

# Service Science: Hype or Cornerstone for Future Success? – A Five-Step Roadmap to Clarity -

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## 1. Introduction

In the last few years, there has been an increasing focus on services. As most frequently quoted, 70% of most developed countries' GDP is based on the service sector, and emerging countries are catching up fast. The trend towards intangibles as subject of economic exchange (often information-based "products"), towards IT-supported customization and extensive customer interaction will make services a key factor for global competitiveness – given that more and more services can be rendered without customer co-location.

Not surprisingly though, affected countries and companies do recognize the need to actively shape their innovation capabilities to stay abreast of their competition – and the notion of a "service science" has been born as the panacea. Academic attention and – even more importantly – public and industry funding is turning to a "service science" – and this naturally enlarges the perimeter as topics increasingly tend to be subsumed under the subject.

Conference and journal calls for papers do include long lists of potential subjects pertaining to service research. Academic endeavors like the S-D logic of Vargo/Lusch (2004) even suggest that *all* economic exchange should be seen and treated as a service – and the natural question does arise: is there anything like a service science – and if so, what should it entail and how is it different from existing, mature academic disciplines. Currently there is a tendency not to question this – like in the well-known fairytale of the emperor's new clothes nobody dares to question whether the emperor in fact does wear any clothes.

A (common) understanding and delineation of service science seems to be a prerequisite to define research topics, to tailor funding programs and to embed this research into the academic world. In the following it is described how - within Germany - recommendations to the Federal Ministry of Education and Research are sought (section 2) and which key questions need to be answered (section 3).

## 2. The Task Force

In 2006, the German Federal Ministry of Education and Research has launched the broad based "High-Tech-Initiative" for Germany<sup>2</sup> – pledging almost €15B to be spent up to 2009. The funds will be used to drive technology development within 17 defined "cutting-edge fields for the future" (including services), foster close cooperation of industry and academia, speed up the transfer of research results into applications, and improve the conditions for high-tech startups and innovative small and medium size companies.

The Ministry will be supported by the Industry-Science Research Alliance ("Forschungsunion"), a board of selected senior leaders in industry and academia with individual members taking the role of

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<sup>2</sup> More information is available at <http://www.hightech-strategie.de>.

promoters for the selected 17 fields. For services, Willi Berchtold, Executive Vice President, ZF Group has launched a task force involving a number of work groups with broad support by other companies and institutions. One of them is set up to specifically tackle the problem of zeroing in on the content of and approach to service science – with a number of experienced representatives of relevant academic fields readily agreeing to join. In the months to come, this group of experts will set out to shape answers to the questions below and come up with recommendations to the Ministry as to the future direction of service science in Germany.

### 3. A Five-Step Roadmap

The first starting point into this roadmap is striving for a consensus on the concept of service(s) – i.e. *question 1*. Over the last decades a number of potential definitions have emerged:

- the statistics-based sectoral view of the economy is often quoted as delimiter in the press,
- product-oriented companies predominantly define services as supplementary elements around their products,
- traditional economic researchers have tried to build a service concept around customer participation, intangibility, heterogeneity, inseparability, and perishability,
- more recent authors have forgone the rigid product-service separation and instead postulated services as the end of a continuum around intangibility, interaction, individuality<sup>3</sup>,
- within the “Service Science, Management, and Engineering” (SSME) initiatives, service is understood as the application competences to co-create value (and thus making services a general perspective rather than a subset of economic activity)<sup>4</sup>,
- at the same time ICT prone researchers use the service concept to delineate independent components of composite applications<sup>5</sup>.

Provided a sufficient consensus on any of those (or other definitions) *question 2* has to be answered: what should a service science discipline focus on? Alternative scenarios can be listed based on the work of Stauss<sup>6</sup>:

- a Sector Service Science could represent the science of the tertiary sector – whatever that would mean,
- a Service Industry Science could be restricted to selected growth industries like telecommunications or health care,
- a Service Transformation Science could concentrate on the “servitization” of product businesses,
- a Service Topic Science could be defined by particular aspects like innovation or design,
- an Analytical Service Science could deal with the application of analytical methods to service problems,
- a Service Management Science could center around the management of intangible and co-produced goods.

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<sup>3</sup> Cf. Meffert/Bruhn (2006).

<sup>4</sup> Cf. Spohrer et al. (2007).

<sup>5</sup> Cf. Buhl et al. (2008).

<sup>6</sup> Stauss (2007).

Consensus on this perspective would then entail a discussion on the approach that a cross-disciplinary service science should employ (*question 3*) – including a subsequent debate on whether the terminology “science” is adequate at all:

- multi-disciplinary approaches emphasize dealing with service problems without requiring methodological integration of the disciplines employed,
- interdisciplinarity, on the other hand, would require this integration,
- transdisciplinarity, though, would make scientific work goal-oriented originating from and centering around problems in industry practice

Given a satisfying view on these competing perspectives, *question 4* would deal with suitable institutional concepts for promoting service science. Given traditional discipline silos in the academic world – what would be promising directions for installing service science:

- can it flourish in existing department structures,
- do we need to establish separate department or school structures,
- or do we need to drive institutions that are (at least) partly outside traditional universities?

Finally, in the context given, the German situation needs to be evaluated in order to position the country within the global competition, and as a result, the focal areas for research should be defined (*question 5*) – which then would be the subject of monetary support also by the Federal Ministry of Education and Research.

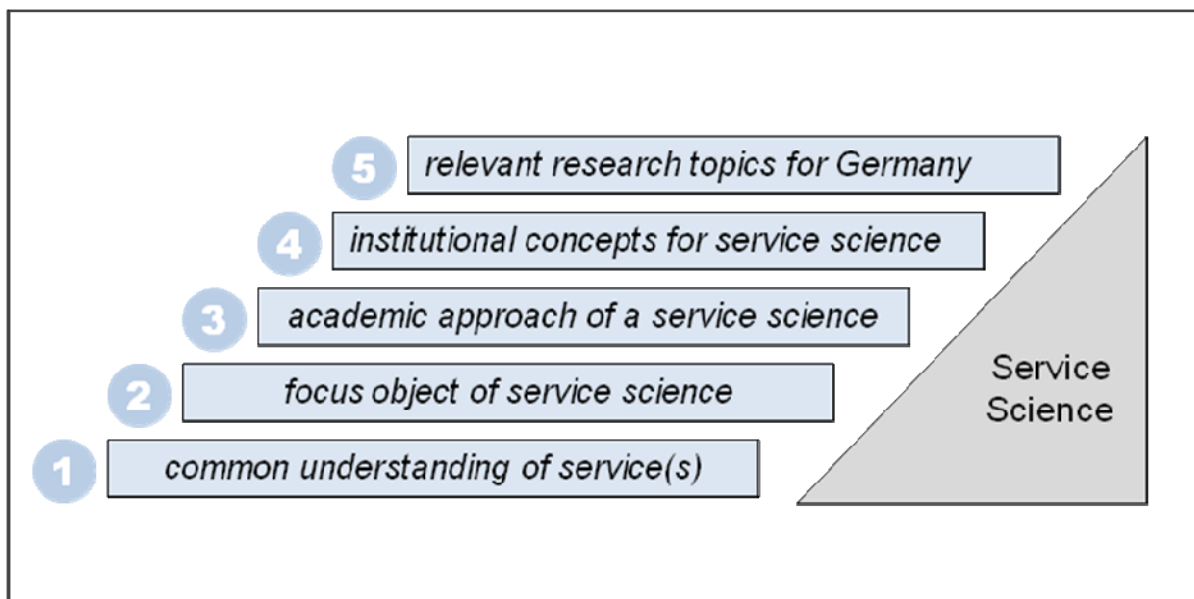


Figure 1: The roadmap to clarity in service science

At the RESER conference 2008, this project will be launched, and we look forward to collecting and synthesizing views on the different steps (cf. figure 1) and to host controversial debates within and outside the group. We do welcome active participation in the discussion and will do our best to unravel the myth of “Service Science”.

## Literature

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