



Grant Agreement N° 215483

Title: *Identification of Scientific Subjects and Partners for Mobility*

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Identifier: *CD-IA-2..1.2*

Type: *Deliverable*

Version: *1.1*

Date: *30^h May 2009*

Status: *Final*

Class: *External*

Management Summary

The mobility of researchers within the S-Cube network of excellence is considered a stepping-stone to achieving the sustainable integration of knowledge and to align the research of the different S-Cube network partner institutions. To facilitate this, the S-Cube mobility program encourages researchers to spend time in one of the beneficiary's institutes to exchange research ideas and carry out joint research through the reimbursement of travel and living expenses incurred whilst at the host institution.

This deliverable aims to identify research areas and beneficiaries of the mobility program by analysing overlaps in the competencies of the S-Cube partner institutes and through the pro-active identification of suitable candidates for the mobility program, thereby encouraging researcher mobility between these partners.

Members of the S-Cube consortium:

University of Duisburg-Essen (Coordinator)	Germany
Tilburg University	Netherlands
City University London	U.K.
Consiglio Nazionale delle Ricerche	Italy
Center for Scientific and Technological Research	Italy
The French National Institute for Research in Computer Science and Control	France
Lero - The Irish Software Engineering Research Centre	Ireland
Politecnico di Milano	Italy
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Vision and Objectives of S-Cube

The Software Services and Systems Network (S-Cube) will establish a unified, multidisciplinary, vibrant research community which will enable Europe to lead the software-services revolution, helping shape the software-service based Internet which is the backbone of our future interactive society.

By integrating diverse research communities, S-Cube intends to achieve world-wide scientific excellence in a field that is critical for European competitiveness. S-Cube will accomplish its aims by meeting the following objectives:

- Re-aligning, re-shaping and integrating research agendas of key European players from diverse research areas and by synthesizing and integrating diversified knowledge, thereby establishing a long-lasting foundation for steering research and for achieving innovation at the highest level.
- Inaugurating a Europe-wide common program of education and training for researchers and industry thereby creating a common culture that will have a profound impact on the future of the field.
- Establishing a pro-active mobility plan to enable cross-fertilisation and thereby fostering the integration of research communities and the establishment of a common software services research culture.
- Establishing trust relationships with industry via European Technology Platforms (specifically NESSI) to achieve a catalytic effect in shaping European research, strengthening industrial competitiveness and addressing main societal challenges.
- Defining a broader research vision and perspective that will shape the software-service based Internet of the future and will accelerate economic growth and improve the living conditions of European citizens.

S-Cube will produce an integrated research community of international reputation and acclaim that will help define the future shape of the field of software services which is of critical for European competitiveness. S-Cube will provide service engineering methodologies that facilitate the development, deployment and adjustment of sophisticated hybrid service-based systems that cannot be addressed with today's limited software engineering approaches. S-Cube will further introduce an advanced training program for researchers and practitioners. Finally, S-Cube intends to bring strategic added value to European industry by using industry best-practice models and by implementing research results into pilot business cases and prototype systems.

S-Cube materials are available from URL: <http://www.s-cube-network.eu/>

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Chapter 1

Introduction

The mobility of researchers within the S-Cube network of excellence is considered a stepping stone to achieving the sustainable integration of knowledge and to align the research of the different S-Cube network partner institutions [2]. To facilitate this, the S-Cube mobility program encourages researchers to spend time in one of the beneficiaries institutes to exchange research ideas and carry out joint research through the reimbursement of travel and living expenses incurred whilst at the host institution. This deliverable aims to identify research areas and beneficiaries of the mobility program by analysing overlaps in the competencies of the S-Cube partner institutes and through the pro-active identification of suitable candidates for the mobility program, thereby encouraging researcher mobility between these partners.

1.1 Objectives of this Workpackage

According to the S-Cube description of work [2], the intention of Workpackage WP-IA-2.1 ('Mobility of Researchers') is to:

- Create suitable scientific, administrative, financial, social and practical conditions for scientific stays of researchers, post-doctoral and PhD students
- Identify researcher mobility and re-location opportunities by analysing dependencies, overlaps, and possible synergies among beneficiaries as an outcome of the collaborations within the joint research activities (JRAs)
- Establish a transparent method and criteria for selection for mobility candidates
- Define and enact a suitable mobility plan of researchers, post-doctoral and PhD students within the network
- Establish sustainable agreements between the beneficiaries for recurrent mobility whose duration goes beyond the duration of the network

1.2 Objective & Structure of this Report

The previous deliverable of this Workpackage [1] defined the mobility program policies, procedures and 'administrative and social backbone'. This report has the purpose of identifying scientific subjects for mobility (i.e., defining common research areas) and maps those research areas to S-Cube partners and participants. In carrying out this process this deliverable will pro-actively identify suitable candidates for the mobility program by classifying them with respect to the identified scientific subjects, thereby encouraging researcher exchange visits between these partners.

The structure of this report is as follows: Chapter 2 describes the scientific subjects for mobility and how they were identified; Chapter 3 describes the mapping between the scientific subjects and S-Cube participants; Chapter 4 provides a conclusion to the report.

Chapter 2

Identification of Scientific Subjects for Mobility

This Chapter identifies the scientific subjects, or common research areas, suitable for the mobility program. The challenge in defining these subjects is not only to find common research areas of interest but also to find complementary research topics that will allow researchers from different backgrounds to work together who would not normally do so. In identifying complementary as well as common research areas we hope to increase the possibility for researcher mobility.

The first step to achieving this is to identify the scientific subjects. This report uses the competencies, or skills and abilities, of each S-Cube network participant as defined in the S-Cube Convergence Knowledge Model (KM), an outcome of the IA-1.1 Workpackage, to help define the scientific subjects. The KM captures terminology and also classifies competencies of partners and their research [2]. Thus, by gathering the competencies from the KM we have identified their common themes and grouped them accordingly in the scientific subjects.

2.1 Scientific Subjects for Mobility

As described above, the scientific subjects for mobility are the common research areas suitable for the mobility program. These subjects we describe below were found through mining the competency information that each partner had entered about themselves contained in the S-Cube KM in M12 of the project (see S-Cube deliverable [3]). The full list of competencies grouped by partner institution (the raw data the scientific subjects are derived from) is given in Appendix B of this document (page 12). By using the information entered/given by each partner we hope that the common and complementary research areas identified will be as accurate and current as possible.

The list of the competencies of each S-Cube member participant extracted from the S-Cube KM is shown in Table 4.2. Once we had the information in Table 4.2 we gathered common and complementary competencies declared by each S-Cube participant and these became the scientific subjects for mobility.

As an example of how this process was carried out, consider the competencies of Software Engineering, Software Architecture, Software Quality Assurance, Software Processes and Software Product-Line Engineering & Variability Management. These competencies were gathered together under the common research area of *Software Engineering-Lifecycle* as each of them is common or complementary to that area. Note also how competencies such as Business Protocol Analysis, Monitoring & Auditing and Software Quality Assurance can also fall into two (or more) common research areas; here we have classified Business Protocol Analysis, Monitoring & Auditing as also belonging to the research areas of *Business Processes and Monitoring*, while Software Quality Assurance can also be considered as belonging to the *Quality Assurance* common research area. Note that the names of some common research areas, scientific subjects, competencies and terms have the same name (e.g., Adaptation, Monitoring and Secu-

rity). If the conflict of names proves to be confusing the names of the scientific subjects may be changed accordingly.

The results can be seen in Table 2.1, below.

	Scientific Subject for Mobility	Common & Complementary Competencies
1	Adaptation	Self-Adaptation, Dynamic Adaptation of Parallel Programs, Engineering Adaptive Component-Based Systems, Adaptive Web Services, Adaptation in Business Protocols, Adaptation of Service Compositions, Engineering Adaptive Service-Based Systems, Self-Organising Systems, Self-Healing, Flexible & Self-Healing Web Services
2	Business Processes	Business Process Management, Distributed Business Processes Business Processes, Business Processes & Protocols, E-Business, Business Process Analysis, Monitoring & Auditing
3	Business Protocols	Business Processes & Protocols, Business Protocol Languages, Multi-Party Business Protocols, Adaptation in Business Protocols
4	Evolution	Service Evolution, Software Architecture Evolution, Dependable Evolvable Pervasive Service Engineering
5	Information Quality	Data & Information Related Quality, Data-Related Quality
6	Interaction	Interaction Design & Research, Personalisation
7	Grid Computing	Grid Scheduling, Grid Workflow, Grid Brokering, Load Balancing & Scheduling, Knowledge Sharing Networks
8	Model-Driven Engineering	Requirements & Model-Based Testing, Model-Driven Service Composition, Model-Driven Engineering
9	Monitoring	Monitoring, Service-Oriented Monitoring, Monitoring Design Principles & Monitoring Framework, Business Process Analysis, Monitoring & Auditing, Monitoring of QoS Metrics of Web Services, Monitoring of Key Performance Indicators
10	Negotiation & QoS Agreement	Service Level Agreement (SLA) Negotiation, Quality Assurance Negotiation & QoS Agreement, Estimation of the Quality of Service Providers
11	Quality Assurance	Software Quality Assurance, Quality Assurance, Static Analysis
12	Quality of Service	Quality Assurance, Quality of Service, Quality of Service in Component-Based Systems, Web Service Orchestration & QoS Optimisation, Monitoring QoS Metrics of Web Services
13	Requirements Engineering	Requirements Engineering, Requirements & Model-Based Testing, User-Centred Requirements Engineering
14	Service Architectures	Service Architecture, Service-Oriented Architecture, Service Orientation
15	Security	Security, Authorisation, Authentication
16	Service Composition	Model-Driven Service Composition, Service Composition, Web Service Orchestration & QoS Optimisation, Service Choreography & Orchestration, Service Networks
17	Service Discovery	Semantically-Enriched Service Discovery Mechanisms, Web Service Retrieval, Service Registries, Context-Aware Invocation of Web Services, Dynamic Binding & Invocation of Web Services, Discovery of Human-Based Services
18	Service Design & Modelling Methodologies	Service-Centric Systems Engineering, Service Design & Modelling Methodologies
19	Service-Oriented Computing	Service Orientation, Service-Oriented Computing, Service-Based Applications (SBAs), Service-Oriented Applications

20	Service Oriented Software Engineering	Dependable Evolvable Pervasive Service Engineering, Service-Oriented Software Engineering
21	Software Engineering Life-Cycle	Software Processes, Software Architecture, Software Engineering, Software Quality Assurance, Software Product-Line Engineering & Variability Management
22	User-Centred Requirements Engineering	User-Centred Requirements Engineering, User Centric Services

Table 2.1: Scientific Subjects for Mobility (ordered alphabetically)

Chapter 3

Mapping of Scientific Subjects for Mobility to S-Cube Network Participants

Having defined the scientific subjects for mobility in Section 2.1, this Chapter identifies the S-Cube partners and individuals suitable for the mobility under each scientific subject. This is achieved through mapping the declared competencies of institutions in Table 4.2 to the scientific subjects in Table 2.1 through the common and complementary competencies. Because the competencies in Table 4.2 are also declared with competent individuals it was also possible to produce a list of competent S-Cube scientists suitable for mobility between institutions.

The result is Table 3.1, below.

	Scientific Subject for Mobility	Competent S-Cube Institutions	Competent S-Cube Scientists
1	Adaptation	UniDue CNR FBK INRIA Polimi UCBL USTUTT UHH	Klaus Pohl, Andreas Metzger, Andreas Gehlert Nicola Tonello Marco Pistore, Raman Kazhamiakin, Antonio Bucchiarone, Annapaola Marconi Brice Morin, Grgory Nain, Olivier Barais, Fank Chauvel, Jean-Marc Jean-Marc Jézéquel, Franoise Andre Barbara Pernici, Maria Grazia Fugini, Pierluigi Plebani, Cinzia Cappiello, Danilo Ardagna, Marco Comuzzi, Anna Maria Rosati, Carlo Ghezzi, Elisabetta Di Nitto, Valentina Mazza, Luciano Baresi, Andrea Mocci, Luca Cavallaro, Daniel Dubois Salima Benbernou, Fabien DeMarchi, Francois Hantry, Emmanuel Coqery, Mohand Said Hacid Frank Leymann, Dimka Karastoyanova, Branimir Wetzstein, Olha Danylevych Winifried Lamersdorf, Sonja Zaplata
2	Business Processes	Tilburg FBK Polimi TUW USTUTT UHH	Michele Mancioppi, Mike Papazoglou, Willem-Jan van den Heuvel, Koah Nguyen, Benedikt Kratz Marco Pistore, Annapaola Marconi, Michele Trainotti Barbara Pernici, Cinzia Cappiello Schahram Dustdar, Florian Rosenberg, Philipp Leitner Frank Leymann, Dimka Karastoyanova, Branimir Wetzstein, Olha Danylevych Winifried Lamersdorf, Sonja Zaplata
3	Business Protocols	Tilburg UCBL	Michele Mancioppi Salima Benbernou, Francois Hantry,

		UPM USTUTT	Emmanuel Coqery Manuel Carro, Manuel Hermenegildo Frank Leymann, Dimka Karastoyanova, Branimir Wetzstein, Olha Danylevych
4	Evolution	Tilburg INRIA Polimi	Mike Papazoglou, Vasilios Andrikopoulos Olivier Barais, Rgis Fleurquin Carlo Ghezzi, Elisabetta Di Nitto, Valentina Mazza, Luciano Baresi, Andrea Mocchi, Luca Cavallaro, Daniel Dubois, Giordano Tamburelli
5	Information Quality	CNR POLIMI	Fabrizio Silvestri, Franco Maria Nardini Barbara Pernici, Cinzia Cappiello
6	Interaction	CITY CNR	Neil Maden, Angela Kounchou, Kos Zachos Fabrizio Silvestri, Franco Maria Nardini, Gabriele Tolomei
7	Grid Computing	Tilburg CNR INRIA SZTAKI TUV VUA	Michael Parkin Nicola Tonello, Ranieri Baragli Jean Louis Pazat, Benoit Baudry, Sagar Sen Franoise Andre Attila Keresz, Zsolt Nemeth, Gabor Kecskemeti Philipp Leitner Patricia Lago, Hans van Vliet
8	Model-Driven Engineering	UniDue INRIA	Klaus Pohl, Andreas Metzger Brice Morin, Grgory Nain, Olivier Barais, Fanck Chauvel, Jean-Marc Jean-Marc Jézéquel, Maha Driss
9	Monitoring	FBK INRIA Polimi TUV	Marco Pistore, Annapaola Marconi, Michele Trainotti, Raman Kazhamiakin Thomas Ledoux, Franoise Andre, Olivier Barais, Jean-Louis Pazat Barbara Pernici, Cinzia Cappiello Florian Rosenberg, Scharam Dustdar, Philipp Leitner
10	Negotiation & QoS Agreement	Tilburg CNR Polimi	Michael Parkin Fabrizio Silvestri, Franco Maria Nardini Barbara Pernici, Danilo Ardagna, Pierluigi Plebani, Cinzia Cappiello, Marco Comuzzi, Kyriakos Kritikos, Maria Grazia Fugini
11	Quality Assurance	UniDue Tilburg Lero@UL UPM	Klaus Pohl, Andreas Metzger Michael Parkin Ita Richardson, Stephen Lane Manuel Carro, Manuel Hermenegildo, Dragan Ivanović
12	Quality of Service	UniDue Tilburg INRIA Polimi TUV	Klaus Pohl, Andreas Metzger Michael Parkin Nol Plouzeau, Jean-Louis Pazat Barbara Pernici, Maria Grazia Fugini, Danilo Ardagna, Pierluigi Plebani, Cinzia Cappiello Scharam Dustdar, Florian Rosenberg
13	Requirements Engineering	UniDue Tilburg CITY INRIA	Klaus Pohl, Andreas Gehlert, Andreas Metzger Oktay Turetken Neil Maiden, Angela Kounkou, Kos Zachos Benoit Baudry
14	Service Architectures	Tilburg TUV	Vasilios Andrikopoulos, Willem-Jan van den Huevel, Mike Papazoglou, Michael Parkin Scharam Dustdar, Florian Rosenberg, Philipp

		UHH VUA	Leitner, Martin Treiber Winifried Lamersdorf, Sonja Zaplata Patricia Lago, Qing Gu, Hans van Vliet
15	Security	Polimi UCBL	Maria Grazia Fugini Salima Benbernou, Emmanuel Coqery, Mohand Said Hacid
16	Service Composition	Tilburg INRIA Polimi UoC USTUTT UHH	Michele Mancioffi, Mike Papazoglou, Khoah Nguyen, Willem van den Huevel Maha Driss, Jean-Marc Jean-Marc Jézéquel Barbara Pernici, Maria Grazia Fugini, Danilo Ardagna, Pierluigi Plebani, Cinzia Cappiello Dimitris Plexousakis, Kyriakos Kritikos, George Baryannis Frank Leymann, Dimka Karastoyanova, Oliver Kopp, Branimir Wetzstein, Olha Danylevych Winifried Lamersdorf, Sonja Zaplata
17	Service Discovery	CNR Polimi TUV UoC	Fabrizio Silvestri, Gabriele Tolomei Barbara Pernici, Pierluigi Plebani Scharam Dustdar, Florian Rosenberg, Philipp Leitner Dimitris Plexousakis, Kyriakos Kritikos
18	Service Design & Modelling Methodologies	Tilburg CITY VUA	Willem-Jan van den Huevel, Khoa Nguyen, Mike Papazoglou, Vasilios Andrikopoulos Neil Maiden, Kos Zachos Patricia Lago, Qing Gu, Hans van Vliet
19	Service-Oriented Computing	FBK TUW UoC USTUTT UHH	Marco Pistore, Annapaola Marconi, Michele Trainotti, Raman Kazhemiakin, Antonio Bucchiarone, Piergiorgio Bertoli Scharam Dustdar, Florian Rosenberg, Philipp Leitner, Martin Treiber Dimitris Plexousakis, Kyriakos Kritikos, George Baryannis, Chrysostomos Zaganis Frank Leymann, Dimka Karastoyanova, Branimir Wetzstein, Olha Danylevych Winifried Lamersdorf, Sonja Zaplata
20	Service Oriented Software Engineering	Polimi VUA	Carlo Ghezzi, Elisibetta Di Nitto, Valentina Mazza, Luciano Baresi, Andrea Mocci, Luca Cavallaro, Daniel Dubois, Giordano Tamburelli Patricia Lago, Qing Gu, Hans van Vliet
21	Software Engineering Life-Cycle	UniDue Tilburg INRIA Lero@UL UPM	Klaus Pohl, Andreas Metzger, Kim Lauenroth Oktay Turetken Olivier Barais, Benoit Baudry, Noël Plouzeau Stephen Lane, Ita Richardson Manuel Carro, Manuel Hermenegildo, Dragan Ivanović, Julio Marinõ
22	User-Centred Requirements	CITY FBK	Neil Maiden, Angela Kounkou, Kos Zachos Marco Pistore, Raman Kazhemiakin

Table 3.1: Scientific Subjects for Mobility and Competent S-Cube Participants
(ordered alphabetically)

Chapter 4

Conclusions

The S-Cube mobility program encourages researchers to spend time in one of the beneficiaries institutes to exchange research ideas and carry out joint research. This deliverable seeks to pro-actively encourage mobility through the identification of partners and individuals most suitable for mobility through the identification of common research areas.

This was achieved by first identifying common scientific research areas for the mobility program (Chapter 2), which were found through analysing the competency information in the S-Cube KM and grouping the common and complementary competencies. We found the S-Cube partners had declared over 100 competencies in the S-Cube KM from which we were able to determine 22 common research areas.

We were able to identify the S-Cube partner institutions and individuals suitable for mobility in each common research area (Chapter 3) by mapping the common research areas to institutions and individuals through the common and complementary competencies declared in Table 4.2. Table 3.1 shows the results.

The next step for Workpackage WP-IA-2.1 ('Mobility of Researchers') is to take the information produced in this report and produce a 'Call for Mobility' organised around the research areas listed in Table 2.1, specifically targeting individuals who are grouped together due to their common and complementary competencies. An initial report on the success of this 'Call For Mobility' will be presented in CD-IA-2.1.3, due in M21 of the S-Cube Network of Excellence.

Appendix A

S-Cube Network of Excellence Participants

	Name	Short Name
1	University of Duisberg-Essen	UniDue
2	Tilburg University	Tilburg
3	City University London	CITY
4	Consiglio Nazionale delle Ricerche	CNR
5	Centre for Scientific & Technological Research	FBK
6	French National Institute for Research in Computer Science & Control	INRIA
7	Irish Software Engineering Research Centre	Lero@UL
8	Politecnico di Milano	Polimi
9	MTA SZTAKI — Computer & Automation Research Institute	SZTAKI
10	Vienna University of Technology	TUW
11	Université Claude Bernard	UCBL
12	University of Crete	UOC
13	Universidad Politécnica de Madrid	UPM
14	University of Stuttgart	USTUTT
15	University of Hamburg	UHH
16	VU University Amsterdam	VUA

Table 4.1: List of S-Cube Network Participants with their Short Name

Appendix B

Competencies by S-Cube Partner Institution

The following table is a list of the S-Cube network partner competencies entered in the S-Cube Knowledge Model on 27 May 2009. This data is used to derive the scientific subjects for mobility (in Section 2.1) and then to map the scientific subjects to S-Cube network participants (Chapter 3).

Participant	Competency	Who	Associated KM Terms	
1	UniDue	Quality Assurance	Klaus Pohl, Andreas Metzger	Proactive Adaptation, Error, Monitored Property, Service Fault, Monitor, Quality of Service Characteristic, Monitored Event, Formal Specification, Quality of Service Constraint, Quality of Service Level, Satisfaction, Monitoring Requirements, Quality Attribute, Monitoring Architecture Distribution, Monitoring Architecture, Static Analysis, Verification, Software Service, Monitoring, Analytical Quality Assurance, Design for Monitoring, User Error, Quality of Service-Based Adaptation, Monitoring Mechanisms, Validation, Failure Semantics, Quality of Service Dimension, Monitoring Aspect, Constructive Quality Assurance, Monitoring Specification, Reactive Adaptation, Software Quality Assurance, Service Level Agreement, Fault, Failure
		Software Product Line Engineering & Variability Management	Klaus Pohl, Kim Lauenroth, Andreas Metzger	Customisation
		Engineering Adaptive Service-Based Systems	Klaus Pohl, Andreas Metzger, Andreas Gehlert	Proactive Adaptation, Self-Configuration, Adaptation Strategy, Service-Based Application, Self-Optimisation, Self-Healing System, Service Specification, Adaptation, Design for Adaptation, Self-*, Service, Adaptability, Software Service, Adaptation Mechanism, Self-Protection, Quality of Service-Based Adaptation, Post-Mortem Adaptation, Adaptable Service-Based Application, Service Based Application Construction, Autonomy, Adaptation Requirements and Objectives, Self-Healing, Reactive Adaptation, Evolution, Self-Adaptation

		Requirements Engineering	Klaus Pohl, Andreas Gehlert	Goal, Requirement, Context, Formal Specification, Stake-holder, Service Specification, Soft Goal, Elicitation, Hard Goal, Service Oriented Requirements Engineering, Scenario, Requirements Analysis, Mediation, Plan, Requirements Engineering, Actor
		Software Architecture	Klaus Pohl, Andreas Metzger, Kim Lauenroth	Service-Based Application, Formal Specification, Service Specification, Monitoring Architecture Distribution, Monitoring Architecture, Software Service, Design for Monitoring
		Requirements- & Model-Based Testing	Klaus Pohl, Andreas Metzger	Testing
2	Tilburg	Quality Assurance	Michael Parkin	Quality of Service Characteristic, Quality of Service Negotiation, Quality Attribute, Quality of Service-Aware Grid Service, Testing, Non-Repudiation, Service Level Agreement
		E-Business	Benedikt Kratz, Mike Papazoglou	Business Transaction, Business Aware-Transaction
		Service Composition	Michele Manciacopi, Khoa Nguyen, Mike Papazoglou	Service Orchestration, Service Choreography
		Requirements Engineering	Oktay Turetken	Requirement, Elicitation, Requirements Analysis, Requirements Engineering
		Service Infrastructure	Michele Manciacopi, Khoa Nguyen, Mike Papazoglou, Michael Parkin	Enterprise Service Bus, Network- & Infrastructure-Related Quality, Grid Brokering, Monitoring in Grid, Grid, Grid Workflow, Monitoring Infrastructure
		Service Design & Modelling Methodologies	Willem-Jan van den Heuvel, Khoa Nguyen, Mike Papazoglou, Vasilios Andrikopoulos, Michael Parkin	Design Principles, Formal Specification, Service Specification Specification, Design for Monitoring Service Description, Design for Reuse Service Realisation Strategy, Service Design, Service Analysis
		Software Processes	Oktay Turetken	Capability Maturity Model, Software Process, Capability Maturity Model Integration, Software Process Assessment, Software Process Capability, Key Process Area, Software Quality Assurance
		Business Process Management	Willem-Jan van den Heuvel, Michele Manciacopi, Mike Papazoglou, Khoa Nguyen, Oktay Turetken	Compatibility, Business Rules, Business Process Modelling, Business Protocol Language, Business Process Integration, Business Protocol Projection, Business Process

				Execution, Business Process Reusability, BPM Software Suite, Business Protocol, Business Process, Workflow
		Service Networks	Willem-Jan van den Heuvel, Mike Papazoglou	Agile Service Network
		Service Evolution	Vasilios Andrikopoulos, Mike Papazoglou	Evolution
		Service Architectures	Willem-Jan van den Heuvel, Mike Papazoglou, Michael Parkin, Vasilios Andrikopoulos	Service-Based Application, Monitoring Architecture, Service, Software Service, Enterprise Application Integration
3	CITY	Inclusive Design & Social Aspects of Computing	Neil Maiden, Angela Kounkou	Culture, Social Network Analysis, User Interface, User Error, Accessibility, User Modelling, Usability, Persona, Stereotype
		Requirements Engineering, Service-Centric Systems Engineering	Neil Maiden, Kos Zachos	Service Oriented Requirements Engineering
		Centre for HCI Design	Neil Maiden, Angela Kounkou	Human Computer Interaction,
		Interaction Design & Research	Neil Maiden, Angela Kounkou, Kos Zachos,	Personalisation, Task Modelling, User Experience
		Service-Centric Systems Engineering	Neil Maiden, Kos Zachos	Semantic Web Services, Service-Based Application, Service Discovery, Web Service, Software Service, Semantic Web Services Composition, Service Description, Service Based Application Construction
		User-Centred Requirements Engineering	Neil Maiden, Kos Zachos	Requirement, Soft Goal, Elicitation, Hard Goal, Scenario, Requirements Analysis, Requirements Engineering
4	CNR	Human-Centered Process Mining from Activity Logs	Gabriele Tolomei, Franco Maria Nardini, Fabrizio Silvestri	Process Mining
		Estimation of the Quality of Service Providers	Fabrizio Silvestri, Franco Maria Nardini	Data-Related Quality
		Grid Workflow Modelling & Enactment	Ranieri Baraglia, Nicola Tonello	Grid Workflow
		Self-* in Service Execution	Nicola Tonello	Self-*
		Discovery of Human-Based Services	Fabrizio Silvestri, Gabriele Tolomei	Service Discovery
		Personalisation of Services	Fabrizio Silvestri, Franco Maria Nardini, Gabriele Tolomei	Personalisation
		Designing Efficient Algorithms	Fabrizio Silvestri	Scalability

		for Service Provisioning		
		Dynamic Adaptation of High Performance Components	Nicola Tonello	Adaptation
		Scheduling Policies on Grid	Nicola Tonello, Ranieri Baraglia	Grid Scheduling
		Grid Computing	Nicola Tonello, Ranieri Baraglia	Grid
		Monitoring of Grid Components	Nicola Tonello	Monitoring in Grid
		Scheduling	Ranieri Baraglia	Performance
5	FBK	Service-Oriented Applications	Piergiorgio Bertoli, Marco Pistore, Antonio Bucchiarone, Raman Kazhamiakin, Annapaola Marconi, Michele Trainotti	Service Composition, Proactive Adaptation, Monitor, Composition Schema, Service-Based Application, Service Orchestration, Monitoring Requirements, Adaptation, Service Oriented Software Engineering, Monitoring Architecture, Web Service, Design for Adaptation, Service Oriented Requirements Engineering, Service, Static Analysis, Verification, Semantic Web Services Composition, Monitoring, Requirements Analysis, Analytical Quality Assurance, Automated Service Composition, Adaptation Mechanism, Design for Monitoring, Monitoring Mechanisms, Adaptable Service-Based Application, Validation, Monitoring in Service Compositions, Service Based Application Construction, Monitoring Infrastructure, Service Runtime, Service Choreography, Adaptation Requirements & Objectives, Monitoring Specification, Reactive Adaptation, Self-Adaptation, Planning
		Service Level Agreements	Marco Pistore, Annapaola Marconi, Michele Trainotti	Service Level Agreement
		User-Centric Services	Marco Pistore, Raman Kazhamiakin	Context, User Modelling
		Distributed Business Processes	Marco Pistore, Annapaola Marconi, Michele Trainotti	Business Process Modelling, Business Process
6	INRIA	Software Architecture Evolution	Olivier Barais, Régis Fleurquin	Evolution,
		Component-Based Software Engineering	Françoise André, Olivier Barais, Noël Plouzeau, Jean-Marc Jézéquel, Jean-Louis Pazat	Composition Schema
		Quality of Services in Component Based Systems	Noël Plouzeau, Jean-Marc Jézéquel, Noël Plouzeau,	Quality of Service Characteristic, Quality of Service Constraint

	Jean-Marc Jézéquel,	
Engineering Adaptive Service-Based Systems	Brice Morin, Grégory Nain, Olivier Barais, Franck Chauvel, Jean-Marc Jézéquel, Franoise André, Erwan Daubert, Olivier Barais, Françoise André	Self-*, Automatic Service Deployment
Model-Based Testing	Benoit Baudry	Testing
Requirements Engineering	Benoit Baudry	Goal, Requirement, Requirements Analysis, Requirements Engineering, Actor
Context Monitoring	Françoise André, Jean Louis Pazat, Olivier Baraus	Context
Dynamic Adaptation of Parallel Programs	Jean Louis Pazat, Françoise André	Adaptation
Model-Driven Engineering	Brice Morin, Grégory Nain, Olivier Barais, Franck Chauvel, Jean-Marc Jézéquel	Design Principles, Enterprise Application Integration
Monitoring Framework	Thomas Ledoux, Olivier Barais	Monitoring Execution
Monitoring Design Principles & Monitoring Framework	Thomas Ledoux, Françoise André, Olivier Barais, Jean-Louis Pazat, Thomas Ledoux	Monitored Event, Monitoring in Grid, Monitoring
Collaborative Model Driven Engineering	Olivier Barais, Benoit Baudry, Jean-Marc Jézéquel	Global Software Development
Model-Driven Service Composition	Maha Driss, Jean-Marc Jézéquel	Model-Driven Service Composition
Service-Based System Testing	Benoit Baudry, Sagar Sen	Error, Diagnosis, Fault, Failure
Software Engineering	Olivier Barais, Benoit Baudry, Noël Plouzeau, Jean-Marc Jézéquel	Life Cycle Model
Grid Computing	Françoise André, Jean-Louis Pazat	Grid Brokering, Grid
Load Balancing & Scheduling	Jean-Louis Pazat	Performance
Testing	Benoit Baudry	Verification, Validation

		Component-Based Software Development	Brice Morin, Grégory Nain, Olivier Barais, Franck Chauvel, Jean-Marc Jézéquel, Françoise André, Jean-Louis Pazat	Design for Reuse,
		Engineering Adaptive Component-Based Systems	Brice Morin, Grégory Nain, Olivier Barais, Franck Chauvel, Jean-Marc Jézéquel	Adaptation, Design for Adaptation, Dynamic Binding, Adaptability, Adaptation Mechanism, Adaptable Service-Based Application, Autonomy, Adaptation Requirements & Objectives
7	Lero@UL	Software Quality Assurance	Stephen Lane, Ita Richardson	Global Software Development, Capability Maturity Model, Software Process, Capability Maturity Model Integration, IDEAL Model, Virtual Software Team, Software Process Assessment, Software Process Capability, Common Features, Key Process Area, Software Quality Assurance
8	POLIMI	Dependable Evolvable Pervasive SE	Carlo Ghezzi, Elisabetta Di Nitto, Valentina Mazza, Andrea Mocci, Luca Cavallaro, Daniel Dubois	Adaptation Strategy, Goal, Context, Service-Based Application, Quality of Service Level, Monitoring Requirements, Self-Healing System, Adaptation, Service Oriented Software Engineering, Web Service, Design for Adaptation, Service Oriented Requirements Engineering, Self-*, Service, Dynamic Binding, Optimisation, Adaptability, Software Service, Adaptation Mechanism, Service Description, Quality of Service-Based Adaptation, Adaptable Service-Based Application, Autonomy, Actor, Adaptation Requirements & Objectives, Self-Healing, Evolution, Software Quality Assurance, Service Level Agreement, Customisation
		Requirement Engineering	Carlo Ghezzi, Elisabetta Di Nitto, Luciano Baresi	Requirements Engineering
		Web Service Orchestration & QoS Optimisation	Barbara Pernici, Danilo Ardagna, Pierluigi Plebani, Cinzia Cappiello, Marco Comuzzi, Kyriakos Kritikos, Barbara Pernici, Maria Grazia Fugini	Service Composition, Ontological Quality of Service Models, Optimisation, Performance, Plan, Process, Quality of Service-Aware Service Composition
		Quality Assurance	Carlo Ghezzi, Elisabetta Di Nitto, Giordano Tamburelli	Quality of Service Characteristic, Quality of Service Constraint, Quality Attribute, Quality of Service Dimension,

Negotiation & QoS Agreement	Barbara Pernici, Maria Grazia Fugini, Pierluigi Plebani, Cinzia Cappiello, Marco Comuzzi Kyriakos Kritikos, Carlo Ghezzi, Elisabetta Di Nitto, Luciano Baresi	Quality of Service Negotiation, Quality of Service Negotiation, Service Level Agreement Negotiation, Mediation,
Software Engineering Life Cycle	Carlo Ghezzi, Elisabetta Di Nitto	Software Life Cycle Model
Service Composition & Service Oriented Computing	Carlo Ghezzi, Elisabetta Di Nitto, Valentina Mazza, Luca Cavallaro, Andrea Mocci, Giordano Tamburelli, Daniel Dubois, Luciano Baresi	Service Based Application Construction, Quality of Service-Aware Service Composition, Service Composition
Context-Aware Invocation of Web Services	Barbara Pernici, Pierluigi Plebani, Cinzia Cappiello, Marco Comuzzi	Quality of Use Context, Context, User Modelling, Customisation
Data & Information Quality	Barbara Pernici, Cinzia Cappiello	Data-Related Quality
Service Design & Modelling Methodologies	Carlo Ghezzi, Elisabetta Di Nitto, Luciano Baresi	Design Principles
Security	Maria Grazia Fugini	Security
Data & Information Quality	Barbara Pernici, Cinzia Cappiello	Data Timeliness
Web Service Retrieval & Adaptive BPEL Process Execution Based on Quality Constraints	Barbara Pernici, Danilo Ardagna, Pierluigi Plebani, Cinzia Cappiello, Marco Comuzzi	Dynamic Invocation, Service Binding Dynamic Binding, Rebinding
Monitoring	Luciano Baresi	Monitor, Monitored Event, Monitoring Mechanisms
Flexible & Self-Healing Web Services	Barbara Pernici, Maria Grazia Fugini	Diagnosis
Software Engineering	Carlo Ghezzi, Elisabetta Di Nitto	Life Cycle Model
Monitoring & Service Composition	Luciano Baresi	Monitoring in Service Compositions
Adaptive Web Services	Barbara Pernici, Maria Grazia Fugini, Danilo Ardagna, Pierluigi Plebani,	Proactive Adaptation, Error, Monitored Property, Service Fault, Monitor, Quality of Service Characteristic, Business Process

			Cinzia Cappiello, Marco Comuzzi, Kyriakos Kritikos, Luciano Baresi, Anna Maria Rosati, Valentina Mazza, Elisabetta Di Nitto,	Analysis, Monitoring & Auditing, Monitored Event, Adaptation Strategy, Goal, Service-Based Application, Formal Specification, Quality of Service Constraint, Monitoring Subject, Quality of Service Level, Declarative Quality of Service Models, Monitoring Requirements, Quality Attribute, Service Specification, Adaptation, Monitoring Architecture, Web Service, Design for Adaptation, Accuracy, Self-*, Service, Adaptability, Software Service, Monitoring, Adaptation Mechanism, Design for Monitoring, Service Description, Quality of Service-Based Adaptation, Monitoring Mechanisms, Adaptable Service-Based Application, Service Based Application Construction, Failure Semantics, Autonomy, Quality of Service Dimension, Monitoring Aspect, Service Runtime, Recovery, Actor, Adaptation Requirements & Objectives, Monitoring Specification, Self-Healing, Reactive Adaptation, Evolution, Self-Adaptation, Self-Adaptation, Fault, Failure
		Web Service Orchestration & QoS Optimization & Negotiation & QoS Agreement	Barbara Pernici, Danilo Ardagna, Pierluigi Plebani, Cinzia Cappiello, Marco Comuzzi, Kyriakos Kritikos, Danilo Ardagna	Service Orchestration, Level of Service, Service Level Agreement
		Dependable Evolvable Pervasive SE & Monitoring	Luciano Baresi, Carlo Ghezzi, Elisabetta Di Nitto, Valentina Mazza, Luciano Baresi, Andrea Mocci, Luca Cavallaro, Daniel Dubois	Monitoring, Design for Monitoring
		Web Service Retrieval, Flexible & Self-Healing Web Services & Context-Aware Invocation	Barbara Pernici, Maria Grazia Fugini, Danilo Ardagna, Pierluigi Plebani, Cinzia Cappiello, Filippo Ramoni	Self-Healing System, Static Analysis, Analytical Quality Assurance, Accessibility, Service Registry Service Discovery
9	SZTAKI	Formal Methods	Zsolt Nemeth	Formal Specification
		Multi-Level Grid Scheduling	Attila Kertesz	Grid Scheduling
		Grid Workflow Modelling & Enactment	Gabor Kecskemeti, Attila Kertesz, Zsolt Nemeth	Grid Workflow
		Self-* in Service Execution	Gabor Kecskemeti, Attila Kertesz, Zsolt Nemeth	Self-*

		Grid Brokering	Attila Kertesz	Grid Brokering
		Service Deployment Using Virtualisation	Gabor Kecskemeti	Service Deployment, On-Demand Service Deployment, Automatic Service Deployment
		SLA Based Resource Virtualisation Approach for on Demand Service Provision	Gabor Kecskemeti, Attila Kertesz	Self-Healing
		Service Level Agreements in Grids	Attila Kertesz	Service Level Agreement
		Adaptive Grid Brokering	Attila Kertesz	Adaptation, Adaptation Mechanism
		Nature Inspired Co-ordination Models	Zsolt Nemeth	Autonomy
		Mercury Grid Monitoring System	Gabor Gombas	Monitoring in Grid, Monitoring
		Grid Computing	Gabor Kecskemeti, Attila Kertesz, Zsolt Nemeth	Grid
10	TUW	Context-Aware Service Selection	Schahram Dustdar, Philipp Leitner	Context
		Adaptation of Service Bindings & Service Compositions	Schahram Dustdar, Philipp Leitner, Florian Rosenberg	Adaptable Service-Based Application
		Quality-of-Service Aware Web Service Composition	Schahram Dustdar, Florian Rosenberg	Quality of Service-Aware Service Composition
		Middleware for Service-Based Applications	Schahram Dustdar, Florian Rosenberg, Philipp Leitner, Martin Treiber	Service-Based Application
		Dynamic Binding & Invocation of Web Services	Schahram Dustdar, Philipp Leitner, Florian Rosenberg	Dynamic Invocation, Dynamic Binding, Rebinding, Service Binding
		Monitoring Key Performance Indicators	Schahram Dustdar, Philipp Leitner	Key Performance Indicator
		Management of Web Service Evolution	Schahram Dustdar, Martin Treiber, Philipp Leitner, Florian Rosenberg	Evolution
		SOAP-Based & RESTful Web Services	Schahram Dustdar, Florian Rosenberg, Philipp Leitner, Martin Treiber	Web Service, Service
		VRESCo	Schahram Dustdar, Florian Rosenberg, Philipp Leitner	Service Registry, Service Runtime

		Mediation of Web Service Invocations	Schahram Dustdar, Philipp Leitner	Mediation
		Stateless Web Services	Schahram Dustdar, Florian Rosenberg, Philipp Leitner, Martin Treiber	Stateless Service
		Web Service Mediation	Schahram Dustdar, Philipp Leitner	Service Mediation
		Dependency Analysis in the Context of BAM	Schahram Dustdar, Philipp Leitner	Business Activity Monitoring
		Measuring/Monitoring of QoS Metrics for Web Services	Schahram Dustdar, Florian Rosenberg	Availability, Monitoring Response Time
		WSRF & Stateful Services	Philipp Leitner	Grid, Stateful Service
		Business Process Optimisation	Schahram Dustdar, Florian Rosenberg, Philipp Leitner	Business Process Optimisation
		Testing of SBAs	Philipp Leitner	Testing
		Service Compositions	Schahram Dustdar, Florian Rosenberg	Service Composition
		BPM	Schahram Dustdar, Florian Rosenberg, Philipp Leitner	Business Process
11	UCBL	Business Security	Salima Benbernou, Mohsen Rouached, Emmanuel Coquery, Mohand Said-Hacid	Authentication
		Formal Methods	Mohsen Rouached, Salima Benbernou	Formal Specification
		Transactional Web Service	Mohsen Rouached, Salima Benbernou	Transactional Composite Service
		E-Business	Francois Hantry, Salima Benbernou, Mohsen Rouached	Business Transaction
		Monitoring Service Compositions	Salima Benbernou, Mohsen Rouached, Mohand-Said Hacid	Monitoring
		Adaptation in Business Protocol	Salima Benbernou, Fabien DeMarchi, Francois Hantry, Emmanuel Coquery, Mohand Said Hacid	Adaptation
		Service Composition, Formal Models & Validation	Mohsen Rouached, Salima Benbernou, Emmanuel Coquery, Mohand Said Hacid	Automated Service Composition

	Formal Verification	Mohsen Rouached, Salima Benbernou, Mohand-Said Hacid	Verification
	Authorisation Policies	Salima Benbernou, Emmanuel Coquery, Paul El Khoury, Mohand Said-Hacid, Maziane Hassina, Karima Mokhtari	Authorisation
	BPM	Salima Benbernou, Francois Hantry, Emmanuel Coquery, Mohsen Rouached	Business Protocol Language, Business Aware-Transaction
	Business Protocols	Salima Benbernou, Emmanuel Coquery, Francois Hantry, Mohand Said-Hacid, Karima Mokhtari	Business Protocol
	Service Evolution	Salima Benbernou	Evolution
	Business Process Management & Service Composition	Salima Benbernou, Mohsen Rouached, Emmanuel Coquery, Mohand-Said Hacid	Business Activity Monitoring
	Context-Driven Business Process Adaptation	Mohsen Rouached, Salima Benbernou, Mohand-Said Hacid	Post-Mortem Adaptation
12	UOC		
	Formal Description Languages Providing Enriched Service Behaviour Specification Primitives (Pre-/Post-Conditions, Service Invariance, Quality of Service) with the Use of Ontologies for Complex Services	Dimitris Plexousakis, Kyriakos Kritikos	Quality of Service Constraint, Declarative Quality of Service Models, Ontological Quality of Service Models, Service Specification, Service Description, Quality of Service Dimension
	Service Value Networks	Christos Nikolaou, Marina Bitsaki	Value Network
	Semantically-Enriched Service Discovery Mechanisms Employing Semantic Similarity Measures for Matching Functional Goals & Non- Functional Requirements	Dimitris Plexousakis, Kyriakos Kritikos	Service Registry, Service Discovery
	Service Composition	Dimitris Plexousakis, Kyriakos Kritikos, George Baryannis.	Planning
	Service Oriented Computing	Dimitris Plexousakis, George Baryannis, Kyriakos Kritikos	Service Composition, Composition Schema, Quality of Service Characteristic, Semantic Web Services, Formal Specification, Service Orchestration, Quality of Service Level, Quality Attribute, Web Service, Level of Service, Service, Semantic Web Services Composition, Automated Service

				Composition
13	UPM	Formal Methods	Manuel Carro, Ángel Herranz, Julio Mariño	Formal Specification
		Multi-Party Business Protocols	Manuel Carro	Compatibility, Business Protocol Language, Business Protocol Projection, Business Protocol, Service Choreography, Time-Soundness
		Static Analysis	Manuel Hermenegildo, Manuel Carro	Software Quality Assurance
		Resource Analysis, Multi-Party Business Protocols	Manuel Carro, Manuel Hermenegildo	Service Composition, Service Orchestration
		Constraint Programming	Manuel Carro, Manuel Hermenegildo	Quality Of Service Constraint
		Static Analysis, Resource Analysis	Manuel Hermenegildo, Manuel Carro	Analytical Quality Assurance
		Software Engineering	Manuel Carro, Manuel Hermenegildo	Static Analysis
		Software Engineering, Static Analysis, Abstract Interpretation, Resource Analysis	Manuel Carro, Manuel Hermenegildo, Dragan Ivanović	Data-Aware QoS
		Software Engineering, Static Analysis, Resource Analysis	Manuel Carro, Manuel Hermenegildo, Julio Mariño	Quality Of Service-Aware Service Composition
		Static Analysis. Abstract Interpretation, Resource Analysis	Manuel Carro, Manuel Hermenegildo, Julio Mariño	Verification
14	USTUTT	Service Composition	Frank Leymann, Dimka Karastoyanova, Branimir Wetzstein, Olha Danylevych	Composition Schema, Service Orchestration, Service Co-ordination Service Wiring, Quality of Service-Aware Service Composition
		Service Infrastructure	Frank Leymann, Dimka Karastoyanova	Enterprise Service Bus
		Monitoring of KPIs	Frank Leymann, Branimir Wetzstein	Key Performance Indicator
		Adaptation of Service Compositions	Frank Leymann, Dimka Karastoyanova, Branimir Wetzstein, Olha Danylevych	Adaptation, Adaptation Mechanism
		Monitoring in Service Compositions	Frank Leymann, Branimir Wetzstein	Monitoring in Service Compositions
		Enterprise Application Integration	Frank Leymann, Dimka Karastoyanova	Enterprise Application Integration
		Service Oriented Computing	Frank Leymann, Dimka Karastoyanova, Branimir Wetzstein,	Service Composition, Dynamic Invocation, Web Service, Service Dynamic Binding, Rebinding

			Olha Danylevych,	
		Service Choreography	Frank Leymann, Oliver Kopp, Olha Danylevych	Interaction Choreography Model, Interconnected Interface Choreography Model, Service Choreography
		Business Process Management	Frank Leymann, Dimka Karastoyanova, Branimir Wetzstein, Olha Danylevych	Business Process Analysis, Monitoring & Auditing, Business Process Modelling, Business Process Integration, Business Activity Monitoring, Business Process Execution, Business Process Reusability, Business Process Optimisation, Process Fragment, BPM Software Suite, Business Process Measurement, Business Protocol, Business Process, Process, Workflow
15	UniHH	Service Composition	Winfried Lamersdorf, Sonja Zaplata	Service Choreography
		Context Management & Mobile Computing	Winfried Lamersdorf, Sonja Zaplata	Quality Of Use Context, Context
		Service Oriented Architecture	Winfried Lamersdorf, Sonja Zaplata	Service-Based Application, Software Service
		Decentralised Process Execution	Winfried Lamersdorf, Sonja Zaplata	Process Fragment
		Self-Organising Systems	Winfried Lamersdorf, Sonja Zaplata	Proactive Adaptation, Self-*, Reactive Adaptation, Self-Adaptation
		Service Oriented Computing	Winfried Lamersdorf, Sonja Zaplata	Service Composition, Quality of Service Characteristic, Service Orchestration, Quality of Service Level, Quality Attribute, Web Service, Service, Dynamic Binding
		Business Process Management	Winfried Lamersdorf, Sonja Zaplata	Business Process Execution, Business Process, Process, Workflow
16	VUA	Knowledge Sharing Networks	Patricia Lago, Hans van Vliet	Grid
		Service-Oriented Software Engineering	Patricia Lago, Qing Gu	Service Aspect, Service Oriented Software Engineering, Migration, Service Life Cycle Model, Service Process Model
		Service Design & Modelling Methodologies	Qing Gu, Patricia Lago, Hans van Vliet	Design Principles
		Software Architecture	Hans van Vliet, Patricia Lago, Qing Gu	Architectural Knowledge Management, Architectural Knowledge
		Software Engineering	Hans van Vliet, Patricia Lago, Qing Gu	Process Model, Life Cycle Model, Software Process Model, Software Life Cycle Model
		Service Architectures	Hans van Vliet	Service, Software Service

Patricia Lago,
Qing Gu

Table 4.2: Competencies by S-Cube Partner Institution

Bibliography

- [1] Mohand-Said Hacid, Salima Benbernou, Franco Maria Nardini, Gabriele Tolomei, Fabrizio Silvestri, Branimir Wetzstein, Olha Danylevych, Vasilios Andrikopoulos, Georgios D. Koutras, and Marina Bitsaki. Definition and set-up of Mobility Program Policies. S-Cube Deliverable PO-IA-2.1.1, September 2008.
- [2] S-Cube Network Participants. Annex I — “Description of Work”, November 2007.
- [3] Vasilios Andrikopoulos (Ed.). Separate Knowledge Models for Functional Layers. S-Cube Deliverable CD-IA-1.1.2, March 2009.