

Interdisciplinarity relating to ICT

Experiences with interdisciplinary ICT research in DK

Service Science as another example

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Thinking Across Disciplines

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ITEK survey: The primary IT competence requirements of companies are in IT combined with business competences

- Aalborg University is the largest ICT university in Denmark
- Multi-faculty university – potential for interdisciplinarity
- Center for Communication, Media and Information technologies (CMI)
 - Conditions for ICT development and implications of ICT use
 - Application development
- Other interdisciplinary departments, e.g. Humanistic IT
- The IT University in Copenhagen is also engaged in interdisciplinary ICT research
- Personal experience: More than 20 years of interdisciplinary ICT research – at DTU and Aalborg University
- Relatively long tradition, examples:
 - Computer Science
 - EuroCPR (25 years)
 - Belgian research program on ICT (IBBT – Interdisciplinary Institute for Broadband Technology)

- Mid 90s: Center for Tele-Information
 - Three pillars:
 - Technology and application development
 - Economics and policy of ICT
 - Use of ICT in organizations
 - Aim: To build an interdisciplinary research field
- Mid 00s: Center for Information and Communication Technologies
 - Initiated by European project
 - Merging hardware and software approaches

- MAGNET - personal networks
- CAMMP - mobile media
- CWMC – mobile and wireless cluster in CPH
- FUSE – innovative uses of the digital dividend
- ICE – innovations in the customer encounter

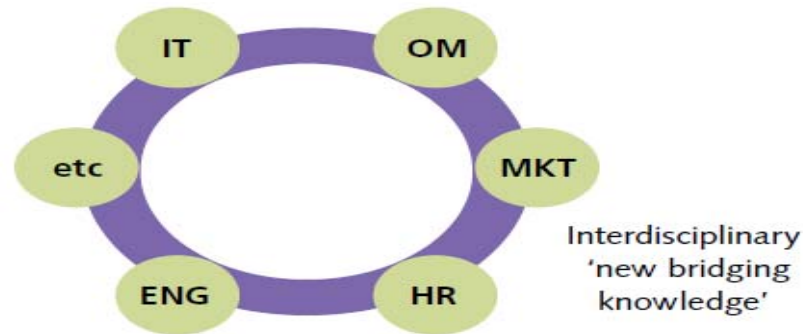
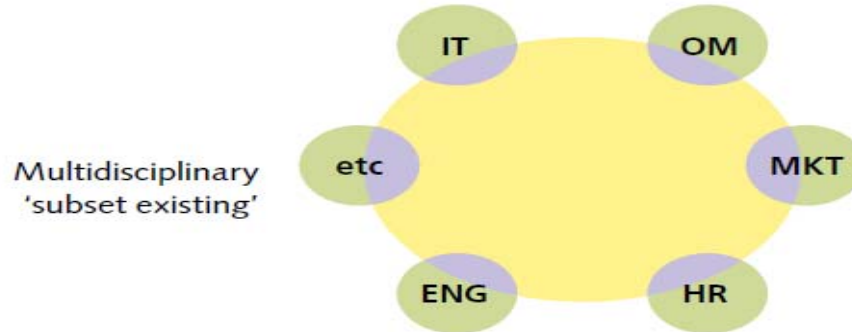
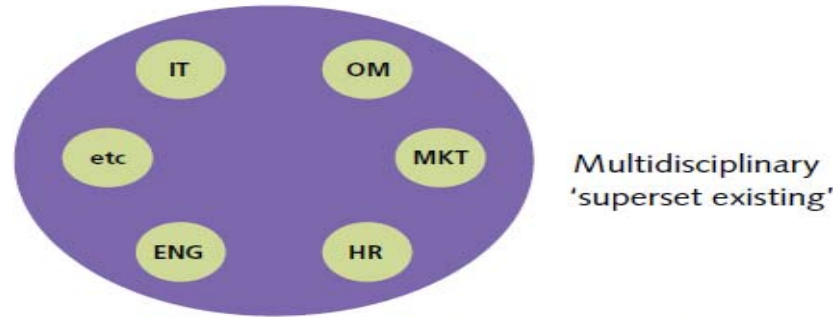
- MAGNET
 - Interdisciplinarity takes time – 10 years or more
 - We made a break-through with MAGNET
 - Social science still an appendix

- Master level
 - Services and platforms
 - First track: Application development + Media services
 - Second track: Design and markets + Governance and strategies
- Examples of courses
 - Entrepreneurship, innovation and business models
 - Interaction design
 - ICT techno-economics
 - Creativity and ICT design
 - Governance of ICT content, services and applications

- Service Science, Management, and Engineering (SSME) is a term introduced to describe an interdisciplinary approach to the study, design, and implementation of services systems – complex systems in which specific arrangements of people and technologies take actions that provide value for others. More precisely, SSME has been defined as the application of science, management, and engineering disciplines to tasks that one organization beneficially performs for and with another.
- Today, SSME is a call for academia, industry, and governments to focus on becoming more systematic about innovation in the service sector, which is the largest sector of the economy in most industrialized nations, and is fast becoming the largest sector in developing nations as well. SSME is also a proposed academic discipline and research area that would complement – rather than replace – the many disciplines that contribute to knowledge about service.

- Two important aspects of ved Service Science
 - Interdisciplinarity
 - Systematization
- SSME underlines Management og Engineering – but other disciplines are also important – marketing, for instance
- Is there a greater need for inter-disciplinarity within services compared to manufacturing? Hardly!
- But service processes are always close to the customer – which is why it becomes natural to integrate marketing, management and engineering

Multi- and inter-disciplinarity (Cambridge White paper)



- Servicization and industrialization
- Use of ICT
- Externalization
- Internationalization
- Competence raising
- And most importantly: Service innovation

- Relatively long-standing tradition for interdisciplinary ICT research and education
- Takes a long time really to develop an interdisciplinarity
- Disciplinarity is an important point of departure
- More focus on themes than on interdisciplinarity
- Service Science is an example of an interdisciplinary field
- Get away from social and humanistic sciences as appendixes in ICT research