
Servitization in the Healthcare Sector



With the growing costs of healthcare in the Netherlands, the healthcare industry, healthcare insurance companies and the Dutch government are actively looking for ways to increase the efficiency of medical treatments without jeopardizing quality of care. The COVID-19 crisis has made this challenge even more difficult. Healthcare costs have grown rapidly since early 2020 and the pandemic has shown more than ever how important the timely availability of high-quality goods and services is for the provision of healthcare.

To find the right balance between efficiency, costs and quality of care, multiple initiatives have been explored, varying from purchasing of healthcare (i.e., alternative ways to finance treatments by hospitals and other institutions by healthcare insurance companies) to purchasing for healthcare (i.e. alternative ways to purchase goods and services required to perform treatment of patients). A significant development within the latter category is **Servitization**.

Servitization entails the shift from producing and selling products to providing and selling services, or a combination of products, services, and sometimes consumables. Servitization is already widely adopted within a range of industries, including automotive, materials handling and entertainment. It is popular because it meets changing needs evolving from equipment ownership to instant access to equipment when needed.

The global appetite for services has grown by 30 percent over the past twenty years relative to the Gross Domestic Product, meanwhile the nature of services is changing.

In general, the number of people buying conventional products and services is decreasing; instead more people are seeking to buy the outcomes that these products offer.

In other words, rather than 'buying a car,' commuters want 'mobility.' And rather than 'buying insurance,' homeowners want 'reassurance.' Increasingly, people want access to equipment without carrying the responsibilities of ownership.

For the healthcare industry, Servitization relates to purchasing treatments with capital intensive medical equipment as a service (pay-per-use) rather than purchasing the equipment itself.

For manufacturers of equipment, this requires a new business model, and for providers, it enables the benefits of equipment usage without carrying any of the related burdens and responsibilities of ownership. There are a number of advantages of servitization for hospitals, from establishing transparency and predictability of costs, to having access to state-of-the-art equipment and technology. Additionally, servitization can facilitate an overall optimization of the cost/value ratio of the treatment process, as there is transparency into the cost per treatment, and equipment-related services like installation, operations and maintenance are often outsourced – maximizing the equipment's efficiency. For the equipment supplier, the advantages include a higher turnover and margin through the delivery of a broader range of product-related services, and higher value-add to customers by providing a comprehensive set of services instead of only the product.

The appetite for servitization is clearly growing. However, awareness and adoption vary across sectors. Although healthcare professionals increasingly realize that servitization helps with outsourcing non-core activities, the transformation from 'traditional' equipment purchasing to buying products as a service within the Dutch healthcare system is only picking up slowly. This paper addresses the barriers to wider adoption within the sector and suggests how hospitals can further embrace servitization. The research has been done by Master Students from the Rotterdam School of Management, Erasmus University on behalf of Berenschot and DLL.

Servitization in general and its implications

Let us first dive into the definition of servitization.

Servitization is a business concept in which original equipment manufacturers (OEMs) offer services either instead of or complementary to products sold.

In this concept, manufacturers that are product-centric (offering merely the provision of a product) transform into a service-centric one. Within the healthcare sector, this means **the equipment owner will no longer be the hospital; instead, the service provider becomes the owner of the product.** This requires changes to the business model, the culture and mission of both hospitals and OEMs.

For the business structure of OEMs, four different servitization stages can be identified:

1. Product manufacturer
2. Value-added manufacturer
3. Full-service provider
4. Integrated solutions provider¹

The servitization stage depends on the level of services offered which ranges from products with services as an 'add-on,' to services with tangible goods. The shift from a product manufacturer to a value-added manufacturer covers the shift from an original product offer to proactively offering services.

The difference between a value-added manufacturer and a full-service provider is the former focuses on ensuring the proper functioning and/or customer's use of the product, and the latter focuses on efficiency and effectiveness of the end-user's processes related to the product.

The most advanced level is the integrated solutions provider, which includes offering complete solutions through long-term relationships.

Why Servitization?

Servitization is the answer to changing market needs. Increasingly, businesses do not necessarily want to own equipment, but rather want access the moment it is needed without the responsibilities of ownership.



Additionally, servitization can be a solution for manufacturers who wish to distinguish themselves in a saturated market. Offering the best product on the market is often not sufficient anymore. Today, customers are looking for more individualized services like real-time responses and predictive maintenance; meanwhile, resources are scarce so models must become more efficient.

Servitization has already been successfully implemented in multiple industries where it accomplished total cost of ownership reductions and increased efficiency. For example, in the agricultural sector, 'Farming as a Service' has been introduced as a solution for farmers to acquire expensive and innovative robots to perform simple and repetitive tasks, thus making the process more efficient. Servitization makes these robots attainable for farmers and provides peace of mind through operation of the robots and maintenance being provided by the supplier.

Servitization is a growing trend in the world, but the extent to which it is already implemented depends on different factors. Both the service industry and the percentage of servitized manufacturing companies are influenced by company dimension, geographical location, and commodity sector. In general, Europe, North America and Oceania have the highest adoption rate of Servitization. The UK, USA and Australia, in particular, score the highest among the countries surveyed².

¹Martinez, V., Bastl, M., Kingston, J., & Evens, S. (2010). Challenges in transforming manufacturing organisations into product-service providers. *Journal of Manufacturing Technology Management*, Vol. 21 Iss: 4, pp. 449 - 469.

²Mastrogiacomo, L., Barravecchia, F., & Franceschini, F. (2019). A worldwide survey on manufacturing servitization. *The International Journal of Advanced Manufacturing Technology*, 103(9-12), 3927-3942.

Servitization in the healthcare sector

By nature, the healthcare sector is different than other industries and these differences may have an impact on the success level of implementing servitization. Both on a global scale and in the Netherlands, healthcare costs are rising and there are limited resources available. With an aging population and a decreasing amount of qualified healthcare professionals, it is difficult to control growing healthcare costs. Furthermore, expectations of the services and the requirements for market acceptance and reimbursement are increasing. To increase the efficiency of operations and decrease the cost per treatment, hospitals are starting to involve their suppliers more closely in their operations. One example of this type of supplier involvement is the purchasing of services through which equipment suppliers assist hospital staff in optimizing the use of their equipment.

As part of this study conducted by Master Students of the Rotterdam School of Management (Erasmus University Rotterdam, the Netherlands), both hospitals and manufacturers have been interviewed.

A number of hospitals in the Netherlands have already implemented servitized solutions. One Dutch general regional hospital currently uses limited servitized solutions for acquiring copiers and printers. In 2016, the hospital started a project in partnership with DLL and reviewed the benefits of servitized solutions within radiology. This assignment has provided insights into the different kinds of devices used in radiology, their usage, total cost of ownership, and program requirements for establishing a servitization model.



In some of the top clinical hospitals in the Netherlands, the ICT infrastructure, servers and data have been outsourced and the manufacturers manage the data storage and software. At another top clinical hospital, medical and imaging equipment is provided as a service. Although there is greater satisfaction with the service contract because the supplier is much more involved in how healthcare services are being provided by the hospital, further development has stagnated because of challenges from both suppliers and hospitals. These may include:

For manufacturers

- Difficulties in determining which types of services to offer in specific global markets
- Limited internal alignment within suppliers, which means that certain business functions may be missed in critical stages
- Risks associated with responsibilities not being clearly defined between suppliers and hospitals

For hospitals

- Commitment to long-term service contracts limiting the possibility to switch suppliers
- Medical personnel not being able to use the equipment that they prefer
- Limited internal alignment within hospitals, which results in doctors' expectations that are not aligned with the service contract
- Conflicting interests between doctors and suppliers' sales personnel

The decision to adopt servitized solutions for a hospital is typically based on strategy and forecasts, since servitization contracts are mostly long-term contracts covering future investments in equipment that have not been fully developed at the time the contract was signed.



Benefits of servitization for the healthcare sector

For equipment manufacturers

- The long-term contract secures revenue streams for the future.
- Servitization establishes strategic product differentiation, setting manufacturers apart from their competitors.
- New revenue resources through the services that will be delivered.
- A more integrated and long-term relationship with hospitals enabling more customer touchpoints.
- Optimized usage of raw materials ensuring more sustainable performance

For the hospitals (end-user)

- The manufacturer will use predictive and preventive maintenance activities to minimize the risk of failures.
- Minimized risk of obsolescence due to the agreed uptime outlined in the contract, often allowing for equipment to be upgraded at the end of the term.
- Tax benefits as the equipment does not need to be included on the balance sheet, but rather is accounted for as operating expenses.
- Hospital has the flexibility to increase or decrease equipment capacity depending on circumstances
- Servitization eases the financial burden of acquiring capital-intensive medical equipment by transforming high investment costs into variable predictable costs
- The risk of equipment failure is transferred to the manufacturer who becomes responsible for repairs and maintenance during the service contract, allowing the hospital to focus more on its core business activities.

Overall barriers for servitization

For manufacturers

- Complexity of the model requires a combination of both an accurate view of the present as well as a predictive view of the future about the resources needed for servitization (e.g. other equipment, spare parts, personnel).
- Identification of the costs of services can be difficult.
- The manufacturer must be able to forecast the needs of hospitals of the future.
- The manufacturer must build long-term relationships with its suppliers and share risks associated with servitization with its supply base.
- The manufacturer is responsible for equipment reliability. This requires continuous optimization, which leads to an increased need for real-time measurement and monitoring processes by implementing measures such as predictive maintenance.
- Risk of 'service paradox' happens when manufacturers do not possess the required capabilities and solutions in order to implement servitization successfully. In instances where the agreed uptime (i.e., the time the equipment is functional during operating hours of the client) cannot be met, usually a specific percentage is deducted from the service fee.
- The product may need to be adapted per customer
- Change is required in the skills and qualifications of the employees

For hospitals

- Hospitals often fear committing to a long-term contract and single supplier, as it restricts options for future investments.
- Successful implementation of servitization requires a change of mindset. However, a certain level of reluctance is observed amongst hospitals.
- There will be a high dependency on manufacturers, which requires a high level of confidence and trust in them.
- There can be difficulties in aligning the interests of all stakeholders involved in the purchasing process.
- Medical professionals might need to work with equipment of a brand they are not familiar with. They must understand the need to change and be educated on the benefits servitization brings.

Approaches and critical success factors for implementing servitized solutions within hospitals

Based on literature, interviews with hospitals, and interviews with manufacturers, several critical success factors have been identified. There must be:

1. A longstanding relationship between the hospital and the supplier (trust-based relationship and the ability to keep track of performance).
2. A shared view (manufacturer, hospital and doctors) of future developments.
3. Innovation and digitalization: High technology capabilities.
4. Enhanced flexibility, enabling the switch among suppliers and benefitting from innovative solutions being offered (applicable to end-users).
5. Strategic sourcing expertise: Servitization strategy needs to be developed at a high level. Final decisions about insourcing or outsourcing of activities and how to manage the supply chain should be made by the board instead of procurement.
6. Customer centricity: understanding the customer's business and service requirements.
7. Awareness of new required skills and qualifications of employees.
8. Product adaptation: the implementation of new services may lead to adaptations of the technical product. The success level of servitization also depends on the condition of the equipment.
9. Alignment of processes and interfaces within and between companies, allowing for monitoring performance.
10. Cultural change: Servitization requires a shift in attitude and behavior, which must be developed and adopted throughout the organization.
11. Identification of cost categories: Identification of the costs of service delivery can be difficult, and therefore a deep understanding of the resources is required.



Conclusion

The shift from selling equipment to providing solutions

OEMs operating in a variety of industries have demonstrated that servitization enables the delivery of additional value to customers. By moving from selling assets to delivering outcomes closely tied to customers' business objectives, efficiency gains can be realized and total cost of ownership can be decreased.

Healthcare's readiness for servitization

Due to tight margins and quickly increasing costs in the healthcare sector, servitization is an emerging trend through which OEMs offer a wide selection of services to hospitals. While various OEMs have introduced servitization offerings, several characteristics specific to the healthcare sector have caused adoption of servitization to be limited so far. This study sought to identify obstacles, key benefits and success factors for OEMs and hospitals associated with adopting servitization. By addressing these benefits and obstacles, this study aims to accelerate the adoption of servitization in the healthcare sector.

This study finds that servitization benefits both OEMs and hospitals.

Benefits for OEMs

Adding servitized solutions to their portfolio has several important benefits for OEMs. One of the largest benefits is that it enables them to differentiate their product offering, which can result in stronger partnerships with customers and generate long-term revenue increases.

Benefits for hospitals

Servitization has several benefits for hospitals, as well. For example, it eases the financial burden associated with acquiring equipment and transfers risk associated with equipment failure to the OEM. It also allows greater flexibility in scaling equipment needs to meet current demand, and hospitals may benefit from present and future technological developments.

Cashing in on the benefits

To realize these benefits, it is essential that OEMs and hospitals closely collaborate to overcome the barriers identified by this study. OEMs need to manage the uncertainty associated with long-term contracts by developing an accurate view of the present, as well as the future, to determine the resources needed to deliver services. At the same time, hospitals should consider the benefits offered by these long-term contracts and how servitization can help them to better meet business objectives. By committing to managing uncertainty through close collaboration, both OEMs and hospitals can undoubtedly benefit greatly from servitization.



About DLL

DLL is a global asset finance company for equipment and technology with a managed portfolio of more than EUR 35 billion. Founded in 1969 and headquartered in Eindhoven, the Netherlands, DLL provides financial solutions to the Agriculture, Food, Healthcare, Clean Technology, Construction, Transportation, Industrial, Office Equipment and Technology industries in more than 30 countries. DLL partners with equipment manufacturers, dealers and distributors, as well as end-customers on a direct basis, to enable businesses to more easily access equipment, technology and software. The company also delivers insights and advice to partners and customers that drive smarter and more economical methods of use. DLL combines customer focus with deep industry knowledge to deliver sustainable solutions for the complete asset life cycle, including commercial finance, retail finance and used equipment finance. DLL is a wholly owned subsidiary of Rabobank Group. To learn more about DLL, visit www.dllgroup.com.

DLL & Healthcare

For more than thirty years, DLL has helped its Healthcare partners successfully navigate challenging markets in which demand is constant, but liquidity and resources are limited. From pediatrics to oncology, and from dialysis to dental, DLL's flexible financing solutions make advanced medical equipment and technology attainable. DLL supports its healthcare partners in building new customer propositions and help them staying relevant and effective. As the needs of customers are changing, DLL is changing with them and is for

example offering financial solutions that enable end-users to pay for equipment as they use it, while the manufacturer remains responsible for ongoing services and maintenance. In this way DLL is tapping into the global trend of servitization.

About Berenschot

Berenschot is a management consultancy firm that delivers solutions to the most important societal challenges. Core focus is enabling organizations to be effective in dealing with large scale transitions in the healthcare, energy and governmental sector. Headquartered in Utrecht, the Netherlands, Berenschot is a fully independent entity.

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