PRACTICES AND PLATFORMS FOR ALIGNING HIGHER EDUCATION TO THE EUROPEAN TRENDS IN SERVICE INNOVATION

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Expectations of the New Generations

- Baby Boom generation (1946-1964) - TV

- X Generation (1965-1976)

- Net Generation (1977-1997) – Computer, Internet, Mobility

- Next Generation (1998-…)

Don Tapscott – Grown Up Digital: How the Net Generation
is Changing Your World

The Net and Next Generations Values

- Liberty
- Personalization
- Vigilance
- Integrity

- Collaboration
- Entertainment
- Speed
- **Innovation**

Questions About Service Innovation

How to capitalize on the transformative power of service innovation for structural change?
Workshop organized by the Directorate-General for Enterprise and Industry
Belfast, 5 - 6 February, 2013

- What is the role of government?

- What is the role of business?

- What is driving change in society?

- How is the system going to change?

- How would the people's behavior change?
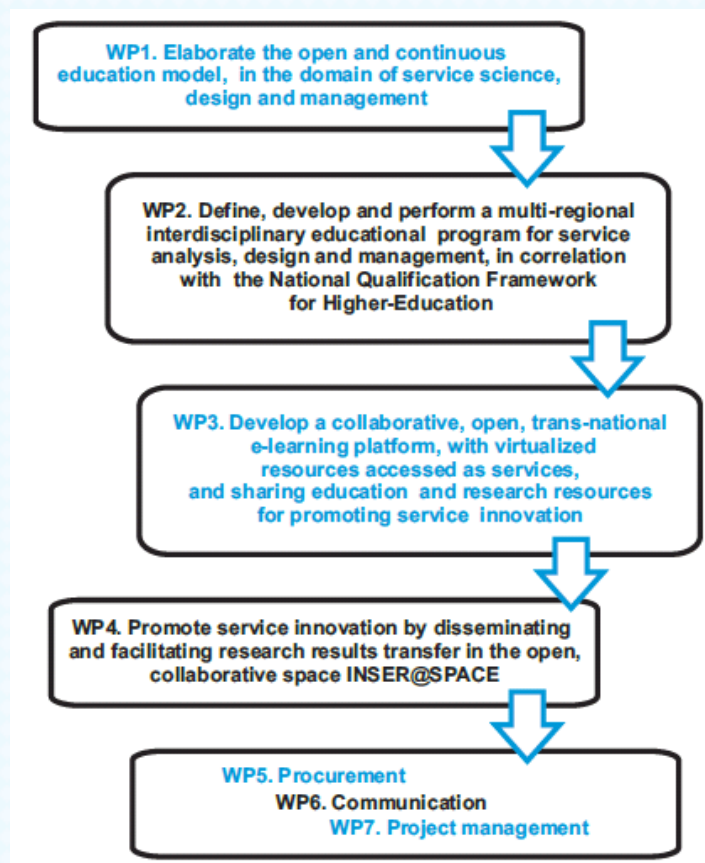
SERVICE INNOVATION IS EVERYWHERE.

European Platforms for Services

EIPKIS - European Innovative Platforms for Knowledge Intensive Services

INSEED Project

WP1. Elaborate the open and continuous education model, in the domain of service science, design and management

WP2. Define, develop and perform a multi-regional interdisciplinary educational program for service analysis, design and management, in correlation with the National Qualification Framework for Higher-Education

WP3. Develop a collaborative, open, trans-national e-learning platform, with virtualized resources accessed as services, and sharing education and research resources for promoting service innovation

WP4. Promote service innovation by disseminating and facilitating research results transfer in the open, collaborative space INSER@SPACE

WP5. Procurement
WP6. Communication
WP7. Project management

- ❑ University Politehnica of Bucharest (UPB) – **coordinator**

- ❑ University Transilvania of Brasov (UTBv)

- ❑ Bucharest University of Economics (ASE)

- ❑ University of Medicine and Pharmacy Carol Davila of Bucuresti (UMF)

Strategic Program to Promote Innovation in Services through Open, Continuous Education INSEED, 2010-2013

Aligning to the European Commission strategy

Common Action Programme

INSER@SPACE Platform
- SSKE Semantic Wiki
- e-Learning Cloud
- Educational programs support

European Innovative Platform for Knowledge Intensive Services (EIPKIS)
- Europe INNOVA
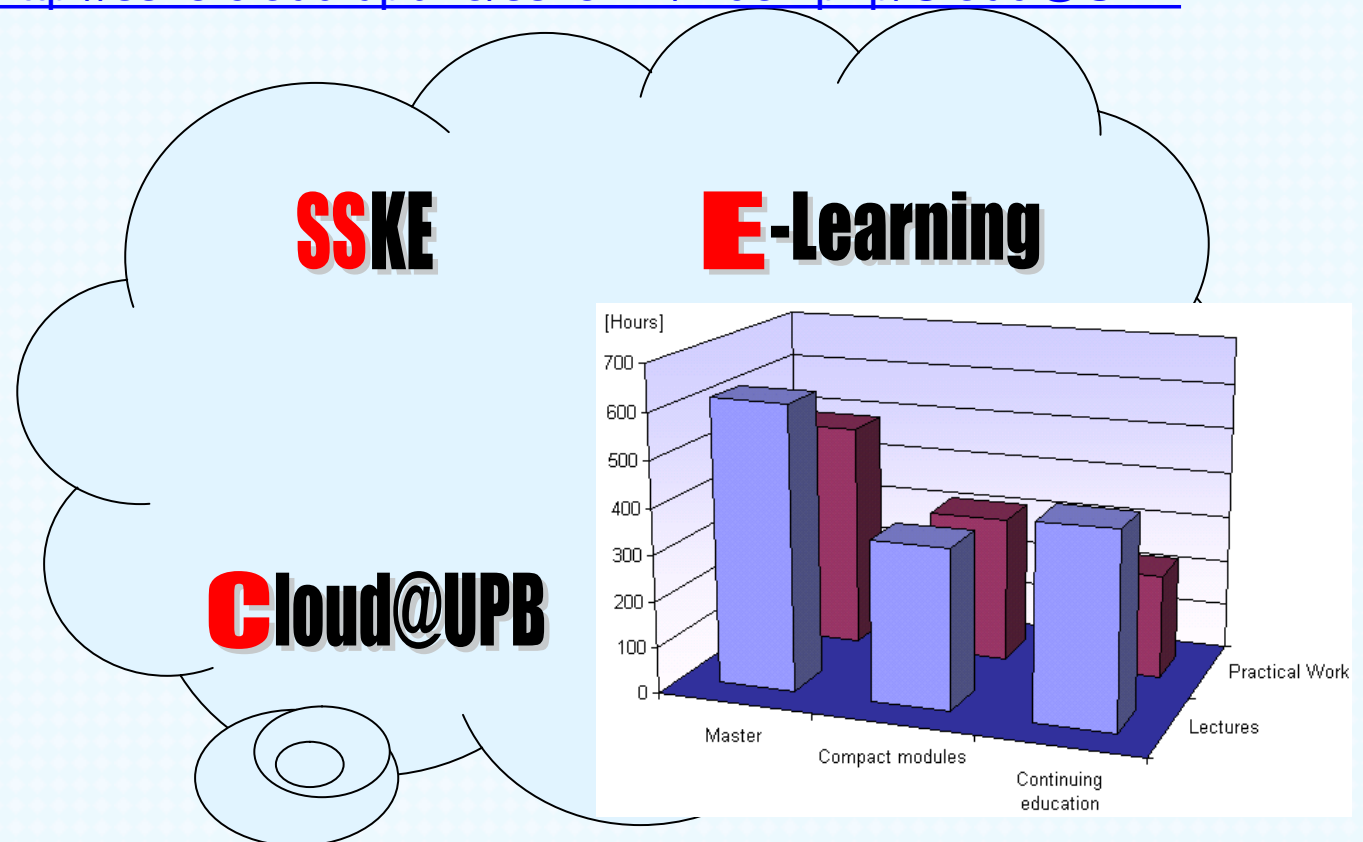- Europa 2020

European Strategic Framework
- Europe 2020
- Horizon 2020

INSER @ *SPACE* Platform

- **E-learning**: http://e-learning.cloud.upb.ro/
- **SS**KE: http://sske.cloud.upb.ro/
- **C**loud@UPB: http://sske.cloud.upb.ro/sskemw/index.php/Cloud@UPB

E-learning Support

48 courses

1300 hours of lectures

1000 hours of applications

INSEED - EIPKIS
Common Action Programme

Objectives

■ **A.** Aligning INSER@SPACE actions with the European Commission strategy

■ **B.** Contribution of INSEED experts and institutions to activities of initiatives and scientific communities at international level

■ **C.** Collaboration with foreign professors and researchers on the topic of innovative services

■ **D.** Sustaining education activities in the domain of services and in correlation with the European framework

■ **E.** Promoting the INSER@SPACE collaborative space

INSEED - EIPKIS
Common Action Programme

Results

▮ Community

- EU Cluster Observatory
- Enterprise Europe Network
- KIS Innovation Platform
- TM Forum
- International Society of Service Innovation Professionals (ISSIP)
- IEEE Computer Society Cloud Computing Special Technical Community (CS CC STC)

▮ Collaborations

- University of Porto
- Institute for Manufacturing, University of Cambridge (IfM)
- GDR MACS (Groupe de Recherche Modélisation, Analyse et Conduite des Systèmes Dynamiques)
- Paris 1 Panthéon – Sorbonne

▮ Contributions

- INSER@SPACE offer: education, knowledge, virtual resources
- DG CONNECT public consultation E2 Software & Services, Cloud
- EU Metrics Survey, scientific literature

Collaboration Map

European Master Programmes Concerning Service Science

Master Programme	Host Institution
Service Science, Management, and Engineering	University Masaryk / Czech Republic
Business Process Management Systems	University of Vienna/ Austria
ICT Service Management	Catholic University Leuven / Belgium
Service Management and Service Engineering	Karlsruhe Institute of Technology / Germany
European MSc in Business Informatics	City University Dublin / Ireland
Master on Service Engineering and Management	University of Porto / Portugal
Service Design and Engineering	Technical University of Eindhoven / The Netherlands

Master Programs on Services in Romania

No.	Title of Master program	University	Study domain
1	**Service Engineering & Management (SEM)**	**UPB-ASE**	**System_E.**
2	Sci., Design & Serv. Engn. in ETTI	UPB	Electron_E.
3	Advanced Software Services	UPB	CS & IT
4	Information Protection & Management	UPB	System_E.
5	Business Service Management	ASE	Bus_Admin.
6	Advanced Data Mgmt for Bus. Sustainability	UTBv	System_E.
7	Information Systems & Services in Medicine	UPB-UMF	System_E.
8	Service Oriented Architectures for Enterprise	UPB	System_E.
9	e-Government	UPB	CS & IT
10	Management of Public Services	ASE	Admin. & Public_Mngmt
11	Services for Energy Efficiency	UTBv	Power_E.
12	Service Engn. in Telecommunication Networks	UPB	Electron_E.
13	Multimedia Services and Signal Processing	UPB	System_E.

Service Engineering and Management

University POLITEHNICA of Bucharest
Romania

University of Porto
Portugal

Bucharest

Porto

Bucharest

SEM Master Program Description

Fundamental Domain: Engineering Science
Study Domain: System Engineering
Program Type: General Master, MS-T or MS-E
Knowledge Areas:
- Formal methods; Modeling
- Economic science; Management; Marketing
- Sociology; Communication; Service science
- Service system engineering
- Information systems; System architecture; SOA
- Data security; Information management

Curriculum areas: service system analysis and design, TIC, service operations management and marketing, psychology and organizational communication, service financial management

Competences:
- Using concepts and scientific methods in interdisciplinary domains
- Integrating concepts and methods specific to economic science and marketing into service development
- Considering psychology and communication principles in service development
- Business process modeling and implementation within the service domain
- Designing architectures for service-oriented systems (SOA, ESB, SaaS)
- Developing IT applications for services using modern technologies

Qualification:
Service Engineering and Management

Possible occupations (according to COR):
214402 Automation engineer
213901 System engineer in informatics
213101 Analyst
213102 Programmer
213905 Software system engineer
250101 Researcher in informatics
251413 Researcher in computers
251416 Researcher in automatic control
231001 Professor assistant
241919 Project manager

New occupations to be introduced in COR:
- Information systems consultant
- Business process consultant
- Architect for service systems based on TIC
- SOA consultant
- Service operations expert
- Customer relationships management expert
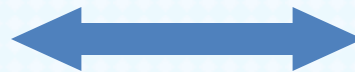
Double degree diploma

Agreements

Students that have been enrolled to study abroad at FEUP and have had a minimum of 6 months of study there, will get not only a degree from the Faculty of Automatic Control and Computers but also for the Faculty of Engineering from the University of Porto.

SEM Service Engineering and Management ⟷ MESG Master on Service Engineering and Management

Comparison between UP and UPB master programs

Programe de master

MESG (UP)
- Business Process Modeling
- Capital Budgeting
- Corporate Strategy
- Creativity
- Customer Relationship Management
- Multimedia and New Services
- Service Operations Management and Logistics
- Information Systems I
- New Service Development and Design
- Services Marketing
- Information Systems Architecture
- Human-Computer Interaction
- Enterprise Management
- Decision Support Systems
- Accounting and Financial Management
- Requirements Engineering for Services
- Human Resources Management
- Organizational Behavior

SEM (UPB)
- Service Operations and Customer Relationship Management
- Mathematical Modelling of Economic Processes
- Data Mining and Data Warehousing
- Architecture of Service Oriented Information Systems
- Marketing and Financial Performance of Business
- Network and Systems Security
- Business Service Integration and Management
- Knowledge Engineering and Services Ecosystem
- Intellectual Property and Entrepreneurship
- Business Process Modelling
- Supply Chain Management and Logistics
- Communication Management and Cognitive Psychology
- Foundations of Service Science
- Accounting and Financial Management for Services
- Enterprise Integration and Management Architectures

Conclusions

Best Practices:

- **Aligning to the European Commission guidelines**

- **Getting involved in the scientific community**

- **Collaborating on service science related topics**

- **Sustaining education on services**

- **Promoting the INSER@SPACE collaborative space**

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Thank you !

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