

# A Service Portfolio Model for Value Creation in Networked Enterprise Systems

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## Agenda

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- 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

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- 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

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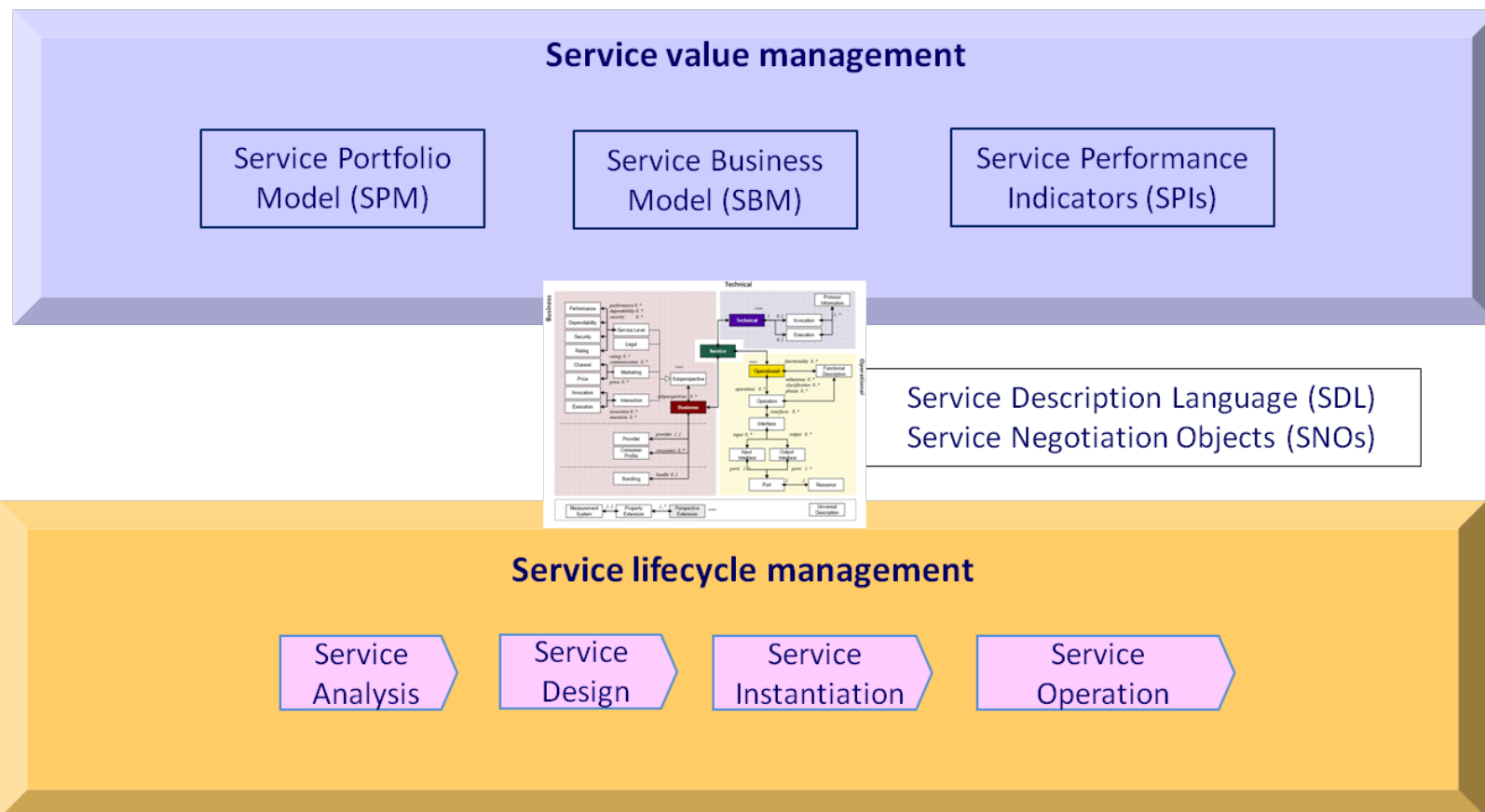
- SYNERGY project (FP7 project)
  - Development of an Interoperability Service Utility (ISU) for collaboration knowledge services provision
  
- Knowledge assets
  - Collaboration Patterns (CPats) capture knowledge on the collaboration activities among partners in virtual organizations (VOs)
  - CPats 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)



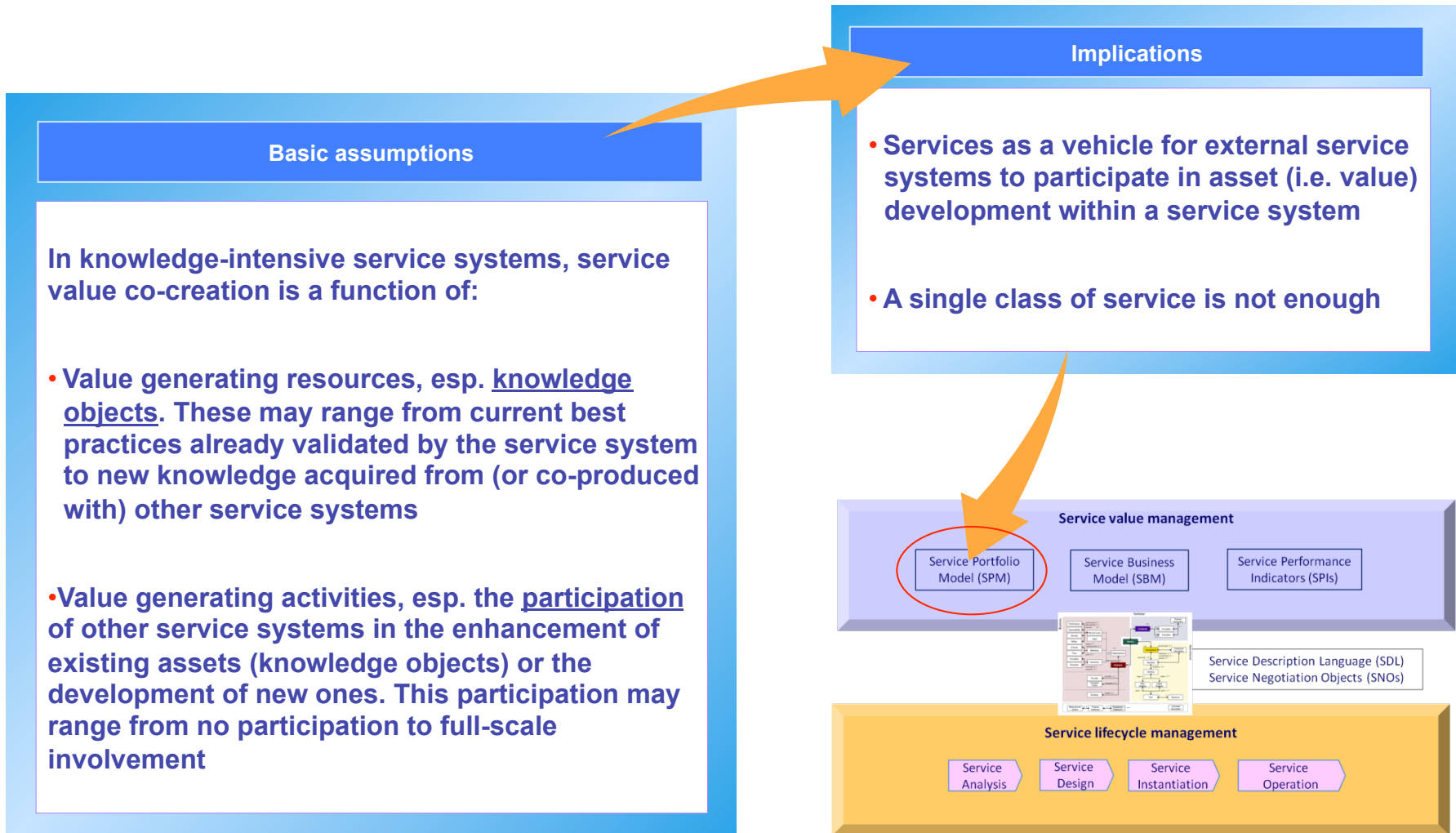
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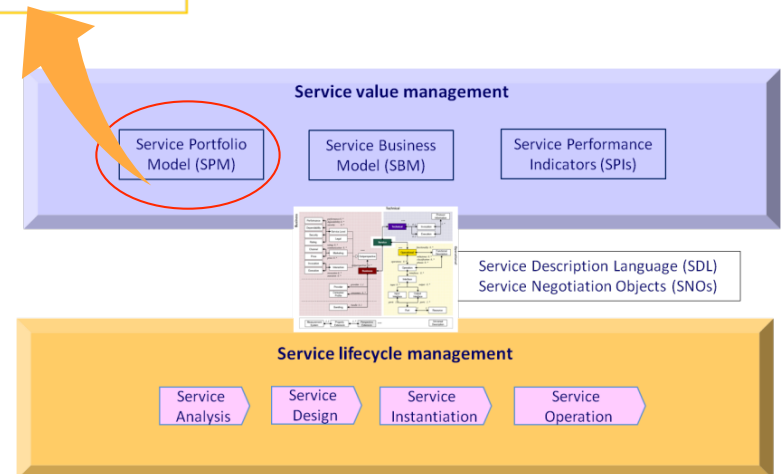
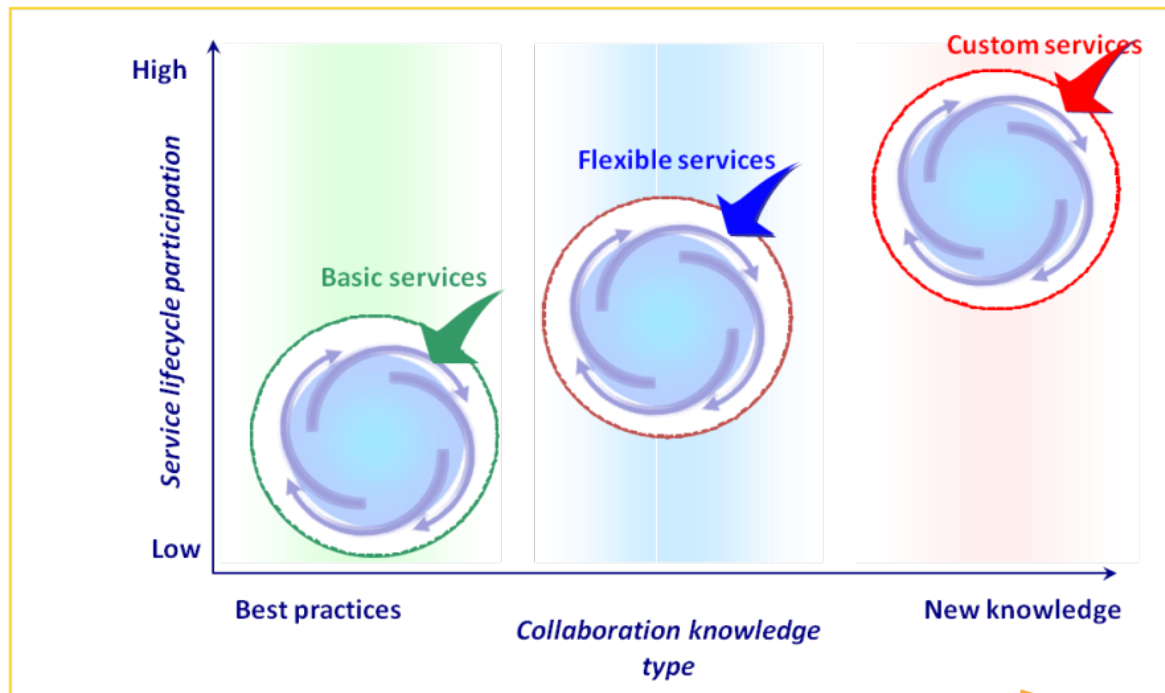
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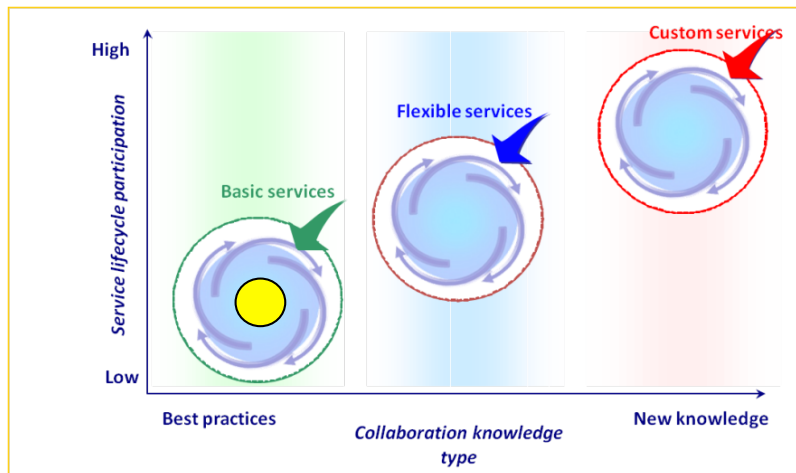
# Service value co-creation through service portfolio management



# Our Service Portfolio Model (SPM)



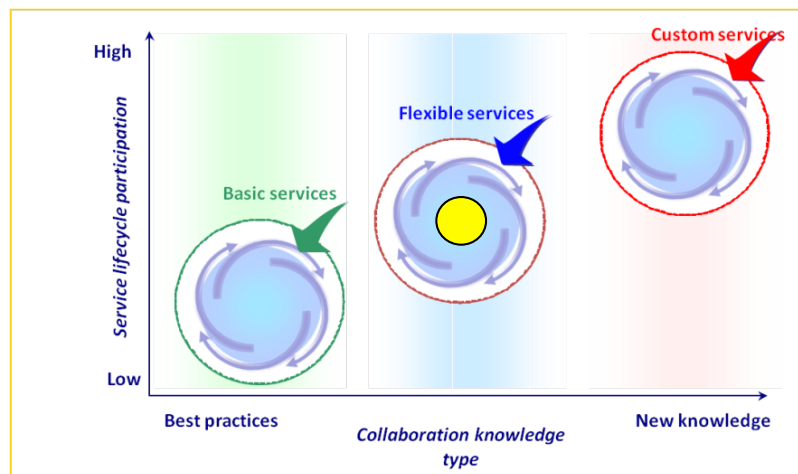
# Basic services



## 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.

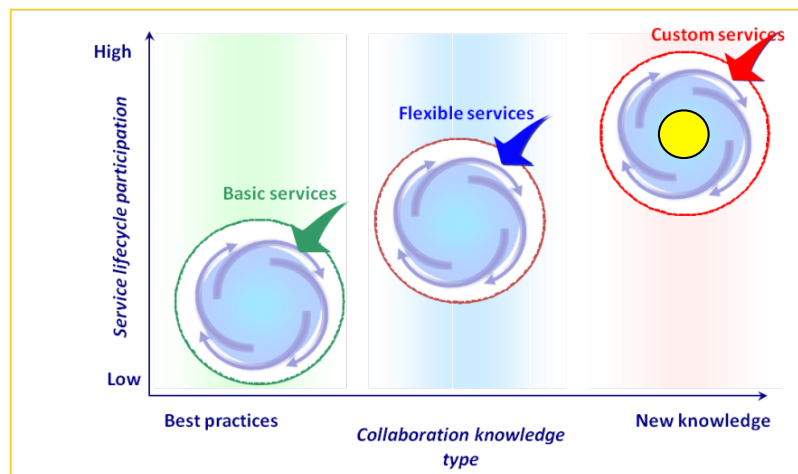
# Flexible services



## 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.

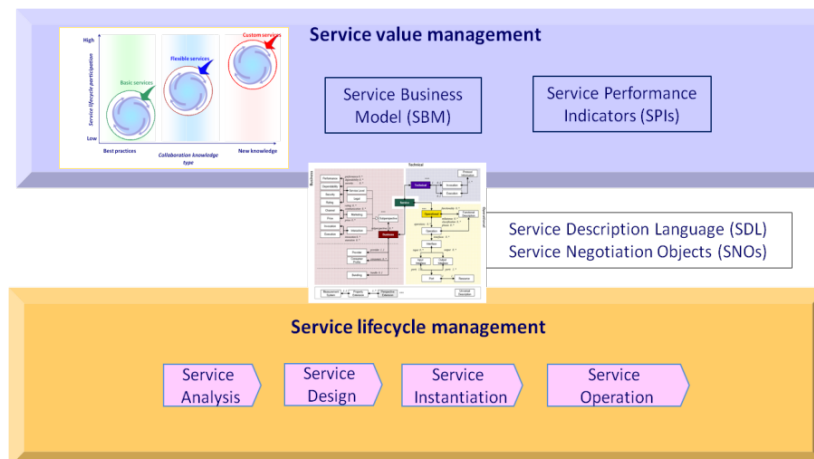
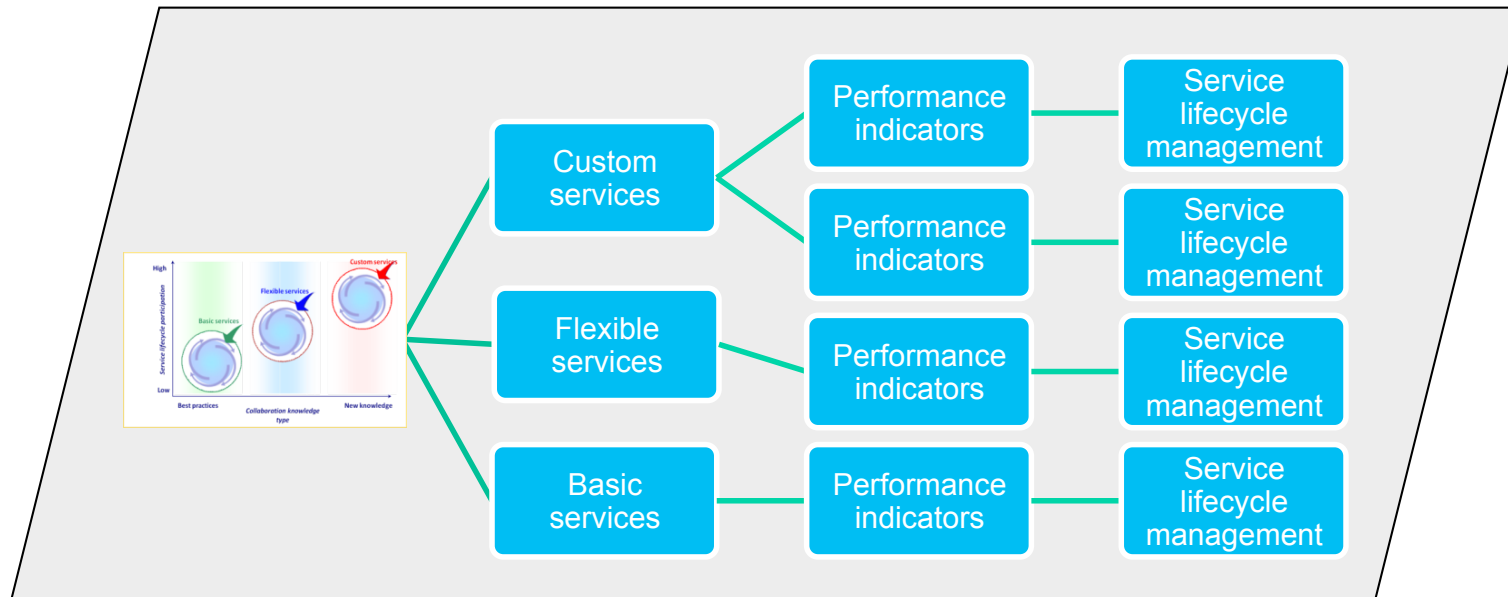
# Custom services



## 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**

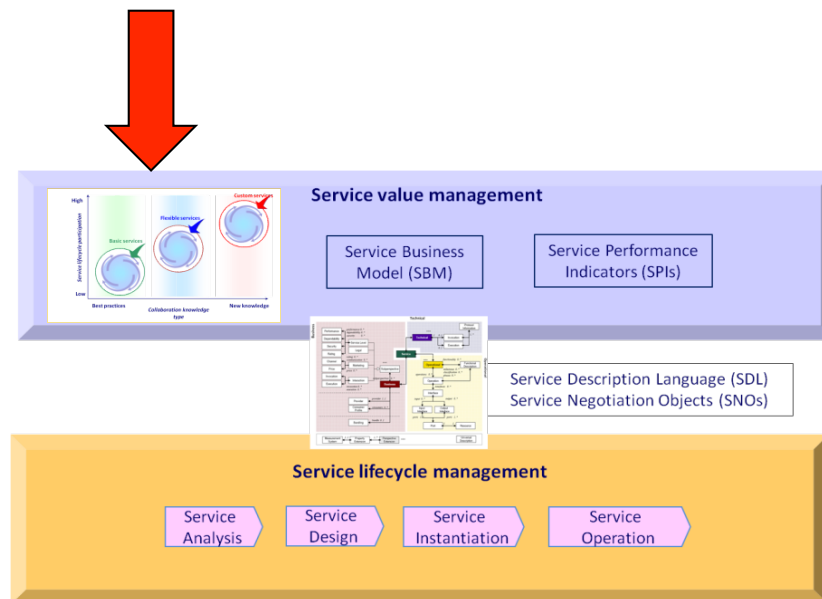


## A scenario

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- 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

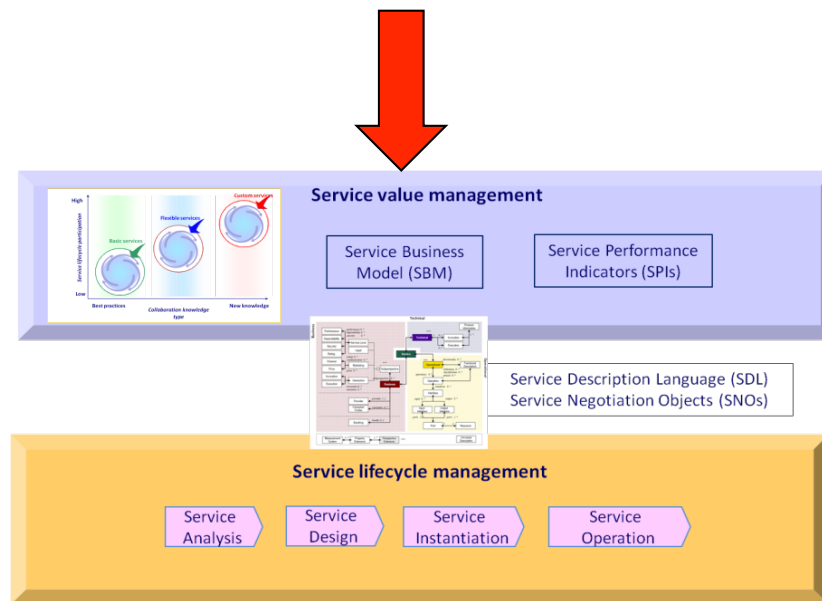


## CPat Design service

- 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



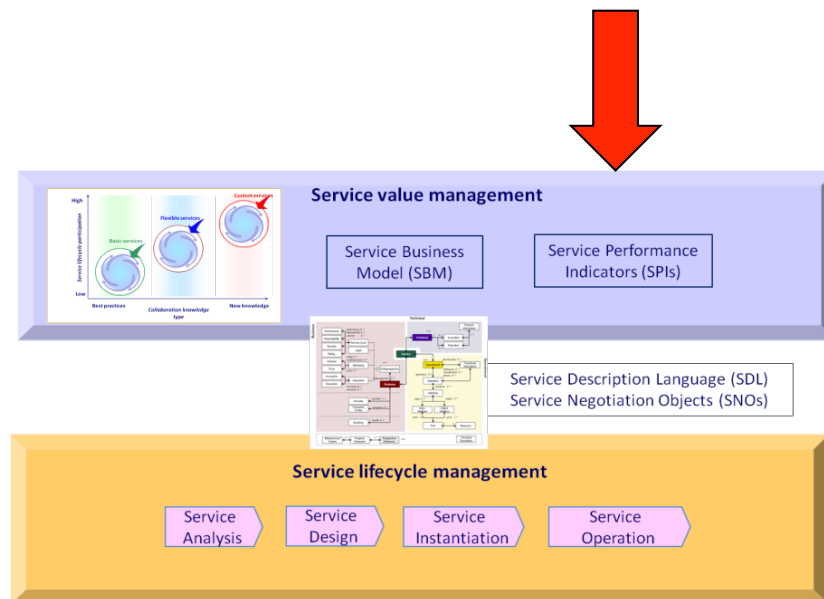
# A SPM service value co-creation path for a SPM Custom service



## 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

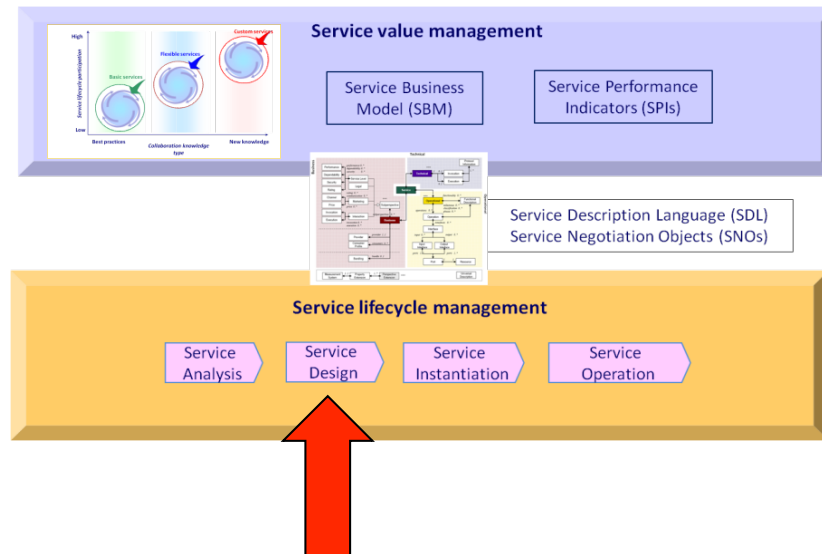
# A SPM service value co-creation path for a SPM Custom service



## 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

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- 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

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- 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

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- 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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