SEVENTH FRAMEWORK
PROGRAMME

INTELLIGENT SERVICES FOR ENERGY-EFFICIENT DESIGN AND LIFE CYCLE SIMULATION

ISES

Deliverable D10.3:
Project Manual

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Technische Universität Dresden / Institute of Construction Informatics

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RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	**X**

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Executive Summary

The purpose of this document is to support the international teamwork of all partners. It includes agreed information and preset IT infrastructure, and defines procedures that are needed to manage and perform in the ISES project.

The Project Manual can be considered to be both an introductory document to the project, and a single source of information for and about the project participants. Although it briefly describes the work to be done, it is not a definition of work. The other relevant binding documents of the project are:

- The Grant Agreement (GA), including all EC documents
- The Description of Work (DoW)
- The Consortium Agreement (CA).

The Project Manual focuses on the practical aspects of collaboration in the project and attempts to avoid duplicating information in the above documents as much as possible.

It is divided into four parts.

Part 1 introduces the consortium partners, their contacts, roles and obligations in the project.

Part 2 is dedicated to the project management, putting together the most essential management procedures laid down in the DoW.

Part 3 provides a synthesis of the project reporting procedures, the planned milestones and deliverables and their deadlines.

Finally, Part 4 details the IT infrastructure and some procedures and rules for harmonized communication between the partners. The set up SharePoint collaboration platform is specifically focused, to some extent repeating the description provided in Deliverable D8.1 in order to keep all project support procedures, structures and rules in a single, easy to access document. However, this description is extended here, including explanation of the structuring and the content of the predefined folders on the SharePoint platform.

The work on the Project Manual was performed fully by the project coordinator, TUD-CIB. However, the procedures described in the manual are coordinated and agreed with all project partners at the first ISES General Assembly Meeting held at Dresden on 9-10.01.2012.

1. Consortium

1.1 Project Partners

#	Organisation Name	Country	Acronym
1	**TECHNISCHE UNIVERSITÄT DRESDEN**	Germany	**TUD**
1a	TUD -- **INSTITUTE OF CONSTRUCTION INFORMATICS**		**TUD-CIB**
1b	TUD -- **INSTITUTE OF BUILDING CLIMATOLOGY**		**TUD-IBK**
2	**INSINOORITOIMISTO OLOF GRANLUND OY**	Finland	**OG**
3	**UNIVERZA V LJUBLJANI**	Slovenia	**UL**
4	**SOFISTIK HELLAS S.A.**	Greece	**SOF**
5	**NYSKOPUNARMIDSTOD ISLANDS**	Iceland	**NMI**
6	**NATIONAL OBSERVATORY OF ATHENS**	Greece	**NOA**
7	**LEONHARDT, ANDRÄ UND PARTNER GMBH**	Germany	**LAP**
8	**TRIMO, INŽENIRING IN PROIZVODNJA MONTAŽNIH OBJEKTOV, D.D.**	UK / DE	**TRI**

1.2 Project Coordinator

TECHNICAL UNIVERSITY DRESDEN - INSTITUTE OF CONSTRUCTION INFORMATICS

Postal Address: **INSTITUT FÜR BAUINFORMATIK**
TECHNISCHE UNIVERSITÄT DRESDEN
01062 DRESDEN

Contact: **Prof. Dr.-Ing. Raimar J. Scherer**

Phone: +49 – 351 – 463-32966
Fax: +49 – 351 – 463-33975
Email: Raimar.Scherer@ tu-dresden.de
Web: http://tu-dresden.de/die_tu_dresden/fakultaeten/fakultaet_bauingenieurwesen/cib

1.3 Roles and Responsibilities

The participation of the partners in the individual Work Packages (WP) is described in details in the next chapter. The information presented in this section provides a rough overview of roles and responsibilities of all partners. The following list provides a fast and easy to understand summary of the consortium's portfolio. The precise requirements and obligations for all ISES partners are regulated by the rules laid down in the contractual documents.

Partner	Type	Role in Project	WP Leader	Relevant competences
TUD-CIB	University	Model and software developer, Project Manager	WP 2,WP 5, WP 10	BIM development and management, interoperability, model views, SOA, web/cloud services, ontologies, stochastic methods
TUD-IBK	University	Model and software developer		Energy and comfort analysis / simulation methods and software tools, energy performance assessments, renewable energy use
OG	Industry	Model and software developer; integrator and end user in FM	WP 6	BIM expertise, energy and CO_2 assessments, life cycle FM software, web services, engineering service consultancy
UL	University	Model and software developer	WP 3,WP 7	Information management, data mining, SOA, web/cloud services, cloud/grid infrastructures, ontologies web design technologies
SOF	Industry	Software developer and vendor; Exploitation manager	WP 8	Numerical methods, software services/tools development (CFD computations, energy simulations, complex geometry modelling)
NMI	Research institute	Model and methodology developer	WP 4	BIM expertise, sustainable design and construction, environmental assessments, renewable energy use, energy efficiency estimation
NOA	Research institute	Model and methodology developer		Numerical modelling & analysis of thermal and solar energy systems, building energy audits, indoor environmental quality assessments, meteorological measurements
LAP	Industry	End user	WP 1	Design consultant in structural and services engineering, usage scenarios development
TRI	Industry	End user	WP 9	Contractor and component developer (façade elements), usage scenarios development

1.4   Contact Details

All persons involved and their contact details can be accessed at the ISES SharePoint (s. Chapter4). The partners have to inform the Project Manager (PM) immediately when contact details are changed. Such information shall be updated as and when changes relating thereto occur.

2.   Project Management

2.1   Overall Management Structure

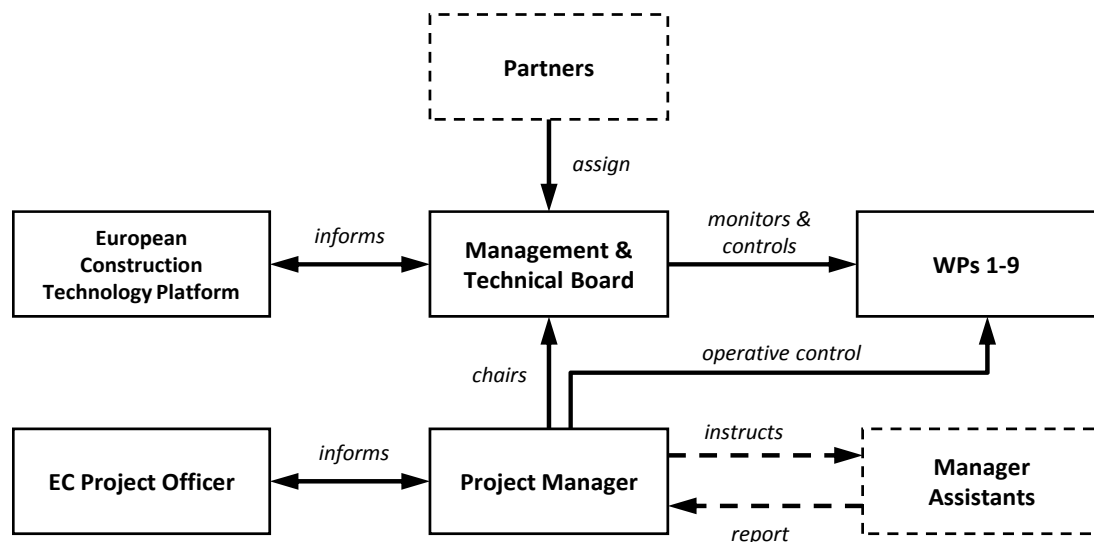The overall management structure is presented on the figure below.

Figure 1: Schematic presentation of the overall management structure

European Construction Technology Platform (ECTP)

Leading European experts from the ECTP will be invited to give advice with regard to working culture and their knowledge and views. In this way, the ECTP will contribute to more general and internationally valid results. The participating members will take care that objectives of the different European regions are properly considered and adapted in the targeted processes and use cases. In exchange, they will have privileged access to restricted project deliverables, and will benefit from early awareness and better insight into the project results.

Management & Technical Board (MTB)

The MTB is the top decision-making body of the project, comprised of one representative of each partner. Its role includes:

- Proper management of resources in order to meet the project's objectives
- Ensuring the quality management of the project and the separate WPs
- Monitoring and controlling the progress of the RTD work
- Tracking of costs related to the budget
- Tracking of risks
- Tracking of the exploitation plan and IPR issues
- Ensuring compliance with legal obligations
- Resolution of conflicts.

The MTB shall meet quarterly, typically at the project's General Assembly Meetings, and if necessary, at extraordinary, special or critical, situations. The operative management between the meetings of the MTB shall be performed by the Project Manager, his assistants and the WP Leaders, as described in the following section.

2.2   Operative Project Management

The operative management of the project between the meetings of the MTB will be performed by the Project Manager (PM) assisted by a Scientific-Technical Deputy Manager (STM), a Dissemination, Exploitation and IPR Manager (DEIM), and all WP Leaders.

The **Project Manager** is head of the MTB and chairs the MTB meetings. His operative management functions involve the steering of the project, both technically, financially and administratively, according to the contract documents, consortium agreement, project manual and the decisions made by the MTB. This includes the management of dependencies between various tasks and work packages, co-ordination of technical progress, final approval of technical reports and deliverables and resolution of problems of technical and administrative nature. He is responsible for implementing the decisions of the MTB and tracking the progress of the project. He supervises the project administration, is responding to important changes during the project life and coordinating necessary adaptation to meet conditions of the external environment. He is in charge of dealing with the contract, work plan, reporting and billing of efforts, budget and review organisation, and assumes the responsibility of representing the project in front of the EC. The Project Manager is also the primary interface of the Consortium to the European Commission. To ensure coherent management of all critical project aspects, his tasks encompass:

- **Financial management**, including budget supervision, preparing the final consolidated cost statements sent to the EC, obtaining audit certificates and bank guarantees as and when required;

- **Scientific management**, including a scientific community watch, evaluating RTD work related to the scientific progress, matching it with the scientific watch and the exploitation strategy and proposing adjustments or updates to the project objectives whenever operatively necessary;

- **Risk management**, including analysis of internal and external projects risks, selection of risk mitigation measures and development of contingency plans, and presentation of a synopsis at each MTB meeting.

The table below provides an overview of the persons engaged in the operative management of the ISES project.

Management role	Person	Organisation
Project Manager (PM)	Prof. Dr. Raimar J. Scherer	TUD-CIB
Scientific-Technical Deputy of the PM	Dr. Peter Katranuschkov	TUD-CIB
Dissemination, Exploitation & IPR Manager	Dr. Byron Protopsaltis	SOF
Leader WP1	Mr. Sven Zschippang	LAP
Leader WP2	Dr. Peter Katranuschkov	TUD-CIB
Leader WP3	Prof. Dr. Ziga Turk	UL
Leader WP4	Mr. Gudni Gudnasson	NMI
Leader WP5	Prof. Dr. Raimar J. Scherer	TUD-CIB
Leader WP6	Mr. Tuomas Laine	OG
Leader WP7	Dr. Matevz Dolenc	UL
Leader WP8	Dr. Byron Protopsaltis	SOF
Leader WP9	Mr. Miha Kavcic	TRI
Leader WP10	Dr. Peter Katranuschkov	TUD-CIB

2.3   Contact with the European Commission (EC Project Officer)

The European Commission (EC) is represented via the Project Officer (PO). He is executing the project reviews and supervises the overall project progress. Communication with the PO should be handled solely by the ISES Project Manager or his deputy. Other partners should contact the PO only in very urgent or very personal matters.

The contact data of the PO is as follows:

Mr. Rogelio SEGOVIA
DG Information Society
H4 ICT for Sustainable Growth
BU 31 07/017
1049 Brussels, BELGIUM
+32-2-295.51.34 (phone) / +32-2-298.02.04 (fax)
Email: rogelio.segovia@ec.europa.eu

2.4   Partner Personnel

The partners' personnel has to be published on the ISES SharePoint platform (see Chapter 4). Only the persons listed therein and forwarded to the PO can work on the project and claim labour costs. Changes of personnel are possible at any time but must be duly recorded in the financial and work statements of the partners. All such changes must be reported via the PM to the PO *before* any actual person-hours are put in account and no later than the submission of the next due periodic progress report. The PM shall report the changes to the EC no later than 20 working days after the announcement of the change by the respective partner(s). The data regarding new persons entering the project must include at least name, surname, telephone and email address.

2.5   Work Program

The description of the individual WPs is provided in the ISES description of work (DOW). The project work plan is broken down into **8 RTD work packages** (WP 1-8), **1 demonstration work package** (WP 9) and **1 management work package** (WP 10).

Overall, a waterfall approach, including necessary and logical parallel developments is taken. RTD work starts in WP1 with analyses of the requirements to the ISES platform from end-user and information availability perspective and definition of relevant use cases and scenarios. This shall be followed (with partial overlap) by development of the overall stochastic approach and the design of the software architecture of the platform in WP2. In parallel, with an offset of two months, detailed work shall start on the functionality of the kernel data layer (model ontology, system ontology, ontology-based BIM and related services) – WP3, and the services for intelligent access to the required information resources (climate data bases, stored user profiles, energy material data, product catalogues) – WP4. At the same time, early specification of the pilot demonstrators and the related requirements shall be done to enable a focused development approach. WP7, following directly the completion of WP2 and using the developed software design therein, will set up as early as possible a cloud test-bed for all other software developments and provide the technical service APIs for the cloud to facilitate the domain-specific service/tool developments in WPs 5 and 6. The succeeding work in the RTD WPs 3–7 shall be performed in overlapping waterfall manner to enable efficient mobilisation of the resources. They will be continuously supported and provided with feedback on the one side by WP9, dedicated to the pilot demonstrators, and on the other side by WPs 8 and 10 related to the dissemination and exploitation of the project results and the project management as a whole.

Figure 2 below, taken from the ISES DoW, provides an overview of the work package timing, including the specified milestones and tasks.
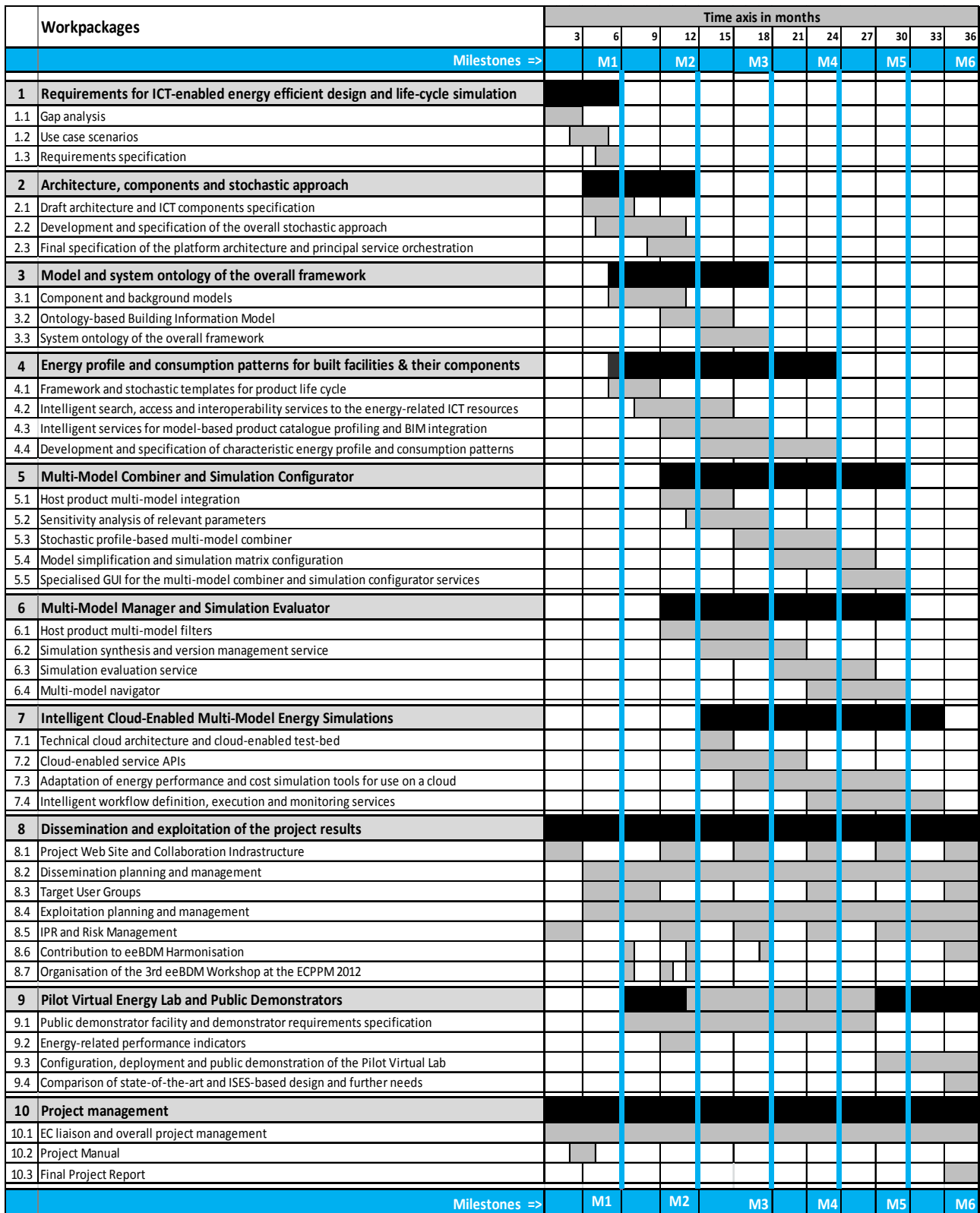
	Workpackages	Time axis in months											
		3	6	9	12	15	18	21	24	27	30	33	36
	Milestones =>		M1		M2		M3		M4		M5		M6
1	**Requirements for ICT-enabled energy efficient design and life-cycle simulation**												
1.1	Gap analysis												
1.2	Use case scenarios												
1.3	Requirements specification												
2	**Architecture, components and stochastic approach**												
2.1	Draft architecture and ICT components specification												
2.2	Development and specification of the overall stochastic approach												
2.3	Final specification of the platform architecture and principal service orchestration												
3	**Model and system ontology of the overall framework**												
3.1	Component and background models												
3.2	Ontology-based Building Information Model												
3.3	System ontology of the overall framework												
4	**Energy profile and consumption patterns for built facilities & their components**												
4.1	Framework and stochastic templates for product life cycle												
4.2	Intelligent search, access and interoperability services to the energy-related ICT resources												
4.3	Intelligent services for model-based product catalogue profiling and BIM integration												
4.4	Development and specification of characteristic energy profile and consumption patterns												
5	**Multi-Model Combiner and Simulation Configurator**												
5.1	Host product multi-model integration												
5.2	Sensitivity analysis of relevant parameters												
5.3	Stochastic profile-based multi-model combiner												
5.4	Model simplification and simulation matrix configuration												
5.5	Specialised GUI for the multi-model combiner and simulation configurator services												
6	**Multi-Model Manager and Simulation Evaluator**												
6.1	Host product multi-model filters												
6.2	Simulation synthesis and version management service												
6.3	Simulation evaluation service												
6.4	Multi-model navigator												
7	**Intelligent Cloud-Enabled Multi-Model Energy Simulations**												
7.1	Technical cloud architecture and cloud-enabled test-bed												
7.2	Cloud-enabled service APIs												
7.3	Adaptation of energy performance and cost simulation tools for use on a cloud												
7.4	Intelligent workflow definition, execution and monitoring services												
8	**Dissemination and exploitation of the project results**												
8.1	Project Web Site and Collaboration Indrastructure												
8.2	Dissemination planning and management												
8.3	Target User Groups												
8.4	Exploitation planning and management												
8.5	IPR and Risk Management												
8.6	Contribution to eeBDM Harmonisation												
8.7	Organisation of the 3rd eeBDM Workshop at the ECPPM 2012												
9	**Pilot Virtual Energy Lab and Public Demonstrators**												
9.1	Public demonstrator facility and demonstrator requirements specification												
9.2	Energy-related performance indicators												
9.3	Configuration, deployment and public demonstration of the Pilot Virtual Lab												
9.4	Comparison of state-of-the-art and ISES-based design and further needs												
10	**Project management**												
10.1	EC liaison and overall project management												
10.2	Project Manual												
10.3	Final Project Report												
	Milestones =>		M1		M2		M3		M4		M5		M6

Figure 2: Project Bar Chart

The principal logical inter-dependencies of the major components of the RTD work resulting from the set up overall strategy described above are presented on the following Figure 3.
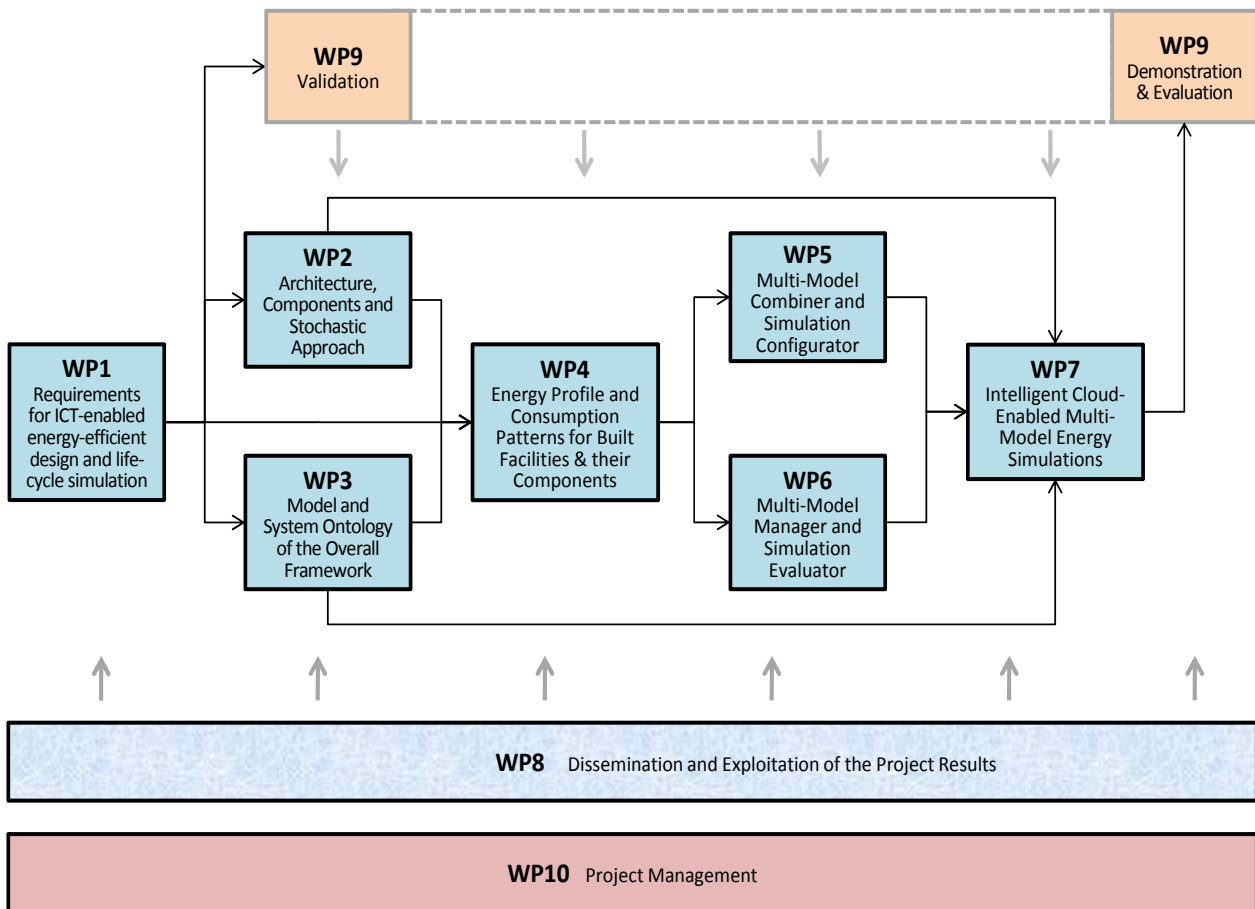

Figure 3: Major Work Package Interdependencies

2.6   Allocation of Resources

The allocation of resources in terms of person months per work package and task, leading to the respective budget breakdown, is shown on Figure 4 below. The resources of TUD are thereby presented in three columns - two separate columns for the two participating institutes and one summary column for TUD as a whole, corresponding to the numbers from the DoW. The work package leaders are highlighted in blue colour and the task leaders within each work package are highlighted in light blue. In all cases where TUD is leading a task, the institute with the greater number of person months is the task leader. The last two columns show

- the total number of person months for each task, work package and the whole project,
- the type of the work package (RTD, demonstration or management).

The latter is important for the justification of the actually used resources (person months, travel costs etc.), which has to be done individually for each type of work. This means, eligible costs for the WP 9 (Demonstration) and for WP 10 (Management) *must* be recorded and justified separately.

#	Workpackages	TUD Total	CIB	IBK	OG	UL	SOF	NMI	NOA	LAP	TRI	Sum PM	WP Type
1	**Requirements for ICT-enabled energy efficient design and life-cycle simulation**	**3**	**2**	**1**	**3**	**3**	**3**	**3**	**5**	**6**	**6**	**32**	RTD
1.1	Gap analysis	1	0,5	0,5	1	1	1	1	2	2	3	12	
1.2	Use case scenarios	1	0,5	0,5	1	1	1	1	1	2	2	10	
1.3	Requirements specification	1	1		1	1	1	1	2	2	1	10	
2	**Architecture, components and stochastic approach**	**12**	**9**	**3**	**8**	**6**	**8**					**34**	RTD
2.1	Draft architecture and ICT components specification	3	2,5	0,5	3	3	3					12	
2.2	Development and specification of the overall stochastic approach	6	3,5	2,5	2		2					10	
2.3	Final specification of the platform architecture and principal service orchestration	3	3		3	3	3					12	
3	**Model and system ontology of the overall framework**	**8**	**7**	**1**	**10**	**16**		**6**				**40**	RTD
3.1	Component and background models	2	1,5	0,5	4	4		3				13	
3.2	Ontology-based Building Information Model	2	2		6	4		3				15	
3.3	System ontology of the overall framework	4	3,5	0,5		8						12	
4	**Energy profile and consumption patterns for built facilities & their components**						**9**	**18**	**15**	**6**	**12**	**60**	RTD
4.1	Framework and stochastic templates for product life cycle							4	4	2	4	14	
4.2	Intelligent search, access and interoperability services to the energy-related ICT resources						3	6	5			14	
4.3	Intelligent services for model-based product catalogue profiling and BIM integration						6	2		2	2	12	
4.4	Development and specification of characteristic energy profile and consumption patterns							6	6	2	6	20	
5	**Multi-Model Combiner and Simulation Configurator**	**24**	**15**	**9**			**14**	**6**	**10**	**6**		**60**	RTD
5.1	Host product multi-model integration	6	6				4	1		1		12	
5.2	Sensitivity analysis of relevant parameters	6	2	4				2	6			14	
5.3	Stochastic profile-based multi-model combiner	4	2	2			6		2	2		14	
5.4	Model simplification and simulation matrix configuration	6	3	3				2	2	2		12	
5.5	Specialised GUI for the multi-model combiner and simulation configurator services	2	2				4	1		1		8	
6	**Multi-Model Manager and Simulation Evaluator**	**20**	**18**	**2**	**24**					**6**	**6**	**56**	RTD
6.1	Host product multi-model filters	6	6		6					2	2	16	
6.2	Simulation synthesis and version management service	6	5	1	6						2	14	
6.3	Simulation evaluation service	4	3	1	6					1	1	12	
6.4	Multi-model navigator	4	4		6					3	1	14	
7	**Intelligent Cloud-Enabled Multi-Model Energy Simulations**	**8**	**6**	**2**	**12**	**24**	**12**					**56**	RTD
7.1	Technical cloud architecture and cloud-enabled test-bed					3						3	
7.2	Cloud-enabled service APIs	4	2	2	6	6	4					20	
7.3	Adaptation of energy performance and cost simulation tools for use on a cloud				6	3	8					17	
7.4	Intelligent workflow definition, execution and monitoring services	4	4			12						16	
8	**Dissemination and exploitation of the project results**	**5**	**4**	**1**	**3**	**4**	**13**	**3**	**3**	**2**	**3**	**36**	RTD
8.1	Project Web Site and Collaboration Indrastructure	2	2			2,5	2		1,5			8	
8.2	Dissemination planning and management	1	0,5	0,5	1	1	2,5	1	1	0,5	1	9	
8.3	Target User Groups				0,5		1,5	0,5		0,5	1	4	
8.4	Exploitation planning and management	0,5	0,25	0,25	1	0,5	3	0,5	0,5	1	1	8	
8.5	IPR and Risk Management	0,5	0,5				3,5					4	
8.6	Contribution to eeBDM Harmonisation	0,5	0,25	0,25	0,5		0,5	0,5				2	
8.7	Organisation of the 3rd eeBDM Workshop at the ECPPM 2012	0,5	0,5				0,5					1	
9	**Pilot Virtual Energy Lab and Public Demonstrators**	**4**	**2**	**2**	**6**	**3**	**6**	**4**	**8**	**8**	**14**	**53**	DEM
9.1	Public demonstrator facility and demonstrator requirements specification	2	1	1	2	1	2	1	1	1	3	13	
9.2	Energy-related performance indicators							1	3	2	3	9	
9.3	Configuration, deployment and public demonstration of the Pilot Virtual Lab	2	1	1	3	2	3	1	1	3	5	20	
9.4	Comparison of state-of-the-art and ISES-based design and further needs				1		1	1	3	2	3	11	
10	**Project management**	**11**	**11**		**1**	**1**	**1**	**1**	**1**	**1**	**1**	**18**	MGT
10.1	EC liaison and overall project management	7	7		1	1	1	1	1	1	1	14	
10.2	Project Manual	1	1									1	
10.3	Final Project Report	3	3									3	
	TOTAL	**95**	**74**	**21**	**67**	**57**	**66**	**41**	**42**	**35**	**42**	**445**	

Figure 4: Scheduling of resources per work packages and tasks

3. Reporting

3.1 Milestones

Milestone number	Milestone name	WP numbers	Lead partner	Delivery date[1]	Synopsis
MS 0	Kick-Off	WP10	TUD-CIB	1	Decisions of the project kick-off
MS 1	Requirements	WP1, WP10	LAP	6	Requirements and user scenarios are defined and ICT resources for life-cycle energy performance are surveyed
MS 2	Architecture	WP2, WP3, WP9, WP10	TUD-CIB	12	Defined architecture of the Virtual Energy Lab Platform with all model and service components
MS 3	Basic concepts, methods and services	WP3, WP4, WP5, WP6, WP10	TUD-CIB	18	Developed model and system ontologies, concepts for all services, the basic support modules and the services of WP4
MS 4	Service prototypes	WP4, WP5, WP6, WP7, WP10	SOF	24	Developed service prototypes from WPs 4 and 5 with all features and performed first public workshop
MS 5	Full prototype of the Virtual Lab (beta)	WP5, WP6, WP7, WP10	OG	30	Implemented full integrated prototype of the Virtual Energy Lab on the cloud, pilots prepared for full demo runs
MS 6	Final system prototype of the Virtual Lab, public demonstrator & final report	WP8, WP9, WP10	TUD-CIB	36	Performed public demonstrators and evaluation of the results, issued final project reports

3.2 Deliverables

The following table shows all deliverables that have to be created in ISES arranged in the **order of work packages and deliverable numbers**. There are several types of such deliverables in the project: (1) The official Periodic Project Reports (PPR) and the Final Report, which have fixed form and format predefined by the EC, (2) Deliverable reports from the RTD work packages, which are officially marked as "Other" in the DoW, (3) Prototype services and tools, for which short reports must also be prepared along with the presentation of the running software, (4) Demonstrators (also requiring short reports on the results), and (5) Others, such as Newsletters, Web Site etc. In the table, these types are specifically indicated, which is different from the respective table provided in the DoW.

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[1] Month in which the milestone will be achieved. Month 1 marking the start date of the project, and all delivery dates being relative to this start date.

ISES – Intelligent Services for Energy-Efficient Life Cycle Simulation

Delive-rable Number	Deliverable Title	WP number	Lead partner	Nature[1]	Dissemi-nation level[2]	Delivery date[3]
D1.1	Gap analysis	1	TRI	DR	PU	6
D1.2	Use case scenarios and requirements specification	1	LAP	DR	RE	6
D2.1	Overall stochastic approach for the Virtual Energy Lab Platform	2	TUD-CIB	DR	PU	12
D2.2	Architecture and components of the Virtual Lab Platform	2	TUD-CIB	DR	CO	12
D3.1	Ontology Specification	3	UL	DR	PU	15
D3.2	Ontology prototype	3	UL	P	PU	18
D4.1	Technical specification of the overall framework and the principal energy profile and consumption patterns	4	NMI	DR	PU	12
D4.2	Prototype of the intelligent search, access and interoperability services to the energy-related ICT platform	4	NMI	P	PU	15
D4.3	Prototype of the intelligent services for BIM-based product catalogue profiling and BIM integration	4	SOF	P	PU	18
D4.4	Characteristic energy profile and con-sumption patterns for the ISES Virtual Energy Lab	4	NMI	DR	PU	24
D5.1	Prototype of the multi-model integra-tion services	5	TUD-CIB	P	PU	15
D5.2	Prototype of the multi-model combiner	5	SOF	P	PU	24
D5.3	Prototype of the simulation configurator	5	TUD-IBK	P	PU	30
D6.1	Prototype of the host product multi-model filters	6	TUD-CIB	P	PU	18
D6.2	Prototype of the simulation synthesis and the version management service	6	OG	P	RE	21
D6.3	Prototype of the simulation evaluation service and the multi-model navigator	6	OG	P	PU	30
D7.1	Cloud-enabled test-bed	7	UL	O + DR	CO	15
D7.2	Cloud-enabled software integration	7	UL	O + DR	PU	30
D7.3	Prototype of the developed intelligent workflow definition, execution and moni-toring services	7	UL	P	PU	33

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[1] **R** = Report, **P** = Prototype (including a summary report), **DEM** = Demonstrator (including a summary report), **DR** = Deliverable Report, **O** = Other   (Note: These types differ from the ones shown in the respective table in the DoW).

[2] **PU** = Public, **PP** = Restricted to other programme participants (including the Commission Services), **RE** = Restricted to a group specified by the consortium (including the EC Services), **CO** = Confidential, only for members of the consortium (including the EC Services).

[3] Month in which the deliverables will be available. Month 1 marking the start date of the project, and all delivery dates being relative to this start date.

Delive-rable Number	Deliverable Title	WP number	Lead partner	Nature[1]	Dissemi-nation level[2]	Delivery date[3]
D7.4	Use of the Prototyped Virtual Energy Lab on a Cloud Environment	7	UL	DR	PU	33
D8.1	Project Web Site and Collaboration Infrastructure	8	UL	O + DR	PU	3
D8.2.1	Project Newsletter #1	8	TUD-CIB	O	PU	6
D8.2.2	Project Newsletter #2	8	SOF	O	PU	12
D8.2.3	Project Newsletter #3	8	OG	O	PU	18
D8.2.4	Project Newsletter #4	8	NMI	O	PU	24
D8.2.5	Project Newsletter #5	8	SOF	O	PU	30
D8.3.1	Intermediate Public Workshop	8	SOF	O + DR	PU	24
D8.3.2	Final Public Workshop	8	TRI	O + DR	PU	36
D8.4.1	Initial Exploitation Plan	8	SOF	DR	CO	12
D8.4.2	Intermediate Exploitation Plan	8	SOF	DR	CO	18
D8.4.3	Final Exploitation Plan & Report	8	SOF	DR	CO	30
D8.5	Internal Risk Management Database and IPR-related Monitoring	8	SOF	O + DR	CO	12
D8.6.1	Contributions to eeBDM Harmonisation (initial report)	8	TUD-CIB	DR	PU	12
D8.6.2	Contributions to eeBDM Harmonisation (intermediate report)	8	TUD-CIB	DR	PU	18
D8.6.3	Contributions to eeBDM Harmonisation (final report)	8	TUD-CIB	DR	PU	36
D8.7	Third eeBDM Workshop – Summary and Proceedings	8	TUD-CIB	O	PU	12
D9.1.1	First public demonstrator of the Virtual Energy Lab and developed ee-performance indicators	9	SOF	DEM	PU	24
D9.1.2	Final public demonstrator of the Virtual Energy Lab	9	TRI	DEM	PU	36
D9.2	End user report on the Virtual Energy Lab pilot	9	NOA	DR	PU	36
D10.1.1	Periodic Progress Report #1	10	TUD-CIB	R	PU/CO	12[1]
D10.1.2	Periodic Progress Report #2	10	TUD-CIB	R	PU/CO	24
D10.1.3	Periodic Progress Report #3	10	TUD-CIB	R	PU/CO	36
D10.3	Project Manual	10	TUD-CIB	DR	CO	4
D10.4	Final Project Report (includes D10.1.3)	10	TUD-CIB	R	PU	36

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[1] Unlike all other deliverables, Periodic Progress Reports (PPR) have to be submitted to the EC 60 calendar days after the official deadline, including the consolidated cost statements of all partners (Form C).

The following table shows the ISES deliverables in their **chronological order**, i.e. ordered by project months. Milestone boundaries are indicated explicitly to enable clear planning. However, milestones only indicate when deliverables are going to be reviewed, internally and/or externally. This has no influence on the delivery dates indicated in the table.

Delive-rable Number	Deliverable Title	WP number	Lead partner	Nature	Dissemi-nation level	Delivery date
Milestone MS1 (project month 6): Requirements						
D8.1	Project Web Site and IT Collaboration Infrastructure	8	UL	O + DR	PU	**3**
D10.3	Project Manual	10	TUD-CIB	DR	CO	**4**
D1.1	Gap analysis	1	TRI	DR	PU	**6**
D1.2	Use case scenarios and requirements specification	1	LAP	DR	RE	**6**
D8.2.1	Project Newsletter #1	8	TUD-CIB	O	PU	**6**
Milestone MS2 (project month 12): Architecture						
D2.1	Overall stochastic approach for the Virtual Energy Lab Platform	2	TUD-CIB	DR	PU	**12**
D2.2	Architecture and components of the Virtual Lab Platform	2	TUD-CIB	DR	CO	**12**
D4.1	Technical specification of the overall framework and the principal energy profile and consumption patterns	4	NMI	DR	PU	**12**
D8.2.2	Project Newsletter #2	8	SOF	O	PU	**12**
D8.4.1	Initial Exploitation Plan	8	SOF	DR	CO	**12**
D8.5	Internal Risk Management Database and IPR-related Monitoring	8	SOF	O + DR	CO	**12**
D8.6.1	Contributions to eeBDM Harmonisation (initial report)	8	TUD-CIB	DR	PU	**12**
D8.7	Third eeBDM Workshop – Summary and Proceedings	8	TUD-CIB	O	PU	**12**
D10.1.1	**Periodic Progress Report #1**	10	TUD-CIB	R	PU/CO	**12**
Milestone MS3 (project month 18): Basic concepts, methods and services						
D3.1	Ontology Specification	3	UL	DR	PU	**15**
D4.2	Prototype of the intelligent search, access and interoperability services to the energy-related ICT platform	4	NMI	P	PU	**15**
D5.1	Prototype of the multi-model integration services	5	TUD-CIB	P	PU	**15**
D7.1	Cloud-enabled test-bed	7	UL	O + DR	CO	**15**
D3.2	Ontology prototype	3	UL	P	PU	**18**
D4.3	Prototype of the intelligent services for BIM-based product catalogue profiling and BIM integration	4	SOF	P	PU	**18**

Deliverable Number	Deliverable Title	WP number	Lead partner	Nature	Dissemination level	Delivery date
D6.1	Prototype of the host product multi-model filters	6	TUD-CIB	P	PU	**18**
D8.2.3	Project Newsletter #3	8	OG	O	PU	**18**
D8.4.2	Intermediate Exploitation Plan	8	SOF	DR	CO	**18**
D8.6.2	Contributions to eeBDM Harmonisation (intermediate report)	8	TUD-CIB	DR	PU	**18**
Milestone MS4 (project month 24): Service prototypes						
D6.2	Prototype of the simulation synthesis and the version management service	6	OG	P	RE	**21**
D4.4	Characteristic energy profile and consumption patterns for the ISES Virtual Energy Lab	4	NMI	DR	PU	**24**
D5.2	Prototype of the multi-model combiner	5	SOF	P	PU	**24**
D8.2.4	Project Newsletter #4	8	NMI	O	PU	**24**
D8.3.1	Intermediate Public Workshop	8	SOF	O + DR	PU	**24**
D9.1.1	First public demonstrator of the Virtual Energy Lab and developed ee-performance indicators	9	SOF	DEM	PU	**24**
D10.1.2	**Periodic Progress Report #2**	10	TUD-CIB	R	PU/CO	**24**
Milestone MS5 (project month 30): Full prototype of the Virtual Energy Lab (beta)						
D5.3	Prototype of the simulation configurator	5	TUD-IBK	P	PU	**30**
D6.3	Prototype of the simulation evaluation service and the multi-model navigator	6	OG	P	PU	**30**
D7.2	Cloud-enabled software integration	7	UL	O + DR	PU	**30**
D8.2.5	Project Newsletter #5	8	SOF	O	PU	**30**
D8.4.3	Final Exploitation Plan & Report	8	SOF	DR	CO	**30**
D7.3	Prototype of the developed intelligent workflow definition, execution and monitoring services	7	UL	P	PU	**33**
D7.4	Use of the Prototyped Virtual Energy Lab on a Cloud Environment	7	UL	O + DR	PU	**33**
Milestone MS6 (project month 36): Final system prototype, pilot demonstrator and final report						
D8.3.2	Final Public Workshop	8	TRI	O + DR	PU	**36**
D8.6.3	Contributions to eeBDM Harmonisation (final report)	8	TUD-CIB	DR	PU	**36**
D9.1.2	Final public demonstrator of the Virtual Energy Lab	9	TRI	DEM	PU	**36**
D9.2	End user report on the Virtual Energy Lab pilot	9	NOA	DR	PU	**36**
D10.1.3	Periodic Progress Report #3	10	TUD-CIB	R	PU/CO	**36**
D10.4	**Final Project Report (includes D10.1.3)**	10	TUD-CIB	R	PU	**36**

3.3   Tentative Schedule of Project Reviews

Review number	Tentative timing	Planned venue of review	Comments
1	after m12	Brussels	Review after MS2, mainly focused on requirements, use cases and the overall architecture of the suggested platform.
2	after m24	Dresden	Review after MS4, focused on major conceptual issues and the developed up and running services and tools from WPs 3 to 7.
3	after m36	Ljubljana or Brussels	Final project review and public workshop, preferably at the venue of the main end-user or at the EC.

The exact timing of project reviews is determined by the PO in coordination with the PM. Typically, a review will be scheduled 75-90 calendar days after completion of the respective project period due to the 60 days given for the preparation of the PPR and at least 15 days for reviewing. However, all documents and other results should be available at the respective milestone deadlines. The required periodic progress reports (PPR) are the central documents that will be reviewed by the EC. They will be based on technical reports of the involved work packages, written by the WP Leaders in a form proposed by the coordinator and typically not exceeding 3 pages per work package. Additionally, each partner will have to provide input to the PPR including:

- report on the work done and the resources used (personnel, travel, consumables)
- financial statement (Form C, see EC Financial Guide on the ISES SharePoint)

Submission of contributions for the PPR to the Coordinator shall be done no later than 30 calendar days before the PPR deadline. Submission of the financial statements to the Coordinator shall be done no later than 15 days before the PPR deadline. Submission of contributions earlier than the indicated dates is strongly encouraged to allow for more time for feedback and corrections.

3.4   Template for Reports

The template for all deliverable reports as well as internal reports, as far as a need for the latter arises, is available at the **ISES SharePoint** (see Chapter 4). The use of this template is **mandatory**.

All technical reports from the RTD work packages (denoted by 'DR' in the tables listed in sect. 3.2) *must* include a **'Conclusions'** chapter - discussing the achieved results, innovations with regard to the state-of-the-art and the impact of the results on research and practice -, as well as the unnumbered chapters **'References'** and **'Acronyms'**.

Note that this deliverable report is itself usable as a template for WP reports. The first four pages can be used as text templates as well, with only minimal changes as appropriate. The rest depends on the actual context.

4.   Communications Infrastructure and Project Portal

4.1   Key principles

In ISES, typical team communication techniques shall be used, as follows:

- E-Mail
- Telephone
- Fax
- Video conferencing
- Skype.

The postal address of each partner shall be used primarily for legal / official documents. The core of the collaboration infrastructure is provided by the **ISES SharePoint Platform** which shall be used for sharing and discussing documents and various other data relevant to the project. For discussion of short-dated issues, email, telephone or Skype can be used in addition.

4.2   The ISES SharePoint Platform

The set up ISES SharePoint Server at TUD-CIB is meant as platform for the exchange and sharing of documents. Every participant is registered with a personal login. The URL to reach the platform is:

> **https://ises.cib.bau.tu-dresden.de**

It is recommended to use Internet Explorer (at least version 7) to have full functionality.

Figure 5 below shows a general overview of the SharePoint portal and its overall structuring.
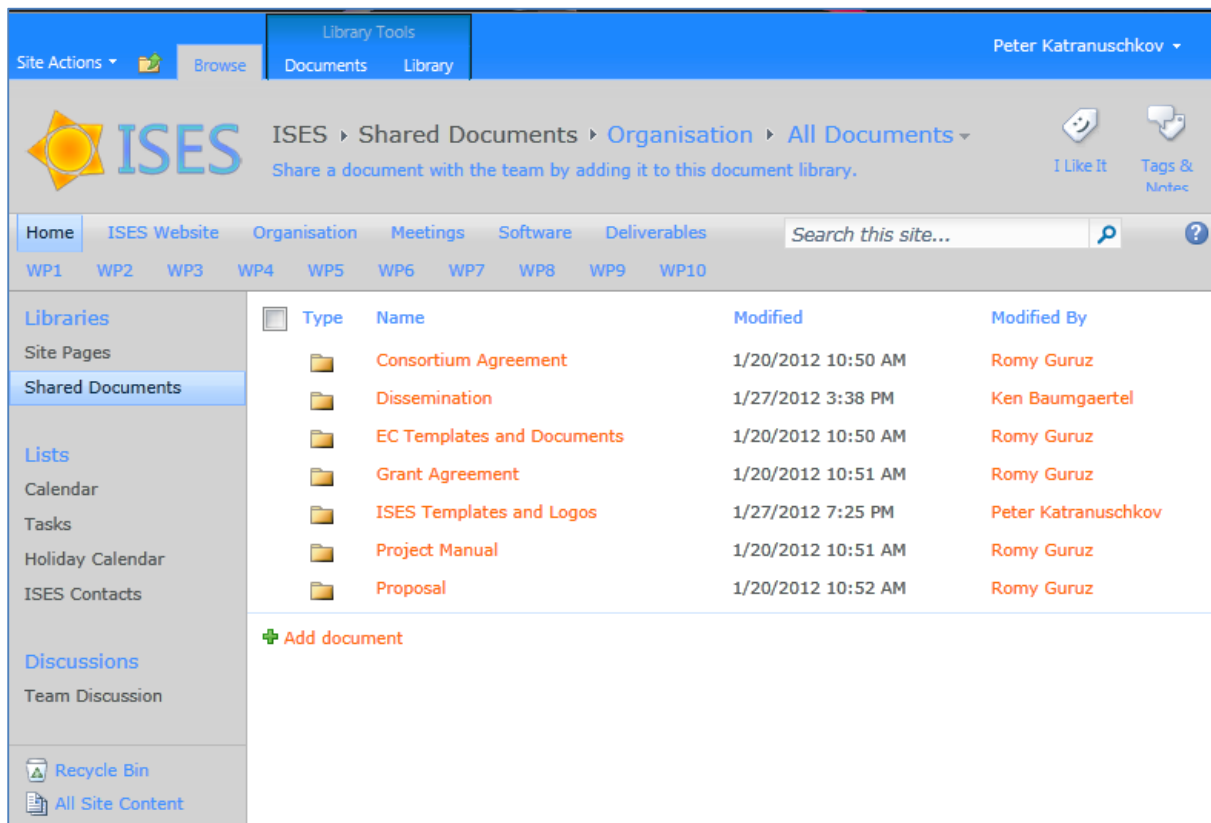
Figure 5: Screenshot of the main page of the ISES SharePoint platform

Basically, **information sharing** is organised via the Shared Documents menu (left), which is additionally subdivided in the following top menu items:

- *ISES Website* – linking the SharePoint platform to the project web site,

- *Organisation* – providing a substructure for basic management, administrative and organisational information,

- *Meetings* – storing for each project meeting the agreed meeting agenda, the meeting minutes (including the decisions taken and the TODO list for the next relevant period), and the presentations for and at the meeting

- *Software* – providing a place for developed project prototypes, open source and freeware software distributions

- *Deliverables* – storing the final versions of deliverable reports

- *WPs 1-10* – providing a place for sharing developer data and documents within each project work package.

In addition, several useful **lists** are provided:

- *Calendar* – featuring a chronological display of project events

- *Holiday calendar* – including public holidays and vacations of the partners (to provide better transparency with regard to communication / availability)

- *Tasks* – providing a list of the important tasks and their planned / actual status and deadlines

- *ISES Contacts* – providing a contact list of all project participants.

A further option on the SharePoint platform is the **Discussions** section, which provides a forum for free-form multi-person discussions on overarching, cross work package subjects.

Access to the platform is provided to **three groups of users**:

- *the project participants* (with almost unrestricted upload/download/editing access rights but limited rights to change or edit the platform structure)

- *invited guests* (with read only access to some of the platform sections)

- *the platform managers* (with full access to all platform sections and features)
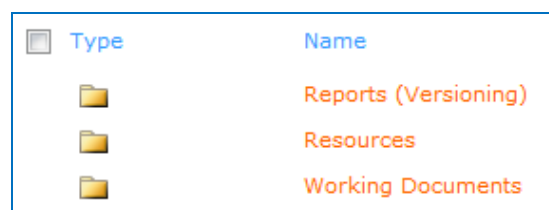
The overall infrastructure is maintained and managed at TUD-CIB by:

Mr. Ken Baumgärtel (chief administrator)   EMail: ken.baumgaertel@tu-dresden.de

Ms. Romy Guruz (design & content issues)   EMail: romy.guruz@tu-dresden.de

Dr. Peter Katranuschkov (content issues)   EMail: peter.katranuschkov@tu-dresden.de

All folders are linked on the **top menu bar** of the portal. This allows fast navigation to the provided content. The structure in each folder is not defined strictly, but for the **work packages** it is recommended to upload reports, working documents and resources which are not yet final and are mostly interesting for the work within the work package itself.

Figure 6: Preset subfolders for each WP

There are several subfolders reachable via the top menu item **'Organisation'**. Most of them are self-explanatory (see Figure 7).

Figure 7: Preset subfolders of top menu item 'Organisation'

'Dissemination' is further subdivided into *Newsletters* (which are project deliverables), *Papers* (published at conferences and journals, with additional hint regarding copyright and confidentiality) and *Presentations*.

'*EC Templates and Documents*' includes various EC guidelines, as well as officially accepted by the EC timesheets for the work of each partner's personnel on the project. Five timesheets have been prepared, one for each country represented in the project, in order to reflect national holidays in addition to working days and weekends. They are denoted by the country code used on the Internet at the end of the name, e.g. *ISES_TimeSheet_EU_2012_(gr)* is the timesheet localised specifically for Greece. These timesheets are valid for 2012 and will be automatically updated for each project year. Their use is not mandatory but highly recommended, since they provide a proven and accepted form for recording labour in FP7. From the other included guidelines, most interesting to all partners are the *'Financial Guide'* and the *'Form_C_FP7_Template'* regarding the financial terms and reports in the project.

'ISES Templates and Logos' includes a small and a large version of the project logo as well as templates for project reporting, project presentations and meeting minutes. Intended are also a template for dissemination and internal reporting (person-months, travel and consumables).

The top menu item **'Meetings'** contains three subfolders: (1) *General Assembly Meetings*, (2) *Technical meetings*, and (3) *Reviews*. In each of them, subfolders for the respective meetings shall be created. Each such subfolder shall in turn contain three further subfolders: (1) *Agenda and Meeting Minutes*, and (2) *Presentations*, to capture all important issues presented and discussed along with decisions taken and planned tasks.

*Figure 8: Subfolders of top menu item 'Meetings' (left) and example content
of subfolder '1. General Assembly Meetings' on 2012-02-22 (right)*

Finally, the top menu item **'Deliverables'** is intended to include only Deliverables that are finalised, internally approved and submitted to the EC. These are arranged in accordance with the project structure (see Figure 9 below). The naming convention to be used should be as shown in Figure 9. For each deliverable two files should be uploaded to the SharePoint: (1) an editable MS Word version and (2) the official submitted PDF version. Intermediate versions of the deliverables should not be stored in these folders but in the respective WP folders (WP 1-10). However, if an official update of a deliverable is issued, which is also resubmitted to the EC, it should also be included in 'Deliverables'.
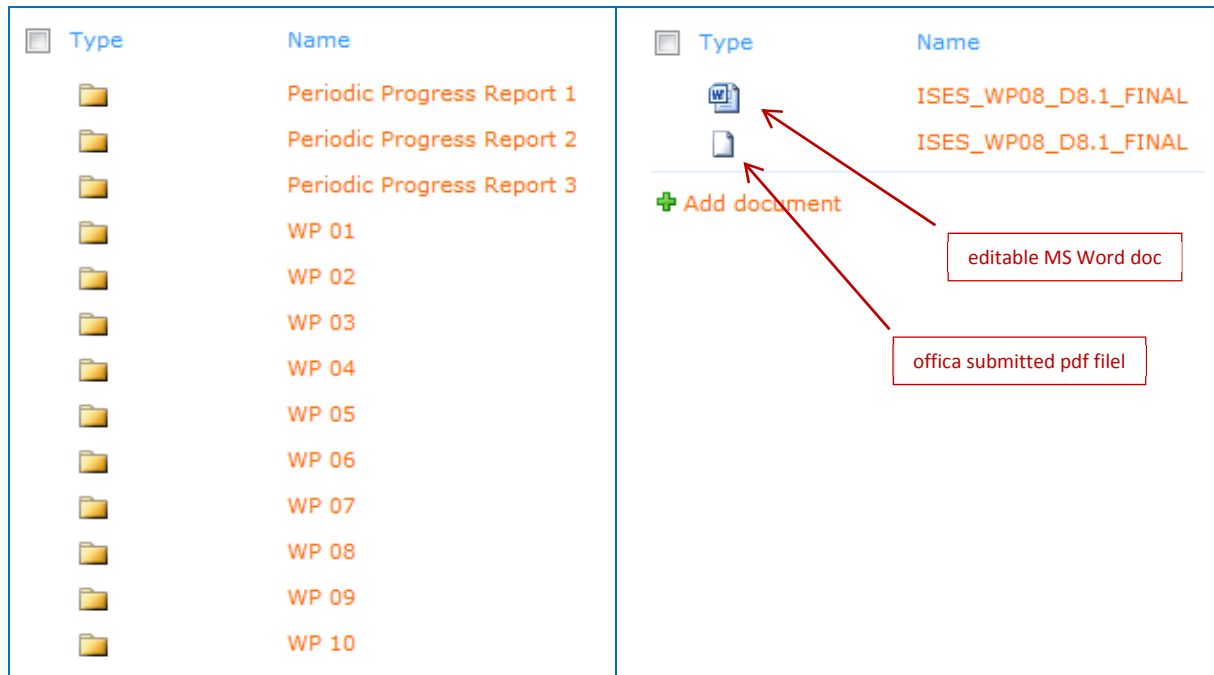
Figure 9: Subfolders of top menu item 'Deliverables' (left) and example for proper deliverable upload and naming in the subfolder WP 08 (right)

All described folders are also reachable via the standard SharePoint menu item **'Shared Documents'** on the left (see Figure 5).

Except for browsing, several **tools for document management** as well as a set of useful **library tools** are provided (Fig.). These are standard SharePoint tools, which are described in the SharePoint documentation (cf. Microsoft SharePoint Server, 2012).
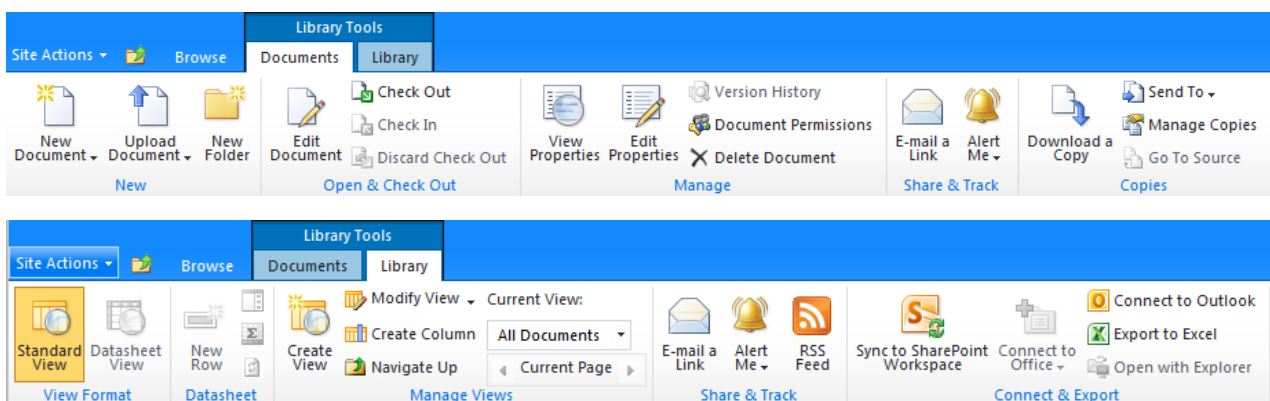

Figure 10: Available Document Management (top) and Library Tools (bottom)

4.3   E-Mail

General information to all project participants should be distributed via **ises@cib.bau.tu-dresden.de**.

Information regarding the coordinator, TUD-CIB, should be sent to **ises-cib@cib.bau.tu-dresden.de**.

For private or work package specific communication, the individual E-Mail addresses of the partners should be used. Confidential E-mail to the coordinator can be sent to:

Raimar.Scherer@tu-dresden.de
(cc: Peter.Katranuschkov@tu-dresden.de).

The contact list of all participants is located on the ISES SharePoint. Consider the following guidelines:

- *Unambiguity*: When sending an E-Mail on the mailing list, the subject of the mail must contain the word 'ISES' and a short concrete subject synthesizing the contained information. By sending E-Mails to a subset of the participants, please specify furthermore the corresponding work package(s).
- *Clarity*: Never start a correspondence to a new topic using the old content of previous E-Mails. This would confuse the receivers and disturb orderly storing of the emails.
- *Appropriation*: Write messages to participants who are involved in the concrete topic and not to larger group than necessary.

4.4   File Name Patterns

To structure all documents effectively, please use the following pattern:

<YYYYMMDD>_<content-description>_<partner-acronym>_[<person>]_[<version>].<extension>

The purpose is to find every document related to its creation date quickly. For example: '20100924_Kickoff-Meeting_CIB_PIK.pdf'.

By uploading new files a new version of the document is created. This feature of SharePoint can be used if the uploaded file has the same name like a previous file, because of the underlying version management. For more information, see the SharePoint guide (Microsoft SharePoint Server, 2012).

4.5   File Formats

Microsoft Office applications (in Versions 2007, 2010) like Word, Excel or PowerPoint shall be used to create documents within the project. Hence, it is possible to upload files like *.doc*, *.docx* or *.ppt, .pptx*. The 2010 versions (.docx, .xlsx, .pptx) are preferred. If other applications are used, it is necessary to upload compatible file formats or PDFs. Final documents should be uploaded as PDF and additionally as non-final editable documents (MS Word). Used pictures and graphics in documents must be embed and not linked to external files. Acceptable formats for graphics are JPEG, PNG, GIF and TIFF. If multiple users work on graphic files together Visio or Photoshop files may be shared.

References

Dourish, P. (2003): The Appropriation of Interactive Technologies: Some Lessons from Placeless Documents, *Computer Supported Cooperative Work* (Kluwer Academic Publishers) 12 (4): 465–490.

ISES DoW (2011): *Grant Agreement for Collaborative Project No. 288819 ISES – Annex I "Description of Work"*, Version date 2011-07-13, European Commission, Brussels.

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Microsoft SharePoint Server (2012): *Microsoft SharePoint Server – User Documentation and Resources*, © Microsoft Corporation, http://office.microsoft.com/en-au/windows-sharepoint-services-help/CH001142452.aspx (last visited 2012-03-22).

Skype Documentation, http://www.skype.com/intl/en/home (last visited 2012-03-12).

Appendix I: Acronyms

CSCW	**C**omputer **S**upported **C**ooperative **W**ork
DoW	**D**escription **o**f **W**ork
EC	**E**uropean **C**ommission
ECTP	**E**uropean **C**onstruction **T**echnology **P**latform
FP7	The Seventh **F**ramework **P**rogramme of the European Commission
GA	**G**rant **A**greement
HTTP	**H**yper**T**ext **T**ransfer **P**rotocol
MTB	**M**anagement and **T**echnical **B**oard
PDF	**P**ortable **D**ocument **F**ormat (cf. http://en.wikipedia.org/wiki/Portable_Document_Format)
PM	**P**roject **M**anager
PO	**P**roject **O**fficer
PPR	**P**eriodic **P**rogress **R**eport
STDM	**S**cientific-**T**echnical **D**eputy **M**anager
WP	**W**ork **P**ackage