: Repository deployment and management

WP-2.4: Collaborative & Educational (C&E) Tools deployment and management

WP-2.5: Glossary deployment and management

**SERVICE ACTIVITIES**

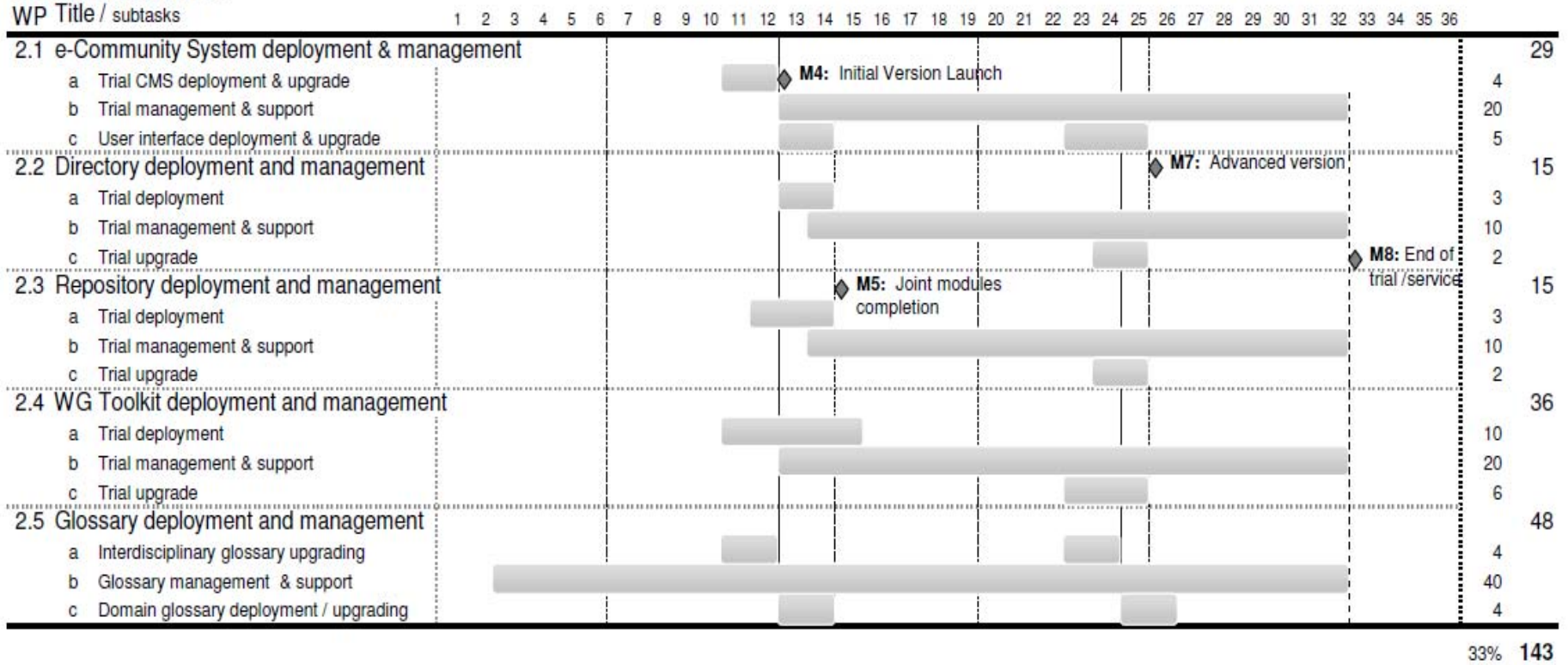


Figure 1.5 a: Gantt chart – Service activities

### 1.5.3 Service - Detailed Work description

**Table 1.5 a:** Work packages-service activities

WP Number	Work package title	Type of activity	Lead partic. No.	Lead partic. short name	Person-months	Start month	End month
2.1	domusBITae Gate deployment & management	SVC	2	UAE	29	11	32
2.2	Directory deployment and management	SVC	10	UTI	12	12	32
2.3	Repository deployment and management	SVC	1	ULE	15	11	32
2.4	C&E Tools deployment and management	SVC	6	FUN	36	10	32
2.5	Glossary deployment and management	SVC	3	UC3	48	3	32
<b>TOTAL:</b>					<b>140</b>		

**Table 1.5 b:** Deliverables

Deliv. Number	Deliverable name	WP	Nature	Dissemination level	Delivery date (Pr. Month)
D2.1.a	Trial eCommunities (dB-CMS) launch	2.1	D	PU	12
D2.1.b	Initial version launch of the user interface	2.1	D	PU	14
D2.1.c	dB-CMS upgrade	2.1	D	PU	24
D2.1.d	User interface upgrade	2.1	D	PU	25
D2.2.a	Directory launch	2.2	D	PU	14
D2.2.b	Directory upgrade	2.2	D	PU	25
D2.2.c	Summary report of community contributions	2.2	R	RE	32
D2.3.a	Repository launch	2.3	D	PU	14
D2.3.b	Repository upgrade	2.3	D	PU	25
D2.3.c	Summary report of community contributions	2.3	R	RE	32
D2.4.a	Collaborative tools launch	2.4	D	PU	12
D2.4.b	Integrated education tools (e-Campus) launch	2.4	D	PU	14
D2.4.c	e-Venue tools launch	2.4	D	PU	14
D2.4.d	Collaborative tools upgrade	2.4	D	PU	24
D2.4.e	Integrated education tools (e-Campus) upgrade	2.4	D	PU	25
D2.4.f	e-Venue tools upgrade	2.4	D	PU	25
D2.4.g	Summary report of community contributions	2.4	R	RE	32
D2.5.a	Interdisciplinary glossary launch	2.5	D	PU	12
D2.5.b	Domain glossaries module launch	2.5	D	PU	14

D2.5.c	Interdisciplinary glossary upgrade	2.5	D	PU	24
D2.5.d	Domain glossaries module upgrade	2.5	D	PU	25
D2.5.e	Summary report of community contributions		R	RE	

Table 1.5 c-1

<b>Work package no.</b>	2.1													<b>Starting date or event:</b>	11
<b>Work package title</b>	domusBITae Gate deployment & management														
<b>Activity type</b>	MGT														
<b>Partic. No.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
<b>Partic. Short name</b>	ULE	UAE	UC3	CBS	HM	FUN	AAU	TUW	UB	UTI	AES	CCO	SIS	SII	
<b>Person-months</b>	5	8	1	0	2	2	0	0	0	2	0	2	2	5	

**Objectives**

- Deployment and upgrading of trial versions of e-Communities using the domusBITae-CMS for the institutional sites of some representative research centers in Europe, China and America.
- Deployment, management and upgrading of the user interface.
- Providing user-friendly interfaces to the domusBITae modules for the target community as a major pillar to ensure impacts.

**Description of work** (possibly broken down into tasks) and role of partners

Unique participant: ULE

**Task 2.1.a:** *Trial CMS deployment & upgrade*

Partners involved: ULE: 1.5, UAE: 1.5, SII: 1

**Task 2.1.b:** *Trial user interface management & support*

Partners involved: ULE: 3, UAE: 2, UC3: 1, HM: 2, FUN: 2, UTI: 2, CCO: 2, SIS: 2, SII: 4

**Task 2.2.c:** *User interface deployment & upgrade*

Partners involved: ULE: 0.5, UAE: 4.5

<b>Deliverables</b> (brief description)	delivery month
D2.1.a Trial e-Communities (dB-CMS) launch	12
D2.1.b Initial version launch of the user interface	14
D2.1.c dB-CMS upgrade	25
D2.1.d User interface upgrade	24



Table 1.5 c-2

<b>Work package no.</b>	2.2													<b>Starting date or event:</b>	13
<b>Work package title</b>	<b>Directory deployment and management</b>														
<b>Activity type</b>	SVC														
<b>Partic. No.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
<b>Partic. Short name</b>	ULE	UAE	UC3	CBS	HM	FUN	AAU	TUW	UB	UTI	AES	CCO	SIS	SII	
<b>Person-months</b>	1	0,5	0,5	0	0	0,5	0	3,5	0	7	0	1	0,5	0,5	

**Objectives**

Deployment, management and upgrading of the directory module. The direct engagement of the consortium partners should provide contents into the directory as a means for gathering community and ensuring early usability of the directory. Community-driven information (calls, gatherings, publications, events, academic curricula, research activities) should be gathered and managed.

**Description of work** (possibly broken down into tasks) and role of partners

ULE: lead participant

**Task 2.2.a:** *Trial directory deployment*

Partners involved: TUW: 0.5, UTI: 1.5

**Task 2.2.b:** *Trial directory management and support*

Partners involved: ULE: 1, UAE: 0.5, UC3: 0.5, FUN: 2, TUW: 0.5, UTI: 5, CCO: 1, SIS: 0.5, SII: 0.5

**Task 2.2.c:** *Trial directory upgrade*

Partners involved: TUW: 1.5, UTI: 0.5

**Deliverables** (brief description)

delivery month

D2.2.a	Directory launch	14
D2.2.b	Directory upgrade	25
D2.2.c	Summary report of community contributions	32

Table 1.5 c-3

<b>Work package no.</b>	2.3													<b>Starting date or event:</b>	12
<b>Work package title</b>	<b>Repository deployment and management</b>														
<b>Activity type</b>	SVC														
<b>Partic. No.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
<b>Partic. Short name</b>	ULE	UAE	UC3	CBS	HM	FUN	AAU	TUW	UB	UTI	AES	CCO	SIS	SII	
<b>Person-months</b>	8	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	1	0	1	0,5	0,5	

Objectives	
Deployment, management and upgrading of the repository module. The direct engagement of the consortium partners should provide contents into the repository and review support to its qualification schema, as a means for achieving early scientific and educational usability and scientific value of the system.	
Description of work (possibly broken down into tasks) and role of partners	
Lead participant: ULE <b>Task 2.3.a:</b> <i>Trial repository deployment</i> Partners involved: ULE: 3 <b>Task 2.3.b:</b> <i>Trial repository management and support</i> Partners involved: ULE: 3, UAE: 0.5, UC3: 0.5, CBS: 0.5, HM: 0.5, FUN: 0.5, AAU: 0.5, TUV: 0.5, UB: 0.5, UTI: 1, CCO: 1, SIS: 0.5, SII: 0.5 <b>Task 2.3.c:</b> <i>Trial repository upgrade</i> Partners involved: ULE: 2	
Deliverables (brief description)	delivery month
D2.3.a Repository launch	14
D2.3.b Repository upgrade	25
D2.3.c Summary report of community contributions	32

Table 1.5 c-4

Work package no.	2.4												Starting date or event:	11
Work package title	Collaborative & Educational (C&E) Tools deployment and management													
Activity type	SVC													
Partic. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Partic. Short name	ULE	UAE	UC3	CBS	HM	FUN	AAU	TUV	UB	UTI	AES	CCO	SIS	SII
Person-months	0,5	1	0,5	2	10	11	9	0,5	0,5	0	0	0	1	0

Objectives
Deployment, management and upgrading of the Collaborative & Educational tools. Consortium partners commit themselves –with respects to its possibilities- to open collaborative groups, to provide educational- contents and activities, and to convene gatherings using the e-Venues tools. Together with the repository and glossary contents, this educational and collaborative assets will constitute the basis for a e-Campus in informacion studies.

Description of work (possibly broken down into tasks) and role of partners
Lead participant: AAU
<b>Task 2.4.a:</b> <i>Trial C&amp;E Tools deployment</i>
Partners involved: HM: 3, FUN: 4, AAU: 3
<b>Task 2.4.b:</b> <i>Trial C&amp;E Tools management and support</i>
Partners involved: ULE: 0.5, UAE: 1, UC3: 0.5, CBS: 2, HM: 5, FUN: 5, AAU: 4, TUW: 0.5, UB: 0.5, SIS: 1
<b>Task 2.4.c:</b> <i>Trial C&amp;E Tools upgrade</i>
Partners involved: HM: 2, FUN: 2, AAU: 2

Deliverables (brief description)	delivery month
D2.4.a Collaborative tools launch	12
D2.4.b Integrated education tools (e-Campus) launch	14
D2.4.c e-Venue tools launch	14
D2.4.d Collaborative tools upgrade	24
D2.4.e Integrated education tools (e-Campus) upgrade	25
D2.4.f e-Venue tools upgrade	25
D2.4.g Summary report of community contributions	32

Table 1.5 c-5

Work package no.	2.5													Starting date or event:	3
Work package title	Glossary deployment and management														
Activity type	SVC														
Partic. No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Partic. Short name	ULE	UAE	UC3	CBS	HM	FUN	AAU	TUW	UB	UTI	AES	CCO	SIS	SII	
Person-months	6	1	5	14	1	0,5	1	0	1	1	0,5	13	2	2	

Objectives
The support to the interdisciplinary glossary –first running in the Glossarium BITri platform- will be subsequently upgraded with the interdisciplinary glossary module –developed within domusBITae- and integrated with the domain glossaries. The research value of the infrastructure is significantly rooted in the clarification provided by the interdisciplinary glossary and the interoperability enabled by the interrelated domain glossaries. For this reason especial effort will be made to provide and manage multi-domain and multi-linguistic contents.

<b>Description of work</b> (possibly broken down into tasks) and role of partners
Lead participant: UC3
<b>Task 2.5.a:</b> <i>Interdisciplinary glossary upgrading</i>
Partners involved: ULE: 2, UC3: 2
<b>Task 2.5.b:</b> <i>Glossary management &amp; support</i>
Partners involved: ULE: 2, UAE: 1, UC3: 1, CBS: 14, HM: 1, FUN: 0.5, AAU: 1, UB: 1, UTI: 1, AES: 0.5, CCO: 13, SIS: 2
<b>Task 2.5.c:</b> <i>Domain glossary deployment / upgrading</i>
Partners involved: ULE: 2, UC3: 2

<b>Deliverables</b> (brief description)	delivery month
D2.5.a Interdisciplinary glossary launch	12
D2.5.b Domain glossaries module launch	14
D2.5.c Interdisciplinary glossary upgrade	24
D2.5.d Domain glossaries module upgrade	25
D2.5.e Summary report of community contributions	32

**Table 1.5 d:** List of milestones (only the means of verification related to networking activities are here specify; for the service and joint research activities see the correspondingly Milestone list)

Milestones number	Milestone name	Work package(s) involved	Expected date	Means of verification
1	Kick-Off Meeting	1.1	1	See table 1.4 d
2	System specifications	1.2, 1.3, 1.4, 1.5	6	See table 1.4 d
3	Assessment Procedure	1.2, 1.3, 1.4, 1.5	10	See table 1.4 d
4	Initial version launch	2.1, 3.1	12	D2.1.a
5	System specifications review	1.2, 1.3, 1.4, 1.5	19	See table 1.4 d
6	First full version of the joint system launch	2.1, 2.2, 2.3, 2.4, 2.5	14	D2.1.b, D2.2.a, D2.3.a, D2.4.a, D2.4.b, D2.4.c, D2.5.a, D2.5b
7	Advanced version launch	2.1, 2.2, 2.3, 2.4, 2.5	25	D2.1.c, D2.1.d, D2.2.b, D2.3.b, D2.4.d, D2.4.e, D2.4.f, D2.5c, D2.5d
8	Assessments of impacts	1.6	36	D2.2.c, D2.3.c, D2.4.g, D2.5.e, D1.6f
9	End of project	1.1	36	See table 1.4 d

Table 1.5 e: Summary of effort – Service activities

Parti. No.	Partic. short name	WP 1	WP2	WP3	WP4	WP5	Total person months
1	ULE	5	1	8	0,5	6	20,5
2	UAE	8	0,5	0,5	1	1	11
3	UC3	1	0,5	0,5	0,5	5	7,5
4	CBS	0	0	0,5	2	14	16,5
5	HM	2	0	0,5	10	1	13,5
6	FUN	2	0,5	0,5	11	0,5	14,5
7	AAU	0	0	0,5	9	1	10,5
8	TUW	0	3,5	0,5	0,5	0	4,5
9	UB	0	0	0,5	0,5	1	2
10	UTI	2	7	1	0	1	11
11	AES	0	0	0	0	0,5	0,5
12	CCO	2	1	1	0	13	17
13	SIS	2	0,5	0,5	1	2	6
14	SII	5	0,5	0,5	0	2	8
<b>Total</b>		29	15	15	36	48	<b>143</b>

## 1.6 Joint Research activities and associated work plan

### 1.6.1 Joint research - overall strategy

Though the domusBITae infrastructure and its modules will be developed –as mentioned above- by following *analysis – design – testing – implementation* cycles, two main phases are envisaged for the development of the infrastructure as a whole. This will lead to the release of a first fully operational platform and a final version about one year after.

The joint research activities will be mainly concentrated between the achievement of the system specification (**2<sup>nd</sup> milestone**) and the release of the final version (**7<sup>th</sup> milestone**). The conclusion of the first development phase will correspond to the completion of the joint domusBITae system (**5<sup>th</sup> milestone**). This phase will be followed by a service period in which the first system version will be deeply tested and assessed. This assessment will enable a second development phase in which new specifications for the final system version will be agreed (WP 1.2 to 1.4, **6<sup>th</sup> milestone**). Right after this final system specification the second phase of joint research will start (WP 3.1 to 3.5). The conclusion of modules and sub-modules will enable a step by step upgrading of the system in operation (WP 2.1 to 2.5). After full upgrade of the system (**7<sup>th</sup> milestone**) this will be supported as explained in the service activities section.

1.6.2 Timing of Working Plan

**JOINT RESEARCH ACTIVITIES**

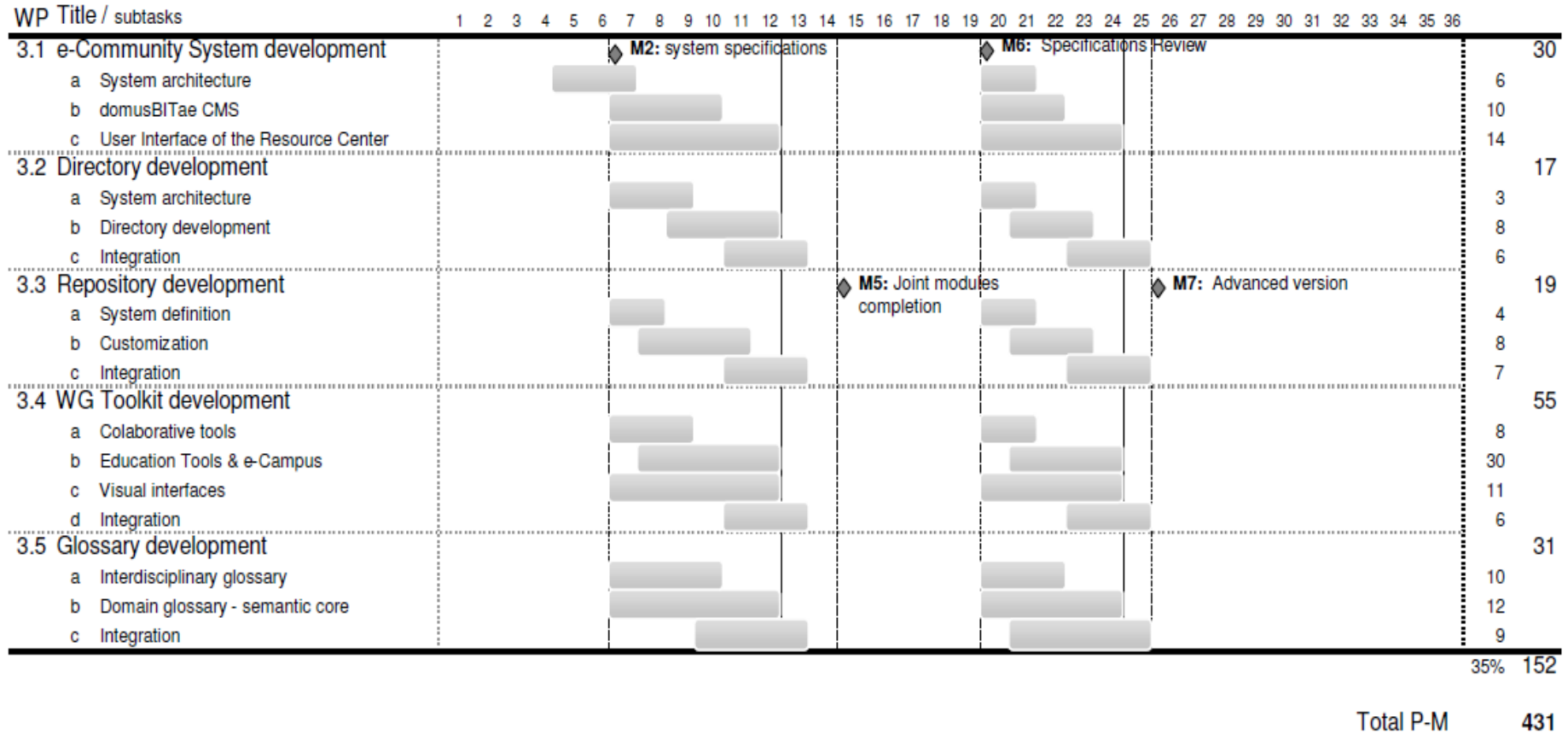


Figure 2: Gantt chart – Joint research activities.

### 1.6.3 Detailed Work description

**Table 1.6 a:** Work packages-service activities

WP Number	Work package title	Type of activity	Lead partic. No.	Lead partic. short name	Person-months	Start month	End month
3.1	domusBITae Gate development	RTD	5	UAE	30	5	24
3.2	Directory development	RTD	3	TUW	17	7	25
3.3	Repository development	RTD	3	ULE	19	7	25
3.4	C&E Tools development	RTD	1	FUN	55	7	25
3.5	Glossary development	RTD	1	UC3	31	7	25
<b>TOTAL:</b>					<b>152</b>		

**Table 1.6 b:** Deliverables

Deliv. Number	Deliverable name	WP	Nature	Dissemination level	Delivery date (Pr. Month)
D3.1.a	Specialised domusBITae CMS	3.1	D	PU	12
D3.1.b	Initial version of the user interface	3.1	D	PU	14
D3.1.c	dB-CMS final version	3.1	D	PU	24
D3.1.d	User interface final version	3.1	D	PU	25
D3.2.a	Directory initial version	3.2	D	PU	14
D3.2.b	Directory final version	3.2	D	PU	25
D3.3.a	Repository initial version	3.3	D	PU	14
D3.3.b	Repository final version	3.3	D	PU	25
D3.4.a	Collaborative tools initial version	3.4	D	PU	12
D3.4.b	Integrated education tools initial version	3.4	D	PU	14
D3.4.c	e-Venue tools initial version	3.4	D	PU	14
D3.4.d	Collaborative tools final version	3.4	D	PU	24
D3.4.e	Integrated education tools final version	3.4	D	PU	25
D3.4.f	e-Venue tools final version	3.4	D	PU	25
D3.5.a	Interdisciplinary glossary initial version	3.5	D	PP	12
D3.5.b	Domain glossaries module initial version	3.5	D	PP	14
D3.5.c	Interdisciplinary glossary final version	3.5	D	PP	24
D3.5.d	Domain glossaries module final version	3.5	D	PU	25

Table 1.6 c-1

<b>Work package no.</b>	3.1													<b>Starting date or event:</b>	5
<b>Work package title</b>	domusBITae Gate development														
<b>Activity type</b>	RTD														
<b>Partic. No.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
<b>Partic. Short name</b>	ULE	UAE	UC3	CBS	HM	FUN	AAU	TUW	UB	UTI	AES	CCO	SIS	SII	
<b>Person-months</b>	0	15	0	0	0	0	0	0	6	0	2	0	7	0	

### Objectives

Development of: (i) a *specialised Content Management System* (dB-CMS) –as a basis for the constitution of a confederated set of communities– adapted to the research needs of the information studies and providing immediate access to the domusBITae resources; (ii) a user interface based on social interactions enabling the engagement of users as active participants; (iii) a confederated access to the system providing cross-identity means for a user friendly and trustworthy navigation of the system and confederated communities (using the dB-CMS).

### Description of work (possibly broken down into tasks) and role of partners

Unique participant: UAE

**Task 3.1.a:** *System architecture*

Partners involved: UAE: 1, UB: 5

**Task 3.1.b:** *domusBITae specialised Content Management System (CMS)*

Partners involved: UAE: 5, UB: 1

**Task 3.1.c:** *User Interface of the Resource Center*

Partners involved: UAE: 9, AES: 1, SIS: 4

<b>Deliverables</b> (brief description)	delivery month
D3.1.a Specialised domusBITae CMS	12
D3.1.b Initial version of the user interface	14
D3.1.c dB-CMS final version	24
D3.1.d User interface final version	25



Table 1.6 c-2

<b>Work package no.</b>	3.2								<b>Starting date or event:</b>			7		
<b>Work package title</b>	Directory development													
<b>Activity type</b>	RTD													
<b>Partic. No.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>Partic. Short name</b>	ULE	UAE	UC3	CBS	HM	FUN	AAU	TUW	UB	UTI	AES	CCO	SIS	SII
<b>Person-months</b>	0	0	0	0	0	0	0	13	0	0	0	1	3	0

**Objectives**

Development of the Directory Communities in Information Studies, including domusBITae interface for navigation in virtual community. Since the directory module acts as a direct linkage with the community of information studies, the navigation provided among researchers, groups, digital assets, scientific contents, concepts, problems and theories represent key factor for the collaborative purpose of the infrastructure, its usability and the achievement of expected impacts.

**Description of work** (possibly broken down into tasks) and role of partners

TUW: lead participant

**Task 3.2.a:** *System architecture*

Partners involved: TUW: 3

**Task 3.2.b:** *Directory development*

Partners involved: TUW: 6, SIS: 1

**Task 3.2.c:** *Integration*

Partners involved: TUW: 4, CCO: 1, SIS: 1

**Deliverables** (brief description)

delivery month

D3.2.a Directory initial version

14

D3.2.b Directory final version

25

Table 1.6 c-3

<b>Work package no.</b>	3.3								<b>Starting date or event:</b>			7		
<b>Work package title</b>	Repository development													
<b>Activity type</b>	RTD													
<b>Partic. No.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>Partic. Short name</b>	ULE	UAE	UC3	CBS	HM	FUN	AAU	TUW	UB	UTI	AES	CCO	SIS	SII
<b>Person-months</b>	15	0	0	0	0	0	0	0	0	0	0	1	3	0

Objectives
Development of thematic repository in the field of information studies according to system design and providing direct linking to other domusBITae modules. It is intended to contain any digital asset of interest for the research, collaborative and educational purposes of the infrastructure. In the repository, the community and any user can self-archive according to a policy of progressive access for promoting liaison and under an evaluation scheme to provide quality assessment.

Description of work (possibly broken down into tasks) and role of partners
<p>Lead participant: ULE</p> <p><b>Task 3.3.a: <i>System definition</i></b></p> <p>Partners involved: ULE: 4</p> <p>Detailed repository features must be determined within the frame of the system specifications agreed in WP1.2, including: a) software selection, b) contents typology, c) metadata structure, d) Access policies, e) self-archiving policy and review schemas, f) motivation policy for participation, g) author-ship rights, h) long-term preservation policy.</p> <p>The criteria for the determination of these elements will be specially driven by: 1) usability and scientific interest, 2) interoperability –within the system and beyond-, 3) security and trust, 4) compatibility with the committed long-term support.</p> <p><b>Task 3.3.b: <i>Customization</i></b></p> <p>Partners involved: ULE: 6, SIS: 2</p> <p>The specified features will be implemented by customization of the selected software. Though the system will be first implemented in English, special effort will be devoted to multilingual customization (specially in Chinese and Spanish). This imply that metadata and interoperability means has to be implemented in these languages and links between metadata structures should be provided.</p> <p>After first customization first contents shall be loaded for subsequent testing-review-implemetation cycles until completion (in each development phase).</p> <p><b>Task 3.3.c: <i>Integration</i></b></p> <p>Partners involved: ULE: 5, CCO: 1, SIS: 1</p> <p>The metadata structure and other integration means should be refined for achieving interoperability goals and a good synchronization with the user interface and other modules.</p> <p>A training kit for repository management and a maintenance plan should be developed.</p>

Deliverables (brief description)	delivery month
D3.3.a Repository initial version	14
D3.3.b Repository final version	25

Table 1.6 c-4

<b>Work package no.</b>	3.4													<b>Starting date or event:</b>	7
<b>Work package title</b>	C&E Tools development														
<b>Activity type</b>	RTD														
<b>Partic. No.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
<b>Partic. Short name</b>	ULE	UAE	UC3	CBS	HM	FUN	AAU	TUW	UB	UTI	AES	CCO	SIS	SII	
<b>Person-months</b>	0	2	0	0	15	18	11	0	0	0	0	0	9	0	

### Objectives

Research and development of: (1) collaborative methodologies and tools for the scientific community oriented to increase individual productivity and generate collective intelligence within an open scenario to society; (2) educational production tools for the scientific community oriented to facilitate the individual and collective creation of educational and dissemination supports; (3) e-Venue tools oriented to an effective and productive interaction in which tele-presence can be combined with high enhanced visual interfaces for the visualization, navigation and data organization of the related information.

### Description of work (possibly broken down into tasks) and role of partners

Lead participant: FUN

#### Task 3.4.a: Collaborative tools

Partners involved: UAE: 1, HM: 2, FUN: 3, AAU: 1, SIS: 1

A research study will be carried out to develop and adapt the current state-of-the-art on collaborative methodologies, along with a comparative study of available open tools oriented to the development of open source means for the provision of high quality collaborative tools.

The most relevant issues to be determined in the specification of the collaborative tools are: 1) Collaborative methodologies, 2) Definition of interoperable outputs (e.g. XML-type) as a result of the collective intelligence and as a seed for further work (RTD purpose, educational, dissemination, etc.); 3) Means to establish open channels with society; 4) User interface features in order to avoid the necessity of manuals, i.e. provision of self-contained tools; 5) Security & Trust, Usability, and Interoperability guidelines developed by the respective councils.

Upon these specifications a prototype of the collaborative toolkit will be developed and integrated into the domusBITae platform.

#### Task 3.4.b: Education Tools & e-Campus

Partners involved: HM: 12, FUN: 13, SIS: 5

A research study will be carried out to select: a) the object model best suited to the scientific purposes of the community, and b) the open source code offering highest quality modules for the proposed tools.

Detailed featuring of the educational tools must be determined within the frame of the system specifications agreed in WP1.2, regarding: 1) Collective production; 2) Development of a hub able to join the collective set of resources into a logical architecture; 3) Interoperability and semantic background network for the linkage of primary resources; 4) Use of multimedia objects; 5) Objects re-usability; 6) Capacity to develop a virtual campus by means of the joint integrated services; 7) User interface features in order to avoid the necessity of manuals, i.e. provision of self-contained tools; 8) Security & Trust, Usability, and Interoperability guidelines developed by the respective councils.

For the implementation of e-Campus additional academic resources must be provided:

(i) Communicational tools: solving questions, group activities and enhancing communication synergies between participants of training programs.

(ii) Training tools: Virtual Library, events calendar, current news, case studies, complementary legislation.

Upon these specifications a prototype of the educational tools will be multi-linguistically developed and integrated into the domusBITae platform.

**Task 3.4.c: Visual interfaces**

Partners involved: UAE: 1, AAU: 8, SIS: 2

In order to overcome dense information environments and representations that lead to complicated patterns of scrolling, linking and navigation, the solutions proposed in domusBITae will experiment with new trends in information visualization, navigation and data organization such as those that have been characterised as zoomable user interfaces (ZUI) for either: fluidly zooming in and out in vast information landscapes, or classifying in real-time –and in a customizable fashion – maps and patterns of huge databases.

Though several proprietary tools has been currently developed domusBITae tools will focus on open source developments as (e.g. “The Open Zoom Project”).

These applications are meant to be developed for two main interlinked purposes: a) for the single-user graphic interface used for navigation of the content landscapes contained in the databases containing the information used in a collaborative work, and b) for innovation and ease of presentation and interaction in real-time telepresence and on-line collaborative applications such as the “virtual meeting room”.

**Task 3.4.d: Integration**

Partners involved: HM: 1, FUN: 2, AAU: 2, SIS: 1

Deliverables (brief description)		delivery month
D3.4.a	Collaborative tools initial version	12
D3.4.b	Integrated education tools initial version	14
D3.4.c	e-Venue tools initial version	14
D3.4.d	Collaborative tools final version	24
D3.4.e	Integrated education tools final version	25
D3.4.f	e-Venue tools final version	25

Table 1.6 c-5

<b>Work package no.</b>	3.5											<b>Starting date or event:</b>		7
<b>Work package title</b>	Glossary development													
<b>Activity type</b>	RTD													
<b>Partic. No.</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>Partic. Short name</b>	ULE	UAE	UC3	CBS	HM	FUN	AAU	TUW	UB	UTI	AES	CCO	SIS	SII
<b>Person-months</b>	3	0	13	6	0	0	0	0	0	0	0	5	4	0

<b>Objectives</b>
Development of: (a) an <i>interdisciplinary glossary</i> aimed at promoting interdisciplinary clarification and disambiguation on common terms, problems, and the concerned viewpoints; (b) a set of interlinked <i>domain glossaries</i> providing a semantic network for the interoperability and knowledge integration of the infrastructure.
<b>Description of work</b> (possibly broken down into tasks) and role of partners
Lead participant: UC3 <b>Task 3.5.a: Interdisciplinary glossary</b> Partners involved: ULE: 3, UC3: 1, CBS: 3, CCO: 2, SIS: 1 <b>Task 3.5.b: Domain glossary - semantic core</b> Partners involved: UC3: 5, CBS: 2, CCO: 3, SIS: 2 <b>Task 3.5.c: Integration</b> Partners involved: UC3: 7, CBS: 1, SIS: 1
<b>Deliverables</b> (brief description) <span style="float: right;">delivery month</span>
D3.5.a Interdisciplinary glossary initial version <span style="float: right;">12</span>
D3.5.b Domain glossaries module initial version <span style="float: right;">14</span>
D3.5.c Interdisciplinary glossary final version <span style="float: right;">24</span>
D3.5.d Domain glossaries module final version <span style="float: right;">25</span>

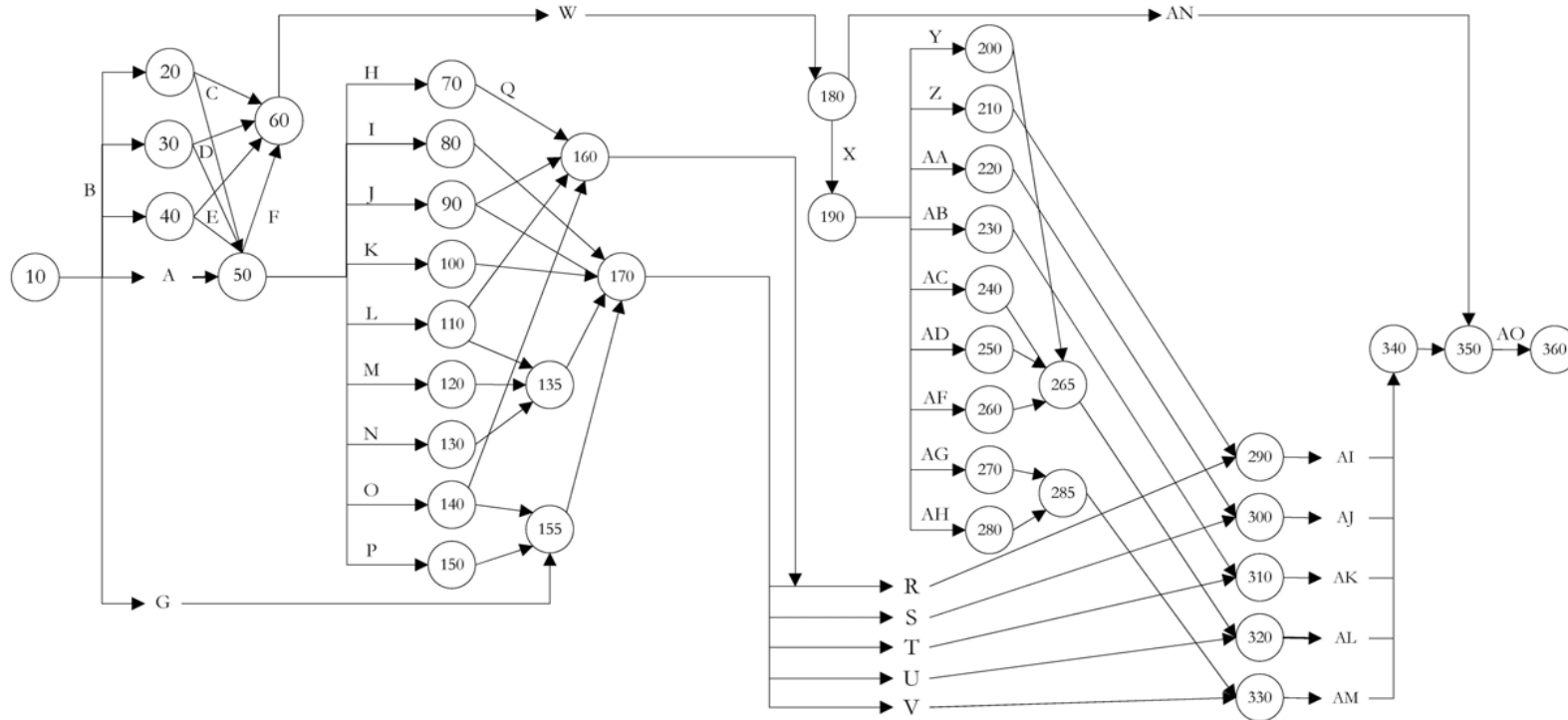
**Table 1.6 d:** List of milestones (only the means of verification related to *Joint Research* activities are here specify; for the coordination and service see the correspondingly Milestone list)

Milestones number	Milestone name	Work package(s) involved	Expected date	Means of verification
1	Kick-Off Meeting	1.1	1	See table 1.4 d
2	System specifications	1.2, 1.3, 1.4, 1.5	6	See table 1.4 d
3	Assessment Procedure	1.2, 1.3, 1.4, 1.5	10	See table 1.4 d
4	Initial version launch	3.1, 3.2, 3.4, 2.1	12	D3.1.a
5	System specifications review	1.2, 1.3, 1.4, 1.5	19	See table 1.4 d
6	First full version of the joint system launch	2.1, 2.2, 2.3, 2.4, 2.5	14	D3.1.b, D3.2.a, D3.3.a, D3.4.a, D3.4.b, D3.4.c, D3.5a, D3.5b
7	Advanced version launch	2.1, 2.2, 2.3, 2.4, 2.5	25	D3.1.c, D3.1.d, D3.2.b, D3.3.b, D3.4.d, D3.4.e, D3.4.f, D3.5c, D3.5d
8	Assessments of impacts	1.6	36	D.1.6f
9	End of project	1.1	36	See table 1.4 d

Table 1.6 e: Summary of effort – Service activities

Parti. No.	Partic. short name	WP 1	WP2	WP3	WP4	WP5	Total person months
15	ULE	0	0	15	0	3	18
16	UAE	15	0	0	2	0	17
17	UC3	0	0	0	0	13	13
18	CBS	0	0	0	0	6	6
19	HM	0	0	0	15	0	15
20	FUN	0	0	0	18	0	18
21	AAU	0	0	0	11	0	11
22	TUW	0	13	0	0	0	13
23	UB	6	0	0	0	0	6
24	UTI	0	0	0	0	0	0
25	AES	2	0	0	0	0	2
26	CCO	0	1	1	0	5	7
27	SIS	7	3	3	9	4	26
28	SII	0	0	0	0	0	0
<b>Total</b>		30	17	19	55	31	<b>152</b>

### 1.7 Interdependency of project components (PERT diagram)



Events			
10	Kick-off	140	Interdisc. glossary deliv.
20	Security & Trust council	150	Domain glossary deliv.
30	Usability & U.E. council	155	Glossary integration
40	Interoperability council	160	Preliminary vers. launch
50	System specification	170	Joint system integration
60	Assessment procedure	180	First system assessment
70	dB CMS delivery	190	Final system specification
80	User interface delivery	200	2 <sup>nd</sup> dB CMS delivery
90	Directory delivery	210	2 <sup>nd</sup> User interface delivery
100	Repository delivery	220	2 <sup>nd</sup> Directory delivery
110	Collaborative tools deliv.	230	2 <sup>nd</sup> Repository delivery
120	Educational tools deliv.	240	2 <sup>nd</sup> Collab. tools deliv.
130	e-Venue tools delivery	250	2 <sup>nd</sup> Educ. tools deliv.
135	C&E tools integration	260	2 <sup>nd</sup> e-Venue tools delivery
140		265	2 <sup>nd</sup> C&E tools integration
150		270	2 <sup>nd</sup> Interd. glossary deliv.
155		280	2 <sup>nd</sup> Domain glossary deliv.
160		285	Glossary integration
170		290	User interface upgrade
180		300	Directory upgrade
190		310	Repository upgrade
200		320	C&E tools upgrade
210		330	Glossary upgrade
220		340	End of trial operation
230		350	Global assessment
240		360	End

Activities				
A	System design	O	Interd. Glossary develop.	AC
B	Councils constitution	P	Domain glossary develop.	AD
C	Sec. & Trust guide	Q	Trial CMS deployment	AF
D	Usability guide	R	dB Gate management	AG
E	Interoperability guide	S	Directory management	AH
F	Assessment plan	T	Repository management	AI
G	Interd. glossary service	U	C&E tools management	AJ
H	dB CMS development	V	Glossary management	AK
I	User interface dev.	W	1 <sup>st</sup> global assessment	AL
J	Directory development	X	System design review	AM
K	Repository development	Y	2 <sup>nd</sup> dB CMS development	AN
L	Collab. tools develop.	Z	2 <sup>nd</sup> User interface devel.	AO
M	Educ. tools develop.	AA	2 <sup>nd</sup> Directory develop.	
N	e-Venue tools develop.	AB	2 <sup>nd</sup> Repository develop.	

## 1.8 Significant risks and contingency plans

For the progress of the project, the following risks can be pointed out:

1. The need to attain in some steps the approval of domusBITae members (see §2.1), although it is conceived as a warranty to achieve a democratic, inclusive and open virtual community, it might hinder the progress of the project, complicating in excess some developments. To minimize this risk the following measures will be taken:
  - a) an early survey of target community needs in the analysis phase;
  - b) an agreement in the pre-design including representatives of a critical mass of communities in all the relevant fields (see table 3.1);
  - c) significant target community trials within the testing phase of all developments;
  - d) membership commitment to a co-operative contribution in the systems development, not hindering its progress; d) an approval procedure cycle considering minimal agreement in case of excessive delay.
2. The necessity of gathering representatives, consortium or community members for decision making and design approval –although desirable for a participatory development– might increase the expenses, complicate the development and reduce flexibility. To minimize this risk:
  - a) the meetings will be carefully planned considering virtual and presential ones regarding the durability and potential amount of posed questions;
  - b) the decision making at the coordinative level will be dimensioned to keep a good balance among flexibility, operability and partaking.
  - c) the specification of modules at the design stage should enable the maximal operability of the development teams as well as an effective work control at the coordinative level.
3. Although in order to warranty system security and responsible use, the *requirement for user authentication* and other member's obligations will increase the trustfulness of the system, it has been proven that such requirement and other user commitments usually hinder a fluent participation. Therefore, it exist a risk that these measures might *discourage participation of potential users*, thus reducing the desired impacts (§3.1). To minimize this risk, the Domus BITae system aims at developing a sort of federal authentication by means of which it will not be necessary authentication whenever a user has already been identified in a system belonging to Domus BITae.
4. The system development by fulfilling the *requirements* of knowledge oriented design, accessibility, security and good scientific practise (see §2.1, design council) –although aimed at achieving an inclusive, trustworthy, democratic and useful stage– *might hinder the development easiness*. It might complicate the maintenance, betterment and therefore a long-term usability of the system. To minimize this risk, the *National Lab of Quality SW* (within INTECO, see §2.2) will veil for general design simplification in Domus BITae development.
5. Other risks concerning potential impacts will be considered in § 3.1.



## 2. Implementation

### 2.1 Management structure and procedures

Figure 1 shows the most relevant roles regarding the management of the project and the most relevant relation among parts. Three different management roles are distinguished: 1) *coordination*, which affect any other activity, 2) *design council*, which monitors and advice all design and development, and *development* chiefly devoted to an specific DomusBITae module.

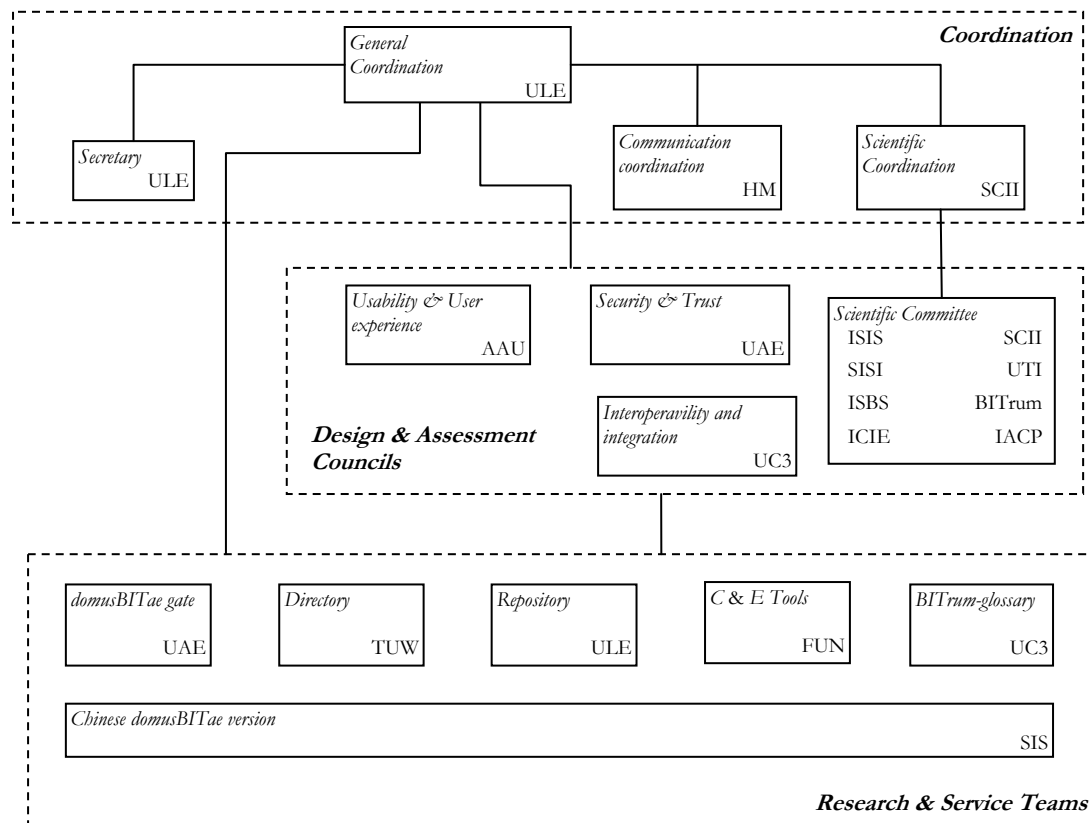


Figure 4: Management structure

Regarding **decision making**, the tasks of the project may be divided in those subject to:

- *Coordinative Approval* (CoA), if just a coordinator can decide;
- *Team Approval* (TA) if a particular team can decide by itself;
- *Design Council Approval* (DCA), if the assessment of design council is to be committed.
- *Consortium Approval* (CA) if the agreement of all parts is mandatory; and
- *Members Approval* (MA), if also the members of the usage community should take part.

While the first two kinds of approvals will drive the decision taking within the working packages, the others will articulate the developing of the work as a whole.

The *coordinative approval* is committed to the supervision of the work within working packages concerning both consortium and FP7 criteria, therefore all team reports are subject to such approval.

Any decision making within the teams will be driven under responsibility of the head of each team, who may articulate the involved personal according to their particular task and organization.

Any other decision concerning functional modules of the system or integrated systems, has to be agreed by all parts by means of any of the last tree categories of approvals according to the scheme depicted in figure 5.

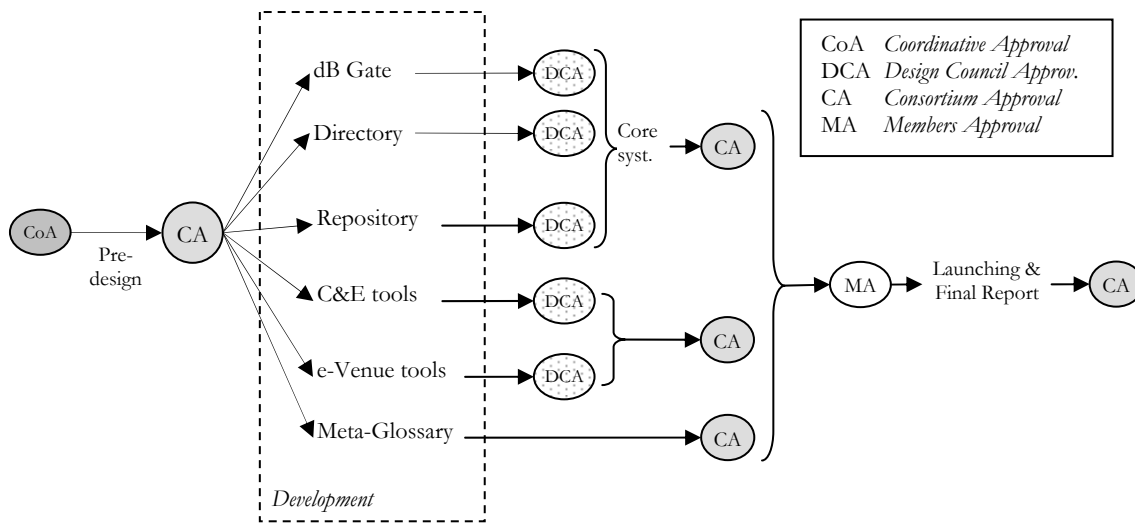


Figure 5: Evolution of work regarding the necessities of agreement

## 2.2 Individual participants

### 2.2.1 Universidad de León, Spain (ULE)

**Institution:** The University of León (at the northwest of the autonomous community of Castilla y León, Spain) has been recognised by the excellence of their information technologies infrastructures and has constituted the promoting and management centre of an open community in information studies.

#### 2.2.1.1 Coordination

The team proposed for the coordination of Domus BITae consortium belongs to the *Department of Psychology, Sociology and Philosophy* and has maintained a broad and intensive activity in gathering Information Science Research at the National and International Level.

**Task:** Besides other general or punctual participations: a) General project coordination, including: communication, approval, development control, calls, scientific gathering and secretary -WP-1.1; b) Coordinating and participating in the dissemination and community management -WP-1.6; Management of the domusBITae Gate -WP-2.1-; c) Management and development of the interdisciplinary glossary management -WP-2.5-.

**Experience:** the team has carried out in the last years an intensive and well recognised activity in the promotion of Information Science:

*BITrum research group:* founding, coordinating and managing the group and related activities. Founded in 2008, it is aimed at clarifying the information concept following an interdisciplinary approach and composed by above 70 members from different scientific domains and nationalities.

*Virtual Research Community:* development and management of tools for sharing information, conceptual clarification, discussion, dissemination, cooperative work. It is composed: 1) diffusion facilities (public site and blog of contributions), 2) working facilities (archives, discussion, agenda, etc.), 3) glossary edition system. This e-Community for cooperative research represents the grounds for the proposed infrastructure. <http://en.bitrum.unileon.es>

*Communities of Information Studies:* relevant liaison and implication (executive and scientific boards) in a number of research groups and institutions devoted to Information Studies: Science of

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Information Institute, Unified Theory of Information Research Group, International Center for Information Ethics, ICT & Society, International Society for Information Studies, etc.

*Scientific Gatherings:* (co-) organization of the First International Meeting of Experts in Information Theories, León 2008; Colloquium BITae, León 2009; ICT&Society Network Meeting, held in Barcelona 2010; 4<sup>th</sup> International Congress on Foundations of the Information Science FIS2010, held in Beijing 2010-.

*Research Projects:* BITrum and other related projects supported by the Ministry of Science, and the local government; several successful projects of multidisciplinary engineering research in telecommunications of public support; a number of proposals to the ESF and EC.

*Publishing Activities:* books, special issue, Glossarium BITri –regional supporters-, special issues of international scientific Journals.

*Ithaca:* development and usage of a software Ithaca on game theory for education and research purposes, supported by public funding.

**Profile of staff:** To carry out the coordination tasks three profiles are proposed:

JOSÉ MARÍA DÍAZ NAFRÍA as *General and Technical Coordinator (GTC)* must control the whole technical development, driving the different parts in their commitments, monitoring the decision making, the completion of objectives, signing approvals and summoning the concerned parts. The proposed GTC has an interdisciplinary academic experience in humanities, engineering and natural science, proven by academic awards (PhD in Telecommunication Engineering –mathematical physics-; M.S. in Philosophy) and recognised work, as well as experience in the coordination of interdisciplinary activities (research, summoning, dissemination and academia), he has also proven experience in multidisciplinary development of edge technology (satellite antennas; antenna metrology, etc). He is well centred in the international community of informational studies, belonging to several leading communities in the field.

FRANCISCO SALTO ALEMANY as *Scientific Coordinator (SC)* is in charge of summoning the scholar and scientific community, bringing the Information Studies research interests and activities into the system, as well as disseminating results. He has interdisciplinary experience in German and American Universities, has coordinate international research activities and is also well centred in the target community.

SECRETARY: in charge of keeping the agenda, communicate the calls, recording decision and reports, keeping procedures and format documentation, making documentation available to all parts (including FP7 assess), requesting reports, and editing. The proposed secretary has experience in the management of international research and development.

### 2.2.1.2 Team of Repository development

The team proposed for the development of DomusBITae repository belongs to the University Library. It has provided information system support for the mentioned networking and research activities of ULE in the advancement of Science of Information.

**Task:** development and management of the thematic repository (WP 2.3 & WP 3.3), cooperating in the design of the metadata/semantic structure of the domusBITae system as a whole in relation to the peculiarities of the digital assets to be stored in the repository. A best practise to promote participation, quality assessment, preservation and annotation will be specifically pursued.

**Experience:** BULERÍA is an institutional repository developed by the team for the Universidad de León. The team has also broaden experience in the use and development of tools for Library management in bibliographic resources, as well as training for the usage, management and customization of repositories, and other librarian resources.

**Profile of staff:**

LETICIA BARRIONUEVO as *Repository Manager (RM)* for managing the architectural and metadata structure of the repository as well as the archiving, review, access and authorship policies,

advocacy, user training and a liaison with other partners and external institutions. She has recognised professional and scientific qualification in librarianship and information science; experience of working in a higher education library and relevant research in special library environment; excellent IT skills and familiarity with institutional repository software and metadata standards. Strong advocacy skills and a customer orientated approach to service design and delivery. She will promoting the use of repository; manage daily operation of the research repository service -providing training and advice to contributors. Furthermore she will envisage future strategies for improvement in the repository service.

REPOSITORY TECHNICAL DEVELOPER (*RTD*), for technical implementation, customisation and management of repository software; management of metadata fields and quality, usage reports and tracking preservation issues. The RTD will: design, implement, test and maintain the repository and associated tools and applications; develop or contribute to the development of technical/specialist documentation and advocacy and outreach activities. The RTD must have excellent IT skills and experience in web systems and web-based technologies, software (e.g. Web 2.0 tools), analytics, Linux, SQL, XML, PHP. RTD is acquainted with at least one (or a specific) repository software, as well as relevant metadata standards and protocols e.g. OAI-PMH, Dublin Core.

### 2.2.2 University of the Aegean, Syros, Greece (UAE)

**Intitution:** The University of the Aegean is an international research oriented university. It is an inspiring, innovative, socially committed institution situated in the Aegean Archipelago, the ancient cradle of knowledge. The scientific subject of the Department of Product and Systems Design Engineering (DPSD) of the University of the Aegean and member of the consortium, is the integrated design of Products and Systems, using creatively the knowledge and the ideas emerging from a wide variety of arts and sciences, emphasizing in the exploitation of new technologies. The basic research subjects, that result in key themes linked to the programme of the department are the following: Information Systems Design, Human Computer Interaction, Collaborative Systems Design, User Interface Design, Interaction Design, User experience Design, Usability Evaluation and Accessibility.

**Task:** The participation of UAE-DPSD research group in the project's development is transversal and is involved in the following work packages (besides other commons tasks): WP-1.3: Coordination of the Security and Trust council; WP-1.4: Usability, User Experience and Accessibility cross-module; WP-1.5: Interoperability and system integration cross-module; WP-2.1 and WP-3.1 concerning the development and service of domusBITae gate (specialised CMS and integrated access system to domusBITae federated resources).

**Experience:** Among others it is worth mentioning the following projects:

*BenToWeb:* Benchmarking tools for the Web (IST-2002-2.3.2.10 e-inclusion). BenToWeb was a project within the Web Accessibility Benchmarking (WAB) Cluster aimed to support the European public and private sector to implement the recommendations of the eEurope 2005 Action Plan by providing new software modules and methodologies that satisfy some of the accessibility recommendations of the Web Accessibility Initiative (WAI) of the World Wide Web Consortium (W3C), which were not analysed by existing tools due to their inherent complexity.

*IRIS:* Incorporating Requirements of People with Special Needs or Impairments to Internet-based Systems and Services, IST-2000-26211. The scope of the IRIS project is to support all designers to design web applications and services that implement a wide variety of accessibility/usability/DfA recommendations, as well as relevant user modelling techniques. IRIS project was initiated from the lack of familiarisation of Web accessibility guidelines from the Internet and ICT industry Community and absence of multimodal services to support Web designers to design inclusive Internet applications.

*coCreate:* collaborative design platform. coCreate is a platform that aims to support collaborative design processes and activities of information and knowledge sharing within a community of

researchers, designers and academics. It offers a set of collaborative services and software online tools that enable individual people to communicate and share information in order to work together to achieve common business goals. The central elements of the platform include messaging tools (e-mail, contact, calendar, task scheduling etc.) team collaboration tools (community awareness widgets, wiki notes, wiki libraries, task distribution and management, file sharing and synchronization etc.) real-time communication and collaboration tools for group-work (chat, avatar presence, instant messaging, annotations, file and folder sharing, audio conferencing through external tools, work planning tools and evaluation mechanisms e.g. voting for surveys, polls etc.) social computing tools of web 2.0 technologies (blogs, tagging, wikis, RSS, tag clouds, shared bookmarks) and bibliographic tools, file management, indexing for rapid search and audio, video and image archiving and presentation.

*SRcosmos* (Scientific References Cosmos). The subject of the “SRcosmos” project is the design and implementation of a database management system for archiving scientific publications and gray literature in the area of the Environmental Science and Technology. The database is designed to include all necessary information regarding authors, various categories of publications, full-text documents and references/citations. A public and an administrative interface are implemented. The database supports multiple languages. The public interface is a web-based application that provides generic search and advanced search by any available field.

### **Profile of staff:**

Prof. JOHN DARZENTAS is Professor of Operational Research. His interests include: Information systems design, intelligent systems and decision support systems, human computer interaction, systems thinking, computer supported collaborated work. Professor Darzentas is the Greek national representative to IFIP TC 13 (HCI), and a member of the CEN/ISS Working Group for Learning Technologies. e-mail: [idarz@aegean.gr](mailto:idarz@aegean.gr)

Dr. THOMAS SPYROU is an Assistant Professor. He is Technical Director of Aegean-Net, as well as providing internet services to other educational communities of the Aegean. He is an executive member of GUnet technical committee. Research interests include information systems, artificial intelligence, decision support systems, intelligent tutoring systems, simulation and security. e-mail: [tsp@aegean.gr](mailto:tsp@aegean.gr)

Dr. DIMITRIOS LEKKAS is an Assistant Professor with the department of ‘Systems and Products Design Engineering’. He has been involved in several national and EU funded R&D projects in the area of Information and Communication Systems and specifically in Computers security, Database management systems, Telecommunication systems and Geographical Information systems. e-mail: [dlek@aegean.gr](mailto:dlek@aegean.gr)

Dr. PANAYIOTIS KOUTSABASIS Lecturer of Human-Computer. Research areas include human-computer interaction, intelligent user interfaces, systems personalisation and adaptation, usability evaluation and accessible Web design and design support. Research interests include: interaction design, design methodology, design and usability, design for all, systemic thinking and practice, evaluation of interactive systems, Web design, personalization, collaborative systems design, decision support systems. e-mail: [kgp@aegean.gr](mailto:kgp@aegean.gr)

Dr. SPYROS VOSINAKIS is a Lecturer in Virtual Reality. His research interests include: Virtual Reality, Intelligent Virtual Agents, Virtual Worlds in Education, Collaborative Virtual Environments, Adaptation and Personalization in 3D Environments and Virtual Museums. e-mail: [spyrosv@aegean.gr](mailto:spyrosv@aegean.gr)

Dr. ARGYRIS ARNELLOS is a Researcher & Lecturer in Systems Theory. His research interests focuses on: Systems Theory, 2nd-order Cybernetics, Semiotics, Biosemiotics, Complex Systems, Design Theory, Information Theory, Information Systems Design, Artificial Intelligence, Artificial Life. e-mail: [arar@aegean.gr](mailto:arar@aegean.gr)

Dr. JENNY DARZENTAS is a Researcher and Lecturer in Accessibility and Design for all. Her main interests as regards this proposal are in the accessibility of informational content, in terms of

being usable and ultimately meaningful for information seekers and users. Her research covers information design and structure that are in accord with relevant communication theories. That is, to work to turn static repositories of information into hubs around which can evolve active communities of researchers. She has worked on European funded projects related to information retrieval and organisation and in projects related to accessibility and usability of mainly digital content. e-mail: [jennyd@aegean.gr](mailto:jennyd@aegean.gr)

Dr. MODESTOS STAVRAKIS is a Researcher/Lecturer in Interaction Design and User Experience Design. His main interests as regards this proposal are in the areas of interaction design, interface design, user modeling, web information systems, multimedia design, collaborative systems design for supporting design processes, Content Management Systems, Digital Management Systems, Open source Software, web technologies and the development of assistive technologies for the web. e-mail: [modestos@aegean.gr](mailto:modestos@aegean.gr)

Dr. EVANGELOS VLACHOGIANNIS is a Researcher/Lecturer in Informatics. His main interests as regards this proposal are in adaptive / interactive / accessible web, web science (mobile web, semantic web and web 2.0), personalization, user experience, portals, information systems design, collaborative environments, Content Management Systems, Software/Web engineering. e-mail: [evlach@aegean.gr](mailto:evlach@aegean.gr)

### 2.2.3 Universidad Carlos III de Madrid, Spain (UC3)

The University Carlos III of Madrid (UC3M) is a public university founded in 1989. Its main goal is to provide specialised training in Law and Social Sciences and Engineering, as well as to become a prime European research centre. UC3M has strived, since its foundation, to make research one of the fundamental pillars of its activity, both for the enhancement of its teaching and for the new knowledge and new areas of research. UC3M is organized into 26 Departments and 24 University Research Institutes. In addition, since 2005 it has an Official Catalogue of Research Groups, composed of scholars who share common lines of work, carry out collaborative research project and publish jointly. The Catalogue is comprised of 118 groups, which cover almost all of bodies of knowledge and studies at UC3M. UC3M, as university, has a national reputation for its research efficiency. It holds second place in participation in the EU Framework Programme (standardized data by number of permanent researchers) and second in average number of publications per permanent researcher in the period 2002-2006 (Web of Science). Recently (Report 2009 of CNEAI-National Commission for Evaluation of Research Activity), UC3M has reached the top of the Spanish universities in research activity. Main figures (numbers below are from 2009): Researchers: 1.855; Research Teams: 118; Doctoral students: 555; Chairs of Research: 25; Research & Innovation Centers (national or regional): 4; Technology Laboratories: 7; - Research funding: 23,3 Million€; Competitive (regional, national or international programmes) 13,3 M€; R&D contracts with Industry: 8,7 M€; Others: 1,3 M€.

**Tasks:** Besides other common activities: a) Structuring the metaglossary with a Knowledge Organization System WP-3.5; b) designing a model that links the glossary with assets in the repository and the directory WP-1.5; c) defining requirements in the Search Engine System and to analyze alternative positioning algorithms WP-1.3; d) facilitating harvesting to external tools, thus facilitating interoperability WP-1.3; e) incorporating metadata vocabularies and semantic documents to the system WP-1.3.

### 2.2.4 Copenhagen Business School (CBS)

Using traditional fields within business economics and language as a starting point, CBS gives very high priority to cross-disciplinary and problem-oriented approaches. Therefore, sociology, psychology, anthropology, politology, law, philosophy and intercultural understanding are also important areas in CBS' academic and research profile.

**Tasks:** a) Participation in the design of the repository module: organization of the reviewing structure, and motivation policies WP-3.3; b) Participation in the design of the glossary module: semiotic network, linkage between different levels of the glossary, between knowledge domains,

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and between languages WP-3.5; c) Participation in the usability and user experience council WP-1.4; d) Participation in the interoperability council to define and assess the semantic structure of the system WP-1.5; e) Management –including contributions provision- to the glossary WP-2.5.

**Experience:** The Center for Language, Cognition, and Mentality, at the Department of International Culture and Communication Studies, has been engaged in a number of research projects related to the tasks, specifically in semiotics. For instance: “The SugarTexts project” <http://www.sugartexts.dk/>, or “Integral Semiotics - towards a theory of integral communication”.

### **Profile:**

SØREN BRIER is professor in the Semiotics of Information, Cognitive and Communication Science. He has conducted significant research and scientific publications in the fields of Theory of Science, Cognitive Science, Cross- and trans-disciplinary function and possible autonomy in relation to mono-disciplinary science, Cybernetics, Bio-semiotic cognition- and communication theory, Information theory, Cybersemiotics.

OLE NEDERGAARD THOMSEN is an experienced researcher in linguistic and semiotics, currently engaged in the project “Integral Semiotics” and “A Cybersemiotic Foundation of Functional Discourse Grammar”. He also has expertise in models of linguistic change.

### 2.2.5 Munich University of Applied Sciences, Germany (HM)

**Institution:** HM is one of the largest Universities of Applied Sciences in Germany. Particularly Faculty 13 (for General and interdisciplinary Studies) plays a significant role in the provision of a general education and has a special focus in intercultural communication and virtual education, both of significant added value to the purposes of domusBITae.

**Task:** Besides other common activities: a) Participation in the development of Cooperative and Educational Tools especially in the field of: (i) education and (ii) cooperative interdisciplinary design (co-design) (WP-3.4); b) Deploying of some educational and co-design WG (WP-2.4); c) participation in the usability and user experience council will be linked to the participation of Prof. Zimmermann in a research project in which the sociological, ethical and cognitive consequences with respect to social networks and internet technologies are analysed (WP-1.4).

**Experience:** Research about Metaphysics and Philosophy of Nature including Philosophy of Science (particularly of quantum gravity theories) and Ethical Implications, relationship between ontological and epistemological consequences of the cognitively perceiving and the linguistic modeling as well as designing of the world, especially in terms of spaces, networks, and (evolutionary) systems.

The team has also educational experience in e-Learning and liaison with industry in co-design using new medias; development and management of e-Learning Platform “Strategiepaper at the Hochschule München”; experience in intercultural and international programmes.

### **Profile of staff:**

RAINER ZIMMERMANN (PhD in Mathematics in 1977 from Frei Universität Berlin; PhD in Philosophy in 1988 from TU Berlin) is professor of philosophy whose interdisciplinary profile is rooted in his scientific career in the fields of formal, natural, social and philosophical sciences. He has a wide international experience in different scientific fields participating in international projects and holding or having held academic positions in different countries and institutions: Clare Hall at Cambridge, University of Kassel, University of Bologna, University of Salzburg, Technische Universität Berlin.

### 2.2.6 Fundación Universitaria Iberoamericana, Spain (FUN)

**Institution:** FUNIBER, founded in 1997, is a non-profit private organization devoted to online education, collaborative and multidisciplinary R+D+i projects and international cooperation

projects. In education, FUNIBER promotes inter- university programs (Masters, post-degrees, specializations) with double-titled academic degrees. <<http://www.funiber.org>

Task: the participation within the Project will be mainly dedicated to the deployment of specific working group tools related to educational and dissemination purposes and the effective collaborative work.

Experience: FUNIBER expertise is derived from an extensive experience from distance learning with the development of online campus (currently maintaining 20 campus), working in multinational scenarios (25 countries) with about 12.000 students.

The international team of about 270 employees is dedicated to develop the knowledge base, diverse programmes, and provide the personalized service.

Period	Program	Nom
2007-2009	Iberoeka	Intelligent system for the management of informatics vulnerabilities
2006-2009	Iberoeka	PROGNOS (system for demand forecasting for SME)
2003-2006-2008	Regional	Nutrition information system (intellectual property rights)
2006	Private funds	Integrated academic system
2003-2006	Socrates-Grundtvig (EC)	“Teaching Culture! Teacher Training in Intercultural Awareness”
2005-2006	Socrates (EC)	Tools for Intercultural Education

Furthermore, the researchers into FUNIBER accounts with experience in: a) Participation in European network of Living Labs (ENOLL); b) Virtual Community between professionals into broadband networks (about 4000 members); Participant in open innovation projects devoted to co-design of products, collaboration tools.

**Profile of staff:** to carry out the deployment of the R+D project, the proposed profiles are:

ARTURO ORTEGA-MANSILLA as *Research Coordinator* responsible for the whole technical development both inside the institution and within the consortium. The proposed coordinator has an extensive experience in RTD international projects besides a global knowledge into the research focus area.

A Scientific multidisciplinary group formed by the scientific coordinators of FUNIBER knowledge areas: cognitive and pedagogical science, project design and collaboration, e-learning and Information Technologies.

The researchers who are specialized in the RTD technologies that will be developed in order to build the working group tools: IT platforms, enhanced and e-learning, collaborative methodologies.

### 2.2.7 Aalborg University, Denmark (AAU)

**Institution:** The Department of Architecture, Design & Media Technology (ADMT) -involved in the project- consists of several cross-disciplinarily units sharing a common vision for the development of an innovative cluster of engineering-based environments for education and research which integrate creativity, engineering and technology within the disciplines of interactive media, digital design, architecture, urban design and industrial design. The department works to be the leading research and educational environment in Denmark that address the challenge of the interplay between creativity and technology, and to develop new growth areas in research and education directed towards the human end-user.



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The Department maintains and expands the existing research and teaching centres in three Danish cities (Aalborg, Ballerup and Esbjerg). It includes 100 employees and provides teaching to over 1000 students country-wide.

**Task:** Besides all the common activities: a) Coordination of the “Usability and user experience” cross-module; b) Development of the “virtual meeting room” within the Workings group toolkit; c) Participation in the “Interoperability and system integration” cross-module; d) Contributions to the glossary.

**Experience:** Areas of expertise and research include (among others) interaction design, human perception and evaluation techniques, computer graphics and sound synthesis for interactive media and VR, computer vision, computer science, cognitive ergonomics, human machine interaction, digital culture and interactive media science.

The department has extensive experience in implementing and testing multimodal immersive and interactive systems. For example, the following project:

NIW - Natural Interactive Walking (ICT-2007.8.0 FET Open)

Paco-Plus (IST-FP6-IP-027657)

Sound forum Oresund (Interreg III)

COST Action IC-0601 SID “Sonic Interaction Design”.

BENOGO (Being There Without Going), EU IST FET PRESENCE (2002-2005).

### **Profile of staff:**

LUIS EMILIO BRUNI: Associate Professor in the Medialogy cluster conducting research and teaching in multimodal perception and cognition, cognitive technologies, biosemiotics, cognitive and cultural sustainability in the digital age.

RESEARCHER/DEVELOPER: with experience in interactive media development, information visualization and navigation, computer graphics.

## 2.2.8 Technische Universität Wien, Austria (TUW)

**Intitution:** The TUW sub-team will be located at the Institute of Design and Techology Assessment of the Faculty of Informatics. This institute consists of 2 working groups – Computer Supported Cooperative Work and Multidisciplinary Design and Human Computer Interaction – that seek to merge sociological and other relevant social sciences research with a practical contribution to the design of information technology.

**Task:** Besides all the common: 1) Coordinating the joint development domusBITae directory -WP-2.2-, 2) managing and supporting the dB directory -WP-3.2-; 3) Development of the English version "community directory".

**Experience:** Research in the area of design focuses on interaction design (innovative, multimodal interfaces), design research, design methods, digital games, media art, and information visualization. Research in the area of cooperative work integrates ethnographic studies with concept development and the design of applications.

The research application areas in HCI are on end-user's inclusion & participation, acceptance & adoption of new technologies, motivations and experiences of users, ethics and social impact of information & communication technologies. The group applies interdisciplinary, cutting-edge methodologies in order to conduct user requirement analysis, co-design of new technologies, participative design process and lab and field based, short and long-term user studies.

### **Profile of staff:**

WOLFGANG HOFKIRCHNER: is Associate Professor in Technology Assessment and was Professor for Internet and Society for the last 6 years at the University of Salzburg. He has

significant liaison with a number of communities of the global target community. He will be the working group leader of the directory.

A RESEARCHER with experience in the development of web systems and knowledge in social networks.

### 2.2.9 University of Barcelona, Spain (UB)

**Institution:** The University of Barcelona is the principal centre of university research at Spain and has become a European benchmark for research activity. The team part of the consortium constitutes a research group integrated at Faculty of Library and Information Science. Its graduates have established direct paths into information management and documentation within organizations large and small, and are now playing significant professional roles in the recordkeeping of a growing multitude of online products and projects, including websites, intranets, digital publications and resource directories.

**Task (within the project):** The participation of UB's research group in the project's development is transversal and is involved in all work packages; but it is lead party of work package #1 *Global design and coordination of module designs*.

#### Expertise (selection):

- 2008-2009: Project: "Success critical factors for the implantation of communities of practice in Public administration" funded by the *School of Public Administration of Catalunya*.
- 2005-2006: Project "Content and Knowledge Management Systems" funded by the *Agency of University and Research Support of Catalunya (AGAUR)*.
- 2003-2005: Project "Taxonomy for Knowledge Organization in Information Society" funded by *Biblioteca Digital de la Universitat Oberta de Catalunya*.
- 2002-2004: Project "*Knowledge Assets Identification and Methodologies of Implementation in Organizational Knowledge Management*" funded by *Internet Interdisciplinary Institute of Universitat Oberta de Catalunya*.
- 2002-2003: Project "Campus Information System for students in Spanish Universities: characterization and análisis" funded by Ministerio de Educación.
- 2000-2002: Project *LAGNIKS (Latin-American Government Network on Information and Knowledge Systems)* funded by United Nations Development Programme NDP at UN and Generalitat de Catalunya.

#### Profile of staff:

MARIO PÉREZ MONTORO: is professor in information science and has carried out significant research and publications in the field of information- architecture, management and organization.

The work of UB's research group is focussed on some of the diverse aspects (conceptual, semantic, epistemological, and practical) related to the subject of Information Science and Knowledge Management; and, in a particular way, on information visualization and architecture as well as collaborative environments development.

### 2.2.10 Unified Theory of Information Research Group, Austria (UTI)

**Institution:** The *Unified Theory of Information (UTI) Research Group - Association for the Advancement of Information Sciences* is a non-profit organization that aims at the advancement of reflection and discourse in academia and society about the role of Information, communication, media, technology, and culture in society. It works for building a better understanding and for dialogue in information science, communication and media studies, and science and technology studies (STS). It is interested in advancing critical ideas, approaches, methods, and research that are needed for establishing a global sustainable information society.

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**Task:** Besides other common activities: a) Co-organising a ICTs&Society Meeting as a significant part of the dissemination activities WP-1.6.; b) Liaison with other scientific communities in Information Studies WP-1.6; c) Managing the directory and entering into it the survey on information studies societies carried out by UTI, as well as linking with the ICTs&Society Network WP-2.2; d) Contributing to the repository trial with archives on system science and liaison to TripleC scientific journal managed by UTI WP-2.3; e) Trial contributions into the domusBITae Gate WP-2.1.

**Experience:** The experience of the UTI Research Group that is needful for the project at hand is the current status of its networking activities.

The UTI Research Group is member of the EU COST Project "Living in Surveillance Societies (LiSS)" (ISO 807).

Members of the board of directors Prof. Wolfgang Hofkirchner and Prof. Christian Fuchs are the coordinators of the ICTs-and-Society Network (<http://www.icts-and-society.net/>) that comprises members of the communities of Information Science, Social Informatics, New Media Studies, Internet Research, Information Society Research, and so on.

Hofkirchner and Peter Fleissner are in charge of registering the International Society for Information Studies as association by Austrian law. The decision to found this society for reasons of networking all sciences of information, of information technology and of information society was taken at a conference "Towards a new Science of Information" held in Beijing 2010 and co-chaired by Hofkirchner.

The UTI Research Group hosts the website of the "Foundations of Information Science (FIS)" community. It has also developed and managed the scientific journal TripleC since 2003.

**Profile of staff:** The team has fully experience in managing Scientific Communities, and virtual research communities, editorial experience and proven success experience in gathering international researchers in information sciences (e.g. several FIS and ICT&S international meetings).

### 2.2.11 Agrupación Empresarial Innovadora para la Seguridad de las Redes y los Sistemas de Información, Spain (AES)

**Intitution:** The group (Innovative Business Group for Network and Information Systems Security) was promoted by the National Institute for Communication Technologies (INTECO, a state company attached to the Spanish Ministry of Industry [www.inteco.es](http://www.inteco.es), national reference in ICT security and accessibility). It gathers companies, associations, R+D+i centers and public or private organizations interested in promoting new technologies, its auxiliary industries and other sectors related with it, wishing to contribute to the aims of the Association in the Spanish Security Technologies.

The association is joined with the purpose of providing an operational structure to all companies interested in promoting and developing a Technological and Industrial Pole in ICT security. Its pillars are innovation, service delivery and training.

**Task:** Apart of other common activities, it would be in charge of: (1) Design and development of the security means and policy regarding the domusBITae Gate (WP-3.1), (2) Design of the confederated access and identity in the community, including the resource center and the federated communities of users (WP-3.1), (3) Determination of the security and trust policy for the design and development of each module and the infrastructure as a whole (WP-1.3). (4) Design advice and assessment regarding security and trust (WP-1.3).

**Experience:** The AES has broad experience in audits and consults on ICT security: requirements, risk analysis. The promoter of AES -INTECO- hosts the Spanish *Information Security Observatory*; the *Security demonstrator for SMEs*, the *Incidence Response Center*, the *National Lab of Quality SW*. Together with the European Commission, INTECO organized the Trust in the Information Society TrustIS, held in León March 2010.

**Profile of staff:** Senior consultants in information security and data protection with broad experience in security management, and design of critic security infrastructures. The teams devoted to the national monitoring of security incidences will assist in the assessment tasks.

### 2.2.12 China Center for Overseas Social & Philosophical Theories, China (CCO)

**Institution:** The CCOSPT, established in September 2009, grew out of debates with scholars in diverse disciplines in China and abroad. The Center strives to mobilize and coordinate both innovative research and usable development. CCOSPT is integrated by a group of full-time research professors and fellows, as well as part-time scholars in various fields from inland and across the world devoted to joint research projects. Especially, surveys of Internet impacts to the modern society in China find its priority in CCOSPT.

The center aims at following the new ideas, new proposals, and new programs in social, philosophical, scientific and technical activities outside of China, and to introduce these new developments to the Chinese audience, contributing to the policy-making in the central government, and to the modernization of China.

**Task:** In order to accomplish the objective of internationalising the proposed infrastructure and achieving the expected impacts, the deployment of domusBITae in the Chinese scientific community and audience becomes a fundamental task. To this end CCO will be devoted to: a) looking after the usability of the infrastructure for Chinese communities and users, aiming at delivering a domusBITae platform in Chinese adapted to the contextual reality of Chinese researchers and society WP-1.2; b) Searching for a good linkage between the resources provided in different languages so that the Chinese researchers gain access to the scientific work of the international community, and the later is enriched with the scientific work of the Chinese community WP-2.5; c) Contributing to the glossary with: (i) Chinese terms, (ii) The Chinese viewpoint (or belonging to a specific discipline) in English if different from the already clarified usage WP-2.5; d) Contribution to the analysis of the semantic network between Chinese and other languages WP-3.5.

**Experience:** The Center congregates some of the most pre-eminent scholars from social and information studies. So far as the project is concerned, CCO can do so much, including resources and results sharing, communication improving, discussion, scientific and innovation fostering, etc. CCO has many collaborators abroad, e.g., East-West Center, Asia Foundation, Berlin-Brandenburg Academy of Sciences and Humanities, etc. The famous Marx/Engels-Gesamtausgabe (MEGA) is their present translation. The working languages include English, French, German, Russian, and Japanese etc.

#### **Profile of staff:**

Gang LIU, as representative of the CCO is a well centered and known scientist in global community of information studies. The representative's reputation enables him to carry out the possible impact within the community. He has develop significant translational work specifically in the field of information studies.

The team will also be integrated by several researchers including translators in charge of rendering the platform into Chinese and an assistant to coordinate the works and interactions of the team.

### 2.2.13 Social Information Science Institute, China (SISI)

Social Information Science Institute (SISI) is dependent of Huazhong University of Science and Technology (HUST), a national key university directly under the administration of the Ministry of Education of P. R. China, and among the first Universities joining the national "211 Project" and "985 Project". SISI was established in 2006, aimed at: developing systematic innovation research in social information science; promote discipline innovation in information science and humanities; and foster interdisciplinary approach in humanities and science. SISI has organized First National Conference on Social Information Science (NCSIS'07) and First International Forum on Systems Science and Information Science (IFSSIS'07) and the Fourth International Conference on the

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Foundations of Information Science (FIS 2010), in Beijing 2010 where the International Society for Information Studies was founded.

**Task:** a) Advising and assessing regarding the necessities of the Chinese scientific community in the usability and user experience council WP-1.4; b) Developing the Chinese version of the domusBITae interface adapted to the usability of Chinese users WP-3.1; Contributing to the glossary with: (i) Chinese terms, (ii) The Chinese viewpoint (or belonging to a specific discipline) in English if different from the already clarified usage WP-2.5; c) Customizing the information studies campus of domusBITae for Chinese users WP-3.4; d) Developing some Working Group in education and research using the WG module adapted the Chinese WP-2.4.

**Experience:** With more than twenty research projects, Scholars from Huazhong University of Science & Technology, Xi'an Jiaotong University, Peking University, and other universities and research institutions all over China are gathered in SISI to carry out research in interdisciplinary areas. Following are selected research projects of SISI funded by National 985II-Project for HUST Science & Technology and Humanities Development, National Philosophical Social Innovation Base.

Carried out between 2007 and 2009: “Project: Study on the Historical Information Issues in the Viewpoint of Social Information Science”; “Project: Linguistics Study from the Perspective of Information Science”; “Project: Information Operation of Editing and Publishing Systems”; “Project: Study on the Media Information Dynamics”; “Project: Information Operation in the Trans-language Communication”; “Project: Study on the Social Information and Information System Science”; “Project: Discipline Informatizing in Information Science”; “Project: Study on the Informatizing of Social “Decision-making and Executing” System”; “Project: Study on the Communication of Mass Culture and Industry”; “Project: “Poor” Information Operation of Social System and Gray Model Technology”; “Project: Study on the Construction and Optimism of Environment of Modern Communication and Social Information”; “Project: Soul-Conscious-Information: Study on the Cognitive Process of Mental World of Human Beings”; “Project: Study on the Social Information Problems in Philosophy and Religion”.

Carried in the period 2009-2011: “Project: Comparative Research on Foreign Social Informatics”; “Project: Study on Britain Informatics and the Development of Information Technology”; “Project: Study on the Prospect of Australian Information Science”; “Project: Study on the Prospect of Canadian Information Science”; “Project: Study on the History and Present Status of Russian Social Informatics”; “Project: Study on the History and Present Status of Japanese Social Information Science”

Conferences: 2007 First National Conference on Social Information Science (NCSIS'07); 2007 First International Forum on Systems Science and Information Science (IFSSIS'07); 2010 Fourth International Conference on the Foundations of Information Science (FIS2010)

### **Profile of staff:**

The research team of SISI is a dynamic and diverse group in which researchers come from different disciplines of engineering, medicine and social sciences. Interdisciplinary researches are carried out in various levels, such as the philosophical and theoretical foundation of information science, the theoretical level of social information science, the practical level of concrete application of information theories in both social and scientific areas and so on.

### **2.2.14 Science of Information Institute (Soll)**

**Intitution:** The Science of Information Institute, established in February 2006 by U.S.A. law, grew out of discussions with scholars in diverse disciplines across the United States and Europe, as well as leaders of key international governmental and non-governmental organizations whose missions span science and information. The Institute strives to mobilize, correlate, and coordinate both innovative research and usable development.

**Task:** SoII will be the driven institution to gather scientists and communities of information studies into Domus BITae. It will be one of the two first communities to be shown in the system and will convene the call for membership.

**Experience:** The Institute congregates some of the most pre-eminent scientists in information studies at the international level, having contact with industry and academia.

**Profile of staff:** The representative is a well centred and valued scientist in the global community of information studies, what gives the reputation to engage the widest possible impact within the community.

## 2.3 Resources to be committed

### Eligible costs

All eligible costs (according to the principles of non profit and co-financing) will be transferred to the corresponding management offices of each participant following the payment FP7 criteria, which implies some pre-financing and the reimbursement subjected to reported achievements.

### Direct costs

Direct costs corresponding to participants' staff will be accounted with regard to the working time and assumed as a part of their salaries.

Direct costs corresponding to personnel not belonging to institution's staff will be endowed by means elected by the institutions regarding their particular regulations (temporal contract, grant, etc), but in either case the time devoted to the project has to be warranted, technically supervised and properly remunerated with the normal practice of the participants (including social security charges and any other statutory cost).

The institutions will supply those direct costs to be committed by the participants, i.e. the corresponding rate for joint research activities (RTD), by means of the corresponding dedication of their own staff.

### Indirect costs

Eligible indirect costs corresponding to each part will be mobilised by its representative and accounted according FP7 criteria.

Non eligible indirect costs related to the project will be also provided by participants.

### Others resources

Other relevant resources committed for the development of the project will be:

- Unlimited hosting service in the Supercomputing Center of Castilla y León coordinated with the maintenance services of the University of León (see support commitment signed by the Fundación Centro de Supercomputación de Castilla y León).
- Contents and management system of the Glossarium BITri (see support commitment signed by the BITrum association).

### 3. Impact

#### 3.1 Expected impacts listed in the work programme

As mentioned in the objectives section (§1.1), the potentials of the target community summarized in tables 3.1 and 3.2 (non exhaustive SCIP's survey on relevant Communities of information studies, classified according to their field of research, 2007) concerning over 300 organizations in more than 40 countries, is a major pillar to achieve the impacts pursued in the FP7 capacities work programme for infrastructures (Virtual research communities, INFRA-2011-1.2.1).

The geographical and academic divide of the target community is a hinder to tackle important scientific and societal problems of our time (as for example in the frontiers between physical and biological sciences, between biological and cognitive sciences, and between cognitive and social sciences). Thus the proposed domusBITae e-Infrastructure, bringing together the target community, could contribute to **increase the effectiveness of European Research**.

**Table 3.1:** Number of communities of Information Studies classified in types (accounted by SCII)

Type of studies	N° of communities
Artificial Intelligence	50
Cognitive Science	39
Communication Science and Media Studies	27
Computer Science	52
Cybernetics	26
Information Science	38
Information Society Research	64
Internet Research	16
Knowledge Studies	18
Library Science	16
Philosophy of Information and Information Ethics	20
Research on ICT's	12
Science of Complexity	22
Semiotics	13
Systems Theory	27

As shown in table 3.2, while in a global dimension the amount of communities is significant for erecting an appropriate stance to tackle the problems posed by the emerging Science of Information, in national levels (with the exception of the USA) the amount of initiatives are not enough to bring about the critical mass for confronting the regarding problems. Therefore the proposed infrastructure **empowers the European communities** (about the half) **to drive the emergence of a global virtual community** in information studies.

Much of the work wasted in the scientific research regarding information science concerns the redundancy of discussions, the dispersion of background, thought and proposals, the misunderstanding about used terms or scientific models, the relevancy of problems or phenomena, etc. Thus we believe the proposed **common tools** within domusBITae infrastructure –by means of giving the possibility to share results, foundations, approaches, terminology disambiguation, etc.– might be a key factor to achieve the pursued effectiveness in information research as well as to foster effective synergies with education and industry. Concerning the appropriateness of **procedures & best practices**, the expertise of the Scientific Committee will steer as well the

architecture of the system as the conditions to participate in the different domusBITae areas (Working Groups, Repository, Meta-Glossary).

By bringing in the managing structure the design councils concerning the issues of knowledge oriented design (UB), security, accessibility and software quality (INT) the consortium pursues to achieve the **increase of quality and attractiveness** of the proposed e-infrastructure.

**Table 3.2:** Number of communities of Information Studies per countries (accounted by SCII)

Country	No.	Country	No.	Country	No.
Argentina	1	France (EU)	3	Romania (EU)	1
Australia	7	Georgia	1	Singapore	1
Austria (EU)	10	Germany (EU)	25	Slovakia (EU)	1
Belarus	1	Greece (EU)	1	Slovenia (EU)	3
Belgium (EU)	6	Hungary (EU)	2	Spain (EU)	5
Brazil	1	Ireland (EU)	3	Sweden (EU)	8
Bulgaria (EU)	2	Israel	1	Switzerland	12
Canada	8	Italy (EU)	4	Taiwan	1
Chile	1	Japan	6	Thailand	1
Croatia	1	Lithuania	1	United Kingdom (EU)	43
Czech Republic (EU)	3	Netherlands (EU)	4	U.S.A.	106
Denmark (EU)	6	New Zealand	1	Venezuela	1
Estonia (EU)	1	Norway	1	No located	27
Finland (EU)	4	Portugal (EU)	1	<b>Total</b>	319

### 3.1.1 Roadmap for impact

With the goal of achieving the mentioned impacts the following steps are planned:

1. The design council is constituted from the beginning to participate in the whole system development in order to achieve a qualitative, useful, trustful and friendly system.
2. The consortium will address the needs of the community by making: a) a survey on research needs; b) an open call to take part in the advice of design and development.
3. After pre-design, a summoning of representatives of developers and target community will agree the specifications of the system to be developed (see fig.5). In this summoning, new members can integrate the scientific advisory board.
4. After core system launching (see fig. 2, PERT diagram, activity 70) an open call will be convened to gather new communities into the system.
5. Some mandatory member-approvals are envisaged within development (see fig.5) in order to meet the engagement of the target community.
6. The dissemination of the system as well as the call for participation will be committed to the science advisors as representatives of the target community.

### 3.1.2 European dimension

The European dimension for reaching the pursued impacts is essential for:

1. Overcoming the mentioned geographic and academic divide;
2. Overcoming the limitation of national approaches, specially in those countries where few relevant communities are present and only concerning a limited set of scientific domains –not covering the scope of information science– (table 3.2);



3. The quantity and quality of European communities in information studies might support the emerging of a global community in Information Science with European leadership;
4. The openness of an European approach might contribute to the emerging of scientific research in regions which are less organised in terms of academic networking (ESFRI 2008, p.83).

### 3.1.3 Relation with other research activities

Regarding how domusBITae initiative would account other research activities in the field, it may be pointed out its strategic relation with *Foundations of Information Science (FIS)*, *Science of Information Institute (SoII)*, *BITrum*, *Unified Theory of Information (UTI)*, and *International Centre of Information Ethics (ICIE)*, all of them directly involved in the development of the project. As shown in fig. 2, FIS and SoII will be the two first communities to be dumped into domusBITae in order to launch the core system, aiming at achieving a catalytic effect because of their centred position in the international community of information studies.

- .
- The role of SCII (<http://www.soi.info/>) is planned as a cornerstone in domusBITae strategy because of its integrative scope concerning all information studies. Therefore the task given to SCII is to convene calls for membership and disseminate the system within research community and industry. The Institute is at the same time linked to the FIS initiative (<http://fis.icts.sbg.ac.at/>), which has played a significant role in the theoretical framing of information science. The structured incorporation of its archives into the repository is envisaged as a means to increase its scientific value and usability.
- The goal of BITrum (<http://sites.google.com/site/ebitrum/>) as conceptual disambiguation and theoretical clarification in information studies is conceived within domusBITae strategy as a means to achieve research effectiveness and fruitfulness of the community as a whole. On the other hand, the coordination of BITrum glossary (Díaz et al. 2010) within domusBITae meta-glossary is aimed at distilling community discussion and best glossary contents to improve its usability and attractiveness, constituting itself a product for domusBITae dissemination.
- The direct involvement of UTI research group (<http://www.uti.at/>) may also be an important factor in achieving the impact goals of domusBITae, specially regarding the following activities of the group: 1) the essay of unified frames for understanding all information phenomena – that may be conceived as a goal for the whole community; 2) its interest for establishing a global sustainable information society –bringing therefore into stage the social relevancy and interest–; 3) the publishing of the peer-reviewed journal tripleC – Cognition, Communication, Co-operation (<http://www.triple-c.at/>) –that may be accounted as a dissemination means of domusBITae–.
- The ICIE role in domusBITae concerns its position as relevant international actor in the discussion and research on information ethics. Its International Review of Information Ethics (IRIE, <http://www.i-r-i-e.net/>) may also be accounted as a peer-reviewed dissemination means of domusBITae in the Information Ethics field.

### 3.1.4 Assumptions and external factors

For the achievement of all mentioned impacts it is assumed:

1. The interest of the target community for the proposed collaborative system. Although it is indeed the major external factor of the proposed initiative, a significant engagement of communities has been beforehand acknowledged. Moreover the roadmap to match target community needs as well as the engagement of the community since early stages is conceived as means to guarantee the mentioned interest.
2. *A real interest of the target community for sharing results and approaches.* Although we account with the engagement of a critical mass of communities in Information Studies, there is a risk that some

researchers would try to take advantage of the information sharing without correspondingly contributing to the system. In order to minimize this risk: a) a membership commitment of rights and obligations should be agreed considering: content sharing and use, copyrights issues, communication policy, accessibility vs privacy; b) the access to some domusBITae areas should be limited to user properly authenticated and regulated by a good practice policy.

3. *No other parallel system with a similar focus* is going to be developed at the same time. Although no other similar proposal is known within the community of information studies, the need to get a common stage to foster a information science has been felt in different levels, therefore, other initiatives (perhaps in USA or China) could arise reducing potential impacts. To minimize this risk Domus BITae: a) should have resources enough to enable the inclusion of the potential target community matching its necessities; b) should develop a membership policy and practise aimed at achieving the general interest (i.e. the scientific and societal fruitfulness) over any other particular interest, as well as fostering a democratic and open participation. c) develop a good policy of dissemination showing both the strengths and the inclusiveness of the system.

## 3.2 Dissemination

Since a significant engagement of the target community is required to meet project goals in the design, developing and operational stages of domusBITae deployment, special effort will be taken to achieve a good dissemination of project objectives, membership calls and results especially to the identified target community, but also to: academic and educational audience as potential stakeholders, industry as interested in the practical aspects of the scientific research, institutions and governments as interested in its societal relevancy, and citizens since it concerns the key issue of the society where they are immersed. In order to ensure a good coordination of all dissemination issues, a specific role for coordination of communication means is foreseen (§2.1). This role is given to INTECO since it has access –as public body- to a large variety of communication channels.

The specific means envisaged to chiefly improve the impacts of the initiative are:

1. The **website** of the virtual community will be developed as a mean itself for dissemination. The public accessible pages will be designed in order to provide a fresh, dynamic, summarized and clear picture of the whole system. Special care will be taken in the design of the homepage and most accessible pages, pursuing a balance among: scientific interest, useful and practical information for target community, public concerns and a clear track for membership and partaking. The mead-term launching of the core system, hosting the first two communities, is planned as a special measure to gather the target community.
2. The **directory** of communities will include a sub-directory of relevant open calls, new activities and publications. A qualitative maintenance of this useful information is foreseen as a measure to keep the interest of the target community into the system.
3. Scientific peer-reviewed **journals** (TripleC, IRIE and others) by publishing articles where the ideas and possibilities of the system as scientific mean to achieve relevant research are highlighted.
4. Consortium and usage community will **commit** themselves to use their particular **communication channels** to disseminate the system. Specifically, SoII and Inteco's communication channels will devote to the dissemination of domusBITae into industry-, institutional-, governmental- and public audiences, and offering spaces to community members as means to show and promote inclusiveness.
5. **Scientific Meetings.** The planned design meeting can be convened as an open call to bring initiatives to foster the science of information. A second meeting concurring with full system launching might pursued new proposal for the same issue and a roadmap for domusBITae maintenance and betterment. Future meeting calls might maintain the twofold objective of information science fostering and domusBITae maintenance, therefore making this a cornerstone in the emergence of the first.

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A specific agenda for dissemination, involving the commitment of the parties, is intended to provide a regular flow of information in order to maintain the interest of the target audience. The coordination of all dissemination contributions will be responsibility of the communication coordinator (§2.1).

The work envisaged as a part of the dissemination programme by any of the consortium members is considered as networking activity and specifically budgeted.

## 4. Ethical Issues

Table 4: Ethical issues

<b>Research on Human Embryo/ Foetus</b>	<b>YES</b>	<b>Page</b>
* Does the proposed research involve human Embryos?		
* Does the proposed research involve human Foetal Tissues/ Cells?		
* Does the proposed research involve human Embryonic Stem Cells (hESCs)?		
* Does the proposed research on human Embryonic Stem Cells involve cells in culture?		
* Does the proposed research on Human Embryonic Stem Cells involve the derivation of cells from Embryos?		
I CONFIRM THAT NONE OF THE ABOVE ISSUES APPLY TO MY PROPOSAL	X	
<b>Research on Humans YES Page</b>		
* Does the proposed research involve children?		
* Does the proposed research involve patients?		
* Does the proposed research involve persons not able to give consent?		
* Does the proposed research involve adult healthy volunteers?		
Does the proposed research involve Human genetic material?		
Does the proposed research involve Human biological samples?		
Does the proposed research involve Human data collection?		
I CONFIRM THAT NONE OF THE ABOVE ISSUES APPLY TO MY PROPOSAL	X	
<b>Privacy</b>		
Does the proposed research involve processing of genetic information or personal data (e.g. health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction)?		
Does the proposed research involve tracking the location or observation of people?		
I CONFIRM THAT NONE OF THE ABOVE ISSUES APPLY TO MY PROPOSAL	X	
<b>Research on Animals</b>		
Does the proposed research involve research on animals?		
Are those animals transgenic small laboratory animals?		
Are those animals transgenic farm animals?		
* Are those animals non-human primates?		
Are those animals cloned farm animals?		
I CONFIRM THAT NONE OF THE ABOVE ISSUES APPLY TO MY PROPOSAL	X	
<b>Research Involving Developing Countries</b>		
Does the proposed research involve the use of local resources (genetic, animal, plant, etc)?		
Is the proposed research of benefit to local communities (e.g. capacity building, access to healthcare, education, etc)?		
I CONFIRM THAT NONE OF THE ABOVE ISSUES APPLY TO MY PROPOSAL		
<b>Dual Use</b>		
Research having direct military use		
Research having the potential for terrorist abuse		
I CONFIRM THAT NONE OF THE ABOVE ISSUES APPLY TO MY PROPOSAL	X	

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