

A Service Portfolio Model for Value Creation in Networked Enterprise Systems

Kostas Kutsikos
kutsikos@aegean.gr

Assistant Professor
Business School
University of the Aegean
Greece

Gregoris Mentzas
gmentzas@mail.ntua.gr

Professor
ICCS
National Technical University of Athens
Greece

Agenda

- Background and research focus
- Overview of our Service Management Framework
- Managing value co-creation in knowledge-intensive services
- Related work
- Conclusions and future work

Background

- Value for an entity (in a service context): after it acquires a service, is or feels 'better off' (Gronroos, 2008)
 - G-D logic
 - S-D logic

- Service value creation for an entity (in the service science context): through chains of **knowledge-intensive interactions** between service systems (Vargo & Lusch, 2008)
 - Value is the **co-creation** outcome of integrating internal and external resources and capabilities
 - Co-production of assets with shared value

Our research is focused on managing service value co-creation

Motivation

- A lot of research work on understanding value in service systems (e.g. Vargo, Maglio & Akaka, 2008)
- Less focus on how value co-creation can be managed (e.g. Chen, Lelescu & Spohrer, 2008)
- Even less focus on practical implications, such as linking to existing business service lifecycle frameworks (e.g. Kohlborn, Felt, Korthaus & Rosemann, 2009)

Our focus

- **Service systems that own knowledge assets and provide access to them through services**
- **In a knowledge-intensive service system ...**
 - What are the key characteristics of service value co-creation ?
 - What new perspectives (if any) do these characteristics create for relevant service offerings ?
 - How do these perspectives affect service lifecycle management ?
- **We are interested in the business-side implications of these questions**

Context of our research

- SYNERGY project (FP7 project)
 - Development of an Interoperability Service Utility (ISU) for collaboration knowledge services provision

- Knowledge assets
 - Collaboration Patterns (CPats) capture knowledge on the collaboration activities among partners in virtual organizations (VOs)
 - CPats describe the forms of collaboration and the proven solutions to a collaboration problem

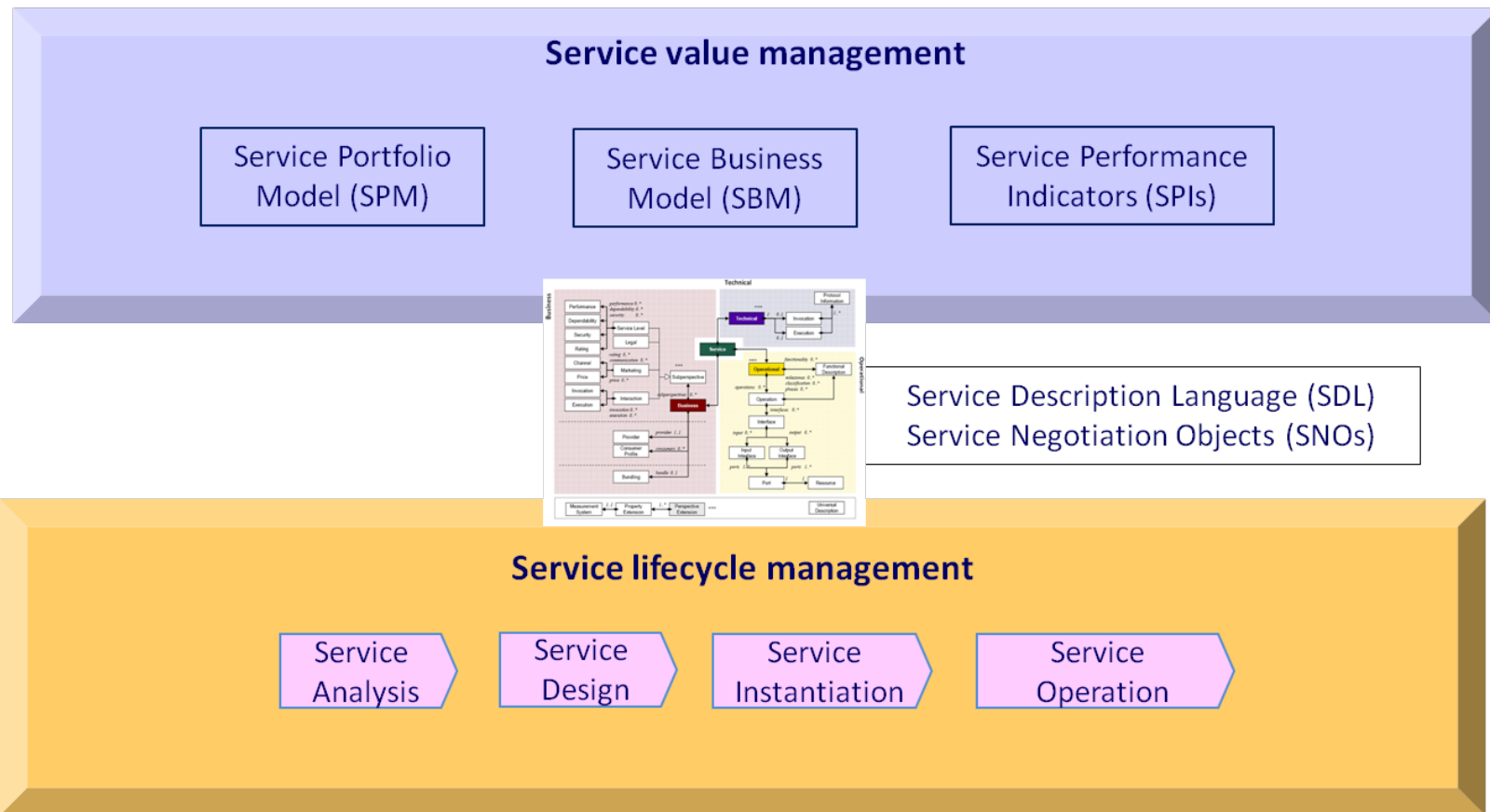
- E-services
 - To discover, capture, deliver and apply CPats

- Testbed
 - A SYNERGY service system
 - A VO of pharmaceuticals (i.e. service systems) that want to develop and test a series of new drugs

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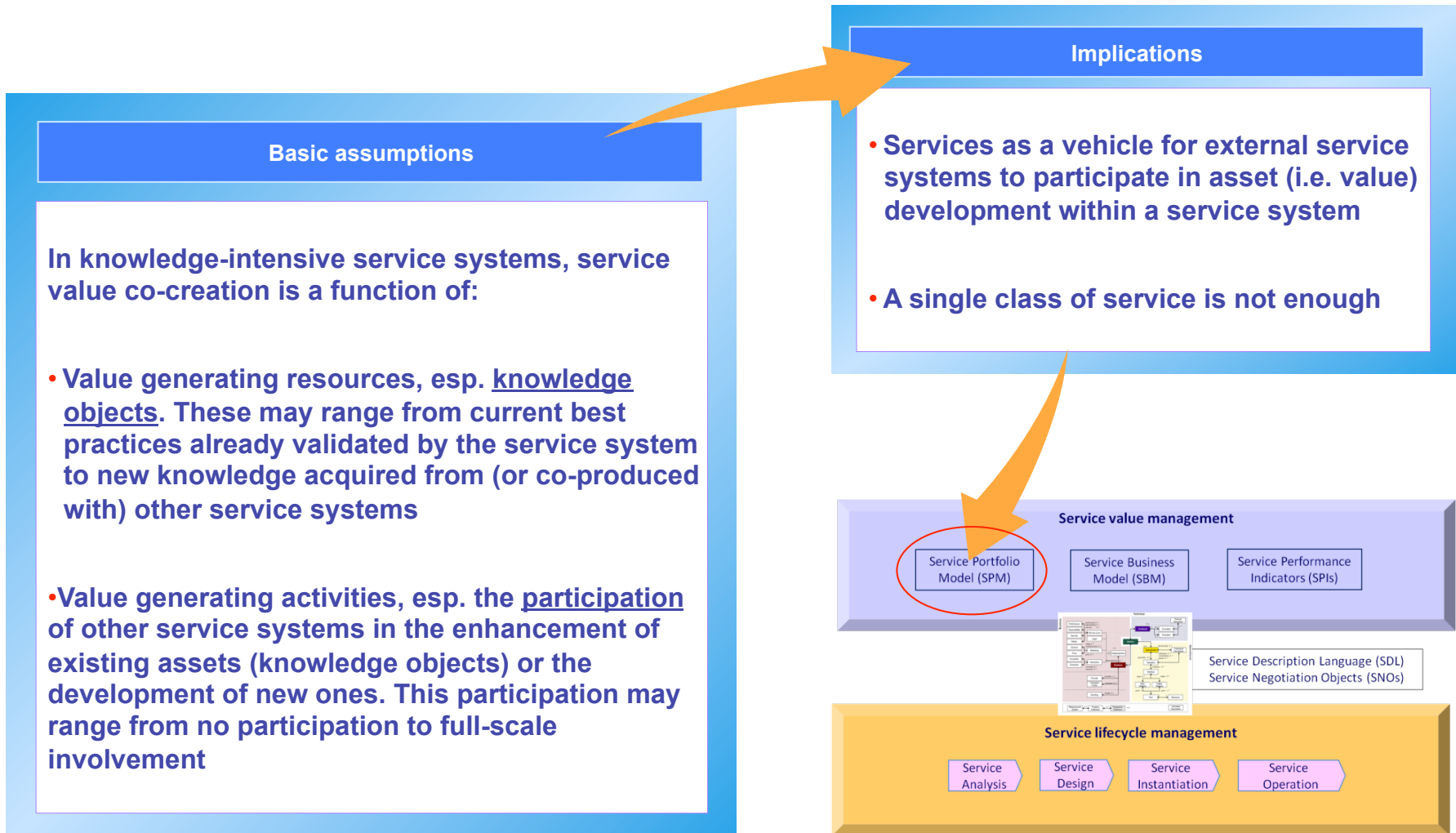
Managing service value co-creation (simplified version)



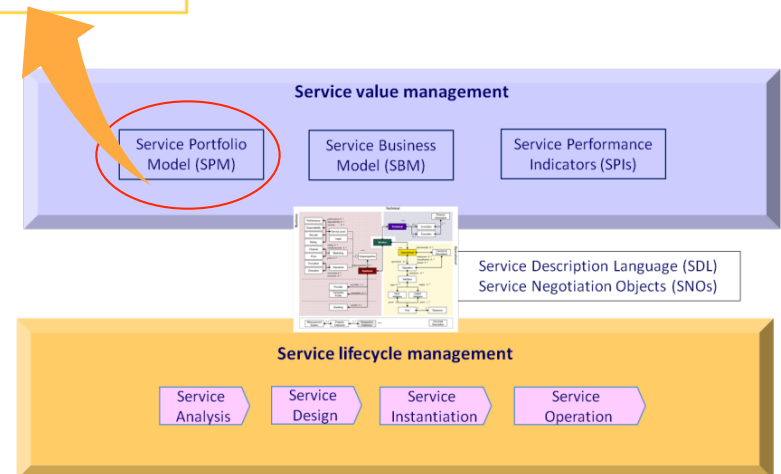
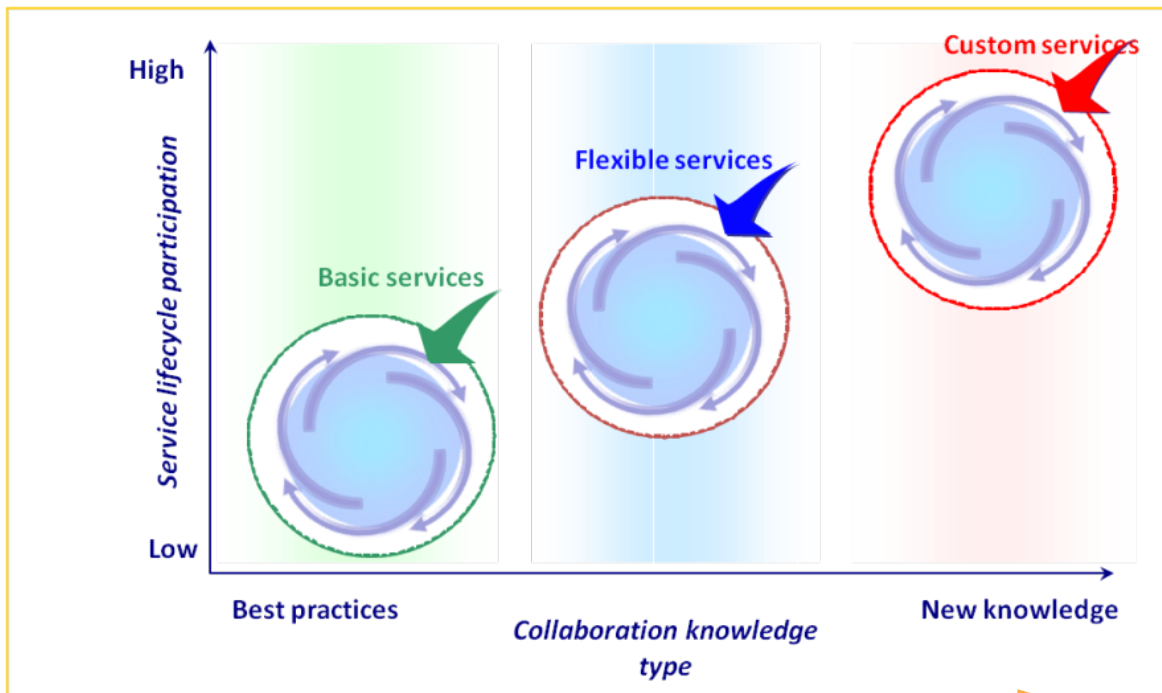
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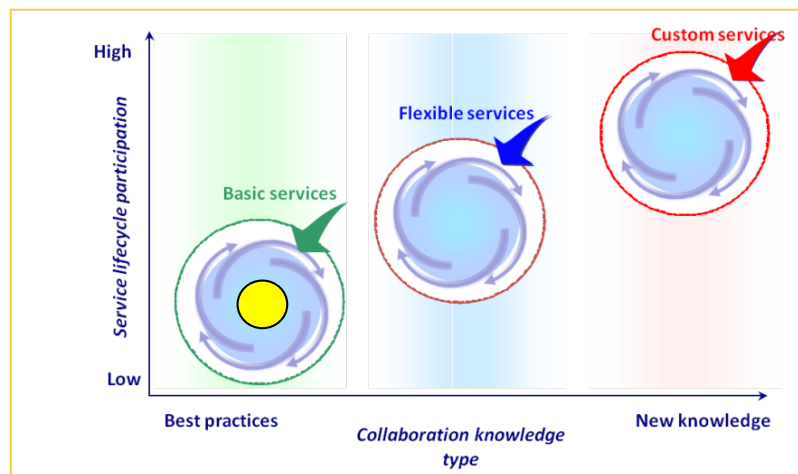
Service value co-creation through service portfolio management



Our Service Portfolio Model (SPM)



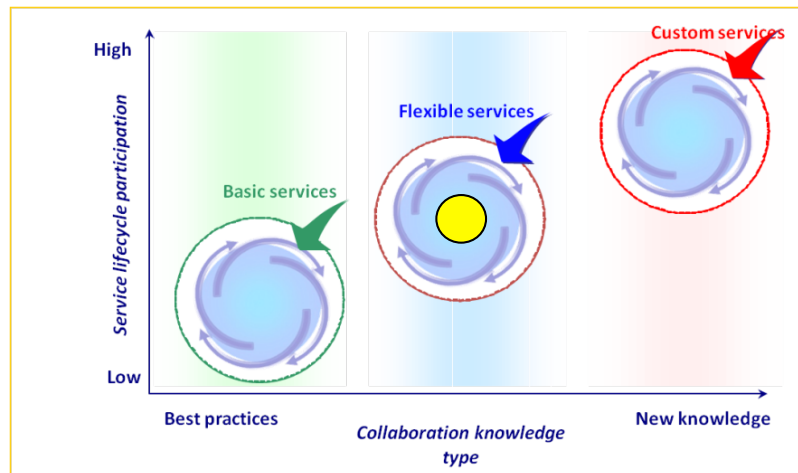
Basic services



Definition

- These are standardized services that encapsulate best-practices (generic or industry-specific) owned by the service system.
- External service systems' participation in the service development lifecycle is limited and is provided on an ad-hoc basis.
- Knowledge assets handled by this service class are expanded through updates generated internally, by the provider's own value creation process.

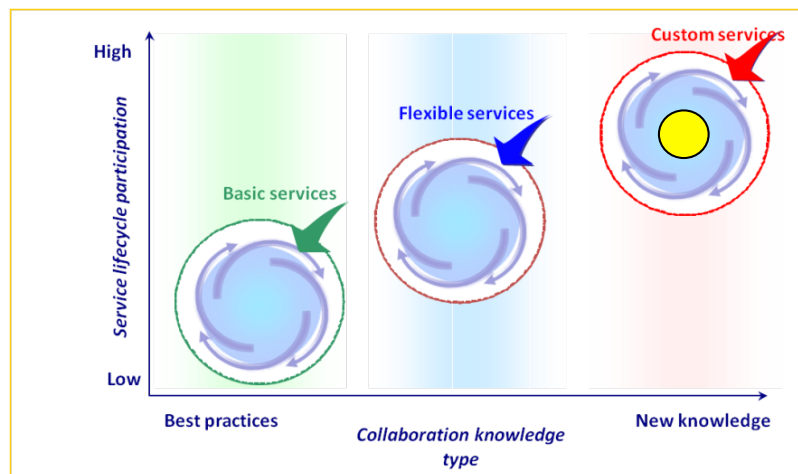
Flexible services



Definition

- These are configurable services that are based on a wide menu of options offered by the provider.
- External service systems participate in the service development lifecycle to co-develop new service configurations or new service configuration options, assisted by the provider's resources (human, technical, etc.).
- Services of this class expand stored knowledge by providing new syntheses.

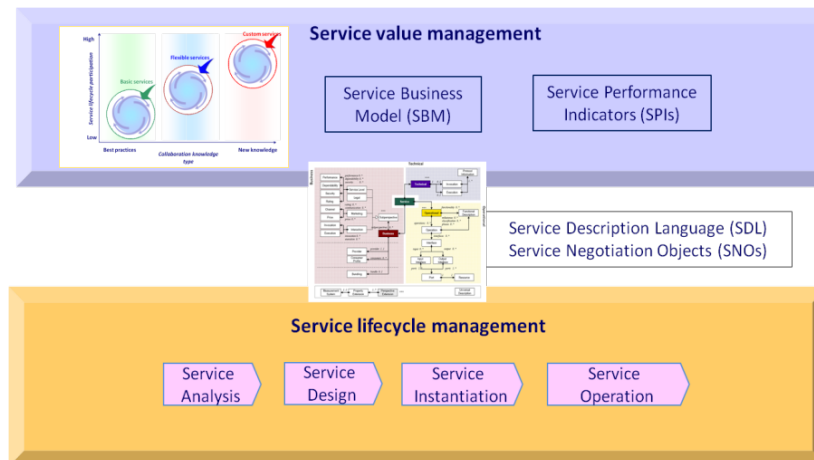
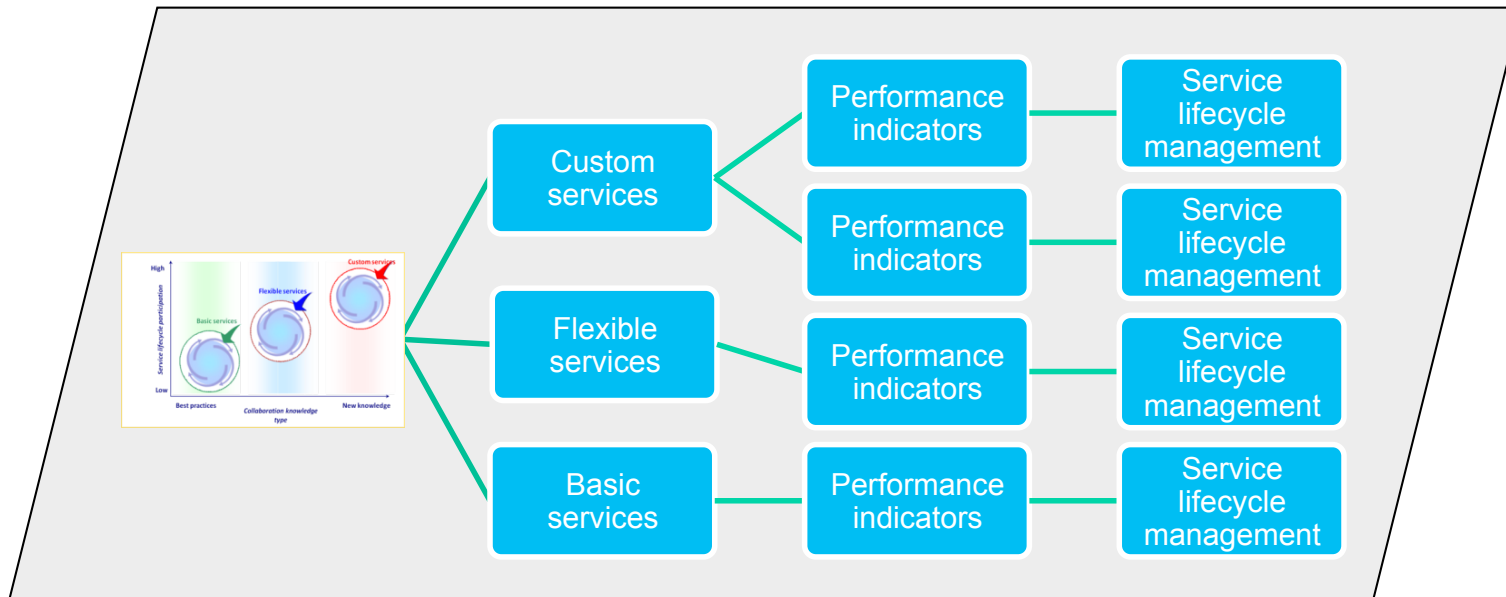
Custom services



Definition

- These are highly customizable and user-driven services.
- External service systems' involvement in the service development lifecycle is high and should require an equally significant investment of the provider's resources (human, technical, financial, etc.).
- Services of this class may significantly expand stored knowledge - for example, with industry-specific practices.

SPM becomes the root of a tree that is comprised of different service value co-creation paths, leading to a dynamic service management framework

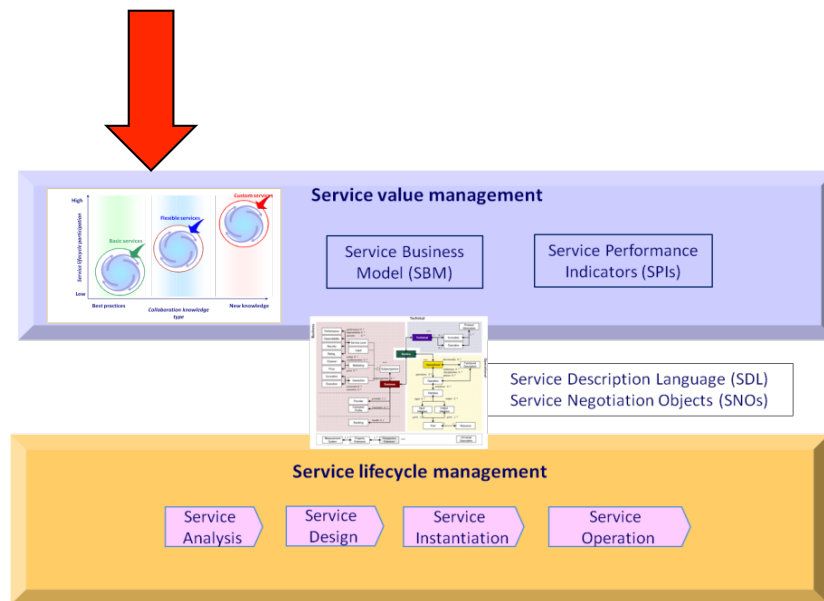


A scenario

- A SYNERGY services provider (i.e. a service system)
 - Owns collaboration knowledge assets in the form of collaboration patterns (CPats)
 - Provides access to them through CPat services
 - CPat services is a 'service pack': from Basic to Premium
- A VO of pharmaceuticals (i.e. service systems) that want to develop and test a series of new drugs

- New rules imposed by public health authorities require new lab experiments → new collaboration needs for the VO
- New CPats need to be co-created in order to capture new collaboration tasks

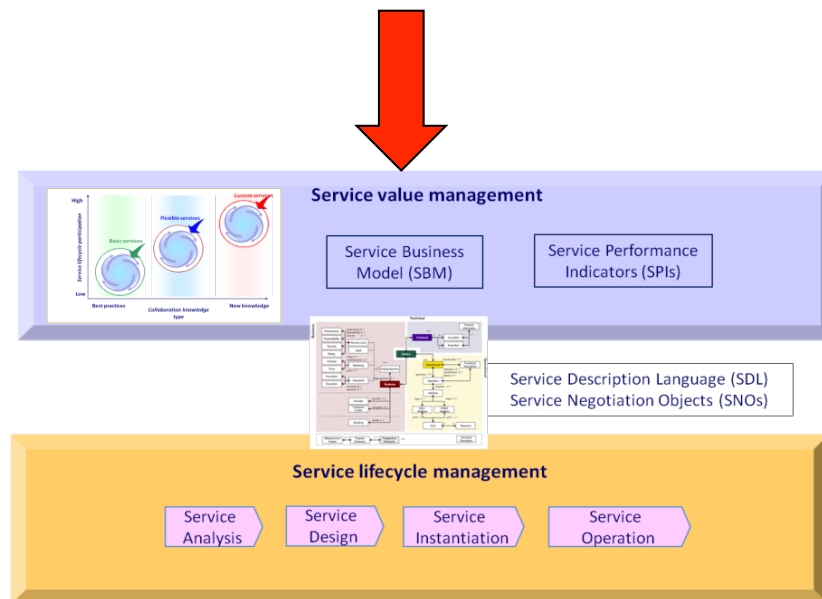
A SPM service value co-creation path for a SPM Custom service



CPat Design service

- A Custom SPM service
- New knowledge assets are co-created (new CPats) by multiple service systems
- It is not a fully automated service, e.g. a commercial plan for shared exploitation of the new CPats may need to be defined

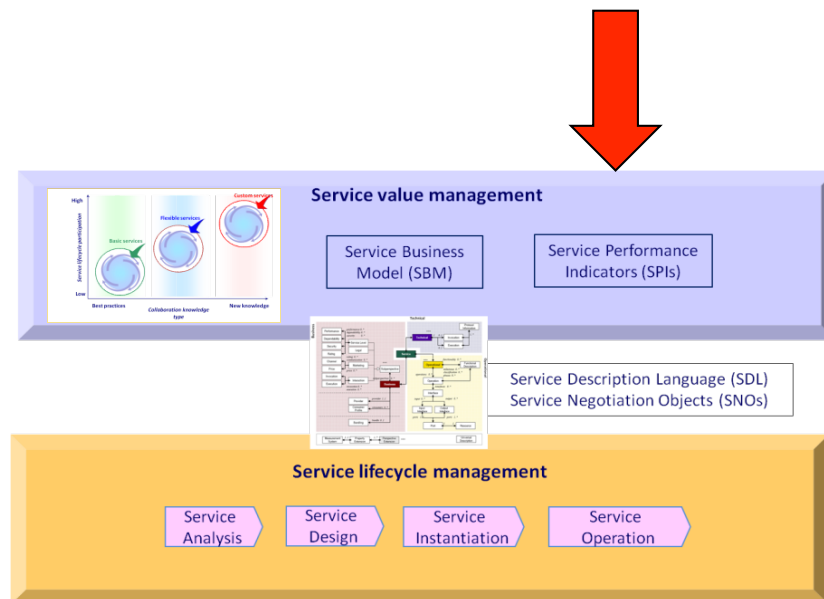
A SPM service value co-creation path for a SPM Custom service



Business model implications

- Driven by the Custom Service class (i.e. next node in the tree)
- Co-production → co-ownership → shared service value when assets are served to other entities
- Existing services that provide access to CPats may need to be altered
- New services may need to be developed for enabling commercial access to the new CPats
- Business model considerations
- Resources, activities, costs, revenues
- E.g. joint equity, revenue sharing

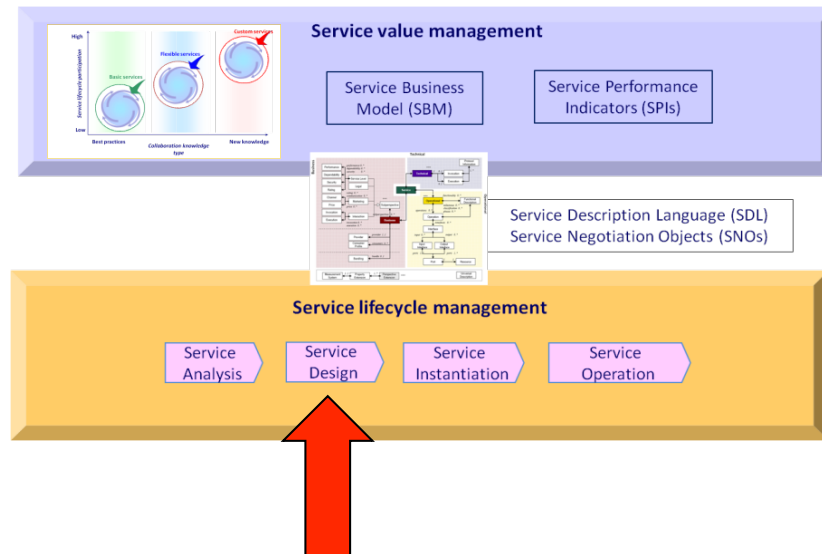
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Performance measurement

- Existing Custom Service performance indicators are updated and/or flagged for monitoring during service execution
- Driven by Service Business Model choices (i.e. next node in the tree)
- Financial indicators (e.g. shared revenue, consulting revenue, equity in a VO)
- Innovation indicators (e.g. annual number of new CPats)

A SPM service value co-creation path for a SPM Custom service



Performance measurement process

Let's assume that additional service performance indicators need to be developed

- Define service performance indicator type (Financial, Innovation)
- Define basic measurement parameters (e.g. measurement unit, frequency, dependencies on existing PIs)
- Define calculation rules
- Define acceptable target values and value ranges
- Define data sources
- Approve indicator

N.B. The new indicator becomes part of the service description (in USDL?)

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Indicative related work

- ECOLEAD project
 - Value generation objects, performance measurement in VOs

- Critical factors for managing the value co-creation process
 - Value co-creation mindset; innovation vs. commoditization dynamics; configuration of core resources
 - Chen, Lelescu, Spohrer

- USDL v3.0
 - Cardoso, Winkler, Voigt (+SAP et al)

- Service lifecycle management
 - Kohlborn, Fiert, Korthaus, Rosemann

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Summary and conclusions

- A service science viewpoint on knowledge-intensive service systems can offer new perspectives in value creation within such systems
- In one such perspective we research, service value co-creation depends on knowledge assets within the service system, and on external participation from other service systems that want to 'act' on these assets
- Our service classification model (SPM) captures these parameters and is the starting point for instilling them into the end-to-end service lifecycle management process
- SPM essentially becomes the root of a tree comprised of different service value co-creation paths that create a dynamic service management framework for knowledge-intensive service systems
- Initial deployment within a collaboration knowledge service system

Work-in-progress and future directions

- Fully develop baseline 'service value co-creation paths' within our framework, for SPM service categories and scenarios
 - SPM service downgrade (dynamically changing a tree branch)
 - Service pack (following multiple tree branches in parallel)

- Describe SYNERGY services in USDL v3.0
 - Account for SPM classes

- Finalize performance measurement framework

- Explore lessons learnt from cybernetics system models for service management, e.g. VSM (Viable Systems Model)

- Expand practical deployment

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