

Succeeding through service innovation: A service perspective for education, research, business and government

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University of Cambridge

Some fundamental questions

1. What is service innovation?
2. Why does service innovation matter?
3. What did the Cambridge meeting consider?
4. What is the service innovation agenda for...

Education?

Research?

Business?

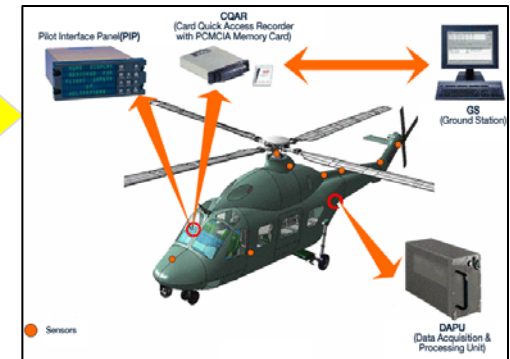
Government?

What is service innovation in the 21st century



Health and Usage Monitoring Systems

Use sensors on equipment to detect repair and overhaul requirements



John Deere iGuide system (2007)

Uses GPS technology to automatically shift the steering pattern of the tractor to compensate for implement drift

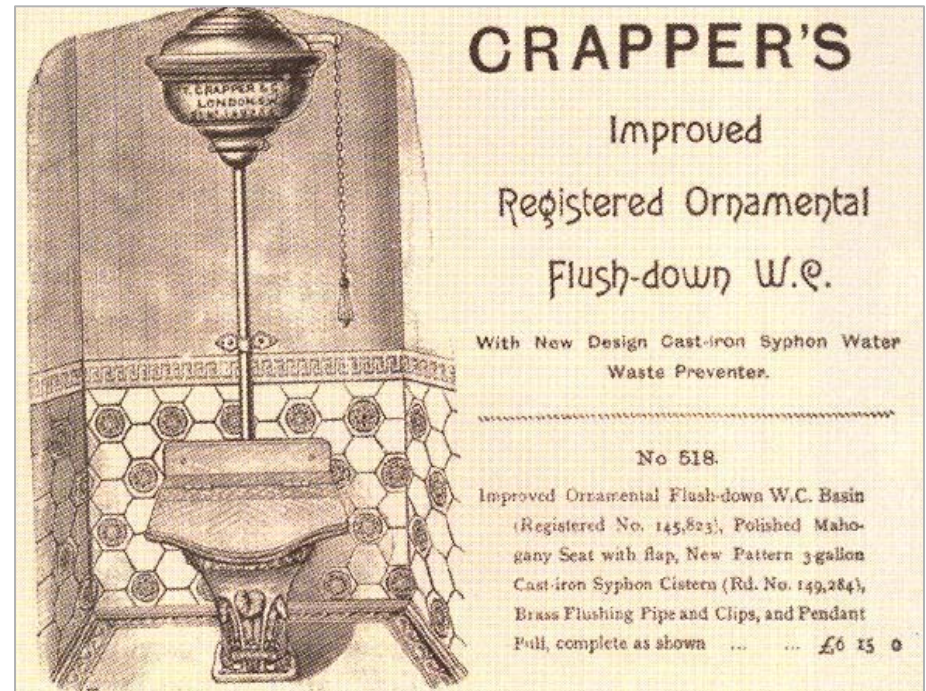


Service innovation in all walks of life

Yesterday's Technology...



Thomas Crapper (1836-1910)
Sanitary Pioneer



Footnote for Sir John Harington who is credited with inventing the first flush toilet in 1596!

Today's toilet technology!



Neorest toilets...

- Lid opens automatically as you walk up...
- The seat's heated...
- There's a catalytic air purifier to remove any "unwanted odours"...
- With a manual power override for those particularly unpleasant visits...
- There's a warm-water massage spray and a hot air dryer...
- The temperature and intensity of both are controlled using a LCD panel...
- Once you've finished and left the "sensor zone" the toilet automatically closes the lid and starts a three stage "Cyclone" flush; the strength of which depends on how long you've been busy on the toilet and previous patterns of usage.

The intelligent toilet...



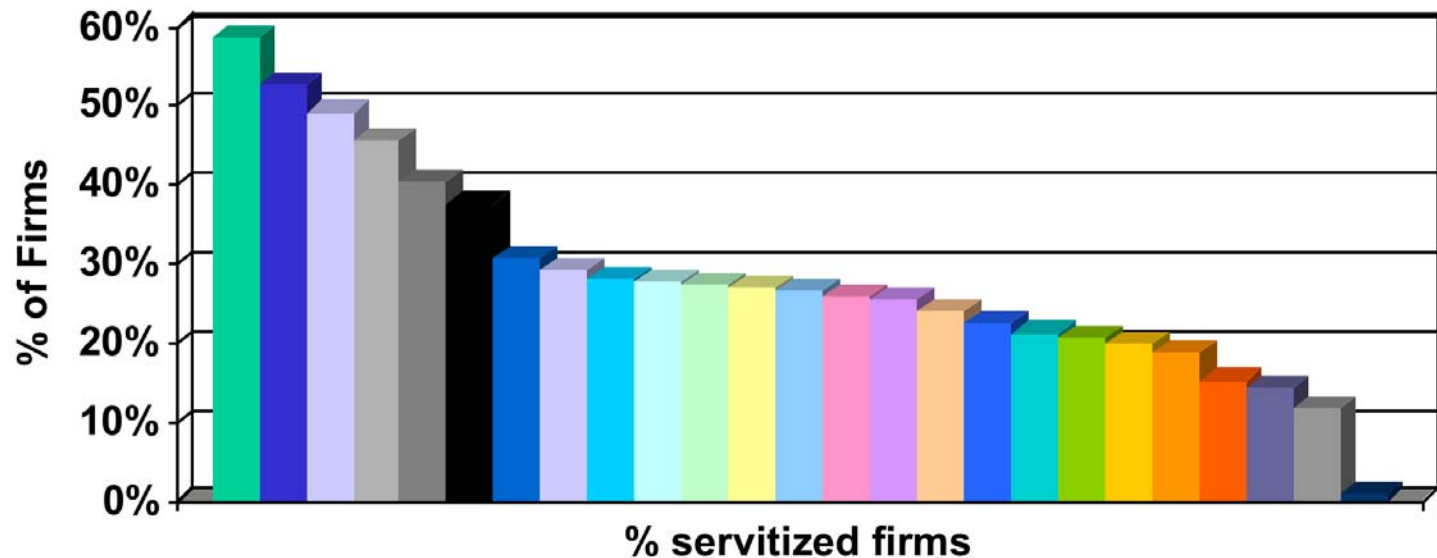
The toilet of tomorrow!



Put simply...

**The servitization
of manufacturing
= integrating
services with
products...**

The servitization of manufacturing



It's not just the 70+% of people employed in services (directly) that work in services!

Some fundamental questions

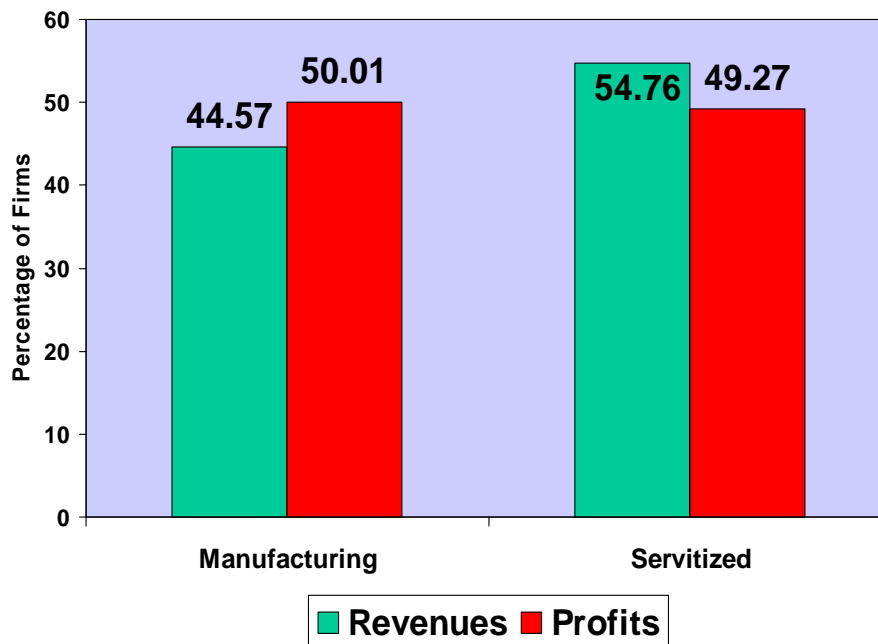
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Why does service innovation matter?

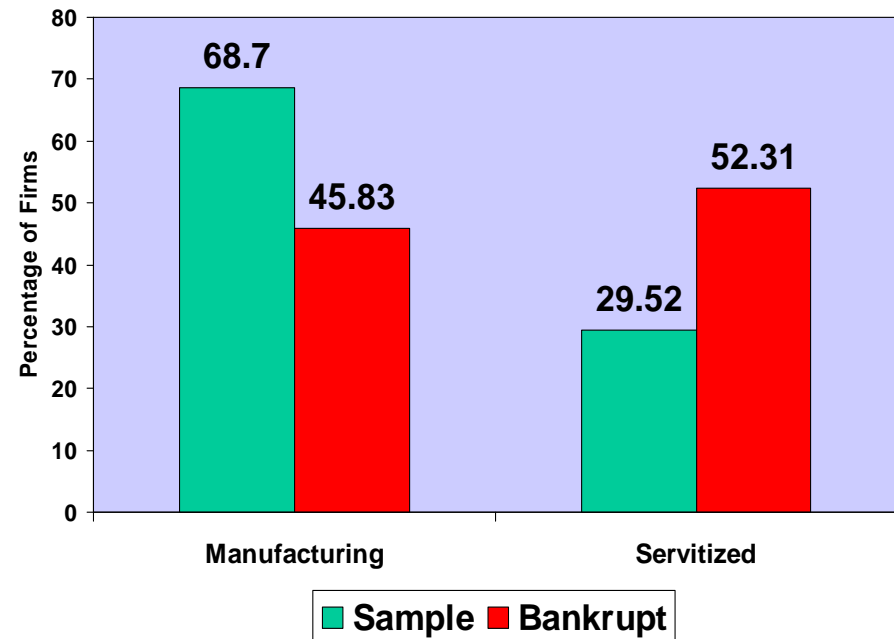
Economic rationale	<ol style="list-style-type: none">1. Manufacturing firms in developed economies cannot compete on the basis of cost (technological developments are enabling them to add innovative services)...2. The installed base argument (e.g. for every new car sold there are already 13 in operation, 15 to 1 for civil aircraft and 22 to 1 for trains)...3. Stability of revenues – services vs. products...
Strategic rationale	<ol style="list-style-type: none">1. Lock in customers (sell the original equipment at cost, make money on spares & suppliers - razor, printers)...2. Lock out competitors...3. Increase the level of differentiation (e.g. equipment provider offers to take customer's risk and give predictable maintenance costs)...4. Customers demand it (e.g. contracting for capability)...
Environmental rationale	<ol style="list-style-type: none">1. Environmental rationale (change notions of ownership and resource use – e.g. Mobility cars)...

The services paradox

Servitized firms account for a greater proportion of revenues, but a lower proportion of profit



A greater proportion of servitized firms went bankrupt than might be expected



Neely, A.D. (2009) "Exploring the Financial Consequences of the Servitization of Manufacturing", accepted for publication in Operations Management Research.

**Service innovation
is not easy!**

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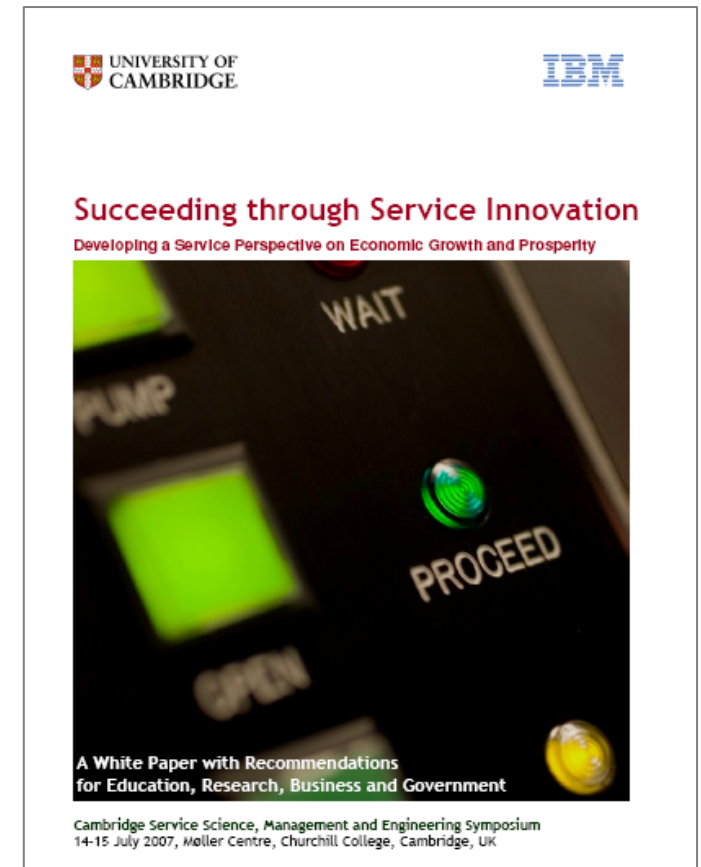
Cambridge symposium: Key objectives

To establish consensus on the need for service innovation

To articulate the key concepts in service innovation

To identify gaps in existing knowledge base and skill sets

To stimulate further actions through recommendations for business, government and academia



Development of the white paper

Analysis of status quo (May '07)

- Form industrial and academic committee

Cambridge symposium (July '07)

- Attendees include senior academics and leading industrialists

Green paper development (July-Sept '07)

- Led by Guangjie Ren
- Advised by committee

Broad stakeholder consultation (Oct-Dec '07)

- Active response from over 100 people

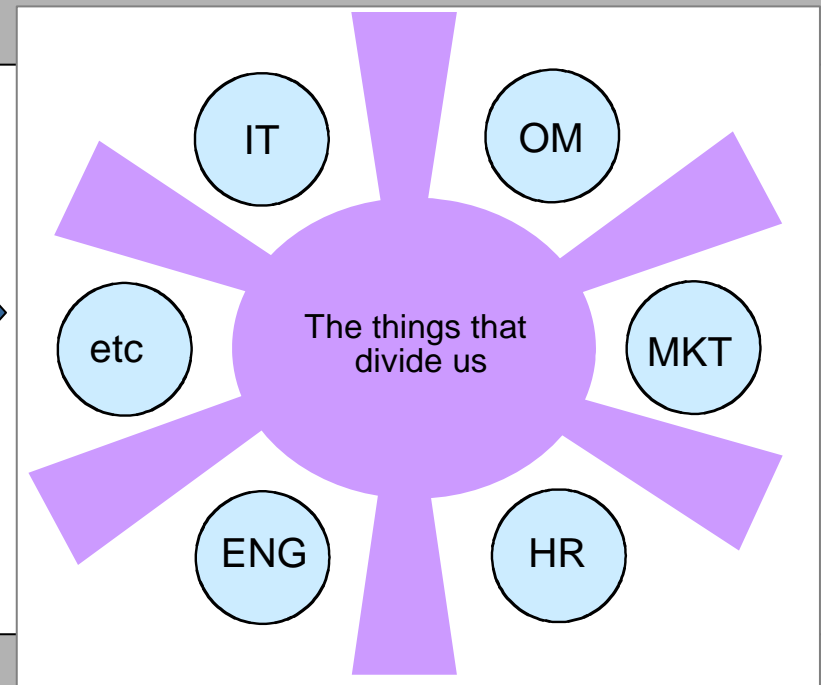
Paper revision and report release (Jan-Mar '08)

- www.ifm.eng.cam.ac.uk

The problem is clear

Designing and delivering complex service systems that perform requires specialisation and integration.
However, the reality is ...

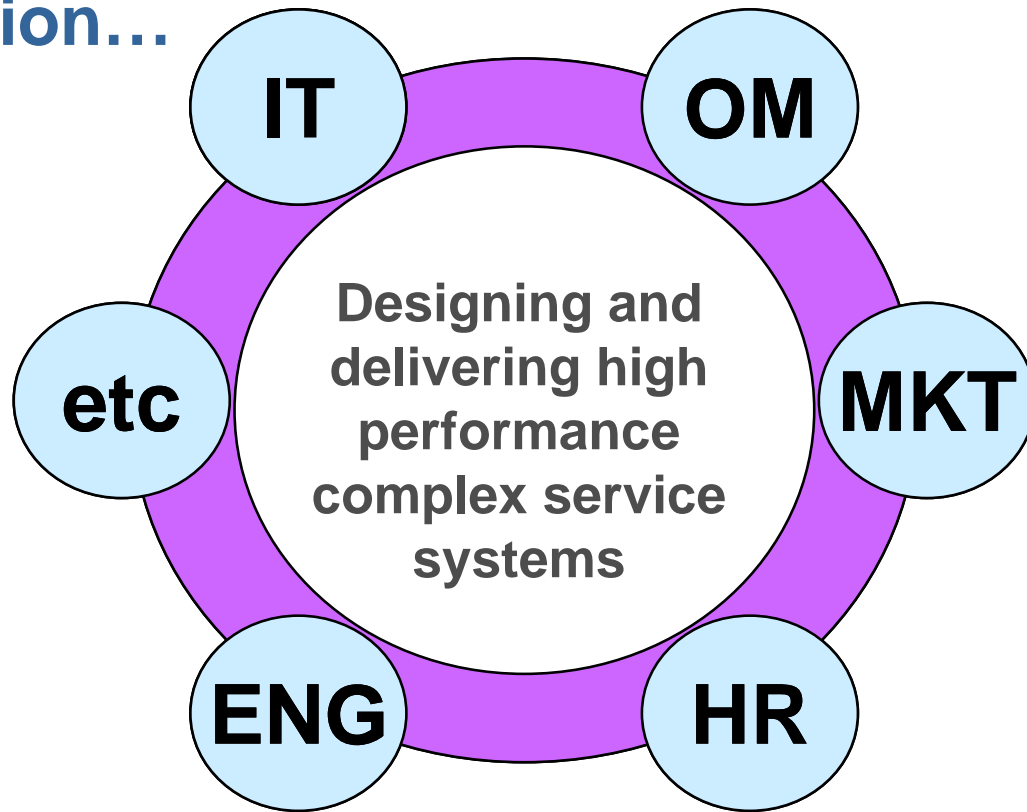
**Functionally
divided silos...**



This has led to

- gaps in knowledge across disciplines
- short supply of people with skills moving across functions.

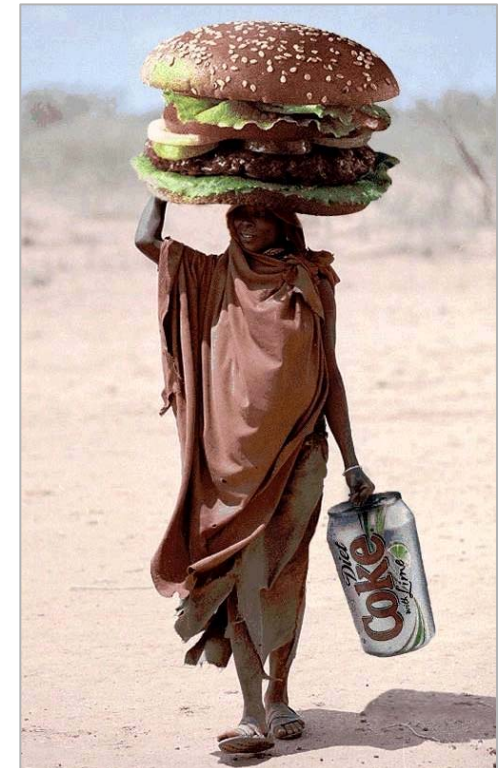
The solution...



But this time academia, business and government need to work it out together!

Why a collaborative solution?

Put simply the challenges that we face (and that we are going to face) are too complex for any single group – either discipline or section of society – to solve...



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Recommendations for education and research

1. Enable **graduates from various disciplines** to become “T-shaped professionals”, who can make early contributions as adaptive innovators with a “service mindset”
 - a) Promote SSME programmes and qualifications
 - b) Develop a modular template-based SSME curriculum
 - c) Explore alternative and innovative provisioning routes
2. Develop an inclusive **interdisciplinary and intercultural** approach to service research
 - a) Foster disciplinary-integration efforts with grand research challenges
 - b) Establish service system and value proposition as foundational concepts
 - c) Work with practitioners to create data sets for service systems design
 - d) Create service systems modelling and simulation tools

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Recommendations for business

1. Review existing approaches to building **repeatable service systems**
2. Expand **project-based collaboration** with multidisciplinary research teams
3. Establish **employment policies and career paths** that encourage the formation of interdisciplinary service science communities
4. Provide specific **challenges and funding** for service system research
5. Develop appropriate organisational arrangements and practices in the area of **business partnerships** to enhance industry-academic collaboration
6. Work with stakeholders to include **sustainability measures** and create actionable **service innovation roadmaps**

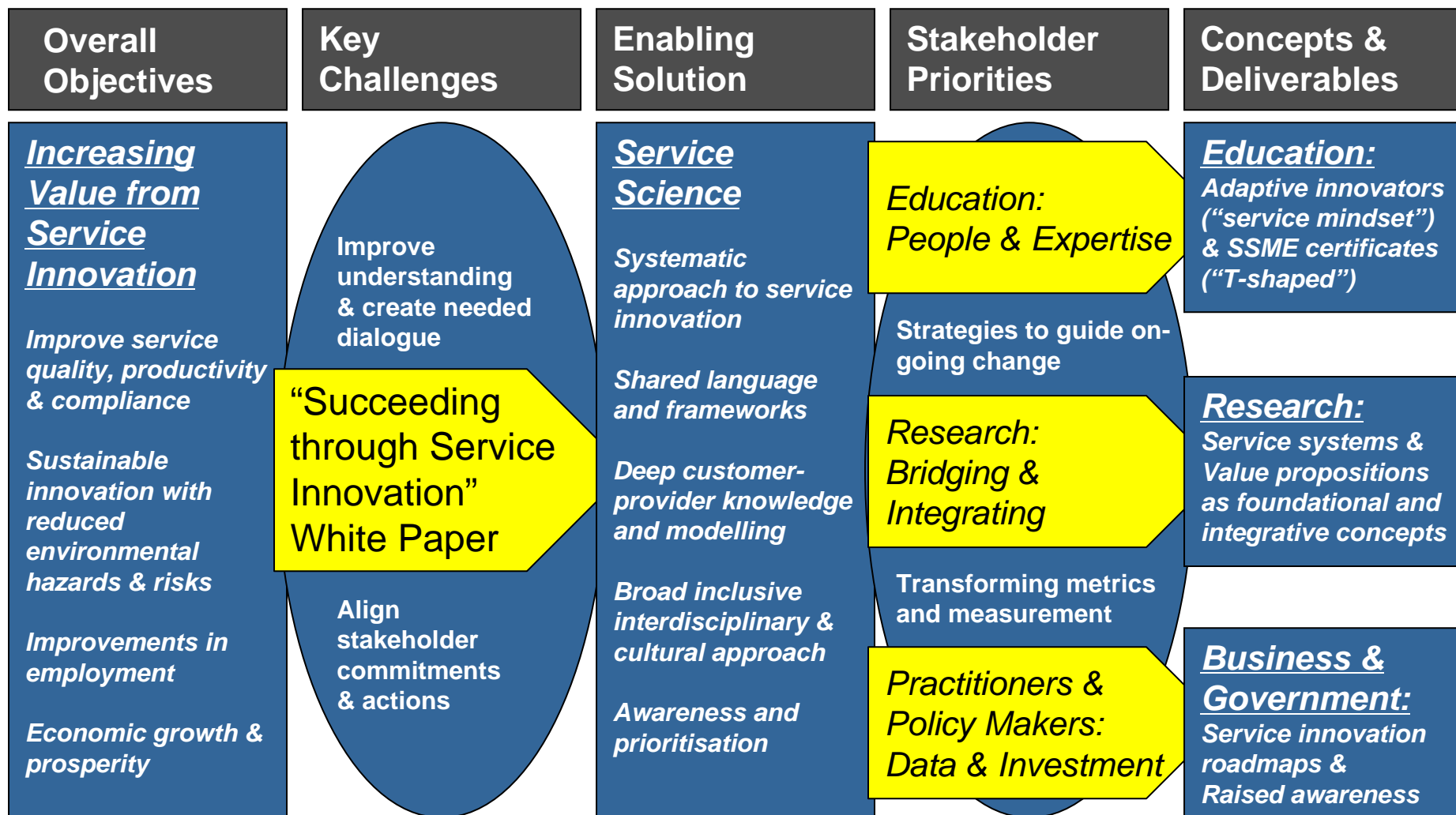
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Recommendations for government

1. Explain the **importance of service innovation** for all parts of the economy and fund the development of an **integrated theory of service systems**
2. Demonstrate the value of service science to government agencies and thereby create **methods, data sets, and tools** to inform and challenge current education and research support
3. Develop **relevant measurements and reliable economic data** on knowledge-intensive service activities across sectors to underpin leading practices for service innovation
4. Make **government service systems** more comprehensive and citizen-responsive
5. Encourage public hearings, workshops and briefings to develop **service innovation roadmaps**

The service innovation agenda



For further details

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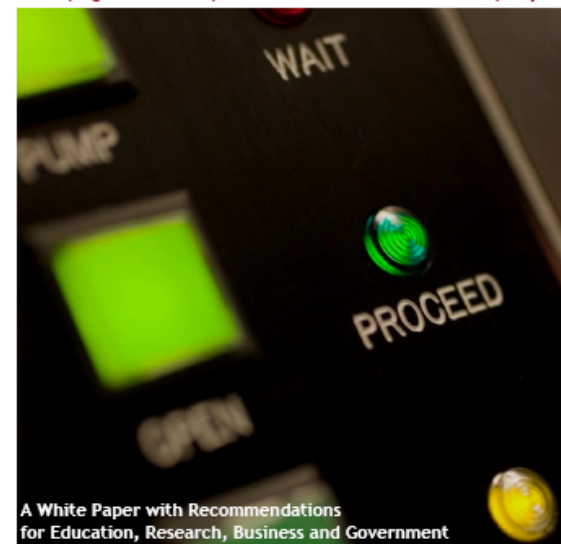
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Succeeding through Service Innovation

Developing a Service Perspective on Economic Growth and Prosperity



A White Paper with Recommendations
for Education, Research, Business and Government

Cambridge Service Science, Management and Engineering Symposium
14-15 July 2007, Møller Centre, Churchill College, Cambridge, UK



2009 Service Science Summit

Co-hosted by Aalto University and IBM

