



RISE LAB - UNIVERSITY OF BRESCIA

Research & Innovation for Smart Enterprises

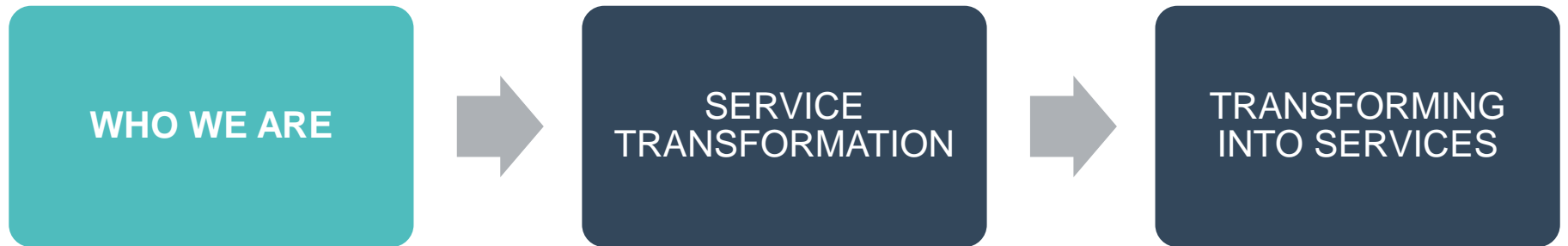
Service-Oriented Business Models

A tool for the transformation of the company

Nicola Saccani & Federico Adrodegari
Onati, September 15, 2016



AGENDA





RISE LAB WHO WE ARE

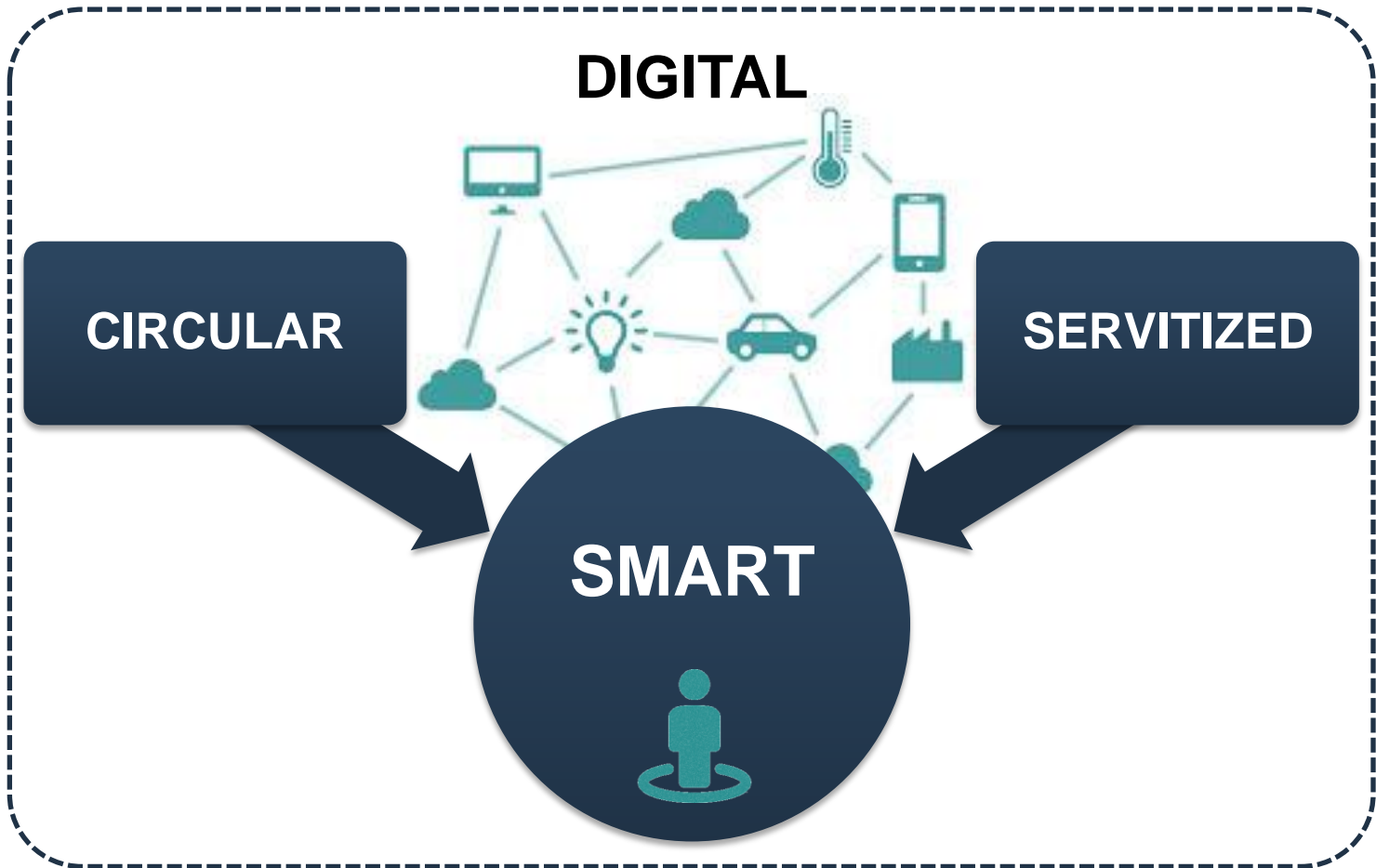


RISE
Research & Innovation
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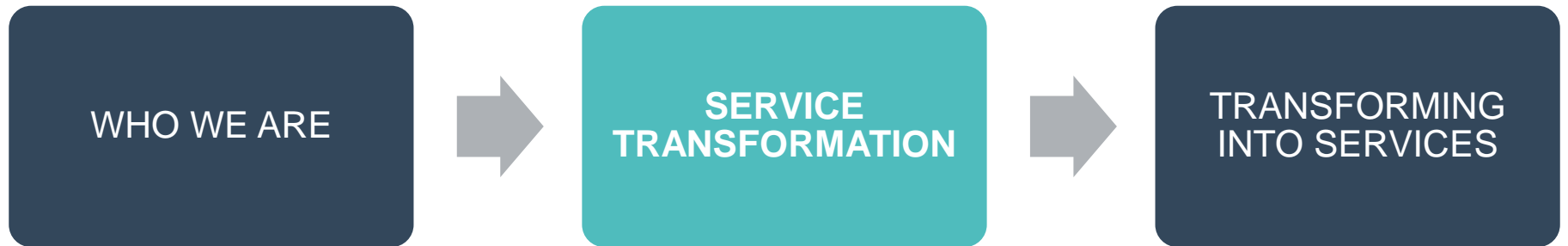


VISION: THE FUTURE OF COMPANIES AND SUPPLY CHAINS





AGENDA





SERVITIZATION: from products to Product-Service Systems & Solutions

Development stages

Role of services

Product-related Services

Services as necessary supplement to products



Product-Service Systems

Complex systems consisting of hardware, software & services

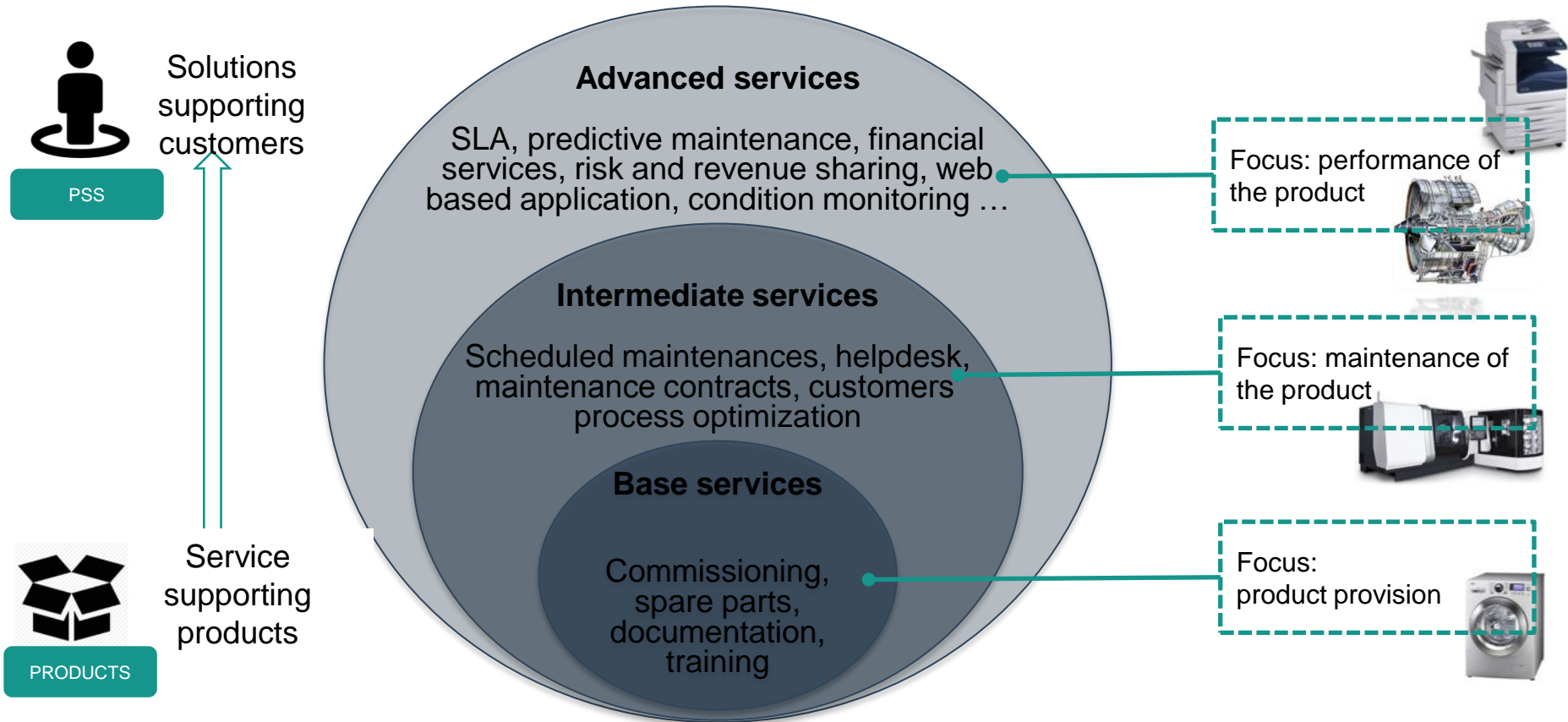


Smart Service Systems

Data-based services and service platforms as a main driver for manufacturing



SERVITIZATION: from products to Product-Service Systems & Solutions



Based on
Baines et al., 2009
Lightfoot et al. 2013



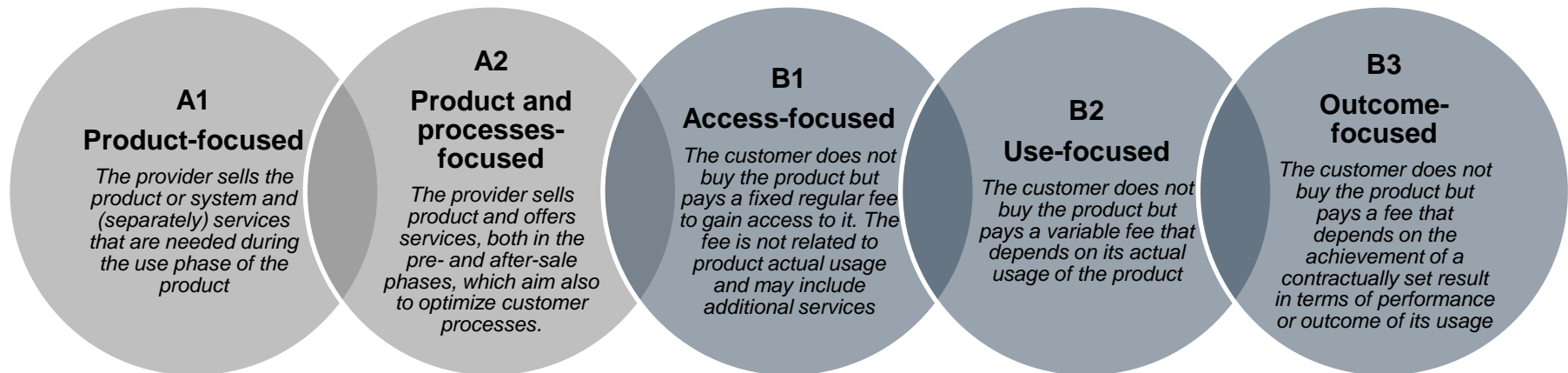
STRATEGIC OPTIONS & BUSINESS MODELS



Options for a company moving to new business models: from product-centric offerings to services and solutions

A) Ownership-oriented business models

Product sales are the main source of revenue; services are sold as an add-on of the product. Service can be sold both transitionally (e.g. corrective technical assistance without any contractual agreement) and relationally (e.g. maintenance contract).



B) Service-oriented business models

Services strictly linked to the access/usage of a product are the main source of revenue. The ownership of the product is not transferred to the customers. Services are sold through relational contracts with generally medium-long term duration. Add-on services can also be sold on a transactional base outside the contractual agreement



1. PRODUCT-FOCUSED



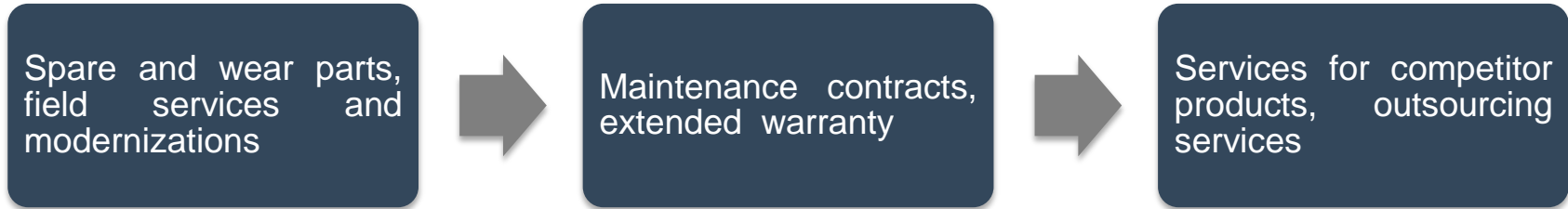
Product-focused

The provider sells the product or system and (separately) services that are needed during the use phase of the product

- Revenues: almost only sales of the appliances
- Service offering: limited and often seen as a “*necessary evil*”. Typically limited to: legal warranty, spare parts and corrective maintenance
- Customer relations: transactional
- Channels: intermediated by other subjects, such as: retailers, service providers, call centres, customer care, ..



2. PRODUCT PROCESSES-FOCUSED



Product processes-focused

The provider sells product and offers services, both in the pre- and after-sale phases, which aim also to optimize customer processes.

- Revenues: mainly sales of the product, but services are important
- Service offering: broad, moves away from pure product support, encompassing: system customization, usage process support, full-risk maintenance contracts, etc.. Often developed incrementally
- Customer relations: the provider keeps a closer contact with the customer all along the product lifecycle
- Channel: service provision may be direct or outsourced



BOSCH
DMG MORI



3. ACCESS-FOCUSED



- Revenues: mainly connected to a “Fleet management” business model. A fixed period fee is charged for tools availability, including competitors’
- Service offering: broad, can include technical support, financial support and repair
- Customer relations: continuous in time, starting from fleet choice
- Channel: direct (some services outsourced)

Access-focused

The customer pays a fixed regular fee to gain access to the product. The fee is not related to product actual usage and may include additional services

FROM:

Fischer, Gebauer, Fleisch. Service business development: Strategies for value creation in manufacturing firms. Cambridge University Press, 2012.





4. USE-FOCUSED

RICOH

xerox 



- Revenues: almost exclusively connected to a pay-x-use business model (“*Pay-x-page*”). A fixed fee is connected to usage
- Service offering: full service, including full risk maintenance
- Customer relations: experiential, customer intimacy
- Channel: direct field service network owned by the company

Use- -focused

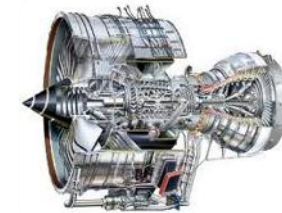
The customer pays a variable fee to access the product that depends on its actual usage of the product



5. OUTCOME-FOCUSED



Rolls-Royce



- Revenues: almost exclusively connected to a pay-x-performance business model (“*Power-by-the-hour*”). A fixed fee is connected to each unit of output
- Service offering: full service, including full risk maintenance and an agreed upon response time SLA for service requests
- Customer relations: experiential, customer intimacy
- Channel: direct field service network owned by the company

Outcome-focused

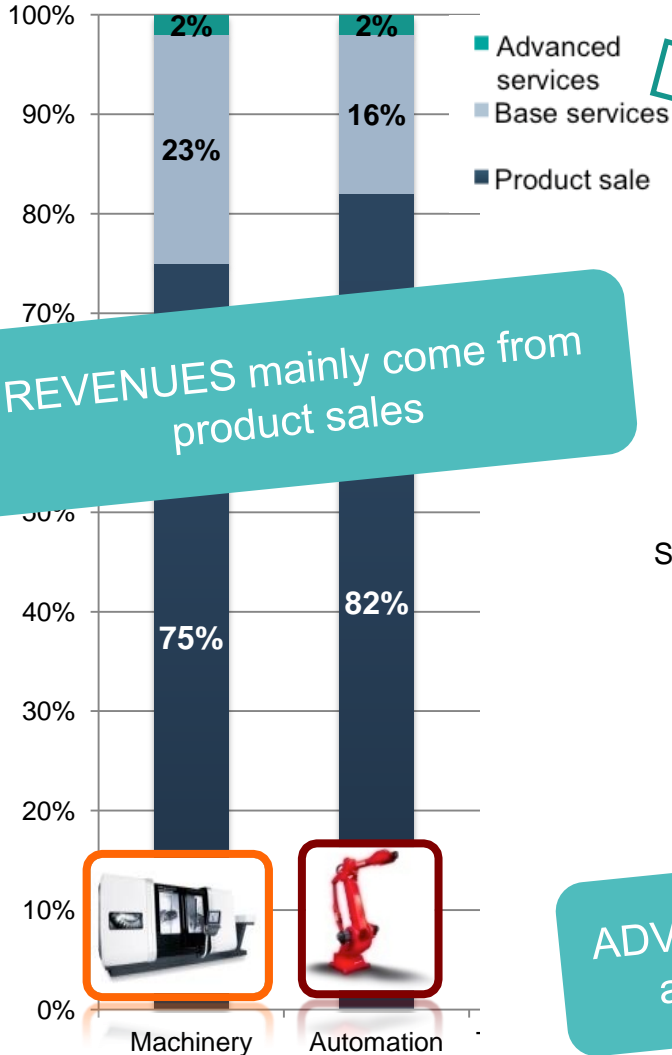
The customer pays a variable fee to access the product that depends on its actual usage of the product and/or on the achievement of a contractually set outcome or performance (Service Level agreement)

BUT IN PRACTICE...

Exploratory survey on 95 companies:

- 64 machinery
- Large (45%) and medium (30%)

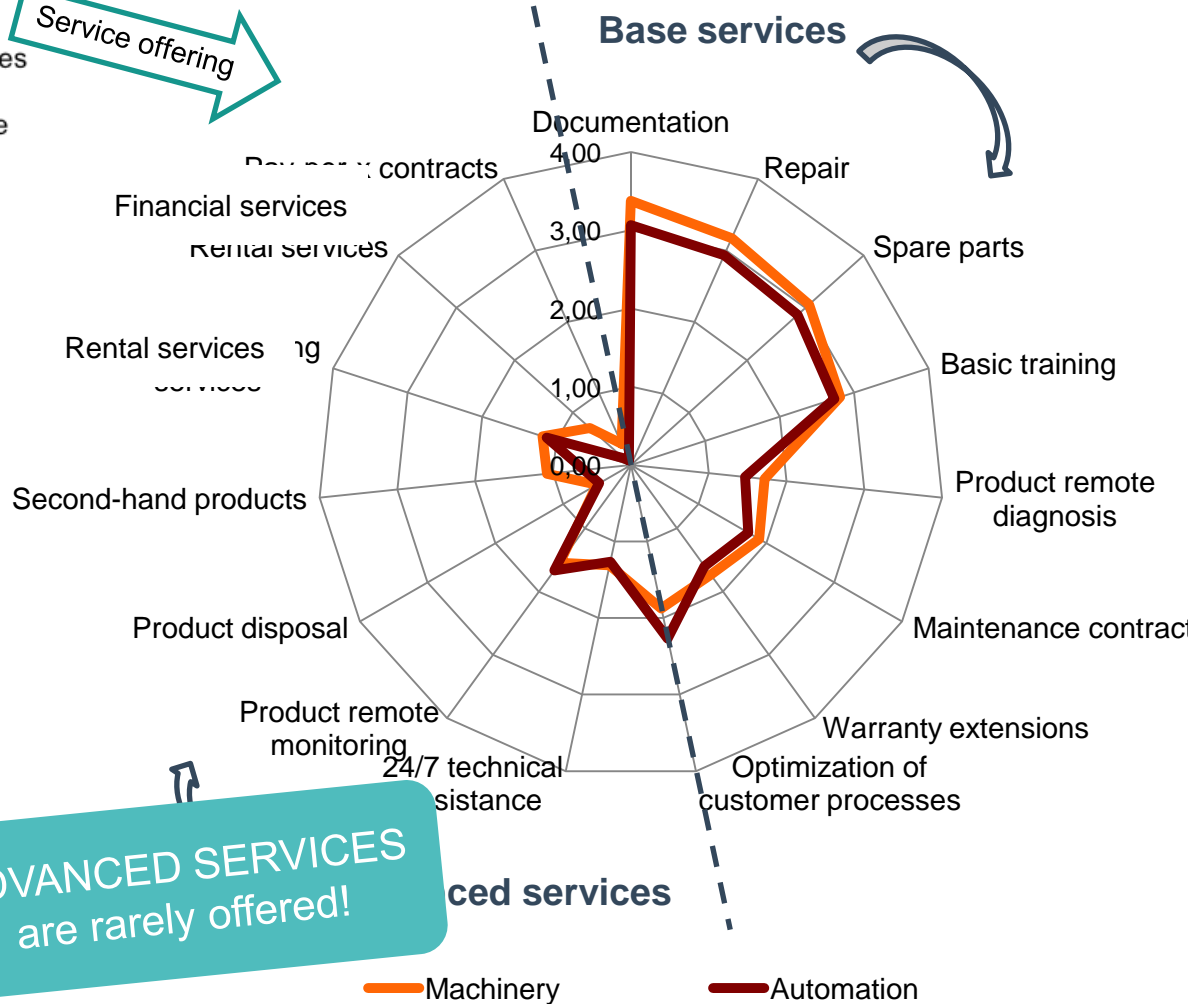
0 – Not offered, 1 – Rarely - 4 – Always offered



REVENUES mainly come from product sales

Service offering

ADVANCED SERVICES are rarely offered!



Base services

Advanced services

— Machinery — Automation



AGENDA





MAKING THE MOVE TO “SERVITIZED” BUSINESS MODELS



A method and tools to support companies in the identification and adoption of the appropriate Service Oriented BM



PROCESS

1. Assessment and Transformation

2. Plan

3. Implementation

TOOLS

Mind map

Context analysis

Customer Survey

Prototyping tool



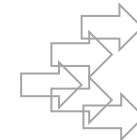
BM design tool



Gap assessment tool

Actions definition tool

Business plan



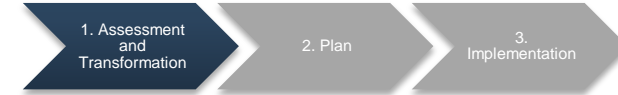
Ad hoc projects



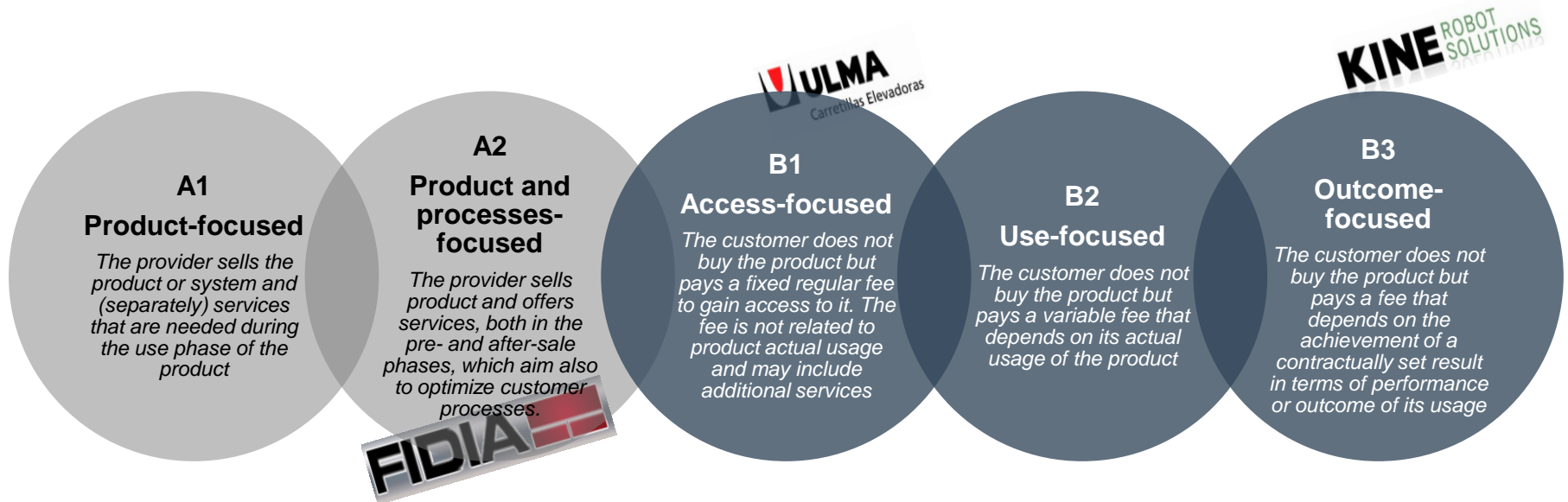
XLS



STEP 1: Assessment and transformation

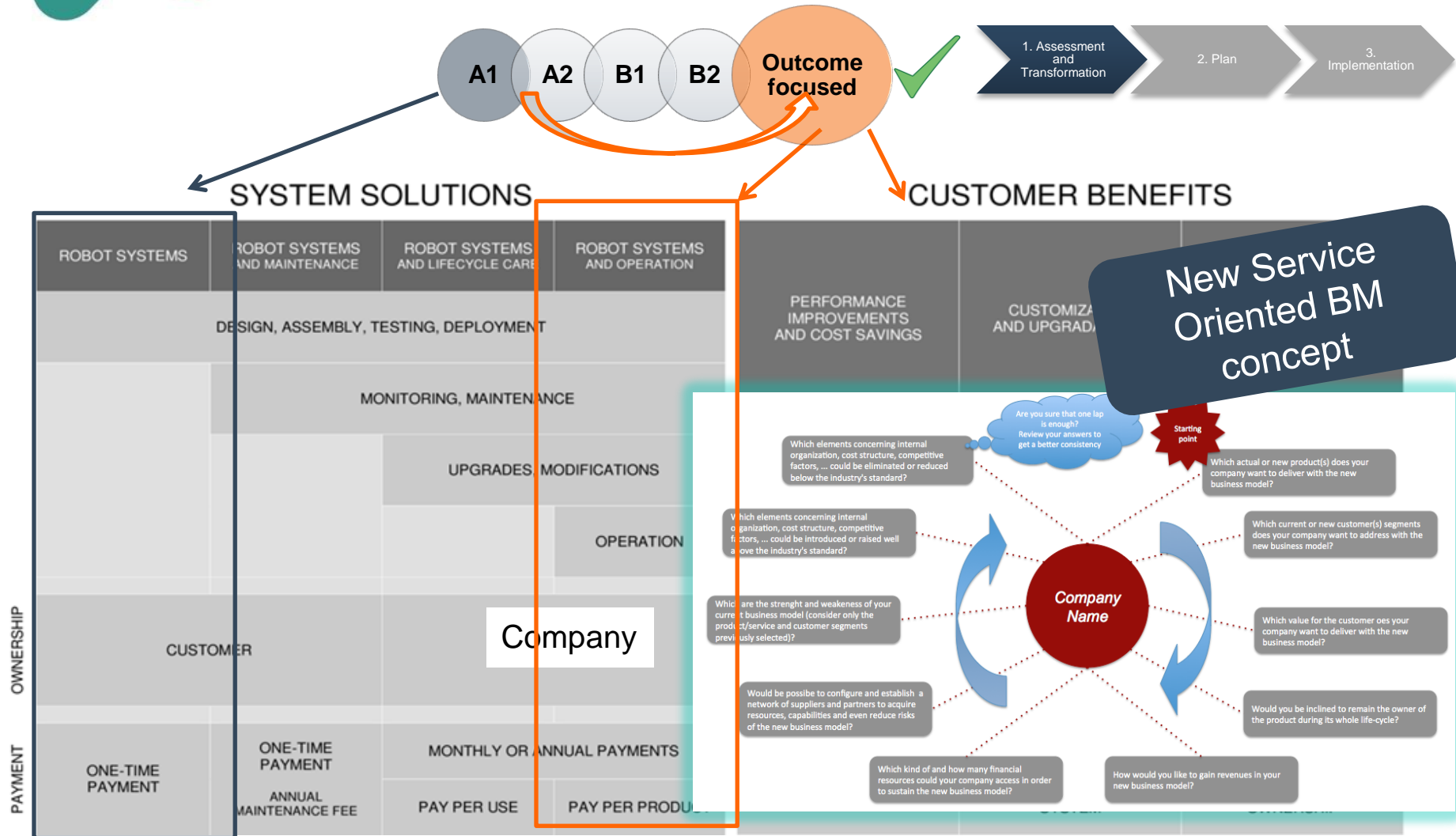


Choose the new business model strategy
Understand the new business model potential
Formalize the new business model characteristics



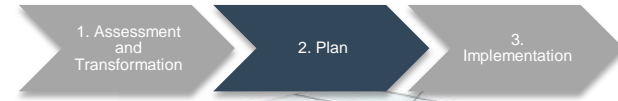


STEP 1: Assessment and transformation

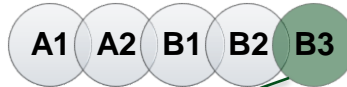




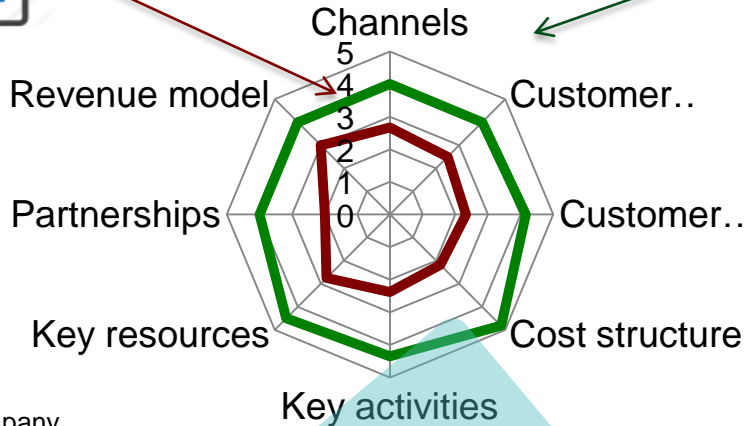
STEP 2: Plan - GAP assessment



Maturity model tool
Company audit



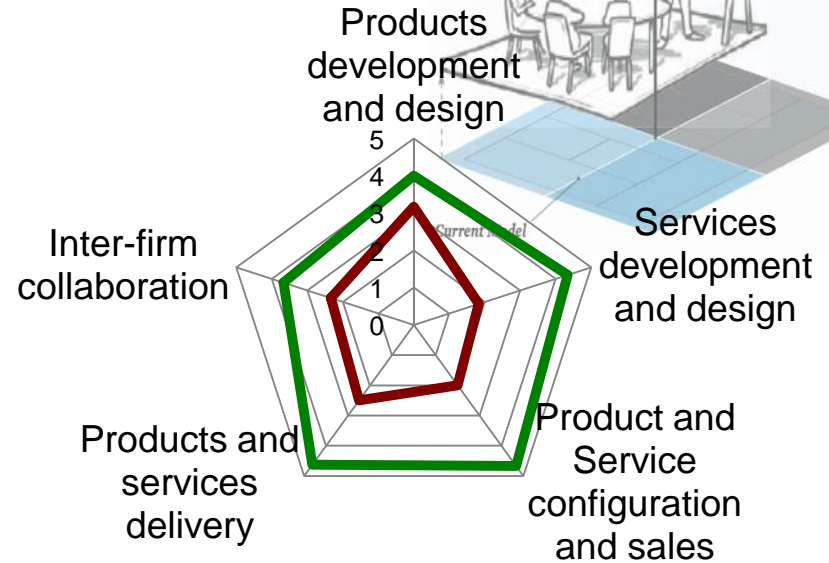
BM target



— Company
— Th. Configuration

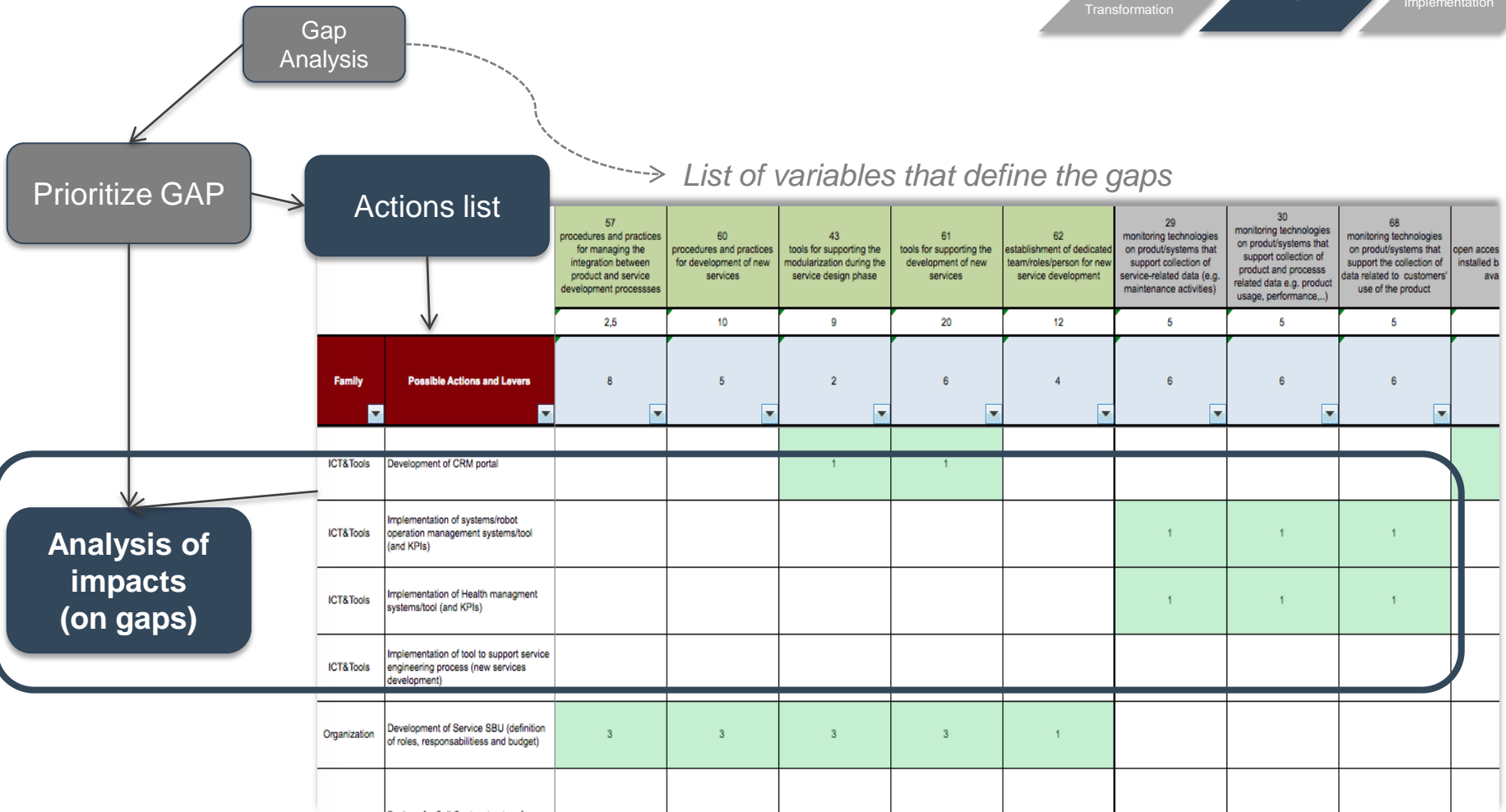
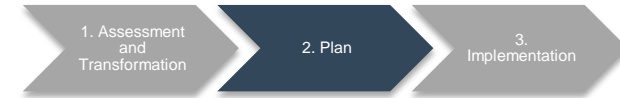


Identify and analyse the main gaps



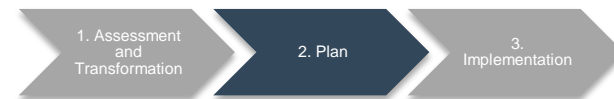


STEP 2: Plan - Prioritize actions *(importance vs impact)*

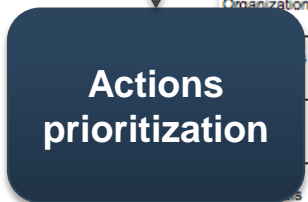
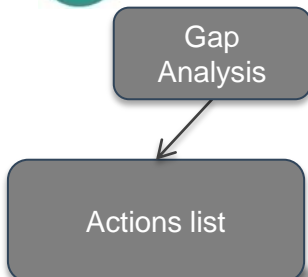




STEP 2: Plan - Roadmap



Automatic calculation of impacts
 Evaluation of implementation cost
 Action priority
 Other elements



Family	Possible Actions and Levers	Estimated lever impact (calculated)	Lever costs (1: Low - 5: High)	Lever priority score	# Items Impacted (overall)	# BM area Impacted (overall)	Key resources	Key activities
Procedures and rules	Documentation and formalization of contractual agreement and parameters	84,50	1,00	84,50	9	3		
ICT&Tools	Implementation of systems/robot operation management systems/tool (and KPIs)	225,00	3,00	75,00	14	2		
	Development of specific courses for relational capabilities	73,00	1,00	73,00	10	5	17,0	
	Development of specific courses for dynamic capabilities	72,00	1,00	72,00	0	3	17,0	
	Development of specific training courses for service development / service engineering							
Others	Development of dedicated marketing activities							
Organization	Define a specific team for analysis and interpretation of data							
	Documentation and formalization of data and processes (procedure and workflow)							
	Development of service culture and attitude							
	Query systems development							
KPIs	Design a dashboard for monitor customers' performances							
ICT&Tools	Implementation of Health management systems/tool	295,00	5,00	59,00	14	2		

Main ongoing actions (examples):

- Reorganization of the Service BU
- Formalize and review workflows of service planning and delivery processes
- Procedures for data collection, interpretation and elaboration
- Implement new monitoring technologies
- ...



WHY CHOSING OUR METHODOLOGY



To help your company developing an understanding of the service **transformation** and a **service culture**



To help your company to **formalize** new product-service offering and define the **best suited business model**



To carry out a **gap analysis** with respect to the new business model requirements



To develop an **action list** and a **roadmap** to support your company in the implementation of the new business model



OUR NETWORK

The ASAP Service Management Forum



MISSION

to promote the culture and excellence in Service Management
ASAP is the community where scholars and practitioners of several leading manufacturing companies and service providers, collaborate in developing research projects and share findings in the **servitization** and **product-services** management field www.asapsmf.org





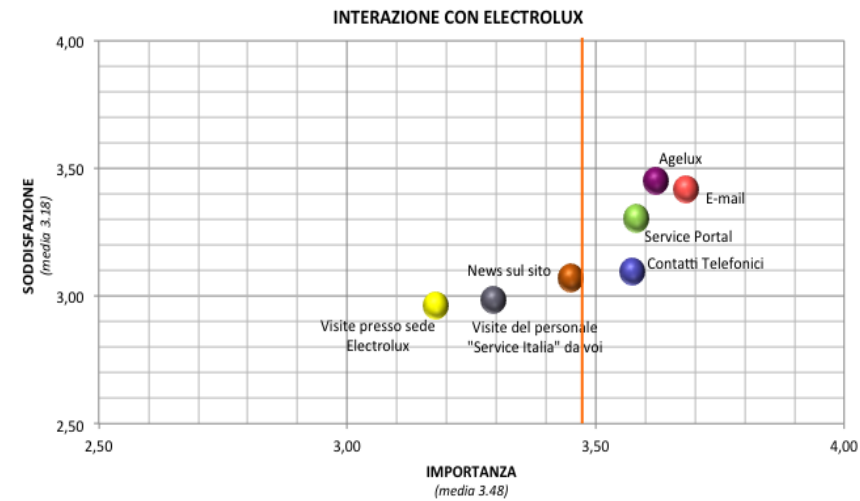
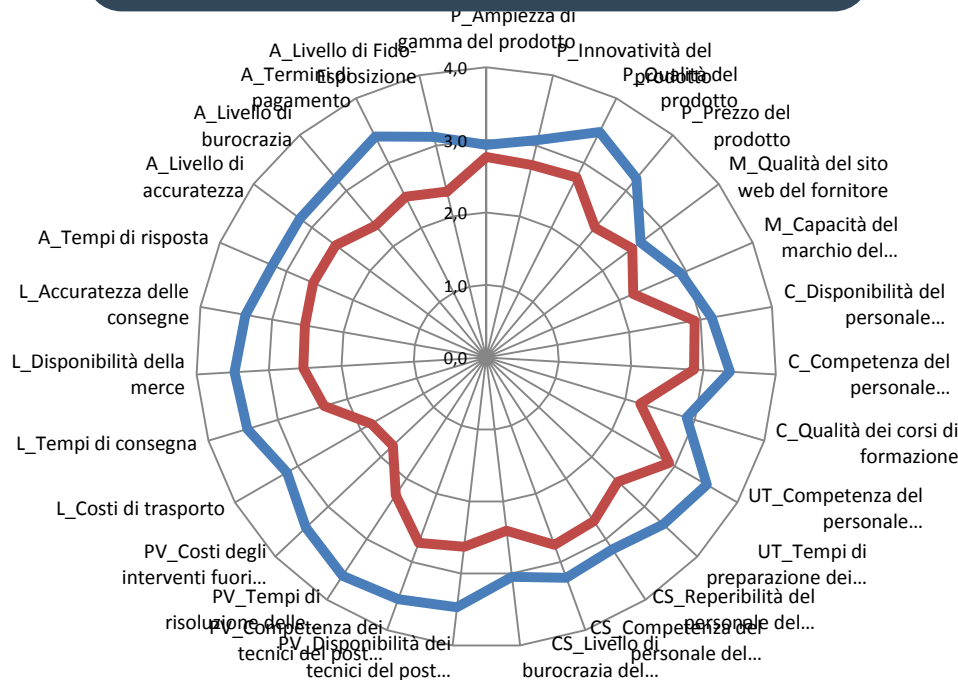
Our projects

IS YOUR SERVICE PORTFOLIO ALIGNED WITH CUSTOMER NEEDS?



Assessment of customer interest in a set of services and value sources (premium vs standard customers)

Assessment of relevance and satisfaction about the service portfolio to third party service providers





Our projects TCO-BASED SERVICE



OBJECTIVE:

- Computing the customers' total cost of ownership (purchase, usage, maintenance, ...)
- Transferring the information to customers
- Consider standard and customized setting

TOOLS:

- Total cost of ownership model
- Database
- Simulation tool with customer input

OUTPUT:

Yearly usage cost in standard conditions



Simulator: customized TCO computation based on usage conditions



Our projects

MAKE-OR-BUY OF AFTER-SALES SERVICES



Miele



In-House

Strategic and image alignment
Higher service quality
Sales of warranty extensions
Higher fixed costs



Outsource

Lower cost
Less stable service quality

**SMALL,
EXCLUSIVIST**



Outsource

Satisfactory technician specialization and service quality with lower fixed costs than in-house



Outsource

Technician productivity
Low brand fidelity

**LARGE,
EXCLUSIVIST**

MULTIBRAND

OUTPUT:

- Cost/revenue analysis of the different solutions
- Assessment of pros and cons





Our projects

SPARE PARTS PLANNING

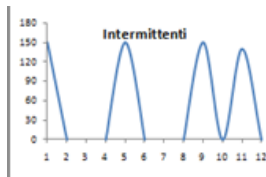
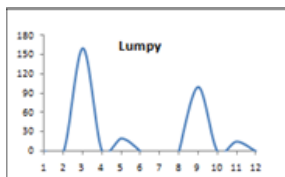


OBJECTIVE:

→ Dramatically improving the spare parts delivery time to customers with limited stock increase

ACTIVITIES:

- Spare parts demand analysis
 - Classification method development
- Supplier analysis and supplier agreement design
 - Stock level definition
 - Simulation of outcomes



OUTPUT:

- Classification method
- Stock dimensioning
- Performance projection

VALUE

FREQUENCY

CRITICALITY/SUPPLIER AGREEMENT

Policy	% SKUs	% order lines	Response time
On stock	4%	44%	Fast
Supplier agreement	22%	17%	Medium
To order	74%	39%	Slow



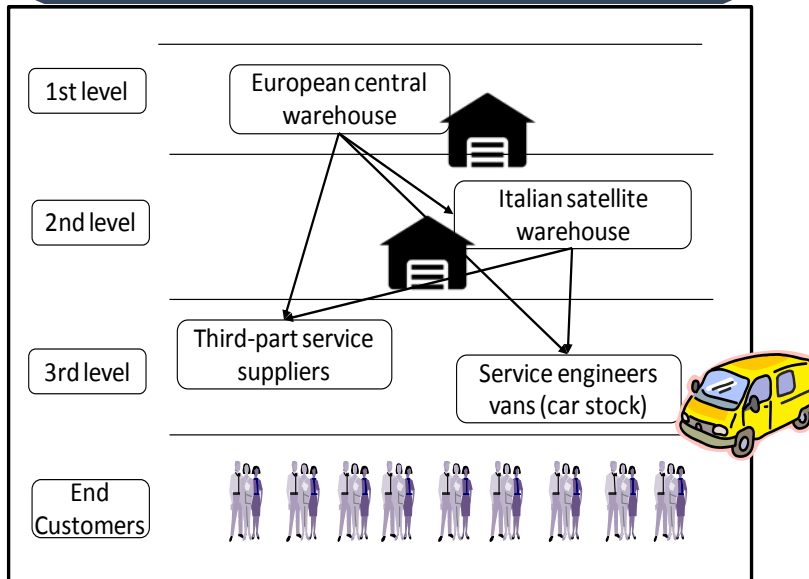
Our projects

CAR STOCK OPTIMIZATION

RICOH

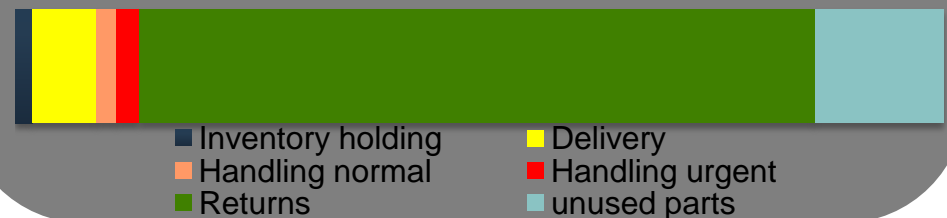
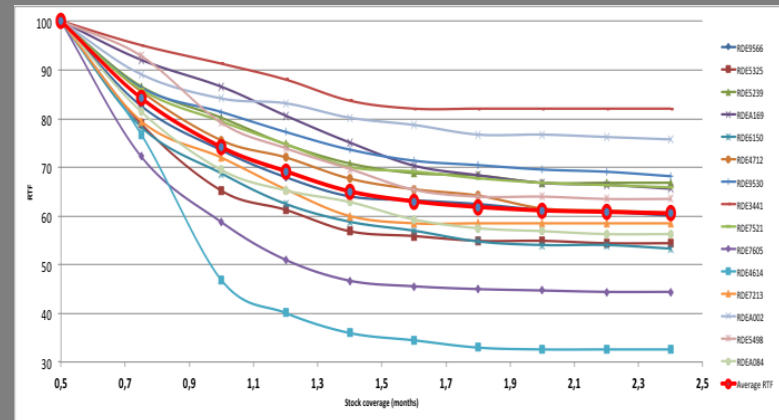
OBJECTIVES:

- Reducing capital invested in car stock
- understanding the relationship between car stock value and service level
- benchmark car stock management in different countries
- harmonize processes and systems



OUTPUT:

- Best practices across 4 countries
- Development and simulation of a car stock selection and update model
- Performance assessment: cost structure, service level





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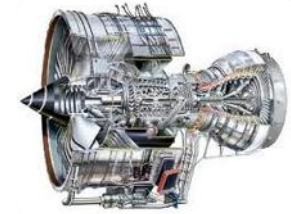
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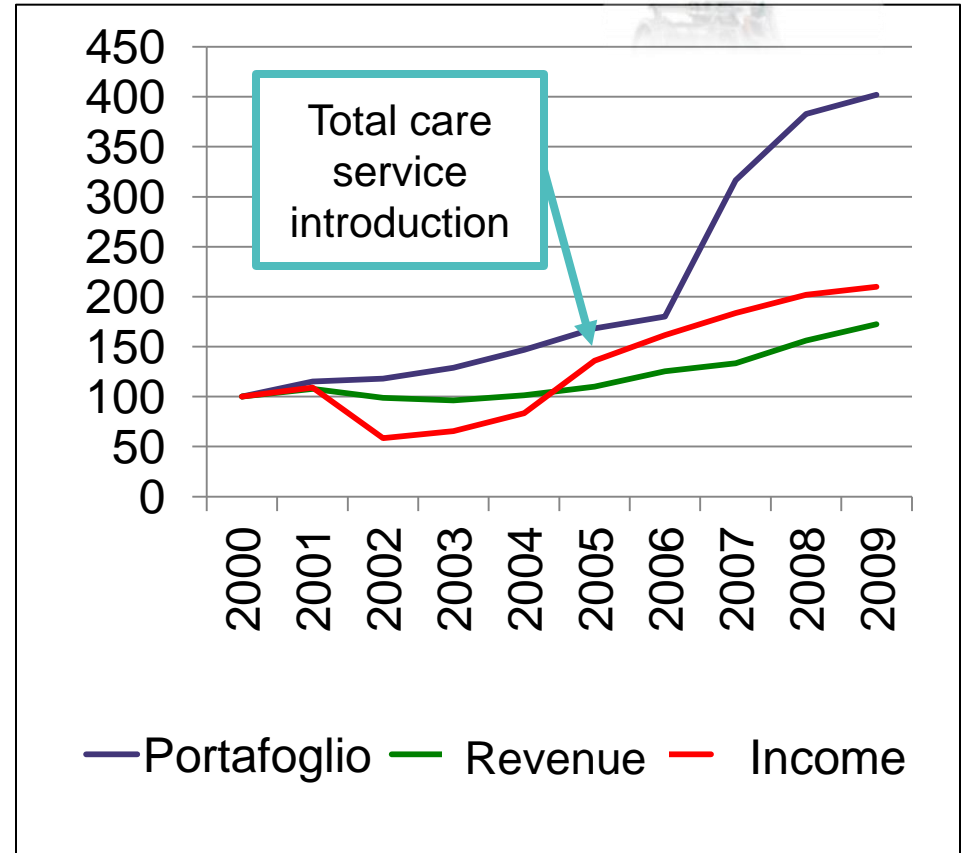
EXAMPLE: ROLLS ROYCE



Rolls-Royce



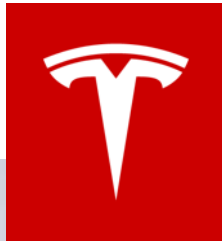
- ▶ **Strategy:** improve customer value through innovative service based on new technologies (*Total care*)
- ▶ **Path:** change *bottom-up, technology driven*
- ▶ **Enablers:** monitoring technologies, remote diagnostic, interconnected product
- ▶ **Result:** *cash-flow* stabilization, improved income, maintenance cost reduction





SOME SCENARIO TRENDS

- ▶ **Data are a major asset, and “early movers” can learn faster:**



TESLA: *“The company introduced new sensors into its vehicles in 2014. At that point Tesla began using data streaming from cars with those sensors and in-built internet connection and information on their locations to start testing autonomous driving features. Since introducing this hardware 18 months ago, Tesla has accrued 780 million miles of data, which it can use to look at how people are using the cars and how to improve. Every 10 hours Tesla gets another million miles worth of data”*

(source: <https://serviceinindustry.com/2016/06/06/technology-is-servitizing-the-world-example-1-auto-industry/>)