**Training fiche**

|  |  |
| --- | --- |
| **Title** | Servitization – transforming products into services |
| **Keywords (meta tag)** | servitization, service innovation, service design, business model innovation, digitalization |
| **Provided by** | STEP RI |
| **Language** | English |
| **Training area (X where applicable)** |
| **x** | Innovation & Servitization |
| **x** | Digital Transformation |
|  | Localization |
| **x** | Sustainability |
| **ESCO competencies and skills** |
| [please highlight the competencies and skills that are aligned with the definitions of the ESCO and are developed by each unit in this module]* Transversal skills and competences
	+ Social and emotional skills
	+ Critical thinking
	+ Analytical thinking
	+ Problem-solving
	+ Self-management
	+ Business management
	+ Adaptability
	+ Resilience
	+ Creativity
	+ Networking
	+ Initiative
	+ Flexibility
	+ Openness
	+ Understanding complexity
	+ Cooperation
	+ Empathy
	+ Innovation
	+ Leadership

 * Skills
	+ Technological skills
	+ Product marketing
	+ Digital marketing
	+ Digital skills
	+ Communication
	+ Cooperation
	+ Emotional intelligence

 * Knowledge
	+ Business management
	+ Online learning and training
	+ Advertising
	+ Cloud computing
	+ Big data
	+ E-commerce
	+ Artificial intelligence
	+ IoT
	+ Digital literacy
	+ Cybersecurity
	+ Data mining and analysis
	+ Sustainability
	+ Well-being
	+ Climate change
	+ Social media management
 |
| **Teaser** |
| Did you know that you can transform products into services and improve your business? By adding services to your product-focused business, you can deliver the desired outcome to your customers and create new revenue streams. All kinds of companies can benefit from servitization, by offering additional services to supplement their traditional products such as maintenance, fleet management, customization, resource optimization, pay-per-use models, etc… Learn about servitization in order to innovate your business model, better response to market trends, improve responses to your customer needs and obtain more revenue in the long run. |
| **Objectives / goals / learning outcomes** |
| At the end of this module, you will be able to:* Understand the concept of servitization,
* Encourage servitization initiatives in your work,
* Apply tools and methods that support servitization process,
* Identify business opportunities arising from new technologies.
 |
| **Description** |
| Servitization is a business innovation process of transforming product-based business into a service-based one by developing a product-service system, allowing entrepreneurs to better adapt their solution to the needs of the customer and improve their business. In this module, you can learn how to improve business with implementing servitization. You will be introduced with the Things+ Service innovation Methodology, which is specifically tailored to help micro, small and medium product-based enterprises with designing and implementing innovative services. |
| **Checklist of benefits for entrepreneurs** |
| [list at least three benefits]✓ Service is no longer a cost but a value creator✓ Scalable (for any size of company)✓ Potentially more revenue (and growth opportunity)✓ Rationalization of resources and expenses for both company and its customers✓ Increasing customer loyalty |
| **Contents arranged in 3 levels** |
| **Module: Servitization – transforming products into services****Unit 1: What is servitization?****Section 1.1: Introduction**Servitization is the transformation of products or resources into services, meaning selling entire solutions instead of just products. It’s mostly defined as adding services to your product-focused business, in order to deliver a desired outcome to your customers and create new revenue streams, therefore making your business primarily solution-focused.Some well-known examples are Netflix and Spotify - delivering media as a service, rather than customers buying the CDs, DVDs et cetera that produce those outcomes. In engineering, Rolls-Royce is delivering power-by-the-hour to airplane companies instead of selling engines. HILTI is selling a package of services enabling maximum tools utilization, instead of just selling tools for construction sites.All kinds of companies can benefit from servitization, by offering additional services to supplement their traditional products such as maintenance, fleet management, customization, resource optimization, pay-per-use models, etc.. In this module you will learn what servitization is, the benefits it brings and challenges that companies have to overcome in case to embrace it. We can say that there are three levels of services complementing products.**Advanced**Advanced services are defined by contractual agreements that require a product-service system. Ownership of the servitized good usually isn’t transferred to the customer therefore he pays for the use of the product or per unit of service provided by the resource.**Intermediate**Refers to services provided proactively and enabled with remote monitoring and diagnostic capabilities. Those are more precise and customized services for each client, rather than a standard model that is the same for everyone.**Basic**Services such as maintenance repair, overhaul, and asset support, which are provided at the customer’s request or with a fixed frequency.**Section 1.2: Is it for me?**Traditionally, servization initiatives were something reserved for large companies which had substantial resources and knowledge to develop and introduce new services. **But it has been proven that small and medium businesses are capable to servitize their offer and greatly benefit from it.** Bigger companies are usually able to make the transition to servitization more easily because of their network and their budget. But **for MSMEs there is also a significant opportunity as they are more agile and flexible in changing course of the business.** Furthermore, with digitization and all the new technologies on the market, these smaller companies are able to successfully reap the benefits of servitization.  As customers continue to expect additional benefits and long lasting relationships, companies of all sizes are adding services to their product offer. Companies that take advantage of the opportunity in service will become more financially secure and build stronger customer relationships.Being MSMEs or large companies, the winners will be those who succeed in adding different types of services to their products and who create real value for their customers. **Examples:*** Large companies:
	+ Electronics company Philips provides **LED lighting-as-a-service** to Amsterdam-Schiphol airport enhanced by ‘Internet of Things’ connectivity. Philips sells ‘light’ to the airport, instead of products. Schiphol pays for the light it uses, while Philips remains the owner of all fixtures and installations.
	+ WashTec is delivering its **car wash technology via pay-per-use model** complemented with a bundle of additional services from the chemical supply and regular maintenance to repairs and site cleaning. They are even supporting launch of the business with planning assistance and competition and location analysis.
* MSMEs:
	+ Dutch company Bundles offer **home appliances as a service**. In collaboration with equipment producers, they rent home appliances, like washing machines, and charge for their time in use, energy or resource consumption, delivering the function (or outcome) instead of product.
	+ Croatian company Alius Grupa is selling a **total care service for logistic chain management in pharmacy** (transport and storage monitoring of medicines), instead of just selling equipment for monitoring temperature and humidity.
	+ Croatian company Ventex is selling **location monitoring and emergency response service** for elderly care, instead of selling GPS tracking devices.

**Unit 2: How to implement servitization in your company?****Section 2.1: Service Innovation Methodology – the transformation process**Creation and improvement of services, often referred as service innovation or service design, is an interdisciplinary approach that combines different methods and tools from various disciplines. This part of the module is going to introduce you with the **Service Innovation Methodology** developed by the international group of business support organizations gathered under [THINGS+ project](https://www.interreg-central.eu/Content.Node/THINGS-.html), co-financed by the [Interreg Central Europe](https://www.interreg-central.eu/Content.Node/home.html) programme.Service Innovation Methodology is developed specifically for SMEs and defined by:* **Lean approach -** Specifically tailored servitization process for SMEs with limited resources and capabilities
* **Learning by doing** - Tools and methods are easy to apply and very effective with customer discovery and business model design
* **Improving the offer** - Delivering the full potential of the value proposition through enhanced customer experience
* **Available support** - Implementation is supported by the THINGS+ project materials and network of trained experts

Service Innovation Methodology is a coherent, robust, and operational methodology for the improvement of entrepreneurs’ skills in the development of product-based services, that will allow them to implement servitization in 4 phases:* Phase 1 - Identification of opportunities for based on existing capabilities and knowledge that reside within company
* Phase 2 - Identification of opportunities based on external developments
* Phase 3 - Roadmap design and change management
* Phase 4 - Implementation and commercialisation

**Phase 1: Identification of opportunities for servitization based on existing capabilities and knowledge that reside within company – „inside-out” identification of opportunities**Servitization and innovation is enabled with **clear understanding of customer problem(s)** that products and services solve; while buying and using circumstances help define which offer (if any) will be chosen by the customers as the most appropriate and convenient solution.Identification of the **other solutions** customers “hire” to solve their problems or **workarounds** they invent to avoid problems or reduce problem’s negative impacts **are clear indications of market size** and future challenges or possibilities for growth.The process of identification of the opportunities is some kind of a process of discovering “the other side” – side of users and buyers, their reasons and motivations. **It can be very difficult to switch perspective from product side to customer side**, therefore gradual approach is needed.**Companies already know a lot about buyers/users** of their products but due to productivity, efficiency or just every day operational pressure **they choose to ignore that knowledge** – in order to make things simpler and less complicated for the companies. It is about unveiling hidden knowledge and starting the **shift of the perspective – from “product centricity” into “customer centricity”.**The main task is to clarify offer (product and service bundle) – define the boundaries of the starting content of the servitization project and **identify opportunities based on existing knowledge about customers**, markets and relevant and influential factors that can shape competitive position of the company.**Phase 1 - Steps to be taken:**1. **Choose your most perspective product,** asses its financial relevance (impact on income) and perceived importance (perception of how important for the company image they are)
2. **Identify key features of the offer that could be categorized based on how customers perceive them.** Use [Product attributes map](https://hbr.org/1996/05/discover-your-products-hidden-potential) for the gradual shift of the perspective from product to customer related issues.
3. **Define of the** [**main customer problem(s)**](https://hbr.org/2016/09/know-your-customers-jobs-to-be-done)**!** Itshifts the perspective to the customers, targeted segment for which company aim to develop service. Various but clearly targeted and well-defined customers have to be in mind when doing this step. Suggested technique is to choose particular real person that “represent” particular customer segment.
4. **Identify the elements of your value proposition.** After defining customer’s main problem or Job to be done, use the [*Value Proposition Canvas*](https://www.strategyzer.com/canvas/value-proposition-canvas) to further discover how is your product fitting into the needs of customer.
5. **Identify all the alternatives at customer’s disposal.** Market segment should be defined by the problem that particular products and services are solving. This concept redefines the market perception and introduces new and unconventional competitors that should be identified. Servitization initiatives aim to unlock previously ignored or underserved markets which were not manufacturing companies core markets.
6. **Compare your offer to the alternatives in order to understand why a particular solution is chosen by the customers under particular customer circumstances.** You can use [Strategy Canvas](https://www.blueoceanstrategy.com/tools/strategy-canvas/) to visually understand and predict customer behaviour when particular customer circumstances and (product) offering features are confronted.

**Phase 2: Opportunities based on external developments and new insights – “outside-in” identification of opportunities**Identification of “outside-in” opportunities starts with additional description and understanding of key customer segments and creation of a **customer profile: persona**. Aim is to expand perspectives beyond traditional product or demographic perspective and to initiate customer analysis based on the problems customers are trying to solve and circumstances under which those problems exist. Shift towards the customer centric approach was already started during the first phase of the methodology implementation, and at this point the customer segment and market features will be further elaborated. It is suggested to proceed with no more than three customer segments. The aim is to describe the customer based on a specific individual – a real person representing the customer segment. Next step is to visually capture the **entire cycle of customer’s experience** from the moment the customer’s problem emerges until after the solution is applied. Stages of the journey can be generic (preparation, purchase, delivery, use, supplements, maintenance, disposal) or more precisely defined. After all stages are defined, customers behaviour at every stage should be analysed (define what is the customer doing-thinking-feeling) so any unsatisfactory experience (pain points) can be identified and recognized as possible opportunity to develop innovative service.This phase ends with initial **Servitization concept** based on opportunities which will be recognized as most promising and doable. In case of more possibilities, the company will have to make a decision on which one to pursue, having in mind its own capabilities, challenges and possible gains.**Phase 2 - Steps to be taken:**1. **Identify and analyze key** [**customer segments**](https://blog.hubspot.com/service/customer-segmentation) in order to gradually shift the perception of them beyond the existing assumptions.
2. Focus on the most promising customer segment(s) and **create a** [**customer persona**](https://econsultancy.com/customer-personas/). Describe the customer based on a specific individual – a real person representing the customer segment. This information should enable to identify even more precisely who to target, when and how.
3. **Visually capture the entire cycle of** [**customer’s journey/experience**](https://columbiaroadcom.medium.com/why-and-how-to-create-a-customer-journey-map-download-free-template-b832a614cbe0), from the moment the customer’s problem emerges until after the solution is applied. Analyze it and identify unsatisfactory experience (pain points) that can be recognized as possible opportunity.
4. **Create initial servitization concept** – a brief description (or few of them) of the new service that will be complemented to the product chosen for the servitization initiative. The aim is to identify key elements that are crucial for the implementation and to enable understanding of the organizational and operative changes that will be envisioned during the next steps.
5. **Elaborate the New (to be)** [**customer journey**](https://columbiaroadcom.medium.com/why-and-how-to-create-a-customer-journey-map-download-free-template-b832a614cbe0) (by using the proposed tool), this time describing the customer’s experience with the new service.

**Phase 3: Change and implementation design**In the third phase, **company has to identify key changes in the way how the customers will be served**, and how business model and key elements that define company’s capabilities should be altered (resources, processes and decision-making criteria/values). You can start with the revision of the New (“to be”) Customer Journey based on the initial servitization concept. It is suggested that the revised Customer Journey should be developed from the scratch – as if there is no previously established relationships and activities related to “old” customer journey.After the customer side is defined, company perspective should be explored in order to define: which are the touchpoints, in what way to organize them and **what will be the most appropriate way to support the newly developed customer side**. Next step is to integrate the planned changes into the business model. To be able to do it, companies should understand both existing key elements of their business model and changes that are required. Once existing “as is” and planned “to be” business models are defined - overlaps and differences need to be checked.Servitization concept and business model transformation should be discussed with all organizational parts (departments, stakeholders etc.) in order to get estimations of implementation impact and requirements, costs, delivery terms, limitations, capacities etc. This phase ends with the **acceptance of the servitization project blueprint and its approval by the senior management** of the company.**Phase 3 - Steps to be taken:**1. **Revise/define the New (“to be”)** [**Customer Journey**](https://columbiaroadcom.medium.com/why-and-how-to-create-a-customer-journey-map-download-free-template-b832a614cbe0) based on the initial servitization concept.
2. **Integrate the planned changes into the business model.** You should understand both existing key elements of the business model and changes that are required. Suggested procedure is to use [Business Model Canvas](https://www.strategyzer.com/canvas/business-model-canvas) as checklist for the identification and description of key elements of both existing (product manufacturing-based) business model and the servitized business model.
3. **Create detailed description of the differences and expected changes** in terms of [resources, processes and values](https://thebusinessprofessor.com/en_US/mgmt-operations/resources-process-values-framework).
4. **Review of the previously defined servitization concept from the feasibility perspective**. Are you capable to manage the change?

**Phase 4 - Change and implementation design**Fourth phase’s main focus is the creation of the strategy for the commercialization of the servitized product. It should be based on the:* + previously defined elements (servitization concept, existing company capabilities and product portfolio, key business model elements like sales and distribution network including post-sales support, partnerships etc.),
	+ relevant inputs and reviews from the company,
	+ existing strategy, performance, and operations management activities and
	+ acceptance by the company owners/senior management.

**The key aim is to develop a sound commercialization strategy and implementation plan.** Since companies could face many “unknowns” during the implementation, traditional strategic management approach based on the indicators, thresholds and goals is not appropriate. Discovery driven (or assumption based) planning is strongly suggested. At this initial commercialization stage, learning what is possible is much more important than just achieving what was planned**Phase 4 - Steps to be taken:**1. **Create implementation strategy.** In order to avoid too complex planning and decision-making procedure, simple strategy management tool is proposed (e.g. One Page Strategy). It should enable seamless implementation of servitization initiative and its integration into broader, already existing strategy.
2. **Create a a** [**list of assumptions**](https://iveybusinessjournal.com/publication/strategic-assumptions-the-essential-and-missing-element-of-your-strategic-plan/) **that arise from drafting the strategy.** Great number of assumptions regarding environment, markets, customers but also organizational and individual capabilities. Management based on the assumptions allows swifter response and better adjustment which is more in line with the lean startup thinking (customer development process) than traditional, inert approach.
3. **Elaborate and document key implementation activities** drafted in the strategy to better communicate and delegate elaborated tasks within the company’s organizational structure.
4. Monitor implementation of the servitization initiative and respond to assumption validation.

**Section 2.2: Key tools to be used**

|  |  |
| --- | --- |
| **Step of Phase 1** | **Tools** |
| 1 | Product and service list with described assessment of financial and perceived importance |
| 2 | [Product attributes map](https://hbr.org/1996/05/discover-your-products-hidden-potential) |
| 3 | [Job-to-be-done](https://hbr.org/2016/09/know-your-customers-jobs-to-be-done) |
| 4 | [Value proposition canvas](https://www.strategyzer.com/canvas/value-proposition-canvas) |
| 5 | List of competitors in the context of Job-to-be-done, in and outside your industry |
| 6 | [Strategy canvas](https://www.blueoceanstrategy.com/tools/strategy-canvas/) |

|  |  |
| --- | --- |
| **Step of Phase 2** | **Tools** |
| 1 | List of [customer segments](https://blog.hubspot.com/service/customer-segmentation) |
| 2 | [Customer persona](https://econsultancy.com/customer-personas/) |
| 3 | [Customer Journey Map](https://columbiaroadcom.medium.com/why-and-how-to-create-a-customer-journey-map-download-free-template-b832a614cbe0) |
| 4 | Custom form with initial servitization idea description (experience and benefits for the customer, responsibilities for implementation among employees) |
| 5 | [Customer Journey Map](https://columbiaroadcom.medium.com/why-and-how-to-create-a-customer-journey-map-download-free-template-b832a614cbe0) |

|  |  |
| --- | --- |
| **Step of Phase 3** | **Tools** |
| 1 | [Customer Journey Map](https://columbiaroadcom.medium.com/why-and-how-to-create-a-customer-journey-map-download-free-template-b832a614cbe0) |
| 2 | [Business model canvas](https://www.strategyzer.com/canvas/business-model-canvas) |
| 3 | [RPV framework](https://thebusinessprofessor.com/en_US/mgmt-operations/resources-process-values-framework) |
| 4 | Custom form with revised servitization idea description (experience and benefits for the customer, responsibilities for implementation among employees) |

|  |  |
| --- | --- |
| **Step of Phase 4** | **Tools** |
| 1 | Custom One Page Strategy form that consists of description of the success, goals that are the measure of the success and actions for achieving goals. |
| 2 | Custom form with [list of assumptions](https://iveybusinessjournal.com/publication/strategic-assumptions-the-essential-and-missing-element-of-your-strategic-plan/) concerning environment/market, company and employees. |
| 3 | Custom form with description of the activity: actions, responsible person, expected results, resources, deadline,… |

**Section 2.3: Challenges for the company*** **Business model adjustments** – in some cases, large adjustments on operational level need to be made, which can be challenging. Some of the processes that may need to change are logistics, billing and collecting, asset tracking, customer support service and financial.One of the major challenges is **organizing the reverse logistics** which means that the companies need to build the operational structure to take-back their products and reuse, refurbish or recycle them.
* **Supply chain** needs to be **integrated and well organized** - this needs to be done in collaboration with supply chain partners. Often new Service Level Agreements (SLAs) are needed.
* **Determining the price of a service** - determining the price of a product is relatively simple, but knowing how much service (on average) you will have to provide over the entire lifetime is difficult. You mustn't overcharge the clients or underestimate your own activities.
* **Customers** – convincing customers to considerer a new offering with associated new payment models, contracts and responsibilities can be a big challenge. Customers need to have confidence that the services you offer them will be adequate.
* **A change in employee mindset and organizational transformation** - due to the change in the way of functioning, i.e. selling services instead of products, there will be resistance from some employees who, until now, have been focused on one-time sales targets instead of long-term customer engagement. Servitization requires different sales mentality and sales processes.
* **Rapid and unpredictable changes in income** - companies could experience large changes from month to month in income, especially if they run a pay-per-use model and have large changes in the intensity of services provided.
* **Proactive support** - companies will need to act preventative instead of reactive in order to minimize downtime and maintenance costs, which sometimes requires development of innovative maintenance concepts.

**Unit 3: Why servitization??****Section 3.1: Benefits of servitization**Despite the challenges for the company introducing servitization, there are many benefits companies should strive for:* Better response to market trends like outsourcing and asset management
* Rationalization of resources and expenses for both company and its customers
* More revenue in the long run
* Larger market share and growth opportunity
* Improved responses to customer needs
* Improved product innovation
* Building new revenue streams
* Constant or recurring income stream
* Increasing customer loyalty
* Setting higher barriers to competition
* Service is no longer a cost but a value creator
* Scalable (for any size of company)
* Improved pace of technology adoption

**Section 3.2: New technologies as servitization enabler****New technologies play an important role** **in enabling servitization** and innovative services in general. These technologies allow new ways of product-service integration and added value creation for the customers, and at the same time more efficient resource utilization by the companies. **Servitization fosters digitalization** of MSMEs by creating new revenue streams based on digitalized products and maximizes the potential of new technologies. Technologies like Internet of Things, sensors, RFID, network & communication technologies, data analytics, space technologies, additive manufacturing, etc. can be involved in providing product-based services in different ways and different levels of service maturity. Some interesting aspects of innovative services enabled by new technologies are:* **Diagnostics & predictive maintenance** - using a combination of hardware and software technologies to predict the future state of a product in order to react to failures or prevent them,
* **Remote communications** increasing data exchange in order to control the product, increase its autonomy and deliver new data driven services,
* **Mobile devices** enabling better communication with customers, real time data and efficient resource planning,
* **Consumption monitoring** allowing companies to have a better understanding of how their products are used so they can develop personalised services and co-create value with customers.

Every interaction in the digital world generates data that enables new revenue generating services. New technologies are generating more data, and at the same time, new customer needs are forcing companies to adopt new technologies to serve them better and deliver added value. Either way, servitization is a process that improves adoption rate of new technologies.New technology 🡪 New data 🡪New services – **new revenues!**New technology 🡨 New standard 🡨 New customer needsDepending on the level of product connectivity, data-driven service fits into one of 4 maturity levels:1. Reactive
2. Preventive
3. Predictive
4. Proactive

**Section 3.3: Path towards sustainability**The continuous growth of the global population and economy are resulting with an increasing demand for energy and other resources. Although efficient technologies are available and their economic benefits are clear, there are different barriers that prevent these from being deployed, like high up-front costs for example. Sustainability goals require introduction of these technologies and solutions which are expensive and complex to deliver, and this is where servitized business models play a significant role. **By optimizing entire value chain, servitization leads to more efficient utilization of resources and improved energy consumption, therefore enhances environmental performance.**Servitization as an innovative business model has implications not just for the companies engaging with it, but also has wider societal implications. For example, in food supply chain, **servitization encourages introduction of new technologies** and different partners, making food production more efficient, secure and available. **Circularity is also a driver for servitization.** In delivering a servitized product there is a motivation to reuse, recycle and prolong product lifecycle since they are being optimized for longer use and outcome delivery. Design of a servitized product is looking at the entire lifecycle of the product, rationalizing its use in order to deliver the desirable outcome. Companies that design a product are responsible for delivery, use, service and efficiency over a longer period of time. **In a servitized context, where the company retains ownership and responsibility for the products, they are motivated to optimise their use and pursue circular economy principles.**  |
| **Contents in bullet points** |
| [summary of the contents in bullet points]* Servitization is the transformation of products or resources into services, meaning selling solutions instead of just products.
* Servitization is an opportunity also for MSMEs, as they are more agile and flexible in changing course of the business.
* Service Innovation Methodology is a convenient way for MSMEs to create innovative product-based services.
* It is deployed in 4 phases, leading MSME through customer discovery and design of a desirable service.
* Servitization brings significant benefits both to the company and its customer.
* Servitization fosters digitalization of MSMEs by creating new revenue streams based on digitalized products and maximizes the potential of new technologies.
* Servitization leads to more efficient utilization of resources and improved energy consumption, therefore enhances environmental performance.
 |
| **5 glossary entries** |
| [5 glossary entries with a brief description]**Servitization –** innovation process of amending product-focused business with innovative services.**Product-service system** – business model where value is delivered in cohesive mix of products and services.**Business model** – description of organization’s way of creating, delivering and capturing value.**Value proposition –** benefits for customers promised to be delivered by the company**Circular economy –** model of economy which involves sharing, reusing and recycling existing materials and products in order prolong their lifecycle and tackle global challenges as climate change, biodiversity loss, waste, and pollution. |
| **Bibliography and further references** |
| [sources and references of the contents; format of the reference: link; please use only relevant sources, do not cite Wikipedia]1. Forbes (2022, March 28). What Is Servitization And How Can It Help Your Business?. <https://www.forbes.com/sites/sap/2022/03/28/what-is-servitization-and-how-can-it-help-your-business/?sh=404727a97cf5>
2. ARC Advisory Group (2018, November 14). Servitization for Industrial Products. <https://www.arcweb.com/blog/servitization-industrial-products>
3. Scheper.Co - Engineering & Consulting. Servitization maturity Stages. <https://www.scheper.co/solution-servitization-maturity-servitization-week-2-6/>
4. Exor International (2021, May 6). What is servitization?. <https://www.exorint.com/en/blog/what-is-servitization>
5. ESA automation (2022, May 31). The Three Levels of Servitization: Base, Intermediate, Advanced. <https://www.esa-automation.com/en/the-three-levels-of-servitization-base-intermediate-advanced/>
6. NextService (2020, September 22). Servitization for Manufacturers: The Future of Business?. <https://nextservicesoftware.com/news/servitization-for-manufacturers/>
7. Caddify. Why Does Successful Servitization Require Mobile Apps?. <https://caddify.com/2019/12/07/why-does-successful-servitization-require-mobile-apps/>
8. MSI Data (2015, December 4). What is Servitization and Why Should Manufacturers Care. <https://www.msidata.com/what-is-servitization>
9. Semcon. Is your business on the road to servitization?. <https://semcon.com/offerings/servitization/>
10. NexSys (2022, November 18). Jargon Buster: Servitization Explained. <https://www.nexsys.co.uk/knowledge-hub/servitization-jargon-buster/>
11. The Advanced Services Group (2022). Leading examples of servitization. <https://www.advancedservicesgroup.co.uk/leading-examples-of-servitization/>
12. Emerald Publishing Limited (2020, January 28). What is servitization of manufacturing? A quick introduction. <https://www.emeraldgrouppublishing.com/opinion-and-blog/what-servitization-manufacturing-a-quick-introduction>
13. Firmhouse (2020, May 15). The advantages and challenges of servitization. <https://www.firmhouse.com/blog/the-advantages-and-challenges-of-servitization>
14. Field Service News. The Multiple Challenges of Servitization. <https://fieldservicenews.com/think-tank-sessions/the-multiple-challenges-of-servitization/>
15. World Economic Forum (2020, November 20). What is servitization, and how can it help save the planet?. <https://www.weforum.org/agenda/2020/11/what-is-servitization-and-how-can-it-help-save-the-planet/>
16. IEDP (2017, July 5). Servitization A Model for Growth - How manufacturers are adding value by adding services. <https://www.iedp.com/articles/servitization-a-model-for-growth/>
17. The service design group. 5 Recent Examples of Servitization. <https://theservicedesigngroup.com/insights/5-recent-examples-of-servitization/>
18. The manufacturer (2018, August 24). Three examples that make the case for service-based models. <https://www.themanufacturer.com/articles/three-examples-that-make-the-case-for-service-based-models/>
19. ScienceDirect. Servitization of SMEs through Strategic Alliances: a Case Study. <https://www.sciencedirect.com/science/article/pii/S2212827119306225>
20. Hrčak (2017). Trends in servitization: evidence from Croatia. <https://hrcak.srce.hr/file/280749>
21. Cambridge Service Alliance. The future of servitization: Technologies that will make a difference. <https://cambridgeservicealliance.eng.cam.ac.uk/system/files/documents/150623FutureTechnologiesinServitization.pdf>
22. Interreg Central Europe Things+ project

<https://www.interreg-central.eu/Content.Node/THINGS-.html>1. Interreg Central Europe Boost4BSO project

<https://boost4bso.eu/><https://www.interreg-central.eu/Content.Node/Boost4BSO.html>1. Future of field services. The Intersection of Servitization and Sustainability

<https://futureoffieldservice.com/2021/09/08/the-intersection-of-servitization-and-sustainability/>1. WeForum. What is servitization, and how can it help save the planet?

<https://www.weforum.org/agenda/2020/11/what-is-servitization-and-how-can-it-help-save-the-planet/> |
| **Five multiple-choice self-assessment questions**Upon completion of the validation mechanism with 75% of correct answers, users will be able to generate customised Certificate of Attendance and Certificate of Completion. | **Question 1. Servitization is transformation of:**Option a: Resources into productsOption b: Services into productsOption c: Products into servicesAttractive questions = great gamification solution!!Option d: Customers into partners**Correct option: c: Products into services****Question 2. Servitization is applicable:**Option a: Only in EuropeOption b: Only in small companiesOption c: Only in fishing industryOption d: In companies of all sizes **Correct option: d: In companies of all sizes****Question 3. Service Innovation Methodology has**Option a: 2 main phasesOption b: 4 main phasesOption c: 6 main phasesOption d: 8 main phases**Correct option: b: 4 main phases****Question 4. Tool that captures customer’s experience in detail is:**Option a: One page strategyOption b: Business model canvasOption c: Customer journey map Option d: List of competitors**Correct option: c: Customer journey map****Question 5. Servitization optimizes:**Option a: Use of resourcesOption b: Energy consumptionOption c: Product lifecycleOption d: All of the above**Correct option: d: All of the above** |
| **Related material**  | [related material - field is to indicate the name of the ppt file that accompanies the file, so that when IWS uploads the materials to the backoffice, they are sure that they are uploading the correct files]RESTART\_PR3\_6. Servitization |
| **Reference link** | <https://www.interreg-central.eu/Content.Node/THINGS-.html><https://boost4bso.eu/knowledge-exchange><https://www.aston.ac.uk/research/bss/abs/centres-hubs/advanced-services-group> |
| **Video in YouTube format (if any)** | <https://www.youtube.com/watch?v=jiXOGlzPeBY&t=8s&ab_channel=AVOvidea> |