



Towards the new job profile of a Service System Innovation Architect

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Adapted from the presentation of

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Service Science & Innovation department

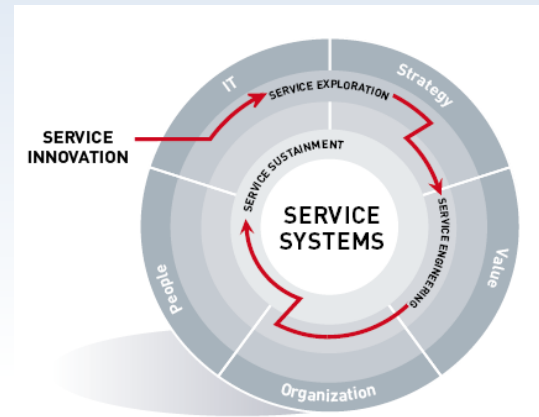
Public Research Centre Henri Tudor, Luxembourg



The Context



- ERASMUS projects focusing on cooperation between higher education and enterprises
- Curriculum design



EMISS



- Designing Lifelong Learning for Innovative Services Systems
- Professional audience



The Project

- Duration: 24 months (Oct 2008 - Sept 2010)
- Budget: 398.972 € (EACEA contribution: 299.224 €)



Partners:

- **University of Amsterdam**
- **Technical University of Catalonia, Barcelona**
- Foundation for the Open University of Catalonia
- **Faculty of Informatics Masaryk University Brno**
- **University of Geneva**
- **Public Research Centre Henri Tudor, Luxembourg**
- University of Paris 1 Pantheon-Sorbonne
- **Faculty of Engineering of the University of Porto**
- University of Skövde,

and 23 associated partners (private / public sectors)

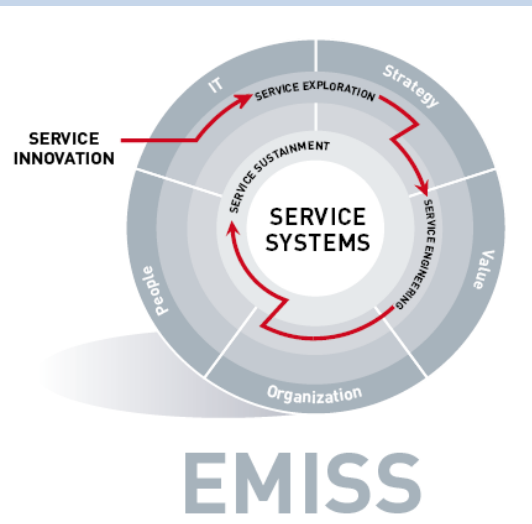


The Objective

- EMISS: *Executive Master on Innovative Service Systems*

whose perimeter has to be defined and precised

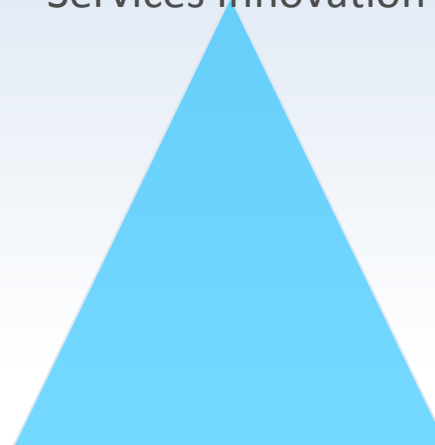
- following a **Knowledge Triangle** approach



Services Innovation

Higher
Education

Research





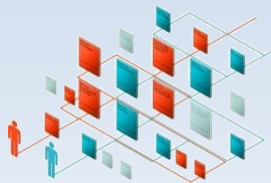
LLL content elaboration process



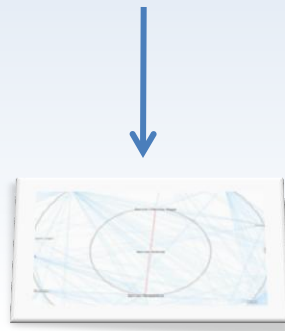
Skill cards provided the Expertise Pillars



Expertise pillars weighted and complemented with think tanks data



Issue first learning trajectories

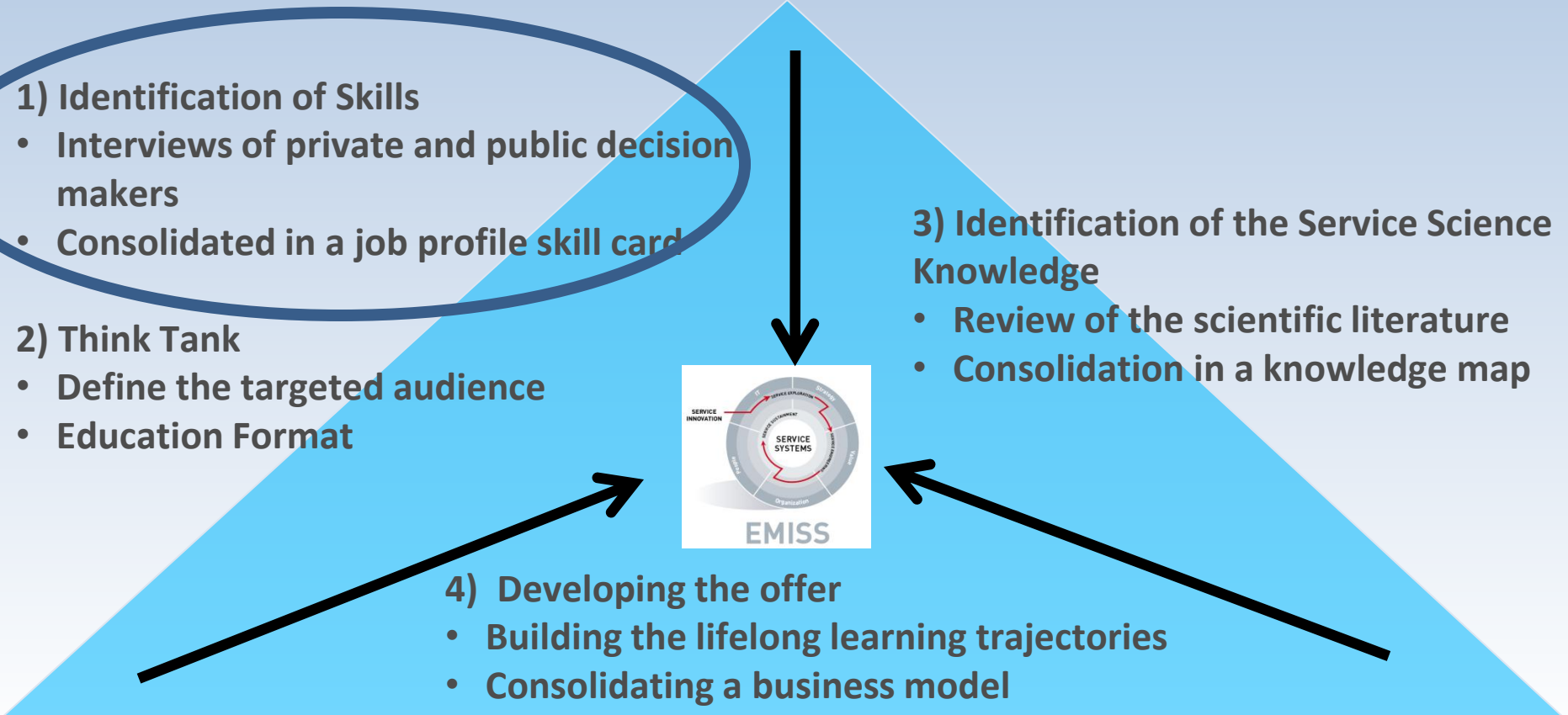


Consolidated with knowledge map data



The Approach

Services Innovation

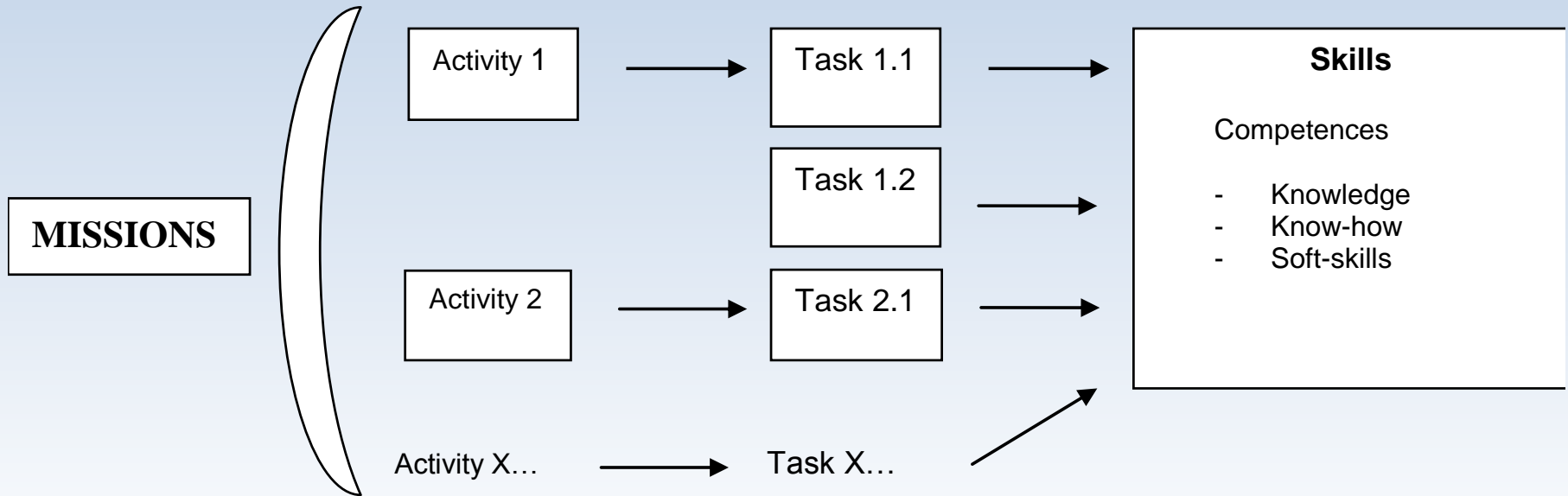


Higher Education

Research

1) Identification of Skills

Building a skill-card framework



**For Skills, use of reference models like:
SFIA: knowledge competences in the ICT
domain (not service sepcific)**

Soft skills, like PMI



1) Identification of Skills

Definition of an Service Science Actor

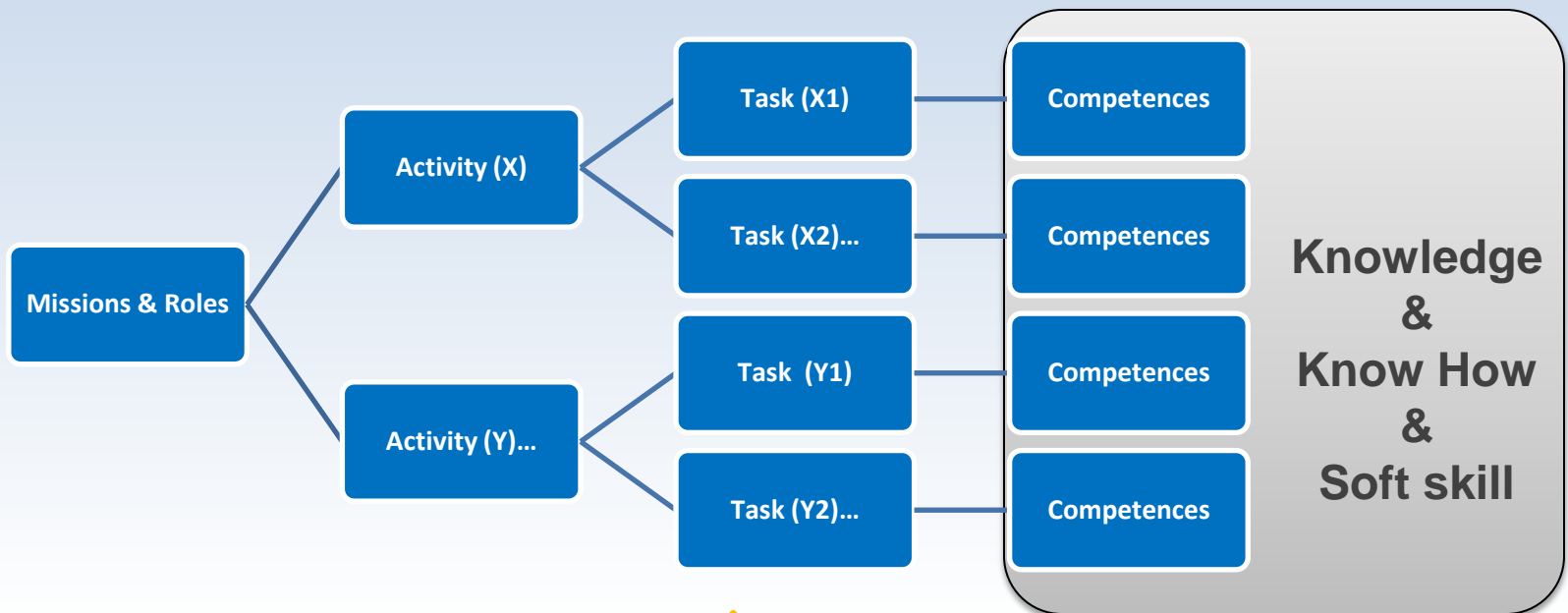
Service Science actors can design (creatively imagining and realizing), execute/build, lead and manage sustainable service innovation in every sector of the economy (public/private), with short-term and long-term value co-creation potential.

Service Science actors use tools and methods to analyze/study (as a watcher) and increases service detection/productivity, to improve the predictability of demand for service and achieve more systematic service innovation. He could act as service innovation promoter.

Skills Card Elaboration

Identification of Skills

- Interviews of 50 private and public decision makers
- Consolidated in a job profile skill card



Skills Card Results

A fragment ...

Service Design : Align business and technology, build innovative services proposals, business case design and strategic planning			
Tasks	Knowledge	Know-How	Soft-Skills
<p>Explore Study and understand, analyse/define properties of (business/service/domain). Generate new business ideas. Identification & model its components and their integration. Define/collect new requirements indicate target customers and translate their needs to develop new services or improve services.</p>	<p>Technical strategy and planning</p> <ul style="list-style-type: none"> - Methods & Tools - Solution architecture <p>Business change management</p> <ul style="list-style-type: none"> - Business analysis - Change implementation planning and management - Business process testing - Organisation design <p>Systems development</p> <ul style="list-style-type: none"> - Systems development management - Data analysis - Systems design - Network design - Programming/software development - Systems testing 	<p>Apply a service attitude Express entrepreneurship</p> <p>Conceptual modelling, User experience analysis techniques, System analysis, Design techniques</p> <p>Conceptual modelling, Data modelling, UI design, Systems design</p> <p>Brainstorming techniques</p> <p>Creativity techniques, Similarity reasoning, Innovation, award</p> <p>Technical knowledge (knowing the possibilities)</p>	<p>Deep and narrow focus Analytic Analytics thinking, Communication, Presentation, Consultancy Leadership, Engagement & Motivation Creativity, Results orientations Communication, Entrepreneurship, visionary, Courage Instinct, intuition</p> <p>Negotiation, Systemic thinking, Analysis, Synthesis, Quality orientation, Negotiation Openness, Networking with people</p> <p>Synthetic, Presentation, Technical writing, Documentation, Systemic thinking, Structural thinking, Focused on detail, Risk taking leadership, Common sense, realistic Analytical skills, synthetic</p>
<p>Measure and test and prioritise requirements/specifications, functional modelling and pilot test of new service initial version, identify bottlenecks and manage complexity.</p>	<p>Advise & guidance</p> <ul style="list-style-type: none"> - Business risk management <p>Business/IS strategy and planning</p> <ul style="list-style-type: none"> - Information assurance - Research - Information security - Strategic application of information systems - Technical specialism <p>Human factors</p> <ul style="list-style-type: none"> - Human factors integration - Non-functional needs analysis - Usability evaluation <p>Information strategy</p> <ul style="list-style-type: none"> - Information management 	<p>Strategic goals Enterprise organization, Business processes Technical knowledge, Existing Information System</p> <p>Apply different metrics techniques, Write reports</p> <p>Agile development, Abstraction</p> <p>SWOT analysis Model penetration rate Define Value Model goals Construct dashboard Quantify cost Define micro business plan Project costing Pricing tools & templates</p>	<p>Systemic thinking, Analysis, Synthesis, Quality orientation</p> <p>Analytics thinking, Communication, Presentation, Be analytic, Be able to synthesize, Be able to criticise, Rigorous Visionary</p>
<p>Evaluate business opportunity and align with business strategy, business model including marketing/quality commercial strategies.</p>	<p>Information strategy</p> <ul style="list-style-type: none"> - Information management <p>Conceptual modelling User experience analysis techniques Business modelling, Business case, Case study KPIs</p>	<p>Compare alternatives</p>	<p>Creativity, Reliability, Self Control Efficiency, Conflict & Crisis, Values appreciation, Continuous improvement, Intuition of the need, Creativity Be ready to criticise and receive critics, Common sense, be realistic</p> <p>Communication, Quality orientation</p>

Details: www.delliiss.eu/skill_card



Skills Card Summary

 <h3>Periscopic activity</h3> <p>Explore and analyse market, business orientations, concepts across disciplines and identify opportunities</p>	 <h3>Service Design</h3> <p>Align business and technology, build innovative services proposals, business case design and strategic planning</p>	 <h3>Project management</h3> <p>Project management and cross domain coordination to develop and run services</p>	 <h3>Promote innovation</h3> <p>Promote innovation and the integrated view of services by communicating, sharing information and knowledge in & out the organisation</p>
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Explore and analyse market, business orientations concepts across disciplines and Identify opportunities



Skills Card Summary

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Project management and cross domain coordination to develop and run services

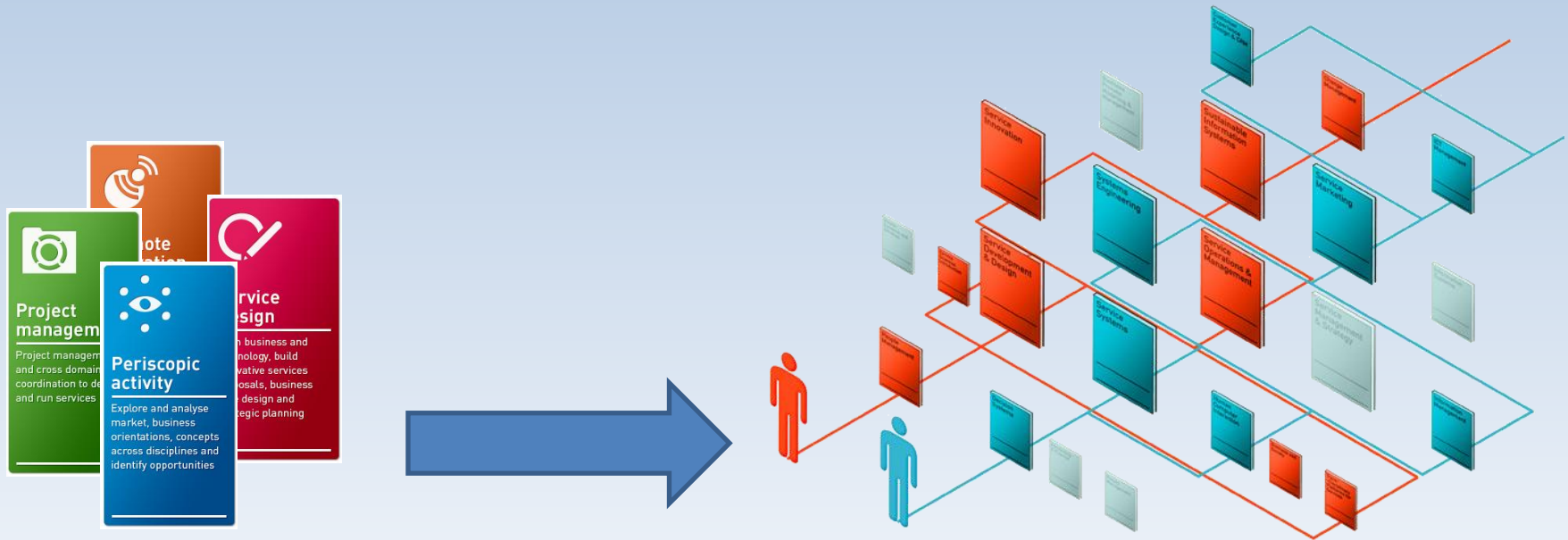


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Promote innovation and the integrated view of services by communicating, sharing information and knowledge in and out the organisation.

Learning Trajectories are...



Depending on the weight put on the different activities and depending on the background of persons, different learning trajectories are possible

Services Innovation

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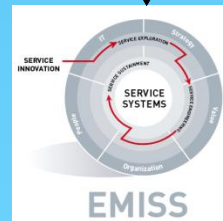
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- Consolidated in a job profile skill card

2) Think Tank

- Define the targeted audience
- Education Format

3) Identification of the Service Science Knowledge

- Review of the scientific literature
- Consolidation in a knowledge map



4) Developing the offer

- Building the lifelong learning trajectories
- Consolidating a business model

Higher
Education

Research



2) Think Tanks inputs

Two Think Tanks organized in Amsterdam (June 09) and Barcelona (May 10) grouping about 40 decision makers for identifying the targeted people profiles

Experienced senior people: CTO/CIO assistants, experienced project managers and product managers , senior business analysts, senior consultants. They have already an important background knowledge and have already acquired a number of soft skills

More innovation than management: early phases of product management, set-up of a framework which allows to manage the governance of the service lifecycle

Services Innovation

Refine the SFIA concepts (generic for ICT) into service specific knowledge components

1) Identification of Skills

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2) Think Tank

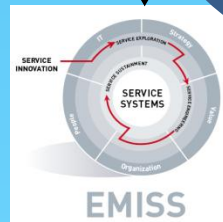
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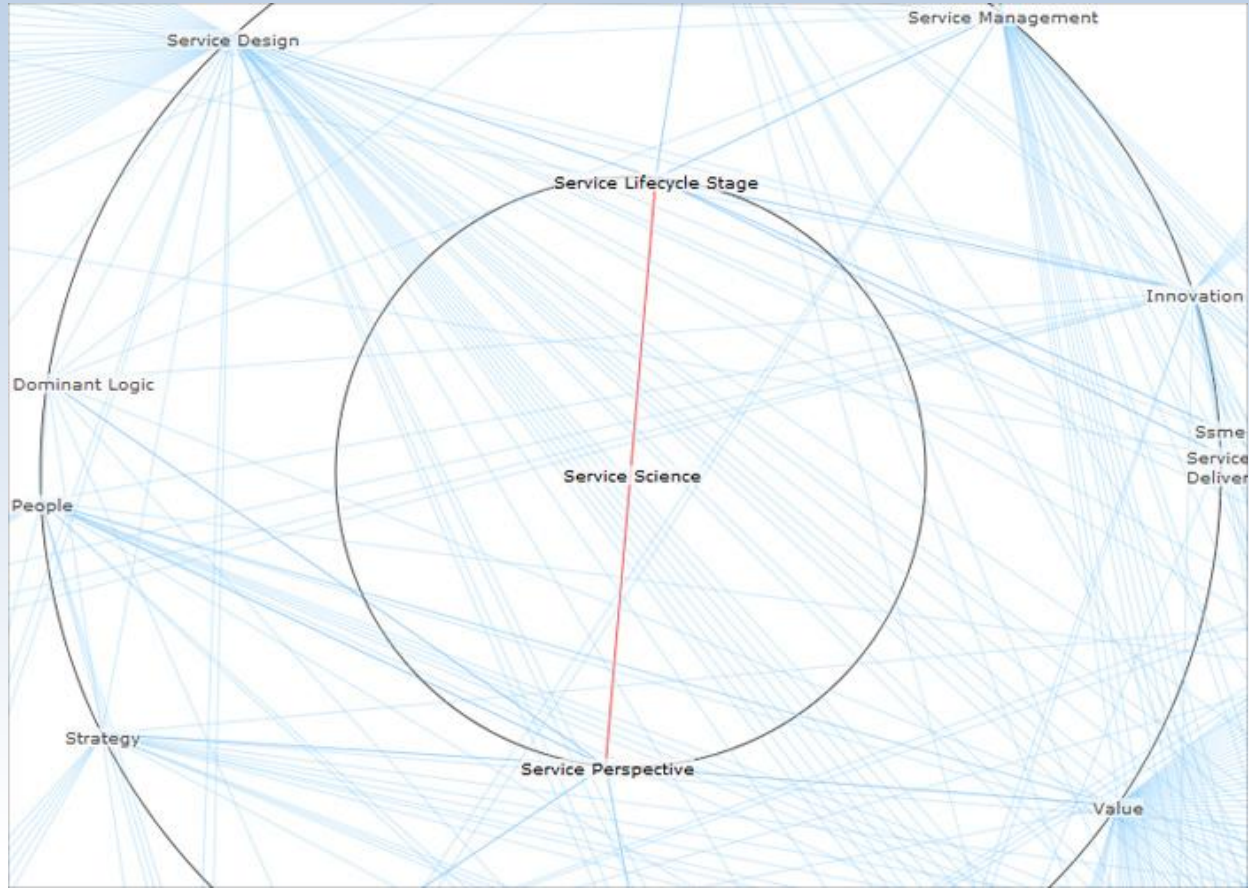
Higher
Education

Research



Knowledge Map

http://www.delliis.eu/knowledge_map



Link between concepts

Services Innovation

1) Identification of Skills

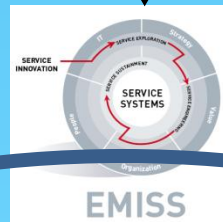
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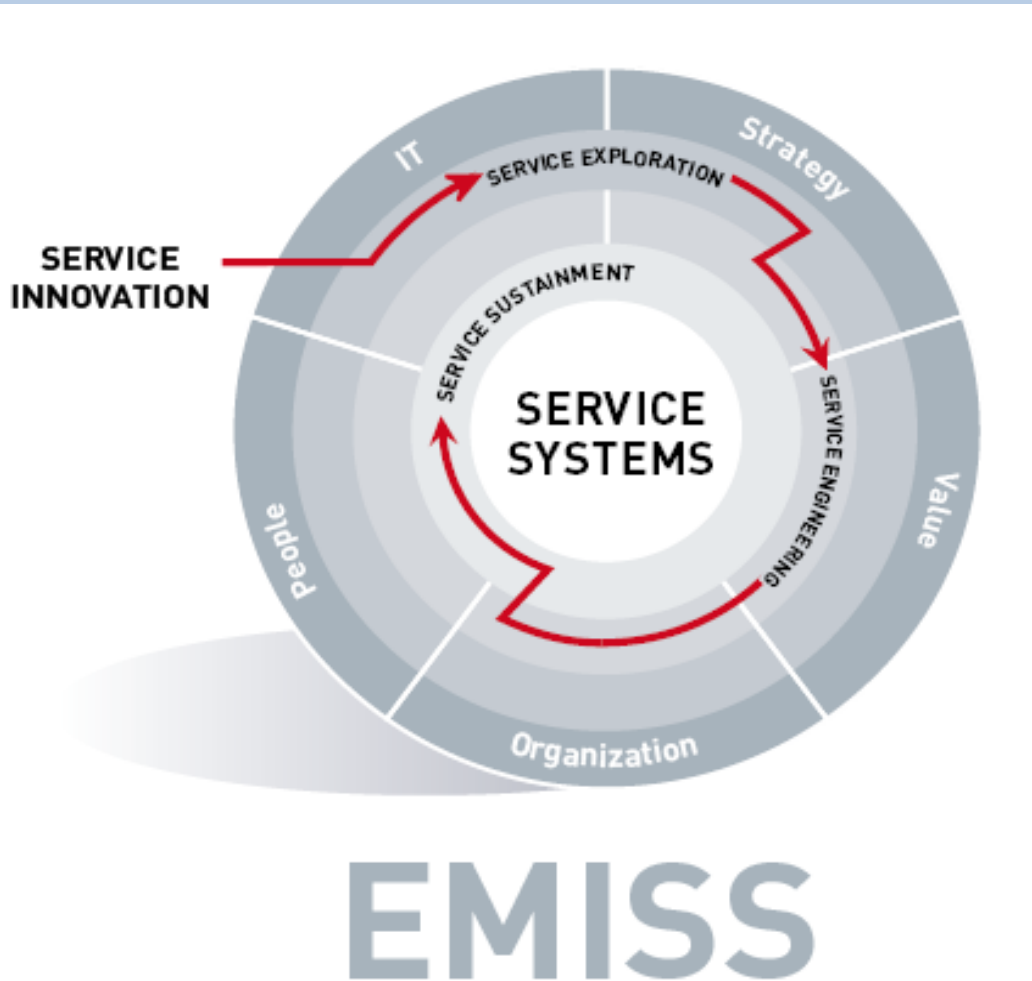
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Higher
Education

Research

4) EMISS: the final programme





EMISS: the final programme



Service Innovation (10 ECTS): understand the context for service value creation
Business model and strategies (5 ECTS): *economies of aggregation, networked organization, IP Strategies, strategic and service perspectives*
Opportunities (product/people/market, services bundling, ...) (2 ECTS): *bundling*
Entrepreneurship and innovation promotion (3 ECTS): *innovation*

Service Exploration (10 ECTS): design services for value and for customers
Generation of ideas, creativity (2 ECTS): *creativity, creative design process,*
Capture of market and customers needs (3 ECTS): *actionable knowledge, attributes, blueprinting, consumer needs and satisfaction, customer experience and expectations, service dominant logic*
Value and finance proposition (4 ECTS) : *assessment system, service pricing, consumer value, cost Oriented pricing approach, customer value proposition delivery, economies of aggregation, service laddering, Personalization, value co-creation*
Ontologies and domain modeling (1 ECTS): *cognitive information systems, conceptual Modelling, service terminology*



EMISS: the final programme



Service Engineering (10 ECTS): manage the engineering of a service system
Management of the engineering of service systems, from the business and IT side (7ECTS) and including risk management (2ECTS): *alignment framework, architecture, alignment framework, BPEL, bundling, coreography and orchestration , service composition information system services, web services, service process, organization*

Ontologies and service systems modelling (1CTS): *cognitive information systems, conceptual Modelling, semantic web services*

Service Sustainment (10 ECTS): setting-up a governance framework for evolution
SLA and services contracts management (5 ECTS): *alignment framework, measuring, operation Management, service life cycle agreement*

Ontologies of services qualities (1 ECTS): *conceptual modelling, e-service quality, non-functional service properties*

Learning on agile project management methods and service lifecycle (4 ECTS):

Master Thesis (20 ECTS):



Thanks for your attention !

EMISS
European Executive Master in
Innovative Service Systems

60 ECTS Diploma

First Edition:
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