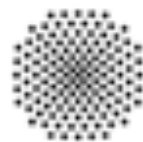




# The International Master in Service Engineering (IMSE): *Toward a Joint Degree in Service Science*



University of Stuttgart  
Germany



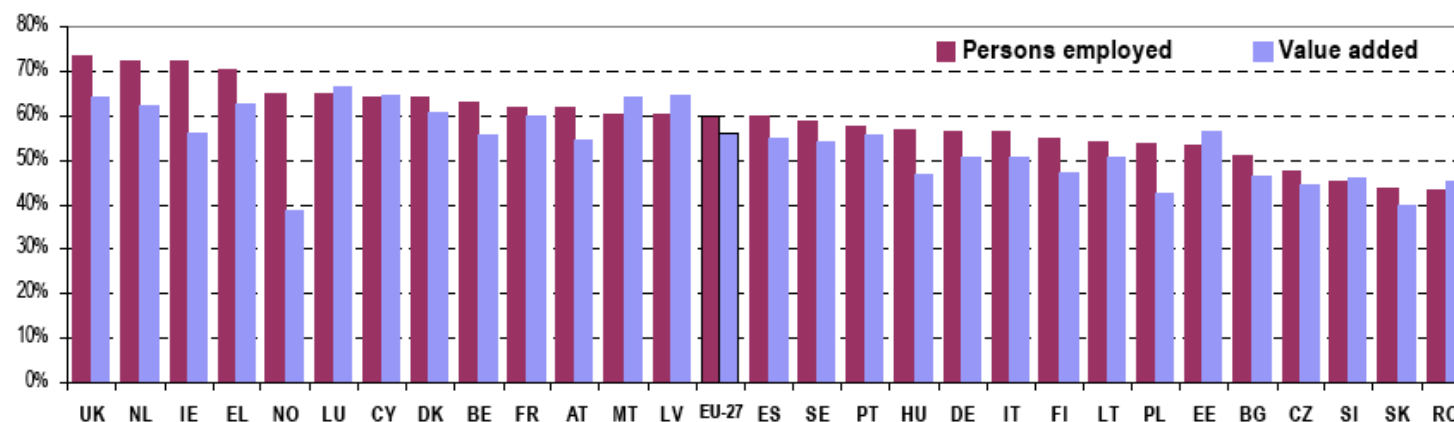
ERASMUS MUNDUS



Education and Culture DG

Prof. Dr. Willem-Jan van den Heuvel  
Tilburg University, The Netherlands  
wjheuvel@uvt.nl  
<http://www.eriss.org>

# Services Everywhere

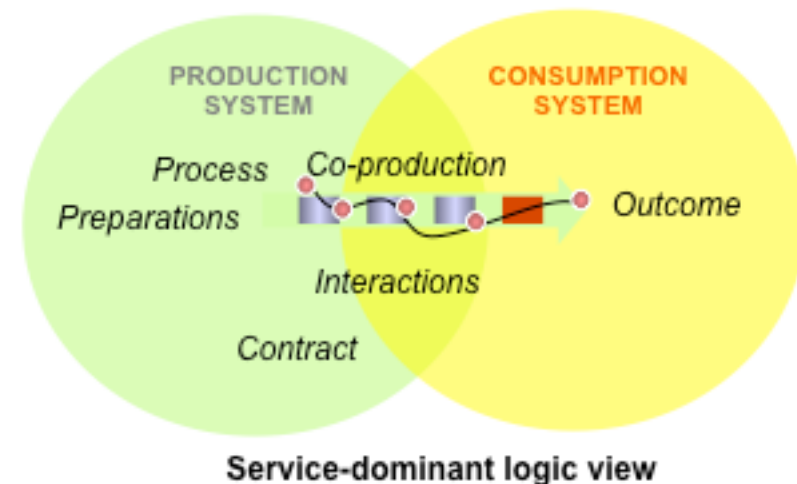
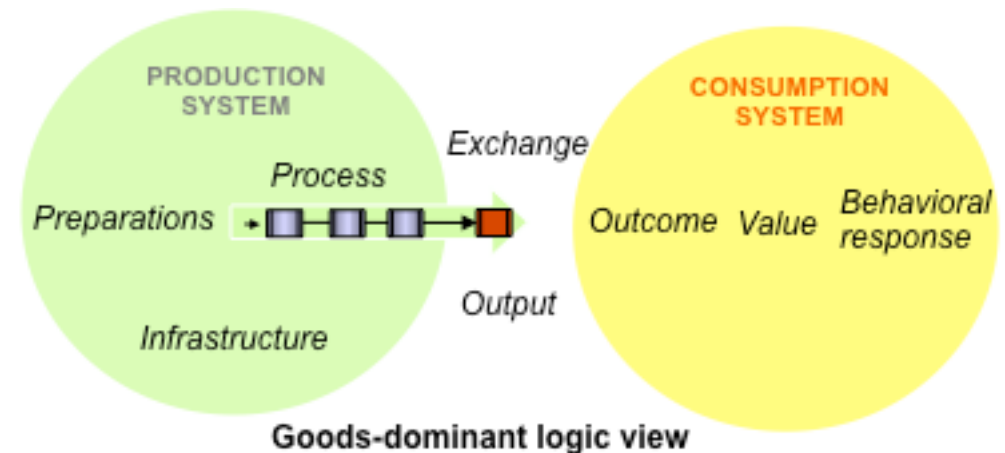


	2005			2006			2007		
	export	import	balance	export	import	balance	export	import	balance
Total services	403.4	349.3	54.1	447.1	378.6	68.5	498.5	414.4	84.1
Transportation	103.2	87.9	15.3	109.3	98.2	11.1	119.2	103.7	15.5
Travel	65.7	84.8	-19.1	72.3	87.7	-15.4	75.6	94.2	-18.6
Other Services	234.4	176.5	57.9	265.5	192.7	72.8	301.4	214.4	87.1
Communication	7.3	7.9	-0.6	8.5	9.6	-1.1	10.0	10.4	-0.4
Construction	12.2	6.1	6.0	13.7	7.1	6.6	15.9	7.8	8.1
Insurance	6.1	8.3	-2.1	11.6	7.6	4.0	14.9	8.0	6.9
Financial	35.0	14.2	20.9	41.9	17.7	24.2	51.5	20.8	30.8
Computer and Information	17.3	8.8	8.5	22.2	10.2	12.0	25.6	11.1	14.5
Royalties and licences fees	23.5	32.1	-8.6	23.7	30.7	-7.0	26.1	34.4	-8.3
Other business services	120.4	86.7	33.7	130.9	95.7	35.2	144.3	108.9	35.5
Personal, cultural & recreational	4.9	6.3	-1.4	4.7	7.2	-2.6	4.8	6.0	-1.2
Government services, n.i.e.	7.6	6.1	1.5	8.3	6.8	1.5	8.3	7.1	1.2
Services not allocated	0.1	0.1	0.0	0.0	0.0	0.0	2.3	2.2	0.1

Source: eurostat, sbs  
Ks-fs-09

# What's a Service Anyway?

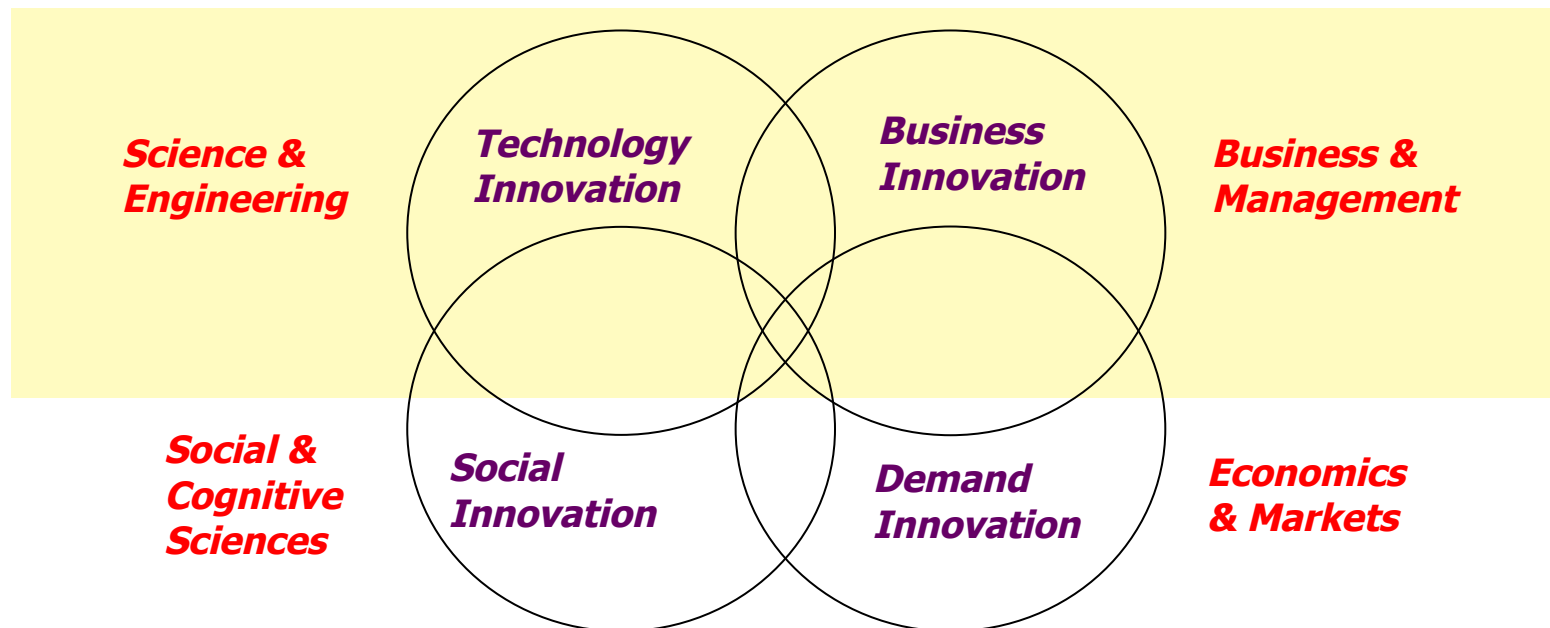
- In economics and marketing, a service is the non-material equivalent of a good (Wikipedia, 2006)
- Particularly, services are defined as being IHIP! (Intangible, Heterogeneous, Inseparable, Perishable)
- More recently, a new theory has emerged named Service Dominant Logic, defining a service as: "a type of action, promise or performance that can be exchanged for value" [Spohrer2007]



Paul Lillrank, "An event-based approach to services,"  
Presented at Frontiers in Service Conference, October 2008

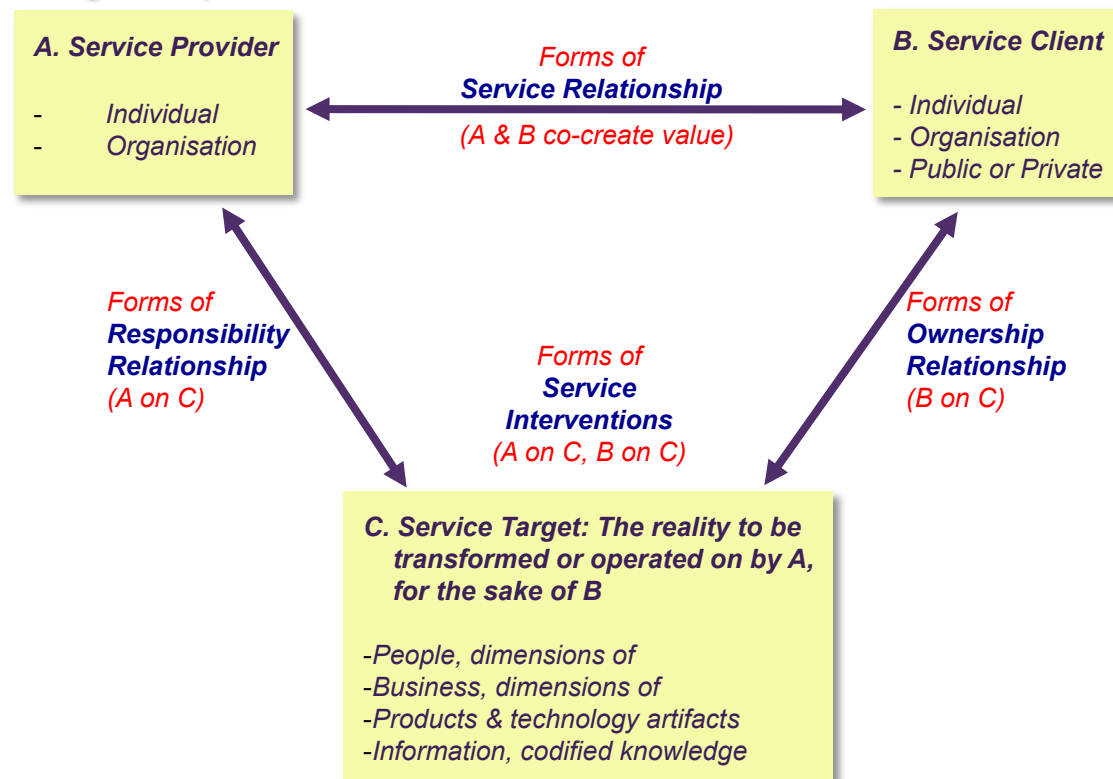
# Service Innovation is inherently Multi-Disciplinary

- Services depend critically on people, technology, & **co-production** of value
- People **work together** with *technology* & with *organisations* to provide/create *value* for clients
- A **service system** is a complex **socio-techno-economic** system



# Service as a System of Relationships

- The changing landscape of business can be described, for the purpose of increasing service innovation, as **a very large global service system**. Made up of:
  - ◆ Many **smaller service systems** (individuals, enterprises, government agencies) **interacting** via **value propositions** to exchange service for service & to co-create value during the process.



Graphics based on J. Gadrey 2002 *The misuse of productivity concepts in services: lessons from a comparison between France and the United States*. Productivity, Innovation and Knowledge in Services. New Economic and Socio-Economic Approaches.

# What is Service Science?

Service Science is an emerging to capture momentum related to service economy growth, the global need for service innovation, & the demands for service research and education.

It fuses together disciplines such as ICT, business & management, business strategy, management sciences, industrial engineering, social & legal sciences, and economics in order to encourage innovation in how organisations create value for customers & shareholders that could not be achieved through such disciplines working in isolation.

# Towards a Digital Service Economy

*"Today investment in intangible assets is of equal importance to investment in machinery and real estate. In recent years, various policies have been integrated into broader strategies to use ICTs (information and communication technologies) to achieve growth, employment and wider socio-economic objectives. It is evident that the ICT services revolution has only begun." - Teppo Tauriainen (Swedish Minister of Foreign Affairs, Swedish Presidency, October 2009)*

99% DSL coverage  
83% are regular internet users  
46% downloads movies, books, music  
75% of companies uses eGovernment appls  
72% of companies uses E-Business

Source: EU Oct. 2009



# IMSE in a Nutshell



## International Master in Service Engineering (IMSE)

*Join in and stand out!*

IMSE, a multi-disciplinary Erasmus Mundus Master's programme:

### IMSE key characteristics:

- A highly innovative, Erasmus Mundus Master's programme
- Outstanding academic quality
- A strong international orientation
- Numerous internship openings and fast track career opportunities
- Frequent exposure to cutting edge research in a fast growing discipline
- Tight connections with internationally renowned industry partners

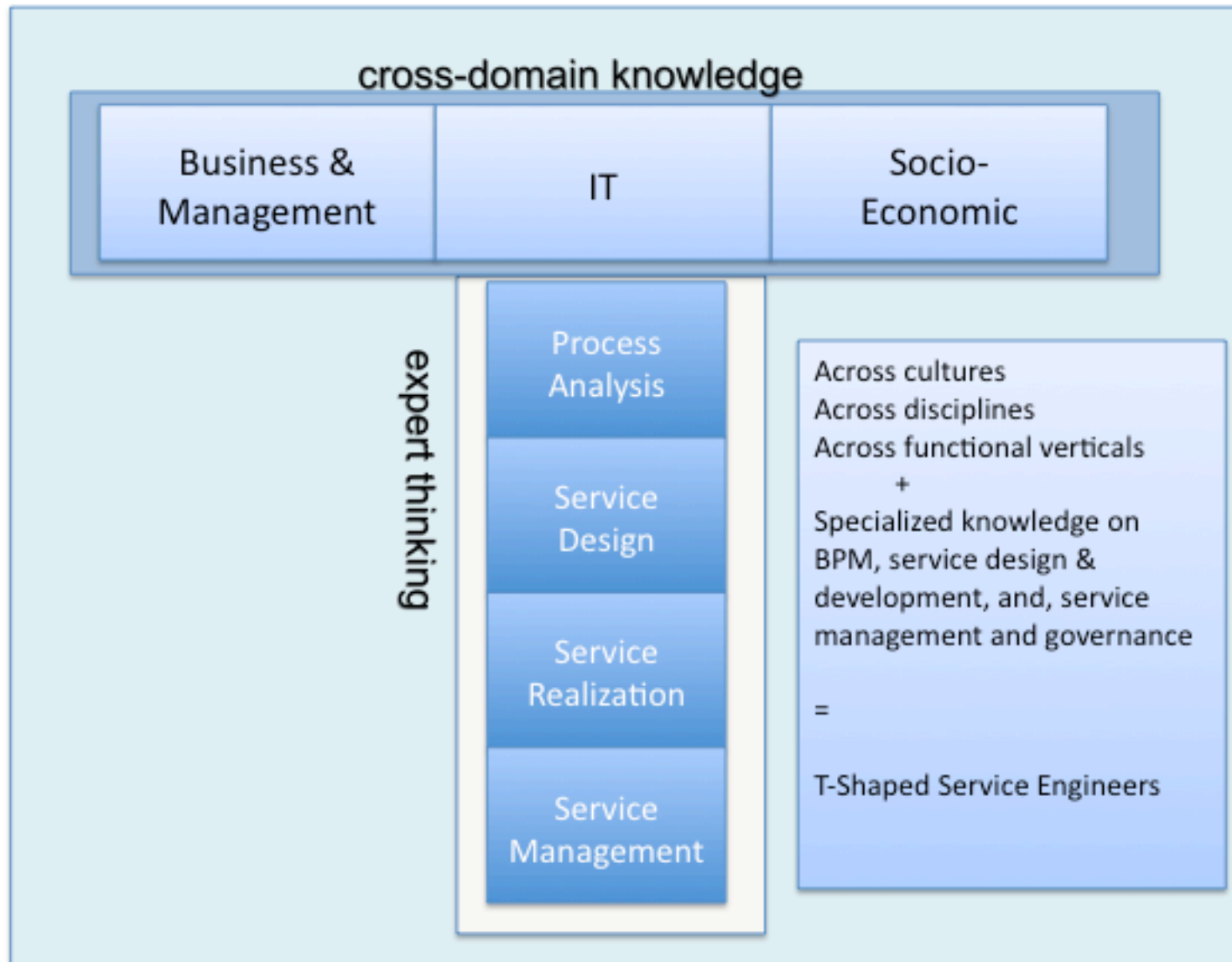
- Designed at the interface of software service systems and new globe-spanning business processes.
- Developed to prepare students with a background in business or information technology to become the new generation of service engineers.

### IMSE partner universities:

- >> Tilburg University, The Netherlands
- >> University of Stuttgart, Germany
- >> University of Crete, Greece



# The demand for T-Shaped Service Engineers



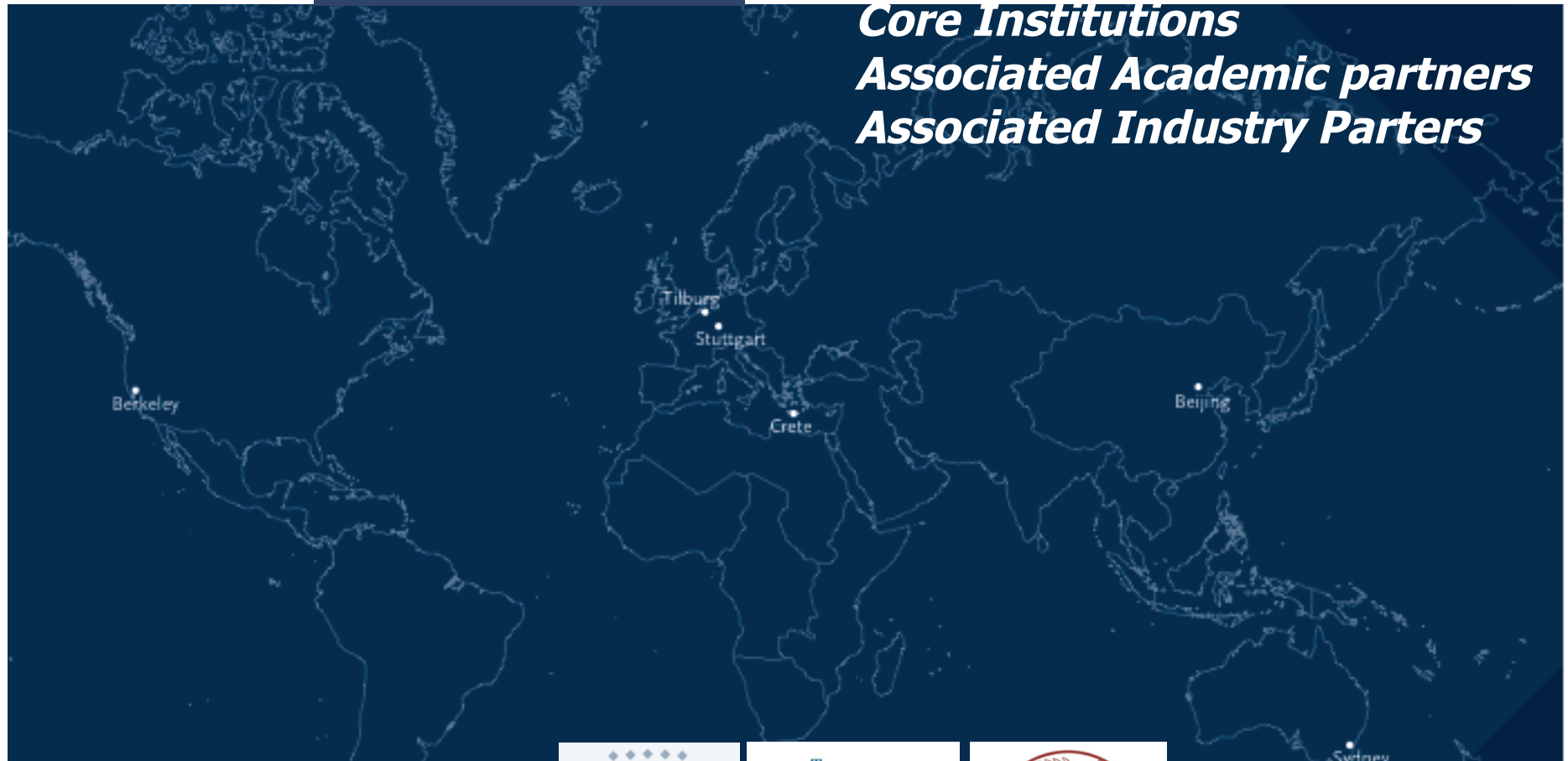
# The Consortium

DAIMLER

software AG



***Core Institutions***  
***Associated Academic partners***  
***Associated Industry Parters***



**Berkeley**  
UNIVERSITY OF CALIFORNIA



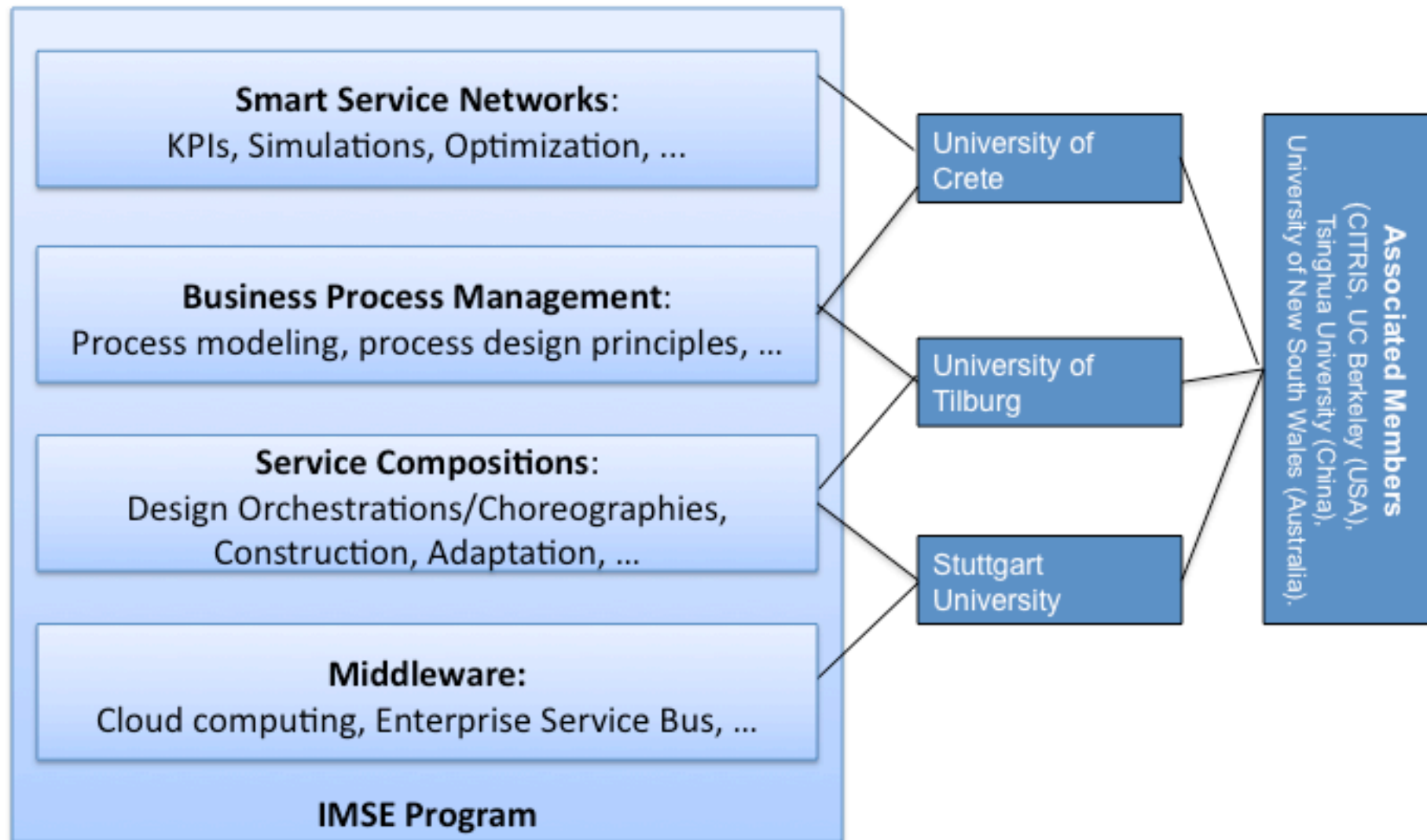
TILBURG  
UNIVERSITY



THE UNIVERSITY OF  
NEW SOUTH WALES



# International Master in Service Engineering (IMSE)



# The IMSE Curriculum at a Glance

*Stuttgart, Germany*

## Semester 1

- Workflow Management
- Webservices  
Messaging
- Datawarehousing
- Service Management  
and Clouds

*Heraklion, Crete*

## Semester 2

- Introduction SSME
- Process Management  
Systems
- Infrastructure Technologies  
for Large – Scale Service –  
based Systems
- Digital Economics
- Summer School

*Tilburg, The Netherlands*

## Semester 3

- Service Oriented  
Architectures
- IT Governance
- Business Process  
Integration
- Enterprise Architecture
- Elective

## Semester 4

- EU-students: associated  
members
- Non-EU: internships

# IMSE Fact Sheet

- *Start of programme: September 2010*
- *Cohort 1: 15 Students enrolled (2 self-paying)*
- *Scholar Scholarships: 3*
- *Recruitment Cohort 2: ongoing*
- *Degree: Joint Degree of Service Science*

# Joint Degree in Service Science

- Joint degrees programmes as such have only been very recently endorsed by the Dutch Ministry of Education ((July 2010)
- The generic EU protocol for accrediting IMSE (or other) EM programme has been stipulated by the European Consortium for Accreditation involving bi-lateral recognition agreements ( <http://www.eacaconsortium.net/> )
- Basically, IMSE will be accredited in a light-weight manner since:
  - IMSE is a special track in an pre-existing program of Tilburg University
  - The same applies to the partner institutions in Crete (Greece) and Stuttgart (Germany)



# Procedure

1. Legitimacy check
2. Principles for the accreditation
3. Assessment of all partner programs
4. Campus Visit by Accreditation Committee
5. Use of Foreign Visitation Reports (mutual recognition Agreements)



# The Road Ahead





# Questions?

