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Digital Platforms to Enable Servitization

— How leading manufacturers leverage digitalization to provide advanced services



Digital Platforms to Enable Servitization

— How leading manufacturers leverage digitalization to provide advanced services

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Swedish manufacturing firms are increasingly adopting pioneering digital technologies and analytics to support advanced service provision in an attempt to achieve sustainable competitive advantages. This article explains how a platform approach to digitalization can help manufacturers achieve both customization and operational efficiency in advanced service provision across global markets.

Global competition places increasing pressure on manufacturing firms to shift from selling products to offering innovative solutions to satisfy customer needs. This process, known as servitization, represents a transition toward increasingly advanced services. Through this transition, manufacturing firms differentiate their offerings by adding advanced services to their portfolio. Examples include GE and Rolls Royce's airplane-engine performance-based service agreements dubbed "Power-by-the-Hour." Servitization represents a unique opportunity for manufacturing firms to enhance their value proposition by working closely with customers and taking a long-term relational view of business interactions.

Transitioning toward advanced service provision, however, entails deep organizational and strategic transformation involving significant changes to the central R&D function (the "back end") and the service organization (the "front end"). Both must rethink their organizational routines, roles, and work approaches to support advanced service provision. Another key challenge of advanced service provision relates to managing operational inefficiencies and costs that derive from the greater need to tailor solutions to unique customer needs in global markets. This "service paradox" highlights the complexity of the process and reflects how the benefits of servitization usually entail critical challenges.

"Leading manufacturing firms are gaining on servitization transformation by increasingly exploiting new digital technologies"

Our research shows that leading manufacturing firms address servitization challenges by implementing digital technologies to increase efficiency and business value. This involves the use of the digital platform approach. This approach is an organizational business perspective that helps firms leverage the value of digital technologies based on modularity and IT-enabled interactions among product, service, and digital components. Naturally, this approach extends beyond the acquisition of the latest sensors, software, or analytics. In practice, it represents large-scale changes in work processes for back- and front-end units to exploit value created through digital platforms. In this respect, a poor understanding of how to leverage digitalization

for advanced service provision may result in high investment costs and low profitability. This article sheds light on how four large manufacturing firms have addressed these challenges by developing and implementing a digital platform approach during servitization across global markets (Cenamor, Rönnerberg Sjödin, & Parida, 2017). More specifically, our research offers three recommendations:

1) Build digital platforms

Adopting a digital platform approach for servitization can provide ways of enhancing customization while improving efficiency. This means developing and integrating various product, service, and digital modules into a coherent platform for advanced service provision. To implement digital platforms, the following steps are critical:

- > Invest in building smart, connected functionalities in products. This means, for example, developing smart IT functionalities such as sensors, connectivity, and analytics as a critical part of physical products.
- > Adopt platform thinking. The use of platforms and modular approaches increases efficiency as different combinations of products, services, and digital modules lead to customized solutions for specific customers while reusing modules to keep costs low.
- > Identify and develop new platform functionalities. Once digital modules have been implemented, the data that are gathered represent a valuable source of information for the development of new services.

2) Transform back-end units into platform orchestrators

Back-end units should have a holistic view on implementing an advanced service strategy. This view would allow them to coordinate the development of product, service, and digital modules to ensure added customer value. Thus, adopting a platform approach requires back-end units to revise their role as platform orchestrators, focusing on the following tasks:

- > Develop modular service offerings. Back-end units should coordinate offerings by designing blueprints for standardized modules to reduce development efforts and ensure a coherent business path. Analyzing customers' usage data may help identify global customers' needs and identify new opportunities for advanced service offerings.

> Set rules for service configurations. Without guidelines, the resulting offerings may jeopardize the manufacturing firm's efficiency and identity coherence. Thus, back-end units must build a specialized service portfolio to make it easy to configure and provide guidance and support in combining different modules to ensure high-quality solutions.

> Optimize global delivery processes. This means that back-end units should gather and analyze customer usage information for delivery support. Moreover, sharing valuable knowledge is a key source of value in the platform approach. Thus, back-end units should spread best practices for common processes, activities, and resources among front-end units.

3) Inspire front-end units to become builders of offerings

Front-end units are closer to customers in providing advanced services. For the front end, the adoption of a platform approach represents a shift toward the role of builders of offerings by being responsible for crafting the final offering. More specifically, front-end units combine different product and service modules with information modules to meet specific customer needs depending on local market conditions. Thus, the platform approach means that the front-end should increasingly focus on the following tasks:

> Accelerate service development. Front-end units should develop the analytical capabilities to sense opportunities for developing new solution modules for local customers. Product use data from the digital platform and in-depth knowledge of customer needs are valuable resources to create new product and service modules by collaborating with the customer. Moreover, as builders of offerings, front-end units combine these modules, so they should develop offers at a subcomponent level to ensure reduced efforts with adaptability.

> Configure flexible service offerings. Developing close relationships with customers allows front-end units to build solutions that are innovative and customized to local markets and customer conditions. By using modules that are pre-designed back-end units, front-end units can exploit economies of scale through replicable bundles with reusable modules.

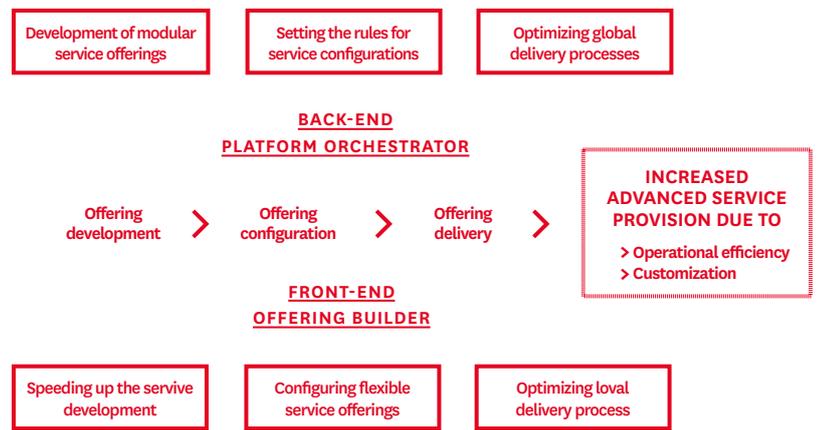
> Optimize local delivery processes. Front-end units can develop a more complete perspective of how value is created for customers through information shared on the platform. From this perspective, they should analyze and optimize internal delivery processes and activities for resource efficiency. Moreover, as builders of offerings, front-end units must monitor usage data to improve customers' operations and decrease lifecycle costs.

Managerial implication and conclusions

Figure 1 provides an overview of how the front end and back end must revise their roles to achieve the opposing goals of efficiency and customization. For senior managers that lead servitization efforts in manufacturing firms, we have three recommendations:

1) Redesign modular architectures that specifically emphasize digital modules at their core and act as the foundation for connecting product and service modules.

2) Redefine platform roles and activities for both back- and front-end units across the phases of advanced service provision.



3) Be ambitious in pursuing the opposing goals of customization and efficiency through digitalization and the platform approach.

In conclusion, to successfully implement advanced services, manufacturing firms can find a strong ally in digital technologies. However, they must be aware that digital technologies do not automatically enable servitization. Manufacturers must shift their previous view to a platform approach and redefine the roles of back- and front-end units. If manufacturers use the transformation that takes place during servitization as an opportunity to implement digital platform and further leverage digitalization, the resulting improvements in new sources of value generation and efficiency may be remarkable.

Figure 1 summarizes the key aspects of the revised roles of back- and front-end units during the advanced service provision process.

FOR FURTHER READING, PLEASE CONSULT

> Cenamor, J., Rönnerberg Sjödin, D., & Parida, V. (2017). Adopting a platform approach in servitization: Leveraging the value of digitalization. *International Journal of Production Economics*, 192, 54-65. doi.org/10.1016/j.ijpe.2016.12.033



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