Service Dominant Architecture (SDA)

The Construction Plan for Collaborations on Platforms
Foundations, Application, Unique Selling Proposition

Course and certificate „SDA PROFESSIONAL ONE“

Institute for Service Design, Hamburg

www.ifsd.hamburg

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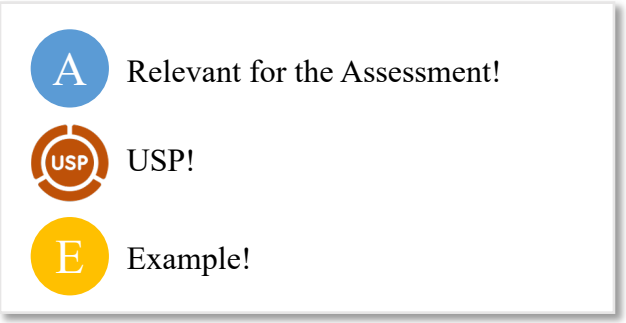
Service Dominant Architecture (SDA)

The Construction Plan for Collaborations on Platforms – Foundations, Application, Unique Selling Proposition

Why this course?

Introduction Service Dominant Architecture (SDA)
Platform- and Service-Economy
Service
Value Proposition
Service Platforms and Service Ecosystems
Service-Dominant Logic
Service Science
Service Dominant Architecture(SDA)
Structure of Service Dominant Architecture (SDA)
Derivation of Service Dominant Architecture (SDA)
Construction Plan for Service Platforms and Ecosystems
Platforms as a result of technical implementation
Use Cases and Ventures (SDA inside)
Value proposition of Service Dominant Architecture
References



Why this course?

Whether retail, travel, accommodation, entertainment, music or mobility, more and more social and economic activities are being organized via Platforms. The majority of our transactions are already Platform-based. The Platform economy is on the move.

This course introduces Service Dominant Architecture (SDA), a Construction Plan for the cooperative creation of value propositions on Platforms. First, the foundations such as Service, Service Science, Service-Dominant Logic, Platforms, and others are outlined. Then, SDA is explained and examples are given to show step-by-step how SDA enables co-creative value propositions on Service Platforms.

Why this course?

After successfully completing the course, a certificate documents that you have studied Service Dominant Architecture and the fundamentals of collaboratively creating value propositions on Platforms.

Hints to prepare for the test: The passages marked with an A are particularly relevant for the assessment.

The USP highlights the USP of SDA and the E shows the content by means of an example.

Have fun and good luck!

Markus Warg
Founder Service Dominant Architecture
www.servicedominiertearchitektur.com
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A Relevant for the assessment!

USP USP!

E Example!

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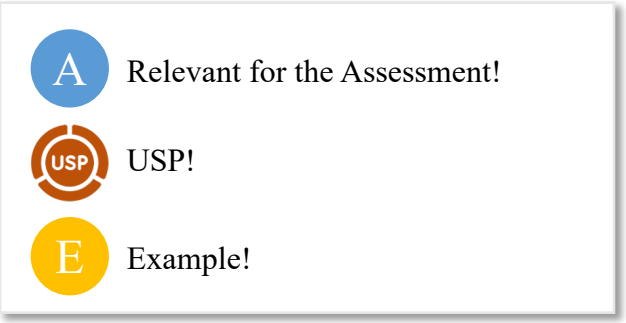
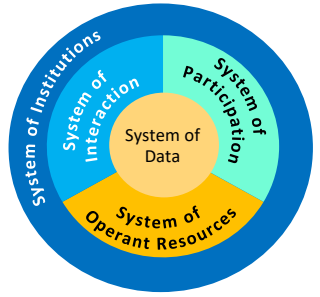


Introduction Service Dominant Architecture

Service Dominant Architecture (**SDA**) is a Construction Plan for the collaborative creation, building and application of value propositions on Platforms.

SDA operationalizes core concepts of the Service-Dominant Logic and Service Science. It enables the collaborative design of innovative value propositions. SDA consists of five (service) systems that enable capabilities to be systematically built and orchestrated.*

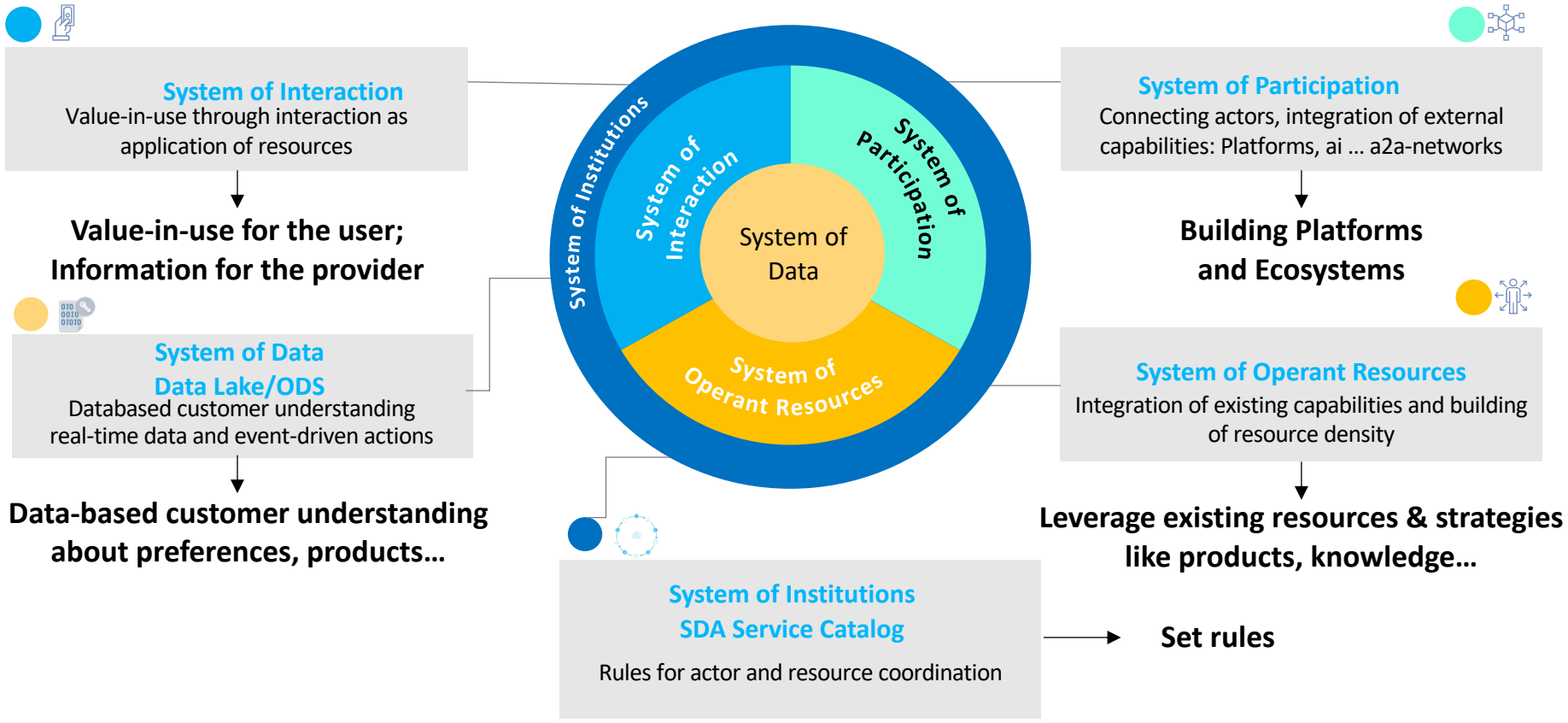


www.servicedominiertearchitektur.com

Spohrer J.C, Maglio P.P., Vargo S.L., Warg M., Service in the AI Era. Business Expert Press, (2022)

Introduction Service Dominant Architecture

SDA consists of 5 (service) systems for the collaborative creation and application of value propositions



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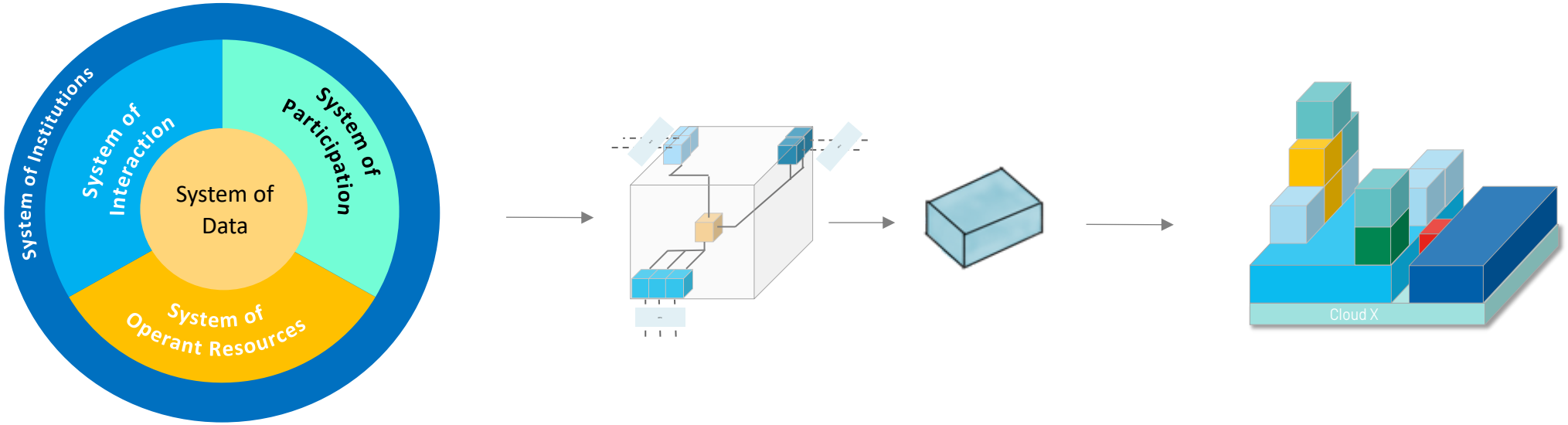
Introduction Service Dominant Architecture

The 5 (service) systems of SDA can be found in software solutions

If SDA is applied as a Construction Plan, the five (service) systems of SDA are reflected as microservices in applications (software solutions). For this purpose, microservices are assigned to the 5 (service) systems of SDA.



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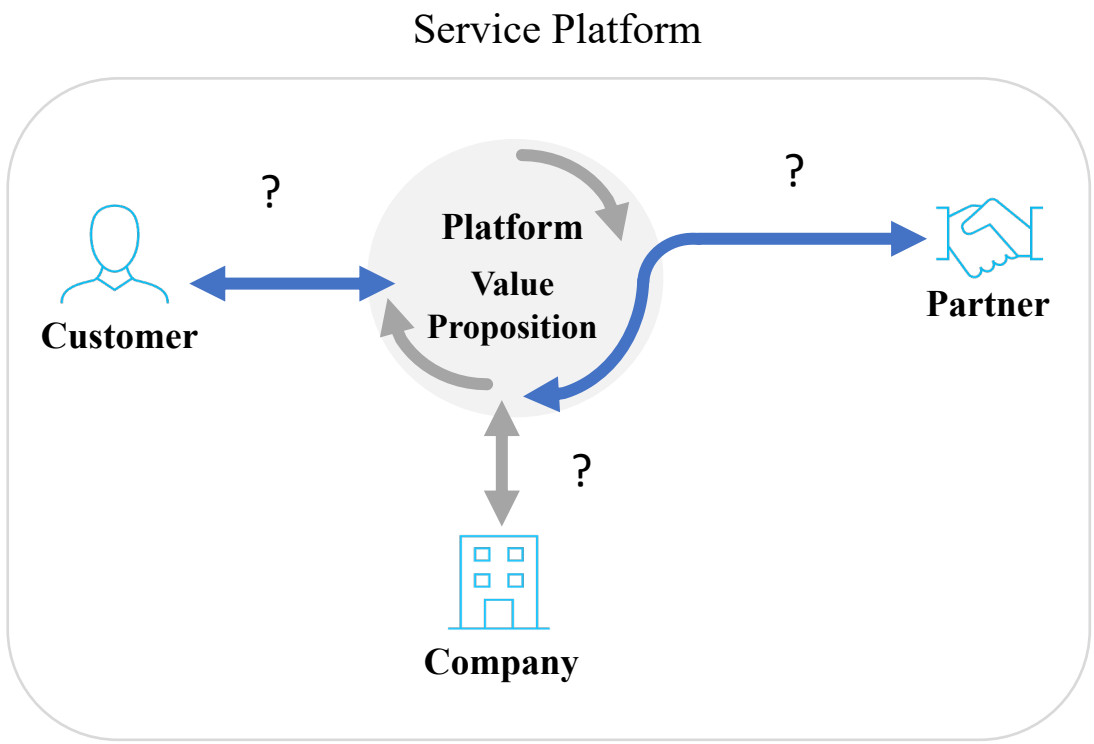
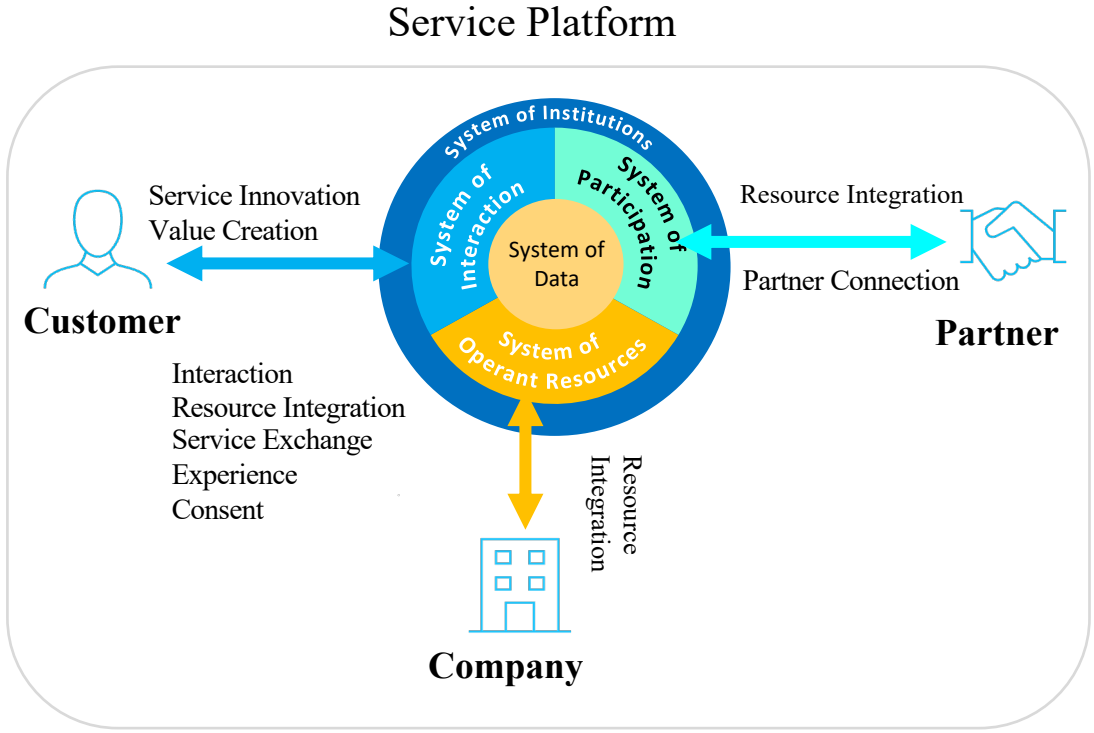
Introduction Service Dominant Architecture

SDA works as Construction Plan for Service Platforms





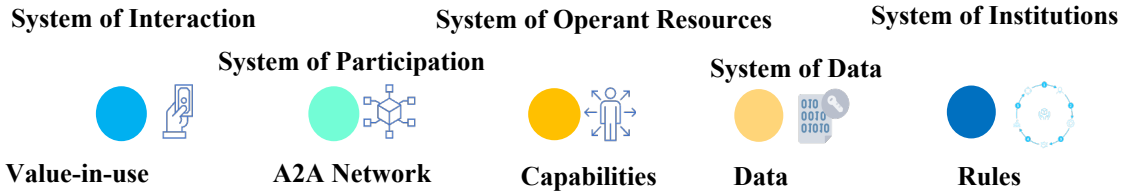
How to connect partners?

How to integrate resources?

How to learn from interactions?

How to build capabilities step by step?

…



Introduction Service Dominant Architecture

SDA value propositions

1 Construction Plan for Service Platforms

SDA is a Science-based Construction Plan for building and designing Service Platforms and Ecosystems.

2 Collaborative creation of value propositions

SDA enables the collaborative creation and application of value propositions.

Value-in-use and value-in-context are created via interaction.

3 B2B2C Business-Models

Implemented with leading cloud technologies, SDA enables data-driven B2B2C business models; code and services come to data. The app store logic and the ”build once - use x times" approach is followed.

4 Scalable Learning

SDA enables (as process and structure) adaptive and generative learning and thus the design of "learning organizations“. The "learning organization" uses interaction to build data-based understanding, adapt behaviour and continuously build up new capabilities.

5 Empowering. Digital. Ecosystems.

SDA enables the creation of ecosystems, understood as structures in which partners collaborate, i.e. share capabilities and rules (institutions), to create and apply value propositions.

Service Dominant Architecture (SDA)

TOP: Introduction Service Dominant Architecture (SDA)

Question 1

What is Service Dominant Architecture (SDA)?

- [ ] A construction plan for building value propositions „do it yourself“
- [ ] A construction plan for the cooperative creation and application of value propositions
- [ ] A construction plan consisting of 5 (service) systems for the cooperative creation and application of value propositions
- [ ] A construction plan consisting of 4 (service) systems for the cooperative creation and application of value propositions

Service Dominant Architecture (SDA)

TOP: Introduction Service Dominant Architecture (SDA)

Question 2

What is the scientific basis for Service Dominant Architecture (SDA)?

- [ ] SDA grounds on the scientific foundations of physics
- [ ] SDA grounds exclusively on the foundations of Service-Dominant Logic
- [ ] SDA grounds exclusively on the foundations of Service Science
- [ ] SDA grounds on the scientific foundations of Service Science and Service-Dominant Logic

Service Dominant Architecture (SDA)

TOP: Introduction Service Dominant Architecture (SDA)

Question 3

How is Service Dominant Architecture (SDA) structured?

- ☐ SDA is an organizational logic of 5 (service) systems: System of Institutions, System of Interaction, System of Data, System of Participation, System of Operant Resources.
- ☐ SDA is an organizational logic of 4 (service) systems: System of Institutions, System of Interaction, System of Data, System of Participation.
- ☐ SDA is an organizational logic of 3 (service) systems: System of Institutions, System of Interaction, System of Data.
- ☐ SDA is an organizational logic of 2 (service) systems: System of Institutions and System of Interaction.

Service Dominant Architecture (SDA)

TOP: Introduction Service Dominant Architecture (SDA)

Question 4

How is Service Dominant Architecture (SDA) technically implemented?

- ☐ The 5 systems of the SDA are reflected in monolithically built software applications
- ☐ The 5 systems of the SDA are reflected in the programming language cobol
- ☐ The 5 systems of SDA are reflected in software applications
- ☐ The 5 systems of the SDA are reflected in microservices that are allocated to these systems

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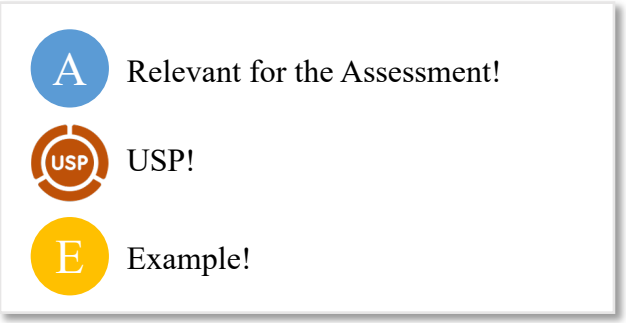


Platform- and Service-Economy

Societal change driven by Platforms

The term Platform economy represents the growing number of societal - and economic - activities and transactions that are enabled and performed by digital Platforms.

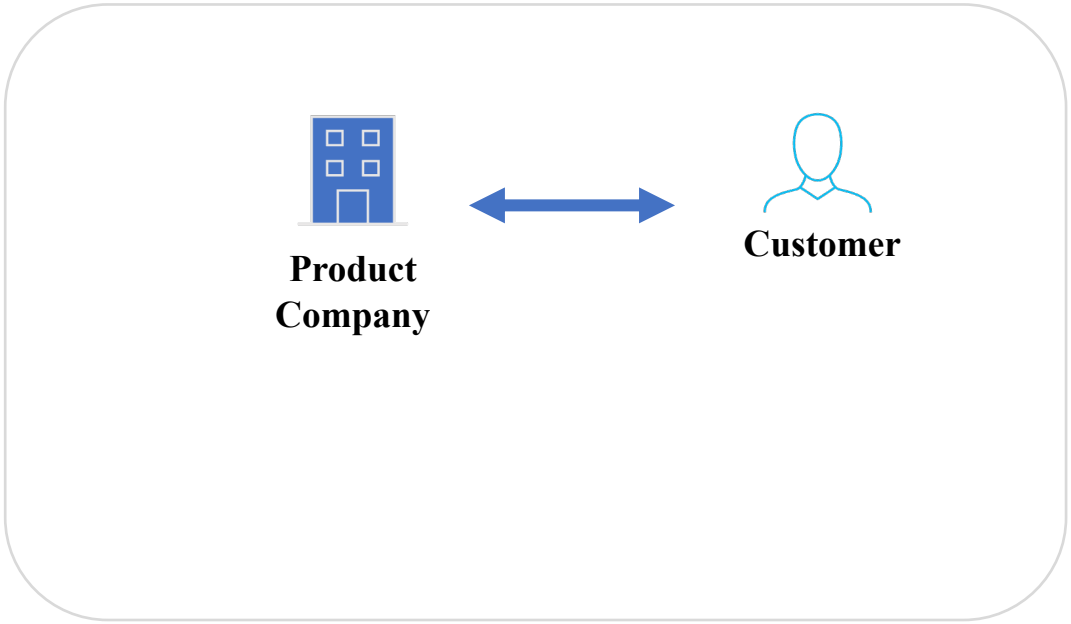
We are in the midst of a transition in which Platforms appear to develop even greater market power than factories and corporations have possessed since the Industrial Revolution.
While economic market analyses and university courses typically assume that buyers and sellers meet in a market, in reality a large proportion of transactions are conducted through Platforms as intermediaries.

In contrast to the goods-based and goods-dominant organization where the production process, the product and the exchange value (product for money) are in the foreground, in the Platform-based organization the value-in-use that the customer realizes by application (interaction) of value propositions dominates.

Platform- and Service-Economy

Societal change driven by Platforms

Goods-based Organization



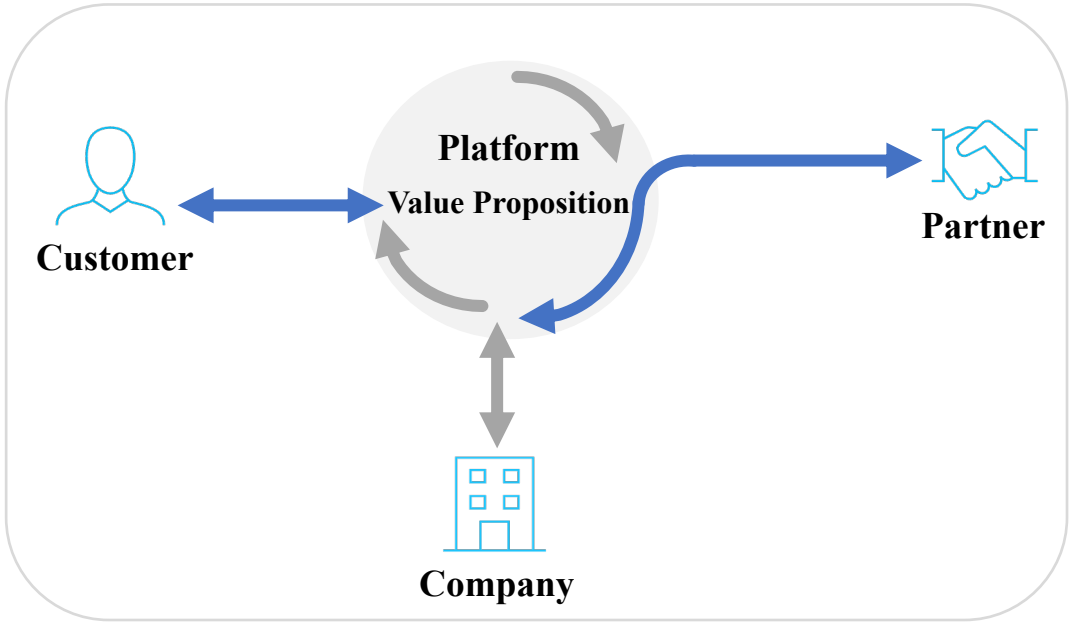
Goods-dominant

Exchange Value

Direct

1:1

Platform-based Organization



Service-dominant

Value-in-use

Intermediaries

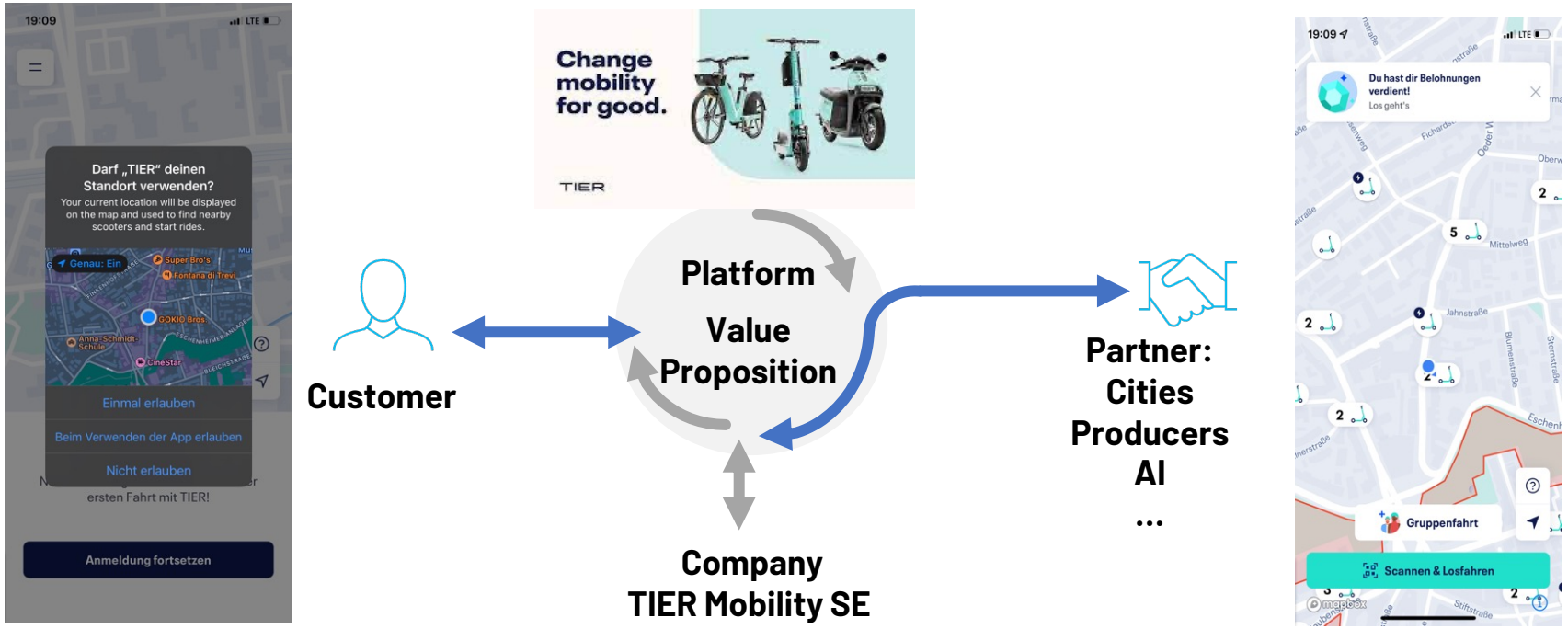
1:n

Platform- and Service-Economy

Societal change driven by Platforms

E The Platform-based organization of activities in society and business is in full swing, one example:

Environmental pollution → Traffic calming → MICROMOBILITY as response to traffic calming in cities

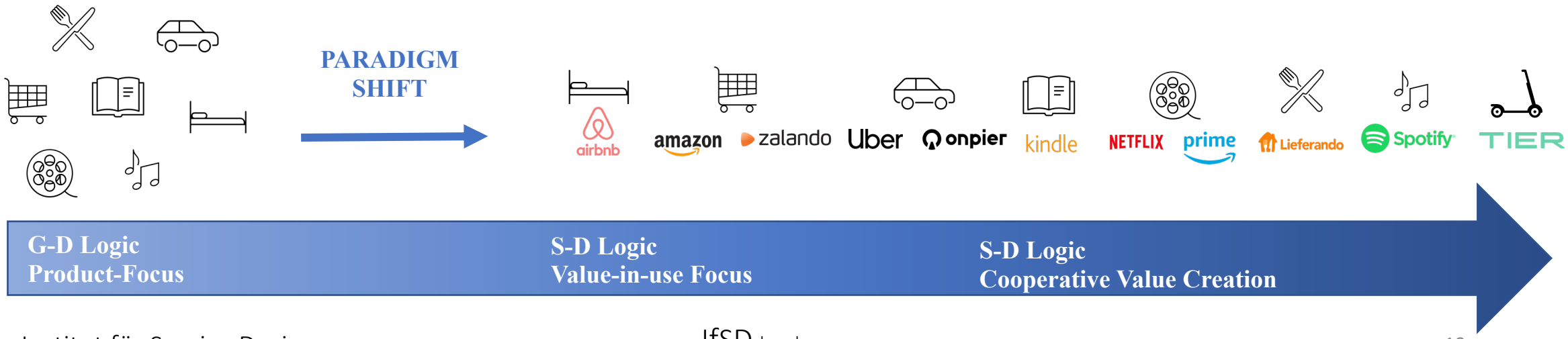


Platform- and Service-Economy

Paradigm shift from Goods-dominance to Service-dominance

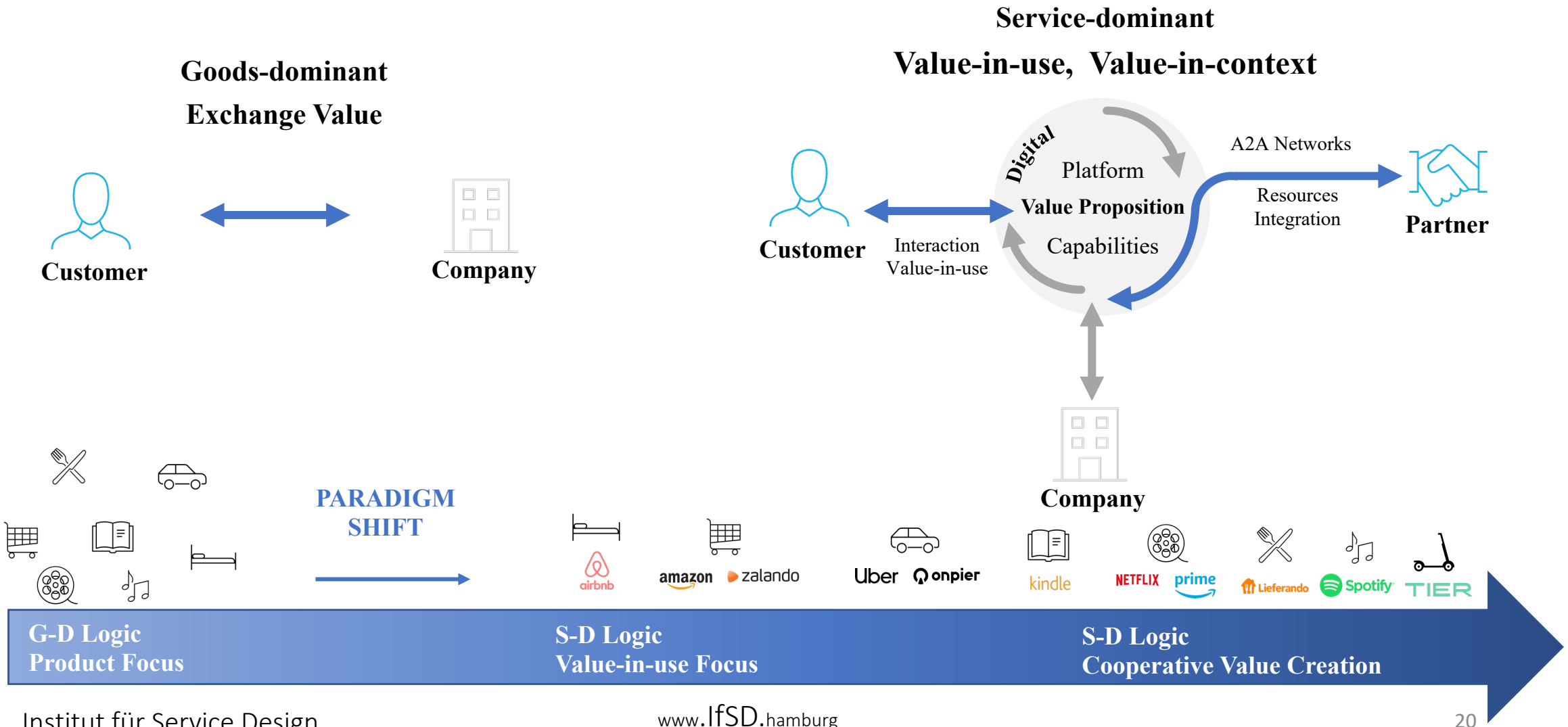
Successful, **Platform-based value propositions and business models** such as Amazon, Airbnb, Tier, Netflix, Car2Go, and Spotify show what customers want: **individualized value-in-use**. And that simply, quickly, transparently, and according to their respective situation (context).

They also show that products or goods - e.g., the physical DVD, the car, or the bed - are still relevant, but are fading into the background. **Service**, as the provision and application of resources and capabilities (competencies, skills, knowledge, data, technical services, products) for the benefit of another, for the realization of **value-in-use** (streaming, discovery, etc.), **steps into the foreground and dominates**.



Platform- and Service-Economy

Paradigm shift from Goods-dominance to Service-dominance



Platform- and Service-Economy

Paradigm shift from Goods-dominance to Service-dominance

Platform-based and service-dominant business models are changing behavior in society and in business.

E Example: Amazon began as an online bookseller and now has reach into media, logistics, retail, grocery, and more. Every product Amazon offers is a vehicle to learn more about their customer; every interaction is a learning moment and a catalytic moment for new value creation. Every product offers the chance to get feedback from customers, each and every interaction is an input toward learning, adaptation and development. This is what Hagel calls „**scalable learning**“ and what characterizes the fourth industrial revolution after "machine", "automation“ and "scalable efficiency".*

amazon

* McGowan H.E, Shipley C., (2020). The adaptation advantage: Let go, learn fast, and thrive in the future of work. John Wiley & Sons.
** Hagel III, John; Seely Brown, John; Davison, Lang (2010). The Power of Pull: How Small Moves, Smartly Made, Can Set Big Things in Motion.
*** Senge P.M. (1997). The Fifth Discipline: The art and practice of the learning organization (Century business), Measuring Business Excellence Measuring Business Excellence.

Service Dominant Architecture (SDA)

TOP: Platform- and Ecosystem-Economy

Question 5

What does the term Platform-Economy stand for?

- [ ] For the growing number of social and economic activities and transactions enabled and handled by digital platforms
- [ ] For platform technologies
- [ ] For the price that a platform costs
- [ ] For the large number of transactions that are processed via platforms and the increasing importance of platforms

Service Dominant Architecture (SDA)

TOP: Platform- and Ecosystem-Economy

Question 6

What distinguishes the goods-based organization from the platform-based organization?

- [ ] The relationship between supplier and consumer is direct in the case of the goods-based organization and indirect in the case of the platform-based organization via platforms as intermediaries.
- [ ] In the goods-based organization, the focus is on the value in use that the customer receives in the course of the interaction
- [ ] In the goods-based organization, the product takes a back seat
- [ ] In the platform-based organization, the product takes a back seat

Service Dominant Architecture (SDA)

TOP: Platform- and Ecosystem-Economy

Question 7

What describes the paradigm shift from Goods-Dominant Logic to Service-Dominant Logic?

- [ ] The product is in the foreground
- [ ] Service, as the provision and application of resources for the benefit of another (and/or oneself) is in the foreground
- [ ] Instead of exchange value (goods for money), the focus is on value in use
- [ ] Instead of value in use, the exchange value (goods for money) is in the foreground

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Use Cases and Ventures (SDA inside)

Value proposition of Service Dominant Architecture

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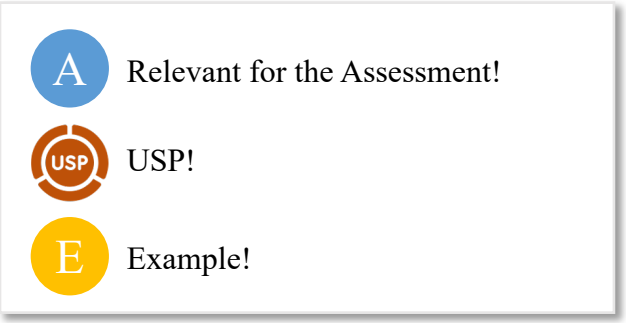

Service

Why is Service so central?

Service is the application of resources (e.g., knowledge) for the benefit of another actor and/or oneself and connects everyone of us to the world around us.

This course addresses service from three perspectives: Science, Logic, and Architecture. In this way, it is possible to understand and design the foundations of Service Platforms and ecosystems.

Service

Why is Service so central?

? **Why is Service** so **central** and so closely linked to every other important concept?

! The answer is that **service is the basis for exchange** and **cooperation!**

A

Definition

Service is the application of resources (e.g. knowledge, capabilities, competences, products, software) for the benefit of another actor and/or oneself and connects everyone of us to the world around us.*

*Spohrer, J.C., Maglio P.P., Vargo S.L., Warg M. (2022) Service in the AI Era. Business Expert Press;
Vargo, S.L., & Lusch, R.F. (2018). The SAGE Handbook of Service-Dominant Logic: SAGE Publications.

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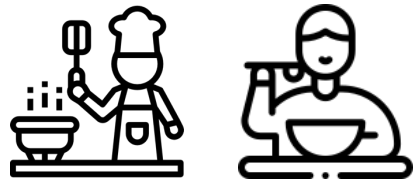
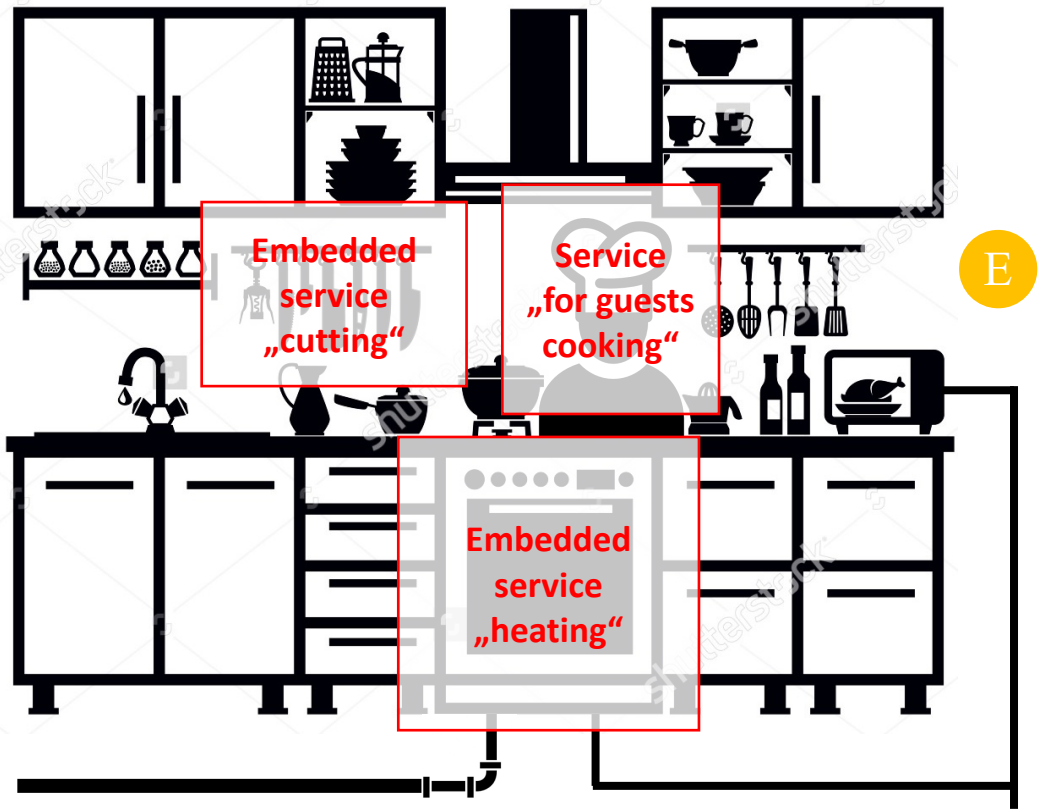


For example, in a restaurant, the cook uses his skills and resources (knowledge of recipes, preparation, resources such as the stove and the pan) to prepare a meal for the guest.

Service

Why is Service so central?



By **using various resources**, the restaurant can offer its customers value propositions for example in the form of a meal.

The value for the customer is created when the customer eats the meal (**value-in-use**) and when the ambience is enjoyed (**value-in-context**).

The result can be evaluated in **result and experience components**.

Furthermore, tangible products serve as **carriers of service**. Their service is embedded in the product during the production process (e.g. a knife provides the service of being able to cut something) and is released **during its usage**.

Service

What is an actor?

A

Definition

An **actor** is an entity capable of acting on potential resources to cocreate value, either positively or negatively valenced.*

E

Actor

Resources

*Vargo, S.L., & Lusch, R.F. (2018). *The SAGE Handbook of Service-Dominant Logic*: SAGE Publications.

Service

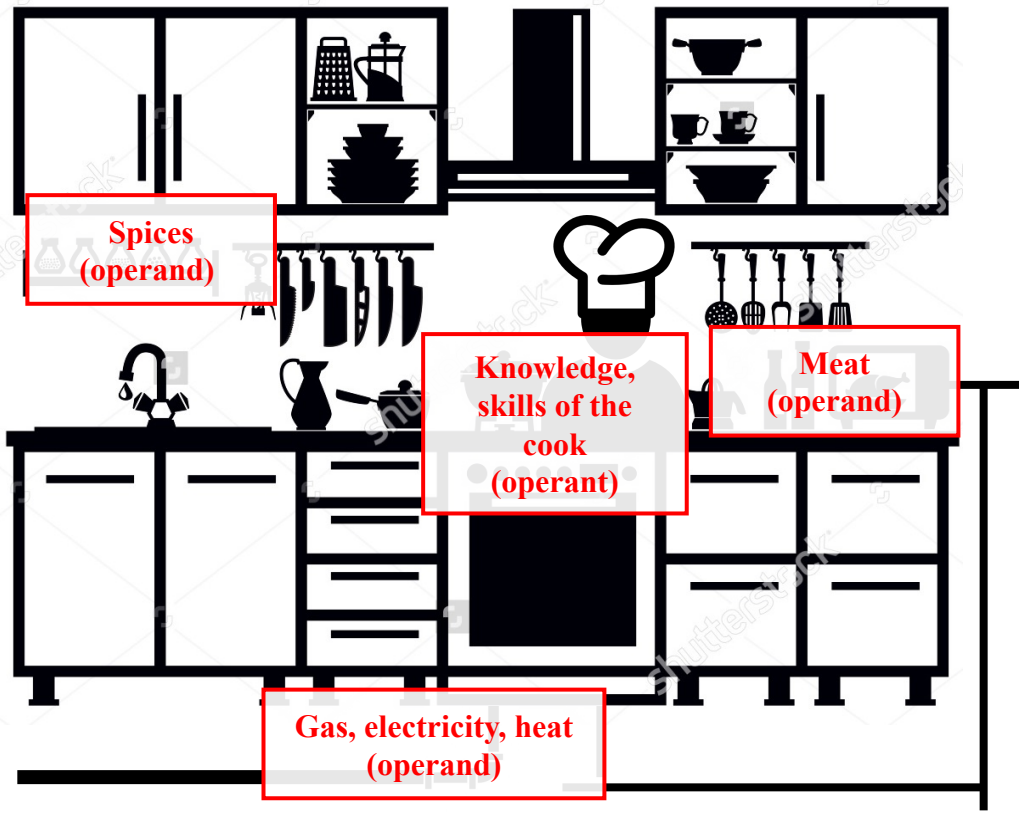
What are resources?

A **Definition** A **resource** is anything an actor can draw on for support.*

A **Definition** **Operant resources** form the basis for a strategic advantage (knowledge and skills): Resources capable of acting on other (potential) resources to (co)create value.*

A **Definition** **Operand resources** are resources on the basis of which something is made (e.g., natural resources): (Potential) resources requiring other resources to act on them for value to be realized.*

E Many resources are required to operate a **restaurant**.



*Constantin, James A., & Lusch, Robert F. (1994). *Understanding Resource Management: How to Deploy Your People, Products, and Processes for Maximum Productivity*: Oxford, OH: The Planning Forum.
Vargo, S.L., & Lusch, R.F. (2018). *The SAGE Handbook of Service-Dominant Logic*: SAGE Publications.

Service Dominant Architecture (SDA)

TOP: Service

Question 8

What is service and why is service so central?

- [ ] Because the product is in the foreground
- [ ] Service is the application of resources (e.g., knowledge, skills, products, software) for the benefit of another actor and/or oneself, connecting each of us to the world around us
- [ ] Service is the basis for social and economic exchange and cooperation
- [ ] Service is the ownership of resources

Service Dominant Architecture (SDA)

TOP: Service

Question 9

What is an actor?

- [ ] An actor is unable to act on potential resources to create positively or negatively valenced value
- [ ] An actor is able to act on potential resources to create positively or negatively valenced value
- [ ] An actor is able to act on operant and operand resources to create positively or negatively valenced value
- [ ] An actor is unable to act on operant and operand resources to create positively or negatively valenced value

Service Dominant Architecture (SDA)

TOP: Service

Question 10

What are resources?

- [ ] Resources are always tangible
- [ ] Resources are always intangible
- [ ] Knowledge, software, spices are examples of resources
- [ ] A resource is anything that an actor can draw on for support

Service Dominant Architecture (SDA)

TOP: Service

Question 11

What are operant and operand resources?

- [ ] Operant resources constitute the basis for a strategic advantage (knowledge and skills). Resources that require other resources to act on them to achieve value
- [ ] Operant resources constitute the basis for a strategic advantage (knowledge and capabilities). Resources that are able to act on other (potential) resources to create value
- [ ] Operand resources are resources that are capable of acting on other (potential) resources to create value
- [ ] Operand resources are resources on the basis of which something is produced (e.g. natural resources): (Potential) resources that require other resources to act on them to create value

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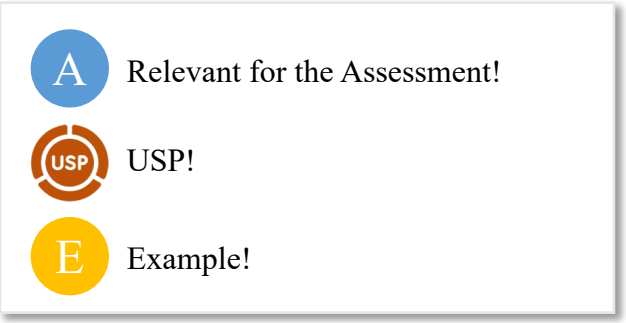

Value Proposition

What is a value proposition?

A

Definition	A **Value Proposition** is „the co-developed understanding of potential value, or benefit, associated with a service provision – often articulated in the form of an implied or explicit promise and expectation.“*

*Vargo, S.L., & Lusch, R.F. (2018). *The SAGE Handbook of Service-Dominant Logic*: SAGE Publications. Page 740

E

In order to provide the customer the appropriate value proposition e.g. a meal, the waiter must record and understand the customer's explicit requirements (what is the customer's appetite for?).

Value Proposition

What is a value?

A	**Definition**	**Value**: An emergent, positively or negatively valanced change in the well-being or viability of a particular system/actor.
A	**Definition**	**Value-in-use**: the change in well-being from an actor's perspective that results from the direct or indirect application of resources.
A	**Definition**	**Value-in-context**: essentially the same as value-in-use, with the explicit recognition that value is always a partial function of context. For example the ambient of a restaurant.

E

Value-in-use

Value-in-context

* Vargo, Stephen L, & Lusch, Robert F. (2018). The SAGE Handbook of Service-dominant Logic: SAGE Publications Limited.

Value Proposition

What is (cooperative, co-creative) value co-creation?

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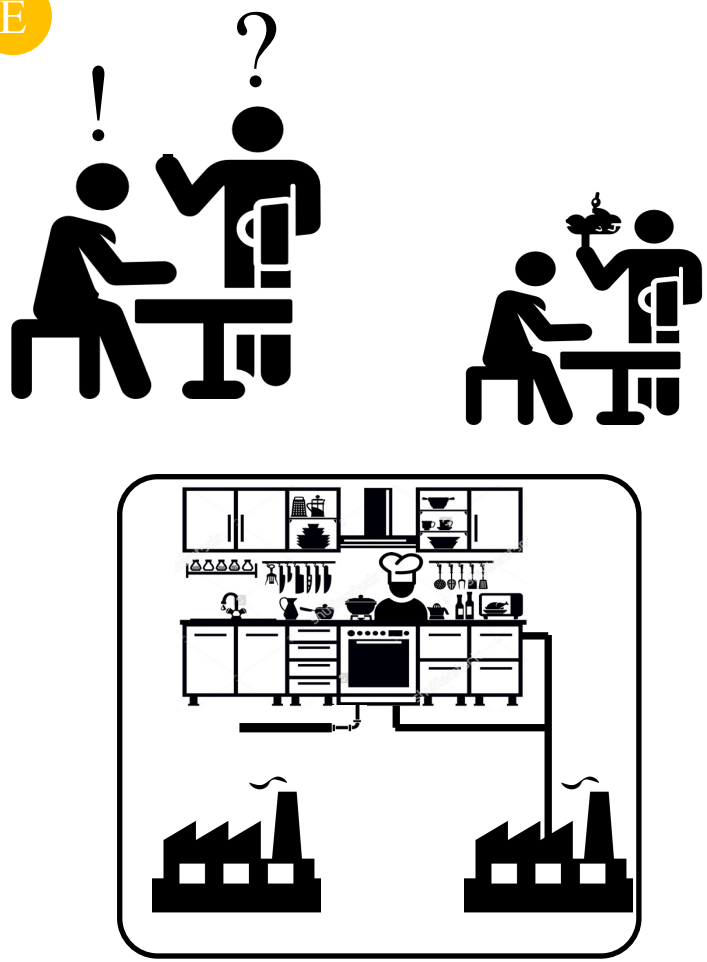

A

Definition

Value co-creation: The process through which multiple actors, often unaware of each other, jointly contribute to an actor's wellbeing. In living systems, an (ontological) statement of how value is always created.

* Vargo, Stephen L, & Lusch, Robert F. (2018). The SAGE Handbook of Service-dominant Logic: SAGE Publications Limited.

Value Proposition

What is a solution?

A

Definition

Solutions are individualized offers for complex customer problems that have been designed interactively with the customer. By combining the individual services, an integrated added value is created which delivers greater value than the sum of all values of the individual services.*

* Evanschitzky, H., v.Wangenheim, Florian, & Woisetschläger, D. (2011). Service & solution innovation: Overview and research agenda. *Industrial Marketing Management, 40*(5), 657–660.

Sawhney, Mohanbir. (2006). Going Beyond the Product: Defining, Designing and Delivering Customer Solutions. In R. F. Lusch & S. L. Vargo (Eds.), *The service-dominant logic of marketing: Dialogue, debate, and directions* (pp. 365-380). Armonk, NY: M.E. Sharpe.

E

To meet the customer's requirements, the kitchen uses different services and resources. The resulting customized meal is the solution.
The overall value in use of the solution is higher than the value in use of its individual elements. This means that a finished sandwich tastes better than its individual components (bread, butter, salad, ...).

Of course, the cook can cook other meals (solutions):

Value Proposition

What is a Service Innovation?

A

Definition

"**Service innovation** can then be considered the rebundling of diverse resources that create novel resources that are beneficial (i.e. value experiencing) to some actors in a given context; this almost always involves a network of actors including the beneficiary (e.g. the customer)"

* Lusch, Robert F, & Nambisan, Satish. (2015). Service Innovation: A Service-Dominant Logic Perspective. *MIS Quarterly, 39*(1), 155-175.

E

For example, new meals are created in the kitchen through new combinations of spices or through new skills in preparation.

Service Dominant Architecture (SDA)

TOP: Value Proposition

Question 12

What is a value proposition?

- [ ] A value proposition is the price of a product
- [ ] A value proposition is value in use
- [ ] A value proposition is value in context
- [ ] A value proposition is “the co-developed understanding of potential value, or benefit, associated with a service provision – often articulated in the form of an implicit or explicit promise and expectation“

Service Dominant Architecture (SDA)

TOP: Value Proposition

Question 13

What is a value?

- [ ] An emergent, positively or negatively valenced change in the well-being or viability of a particular system/actor
- [ ] An emergent, always positively valenced change, in the well-being or viability of a particular system/actor
- [ ] An emergent, always negatively valenced change, in the well-being or viability of a particular system/actor
- [ ] An emergent, positively, neutrally, or negatively valenced change in the well-being or viability of a particular system/actor

Service Dominant Architecture (SDA)

TOP: Value Proposition

Question 14

What is a value in use and value in context?

- [ ] Value in context: essentially the same as value in use, with the explicit recognition that value is always a partial function of context
- [ ] Value in context: essentially the same as value in use, with the explicit recognition that value always arises in the exchange of money for product
- [ ] Value in use: the change in well-being from an actor's perspective that results from the purchase of resources
- [ ] Value in use: the change in well-being from an actor's perspective that results from the direct or indirect application of resources

Service Dominant Architecture (SDA)

TOP: Value Proposition

Question 15

What is co-creative value creation?

- [ ] The outcome of the process through which multiple actors, often unfamiliar with each other, jointly contribute to the well-being of an actor
- [ ] The process by which multiple actors, who always know each other, jointly contribute to the well-being of an actor
- [ ] The process by which an actor contributes to his or her or its well-being
- [ ] The process by which multiple actors, often unfamiliar with each other, jointly contribute to the well-being of an actor

Service Dominant Architecture (SDA)

TOP: Value Proposition

Question 16

What is a solution?

- [ ] Solutions are individualized offers (value propositions) for complex customer problems, which are developed without the customer
- [ ] Solutions are individualized offers (value propositions) for complex customer problems that are developed interactively with the customer
- [ ] Solutions are standard offers (value propositions) for complex customer problems that are developed interactively with the customer
- [ ] Solutions are standard offers (value propositions) for complex customer problems, which are developed without customers

Service Dominant Architecture (SDA)

TOP: Value Proposition

Question 17

What is a service innovation?

- ☐ Service innovations can be viewed as combinations of different resources that are beneficial (i.e., create value) to some actors
- ☐ Service innovations can be viewed as new combinations of different resources that are beneficial (i.e., create value) for some actors
- ☐ Service innovations can be viewed as old combinations of different resources that are beneficial (i.e., create value) for some actors
- ☐ Service innovations can be viewed as existing combinations of different resources that are beneficial (i.e., create value) for some actors

Service Dominant Architecture (SDA)

The Construction Plan for collaborations on Platforms – Foundations, Application, Unique Selling Proposition

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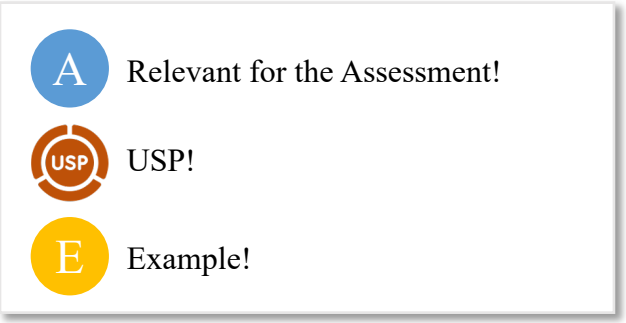


Service Platforms and Service Ecosystems

What characterizes Service Platforms?

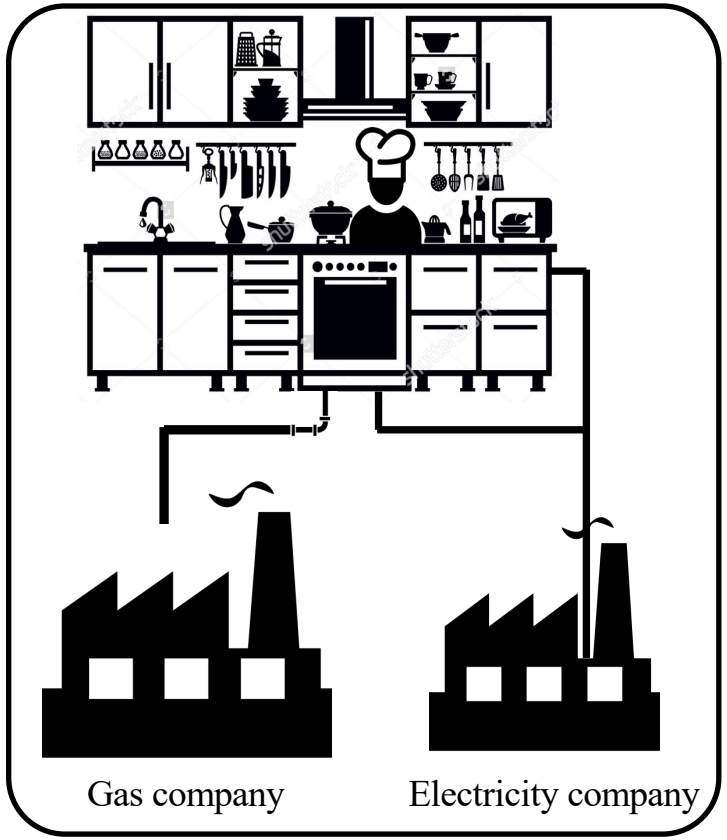
A

Definition

Service Platforms connect actors and enable the integration and bundling of resources (knowledge, services, products, capabilities...) whose application (by interaction) generates benefits.*

E

In the kitchen, internal resources and capabilities (e.g., stove, knives, spices, star cook) and external resources and capabilities (e.g., gas and electricity) are bundled, and when used, for example, by the cook, value is created.



* Warg, M., Zolnowski, A., Frosch, M., Weiß, P. (2019). From Product Organization to Platform Organization - Observations of Organizational Development in the Insurance Industry. Naples Forum on Service, 10.th, 16. http://www.naplesforumonservice.it/uploads/files/2018/Proceedings/NFS2019-Warg-Zolnowski-Frosch-Weiss.pdf
Warg, M., Zolnowski, A., Frosch, M., (2019). Why becoming a Platform organization?, Ignite Talk, HICCS 2019. https://www.ifsd.hamburg/INDEX/

Service Platforms and Service Ecosystems

What characterizes service ecosystems?

Two definitions

A **Definition**

„A relatively self-contained, self-adjusting system of resource-integrating actors connected by shared institutional arrangements and mutual value creation through service exchange" *

* Vargo, S.L., & Lusch, R.F. (2018). *The SAGE Handbook of Service-Dominant Logic*: SAGE Publications.

A **Definition**

„A structure in which partners (often unknown to each other) cooperate, i.e., share capabilities and rules, to create and apply value propositions." *

* Adner, Ron. (2017). Ecosystem as Structure: An Actionable Construct for Strategy. *Journal of Management, 43*(1), 39-58. doi:10.1177/0149206316678451

Warg, Markus. (2022) Erfolg in Ökosystemen: Empfehlungen für deutsche Versicherer. Zeitschrift für Versicherungswesen (Vol 01.04.2022), Allgemeiner Fachverlag

https://www.ifsd.hamburg/INDEX/

Service Platforms and Service Ecosystems

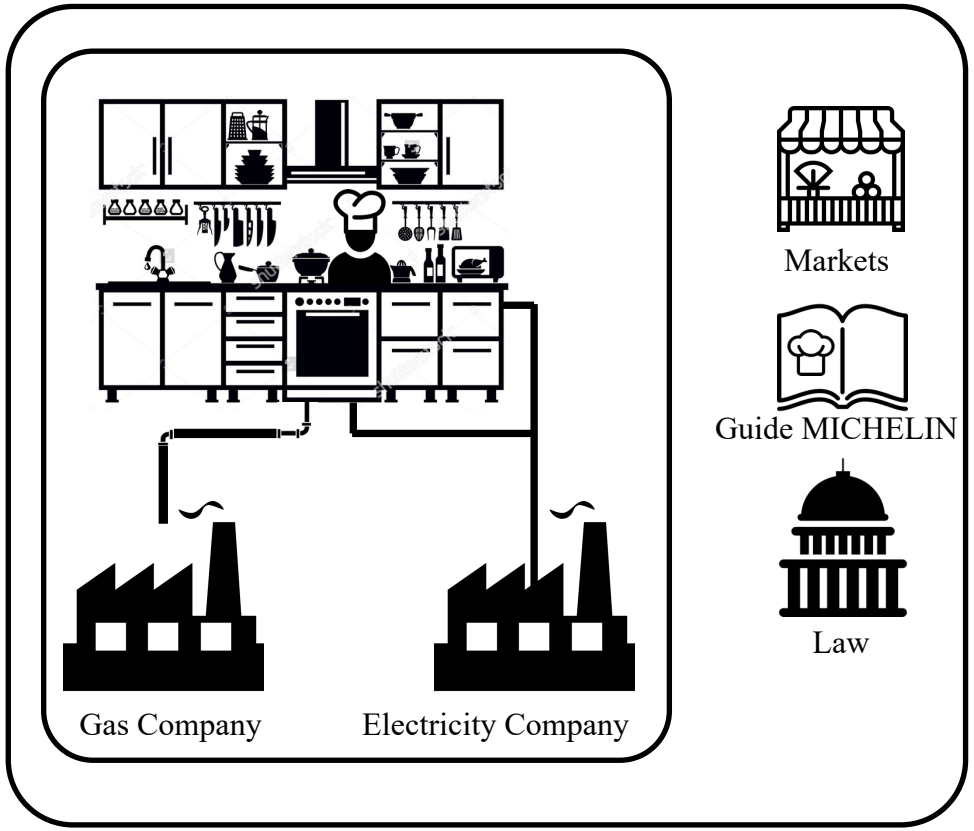
What is a service ecosystem?

A

Definition

Service ecosystem: A structure in which partners (often unknown to each other) cooperate, i.e., share capabilities and rules, to create and apply value propositions.*

* Adner, R. (2017). Ecosystem as Structure: An Actionable Construct for Strategy. Journal of Management, 43(1), 39-58.
Warg, Markus. (2022) *Erfolg in Ökosystemen: Empfehlungen für deutsche Versicherer*. Zeitschrift für Versicherungswesen (Vol 01.04.2022), Allgemeiner Fachverlag



Service (Eco) System

E

Markets provide fresh products, the state makes laws, the MICHELIN guide rates restaurants - the actors have the common goal of guaranteeing good food, but they are not contractually bound to each other and thus loosely coupled. Together, they form a service ecosystem.

Service Dominant Architecture (SDA)

TOP: Service Platforms and Service Ecosystems

Question 18

What characterizes service platforms?

- [ ] Service platforms connect actors and avoid the integration and bundling of resources (knowledge, technical services, products, skills...), whose application (by interaction) generates benefits
- [ ] Service platforms separate actors and enable the integration and bundling of resources (knowledge, technical services, products, skills...), whose application (by interaction) generates benefits
- [ ] Service platforms connect actors and enable the integration and bundling of resources (knowledge, technical services, products, skills...), whose application (by interaction) generates benefits
- [ ] Service platforms connect actors and enable the integration and bundling of resources (knowledge, technical services, products, skills...), whose application (by interaction) does not generate any benefit

Service Dominant Architecture (SDA)

TOP: Service Platforms and Service Ecosystems

Question 19

What characterizes service ecosystems?

- ☐ Service ecosystems are structures in which (often mutually unknown) partners cooperate, i.e. share capabilities and rules, to create and apply value propositions
- ☐ Service ecosystems are structures in which only partners known to each other cooperate, i.e. share capabilities and rules, to create and apply value propositions
- ☐ Service ecosystems are structures in which (often mutually unknown) partners compete without sharing capabilities and rules
- ☐ Service ecosystems are structures in which (often mutually unknown) partners cooperate, i.e. share capabilities and rules to avoid value propositions

Service Dominant Architecture (SDA)

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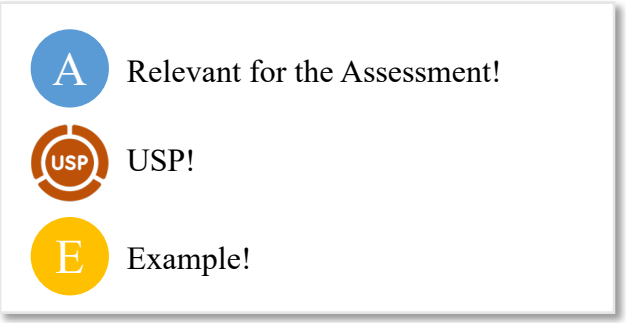


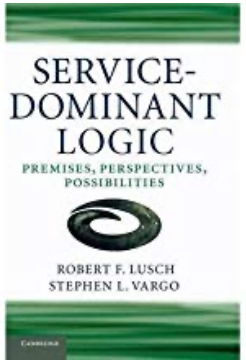
Service-Dominant Logic

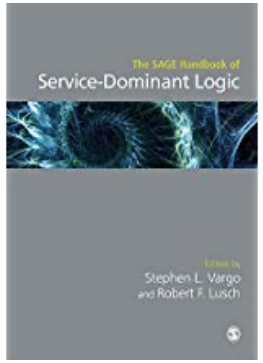
Stephen L. Vargo, Co-Founder of Service-Dominant Logic

Steve Vargo
SD-Logic

Financial Times ... One of the most influencial marketing professors

Vargo, Stephen L., & Lusch, Robert F. (2004). Evolving to a New Dominant Logic for Marketing. *Journal of Marketing, 68* (January), 1-17.





http://www.sdlogic.net/index.html
https://en.wikipedia.org/wiki/Stephen_Vargo

Logic as: „better mental-models in people to improve interactions“*

*Spohrer J.C, Maglio P.P., Vargo S.L., Warg M., Service in the AI Era. Business Expert Press, (2022)

Service-Dominant Logic

What is Service-Dominant Logic?

A

Definition

Service-Dominant Logic (S-D Logic): is a theory assigned to marketing that explains the paradigm shift from a goods-dominant to a service-dominant logic. Based on the fundamentals of interconnected relationships, new value creation processes, business interactions and the integration of resources, the authors explain the dominance of service over products and goods. The theoretical foundation helps to explain market developments such as those evident in the evolution of the Platform economy.

* Vargo, Stephen L, & Lusch, Robert F. (2018). The SAGE Handbook of Service-dominant Logic: SAGE Publications Limited.

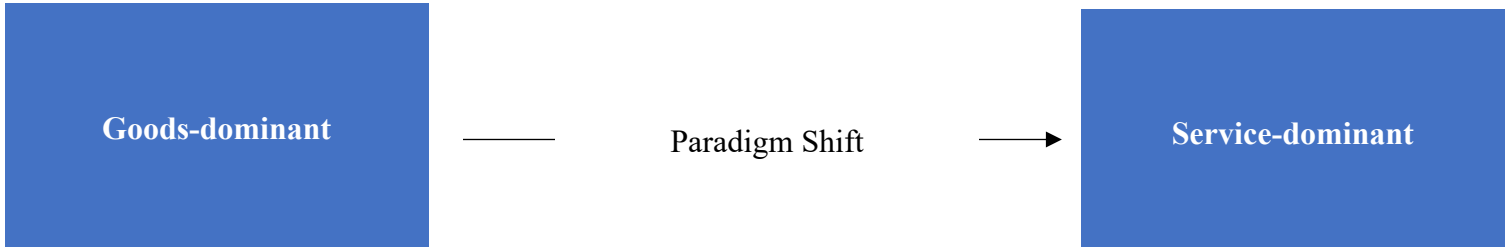
Service-Dominant Logic

What is the paradigm shift from a goods-dominant to a service-dominant logic?

Successful, **Platform-based value propositions and business models** such as Amazon, Airbnb, Tier, Netflix, Car2Go, and Spotify demonstrate what customers are looking for: **individualized value-in-use**. And that simply, quickly, transparently, and according to their respective situation (context).

These business models also show that products or goods - e.g., the physical DVD, the car, or the bed - are still relevant, but are fading into the background. **Service**, as the provision and application of resources and capabilities (competencies, skills, knowledge, data, technical services, products) for the benefit of another, for the realization of **value-in-use** (streaming, discovery, etc.), **is emerging and dominant**.

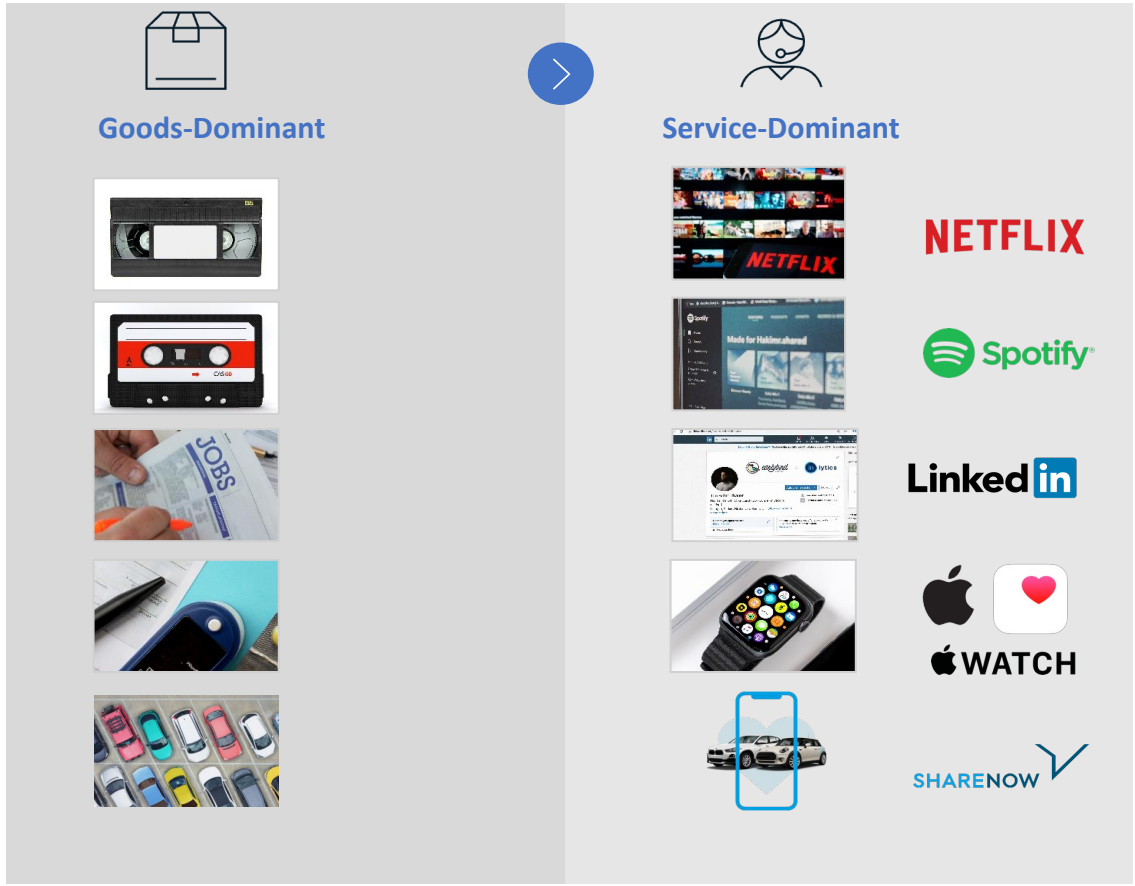
Service as the dominant perspective of value creation is not new, but it is given a consistent theoretical foundation with Service-Dominant Logic (SD-L) and Service Science. It describes a paradigm shift from a goods and exchange value-oriented logic to a service and value-in-use oriented logic.



Service-Dominant Logic

What is the paradigm shift from a goods-dominant to a service-dominant logic?

.....and from exchange value to collaborative, cooperative value creation and value-in-use.



Service-Dominant Logic

What is the paradigm shift from a goods-dominant to a service-dominant logic?

.....and from exchange value to collaborative, cooperative value creation and value-in-use.

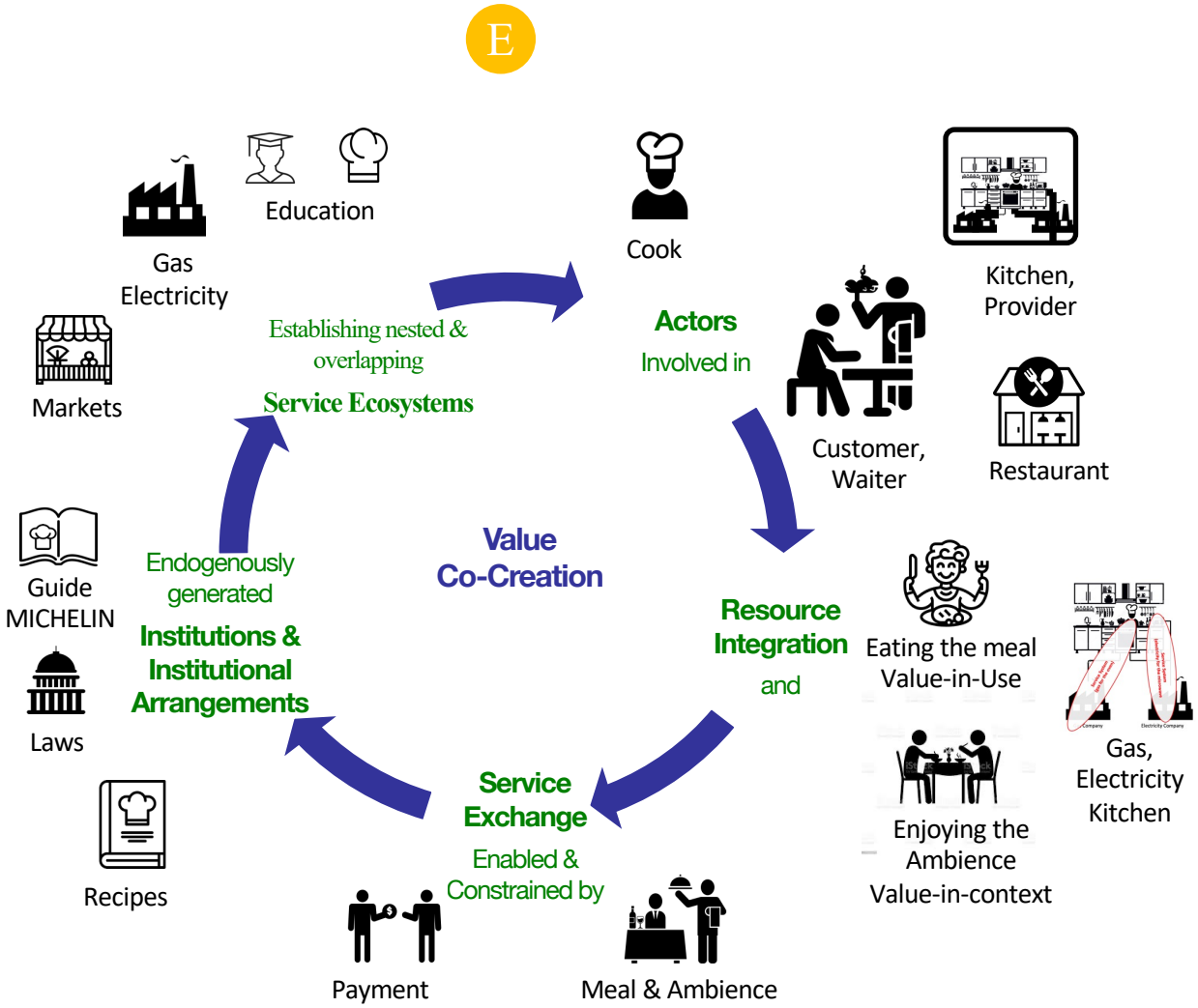
	Goods-Dominant	Service-Dominant
Value Proposition	Exchange Value	Value-in-use Value-in-context
Unit of Exchange	Product	Capabilities, Services, Knowledge, Data, Products...
Role of Customer	Consumer	Co-Creator Interactive
Definition of Value	Producer Production Costs	Customer Value-in-use Value-in-context

Service-Dominant Logic

The narrative and process of the Service-Dominant Logic?

A

"Actors fundamentally do the same thing: they integrate resources and engage in service exchange all in the process of cocreating value. In the process, rules (institutions) and structures of partners that share capabilities and rules (service ecosystems) emerge."*



* Vargo, S. L., and Lusch, R. F. 2016. "Institutions and Axioms: An Extension and Update of Service-Dominant Logic," *Journal of the Academy of Marketing Science* (44:1), pp. 5-23.

Service-Dominant Logic

Axioms, Foundational Premises and Concepts of the S-D Logic

Axiom1	FP1	Service is the fundamental basis of exchange.
	FP2	Indirect exchange masks the fundamental basis of exchange.
	FP3	Goods are a distribution mechanism for service provision.
	FP4	Operant resources are the fundamental source of strategic benefit.
	FP5	All economies are service economies.
Axiom2	FP6	Value is cocreated by multiple actors, always including the beneficiary.
	FP7	Actors cannot deliver value but can participate in the creation and offering of value propositions.
	FP8	A service-centered view is inherently beneficiary oriented and relational.
Axiom3	FP9	All social and economic actors are resource integrators.
Axiom4	FP10	Value is always uniquely and phenomenologically determined by the beneficiary.
Axiom5	FP11	Value cocreation is coordinated through actor-generated institutions and institutional arrangements.

* Vargo, Stephen L., & Lusch, Robert F. (2004). Evolving to a New Dominant Logic for Marketing. *Journal of Marketing, 68* (January), 1-17.
More details please find at: http://sdlogic.net/foundations.html

Service-Dominant Logic

Why is Service-Dominant Logic so important in the context of Service Platforms?

Service-Dominant Logic is the theoretical foundation for the narrative and process of cooperatively creating value propositions.

Service Dominant Architecture (SDA)

TOP: Service-Dominant Logic

Question 20

What does Service-Dominant Logic explain?

- [ ] Service-Dominant Logic explains the paradigm shift from service dominance to goods dominance
- [ ] Service-Dominant Logic explains the paradigm shift from goods dominance to service dominance
- [ ] Service-Dominant Logic explains the paradigm shift from exchange value to value in use and value in context
- [ ] Service-Dominant Logic explains the paradigm shift from value in use and value in context to exchange value

Service Dominant Architecture (SDA)

TOP: Service-Dominant Logic

Question 21

What does Service-Dominant Logic explain?

- [ ] Service-Dominant Logic explains that goods no longer play a role in value propositions
- [ ] Service-Dominant Logic explains that goods play the dominant role in value propositions
- [ ] Service-Dominant Logic explains the paradigm shift from exchange value to value in use and to value in context
- [ ] Service-Dominant Logic explains the paradigm shift from value in use and value in context to exchange value

Service Dominant Architecture (SDA)

TOP: Service-Dominant Logic

Question 22

What is the narrative and process of Service-Dominant Logic?

- ☐ That actors engage only to buy resources. This gives rise to rules (institutions) and structures of partners who share capabilities and rules (service ecosystems)
- ☐ That actors mostly engage to rent resources. This gives rise to rules (institutions) and structures of partners who share capabilities and rules (service ecosystems)
- ☐ That actors always engage to give away resources. This gives rise to rules (institutions) and structures of partners who share capabilities and rules (service ecosystems).
- ☐ That actors engage in resource integration and service exchange. This gives rise to rules (institutions) and structures of partners who share capabilities and rules (service ecosystems)

Service Dominant Architecture (SDA)

TOP: Service-Dominant Logic

Question 23

What are foundational premises of Service-Dominant Logic?

- [ ] Service is the fundamental basis of exchange
- [ ] Value is always created by exactly one actor
- [ ] All social and economic actors are resource integrators
- [ ] The value of service is always determined by the service provider

Service Dominant Architecture (SDA)

TOP: Service-Dominant Logic

Question 24

What are foundational premises of Service-Dominant Logic?

- [ ] Value cocreation is coordinated through institutions (rules) and institutional arrangements created by actors
- [ ] Value is always determined by the beneficiary
- [ ] Value cocreation is not coordinated by actor-created institutions (rules) and institutional arrangements
- [ ] Actors cannot deliver value, but they can participate in creating and offering value propositions

Service Dominant Architecture (SDA)

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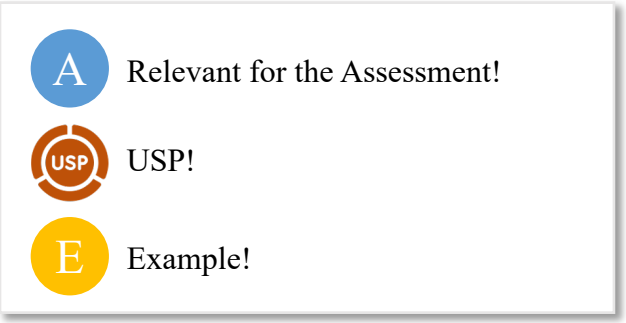
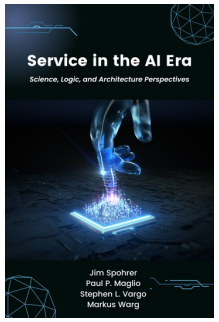
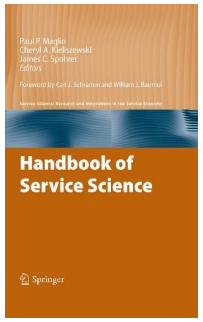


Service Science

Jim Spohrer, Co-Founder Service Science

Jim Spohrer
Service Science





Jim Spohrer is the co-founder of Service Science and co-editor of a series of books about Service Science.

[Jim Spohrer blog on Service Science Research and Education at service-science.info]

Science for: „better models of the world both complex natural and social systems“*

*Spohrer J.C, Maglio P.P., Vargo S.L., Warg M., Service in the AI Era. Business Expert Press, (2022)

Service Science

What is Service Science?

Service Science emerged as an integrative area of study, defined as an interdisciplinary field of inquiry focused on scientific foundations, models, theories, and applications to drive service innovation and well-being through co-creation of value. Key constructs in Service Science include the Service System and Service-Dominant Logic.

A **Definition**

Service Science is a science of collaborative value creation (value cocreation), that studies the structures of Service Systems and their interaction mechanisms.
As a specialization of the Science of Systems, Service Science attempts to integrate the elements of many scientific disciplines around the topic of value creation.*

* Spohrer, J. C., & Maglio, P. P. (Eds.). (2010): *Toward a Science of Service Systems*.
Maglio P., Kieliszewski C., Spohrer J., (2010): Handbook of Service Science, Springer Verlag

Service Science

What characterizes a System?

A

A **System** is a configuration of resources including at least one operant resource, in which the properties and behavior of the configuration is more than the properties and behavior of the individual resources.*

*Spohrer, J. C., Vargo, S. L., & Maglio, P. P. (2008). *The Service System is the Basic Abstraction of Service Science*. Paper presented at the Proc. 41st Hawaii Int. Conf. on System Science, Big Island.

Service Science

What is a Service System?

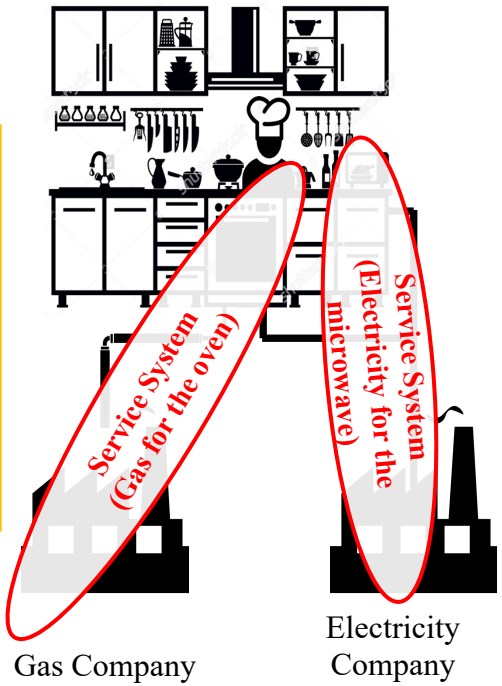
A

A **Service System** is a configuration of resources, like people, technology, information that are connected to other systems by defined value propositions. Hence, in Service Systems, different entities (responsible actors), and their resources are connected, to co-create mutual value.*

* Spohrer, J. C., Vargo, S. L., & Maglio, P. P. (2008). *The Service System is the Basic Abstraction of Service Science*. Paper presented at the Proc. 41st Hawaii Int. Conf. on System Science, Big Island.

E

As soon as the restaurant (entity) interacts with other partners (e.g. companies) for the realization of its meals (services), they each form service systems. Two possible service systems are formed by the restaurant and the energy supplier. In general, all service systems are aligned with a certain value proposition and result in a mutual benefit (e.g., money for food).



Service Science

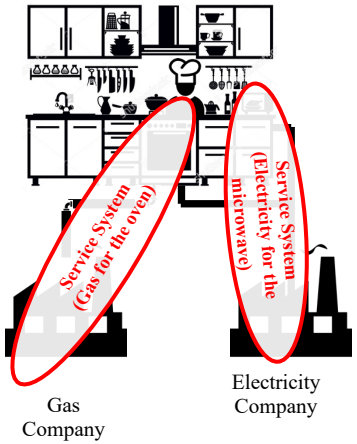
What characterizes a System?

A

A **Service System** is an "open system that
(1) is capable of improving the state of another system by sharing or applying its resources (i.e., the other system sees value in the interaction), and

(2) is able to improve its own state through the acquisition or application of external resources (i.e., the system itself sees value in its interaction with other systems)."

In this context, economic exchange depends on voluntary, reciprocal value creation between service systems (each system must interact voluntarily, and both systems must be improved).*



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Service Dominant Architecture (SDA)

TOP: Service Science

Question 25

What is Service Science?

- [ ] Service Science is a science of value cocreation, that investigates the structures of service systems without their interaction mechanisms.
- [ ] As a specialization of biology, service science seeks to integrate the elements of many scientific disciplines around the theme of value creation
- [ ] Service Science is a science of value cocreation, that investigates the structures of service systems and their interaction mechanisms.
- [ ] As a specialization of systems science, service science seeks to integrate the elements of many scientific disciplines around the topic of value creation

Service Dominant Architecture (SDA)

TOP: Service Science

Question 26

What is a system?

- [ ] A system is a configuration of resources where the properties and behavior of the configuration are less than the properties and behavior of the individual resources
- [ ] A system is a configuration of resources where the properties and behavior of the configuration exactly match the properties and behavior of the individual resources
- [ ] A system is exactly one resource
- [ ] A system is a configuration of resources where the properties and behavior of the configuration are more than the properties and behavior of the individual resources

Service Dominant Architecture (SDA)

TOP: Service Science

Question 27

What is a service system?

- [ ] A service system is a configuration of resources that is connected to other systems by defined value propositions
- [ ] A service system is a configuration of resources that are randomly connected to other systems
- [ ] A service system is a configuration of resources that is involuntarily connected to other systems
- [ ] A service system is a configuration of resources that is connected to other systems by adverse agreements

Service Dominant Architecture (SDA)

TOP: Service Science

Question 28

What characterizes a service system?

- [ ] A service system is a closed system
- [ ] A service system can improve the state of other systems by applying its resources
- [ ] A service system can improve its own state by applying external resources
- [ ] A service system is characterized by involuntary, one-way value creation

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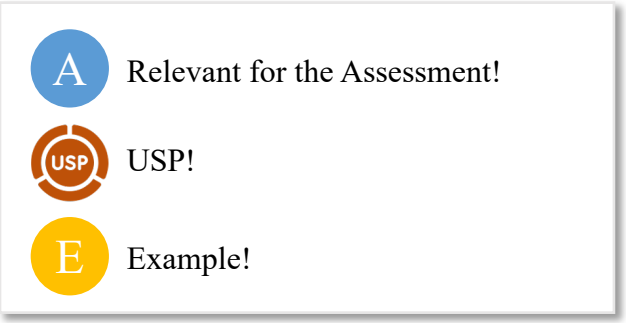
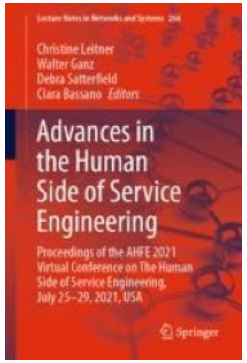
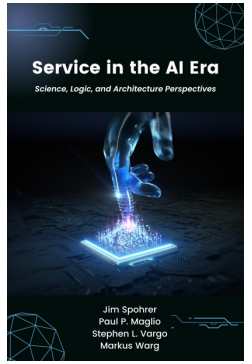


Service Dominant Architecture

Markus Warg, Founder Service Dominant Architecture





Markus is the founder of Service Dominant Architecture and is heading the Institut für Service Design, Hamburg.

http://servicedominantarchitecture.com/

https://www.ifsd.hamburg/

https://www.ifsd.hamburg/PUBLIKATIONEN/

Architecture for: „better cultural and structural models of organizations to improve change“*

*Spohrer J.C, Maglio P.P., Vargo S.L., Warg M., Service in the AI Era. Business Expert Press, (2022)

Service Dominant Architecture (SDA)

A

Service Dominant Architecture **(SDA)** is a Construction Plan for the collaborative building and application of value propositions on Service Platforms.

SDA is based in particular on the theoretical foundations of the Service-Dominant Logic and Service Science. Further influences come from social science as well as institutional economics. It provides an organizational logic for the cooperative design and application of value propositions. SDA consists of five (Service) Systems that enables capabilities to be systematically built and coordinated by responsible actors (entities).*

* Spohrer J.C, Maglio P.P., Vargo S.L., Warg M., Service in the AI Era. Business Expert Press, (2022)

Service Dominant Architecture (SDA)

Service Dominant Architecture (SDA) provides an organizational logic of 5 (Service) Systems as a Construction Plan for the cooperative creation and application of value propositions, for example, for Service Platforms. SDA enables:

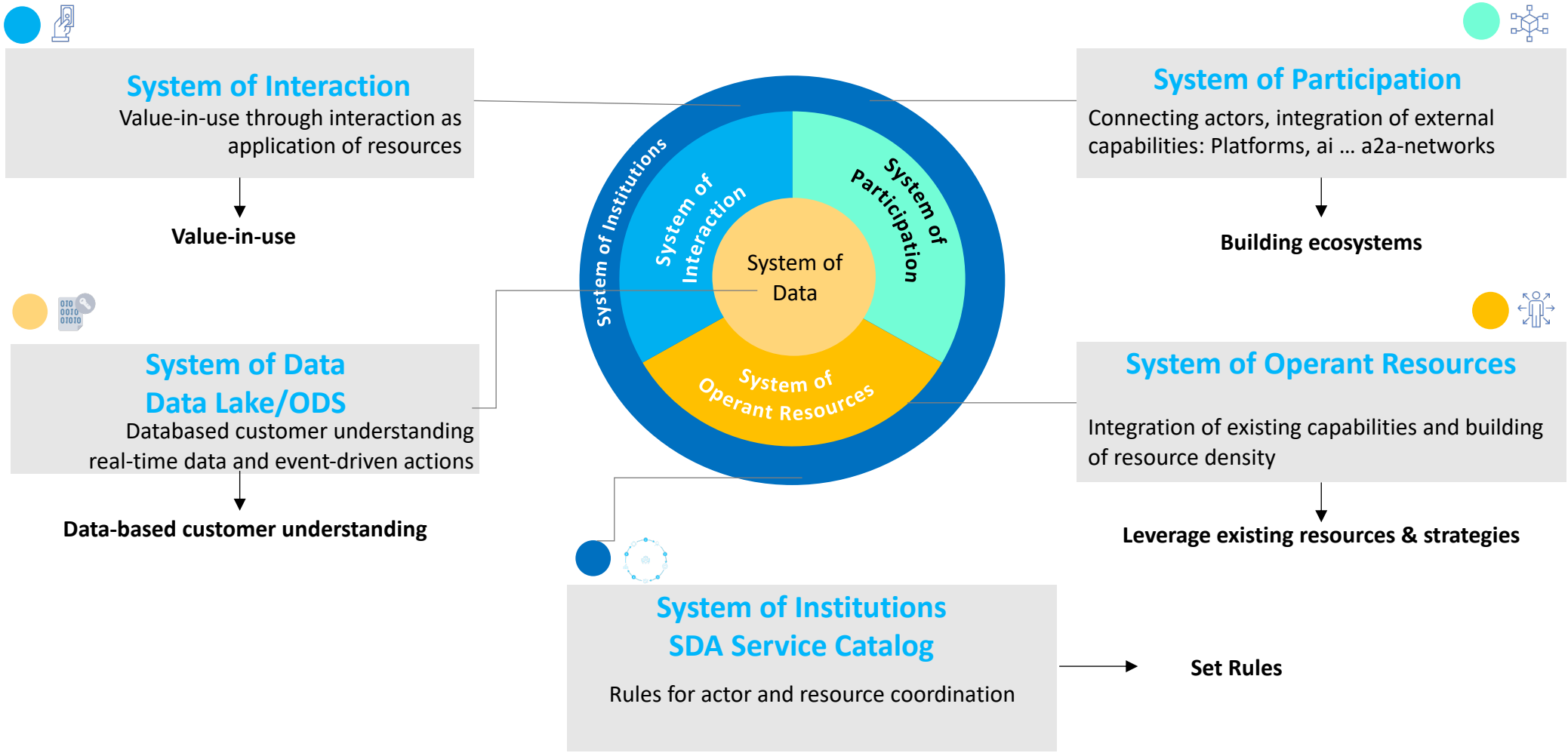
A

1. the **process** of collaborative building and application of value propositions (connecting actors, resource integration, service exchange, setting rules) and

USP

2. the **structure** (configuration of Service Systems) for a systematic building of resources and capabilities.

Service Dominant Architecture (SDA)



Service Dominant Architecture (SDA)

TOP: Service Dominant Architecture (SDA)

Question 29

What are the theoretical foundations of Service Dominant Architecture (SDA)?

- ☐ SDA is based in particular on the theoretical foundations of social science and institutional economics
- ☐ SDA is based on the theoretical foundations of Service-Dominant Logic and Service Science
- ☐ SDA is based in particular on the theoretical foundations of biology and architecture
- ☐ SDA is based in particular on the theoretical foundations of physics and service science

Service Dominant Architecture (SDA)

TOP: Service Dominant Architecture (SDA)

Question 30

What does Service Dominant Architecture (SDA) enable?

- [ ] SDA does not enable the process of cocreating and applying value propositions and the structure for systematically building resources and capabilities
- [ ] SDA enables the process of cocreation and application of value propositions and the structure for random setup of resource and capability building
- [ ] SDA enables the process for cocreating and applying value propositions and the structure for systematically building only assets
- [ ] SDA enables the process for cocreating and applying value propositions and the structure for systematically building resources and capabilities

Service Dominant Architecture (SDA)

TOP: Service Dominant Architecture (SDA)

Question 31

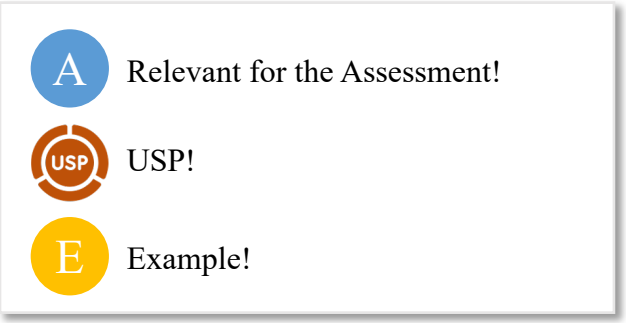
How many (service) systems does the Service Dominant Architecture (SDA) consist of?

- ☐ The SDA consists of 3 (service) systems
- ☐ The SDA consists of 5 (service) systems
- ☐ The SDA consists of 4 (service) systems
- ☐ The SDA consists of 2 (service) systems

Service Dominant Architecture (SDA)

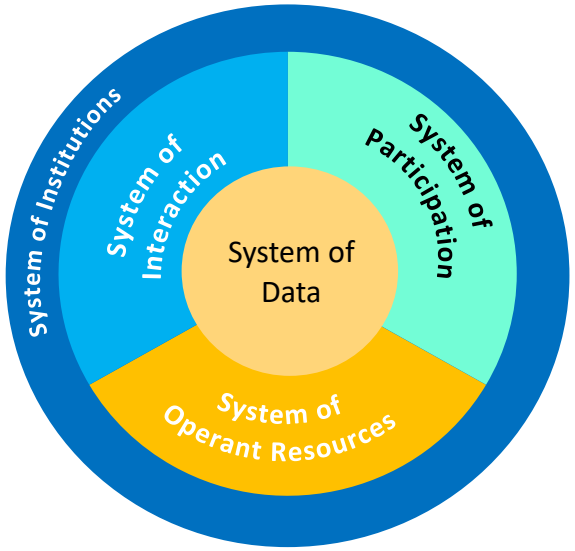
The Construction Plan for collaborations on Platforms – Foundations, Application, Unique Selling Proposition

Why this course?
Introduction Service Dominant Architecture (SDA)
Platform- and Service-Economy
Service
Value Proposition
Service Platforms and Service Ecosystems
Service-Dominant Logic
Service Science
Service Dominant Architecture(SDA)
Structure of Service Dominant Architecture (SDA)
Derivation of Service Dominant Architecture (SDA)
Construction Plan for Service Platforms and Ecosystems
Platforms as a result of technical implementation
Use Cases and Ventures (SDA inside)
Value proposition of Service Dominant Architecture
References



Structure of Service Dominant Architecture (SDA)

SDA consists of 5 (Service) Systems



A

System of Interaction
Value-in-use-Interaction

System of Participation
Authorization A2A-Networks

System of Operant Resources
Use of existing skills

System of Data
Data ML & KI

System of Institutions
Rules for the coordination of actors

1. **System of Interaction:** enables real-time interaction and service exchange between customers, service provider and other stakeholders

2. **System of Participation:** enables actor-2-actor networks and the integration of external capabilities, solutions and services

3. **System of Operant Resources:** enables resource density and orchestration and thus the development, combination and integration of strategically relevant capabilities and value propositions

4. **System of Data** (Data Lake): enables the development of a data-based actor (e.g. customer preferences) understanding from interaction

5. **System of Institutions** (SDA Service Catalog): The systems are complemented by rules (institutions) that coordinate the actors and allow or restrict access to capabilities.

Structure of Service Dominant Architecture (SDA)

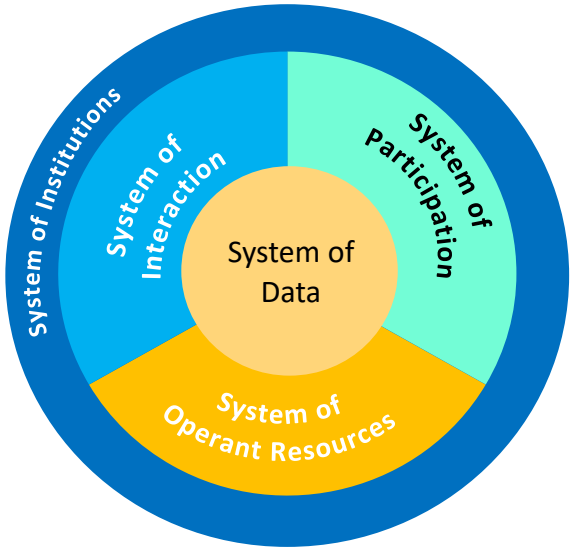
System of Interaction

A

Definition	**System of Interaction:** enables the real-time interaction (application of value propositions) and service exchange between customers, service providers and other actors.

System of Interaction

Value-in-use Interaction



The system enables value-in-use and value-in-context through the application of capabilities bundled in value propositions. The interaction enables the integration of resources and the exchange of service between actors.*

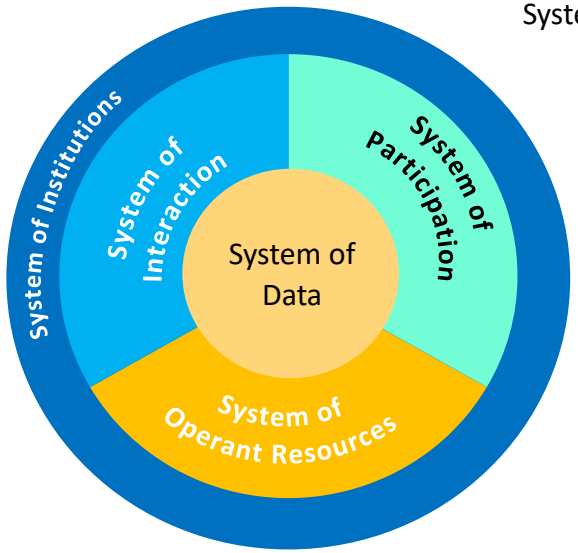
Every interaction is a vehicle to learn more about the customer; each interaction allows to learn about the preferences and context of the customer.

Every value proposition applied by the customer via interaction offers feedback from customers, each and every one is an input toward adaptation. This is what Hagel calls „scalable learning.“**

* Spohrer, J.C., Maglio P.P., Vargo S.L., Warg M. (2022): Service in the AI Era. Business Expert Press
** Hagel III, John; Seely Brown, John; Davison, Lang (2010). The Power of Pull: How Small Moves, Smartly Made, Can Set Big Things in Motion.

Structure of Service Dominant Architecture (SDA)

System of Participation



System of Participation

Authorization
A2A-Networks

A

Definition

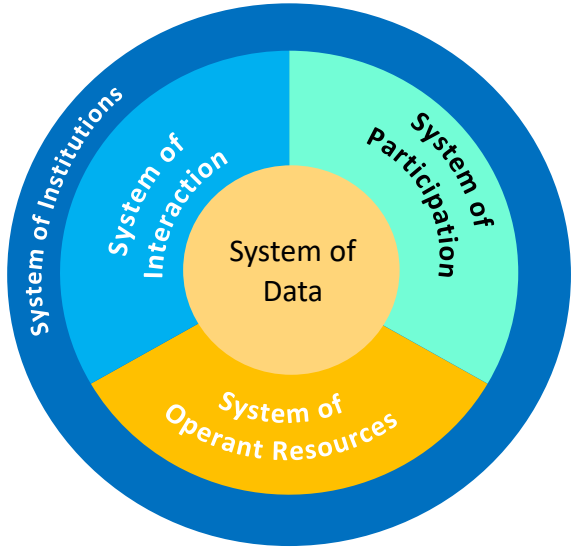
System of Participation: for the integration of partners, the formation of actor-2-actor networks and the integration of external capabilities, solutions and services.

It supports the concept of collaborative value creation (cooperation, co-creation) and involves other (external) actors as co-producers of the value proposition. In this process, the system of participation enables actor-to-actor orientation and the participation of others by coordinating actors and facilitating the process of resource integration.*
In this way, structures of actors are created by sharing capabilities and rules all in the process of building and applying value propositions.**

* **Vargo, Stephen L, & Lusch, Robert F. (2018).** The SAGE Handbook of Service-dominant Logic: SAGE Publications Limited.
** **Adner, Ron. (2017).** Ecosystem as Structure: An Actionable Construct for Strategy. Journal of Management, 43(1), 39-58. doi:10.1177/0149206316678451

Structure of Service Dominant Architecture (SDA)

System of Operant Resources



System of Operant Resources

Use of existing capabilities

A

Definition

System of Operant Resources: Enables the building of resources and resource density as well as the integration of strategically relevant capabilities (e.g. the Platform owner) into the (value creation) process*.

The system of operant resources is the heart of SDA. It represents the workbench, where the various resources and capabilities are brought together and processed. For this, this system applies certain logics or processes. In line with S-D Logic, the focus is on intangible capabilities, previously defined as operant resources (like competence, knowledge, skills, software code), which are used and brought together to (co-) create value propositions.

The emergence of value propositions is dependent on the achievable level of resource density. A high resource density positively impacts the possible combinations and thus the emergence and creation of innovative value propositions.

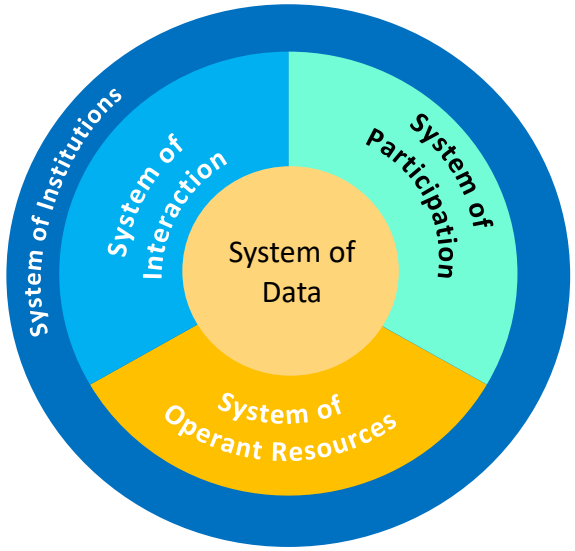
* Spohrer, J.C., Maglio P.P., Vargo S.L., Warg M. (2022): Service in the AI Era. Business Expert Press

Structure of Service Dominant Architecture (SDA)

System of Data / Data Lake – ODS

System of Data

Data ML & KI



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Definition	**System of Data (Data Lake):** enables the development of a data-based understanding from interactions, e.g. regarding the preferences of the actors (e.g. customers) or the relevance of value propositions

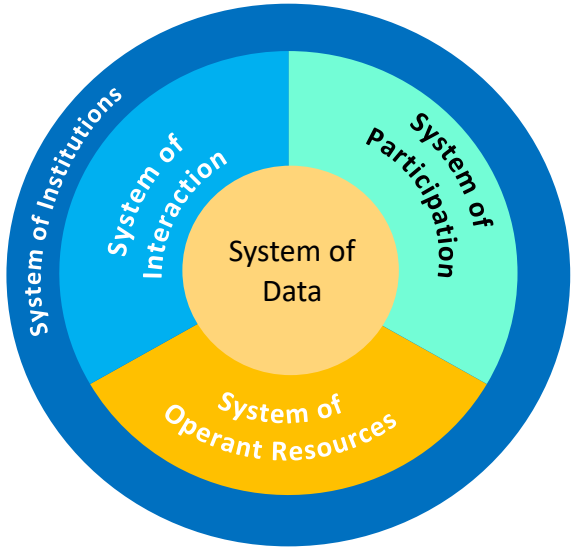
The system of data (data lake, operational data stores): From the interaction, after the actors' consent, data can be systematically collected and analyzed in real time.

In this way, data and knowledge about the preferences and the context of actors like customers can be build up continuously. *

* Spohrer, J.C., Maglio P.P., Vargo S.L., Warg M. (2022): Service in the AI Era. Business Expert Press

Structure of Service Dominant Architecture (SDA)

System of Institutions



A

Definition	**System of Institutions (SDA Service Catalog):** The systems are supplemented by rules (institutions) that coordinate actors and enable or limit access to capabilities.

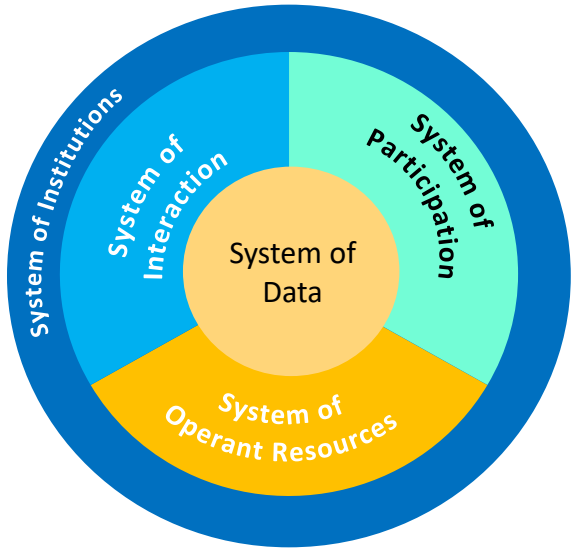
The system of institutions (SDA Service Catalog): As rules, institutions and institutional arrangements enable the coordination of actors and the access or restriction to the use of resources.

System of Institutions

Rules for the coordination of actors

Structure of Service Dominant Architecture (SDA)

SDA is a Construction Plan for collaboratively creating, building and applying value propositions



System of Interaction	System of Participation	System of Operant Resources	System of Data	System of Institutions
Value-in-use-Interaction	Authorization A2A-Networks	Use of existing skills	Data ML & KI	Rules for the coordination of actors

The architecture enables responsible actors (entities) such as organizations to evolve roles and systems that by their implementation become dynamic value co-creation configurations and by this service systems.*

* Spohrer, Jim, & Maglio, Paul P. (2008): The emergence of service science: Toward systematic service innovations to accelerate co-creation of value. *Production and Operations Management, 17*(3), 238-246.

Service Dominant Architecture (SDA)

TOP: Establishment of the Service Dominant Architecture (SDA)

Question 32

What (service) systems does the Service Dominant Architecture (SDA) consist of?

- ☐ System of interaction, system of conception, system of operant resources, system of data, system of institutions.
- ☐ System of interaction, system of participation, system of operant resources, system of data, system of institutions, system of operand resources.
- ☐ System of interaction, system of participation, system of operant resources, system of data.
- ☐ System of interaction, system of participation, system of operant resources, system of data, system of institutions.

Service Dominant Architecture (SDA)

TOP: Establishment of the Service Dominant Architecture (SDA)

Question 33

What does the "system of interaction" enable?

- ☐ The system of interaction enables interaction (application of value propositions) and exchange of service in real time between customers, providers and other actors
- ☐ The system enables value in use and value in context by demonstrating capabilities that are bundled into value propositions
- ☐ The system of interaction allows defining rules and exchanging service in real time between customers, providers and other actors
- ☐ The system enables value in use and value in context through the application of capabilities bundled into value propositions

Service Dominant Architecture (SDA)

TOP: Establishment of the Service Dominant Architecture (SDA)

Question 34

What does the "system of participation" enable?

- ☐ The system of participation enables the connection of partners and it prevents the formation of actor-2-actor networks and the integration of external capabilities, solutions and services
- ☐ It supports the concept of value cocreation (cooperation) and involves other (external) actors as co-producers of the value proposition
- ☐ The system of participation enables the connection of partners, the formation of actor-2-actor networks and the integration of external capabilities, solutions and services
- ☐ It supports the concept of shared value creation and involves other (external) actors as co-producers of the value proposition exclusively in the production of goods

Service Dominant Architecture (SDA)

TOP: Establishment of the Service Dominant Architecture (SDA)

Question 35

What does the "system of operant resources" enable?

- ☐ The system of operant resources enables the build-up of resources and resource density as well as the integration of strategically relevant capabilities (e.g. of the platform owner)
- ☐ It enables a high density of resources and has a positive effect on the possible combinations and thus on the emergence and creation of innovative value propositions
- ☐ It enables high resource density and negatively impacts the possible combinations and thus the emergence and creation of innovative value propositions
- ☐ The system of operant resources prevents the build-up of resources and resource density as well as the involvement of strategically relevant capabilities (e.g., the platform owner)

Service Dominant Architecture (SDA)

TOP: Establishment of the Service Dominant Architecture (SDA)

Question 36

What does the "system of data" enable?

- ☐ The system of data (data lake) prevents the development of a data-based understanding, for example, regarding the preferences of the actors (e.g., customers) from the interaction.
- ☐ From the interaction, after the consent of the actors, data can be collected and evaluated systematically and with a time lag
- ☐ The system of data (data lake) enables the development of a data-based understanding of, for example, the preferences of the actors (e.g. customers) from the interaction.
- ☐ From the interaction, after the consent of the actors, data can be systematically collected and analyzed in real time

Service Dominant Architecture (SDA)

TOP: Establishment of the Service Dominant Architecture (SDA)

Question 37

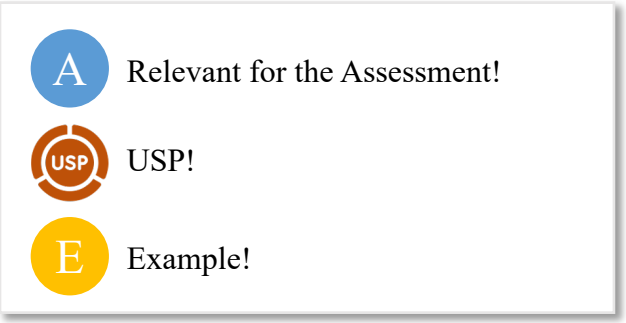
What does the "system of institutions" enable?

- [ ] The system of institutions prevents setting rules (institutions) for the coordination of actors and access to capabilities
- [ ] It prevents the coordination of actors and access or limitation to resources
- [ ] The system of institutions allows to set rules (institutions) for the coordination of actors and the access to capabilities
- [ ] It enables the coordination of actors and the access or limitation to resources

Service Dominant Architecture (SDA)

The Construction Plan for collaborations on Platforms – Foundations, Application, Unique Selling Proposition

Why this course?
Introduction Service Dominant Architecture (SDA)
Platform- and Service-Economy
Service
Value Proposition
Service Platforms and Service Ecosystems
Service-Dominant Logic
Service Science
Service Dominant Architecture(SDA)
Structure of Service Dominant Architecture (SDA)
Derivation of Service Dominant Architecture (SDA)
Construction Plan for Service Platforms and Ecosystems
Platforms as a result of technical implementation
Use Cases and Ventures (SDA inside)
Value proposition of Service Dominant Architecture
References



Derivation of Service Dominant Architecture (SDA)

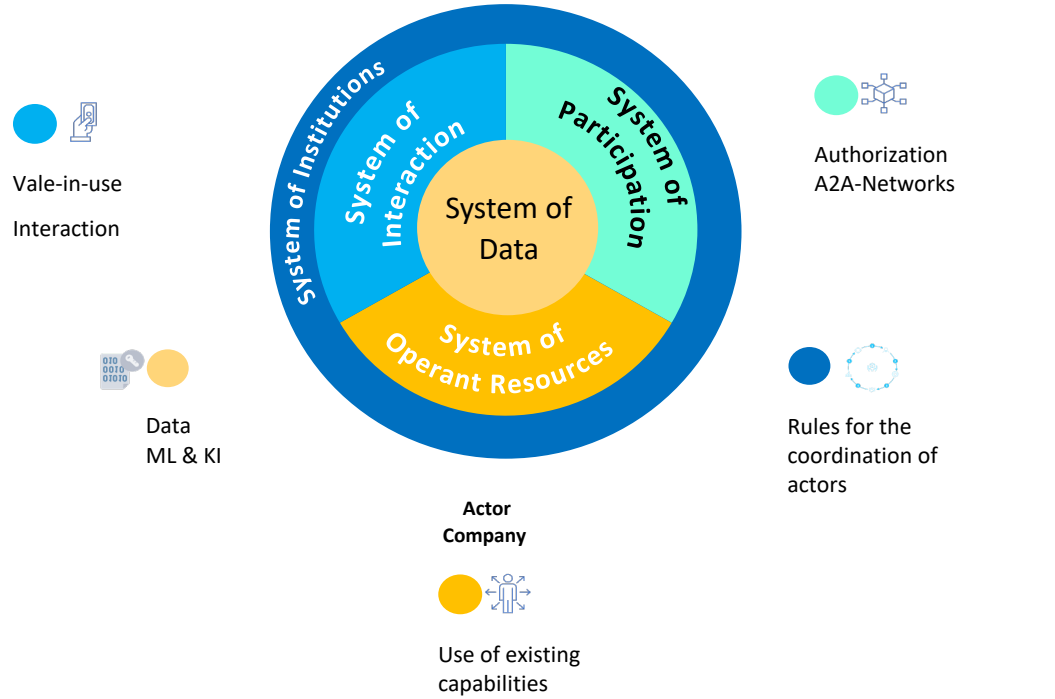
The S-D Logic is operationalized by SDA, 1/2

A Service-Dominant Logic

	Goods-Dominant	Service-Dominant
Value Proposition	Exchange Value	Value-in-use Value-in-context
Unit of Exchange	Product	Capabilities, Services Knowledge, Data, Products...
Role of Customer	Consumer	Co-Creator Interactive
Definition of Value **(Value determination)**	Producer Production Costs	Customer, Recipient Value-in-use Value-in-context

*Vargo, Stephen L., & Lusch, Robert F. (2004). Evolving to a New Dominant Logic for Marketing. *Journal of Marketing, 68*(January), 1-17.Vargo, S.L., & Lusch, R.F. (2018). *The SAGE Handbook of Service-Dominant Logic*: SAGE Publications.

SDA operationalizes the core concepts of the S-D Logic, among others the value-in-use



*Warg, Markus, Weiß, Peter, & Engel, Ronald. (2015). *Service Dominant Architecture*. Retrieved from http://www.fhwedel.de/fileadmin/mitarbeiter/mwa/SDA_Whitepaper_30.11.2015.pdf
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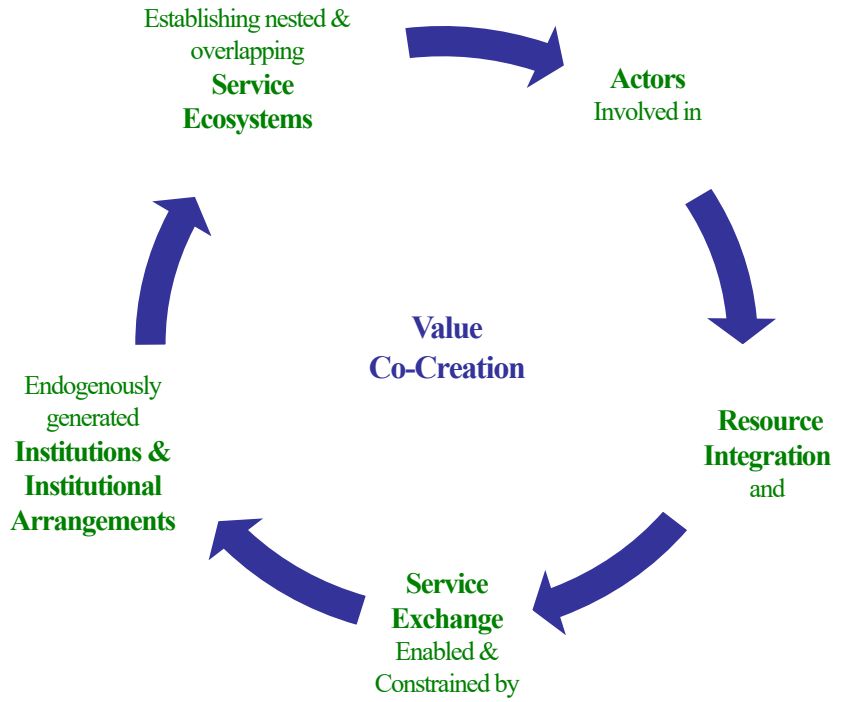
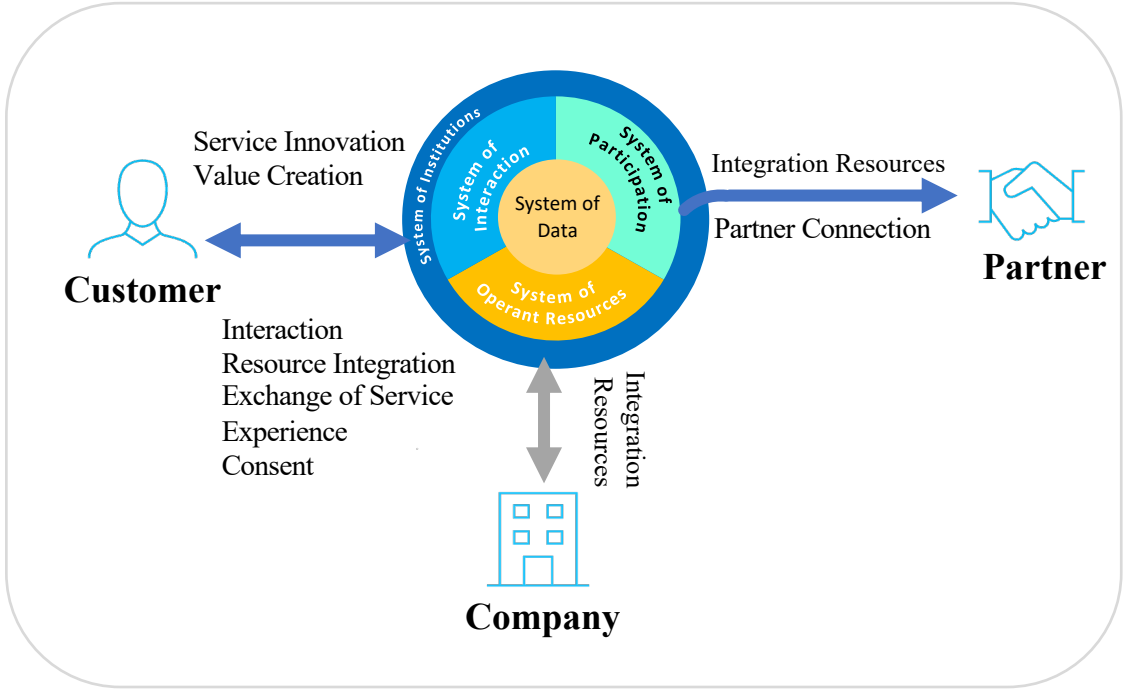
Derivation of Service Dominant Architecture (SDA)

The S-D Logic is operationalized by SDA, 2/2

The PROCESS of S-D Logic



SDA enables the PROCESS of collaborative value creation, e.g. for value propositions on Platforms



Derivation of Service Dominant Architecture (SDA)

Service Science is operationalized by SDA, 1/2

Basics of Service Science

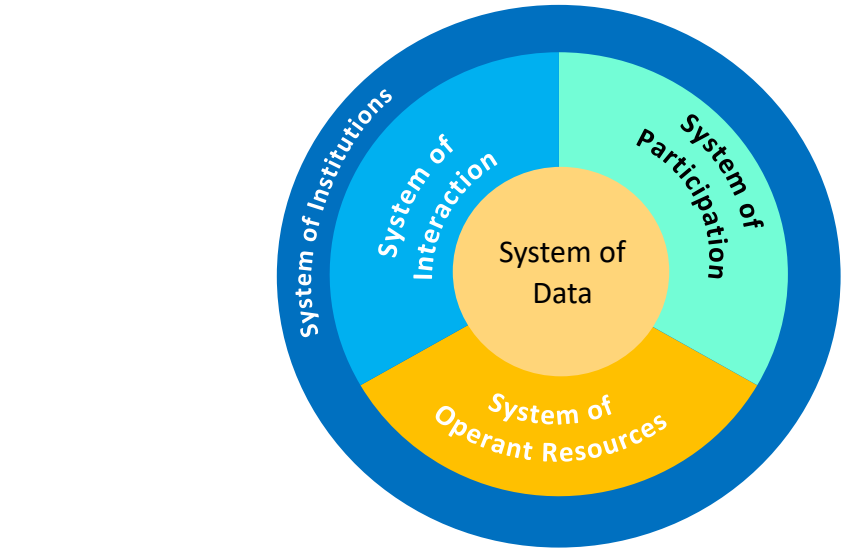
Service Science is the science of value cocreation, it studies the **structures** of service systems and their interaction mechanisms.

Service is the application of resources (including competencies, capabilities, and knowledge) to make changes that are of value to another (system)*.

A **Service System** is a configuration of resources such as people, technology, and information that is connected to other systems through defined value propositions. Service systems interact with other service systems to create mutual value.*

*Spohrer, J. C., Maglio, P. P., Bailey, J., & Gruhl, D. (2007). Steps toward a science of service systems. *Computer, 40*(1), 71-77. Spohrer, J. C., Vargo, S. L., & Maglio, P. P. (2008). *The Service System is the Basic Abstraction of Service Science*. Paper presented at the Proc. 41st Hawaii Int. Conf. on System Science, Big Island.

SDA as a STRUCTURE of 5 Service Systems



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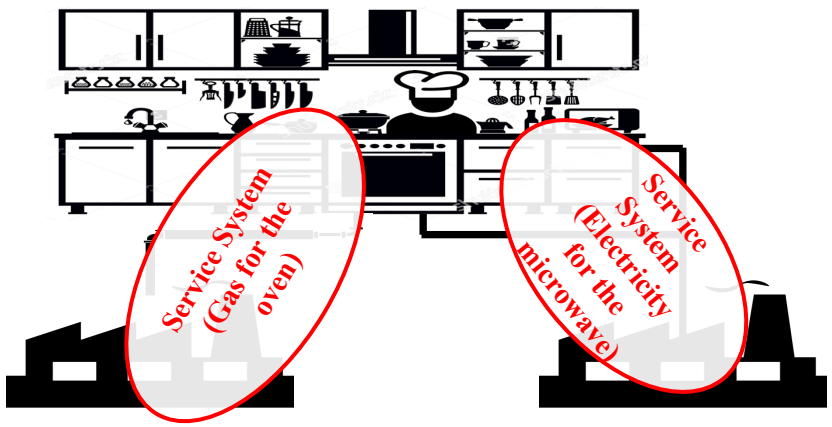
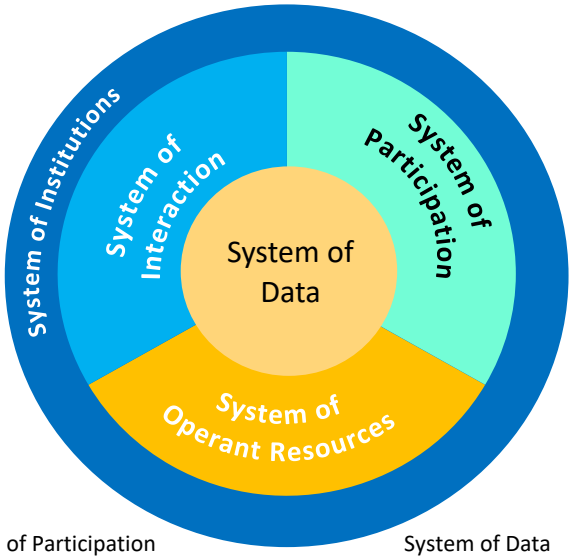
Derivation of Service Dominant Architecture (SDA)

Service Science is operationalized by SDA, 2/2

Service Science as a Service (Eco-) SYSTEM mindset



SDA as a STRUCTURE of 5 Service Systems



System of Participation | System of Data | System of Interaction | System of Operant Resources | System of Institutions

Value-in-use Interaction | Authorization A2A Networks | Orchestration of existing capabilities | Data ML & KI | Rules for the coordination of actors

Derivation of Service Dominant Architecture (SDA)

Emergence: SDA facilitates results that go beyond the sum of the properties of the individual systems.

In analogy to cycling, where the individual parts of the bike work together to enable the process of cycling, the 5 service systems of SDA enable (cooperative) processes for creating, building and applying value propositions on Service Platforms and in service ecosystems.

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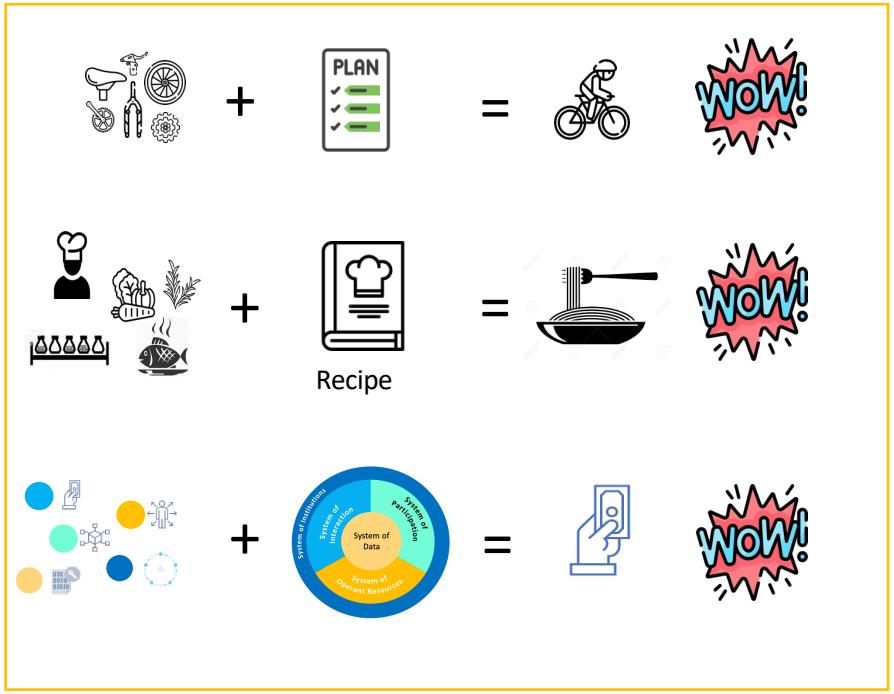


USP

Service Dominant Architecture (SDA)

TOP: Derivation of the Service Dominant Architecture (SDA)

Question 38

What does Service Dominant Architecture operationalize from Service-Dominant Logic?

- ☐ The core concepts such as value in use instead of exchange value, goods dominance instead of service dominance, the active role of the customer as a user of resources or the determination of value by the beneficiary
- ☐ The core concepts such as value in use instead of exchange value, service dominance instead of goods dominance, the active role of the customer as a user of resources or the determination of value by the beneficiary
- ☐ The core concepts such as exchange value instead of value in use, service dominance instead of goods dominance, the active role of the customer as a user of resources or the determination of value by the beneficiary
- ☐ The core concepts such as value in use instead of exchange value, service dominance instead of goods dominance, the passive role of the customer as consumer, or the determination of value by the customer/beneficiary

Service Dominant Architecture (SDA)

TOP: Derivation of the Service Dominant Architecture (SDA)

Question 39

How does Service Dominant Architecture operationalize the narrative of Service-Dominant Logic?

- ☐ The Service Dominant Architecture enables the connection and participation of actors, the integration of resources, the exchange of service and the design and setting of rules (institutions)
- ☐ The Service Dominant Architecture does not enable the connection and participation of actors, the integration of resources, the exchange of service and the design and setting of rules (institutions)
- ☐ The Service Dominant Architecture enables the connection and participation of actors, but not the integration of resources or the design and setting of rules (institutions)
- ☐ The Service Dominant Architecture enables the connection and participation of actors, the integration of resources, the exchange of service but not the design and setting of rules (institutions)

Service Dominant Architecture (SDA)

TOP: Derivation of the Service Dominant Architecture (SDA)

Question 40

What core elements of Service Science operationalizes Service Dominant Architecture?

- ☐ SDA is a structure (a design pattern) of 5 service systems (core element of Service Science) that interact with each other to create mutual value
- ☐ SDA is a structure (a design pattern) of 4 service systems (core element of Service Science) that interact with each other to create mutual value
- ☐ SDA is a structure (a design pattern) of 5 service systems (core element of Service Science) that do not interact with each other to create mutual value
- ☐ SDA is a structure (a design pattern) of 5 service systems (core element of Service Science) that interact with each other and do not create value for each other

Service Dominant Architecture (SDA)

TOP: Derivation of the Service Dominant Architecture (SDA)

Question 41

What does Service Dominant Architecture operationalize from Service Science?

- ☐ The approach of service systems, which are closed systems capable of improving the state of another system as well as their own state through the application of resources
- ☐ The approach of service systems, which as open systems are not able to improve the state of another system as well as their own state through the application of resources
- ☐ The approach of service systems, which are open systems capable of improving the state of another system as well as their own state through the application of resources
- ☐ The approach of service systems, which are open systems capable of improving the state of another system but not their own state through the application of resources

Service Dominant Architecture (SDA)

The Construction Plan for collaborations on Platforms – Foundations, Application, Unique Selling Proposition

Why this course?

Introduction Service Dominant Architecture (SDA)

Platform- and Service-Economy

Service

Value Proposition

Service Platforms and Service Ecosystems

Service-Dominant Logic

Service Science

Service Dominant Architecture(SDA)

Structure of Service Dominant Architecture (SDA)

Derivation of Service Dominant Architecture (SDA)

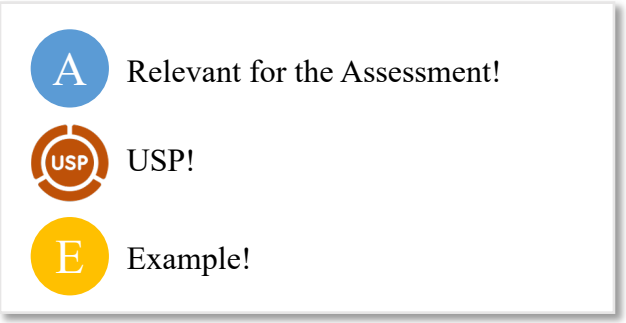
Construction Plan for Service Platforms and Ecosystems

Platforms as a result of technical implementation

Use Cases and Ventures (SDA inside)

Value proposition of Service Dominant Architecture

References



Construction Plan for Service Platforms and Ecosystems

Service Platforms as a strategic mandate for service-oriented companies

We think that **Service Platforms** need to be seen as a strategic mandate for service-oriented companies. Service Platforms act as the "venue for innovation", allowing for the cocreation with customers of experiences that are the basis of new value creation.*

In this way, Service Platforms enable companies to transform business models by facilitating resource integration and interaction.*

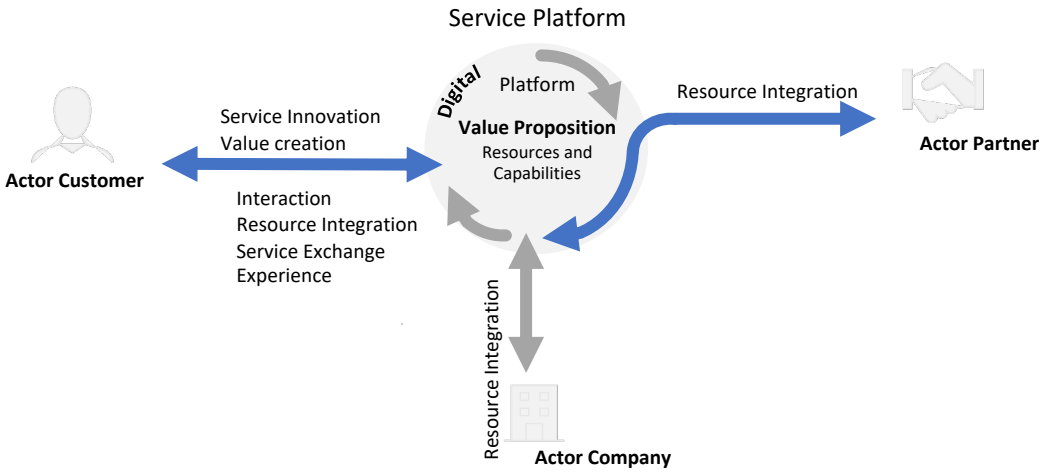
*
Lusch, Robert F, & Nambisan, Satish. (2015). Service Innovation: A Service-Dominant Logic Perspective. *MIS Quarterly, 39*(1), 155-175.
Prahalad, C. K., & Ramaswamy, V. (2004). Co-creation experiences: The next practice in value creation. *Journal of interactive marketing, 18*(3), 5-14.
Warg, M., Zolnowski, A., Frosch, M., Weiß, P. (2019). From Product Organization to Platform Organization - Observations of Organizational Development in the Insurance Industry. *Naples Forum on Service, 10.th*, 16. doi:http://www.naplesforumonservice.it/uploads/files/2018/Proceedings/NFS2019-Warg-Zolnowski-Frosch-Weiss.pdf

Construction Plan for Service Platforms and Ecosystems

Service Platforms: How to build them?

A

Service Platforms connect actors and enable the integration and bundling of resources (knowledge, services, products, ...) whose application (by interaction) generates benefits.
https://www.ifsd.hamburg/INDEX/



How to organize cooperation with Service Platforms?

- How to connect partner?
- How to integrate resources?
- How to facilitate real-time interaction?
- How to use interactions for learnings?
- How to build up a Platform step by step?
- How to handle data?
- How to get customer consent?
- How to enable value in use?
- How to set rules for actor coordination?
- How to scale up?
- How to orchestrate resources?
- …

Construction Plan for Service Platforms and Ecosystems

Service Platforms: How to build them?

Service Dominant Architecture (SDA) serves as Construction Plan for Service Platforms

How to organize cooperation with Service Platforms?

- How to connect partner?
- How to integrate resources?
- How to facilitate real-time interaction?
- How to use interactions for learnings?
- How to build up a Platform step by step?
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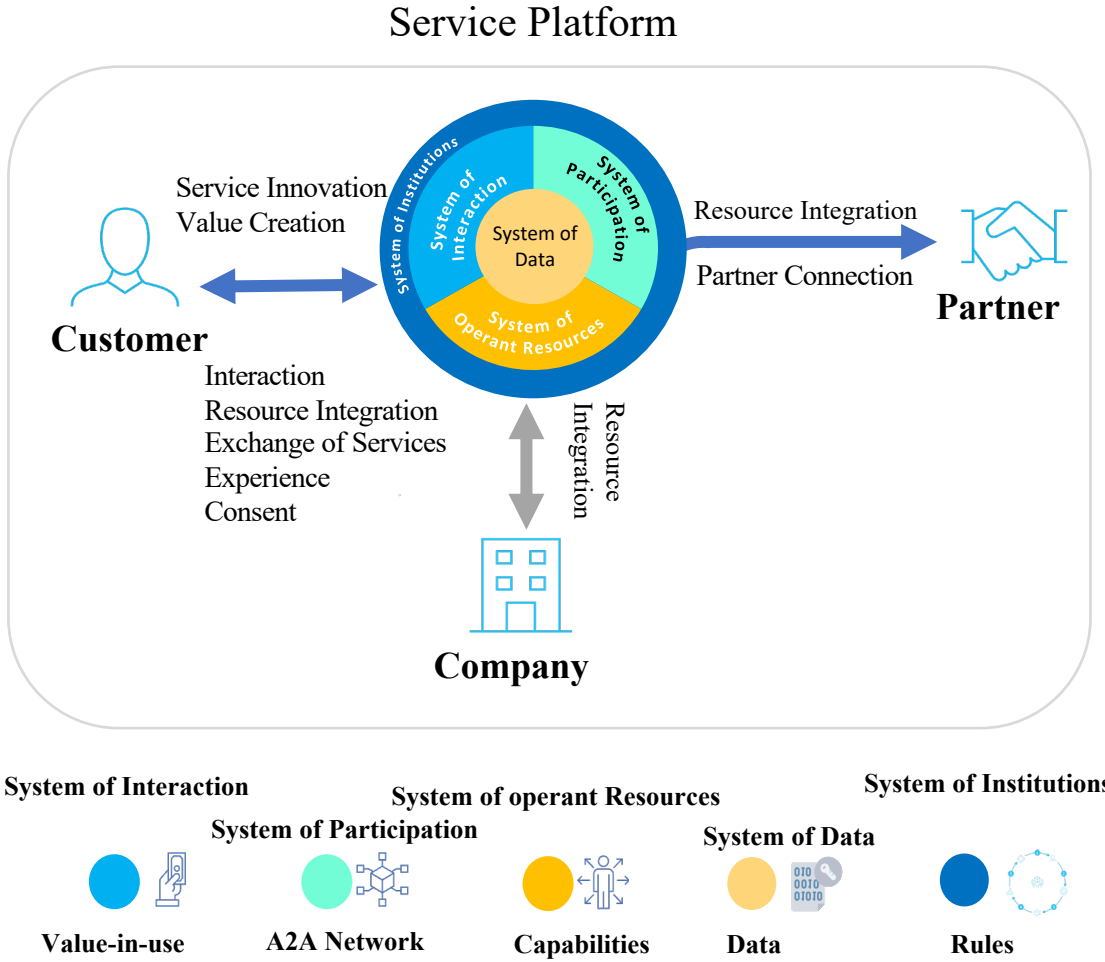
- …



Construction Plan for Service Platforms and Ecosystems

Service Platforms: How to build them?

Service Dominant Architecture (SDA) serves as Construction Plan for Service Platforms

A

Service Dominant Architecture (SDA) is a Construction Plan for the cooperative building and application of value propositions on Platforms.

The 5 (Service) Systems of SDA enable:

- To connect partners and integrate their resources and capabilities
- The cooperative creation of value propositions as combination of resources and capabilities
- The application of value propositions as part of interactions
- Building data-driven customer understanding
- The usage of existing resources and capabilities
- The definition of rules to coordinate actors

* Spohrer J.C, Maglio P.P., Vargo S.L., Warg M., Service in the AI Era. Business Expert Press, (2022)

Construction Plan for Service Platforms and Ecosystems

Service Platforms: How to build them?

Learning from interaction, adapting behavior ("adaptive learning") and purposeful building of capabilities ("generative learning") required for the next value proposition

E

Example Amazon: Every interaction is a learning experience and a catalytic moment for new value creation. Every product offers the opportunity for customer feedback, every interaction is a learning and development (adaptation) contribution.*

A

SDA enables (as a process and structure) "adaptive and generative learning" and thus the design and development of "learning organizations." Learning that uses interactions to build data-based understanding, adapt behavior, and continuously incorporate new capabilities.

* McGowan H.E, Shipley C., (2020). The adaptation advantage: Let go, learn fast, and thrive in the future of work. John Wiley & Sons.
** Hagel III, John; Seely Brown, John; Davison, Lang (2010). The Power of Pull: How Small Moves, Smartly Made, Can Set Big Things in Motion.
*** Senge P.M. (1997). The Fifth Discipline: The art and practice of the learning organization (Century business), Measuring Business Excellence Measuring Business Excellence.

Service Dominant Architecture (SDA)

TOP: Construction Plan for Service Platforms and Ecosystems

Question 42

What does SDA enable as a construction plan for service platforms?

- ☐ To connect partners and integrate their resources and capabilities
- ☐ To build up data-based understanding of e.g. actor preferences from interactions
- ☐ To produce physical goods as a value proposition
- ☐ To coordinate actors who do not use the platform

Service Dominant Architecture (SDA)

TOP: Construction Plan for Service Platforms and Ecosystems

Question 43

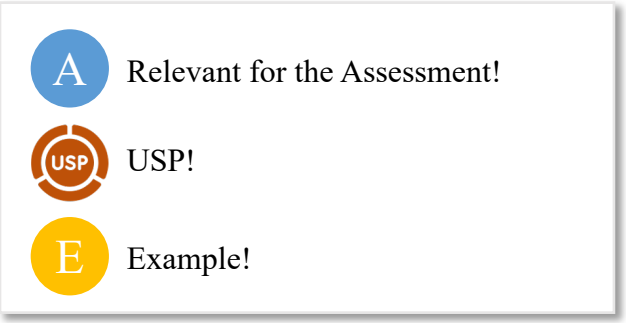
What does SDA enable as a construction plan for service platforms?

- ☐ SDA enables only "adaptive learning": learning that uses interactions to build data-based understanding and adjust behavior
- ☐ SDA enables only "generative learning": learning that uses interactions to build data-based understanding and continuously incorporate new capabilities
- ☐ SDA enables "adaptive and generative learning": learning that uses interactions to build data-based understanding, adapt behavior, and continuously incorporate new capabilities
- ☐ The SDA does not enable "adaptive or generative learning"

Service Dominant Architecture (SDA)

The Construction Plan for collaborations on Platforms – Foundations, Application, Unique Selling Proposition

Why this course?
Introduction Service Dominant Architecture (SDA)
Platform- and Service-Economy
Service
Value Proposition
Service Platforms and Service Ecosystems
Service-Dominant Logic
Service Science
Service Dominant Architecture(SDA)
Structure of Service Dominant Architecture (SDA)
Derivation of Service Dominant Architecture (SDA)
Construction Plan for Service Platforms and Ecosystems
Platforms as a result of technical implementation
Use Cases and Ventures (SDA inside)
Value proposition of Service Dominant Architecture
References

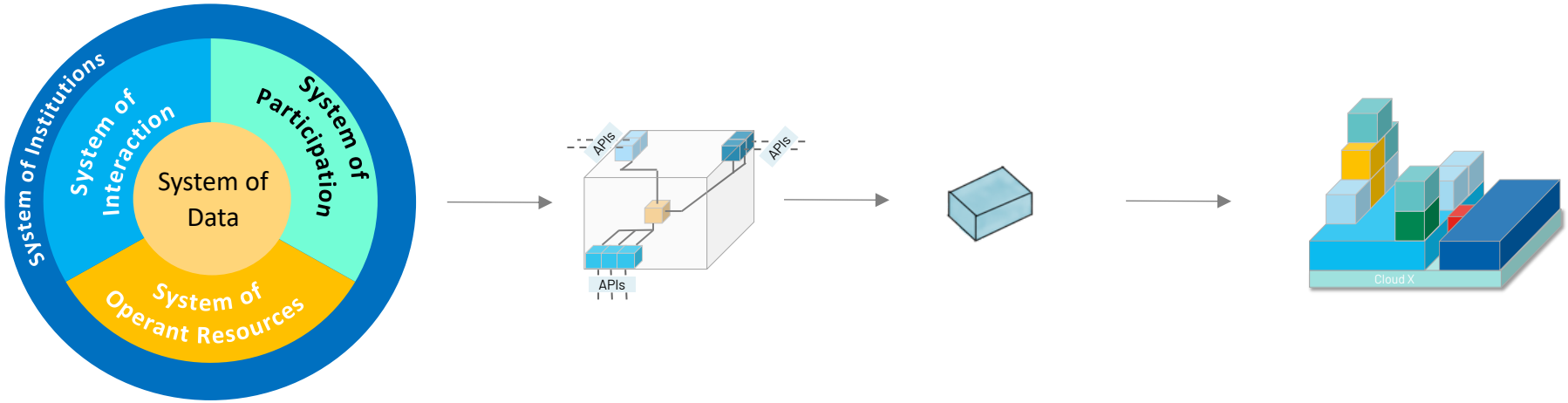


Platforms as result of technical implementation

The 5 Systems of SDA are reflected in software solutions

A

The five Service Systems of SDA are reflected in software solutions. For this purpose, small software services (microservices) are assigned to the 5 systems.

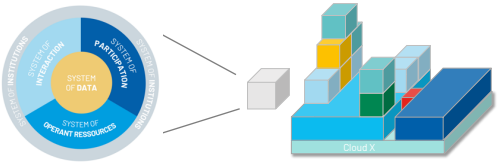


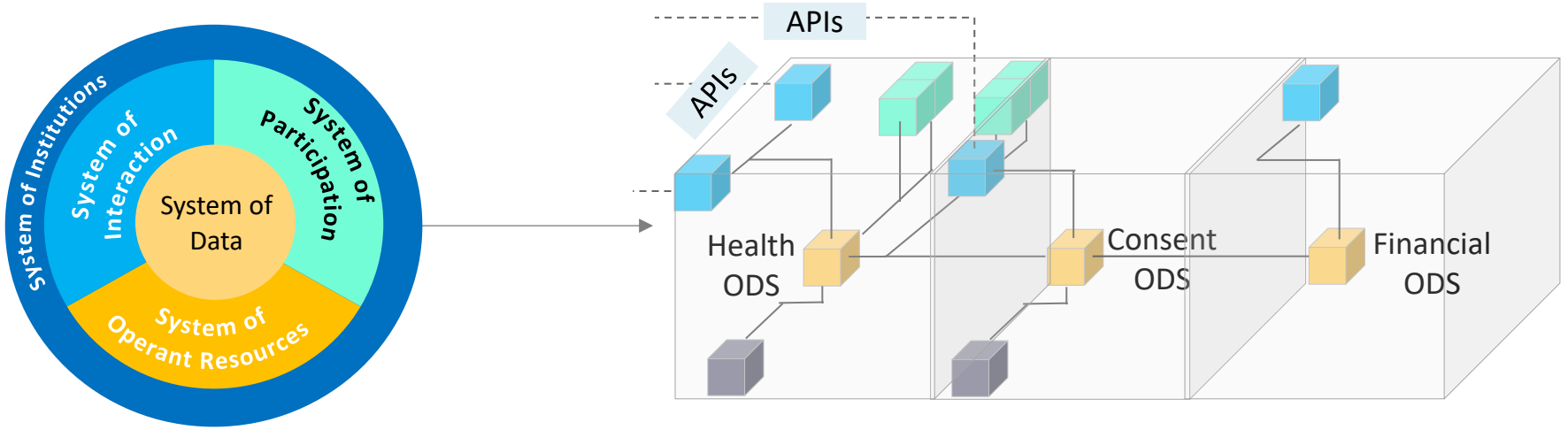
Implemented by SDA SE OPEN INDUSTRY SOLUTIONS

Platforms as result of technical implementation

The 5 Systems of SDA are reflected in the software solutions

The application of the unified architecture enables software solutions - both technical services and business solutions (packaged business capabilities) - to work together.





Modular **Standardized**

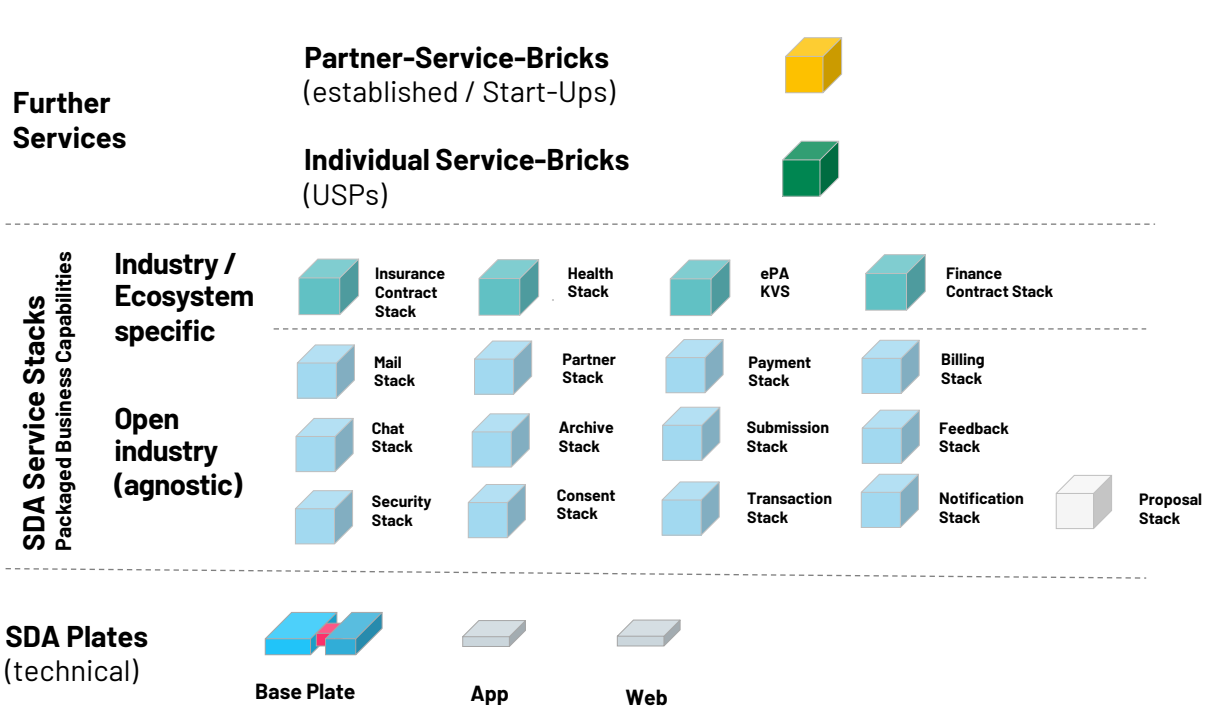
Reusable **Scalable**

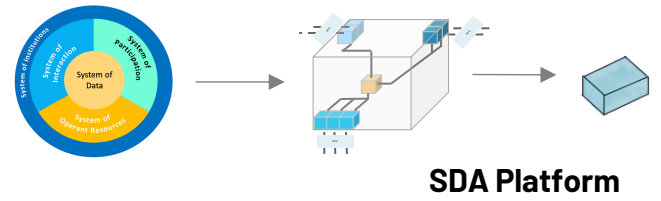
Implemented by SDASE OPEN INDUSTRY SOLUTIONS

Platforms as result of technical implementation

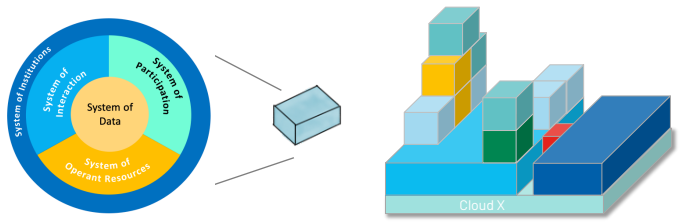
The 5 Systems of SDA are reflected in software solutions

Example SDA SE: SDA as Construction Plan for a modular and composable enabling kit of the Platform- and ecosystem developer SDA SE in Hamburg





SDA inside = Process inside



Modular **Standardized**

Reusable **Scalable**

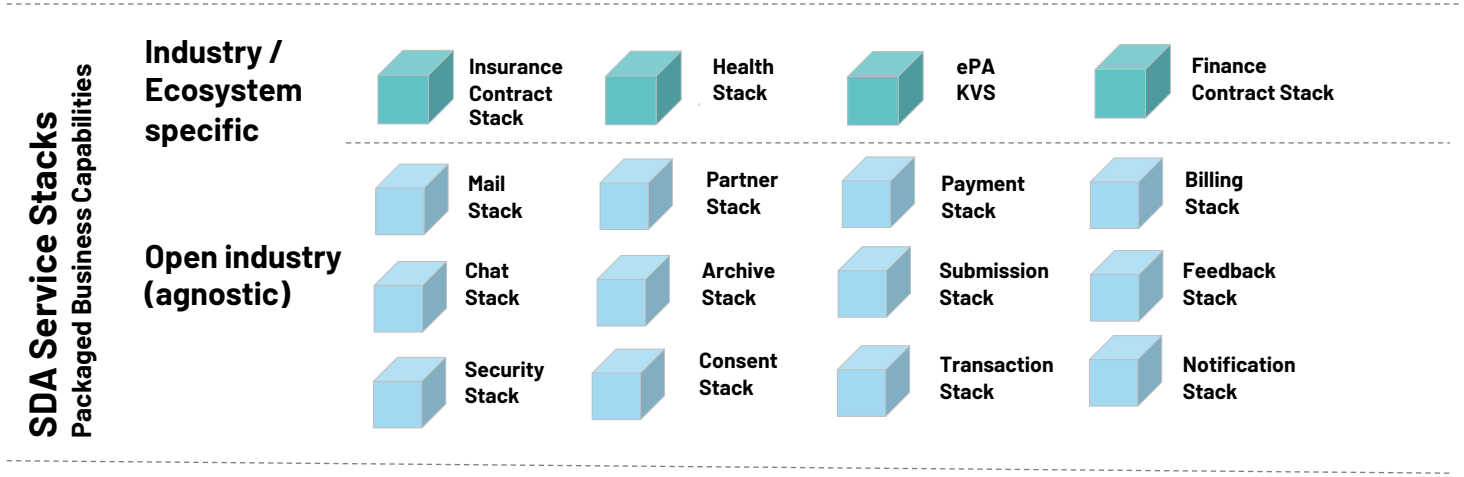
Implemented by SDA SE OPEN INDUSTRY SOLUTIONS

Platforms as result of technical implementation

The 5 Systems of SDA are reflected in software solutions

Packaged Business Capabilities*

Packaged Business Capabilities (PBCs) are mini-applications - sometimes "headless" (i.e., with minimal or no user experience components) - that are intended to represent an isolated business function. A PBC takes the form of an encapsulated software package designed as a building brick for building customized application experiences.



Example: PBCs of the Hamburger Platform- and Ecosystembuilder Ökosystementwickle SDA SE

Implemented by SDA SE OPEN INDUSTRY SOLUTIONS

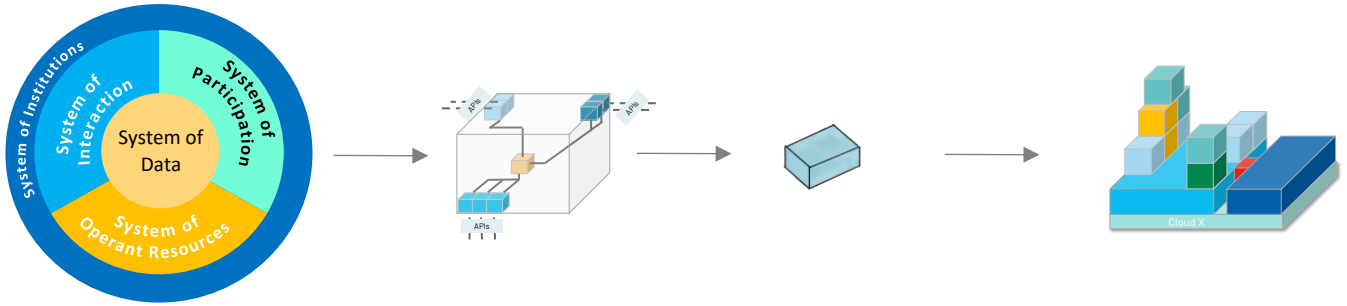
*Gartner. 2021 Strategic Roadmap For The Composable Future Of Applications; by Analysts Yefim Natis, Dennis Gaughan, Gene Alvarez
Refreshed 7 January 2021, Published 17 September 2019 - ID G00433984

Platforms as result of technical implementation

The 5 Systems of SDA are reflected in software

A

Packaged Business Capabilities:
Packaged Business Capabilities (PBCs) are mini-applications that represent an isolated business function. A PBC takes the form of an encapsulated software package.



Service Dominant Architecture (SDA)

TOP: Platforms as a result of technical implementation

Question 44

How are the 5 (service) systems of the SDA implemented technically?

- ☐ The five systems of SDA are reflected in monolithic software solutions
- ☐ The four systems of the SDA are reflected in software solutions. For this purpose, small software services (microservices) are assigned to the 4 systems
- ☐ The five systems of the SDA are reflected in the software solutions. For this purpose, small software services (microservices) are assigned to the 5 systems
- ☐ The three systems of the SDA are reflected in the software solutions. For this purpose, small software services (microservices) are assigned to the 3 systems

Service Dominant Architecture (SDA)

TOP: Platforms as a result of technical implementation

Question 45

What are Packaged Business Capabilities?

- ☐ Packaged Business Capabilities (PBCs) are mini-applications that represent one isolated business function. A PBC takes the form of an encapsulated software package
- ☐ Packaged Business Capabilities (PBCs) are mini-applications that represent multiple business functions. A PBC takes the form of an encapsulated software package
- ☐ Packaged Business Capabilities (PBCs) are large applications that represent an isolated business function. A PBC takes the form of an encapsulated software package
- ☐ Packaged Business Capabilities (PBCs) are mini-applications that represent purely technical functions. A PBC takes the form of an encapsulated software package

Service Dominant Architecture (SDA)

The Construction Plan for collaborations on Platforms – Foundations, Application, Unique Selling Proposition

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Derivation of Service Dominant Architecture (SDA)

Construction Plan for Service Platforms and Ecosystems

Platforms as a result of technical implementation

Use Cases and Ventures (SDA inside)

Value proposition of Service Dominant Architecture

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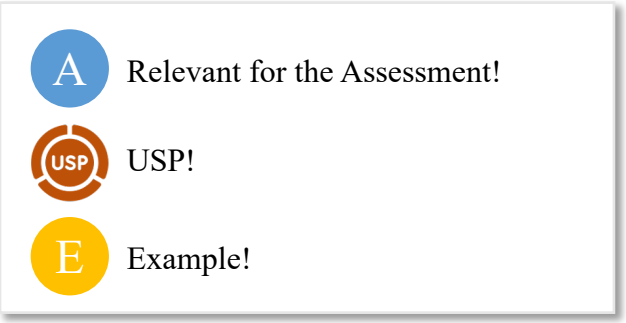
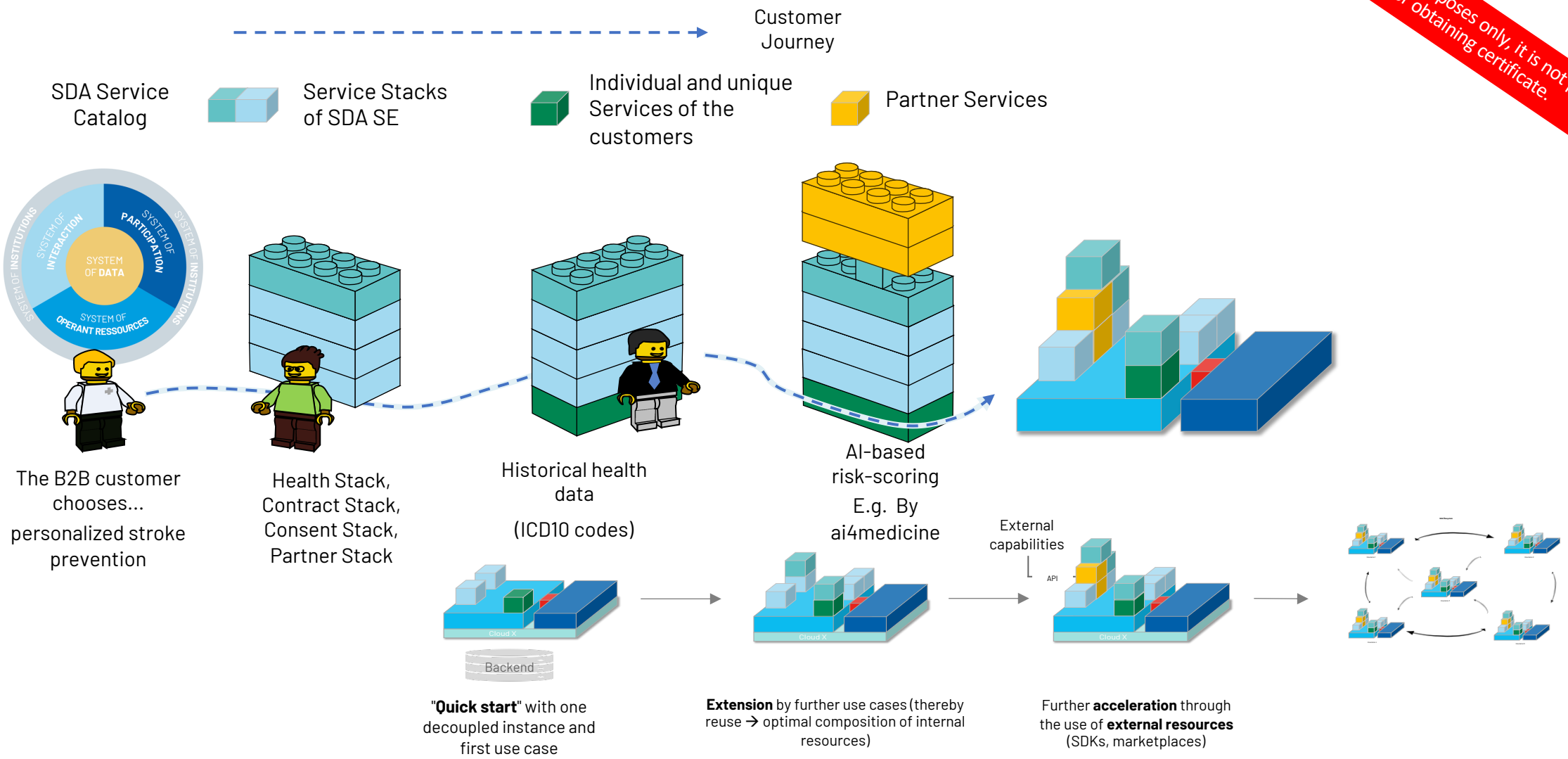


Use Cases and Ventures (SDA inside)

Step-by-step Use-Case oriented development of the Service Platform

Exemplary illustration of the SDA SE (www.sda.se)



Use Cases and Ventures (SDA inside)

Use Case: AI-based health prevention
Exemplary illustration of the SDA SE (www.sda.se)

1. **Customer-centric solution:**
   Customer receives AI-based risk scoring and individualized recommended actions in their personal Health Advisor app

Combination of resources (in particular data):

2. Insurance company brings in (a) customer relationship and (b) historical (health) data
3. Current health data is added via Apple Health (alternatively: Google Fitbit etc.)
4. AI-based risk scoring and individualized recommendations for action by AI4Medicine.
5. SDA SE provides reusable building bricks/stacks that enable a fast implementation and scaling of solutions throughout the lifecycle. Here in particular:

Consent Stack Health Stack Partner Stack

Base plate

Use Cases and Ventures

Snapshot Solution: Treatment of Diabetes

Exemplary illustration of the SDA SE (www.sda.se)

E

1 **Customer-centric solution:**
Customer gets appropriate recommendations depending on the current health status of the customer profile:

Prevention Diagnosis done In treatment

Combination of resources (in particular data):

2 Insurance company brings in (a) customer relationship and (b) historical (health) data

3 Smart Devices like blood sugar trackers could be included to create new Value propositions

4 Partners for each Lifecycle phase can be integrated to create fitting Solutions, like Dietary Apps, Medication support or second opinions about therapy

5 SDA SE provides reusable blocks/stacks, to allow quick implementation and scaling of Solutions across the complete Lifecycle

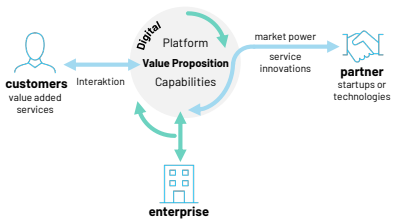
Consent Stack Health Stack Partner Stack Recommendation Stack

Use Cases and Ventures (SDA inside)

Exemplary illustration of the SDA SE (www.sda.se)

This TOP is for illustrative purposes only, it is not part of the assessment for obtaining certificate.

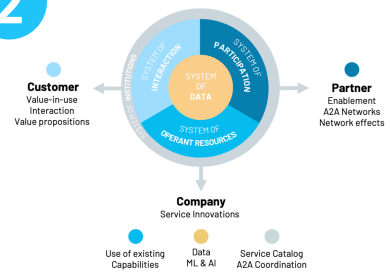
1



Cooperation

Ecosystems enable collaborations, i.e. leveraging partners' capabilities for new value propositions

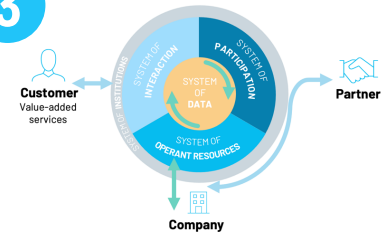
2



Construction Plan

SDA SE's USP is Service Dominant Architecture as a Construction Plan for both the collaborative creation of value propositions and the process of applying them

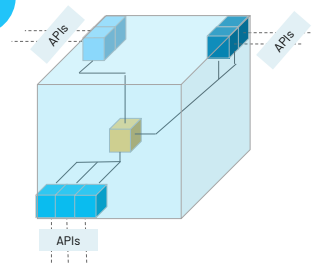
3



5 Systems

1. Integrate company capabilities
2. Connect partners
3. Enable interaction
4. Real-time data
5. Implement a service catalogue

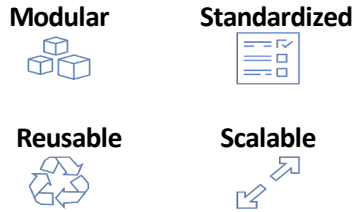
4



Architecture

The architecture (the Construction Plan) is reflected in all SW building blocks (stacks)

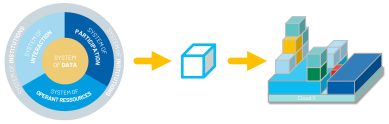
5



Build once, use X times

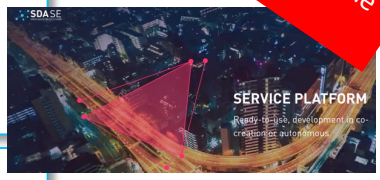
Service Dominant Architecture enable economic coding

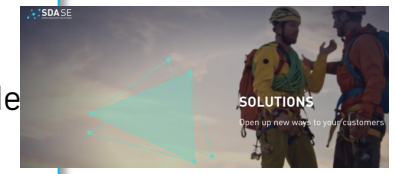
6

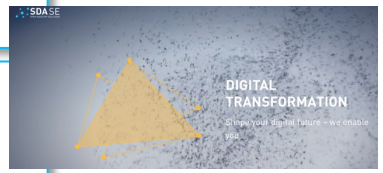


„Quick-Start“

Stacks and other solutions are ordered and implemented via SDA Service catalog - "B2B App Store"





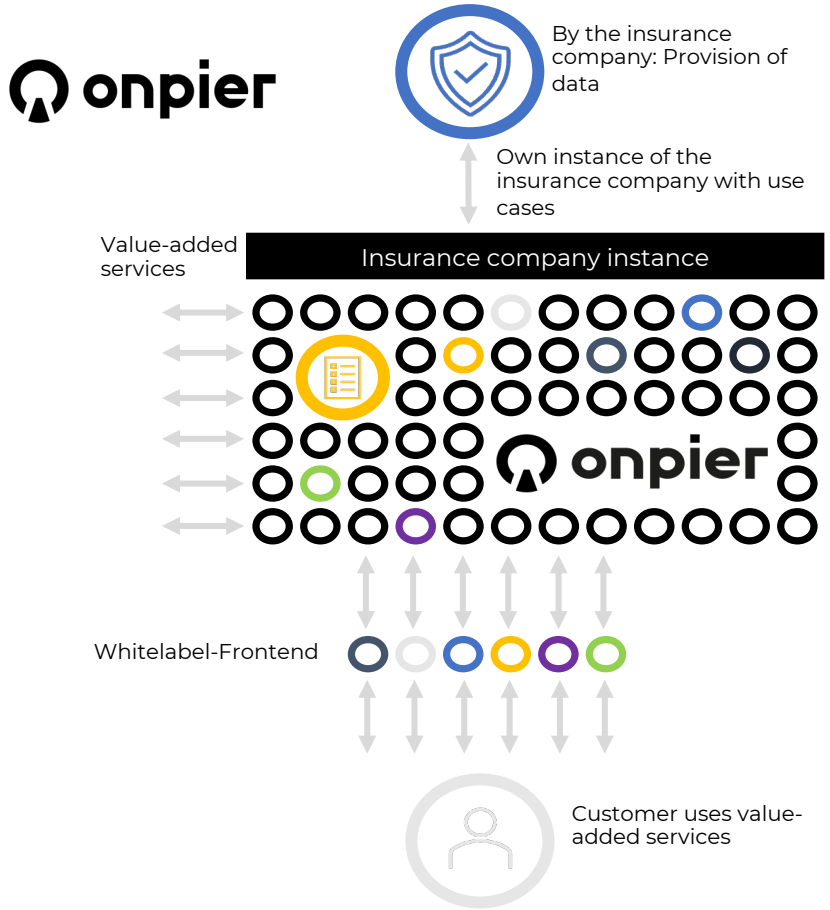


SDA SE – Platform „out of the box“ www.sda.se

Use Cases and Ventures (SDA inside)

Increase customer loyalty quickly and easily with onpier‘s value-added services!

Exemplary illustration of the B2B2C Platformbuilder onpier (www.onpier.de)



onpier – the digital Platform for value-added services

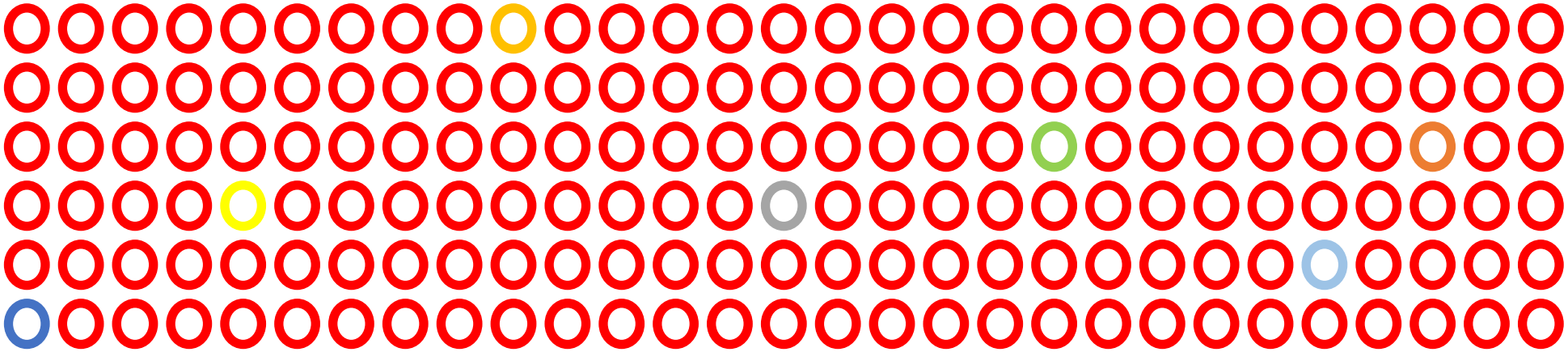
onpier is an open B2B2C Platform for non-insurance services. By connecting to onpier, insurance companies can offer their customers additional services that go beyond traditional insurance solutions. For example, insurers can select a service available on onpier from a service provider that is also a part of onpier, integrate it into their own offering, and make it immediately available for use. Simple, fast and secure!

www.onpier.de

Use Cases and Ventures (SDA inside)

Increase customer loyalty quickly and easily with onpier's value-added services!

Exemplary illustration of the B2B2C Platformbuilder onpier (www.onpier.de)



Vehicle purchase/sale

Parking reservation

Rental vehicle booking

Vehicle financing

GHG-bonus

Booking garage appointment

Wallbox, incl. consulting and implementation

Vehicle registration

Vehicle preparation/ ,maintenance

Service Dominant Architecture (SDA)

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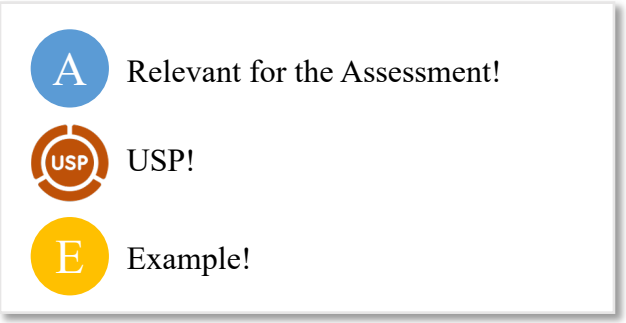

Unique selling point of Service Dominant Architecture

The value proposition of SDA

1

Construction Plan for Service Platforms

SDA is a Science-based Construction Plan for building and designing Service Platforms and Ecosystems.

2

Collaborative creation of value propositions

SDA enables the collaborative creation and application of value propositions.

Value-in-use and value-in-context are created via interaction.

3

B2B2C Business-Models

Implemented with leading cloud technologies, SDA enables data-driven B2B2C business models; code and services come to data. The app store logic and the ”build once - use x times" approach is followed.

4

Scalable Learning

SDA enables (as process and structure) adaptive and generative learning and thus the design of "learning organizations“. The "learning organization" uses interaction to build data-based understanding, adapt behaviour and continuously build up new capabilities.

5

Empowering. Digital. Ecosystems.

SDA enables the creation of ecosystems, understood as structures in which partners collaborate, i.e. share capabilities and rules (institutions), to create and apply value propositions.

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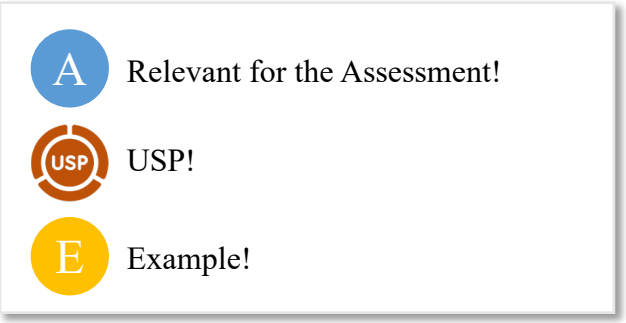

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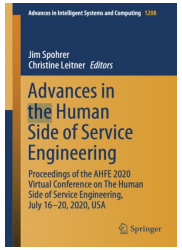

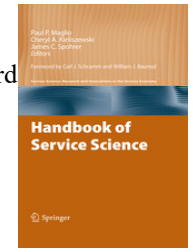

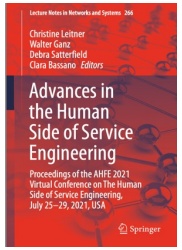

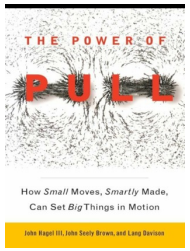

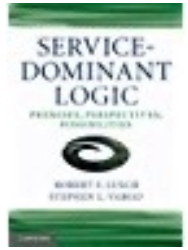

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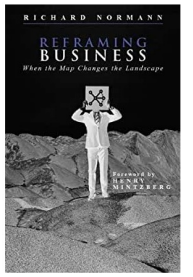

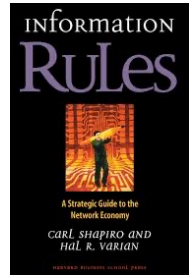

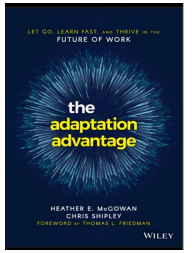

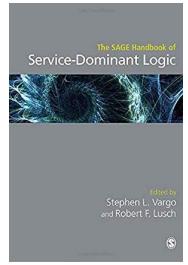

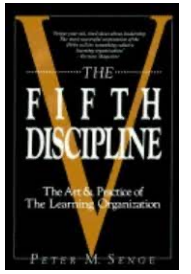

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