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Hermes/Ares/Nomcom Vision Document

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1. INTRODUCTION

The structure of this document is in line with the RUP@DIGIT template for a "Vision Document" (reference number **MAP-2005-008 rev2**).

RUP (the IBM/Rational implementation of the Unified Process) was selected after a call for tender as a methodology, suitable for software development within the Commission.

This document has been revised and approved by SGB3, *project owner* of Hermes/Arès/NomCom.

1.1. Purpose

The purpose of this document is to collect, analyse, and define high-level needs and features of Hermes/Ares/NomCom. It focuses on the capabilities needed by the stakeholders, and the target users, and **why** these needs exist. The details of how Hermes/Ares/NomCom fulfils these needs are detailed in the use-cases and supplementary specifications.

1.2. Scope

In order to understand the scope of this document, it is necessary to put Hermes, Ares and NomCom in the context of the Electronic archiving and Document Management Policy in the European Commission [e-Domec], represented graphically in Figure 2: e-Domec.
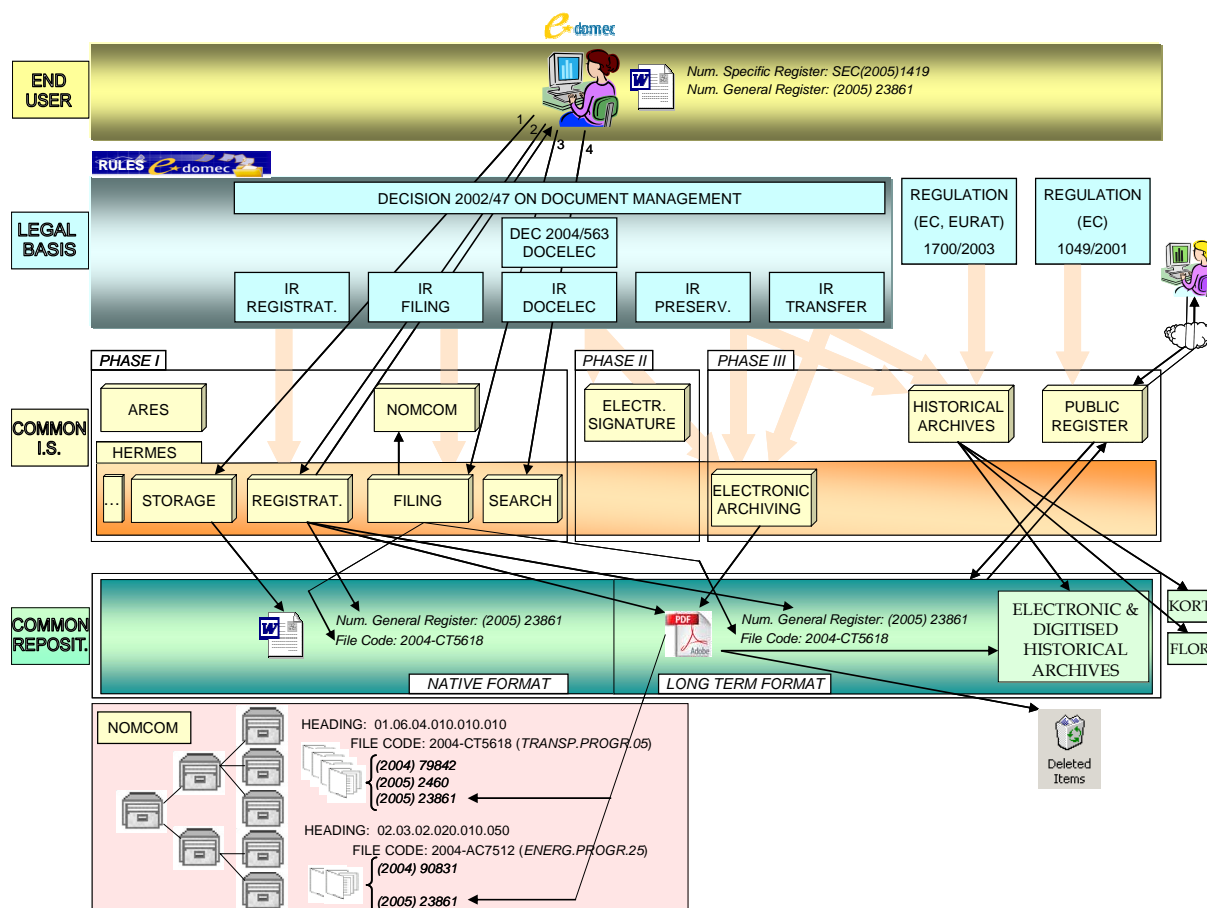

Figure 1: e-Domec

Ares and NomCom are both clients of Hermes. Users save, register and file documents using Ares and manage the Commission's Filing Plan and metadata of their files using NomCom. Ares will replace the (currently used) Adonis application.

Hermes has a modular architecture and, as the figure shows, will grow as new modules are added. This document covers (at the time of this writing) the following main modules of Hermes: Scanning, Storage, Registration, Filing and Workflow. It also covers three modules that support the operations carried out in those main modules: Search, Security and Administration.

There are clear references to the functionality of some of the main modules in Commission Decision 2002/47 of 23 January 2002 [Decision 2002/47].

In particular, [Decision 2002/47, art.4] is dedicated to the registration of documents. The implementing rules for such article are also available [IR Registration – SEC(2003)349/1]. Filing documents and the management of the Filing Plan, both covered by the Filing module of Hermes, are the focus of [Decision 2002/47, art.5] and its implementing rules [IR Filing-SEC(2003)349/2].

Also, [Decision 2002/47, art.6] is dedicated to the preservation of documents. Its implementing rules, which use the term "preservation" rather than "storage", were adopted in 2005 [IR Preservation- SEC(2005)1419]. The analysis of the preservation module should be carried out in 2006.

The implementing rules related to the Scanning and Workflow modules of Hermes are both discussed in [IR DOCELEC- SEC(2005)1578] implementing [Commission Decision 2004/563 on electronic and digitised documents, referred to as DOCELEC Decision]. The procedures for the digitisation of documents in the Commission are the subject of section V.6 while section VIII.1 proposes the use of a workflow system for structured transmissions.

A module for the electronic signature is already planned for phase II of e-Domec, while a module for the transfer to historical archives [Decision 2002/47, art.7] and a module for the access to the public registry by EU citizens are planned for phase III. Those three modules will be covered in greater detail in future versions of this document, once their implementing rules are produced and its analysis carried out in the context of the Hermes project.

Hermes is also a framework upon which other applications concerned at different levels by the document management can be built (being their main business something else). Therefore, those modules and applications will be affected or influenced by the information included in this document.

1.3. Definitions, Acronyms, and Abbreviations

A full list of definitions relevant for the Hermes, NomCom and Ares projects are available in their common glossary [HanGlossary]. In order to better understand this document, some of them are included in the following table:

Domain[1]	Data object Name	Description
Document Management	**ABAC**	A projected owned by DG BUDG that serves as an example of an existing application that will use the document management services provided by the projects under discussion.
Document Management	**Activity**	**The electronic archiving and document management policy in the European Commission (e-Domec) is activity-based, as is the case for the budget (see Decision 2002/47 on Document Management and NomCom).** The following abstracts from Decision 2003/47 prove it : ▪ The establishment and implementation of a filing plan associated with a common nomenclature for all the Commission's departments, which will form part of the institution's **activity-based management**, will make it possible to organise files and improve openness and access to documents; (Whereas of Decision 2002/47) ▪ This filing plan, which shall be accessible by computer, shall be associated with a common nomenclature defined by the Secretariat-General for all the Commission's departments. This nomenclature shall form part of the Commission's **activity-based management.** (Article 5 of Decision 2002/47) ▪ The creation of a file and its attachment to the filing plan of a Directorate-General or equivalent department shall be the responsibility of the **department responsible for the activity covered by the file** in accordance with practical arrangements to be set out in each Directorate-General or equivalent department.(Article 5 of Decision 2002/47) **Source:** [Commission Decision 2002/47 on Document Management; Communication to the Commission (2002)99].

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[1] Domains momentarily apply to one of the following corporate domains: Document management, Other External (policy related), Financial, Human Resources, Other Internal (administration), Methodology (RUP), Portal (internal), Resource planning / reporting, Security, Data Warehouse, IT.

Domain[1]	Data object Name	Description
Document Management	**Archives Service of the DG/Service**	Staff who, depending on the type of organisation (decentralised, centralised or mixed) in the Directorate-General/Service, are responsible for the preservation of the files, records and archives of their unit, directorate or DG/service in line with a general authorisation from the appropriate tier of the administration. Regardless of the type of organisation in the DG, the staff always works in close coordination with the DG's document management officer (DMO) and/or the DG's document management centre (DMC). **Source:** [IR Preservation- SEC(2005)1419].
Document Management	**Audit Trail**	Mechanism incorporated in a computer system which guarantees its traceability – and hence the history – of the major stages (e.g. identification, receipt, creation, modification, addition, digitisation, filing, destruction, signing, transmission, transfer and archiving) throughout a process for the electronic management of documents, metadata, files or procedures. **Source:** [IR DOCELEC- SEC(2005)1578]
Document Management	**Business Process**	A set of one or more linked procedures or activities which collectively realise a business objective or policy goal, normally within the context of an organisational structure defining functional roles and relationships. **Source:** [WfMC_Glossary]
Document Management	**Common nomenclature**	Hierarchical body of terms, concepts and headings which make up the first three levels of the institution's filing plan. **Source:** [IR Filing – SEC(2003)349/2]. The updated contents of the common nomenclature are available in [ComNomenContents]. **Source :**[SEC(2003)903- regularly updated]
Document Management	**Current records**	Files that are regularly and frequently used for the conduct of the current business of the departments which created or received them and which are generally kept nearby. These are "open" files. **Source:** [IR Preservation- SEC(2005)1419].
Document Management	**Deadline**	A time based scheduling constraint which requires that a certain activity (or work item) be completed by a certain time (the 'deadline'). **Source:** [WfMC_Glossary].

Domain[1]	Data object Name	Description
Document Management	**DMC**	Document management centres. Each Directorate-General or equivalent department shall, while taking its structure and constraints into account, put in place or maintain one or more document management centres. The task of the document management centres shall be to ensure that the documents drawn up or received in their Directorate-General or equivalent department are managed in accordance with the rules. **Source:** [Commission Decision 2002/47 on Document Management]
Document Management	**DMO**	**Data Management Officer.** Each Director-General or Head of Department shall designate a document management officer. For the purpose of setting up a modern and efficient document and records management system, the task of the document management officer shall be to: – identify the types of document and file specific to the fields of activity of the Directorate-General or equivalent department; – draw up and update the inventory of the existing specific databases and systems; – draw up the filing plan of the Directorate-General or equivalent department; – draw up rules and procedures specific to the Directorate-General or equivalent department which will be used for document and file management, and to ensure that they are applied; – organise, within the Directorate-General or equivalent department, training for the staff in charge of the implementation, control and monitoring of the management rules laid down in these provisions; The Document Management Officer shall ensure horizontal co-ordination between the document management centre(s) and the other departments concerned. In each DG/Service, the Document Management Officer is, together with the IRM, the single point of contact vis-à-vis the Secretariat-general and DIGIT. **Source :** [Decision 2002/47 on Document Management, article 10; Communication to the Commission (2002)99]

Domain[1]	Data object Name	Description
Document Management	**Interdepartmental group of DMO's**	**Interdepartmental group of DMO's** An interdepartmental group of document management officers shall be set up. It shall be chaired by the Secretariat-General and its task shall be to: – ensure the correct and uniform application of these provisions within departments; – deal with any issues which may arise from their application; – contribute to the preparation of the implementing rules of Decision 2002/47; – relay the requirements of Directorates-General and equivalent departments as regards training and support measures. – propose the multi-annual action plan and annual working programme to be adopted by the e-Domec Steering Committee. The interdepartmental group shall be convened by its chairman, either on the chairman's initiative or at the request of a Directorate-General or equivalent department. **Source:** [Commission Decision 2002/47, art.11; Communication to the Commission (2002)99].
Document Management	**Definitive archives**	Files and records which, in accordance with the Commission level common retention list or, where appropriate, the DG/Service specific retention list, are transferred to the Commission's historical archives and selected for permanent preservation. **Source:** [IR Preservation - - SEC(2005)1419].
Document Management	**Document**	Any content drawn up or received by the Commission concerning a matter relating to the policies, activities and decisions falling within the institution's competence and in the framework of its official tasks, in whatever medium (written on paper or stored in electronic form or as sound, visual or audiovisual recording). **Source:** [Commission Decision 2002/47, art.1].

Domain[1]	Data object Name	Description
Document Management	**e-Domec**	E-Domec stands for "Electronic archiving and Document Management in the European Commission".
		The new electronic archiving and document management policy of the Commission, started officially in January 2002 when the Commission amended its rules of procedure (Commission Decision 2002/47 on document management). This decision was completed in July 2004 by Decision 2004/563 on electronic and digitised documents, also annexed to the rules of procedure.
		Following both decisions, several implementing rules have been adopted by the Secretary-General, namely: IR Registration, IR Filing, Common Nomenclature, IR Preservation, and IR DOCELEC.
		This policy is still in progress: IR "Appraisal and Transfer to the Commission's Historical Archives" are in drafting right now and the Commission-level common retention list has still to be drafted, in close collaboration with the legal experts and DMO's and approved by the Secretary-general or, if needed by the Commission.
		E-Domec is not only a policy, but a team. The e-Domec team (SG.B.3) is dealing with the normative part, but is also *project owner* for Adonis, Hermes, Ares and NomCom. It deals with training, awareness campaign, reporting and audit, preparing the e-Domec Steering Committee meetings, helping with the budget, and working in close cooperation with both the DMO's and DIGIT for the normative aspects and functional specifications.
		Source: [Secretariat-general, SG.B.3].
Document Management	**File**	Group of documents, as defined in the implementing rules *Registration and keeping registers*, organised in such a way as to form a coherent and relevant unit in terms of the activities conducted by the Commission and/or its departments
		Source: [IR Filing - SEC(2003)349/2].
		The status of a file can be new, active, closed or transferred.
		Source: [Nomcom2Hermes].
Document Management	**Filing**	Operation involving identifying documents and ordering them in categories following the logical organisation, principles, methods and rules of a filing system.
		Source: [IR Filing – SEC(2003)349/2]
Document Management	**(Institution's) Filing Plan**	Hierarchical and logical structure taking the form of a tree diagram made up of a given number of interlinked headings at several levels, which allows for the intellectual organisation of the institution's files on the basis of its activities.
		Source: [IR Filing- SEC(2003)349/2]

Domain[1]	Data object Name	Description
Document Management	**Heading**	An entry in the Filing Plan that represents a subject. Headings are organized in a logical and hierarchical manner, from the more general subject to the more specific. Its reference typically includes a title, a brief description of scope, a numeric code, an owner department, a creation date and a status (new, active, frozen or extinct). **Source:** [Nomcom2Hermes].
Document Management	**Inbox**	In the context of these projects, this term is frequently used in place of *worklist*.
Document Management	**Instance (as in Process or Activity Instance)**	The representation of a single enactment of a process, or activity within a process, including its associated data. Each instance represents a separate thread of execution of the process or activity, which may be controlled independently and will have its own internal state and externally visible identity, which may be used as a handle, for example, to record or retrieve audit data relating to the individual enactment. **Source:** [WfMC_Glossary].
Document Management	**Intermediate records**	Files that are no longer deemed to be current records and that correspond to the stage at which, once a case has been dealt with, the Commission and its DGs/Services are required to keep them for administrative or legal reasons. These files are closed, but it may be necessary to access them from time to time. **Source:** [IR Preservation- SEC(2005)1578].
Document Management	**Logical Document**	A content established or received by the Commission, related to a matter connected with its policies, activities and decisions, whatever the medium carrying it (paper or electronic, audio or video, etc.). In other words, a logical document is a logical entity including one or more attachments, in one or more formats and in one or more languages. **Source:** [e-Domec].
Document Management	**Metadata**	Data describing the context, contents and structure of documents and files and their management over time. **Source:** [Commission Decision 2004/563]
Document Management	**Organizational Role**	A group of participants exhibiting a specific set of attributes, qualifications and/or skills. **Source:** [WfMC_Glossary].

Domain[1]	Data object Name	Description
Document Management	**Principle of the record lifecycle**	The lifecycle of records consists of three stages, i.e. current records, intermediate records and definitive archives. This principle, applied Commission-wide, provides for the transfer to the historical archives or the elimination of records in accordance with their administrative, legal and/or historic value, on the basis of the common Commission-level retention list and, where appropriate, the specific DG/Service retention list. **Source:** [IR Preservation- SEC(2005)1578].
Document Management	**Process definition**	The representation of a business process in a form which supports automated manipulation, such as modelling, or enactment by a workflow management system. The process definition consists of a network of activities and their relationships, criteria to indicate the start and termination of the process, and information about the individual activities, such as participants, associated IT applications and data, etc. **Source:** [WfMC_Glossary].
Document Management	**Records**	Registered or listed documents, regardless of form or medium, kept in files and to be stored by the European Commission and its Directorates-General and equivalent departments as part of their duties, either for a limited period or permanently **Source:** [IR Preservation- SEC(2005)1578].

Domain[1]	Data object Name	Description
Document Management	**Register**	The administrative tool establishing the receipt and dispatch of documents that are complete and properly constituted from an administrative and/or legal standpoint, as well as the regularity of their transmission. There are two types of register: 1. General register: the general instrument constituted by registration within the meaning of Article 4 of the Decision 2002/47; 2. Specific register: any other register constituted by a similar procedure but separated from the general register. That procedure must afford equivalent guarantees. **Source:** [IR Registration, point III- SEC(2003)349/1]
Document Management	**Registration**	Registration is an operation which makes it possible to: a) <u>identify</u> with certainty a document drawn up or received by the Commission departments; and b) <u>certify</u> that the document concerned, which fulfils the established or generally recognised minimum requirements within the Commission[2] regarding form and has been presented for registration in accordance with the established or generally recognised procedures within the Commission departments, <u>has been transmitted</u> by an author to an receiver at a given date as incoming or outgoing mail or by its incorporation into an archival storage system. **Source:** [IR Registration, point 3- SEC(2003)349/1]
Document Management	**Registration department**	The group of persons to whom, in accordance with the organisational structure (centralised, decentralised, or a combination of both) within each directorate-general or equivalent department, responsibility for registration is entrusted by means of a general authorisation issued at the appropriate hierarchical level. **Source:** [IR Registration, point III- SEC(2003)349/1]
Document Management	**Registration System**	The set of tools, whether or not computerised, used to achieve registration either in the general register or in a specific register. **Source:** [IR Registration, point III- SEC(2003)349/1]
Document Management	**Role**	See Organizational Role

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[2]   Compliance with established procedures and forms must be verified in the case of all Commission documents. Documents from other institutions or third parties are presumed to comply with established procedures and forms except where there has been an obvious error.

Domain[1]	Data object Name	Description
Document Management	Short and medium-term elimination	A regulated procedure for the physical destruction of files or any other operation resulting in a total or partial loss of information that, in accordance with Article 7(2) of the Decision 2002/47, involves files less than 15 years old that are not to be transferred to the historical archives. **Source:** [IR Preservation- SEC(2005)1419].
Document Management	Sub file	A subdivision of a file. Its properties are very similar to those of a File (e.g. same possible status values). **Source:** [Nomcom2Hermes].
Document Management	Work items	The representation of the work to be processed (by a workflow participant) in the context of an activity within a process instance. **Source:** [WfMC_Glossary].
Document Management	Workflow	The automation of a business process - in full or in part - during which documents, information or tasks move from one participant to another, in accordance with a set of predefined rules. A workflow system defines, creates and manages implementation of such processes. **Source:** [IR DOCELEC – SEC(2005) 1578]
Document Management	Workflow Definition	That part of the process definition which comprises the automatable activities. **Source:** [WfMC_Glossary]
Document Management	Workflow Management System	A system that defines, creates and manages the execution of workflows through the use of software, running on one or more workflow engines, which is able to interpret the process definition, interact with workflow participants and, where required, invoke the use of IT tools and applications. **Source:** [WfMC_Glossary]
Document Management	Workflow participant	A resource which performs the work represented by a workflow activity instance. This work is normally manifested as one or more work items assigned to the workflow participant via the worklist. **Source:** [WfMC_Glossary].
Document Management	Worklist	A list of work items associated with a given workflow participant (or in some cases with a group of workflow participants who may share a common worklist). The worklist forms part of the interface between a workflow engine and the worklist handler. **Source:** [WfMC_Glossary].
Financial	LEF	Legal Entity File. An application that contains information about legal entities which are external to the Commission.

Domain[1]	Data object Name	Description
Human Resources	**COMREF**	Common Reference. An application that contains information about members of the Staff of the Commission. Se veut un réceptacle unique et central de données de référence pour la gestion du personnel à la Commission. Tout système d'information de la Commission pourra venir puiser dans ce réceptacle les informations dont il a besoin. **Source:** [HanNeeds], a document available in French only.
IT	**Certification Authority (CA)**	Recognised trustworthy authority which issues certificates enabling the recipient of a document to check that the signature is indeed that of the person who has signed in with his/her private key.
IT	**CommisSign CA**	The CommisSign CA is intended for use within the European Commission and potentially with organisations or individuals that are outside of the European Commission but exchange emails with the European Commission. The CommisSign CA issues, signs and manages public key certificates. The CA issues user certificates to all Commission Staff excluding any other persons on an as-needed basis. **Source:** [CommisSignCPS]
IT	**DBMS**	Database Management System.
IT	**ECAS**	European Commission Authentication Service. ECAS is used in the Commission to authenticate users of internal IT systems. This system offers centralised authentication of users with various levels of guarantee concerning the person providing authentication details. With a centralised authentication process it is therefore no longer necessary for each application to use its own authentication process. **Source:** [IR DOCELEC- SEC(2005)1578]

1.4. References

Remark: many of the references hereunder are available via a hyperlink. If the hyperlink is not working (because of reader's PC configuration), he/she can request for a copy of the referenced document.

[AbacAssetsVision] ABAC Assets - Vision Document_v1.1. Created by DIGIT/B4 for DG BUDG on 8th of February 2006.

[AbacContractsVision] ABAC Contracts V2 - Vision Document_v2.0. Created by DIGIT/B4 for DG BUDG on 9th of December 2005.

[Action9] Communication to the Commission C(2002)99 of 23.1.2002 - Simplification and modernisation of the management of the Commission's documents (Action 9 of the interim action plan on simplification).

[ArisVsZachman] Successfully Building Enterprise Architectures: How ARIS facilitates the Zachman Framework. Business Process Excellence.

[CEAF10] The Commission Enterprise IT Architecture Framework version 1.0 explained.
http://www.cc.cec/home/dgserv/digit/ict_strategy/governance/enter_arch/com_arch/doc/CEAF%20Guide%20V1.0b-cover.pdf

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 [Commission Decision 2004/563 on electronic and digitised documents, referred to as DOCELEC Decision] Commission Decision of 7 July 2004 amending its Rules of Procedure. Decision (2004)563 EC, Euratom. JO L 251 of 27.7.2004.

 [CommisSignCPS] European Commission's Certificate Practice Statement version 1.0; 25/02/2002. http://europa.eu.int/comm/dgs/personnel_administration/commissign/pdf/cps_en.pdf

[ComNomenContents -SEC(2003)903 - regularly updated] Common nomenclature with a list of the DGs concerned for each branch.
http://www.cc.cec/home/dgserv/sg/i/edomec/doc/planclass/Nomencl_update_en.doc

[e-Domec] http://www.cc.cec/home/dgserv/sg/i/edomec/index.cfm?lang=en

[HanGlossary]   Hermes, Ares and Nomcom Glossary. It can be obtained from the directory J:\GEDA\Documentation\11_Divers with a name like <<HAN_Glossary_vNNN.doc>>.

[HanNeeds] Analyse des besoins fonctionelles GED Ver. 4.0. ADMIN /DI/PFD D(2003) 30314. http://www.cc.cec/CITnet/modules/xfmod/docman/display_doc.php?docid=88&group_id=1022

[Hermes] http://www.cc.cec/home/dgserv/sg/i/edomec/pages/hermes/index_en.htm

[IR_Registration] Implementing **R**ules "Registration and keeping registers of the Institution's documents" for article 4 of the provisions on document management annexed to the Commission's Rules of Procedure by Decision 2002/47 - SEC(2003)349/1.

[IR_Filing] Implementing **R**ules "Filing and the management of the Institution's files" for article 5 of the provisions on document management annexed to the Commission's Rules of Procedure - SEC(2003)349/2.

[IR_Preservation] Iimplementing **R**ules "Preservation of the Institution's files" of the provisions for article 6 of the provisions on document management annexed to the Commission's Rules of procedure - SEC(2005)1419. Covernote of 14.11.2005 - SEC(2005)1418

[IR_DOCELEC] Implementing **R**ules "Electronic and digitised documents" for the provisions on electronic and digitised documents annexed to the Commission's Rules of Procedure. SEC(2005)1578 and its cover note SEC(2005)1577, adopted on 29/11/2005.

[Nomcom2Hermes] Nomcom to Hermes Migration Analysis. Available at J:\GEDA\Documentation\06_Classement <<Nomcom - Hermes Migration analysis v1-7.doc>>

[RappBudget] SG.B.3 D(2005) 6798. Rapport Budgétaire E-Domec (2006-2009). Available on the e-Domec website on IntraComm.

[WfMC_Glossary] Workflow Management Coalition Terminology & Glossary. Document Number WFMC-TC-1011. Document Status - Issue 3.0. Feb 1999. A WfMC specificaton. http://www.wfmc.org/standards/docs/TC-1011_term_glossary_v3.pdf

1.5. Overview

After this introduction (section 1), a business positioning (section 2) includes a statement of the problem that these projects intend to solve and a brief statement of the position of each one of the system (Hermes, Ares and NomCom) in relation to that problem. The proposed approach to solve that problem is the focus of section 3.

Section 4 presents the stakeholders among which we find the users of the system. Their concerns, responsibilities and interrelationships contribute to set the context of the information systems. Section 4 is completed with a list of the most important needs of the stakeholders that are

intended to be addressed by the construction of the systems. These needs were the result of a significant amount of work carried out in early stages of the project [Han_NeedsAnalysis].

Once the context is set, the document turns into the information systems themselves. The overview of the systems (section 5) includes assumptions and dependencies, an estimation of the cost, quality ranges like availability or scalability and the licensing of the products required for development and production.

A list of their high level features (section 6) serves to complete a global vision of the information systems that should be the starting point to more detailed analyses. Hermes, Ares and NomCom are considered a single system for the purpose of describing these features.

The document is completed with an enumeration of the planned resources (section 7) and constraints like security or data protection (section 8).

2. POSITIONING

2.1. Business Opportunity

Early 2002, the Commission adopted Decision 2002/47/EC, ECSC. This decision aims at:

(1) putting in place effective document management systems to enable any document connected with the Commission's official functions to be managed, kept and found securely at all times, whatever form it is in (paper or electronic) or whatever management system is governing it;

(2) introducing, at Commission's level, a system of management and electronic archiving based on a body of common rules and procedures applicable to all departments and supplemented, where necessary, by specific rules and procedures adapted to the activities of the Directorates-General and equivalent departments.

In July 2004, the Commission adopted another very important Decision, namely Decision 2004/563/EC, Euratom on the legal value of electronic and digitised documents. This decision aims at determining:

(1) not only the conditions under which electronic and digitised documents and documents transmitted electronically are valid for the Commission's purposes, where these conditions are not determined elsewhere,

(2) but also the conditions under which they are to be stored, guaranteeing the integrity and legibility over time of such documents and of the related metadata throughout the period for which they are to be kept.

According to the e-Domec website, both above-mentioned decisions form the direct legal basis for the e-Domec action.

The Hermes project aims at providing the Commission with a document management system that supports these two decisions and their respective implementing rules. It should also provide a sound basis for the implementation of a number of other decisions and regulations mentioned in the indirect legal basis for the e-Domec action, including the decisions and regulations regarding public access to Commission documents, the code of good administrative behaviour, the relevant standards for internal control and the regulations concerning the opening to the public of the historical archives of the Commission.

The NomCom project aims at providing the necessary tools to be able to follow the implementing rules for filing. This means that it may be considered as an entry point to consult and edit both the Filing Plan and the lists of files attached under its headings.

The Ares project will replace the actual Adonis application, enabling, so, to reduce the number of copies of the same document within the Commission and making possible a more efficient document management. Another element for the need of Ares is to provide the necessary tools to

be able to follow the implementing rules for registration of documents. Ares will go further than Adonis allowing the use of electronic workflow for some of the operations.

Hermes is not being created only for the provision of services for Ares and NomCom. It is the document management framework that should facilitate the creation of many other applications that require any kind of document management capabilities.

The use of Hermes, Ares and NomCom will make possible to access (depending on the defined security) the whole content of a file without taking care of which application or applications manage the records it contains.

This is depicted in Figure 3: Hermes, Ares, NomCom and other applications in a layered scheme. A common electronic document repository is surrounded by Hermes, which is a layer providing services to Ares, NomCom and other current (to be integrated) or future applications. The DGs will use the whole set of applications, including those developed by themselves, in order to accomplish their business objectives.
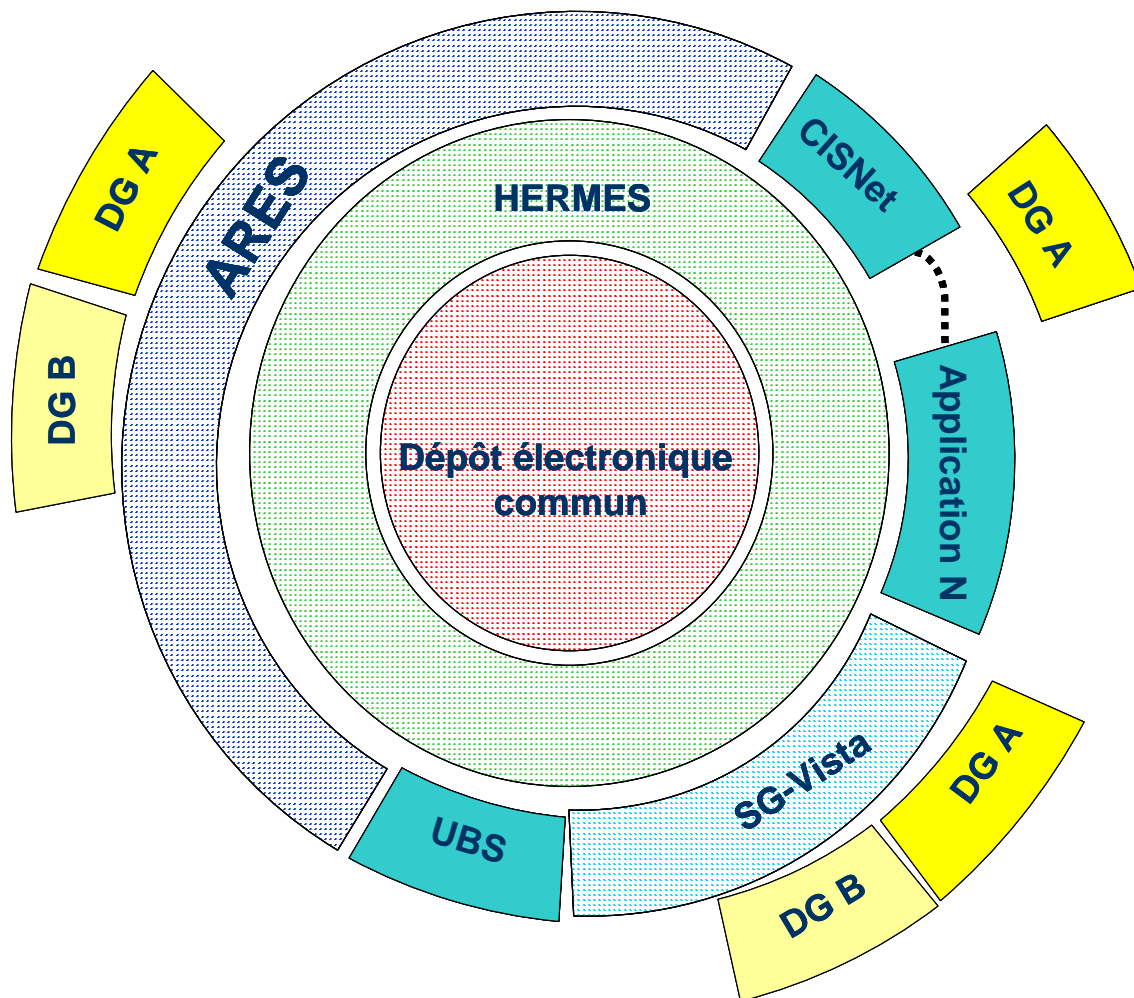

Figure 3: Hermes, Ares, NomCom and other applications in a layered scheme

2.2. Problem Statement

The problem of	Storing and preserving documents in (or referencing documents via) a large number of heterogeneous systems without a coherent and homogeneous filing plan,
Affects	Commission staff (in particular) and the general public,
the impact of which is	That they have problems finding back the right document or constituting files.
a successful solution would be	a coherent view on files and documents in which there are no duplications and each document or file is easy to find because it is filed according to a filing plan and the appropriate metadata are associated to it.

2.3. Information Systems Position Statement

For	the European Commission
Who	need to include document management capabilities,
Hermes	is a Document Management Information System
That	provides document management functions, in line with the relevant Commission decisions and implementing rules, serving as a framework upon which specific applications can be built.
Has a security classification	of type A (i.e. a project involving Critical or Strategic Information Systems)
Unlike	the multitude of solutions that exist today,
Hermes	will provide a coherent approach to document management where a filing plan can be defined and a common document repository can enable a multitude of applications to share documents and files.

For	the European Commission's staff involved in the management of documents and files and search on those documents and files
Who	need to register, file or access documents of the organisation
Ares	is a Document Management Information System
That	provides document management functions, in line with the relevant Commission decisions and implementing rules by making accessible to the users some of the services provided by Hermes. In particular, it supports the users in their collaboration in the preparation of documents [IR_DOCELEC]. The execution of E-Signatory workflows can be launched and monitored through the Ares interface.
Has a security classification	Of type A (i.e. a project involving Critical or Strategic Information Systems)
Unlike	The multitude of solutions that exist today,
Ares	will provide a coherent approach to document management where users can register, file and access all the documents in the common repository (including those documents managed by other applications) according to privileges assigned to them.

For	the European Commission's staff involved in the management of the filing plan and of the metadata of the files attached to the filing plan.
Who	need to create, update or access to elements of the filing plan and file metadata of the organisation
NomCom	is a Document Management Information System
That	provides functions for defining, viewing and using a filing plan and file metadata, in line with the relevant Commission decisions and implementing rules by making accessible to the users some of the services provided by Hermes,
Has a security classification	of type A (i.e. a project involving Critical or Strategic Information Systems)
Unlike	The multitude of filing solutions that exist today,
NomCom	will provide a single entry point to the definition and view of the Filing Plan of the Commission where users can create and update the elements of such a filing plan and file metadata as well as obtaining a complete view of them that can be used in other applications.

2.4. New or updated Business Processes proposed for automation

The Commission Enterprise Architecture Framework (CEAF) is based on the Architecture of Integrated Information Systems (ARIS). The Zachman framework for Enterprise Architecture provides the theoretical foundation for ARIS and the CEAF.

Zachman considers two perspectives: the business perspective and the IT perspective. The business perspective includes two views: the planner's view (scope) and the owner's view (enterprise model) [CEAF10]. ARIS presents a similar approach although it is more process-oriented than the Zachman approach [ArisVsZachman]. The ARIS views are equivalent to the Zachman perspectives. In particular, an understanding of the Process view and the Function view of ARIS is sufficient to understand the contents presented in this section.

Hermes, Ares and NomCom can be seen in relation to the enterprise model of the Commission, and, in particular, to the list of business processes described in that model. The CEAF defines the process glossary as the artifact that presents that list of processes involved in the business activities. They are categorised per business domain [CEAF10]. The business domain of the projects Hermes, Ares and NomCom is "Document and Records Management".

A process can be defined as an organised and repetitive sequence of actions involving resources which aims at producing a result to satisfy a client's needs [CEAF10]. The CEAF proposes a process called "Archival", which supports many processes of the Commission (e.g. DG BUDG's Grant Process, which is partially automated by ABAC Contracts [AbacContractsVision]).

The "Archival" support process and its proposed sub-processes are described in Table 1: Support processes partially automated by Hermes, Ares and NomCom. Some of the sub-processes presented in the table are obtained directly from the regulations. In particular, registration, filing, preservation and transfer to the historical archives are enumerated and referred to as *operations that shall be carried out in accordance with a set of standard rules, which shall apply uniformly to all the Commission's DG and equivalent departments* [Commission Decision 2002/47].

Domain[3]	ID	Name	Description (EN)
Document Management	1	**Archival**	
Document Management	1.1	*Digitisation of a document*	In order to build up, within the Commission, a fully electronic management system for its documentary resources allowing the gradual introduction of exclusively electronic procedures, the Commission is systematically digitising all documents drawn up or received on other supports, in particular paper. **Source** : [IR_DOCELEC, point V.6]
Document Management	1.2	*Registration of a document*	A document drawn up or received by a Commission department must be registered if it contains important information which is not short lived and/or may involve action or follow-up by the Commission or one of its departments. If the document is drawn up within the Commission, it shall be registered by the originating department in its own system. If the document is received by the Commission, it shall be registered by the recipient department. **Source:** [Commission Decision 2002/47, art.4]

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[3] Domains momentarily apply to one of the following corporate domains: Document management, Other External (policy related), Financial, Human Resources, Other Internal (administration), Methodology (RUP), Portal (internal), Resource planning / reporting, Security, and Data Warehouse.

Document Management	1.3	*Maintenance of the Filing Plan of the Commission*	Directorates-General and equivalent departments shall draw up a filing plan adapted to their specific needs. This filing plan, which shall be accessible by computer, shall be associated with a common nomenclature defined by the Secretariat-General for the Commission's departments. This nomenclature shall form part of the Commission's activity-based management. **Source**: [Commission Decision 2002/47, art.5].
Document Management	1.4	*Filing a document*	Registered documents shall be organised in files. For each matter falling within the competence of the Directorate-General or equivalent department, a single official file shall be constituted. Each official file must be complete and must correspond to the activities of the department on the matter in question. **Source:** [Commission Decision 2002/47, art.5].
Document Management	1.5	*Preservation of a document*	Each Directorate-General or equivalent department shall ensure the physical protection the short- and medium-term accessibility of the documents for which it is responsible. **Source** : [Commission Decision 2002/47, art.6]
Document Management	1.6	*E-Signatory workflow*	Electronic signatory providing a hierarchical validation chain and enabling at all times any person with the necessary access rights to modify, validate/sign or send back the documents to be signed. **Source**: [IR_DOCELEC, point VIII.1.d)].
Document Management	1.7	*Appraisal and transfer of files to the Historical Archives*	The DMC's shall carry out, at regular intervals, in cooperation with the departments responsible for the files, an appraisal of the documents and files which could transferred to the Commission's Historical Archives. After evaluating the proposals, the Historical Archives may refuse the transfer of documents or files. **Source:** [Commission Decision 2002/47, art.7].
Document Management	1.8	*Retrieval of files and the documents contained in them.*	Each Directorate-General or equivalent department must be in a position to produce or reconstruct the files to which the documents (for which it is responsible) belong. **Source**: [Commission Decision 2002/47, art.6] The electronic file repository must, among others, offer the following minimum functionalities • access management and control based on predefined rights of users, owner departments of documents and the level of accessibility to the documents themselves; • efficient search tools enabling documents, the relevant metadata and stages of the procedure to be found easily; **Source**: [IR_DOCELEC, point X.4] The archives service of the DG/Service must ensure that, whatever the medium, current records are available to the person dealing with the matter. **Source**: [IR Preservation, point V.1.2]

Table 1: Support processes partially automated by Hermes, Ares and NomCom

At the time of writing, there have been already proposals of business processes in the area of document management. However, there are still some discussions in that respect and there still may be changes in the list of business processes proposed so far.

Some of the business processes proposed in other documents include [VisionAbacAssets]:

• Treatment of incoming and outgoing mail (D.8)

- Treatment of requests for documents issued by a citizen. This is sometimes expressed in relation to the "Transparency in relation to the access to the documents of the Commission (D.9)

There is a correspondence between those business processes and some of the business processes described in the table above. For example, the treatment of incoming e-mails containing important information, which is not short-lived and which is likely to require action, follow-up or a reply from the Commission or one or more of its departments or to involve the responsibility of the Commission or one or more of its departments includes their registration, filing, preservation and, eventually, transfer to the historical archives. The latest can be considered sub-processes of the former. However, the business processes proposed in this vision document have been generalized. For example, the "registration of a document" includes not only the registration of incoming e-mail but also the registration of other documents received or drawn-up by the Commission. The correspondence between (support) business processes in this and other documents are the subject of annex I.

3. PROPOSED APPROACH

The analysis of the needs of the DGs in respect to the registration and filing of documents started back in August 2003.

Started in 2003 and finished by the first quarter of 2004, there was the process to select the tools that fit the needs of the project. Once the tool was chosen (Documentum), the work to find the best architecture started.

In July 2004, an action plan concerning the technologies for document management within the Commission was presented. A number of working groups were created with several purposes, including the creation of a data model and taking key decisions in relation to the architecture of Hermes. The conclusions of these working groups were presented in September 2004.

Those conclusions mark the beginning of the development of the application. The work is organised in such a way to deliver workable releases in several iterations so that the DGs may start testing and providing feedback.

A workshop for Hermes was held in June 2005 and another one for Ares in August 2005. The first playground for Ares and Hermes took place in the same month and, since then, the DGs have been able to check the capabilities of the applications and see how they adapt to their business processes.

A number of functional changes have been decided by the project owner since then. A new release is scheduled for early 2006 including the new functionalities. At the same time, NomCom is being migrated to use the new "filing services" provided by Hermes based on Documentum. From January 2006 till mid-2006 there will be 3 iterations, in order to let the DGs test Hermes and Ares, and so to produce new feedback that will trigger new development.

Hermes, Ares and NomCom implement a supporting process that affects a significant number of processes in all areas of the Commission. Therefore, it is expected to receive a constant flow of feedback from the DGs to make the projects adapt better and better to their present and future needs.

During 2006, we should see the completion of a significant part of the development of the modules of Hermes. It is already planned, in the context of e-Domec, a period of intense maintenance and support at the time that the DGs adapt their systems to use Hermes.
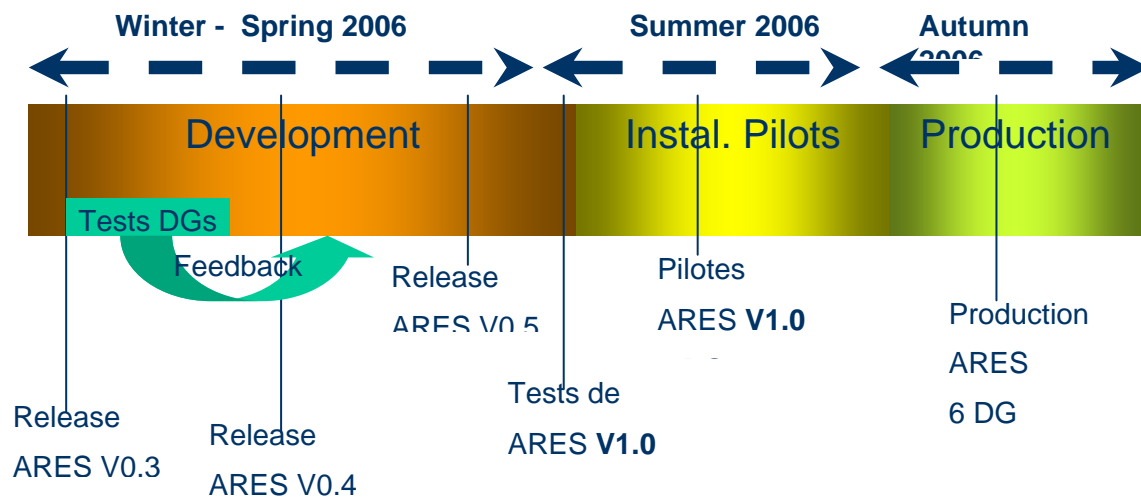
Figure 4: The phases of the projects in 2006

So far we have considered the first phase of e-Domec, in which the first modules of Hermes, Ares and NomCom are developed. In the context of the e-Domec initiative, new functionalities will be added in phases II and III. That includes new modules of Hermes like electronic signature, electronic archival, historical archives management and the public registry. However, there is also a significant amount of work for the adaptation of the current systems to Hermes and the interoperability between corporate systems. All these aspects and their time schedule for their development are depicted in Figure 5: e-Domec functionality development (2006-2009).
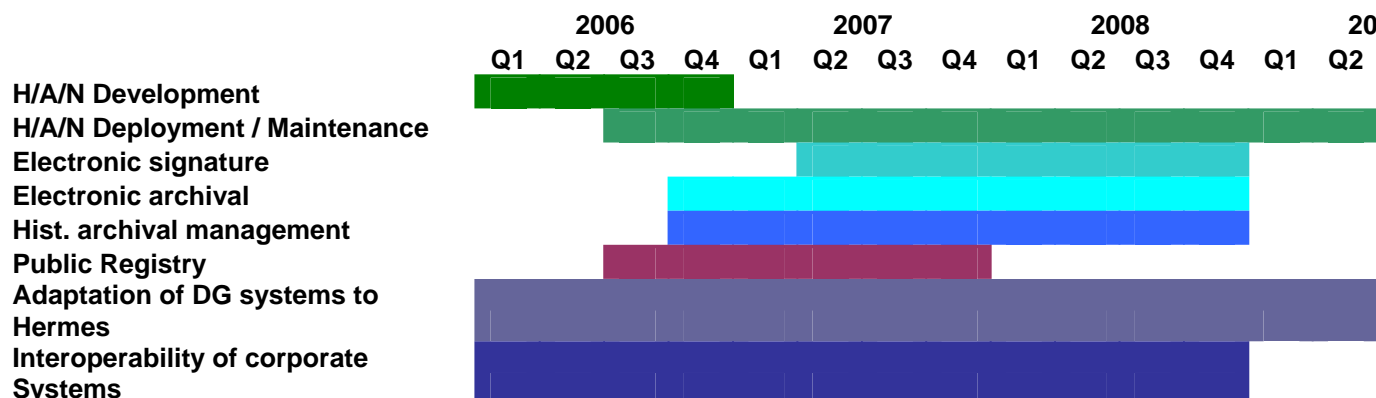
Figure 5: e-Domec functionality development (2006-2009)

The RUP@DIGIT methodology will be used in all the phases. Focus will be initially on the following RUP disciplines: Requirements Management, Configuration Management, Change Management and Project Management.

4. STAKEHOLDER AND USER DESCRIPTIONS

4.1. Organisation goals

The European Commission handles (produces and receives) thousands of documents per year. All the Commission's activities and decisions in the political, legislative, technical, financial and administrative fields ultimately lead to the production of documents. Those documents must be managed on the basis of rules applicable to all Directorates-General and equivalent departments, as they form a direct link with activities in progress and also reflect the Commission's past

activities in its dual capacity as a European institution and European public administration. Those standard rules must ensure that the Commission is able, at any time, to provide information on the matters for which it is accountable. The documents and files kept by a Directorate-General or equivalent department must therefore preserve the institution's memory, facilitate the exchange of information, provide proof of operations carried out and meet the department's legal obligations.

Efficient document management is an essential prerequisite for an effective policy of public access to Commission documents. The establishment of registers containing the references of documents drawn up or received by the Commission will help citizens to exercise their right of access.

In their everyday tasks, the Commission staff will use diverse applications to manage documents. Hermes will provide with document management services to the different applications in order to be sure that the document management is done following the same rules within all services of the Commission. Ares will be the first of this kind of applications and others will be developed in the future or adapted from existing applications that are currently playing a similar role.

The documents managed by the new system will be filed according to a plan. In this respect, the regulation is explicit: *Directorates-General and equivalent departments shall draw up a filing plan adapted to their specific needs.* [Decision 2002/47, art.5]. In each DG, the DMO and his/her team will be dedicated to maintain the filing plan. Other individual or groups will also play that role at the Commission level. They all are potential users of NomCom, an application that will also use services provided by Hermes to fulfil their user's requests.

Hence, Hermes, Ares and NomCom are some of the information systems that will work together to support the Commission goals enumerated in section 2.1.

4.2. Stakeholders

This section presents a list of the stakeholders (including the users) of the Hermes, Ares and NomCom applications. For each one of them, we provide a short name, a description, the responsibilities that they have in relation to the projects and the criteria that they use to evaluate whether the project is a success or not.

Name	EU Citizen
Description	A citizen of any of the European Union Member States.
Responsibilities	N/A
Success Criteria	The information requested is accurate and is supplied by the (web) system in a timely manner.

Name	European Commission's staff
Description	Any member of the staff of the European Commission that needs to manage documents in order to perform his/her assigned activities.
Responsibilities	Handle the received or drawn up documents according to the regulations and principles set by the Commission in the area of document and records management. They are users that play a key role in the project as they must validate the functionalities provided by Hermes, Ares and NomCom.
Success Criteria	The correct completion, in an acceptable delay, of the actions requested to the system (e.g. registering a document, modifying the filing plan, etc).

Name	European Commission's Document and Records Management Professional
Description	The individuals or groups in charge of the management of documents and

	records in each DG.
	They are represented in the projects by the DMO's in all DG's, the interservice group of DMO's, the DMO/IRM group and ad-hoc working groups.
Responsibilities	Via their representatives, they must ensure that Ares, NomCom and the Hermes modules provide "useful" and "usable" functionality, in line with the Commission's rules and benefits.
Success Criteria	Ability to do their job (document management) in line with the Commission's rules and benefits. In particular, they should be able to consult the Filing Plan using the NomCom application.

Name	Common Nomenclature Management Group (Secretariat-General)
Description	A group of individuals that are members of the Commission staff and are in charge of defining and maintaining the *common nomenclature* of the European Commission.
Responsibilities	Keeping up to date the common nomenclature of the Commission in line with policy and regulations.
Success Criteria	They are able to modify the common nomenclature using NomCom. Any person, who is not a member of that group, may not modify the common nomenclature.

Name	DG Filing Plan Editors Group
Description	A group of individuals that are members of a particular DG of the Commission and are in charge of defining and maintaining the DG's specific Filing Plan.
Responsibilities	Keeping up to date the DG's specific Filing Plan in line with policy and regulations.
Success Criteria	They are able to modify the DG's specific Filing Plan using the NomCom application. Any person, who is not a member of that group, may not modify the filing plan.

Name	European Commission's Application Development Teams
Description	The application development teams may use the Hermes modules to provide document management capabilities to their applications.
Responsibilities	Via their representatives, they must ensure that they will be capable to make successful use of the Hermes modules (that must fit in their application architecture).
Success Criteria	Clear and easy to use interfaces to access Hermes services from the applications that they need to write. Robustness of the implementation of those services.

Name	The E-Domec Steering Committee.
Description	A committee composed by seven Directors-General or Deputy Directors-General. The Chair is given to an operational DG. Several operational DG's are members of the E-Domec Steering Committee, as well as DG BUDG, SG and DIGIT. The Steering Committee monitors all e-Domec related activities, including IT oriented activities. It provides a high level link between the various DG/units that are directly involved in these activities and the "business community" that we are serving.
Responsibilities	Final say on strategy and on the yearly e-Domec work programme. The Hermes project is setup within the context of this strategy and work programmes.
Success Criteria	Success of the Hermes project will be indirectly measured – via its ability to effectively help the DGs to have better document management applications and/or better document management capabilities in their applications. Similarly, success of the Ares and NomCom projects will be measured by the visible improvement of the registration and filing, preservation and retrieval of documents and files deriving from the use of those applications by the relevant Commission professionals.

Name	SG.B.3 – Archival and document management policy (e-Domec team).
Description	System owner acting also as project manager. It represents the end users, always maintaining direct contact with the systems suppliers.
Responsibilities	Definition of the projects objectives (as expressed in this document), the projects plans, the functional requirements and the priorities. It provides the system supplier with the necessary budgetary resources to construct and maintain the systems. The unit also initiates and animates e-Domec activities including the preparation of legislative documents, implementing rules, guidelines, training, awareness-campaign, e-Domec website, etc. They have also regular contact with the DMO community and the DMO/IRM group.
Success Criteria	Success of the Hermes project will be indirectly measured – via its ability to effectively help the DGs to have better document management applications and/or better document management capabilities in their applications.

Name	The DMO Community
Description	The DMO's must assist, in the DGs, the implementation of sound document management practices, based on the relevant Commission decisions and regulations.
Responsibilities	Through the DMO meeting, review of functional requirements and reflect on priorities.
Success Criteria	Success of the Hermes project will be indirectly measured – via its ability to effectively help the DGs to have better document management applications and/or better document management capabilities in their applications.

Name	The IRM Community
Description	Each IRM is responsible for providing IT support to the business processes in his/her DG.
Responsibilities	Review system architecture, review technical requirements.
Success Criteria	Uptake of Hermes modules by the DGs for the inclusion of document management functionality in their local systems.

Name	The DIGIT architecture task force.
Description	The taskforce is composed of technical experts from various DIGIT units. It's task is to define and provide a coherent overall application framework (in which Hermes should fit)
Responsibilities	Provide an overall application architecture in which Hermes should fit.
Success Criteria	Because of timing, Hermes may be the first real demonstrator of their architectural concept.

Name	DIGIT.B.4
Description	Unit B.4 at DIGIT which is in charge of Information Systems for Planning, Financial and Document Management
Responsibilities	Definition and construction of the Hermes architecture and modules. The unit acts as the system supplier.
Success Criteria	Delivery of what has been promised when it has been promised. Successful use of the Hermes modules in Ares, NomCom and the future applications that will use its services. Successful and timely deliver of the Ares and NomCom applications.

Name	DIGIT A.3 (Solutions for Information Systems)
Description	Unit A.3 at DIGIT which has the mission to analyse, define, implement, support and continuously improve the Information System infrastructure services, thus enabling a productive and re-useable environment and building an interoperable and open platform for the implementation of critical business systems and processes of the European Commission.
Responsibilities	As part of its "Product Management Lifecycle" services, the unit supports Documentum. It also provides and supports Information System reference configurations and, in particular, collaborates in the deployment carried out at the Data Center. Finally, it delivers modular IS infrastructure services shareable by all EC applications. In particular, and concerning the services required by Hermes, it is in charge of ECAS and also the providing asynchronous communication mechanisms that Hermes requires for application integration. It also has a user interface task force that plays a role in the definition of the user interface of Ares and NomCom.
Success Criteria	That Hermes, Ares and NomCom benefit from the usage of generic security mechanisms (like ECAS), a user interface that respect the common guidelines and that other applications access Hermes trough the common integration infrastructure.

Name	DIGIT C.1 (Information Systems Hosting Services)
Description	Unit C.1 at DIGIT which is in charge of providing secure, reliable and highly available hosting facilities for the information systems and services needed to implement the e-Commission.
Responsibilities	Corporate information system hosting. In particular, it provides the development, test and production environment required by Hermes, Ares and NomCom. Also, the unit participates in the preparation of infrastructure needs estimates.
Success Criteria	The timely availability of the required environments as required by the project planning.

4.3. User Environment

Article 5 of Commission Decision 2002/47 is clear in that *the creation of a file and its attachments to the filing plan shall be the responsibility of the department responsible for the activity covered by the file in accordance with practical arrangements to be set out in each Directorate-General or equivalent department*. Therefore, the user population potentially includes all DG's of the Commission. Other European institutions like the Council or the Parliament are *not* in the scope of Hermes.

For certain tasks, the user population is further restricted to specialized users. As an example, article 5 of Commission Decision 2002/47 also states that *this filing plan, which shall be accessible by computer, shall be associated with a common nomenclature defined by the Secretariat-General for all the Commission's departments*.

Document Management includes, by definition, generic processes provided to be used by a multitude of business processes in all DGs. Those business processes are constantly changing and new ones are created from time to time. Some of those activities may take weeks to complete while others may take just a few seconds.

Hermes does not provide an end-user interface, but services that may be accessed by the applications; this means that users of Hermes are indirect users coming in through other applications. NomCom and Ares are web-based applications, which may be used directly (for the reasons mentioned above) by any person dealing with documents within the Commission; at the end these users will be accessing Hermes.

For EU staff, there is a Commission standard that should be sufficient for the purpose. Note that this includes a web browser, which is necessary as more and more applications are web based. Some details are described later in section 5.4.5 System Requirements.

4.4. Key Stakeholder or User Needs

Between February 2003 and October 2003, a comprehensive study was carried out to determine the functional needs of the Commission's DGs and services concerning the electronic management of documents. Such study involved the participation of several units and services of the Commission that play an important role in this area.

A first version was presented in May 2003, including major input from DG ADMIN/DI (now DIGIT). In June 2003, a second version was presented, which was the result of the review and validation carried out by the Chair of the Steering Committee (that was DG EMPL at that time), SG.B3, SG.G3 and DG ADMIN/DI/SSI. In August 2003, the final contents of this study were presented in a third version, which was produced after the input from the DMO Meeting and a representation of the IRM's.

This section summarizes the results of that study, which was the result of a consensus achieved between the aforementioned parties. The table in the next page enumerates those needs with their priority, concerned stakeholders, current situation and proposed solutions. Each need has a

unique code (N1, N2, etc.) that serves as their reference in later sections of this document (e.g. to associate the features of the system to the stakeholders' needs).

Need	Priority	Concerns	Current Solution	Proposed Solutions
N1: Working ergonomically	Medium	EC Staff.	Disparate user interfaces in applications developed using different technologies.	Homogeneous and Multilanguage user interfaces. Also ability granted to users to choose a language for searching for multilingual contents.
N2: Filing documents and the use of a common nomenclature for that purpose.	High	EC staff responsible for any part of the Filing Plan as well as those who file documents.	The global filing plan is not integrated with the documents repository. Each service or DG has its local convention for filing documents, depending on the systems used.	The common nomenclature for an EC-wide criteria definition and the DG specific part of the Filing Plan for DG/service specific criteria, all integrated with the documents repository.
N3: Transition from paper to electronic files	High	EC Staff.	Done in some applications but not generalized.	Scanning facilities including UBS, OCR and the possibility of importing metadata from the scanned documents.
N4: Effective distribution of document among the interested parties. A system that supports collaborative workflows.	Medium	EC Staff	Non-defined workflows or inexistent tools to adapt to the current activities of the users.	A mechanism for the definition and management of workflows adapted to each service.
N5: Preservation of documents in electronic document repositories	High	EC Staff	Different solutions in different services of the Commission including holding files in local file systems.	A centralized document management repository based on Documentum, around which a number of document management services are provided.
N6: Metadata management	High	EC Staff	Different solutions in different services of the Commission. In some cases, there are no metadata associated to the documents/files.	Every document, file or sub file managed by Hermes will be associated to a set of metadata, always including a minimal set defined in the implementing rules for the filing and registration of documents [IR Filing, IR Registration, IR Preservation, IR DOCELEC]
N7: Search for documents	High	EC Staff	Different solutions in different	A common solution for the Commission

Need	Priority	Concerns	Current Solution	Proposed Solutions
			services of the Commission. Sometimes manual work to find documents in local archives.	as a whole through Hermes services, including a number of searching facilities, including support for multiple languages.
N8: Management of persons, services and organisms. There should be as much integration as possible with existing systems that hold this kind of information (e.g. COMREF).	High	EC Staff	Limited integration between the systems containing such legal entity information and those performing document management functions.	Integration between Hermes and several systems dedicated to the management of legal entities. Periodical importation of the information in those systems and consolidation of those data with those held in the Hermes system.
N9: Ensure the preservation of the information.	High	EC Staff and, in particular, Secretariat - general, DMO's; DMC's, e-Domec Steering Committee and Historical Archives Service.	Risk of loss due to the fact that documents and files were stored in disparate places, without appropriate registration and classification.	The implementation of mechanisms for the management of document lifecycles with the objective to keep the documents and files for as long as they are necessary and in a way that they are easy to retrieve , readable and non-altered.
N10: Make available modules, components and tools in the area of document management. The objective is to make easier the development of new applications as well as the integration of existing applications, both of which should use the common services supplied by those modules, components and tools.	High	EC Development Teams, IRM.	In absence of common framework on which to develop new applications, developers have so far had to create applications that perform all services, leading to duplication of functionality in different applications of the Commission.	A new framework (Hermes) will provide services that are common for many applications, both new and existing (to be adapted to interact with Hermes).
N11: Ensure the application of security policies in relation to the access to files and the documents contained in them.	High	DMO's, Secretariat-general, e-Domec Steering Committee. It affects all EC staff that need to (or is interested in restricting) access to	Authentication provided by ECAS is currently used by some applications. Access control is done differently in different applications otherwise.	A common access control where authentication is always done via ECAS and there is a homogeneous mechanism to perform control based on roles.

Need	Priority	Concerns	Current Solution	Proposed Solutions
			documents.	
N12: Archiving paper and electronic files and documents in the short, medium and long term in a reliable format and on an appropriate medium to ensure that they can be read again in the future if necessary.	High	EC Staff	Files stored in local files or systems of some DG's or services.	The registration and preservation of documents will be two of Hermes services. Registered documents are preserved for a long period of time (even preserved in historical archives when required).
N13: Generation of reports including, among others, those presenting a historical view of the management of a file or document, the follow-up of the quality of the procedures (e.g. "code de bonne conduite") and statistics in relation to the usage of the system (e.g. how many documents per dossier).	High	EC Staff	Lack of integration between the Filing Plan of the Commission and the common documents repository. The reports currently being produced by existing applications are disparate and fail to present a global view.	Reporting facilities will be provided by Hermes. A coherent mechanism to obtain and format the information should be available. As Hermes can access the whole repository and the Filing Plan of the Commission, comprehensive reports involving a broad range of information can be produced.
N14: Registration of documents in a single centralized registry following a pre-defined set of rules (e.g. registration number format)	High	EC Staff	Several different registers exist today. Each one of them follows its own rules and are managed by different team, services or DGs.	A single unique centralized registry. Documents can be registered following a pre-defined coherent set of rules.
N15: Visualizing the full contents of a file (dossier) including, if necessary its reconstitution from several fragments.	High	EC Staff	At the time of this writing, this is not possible.	The possibility to visualize full contents of a file is a functionality that will be built around a common electronic repository of documents and a common filing plan for the Commission.

4.5. Alternatives

As a first step, a strategic market study was carried out on the potential offered by state-of-the-art technology in order to reach the above-mentioned goals in the area of Document Management. In this context, a large number of technical solutions were reviewed, including open-source products. The conclusions were presented internally in September 2002. The main recommendation was to build prototypes (or proofs-of-concept) in order to gain an understanding about how a Document Management system of the required complexity should be designed.

These proofs-of-concept had of course to be built using software products, and a number of alternatives were reviewed. The candidates considered included two Oracle products (iFS and Workflow), Microsoft Share Point Portal Server, FrontPage and DreamWeaver. It was also suggested that, at a later stage, it could be worth to build another proof-of-concept using the product to be selected under the (then ongoing) call for tenders for Web Content Management; the rationale behind this recommendation was that the "content" to be provided under the Web Content Management project consisted anyway of documents in a wider sense. Web Content Management and Document Management were still seen as connected but distinct markets.

The choice of products for the proof-of-concept studies was driven by pragmatic considerations. The two Oracle products (iFS and Workflow) turned out to be a natural candidate for the first Hermes prototype simply because they were cost-free at that time, because there was a considerable degree of technical know-how available in-house in relation to Oracle products in general, and because a contractual framework existed for the acquisition of the required specialised services. In addition, as Oracle products are widely used at the Commission, this choice would ensure that compatibility with the existing IT environment could be controlled. This Hermes Oracle prototype was built during 2003.

After the contract with Fujitsu was signed in September 2003, it was decided to build a second Hermes prototype with Documentum, following the suggestion which had been made one year earlier. Again, the signature of the contract had enabled a pragmatic approach to the design of the proof-of-concept, but —as in the case of the Hermes Oracle prototype— it was never intended to reuse any developments made at this stage.

The results of both proofs-of-concept were available and could be compared at the end of the first quarter 2004. The outcome was conclusive. While the design of the Hermes Oracle prototype had faced considerable difficulties, the Hermes Documentum prototype had shown that the same products which were going to be introduced anyway in the context of Web Content Management could also offer the full functionality required for a Document Management infrastructure capable of meeting the Commission's political objectives.

5. INFORMATION SYSTEM OVERVIEW

5.1. Information System Perspective

We have already indicated that Ares and NomCom are client applications of Hermes. We have also said that more and more applications will be built or improved in the Commission in such a way that they will also rely on the services provided by Hermes.

Hermes itself is conceived as a set of modules implementing common functionality required by document management systems to be e-DOMEC compliant. The different modules are built on top of standard Documentum libraries and they implement additional logic implementing the e-DOMEC requirements and specifications. A graphical representation of the central document repository, Documentum and its relationship with Hermes (modules), Ares and NomCom is presented in Figure 6.
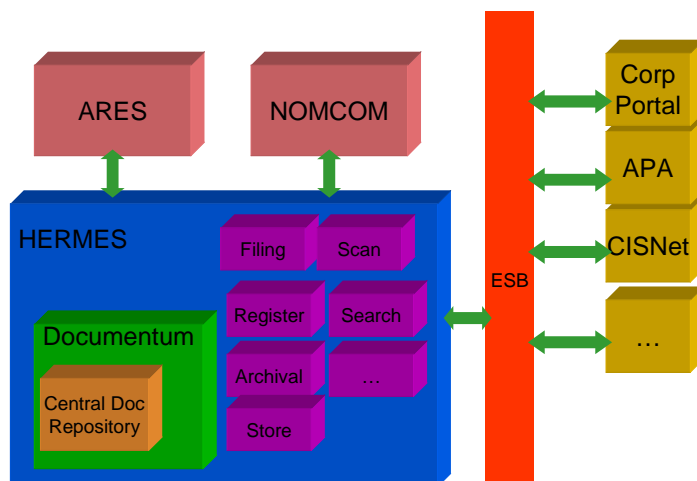
Figure 6: Ares, NomCom and Hermes modules interrelations and relationships with other applications

At the time of this writing, one of these applications is ABAC Contracts. Other DG's are studying the way of using Hermes' services, such as AGRI (APA application) and COMP (COMPReg). After the experience with ABAC Contracts, other applications will be integrated with Hermes to get the benefit of the document management services that it provides.

5.2. Assumptions and Dependencies

The Commission has already a number of database systems that hold information about internal and external entities. The quality of the information in these systems is necessary for the proper functioning of the Hermes system. These dependencies are represented graphically in Figure 7: Hermes dependencies on other systems.
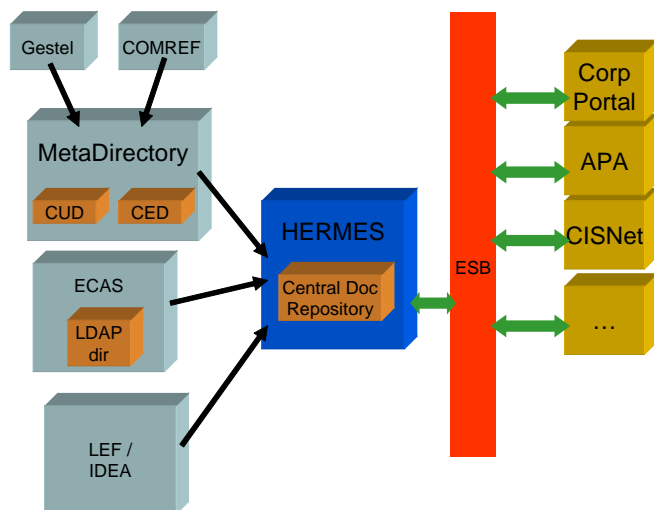
Figure 7: Hermes dependencies on other systems

In relation to this, Hermes uses ECAS as authentication service, which uses the LDAP protocol to access to a directory service to that contains information about the users of the system. Those users are imported into the system for internal use also.

COMREF and Gestel are sources to the metadirectory. COMREF contains information about persons that work for the Commission that are also imported into the system. Other databases of interest in relation to internal entities are CUD, CED and Gestel.

External legal entities are imported into the system and used for several purposes. For example, a user could search for all the records in the system submitted by a particular person working for a company or a particular organism external to the Commission. For this purpose, Hermes imports information from reference bases like LEF or IDEA. Hermes allows the users to add external entities to the system but those are never exported to LEF or IDEA. The availability and quality of this information is vital to the good functioning of the systems under discussion.

At the time of this writing, it has been decided that Documentum is the base product upon which much of the Hermes functionality is based. Therefore, it is assumed that the product will be available (and maintained) for the whole life of the Hermes system.

5.3. Cost and Timing

The timing of the development of Hermes, Ares and NomCom should be considered in the context of the e-Domec activities. A view of the history (until 2005) and plans (from 2006) of those activities is represented in. In particular, the Hermes project has a major milestone in June 2006, including not only the "basic functionality" like registration and filing but also the new implementing rules for the "preservation" [SEC(2005)1419] and "electronic and digitised documents" [SEC(2005)1578] norms. Ares (migrated from Adonis) and NomCom should be complete and fully integrated by the end of 2007. The migration of the DGs' applications to adopt Hermes becomes increasingly important.

Evolution e-DOMEC 2002-2009 : News 2006

IMPLEMENTATION PILAR | **TECHNICAL PILAR** | **NORMATIF PILAR**

2002 · 2003 · 2004 · 2005 · 2006 · 2007 · 2008 · 2009

Implementation Pilar:
- Creation Website e-DOMEC
- Nomination of DMO in each DG
- Creation Steering Comittee
- Creation ISG DMO and sub-groups
- Competition archivists records managers and documentalists
- Migration of DG to Adonis S.2 + image
- Development Commission Filing Plan
- e-DOMEC courses for DMC's and DMO's
- I Awareness campaign : presentation e-DOMEC
- II Awareness campaign : responsabilities HoU
- I Document management review in DG
- Migration of DG to Adonis S.3 - NOMCOM
- Evolution of baseline requirement in accordance with e-DOMEC rules and technical possibilities
- INTERNAL CONTROL STANDARD N°13
- **2006**
- III Awareness campaign : addressed to top and middle management
- Working group "filing in practice"
- e-DOMEC courses for DMC's, DMO's, secretaries, newcomers, management, others
- Document management guidelines : e-mails, security, personal data, public acces
- Implementation of e-DOMEC in delegations, executive agencies, ...
- Creation and visits "flying squad" support to DG
- IV Awareness campaign
- Adoption of archive schedule by DG
- Working group "preservation in practice"
- V Awareness campaign
- II Document management review in DG
- Evaluation of all rules and tools
- VI Awareness campaign

Technical Pilar:
- ADONIS S.2 - Development
- HERMES - Basic modules : Analysis
- NOMCOM - Development
- ADONIS S.3 - Development
- Ares : Analysis
- Roll out
- HERMES - Analysis
- Roll out
- Roll out
- Integration NOMCOM within HERMES
- Development and pilot phase
- Development and pilot phase
- Maintenance and support
- Adaptation of the DG's IT systems to HERMES
- Roll out NOMCOM (HERMES)
- Electronic signature : analysis and prototype
- Electronic archiving : analysis
- Historical archives management : analysis
- Public register : analysis
- Development or acquisition application
- Development of module
- Development of application
- Development of application
- Implementation in the DG's
- Implementation in the DG's
- Roll out
- Roll out
- Roll out
- Roll out
- Maintenance and support
- Maintenance and support
- Maintenance and support
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- Maintenance and support

Normatif Pilar:
- Decision 2002/47/EC on document management
- Implementing rules "Registration" SEC (2003) 349/1
- Implementing rules "Filing" SEC (2003) 349/2
- Decision 2004/563/EC on electronic and digitised documents (DOCELEC)
- Implementing rules "Preservation" SEC (2005) 1419
- Implementing rules "DOCELEC" SEC (2005) 1578
- Implementing rules "Appraisal and transfer to the historical archives"
- Communication to the Commission on e-DOMEC : document management and electronic archiving 1999-2009
- Common Commission-level Retention list
- Specific DG-level Retention list
- Adoption of procedures for the review and elimination of current and intermediate records
- Adoption of circulars to update the annexes of implementing rules DOCELEC
- Evaluation of implementing rules (revision if necessary)
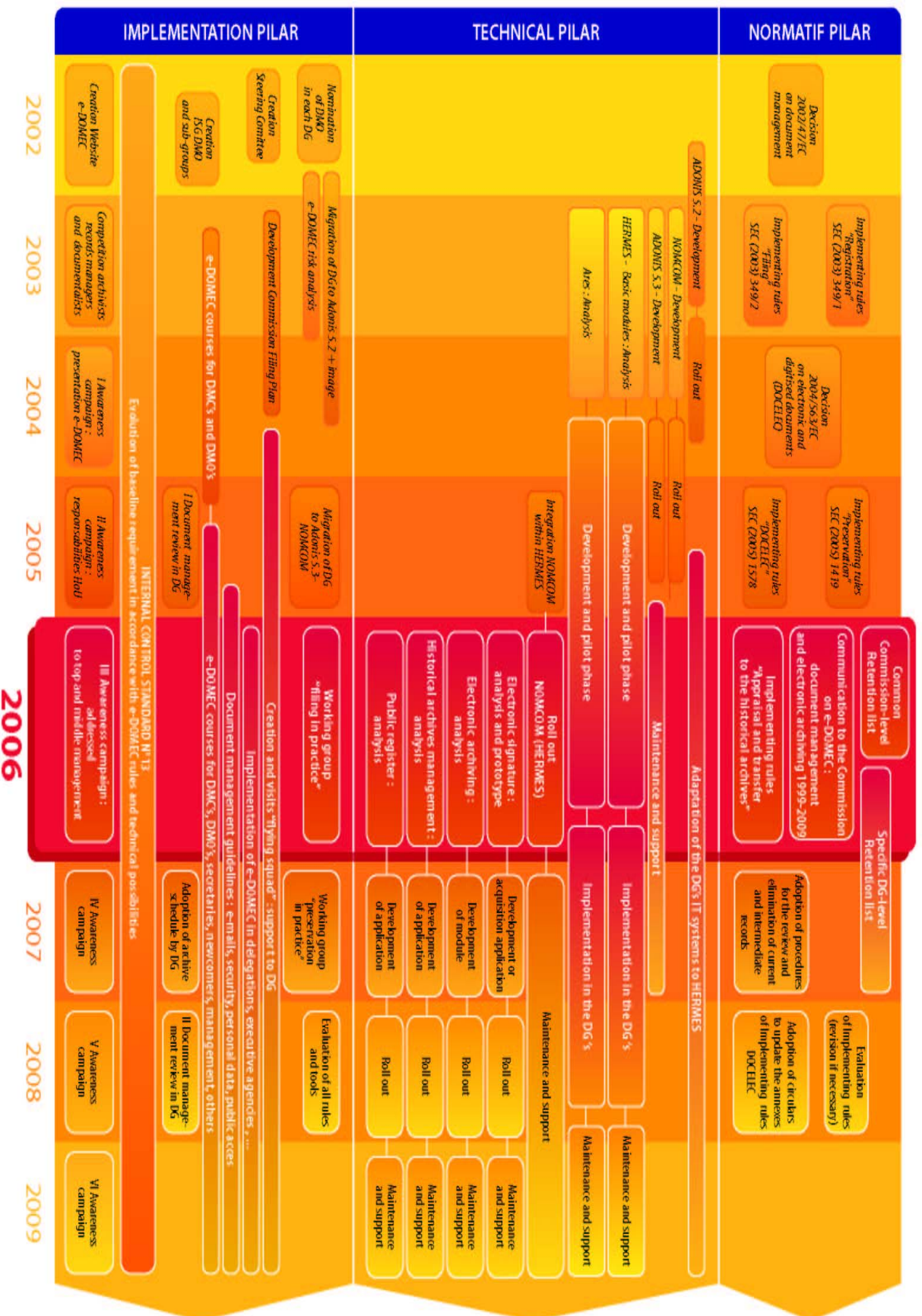
Figure 8: e-Domec evolution 2002-2009

The cost of the project between the years 2002 and 2005, both included is known and is included in the following table:

DG	2002	2003	2004	2005	TOTAL
DIGIT	85.000	890.000	1.530.000	1.930.000	4.435.000
SG	232.000	754.000	958.000	600.000	2.544.000
AUTRES DG	165.000	466.000	470.000	440.000	1.541.000
TOTAL	482.000	2.110.000	2.958.000	2.970.000	8.520.000

There are already previsions for the cost of the information systems for the following years (2006-2009). A summary of the costs estimated for Hermes, Ares, NomCom is presented in Figure 9: The costs of the e-Domec-related Information Systems in 2006 – 2009. The figure also provides an estimation of the costs of other information systems in the context of the e-Domec initiative that will take part during those years (e.g. electronic signature or public registry).

Figure 9: The costs of the e-Domec-related Information Systems in 2006 – 2009

However, the costs associated to the project are not only those of the information systems themselves. There are others like training, infrastructure or services that need to be added. An estimation of the total costs (including those of the information systems) is summarized in figure Figure 10: e-Domec. Total costs estimations for 2006-2009.

		2006	2007	2008	2009	TOTAL
SYSTEMES D'INFORMATION	SYSTEMES CENTRAUX	2.130.000	2.580.000	1.955.000	1.455.000	8.120.000
	ADAPTATION DES S.I. DES DG	500.000	700.000	500.000	400.000	2.100.000
FORMATION	ADMIN	209.130	89.280	89.280	103.380	491.070
	FORUM INFORMATIQUE	148.845	58.241	110.111	45.757	362.954
INFRASTRUCTURE TECHNIQUE		2.928.289	4.743.610	5.050.843	5.017.459	17.740.201
SERVICE (RESSOURCES EXTERNES)		250.000	500.000	500.000	500.000	1.750.000
TOTAL		6.166.264	8.671.131	8.205.234	7.521.596	30.564.225

Figure 10: e-Domec. Total costs estimations for 2006-2009

All this information has been approved by the e-Domec Steering Committee in December the 14th 2005 and the complete budgetary report is available [RappBudget].

5.4. Quality Ranges and Information System requirements

5.4.1. *Availability*

The availability of the system is managed by the production team. Continuous service is required.

High resilience should be provided, including immediate failover in the event of an infrastructure component failure – where possible, this should be transparent/minimal disruption to the user; preventing corruption and/or loss of data, although minimal user intervention can be tolerated (e.g. login session). There should also be built-in contingency measures for disaster recovery – in the event of a site disaster (fire, flood, planned site maintenance etc.) provisions should be made to reinstate the service at an alternative site within the shortest possible timeframe, as transparently as possible.

The EC have two data centres in Luxembourg in which this system is to be implemented. Processing and storage resources should be distributed between the two data centres, with sufficient redundancy to enable continuous operation from one data centre in the event of a site disaster that renders the other data centre unserviceable. Fail-over between data centres should be transparent to the users.

5.4.2. *Usability*

The System shall be easy to operate including search and on-line help facilities and minimal system administration intervention. Hermes, NomCom and Ares should have a similar "look and feel". It is expected that future document management applications will also follow this rule. The systems should support the single sign-on strategy through its integration with ECAS.

5.4.3. *Maintainability*

The system is intrinsically complex. It is foreseen the use of about hundred servers. Several products will be used (e.g. Documentum, Oracle, Weblogic application server, etc). Moreover, the system should be scalable beyond the initial 5-year period to at least 10 years.

The maintenance of such a system is, necessarily complex. It is not possible to place configuration information in the same location/mean. It will eventually be in database tables, initialization files, building procedures, etc.

There should be a significant effort to handle this complexity. The ultimate goal is that the system is highly configurable without recompilation. To ease its maintenance, it is fundamental to provide good administration documentation and automate the building and deployment procedures as much as possible.

5.4.4. Applicable Standards

Except if stated otherwise, the European Commission standards are applied to the system.

5.4.5. System Requirements

The necessary infrastructure for the proper functioning of Hermes is presented in Figure 11: infrastructure required by Hermes.
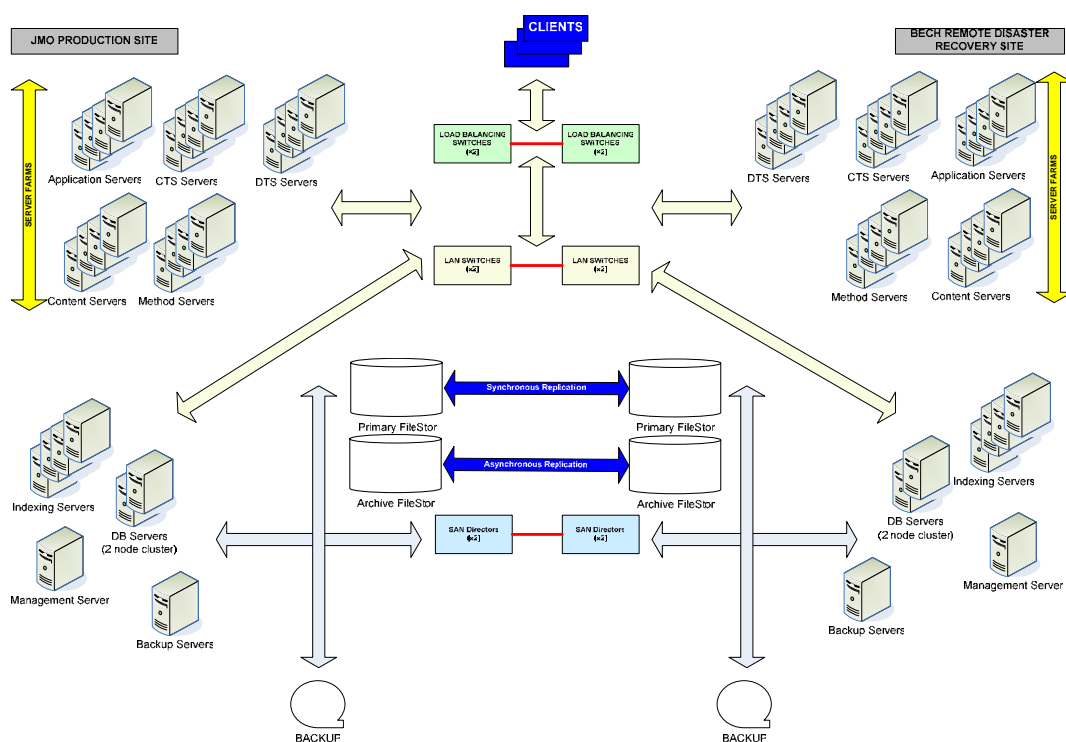

Figure 11: infrastructure required by Hermes

The Corporate Infrastructure required by Hermes makes necessary the acquisition of the servers to run the different components of the Hermes architecture (application servers, index servers, document transformation servers, trusted content services, content storage services, databases, etc), a SAN/NAS storage architecture able to store the volume of data handled by HERMES (documents, databases, etc) while keeping the response time requested by the EC officials working daily with documents.

As for any other applications in the Commission developed in WebLogic/Documentum/Oracle, the system requirements must be in compliance with what the Data Centre provides on the server side. Measures to safeguard the system against the effects of computer viruses should be included.

On the client side, the standard client platform at the Commission is Microsoft Windows XP, which is adequate for the purpose of these projects. As Ares and NomCom are web applications, a web browser is required. It must support HTML 4.0, JavaScript 1.2 and CSS 2.0. Internet Explorer 5.0 or higher is recommended.

Other applications must be present on the client. Those include Adobe Reader 6.0 or later and Microsoft Word/Excel 2002 or later.

The screen resolution of 1024*768 considered convenient, although 640*480 is acceptable. The number of colors must be 65536. The non-standard font «Code 39» is available as code39.ttf.

5.4.6. _Performance Requirements_

Hermes shall support 20.000 active users and 4.000 concurrent users without performance degradation. In total, those users expect Hermes to handle around 15 million documents produced per year and a volume of 4.500.000 document transfer operations per month (54 million transfers a year). Hermes shall offer an average response time of three seconds and a maximum response time of seven seconds for accessing an average-sized document.

The data traffic generated by Hermes usage will require an upgrade of the already busy telecommunication lines. For the front-end LAN (the LAN connection between the application servers and the end-users), it is necessary to assure congestion free 10/100Mbps Ethernet connections. While in the backbone, 10 Gbps Ethernet links will be needed to provide a global adequate response time.

The performance of the Local System Interface is not an issue, provided it has a minor impact on the rest of the system.

Load tests will be conducted to measure performance with regards to these requirements. The objectives will be met with a conjunction of the efforts of the development and production teams.

5.5. Licensing and Installation

The licensing and installation of the system is managed by the Data Centre for the production, test and development environments.

An estimate of the necessary Hardware and product licenses (Oracle databases, Documentum, BEA Weblogic application servers, administration tools, etc) required for all environments has been made in close collaboration with the Data Centre. The result has been included in the global budget under the heading "Infrastructure technique".

The licensing and installation of the software tools used by the developers is managed by DIGIT.B.4. Here is a list of the software development tools:

– _Open Source Software_: Eclipse, CVS and other open source software will be downloaded and installed by the developers whenever needed.

– _IntelliJ IDEA is currently being used and it requires a licence per developer._

– _Documentum_. This requires a licence per developer so it must be taken into account. It is also important to take into account the license required for production.

– _Rational Rose_. This requires licence per user and is particularly important during the phases where analysis and design take an important part of the development effort.

– _Oracle_. There is no license at development time. However, it must be taken into account in the phases where the application will be put in production.

– Database Development Environment: TOAD 7 or later

6. FEATURES

As mentioned in section 1.2, NomCom allows certain authorized users to manage the elements of the Filing Plan and File Metadata. In order to do this, NomCom is client of services provided by Hermes. Therefore, features related to the management of such elements are features of both NomCom and Hermes but not of Ares.

Similarly, some Ares/Hermes features (e.g. document registration) are not features of NomCom. In general, we can say that all of them are features of Hermes, which is the application that is required to provide services to support all of them.

In this section, features are presented at a high level. Usually, that means that a single high level feature corresponds to a number of low level features, that we could also call *operations*. However, it is also possible that two or more high level features are necessary to define an operation. For example, "full text search" (i.e. on metadata and contents) and "extended search" (i.e. using phonetic and/or transliteration algorithms, removing accents, etc.) are two different features. However, a search operation could be both "full text" and "extended".

The features in this document intend to remind the reader which aspects are important not to forget. They should be taken into account while defining the architecture of the system, finding the appropriate libraries and other development tasks that are detailed in other documents of the project (e.g. technical architecture or supplementary specifications).

Before enumerating the features themselves, let us consider some examples that would help to understand terms like "management", "life cycle" and others that are used in their description.

Bar Codes are defined, physically printed and eventually read to be used to identify documents or pieces of documents in an application during some scanning operations. Under the term *Bar Code Management* we cover both, the generation and lecture of bar codes.

Files can be generated (i.e. created) or read (i.e. their contents viewed, maybe through some kind of navigation), but also modified, transferred, eliminated or destroyed. Moreover, they include not only the file itself but also the metadata associated with it. There are also metadata associated to files that can be created, viewed, modified, deleted, printed, etc. The term "File Management" covers all those functions.

Those are example of features of the kind "the management of something". Many details including viewing, navigating, defining, modifying, deleting, printing, etc. are all covered under the concept of "management".

The term "Reference Data", refers to lists like countries, cities, languages, distribution lists, the typology of documents, valid status of heading/files, etc. They are usually presented to the user to pick one or more of them when, say, filling a form. Reference data management is the definition and maintenance of those lists.

In some features, it is mentioned the importation of something from other systems. External and Internal entities, users and group are examples of this. The importation can be fairly complex if, say there are inconsistencies between the data in the source(s) and the system itself. In this case, some kind of consolidation is required. Terms like synchronization are also used in this context (e.g. synchronization of Hermes with the LDAP server from which the users are imported).

Some of the features include the "management of the life cycle of something". Such life cycle can be more or less complex depending on the object being managed. For some objects, the life cycle is just a sequential progress through different statuses. For example, a heading of the filing plan can go in sequence through inactive (i.e. newly created), active, frozen and extinct. To that sequence, it is also possible to restore the state from frozen to active but not, for example from extinct to frozen. These are low level details that are described in other documents.

Finally, it is interesting to note features like "adding a workflow task to a flexible workflow". This is a feature that requires special attention as it forces the development team to find or implement the concept of a dynamic workflow in which tasks can be added or removed from a workflow instance that is currently running. Another example of these special features is "add to a logical document a link to a content rather than the content itself".

Needs	Priority	Features	Planned release
N1	medium	Ergonomic design in line with modern Web applications. The user interfaces of the different applications will have a similar and coherent approach.	Oct.2006
N2, N6, N15	high	Management of elements of the filing plan (headings, files, sub files). This includes the association of files to a heading or sub files to a file and the maintenance of those elements and their metadata by authorized users. Lifecycles should be managed also (e.g. closing a file implies locking their documents against modification). The management of files and sub files includes also the possibility of navigating through their full contents according to the access rights of the user.	Apr.2006 & Jun.2006 (life cycle & locking)
N2, N9	high	Filing and unfiling documents. This contributes to the preservation of the information and its independence of structural modifications (e.g. creation of a new service or DG in the Commission).	Apr.2006
N2	high	Possibility to create a list of favourites heading, files and sub files for easier access to the ones that are more frequently accessed by a given user.	Jun.2006
N3	medium	Image quality, including automatic detection of defects and enhancement.	Dec.2006
N3	medium	Optical Character Recognition (OCR)	Oct.2006
N3	high	The physical scanning of documents in different forms, including pre-scanning, post-scanning, interactive, batch. All of them producing scanning log that can be used to detect failures in the process. It should be possible to encrypt the result of the scan.	Apr.2006 & Oct 2006 (encrypt)
N4	high	Management of workflows. This includes not only the *Workflow definition* but also its modification, visualization and deletion. This should be possible for different kinds of workflows (e-signatory, information, attribution, fixed, mixed and flexible). For flexible workflows, it should be possible to modify a running instance by adding a workflow activity, possibly associated to a new *participant*.	Jun.2006
N4	high	Management of *workflow tasks* and *workflow instances*. In particular, it should be possible to launch and stop a workflow instance, navigate through the pending tasks of one or more users and indicate to the system that a particular task has been performed or cancelled.	Jun.2006
N4	high	Delegation of workflow tasks and instances. As a particular case, it should be possible to delegate the full *inbox*.	Oct.2006
N4	medium	Comment on workflow tasks and workflow instances	Oct.2006

Needs	Priority	Features	Planned release
N4	medium	Possibility to monitor the history of workflow (tasks) executions, including a search for them in the system.	Oct.2006
N5, N6	high	Creation and preservation of documents and their associated metadata. Detection of duplicates in the repository and management of their lifecycle and versions. Possibility to modify the documents and their metadata by the authorized users and the association of those documents (or links to them) to files.	Apr.2006 & Jun.2006 (duplicates detection)
N5, N14	high	Versioning of documents (e.g. for translation or after modifications). Possibility of checking in and out documents to allow the elaboration of documents by groups working on them in a collaborative manner.	Apr...2006
N7	medium	Search for (sub)files, files, documents, contents and transmissions of documents and even for security markings on documents in the repository. Possibility to define, save and maintain user-defined search criteria.	Oct.2006
N7	medium	Extended search including phonetic, transliterated, multilingual, etc.	Oct.2006
N7	high	Full text search, meaning the possibility search on the full contents of documents as well as in their metadata.	Jun.2006
N7	low	Metadata dictionary to support the introduction of information into the system by users	Oct.2006
N8	high	Management of legal entities both, external and internal to the Commission. This includes the integration with specialized systems that hold this kind of data (e.g. COMREF or LEF) and their consolidation with data held in the system. There should be a mechanism to perform search operations on them.	COMREF in Jun.2006 & LEF in Dec.2006.
N8	high	Management of user accounts, groups and roles. This includes the importation of users from other systems, the association of users to groups and assigning roles to users or groups. It should be possible to search from groups and users in a friendly manner.	Jun.2006
N8	high	Audit trail of certain operations and the users that executed them with the objective to monitor those operations and eventually perform rectifications of some of them.	June 2006
N8	high	Distribution lists management including the possibility to search on them.	Dec.2006
N8	medium	Role delegation, meaning the delegation of all permissions associated to a role.	Jun.2006
N10	low	Modular architecture. Some of the services provided by Hermes are provided to other applications via web	Dec.2006

Needs	Priority	Features	Planned release
		services.	(web Serv.)
N11	high	Definition of the access control to headings, (sub)files, documents (item). There should be an automatic mechanism to modify those access control definitions all along the life cycle of those elements.	June.2006
N11	high	ECAS integration for the authentication of users.	June.2006
N11	high	Management of security markings on document, including the addition and removal of those markings as well as the definition of periods of time in which the markings are applicable.	Oct.2006
N11	high	Security classification of documents (e.g. EUCI).	Apr.2006
N12	medium	Format conversion (e.g. from Word to PDF as a more convenient format for the preservation of the document)	Dec.2006
N13	medium	Reporting (e.g. statistics like the number of documents per file)	Dec.2006
N14	high	Management of records. This includes the creation of records or sets of documents that will be eventually registered (and filed) in the system. The full life cycle should be managed including their closure when appropriate. It should be possible to comment on records also.	Apr.2006 & Jun.2006 (life cycle)

7. PLANNED RESSOURCES

The additional equipment described in section 5.4.5 (System Requirements), requires additional human resources to administer, monitor and maintain the infrastructure: software will have to be installed, monitored, upgraded, etc in the computers; it will be necessary to implement backups and restore mechanisms that allow achieving the security levels required by the system; assurance will have to be provided that hardware and software is operational around the clock.

In order to offer Service Management and Support for Hermes (as for any other corporate application at the EC), it is necessary to establish an organisation that will deal with any aspect of the service provision and will ensure that customer requirements and expectations are met at all times.

7.1. DIGIT B.4 (PFD)

The staff required for the development of the projects (Hermes, Ares and NomCom) described in this document is as follows:

- 1 business area coordinator and 2 project managers;

- 2 analysts (responsible for describing the use cases, the business workflows, the functional data models …);

- 1 user interface specialist (responsible for the user interface design);

- 3 Documentum developers with some knowledge of Java and J2EE (for the end user interface development);

- 1 developer with knowledge of the scanning technologies;

- 4 Java developers with some knowledge of Documentum (for the business logic and the interfaces development);

- 1 tester and end user contact (for preparing roll-out, migrations …);

- 1 support team (including 1 support manager, support members for following up and closing the incidents, technical writer, trainer, tester …);

The team currently in place fulfils the development capacity and support needs, it possesses the necessary skills.

7.2. DIGIT C/1 (Hosting Services) and DIGIT/C/2 (Corporate Infrastructure Services)

These Units will have the responsibility of hosting the e-DOMEC services at the Data Centre. In particular, they will have to maintain the additional equipment described in section 5.4.5 System Requirements. Additional human resources are required to administer, monitor and maintain the infrastructure: software will have to be installed, monitored, upgraded, etc in the computers; it will be necessary to implement backups and restore mechanisms that allow achieving the security levels required by the system; assurance will have to be provided that hardware and software is operational around the clock.

The current estimate is that the full system in operation will require the following team to maintain the technical infrastructure:

- 4 Application server administrators
- 3 Server administrators
- 3 Backup operators
- 0.5 for back office

Service management

In order to offer Service Management and Support for Hermes (as for any other corporate application at the EC), it is necessary to establish an organisation following the ITIL recommendations. The objective of the service management is to deal with any aspect of the service provision and will ensure that customer requirements and expectations are met at all times.

Estimates of the required human resources to cover the service management and the support of each individual system have been made and are included in the tables of section 5.3 Cost and Timing. It is important to notice that the centralised nature of HERMES/ARES/NOMCOM will allow the centralisation of the support functions. This centralisation will enable a cost reduction (over the distributed support model currently used for Adonis) while keeping or improving the quality of service.

The decision of which service will assume the Service Management responsibility is still under debate as one of the project activities.

8. CONSTRAINTS

8.1. Security constraints

Hermes, NomCom and Ares have to be fully compliant with the policies of the Commission concerning security (http://www.cc.cec/softline/u/services/security/dssi/home.htm).

They should also ensure the implementation and/or improvement of access control policies which are based upon regulatory requirements (taking into account regulation on privacy/confidentiality according to the EC Financial Regulation).

8.2. Data protection constraints

The system has to be in line with the Data Protection Regulation N° 45/2001.

Sensitive data include:

– Information that can serve to identify a 'natural person'

– Staff (e.g. the data held to identify the owner of a document or file).

8.3. Other constraints

This project will be governed by the following key constraints of scope, elapsed time, and budget:

– the links between local existing systems and the projects presented here. Hermes deserves a special mention as it is a framework that will provide service many other applications.

– the variety of users of the systems (Hermes in particular). They play a role in a variety of business processes and have different needs.

– the installed PC's (platform, tools and capacity) of the potential users of Hermes, Ares and NomCom. This is a Commission Standard.

– the architectural decision about the external products to be used. In particular, Documentum is the core product around which many services of Hermes must be built.

ANNEX I: TOWARDS A DEFINITION OF THE BUSINESS PROCESSES IN THE AREA OF DOCUMENT MANAGEMENT.

In section 2.4 there is a proposed list of supporting business processes in the area of document management. Examples of them are the registration of documents and their filing. At the time of this writing, the CEAF has proposed a list of document management business processes that is currently being used in other documents [AbacsAssetsVision]. However, it should be noted that such list is subject to change.

Despite the difference in the list of business processes, there is a correspondence between the list of business processes proposed in this vision document and some of the business processes proposed by the CEAF. Consider, for example the treatment of incoming email to the Commission. Such treatment includes their registration and their filing. Therefore, we can say that in one treatment of external email, there is one registration and one filing, among other possible sub-processes or operations carried out on them.

The following table presents some of the current CEAF business processes and their correspondence to the business processes enumerated and defined in section 2.4 of this vision document:

	Scan	Reg. doc	Filing Plan	Filing a doc	Preservation	E-Sign. Workflow	Hist. Arch	Retrieve Files/docs
D.8: Treatment of incoming and outgoing mail	X	X		X	X	X	X	X
D.9: Treatment of requests for documents (transparency)		X		X	X			X