UNIVERSITÀ DEGLI STUDI DI SALERNO

DIPARTIMENTO DI SCIENZE AZIENDALI MANAGEMENT & INNOVATION SYSTEMS

ASVSA

SIMAS
SISTEMI PER L'INNOVAZIONE E MANAGEMENT SOSTENIBILE

Marketing Strategy in Service Business

- amegaro@unisa.it -

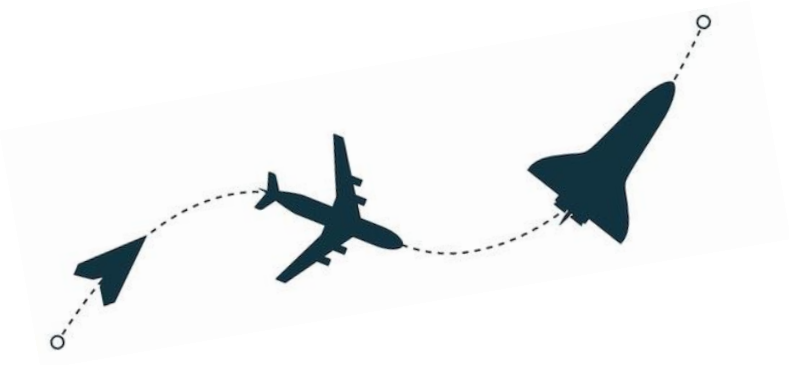
Programme

- Marketing and Service Marketing: an overview
- Marketing plan
- Complexity management
- New marketing strategies approaches: Relationship Marketing and Many-to-Many network; Experiential marketing; Unconventional marketing
- New marketing vision: Service Research - from S-D logic & Service Science to service ecosystems & service systems
- Technologies as Decision Support Systems for marketing strategies

Case studies
Examples
Project work

Agenda: Lesson 5

- SSMED, service systems & smart service systems
- Service innovation and technologies as Decision Support Systems for marketing strategies



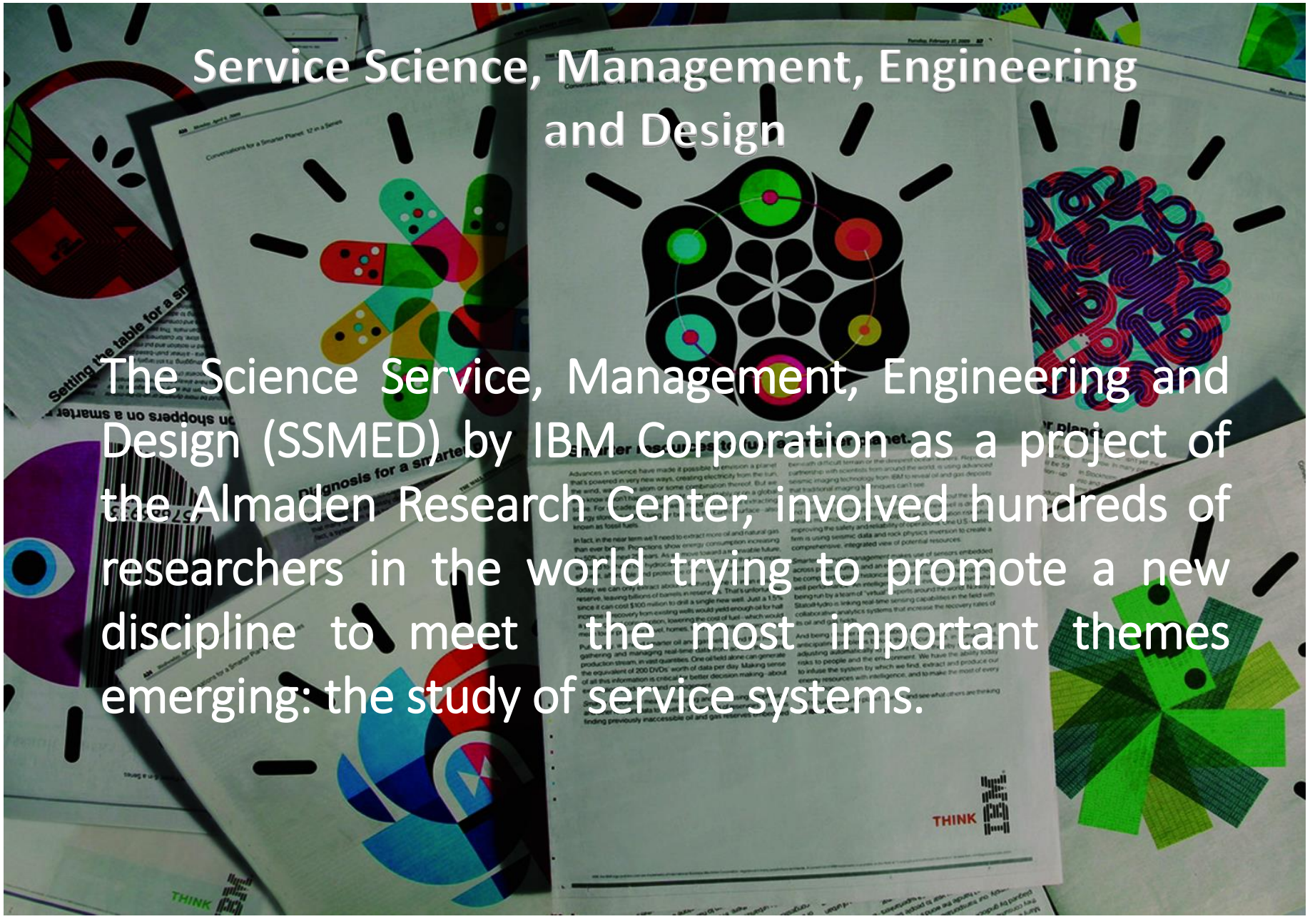
Examples

5.1

Service Science, Management, Engineering and Design

Computer Science Service Research

What is the link?


Service Science, Management, Engineering and Design
The Science Service, Management, Engineering and Design (SSMED) by IBM Corporation as a project of the Almaden Research Center, involved hundreds of researchers in the world trying to promote a new discipline to meet the most important themes emerging: the study of service systems.
THINK

Service Science

Service Science management, engineering and design (SSMED)

- Multidisciplinary research stream that studies the implications emerging from the new management approach to service
- Unifying framework for service design, delivery and evaluation that aims at developing the capabilities required by service economy;
- Introduced after company's shift from a good-logic to a service centered perspective

The founders: Spohrer and Maglio (2008)

Aim: to combine and to apply computer science, operational research, industrial engineering, management and social sciences to find the most appropriate organizational model to support the emergence of value

Service Science

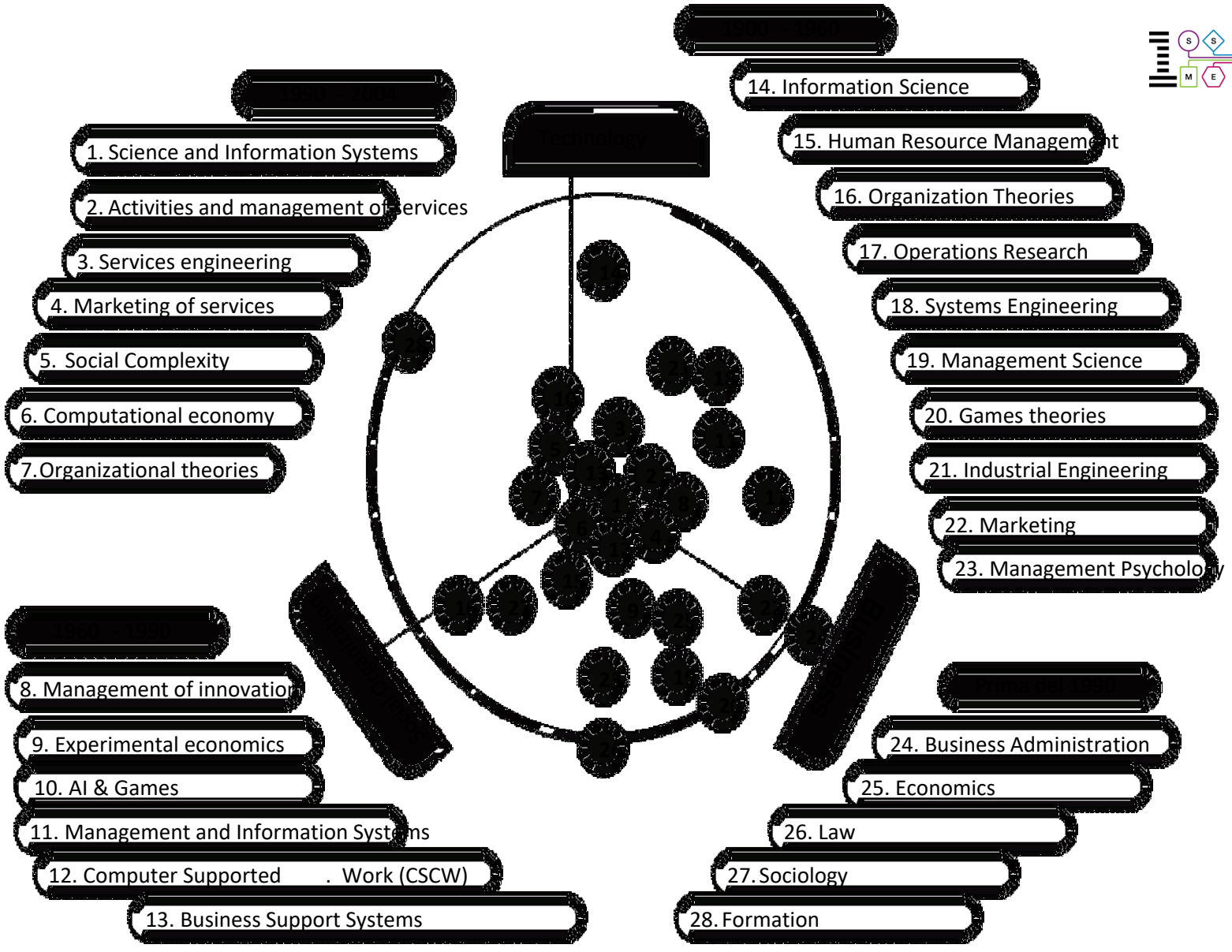
Always looking for *service innovation*, service science would combine organization and human understanding with business and technological understanding to:

(1) explain the origins and growth of service systems;
(2) solve fundamental problems such as how to invest optimally to improve service productivity and quality;
(3) produce unique service professionals and service scientists

Service Science

Many disciplines have accumulated *knowledge* relevant to the understanding of service system, each focusing on different aspects of the overall system.

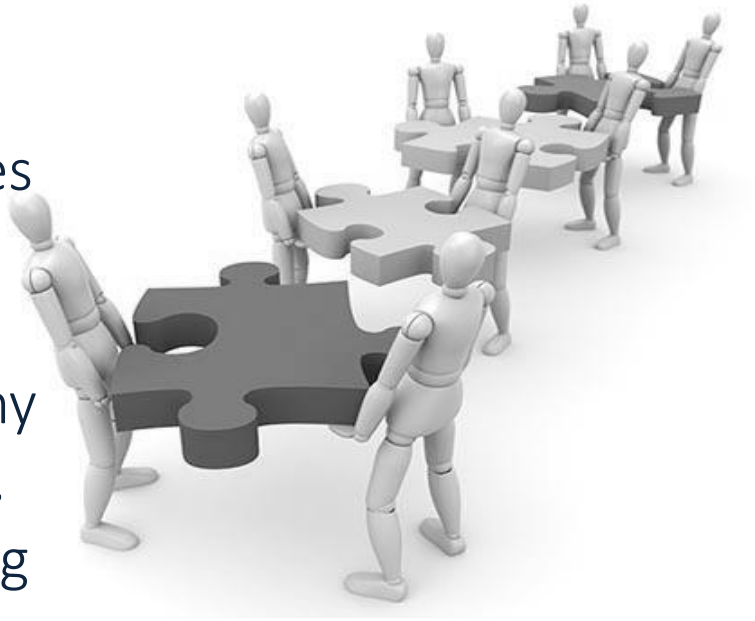
For instance, organization theory focuses on structures, rules, and incentives to create effective groups of individuals.


1. Science and Information Systems
2. Activities and management of services
3. Services engineering
4. Marketing of services
5. Social Complexity
6. Computational economy
7.Organizational theories
14. Information Science
15. Human Resource Management
16. Organization Theories
17. Operations Research
18. Systems Engineering
19. Management Science
20. Games theories
21. Industrial Engineering
22. Marketing
23. Management Psychology
8. Management of innovation
9. Experimental economics
10. AI & Games
11. Management and Information Systems
12. Computer Supported . Work (CSCW)
13. Business Support Systems
24. Business Administration
25. Economics
26. Law
27. Sociology
28. Formation

Service Science

Service is an ever complex issue to deal with.

- Service is related to **value co-creation** among actors.
- Adopting a Service view improves positive interaction between entities in reticular system.
- Service co-creation involves many actors within a dynamic process.
- Service exchangers need evolving expertises and competencies.



Service Science, Management, Engineering and Design

The service-dominated economy has been multisectoral and transdisciplinary. This makes difficult to define a new kind of discipline that could be considered really “cross and unifying”. There are important academic debates on how to describe the implications of service concept characterizations both for basic and applied research.

Service Science focuses on a new and updated service concept, on the study of service systems and on the recent conceptual and interpretative development of *smart service systems*.

Service Science, Management, Engineering and Design

Service Science, Management, Engineering and Design (SSMED), proposes several prospects of investigation and embraces many fields of interest and application.

- In terms of *Science*, it investigates what service systems are and how they really evolve, focusing on the active role of the people employed in them, of knowledge, of shared information, and of technologies, as well as on the importance of the active participation of the services' users (the demand) in the production process (offer);

- In terms of *Management* it investigates possible solutions for implementing evaluation of efficiency, sustainability reports, and systemic interaction within service systems;

- In terms of *Engineering* it is responsible for developing new technologies for the processes of detection, measurement, and dissemination of information-essential for sharing in the contemporary process of value-generation;

- In terms of *Design* it seeks to deepen the appropriate configuration techniques for the proper structuring of service systems.

Service Systems

Service systems are value-creation networks composed of (Bryson et al. 2004; Maglio et al. 2006):

- People
- Organizations
- Technology
- Shared information

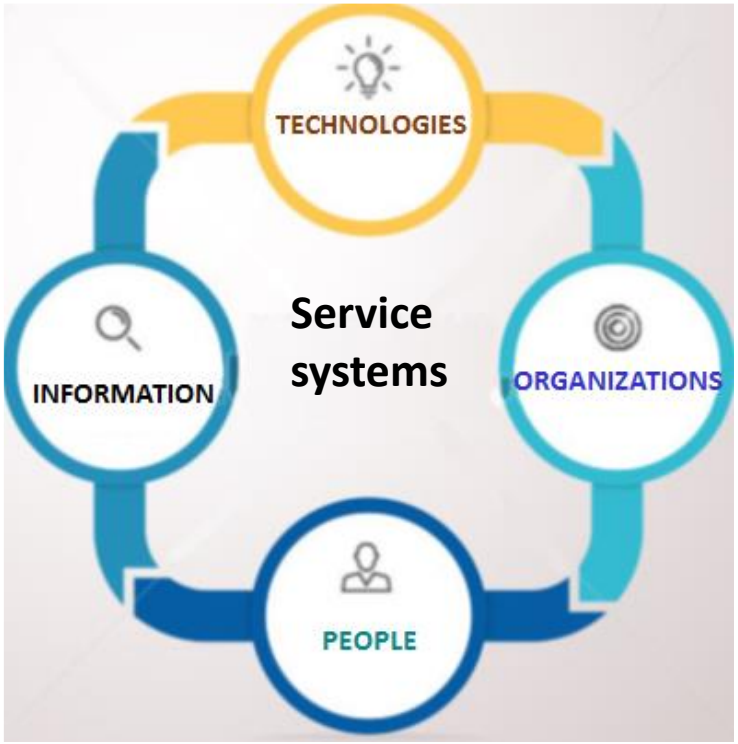
- promote **real-time** relationships and accelerate up **co-learning** processes in many fields (e.g. smart services in the energy sector, transport, etc.).
- come from systematic methods, continuous learning, data collection, innovation, social responsibility and network governance, and all the operations that benefit from the application of **new technologies**.

(1) Service Systems: definition

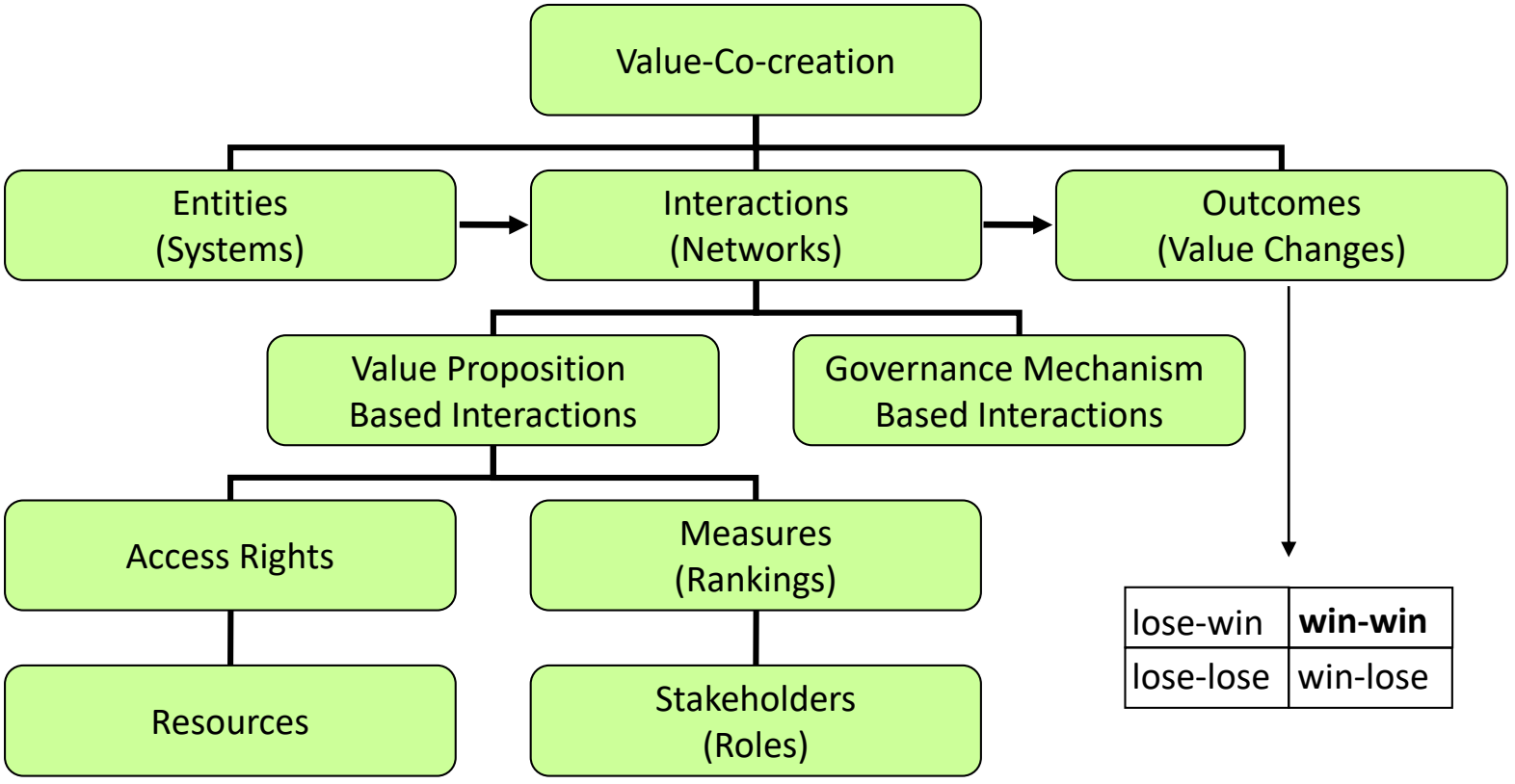
Service systems: value-co-creation configuration of people, technology, value propositions connecting *internal* and *external* service systems, and shared information able to create and deliver **value** to providers, users and other interested entities, through service.

SPOHRER, MAGLIO, BAILEY AND GRUHL (2007)

The **aim** of service system is to use its own resources and the resources exchanged with other actors to improve its own and other's well-being



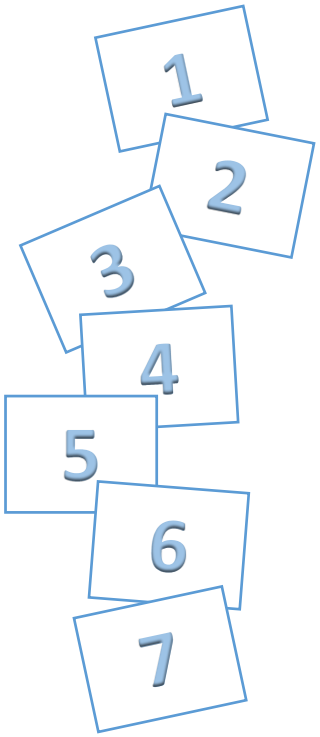
SSMED Key Concepts



Source: www.ibm.com

SSMED Foundations	Main Focus
Resources: Everything that has a name and is useful can be viewed as a resource	*Useful* instruments for activities
Entities: Some complex resource configurations can initiate actions, and these are called service system entities (or just entities, or sometimes just service systems)	Openness of evolving systems
Access rights: dealing with the social norms and legal regulations associated with resource access and usage.	Supra-Systems relevance
Value Co-creation Interactions: Also known as value-proposition-based interaction mechanisms	Joint process within Service Systems
Governance Interactions: Intuitively, governance mechanisms are a type of value-proposition between an authority service system entity and a population of governed service system entities	Common finality, internal and external equilibrium
Outcomes: When service system entities interact, value-co-creation is only one of the possible outcomes.	Value intended in an extended way
Stakeholders: The four primary types of stakeholders are customer, provider, authority, and competitor	Contextual influences and self-regulation
Measures: The four primary types of measures are quality, productivity, compliance, and sustainable innovation	Up to now only qualitative
Networks: Also known as service system networks, service systems entities interact with other service system entities (normatively) via value-propositions	Networked *embeddedness*

(2) Service Systems: definition



value-co-creation configurations,

resources integrators,

knowledge-based,

capable of enabling connections and interaction,

with the aim of reaching desired outcomes,

simply, always, an operative application,

any number of elements, interconnections, attributes, and stakeholders interacting in a co-productive relationship.

… a Service System is basically composed of heterogeneous entities, interacting with each other with specific purposes

Service System definitions	Authors	Year
Service systems represent value co-creation configuration of people, technology, value propositions connecting internal and external service systems , and shared information (e.g., language, laws, measures, and methods), like an assemblage of unites entities by some form of regular interaction or interdependence.	Spohrer, Maglio, Bailey and Gruhl	2007
Service Systems can simply be a software application, or a business unit with an organization, from a project team, a business department, a global division; it can be a firm, institution, government agency, town, city or nation; it can also be a compostiion of numerous collaboratively connected service systems within and/or across organizations.	Qiu, Fang, Shen and Yu	*2007*
Service Systems act as resource integrators, understandable in terms of elements of a work system, within the organization and through the network enduring resource specialization, those operand and operant, such as knowledge, skills, know-how, relationship, competences, people, products, money, etc.	Spohrer, Anderson, Pass and Ager	*2008*
Every service systems is both a provider and client of service that is connected by value propositions in value chains, value networks, or value-creating systems.	Vargo, Maglio and Akaka	2008
A service system is any number of elements, inteconnections, attributes, and stakeholders interacting in a co-productive relationship that create value, in which principal interactions take place at the interface between the provider and the customer.	Spohrer, Vargo, Maglio and Caswell	*2008*
A service system primarly relates to customer-provider interactions as well as open system with it being capable of improving its own state and the one of another system though acquiring, sharing, or applying resources, with the aim of creating a basis for systematic service innovation.	Golinelli	*2008*
Service systems are a complex interplay betwwen form and customer that form an open system which needs to be designed using the techniques of viable systems and systems dynamics, in which both parties are focused on achieving outcomes.	Ng and Maull	2008
Service systems can be divided into “front stage” (about provider/customer interactions) and “back stage” (about operational efficiency) and service performance relies on both of them, putting people (customers and employees), rather than physical goods, in the centre of its organizational structure and operations. The smallest service system is a single person; the largest one is represented by the global economy. A service system essentially is a social-technical system, focusing on engineering and delivering services using all available means to realize respective values for both provider and customer.	Qiu	*2009*
Service systems can be represented as real networks, in which the same entities combine their streghts through direct and indircet connectivity, as they are oriented toward enduring competitiveness and daily intercations with other external interdependent service systems.	Polese	*2009*

The different definitions

«A service system is any number of elements, interconnections, attributes and stakeholders interacting in a co-productive relationship that create value, in which the principal interactions take place at the interface between the provider and the customer»

Spohrer, Vargo, Maglio and Caswell, 2008

«A service system primarily relates to customer-provider interactions as well as open system with it being capable of improving its own state and the one of another system though acquiring, sharing, or applying resources, with the aim of creating a basis for systematic service innovation»

Golinelli, 2008

«Service systems can be represented as real networks, in which the same entities combine their strengths through direct and indirect connectivity, as they are oriented toward enduring competitiveness and daily interactions with other external interdependent service systems»

Polese, 2009

Service Systems: origins

The concept derives from **systemic vision** and **network theory** (Richardson, 1972; Normann and Ramirez, 1993; Castells, 1996; Capra, 2002)

System

entity **emerging** from a specific structure (organzational-physical equipment) thanks to interactions among all system's members (Barile, 2013).

Aim: **survival** through the acquisition (and the exchange) of **knowledge** from the other systems situated in the context which leads to the creation of new knowledge.

Since value co- creation is centred on knowledge exchange to acquire mutual benefits, system is the **most adequate configuration** for companies aiming at acquiring sustainable competitive advantage.

From Systems Theory

SYSTEM

- "complex of *interacting elements*" (Von Bertalaffy, 1956)
- "an entity that is *adaptable* for the purpose of surviving in its changing environment" (Beer, 1975);
- "entity which is a *coherent* whole" (Ng, Maull and Yip, 2009)

Actors & connections

Composed of many parts (Parsons, 1965), boundaries, **connections** and different relationships with relevant stakeholders based on the sharing of critical and influential capabilities

SUB-SYSTEMS

SUPRA-SYSTEMS

sub-systems focus on the analysis of relationships among its own internal components while supra-systems focus on the connections between the analysis unit and other influencing systemic entities in their context (Golinelli, 2005)

Service Systems

Today, *service systems* represent an **emerging issue** in economic research, all-encompassing many specific topics (**innovation**, **smart cities** and **communities**) and even quality, traditionally related to technologies and processes

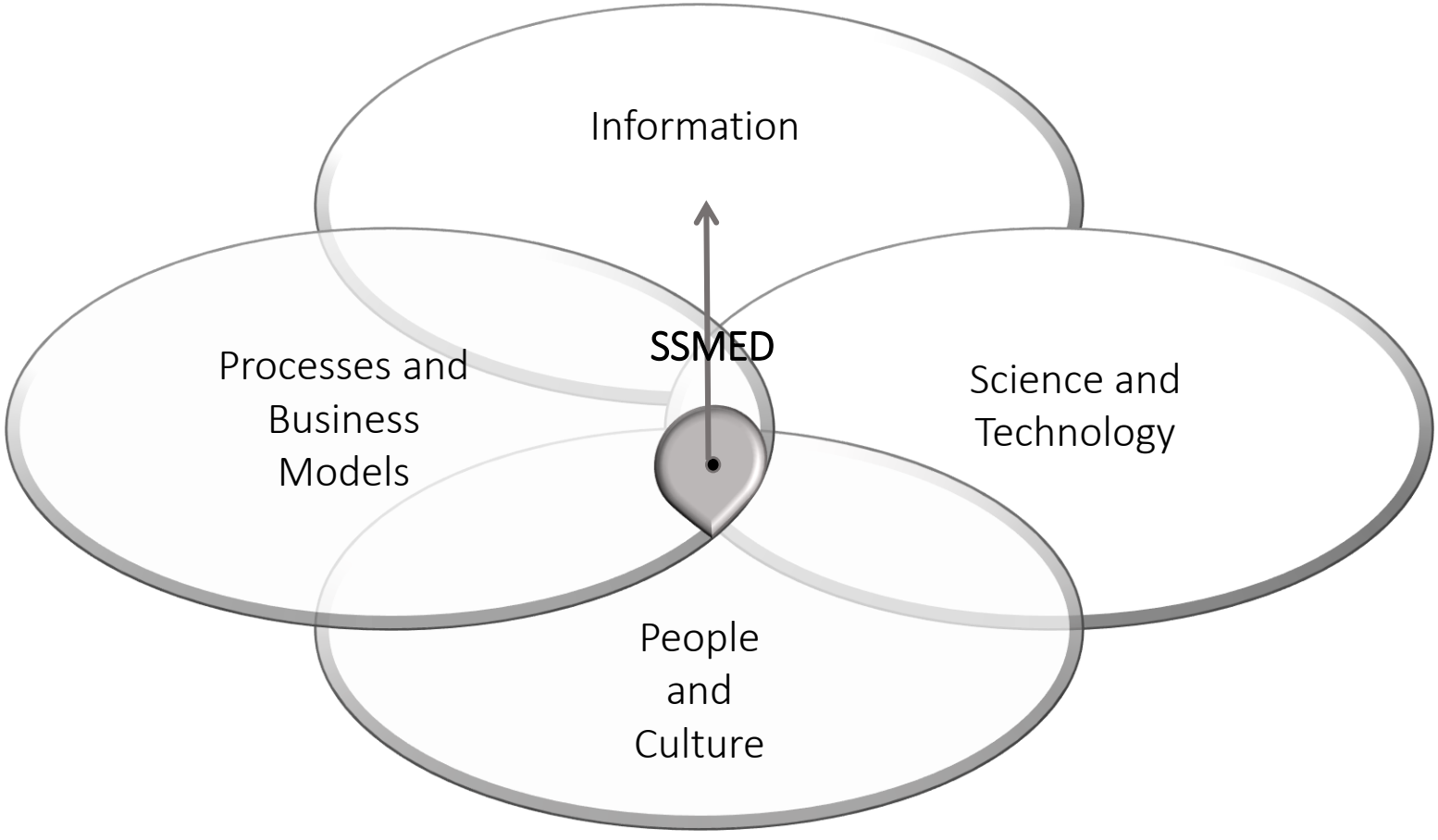
Reinterpretation of **service design**, service supply and **fruition**, in which multiple active actors **synergistically** participate in the value co-creation process, which is characterized by resource-sharing and common finality.

MAIN REFERENCES:

ALTER, S. (2008)

SPOHRER, J., VARGO, S.L., MAGLIO, P.P, CASWELL, N. (2008)

Service Science, Management, Engineering and Design



(1) Service Systems: ORGANIZATIONS

Organizations: interconnected systems entities sharing the same value system.

A Service system is composed of a network of organizations carrying out integrations of multiple resources in order to achieve **reciprocal benefits** for all the stakeholders.

Every member of the system has its own interests and pursues specific aims. Thus, managers should seek to harmonize the differing needs of each subject in an attempt to satisfy the stakeholder's demands and, at the same, the well-being of the system.

Individual objectives

System's Goal

(2) Service Systems: PEOPLE

Human factor is essential to balance the needs of all the stakeholders.

Knowledge is the real added value to foster value co- creation, since this process is grounded of the exchange of internal and external (contextual) competencies and resources

In a market based on *intangibilities*, service delivery does not represent only economic exchange, but can be undesrtood as the result of the integration of the **specialized skills** of each member.

Customers can help firm to improve service starting from service design, by sharing their capabilities and creativity.

(3) Service Systems: TECHNOLOGY

ICTs: opportunities for providers and consumers to exchange resources, fostering the sharing of value propositions at intra- and inter-organizational level

The diffusion of new technologies and platforms (community, forum, blog, social network) can enhance the interactions among stakeholders, with an increase in **stakeholder engagement**.
Users can make comments and judge service quality, providing organizations with suggestions on the improvement of the offering.

The more the social and relational capital grow, the more the knowledge exchanged intensifies.

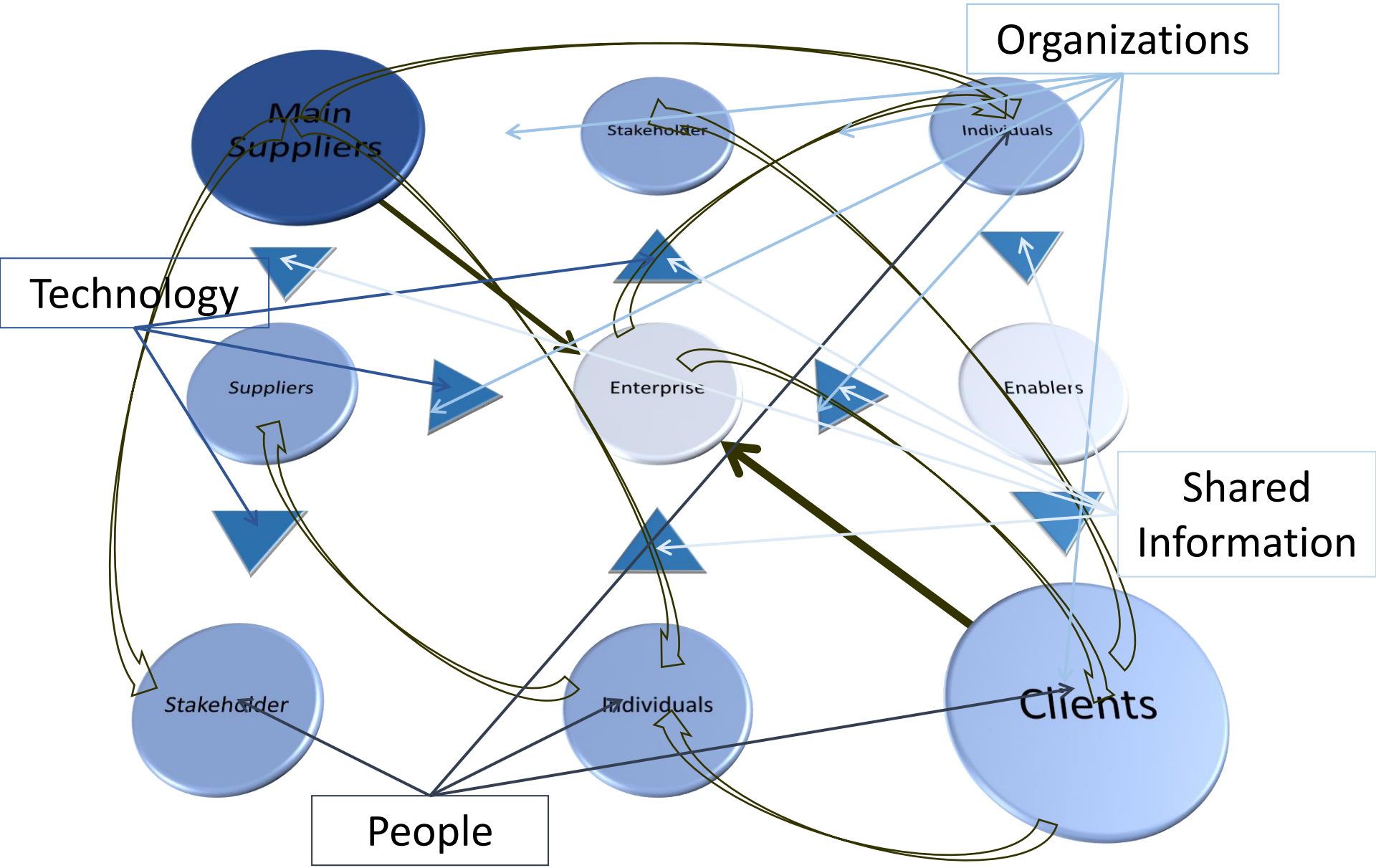
(4) Service Systems: INFORMATION

Through technology and ICTs co- creators can constantly share flows of **information**, increase their **knoweldge**, strenghten **relationships** and modify their **behaviors** to pursue common goals.

The possibility to transfer every kind of information in real time permits users to play a predominant role in business **decision-making** and service improvement

The combination of the 4 elements of service systems (organizations, people, technologies and information) allows to create value through the implementation of a **networked system** in which companies, institutions, organizations and users share a systematic flux of information and **know-how**, which can be **managed** in an **efficient way** thanks to technology

Service System as Value Network



Complex Service Systems

as the base of a Smarter Planet…

iterative, interactive, instrumented, interconnected, intelligent

S.M.A.R.T.: Specific, Measurable, Agreed, Realistic and Timely

(More measurement data, More networks, More learning and adaptation)

Smart traffic systems

Intelligent oil field technologies

Smart food systems

Smart healthcare

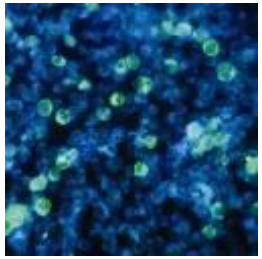
Smart energy grids

Smart retail

Smart water management

Smart supply chains

Smart countries



Smart weather

Smart regions

Smart cities

Source: www.ibm.com/think

Smarter Planet

Iterative, interactive, instrumented, interconnected, intelligent

(More measurement data, More networks, More learning and adaptation)

Information and analytics for Informed Decisions
How we're making better decisions through smarter use of data

Smart Grid
A smarter grid is transparent, accessible, resilient. And optimized from the user on up

Smarter money. Money rarely changes hands anymore
Ones and zeroes can help the world be smarter about dollars and cents

Smarter Food from Food technology with a healthy appetite for innovation
Technology is shaping how it grows, how it tastes and how it gets to your plate

Green buildings are smart buildings
Given their environmental impact, it's time we designed from the earth up

Smarter Government. "Citizen-centric"—the evolution to e-government continues
From the local town council to international collaborations, new ways of working are underway

Smarter Cities
Safe neighborhods. Quality schools. Affordable housing. Traffic that flows.It's all possible

A prescription of intelligence for Smarter Healthcare
To build a smarter system, healthcare solutions need to be instrumented, interconnected and intelligent

Cloud computing.
Workstations used to be tied to a mainframe. Now they're conversing with a cloud

Smarter IT systems
The foundation for a smarter planet

Smarter Oilfields
Get to the "first" oil faster. Increase recovery rates. Sense and solveproblems before they start

Smarter Products. The era of the one-size-fi product comes to an end
The goods we use are getting smarter. Now manufacturing has to as well

Making retail smarter for known shoppers
Accelerate supply chains. Strengthen loyalty. Improve margins

Smarter Traffic
How we get from point A today to point B tomorrow

Smarter Water Management
Whether too much or not enough, the world needs a smarter way to think about water

Smarter Telecom for nowadays Communication Technology
Demand is skyrocketing for more and smarter ways to communicate. Can we keep up?

Smarter Food

Smarter Products

Making retail smarter

Smart Service Systems

S.M.A.R.T.: Specific, Measurable, Agreed, Realistic and Timely (More measurement data, More networks, More learning and adaptation)

There is an increasing demand for ‘smart service systems’ based upon ICT, to create a basis for systematic and sustainable *service innovation* in complex environment.

Smart Service Systems definition

Smart service systems are service systems in which smart products are boundary-objects that integrate resources and activities of the involved actors for mutual benefit.

SSS concerns several elements interacting with each other and working together for a common final goal, through smart solutions.

Smart service systems need to be understood as complex, open, and dynamic sociotechnical systems.

Service Science vs S-D logic

Similarities with SDL

- Relational approach to business
- Focus on resources (RBV)
- Many-to-many logics to business behaviour

Differences with SDL

- Practical approach
- Technological- Informational focus
- Smart vision on planet
- Measurement of service and *systematic* search for innovation and continuous improvement

SPOHRER, J., ANDERSON, L., PASS, N., AGER, T. (2008)
SPOHRER, J. MAGLIO, P.P., BAILEY, J., GRUHL, D. (2007)
VARGO, S.L., LUSCH, R.F., WESSELS, G. (2008)

5.2

Service innovation

Service Innovation

Service Research approach

Innovation does not happen when a new product is introduced into a market or a new service provided (traditional perspective) but when its introduction determines new practices and institutionalized solutions to co-create value among players.

Institutionalization, understood as maintenance, disintegration, change of institution, is the process underlying innovation (Vargo et al., 2015), useful for solving problems, developing new forms of knowledge and also implementing new and more effective technological components starting from value co-creation processes (Akaka et al., 2017).

Service Innovation

Service Research approach

In recent years, technological advances have allowed the creation of several products that can potentially be considered smart as potentially capable of promoting the co-creation of value within smart service systems.

The technological advances appear relevant and (potentially) innovative as they are able to favor better integrations of resources among the actors operating within systems which are characterized by continuous and systematic interactions between actors mediated by technology.

Need for new technologies in marketing

Today *innovation* is increasingly associated with the function of encouraging companies in pursuing and maintaining their survival, through the achievement of a competitive advantage.

Service innovation occurs within networks when existing value propositions are modified through a process of integrating existing resources or by inventing new resources and involves the creation, renewal and transformation of pre-existing knowledge. Innovation cannot be exclusively linked to the use of new technologies; they have the “task” of providing companies with data.

Need for new technologies in marketing

Innovation implies that through technologies, *responsible entities* may improve themselves, and, as service systems are centered on people, it occurs when people, thanks to technologies, are able to optimize service systems operation.

Need for new technologies in marketing

To be competitive and survive in their complex context, companies must be able to solve complex situations and adapt to the needs of their customers.

It is necessary to use a service approach and always look for interactions oriented to value co-creation.

Data-driven decision making

Today, decision-making processes could be more “informed”, thanks to a more precise exchange of information. This would support decision makers to define and implement a strategy in an ever timelier and precise manner, with an improvement in the overall performance.

Data-driven decision making can improve organizations' performance and enable them to pursue their survival goals.

Data-driven decision making

A data-driven decision-making process can improve the competitiveness of companies and enable them to pursue their marketing aims, such as customer relationship management, improvement of the quality of the product or service proposed.

[E.g. Data-driven decision making can also support healthcare actors to improve their performance. The healthcare system is today increasingly patient-centered and, for example, patient data, if correctly interpreted, could allow a doctor/patient co-learning process.]

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THANK YOU.

Questions? Comments?

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