Sustainability as a Service Offering

Denmark as a Leader in “Sustainability Solutions” Business Models

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PRODUCT + SERVICE + DATA INTEGRATION PROJECT

Servitize.DK

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RESEARCH BACKGROUND

This report stems from research undertaken by Copenhagen Business School (CBS) as part of a three-year research project on "Product+Service+Data Integration" – in short, P+S+D Integration. The project is part of a larger initiative, Servitize.DK, which aims to enhance Danish firms' abilities to successfully compete by providing service offerings. The project is financially supported by Industriens Fond.

The aim of the P+S+D Integration project is to examine the potential of services and digitalization and their integration with products to serve as a means of maintaining or improving the competitiveness of Danish manufacturers.

The project focuses on investigating P+S+D integration in relation to four themes:

1. **Autonomy in P+S+D development and delivery in organizations,**
2. **Organizations' P+S+D market strategies,**
3. **Configuration of P+S+D resources, and**
4. **Value-based pricing of P+S+D solutions.**

Firms are encountering changing market conditions and increasingly competitive environments, and they need innovative business models to maintain their competitiveness.

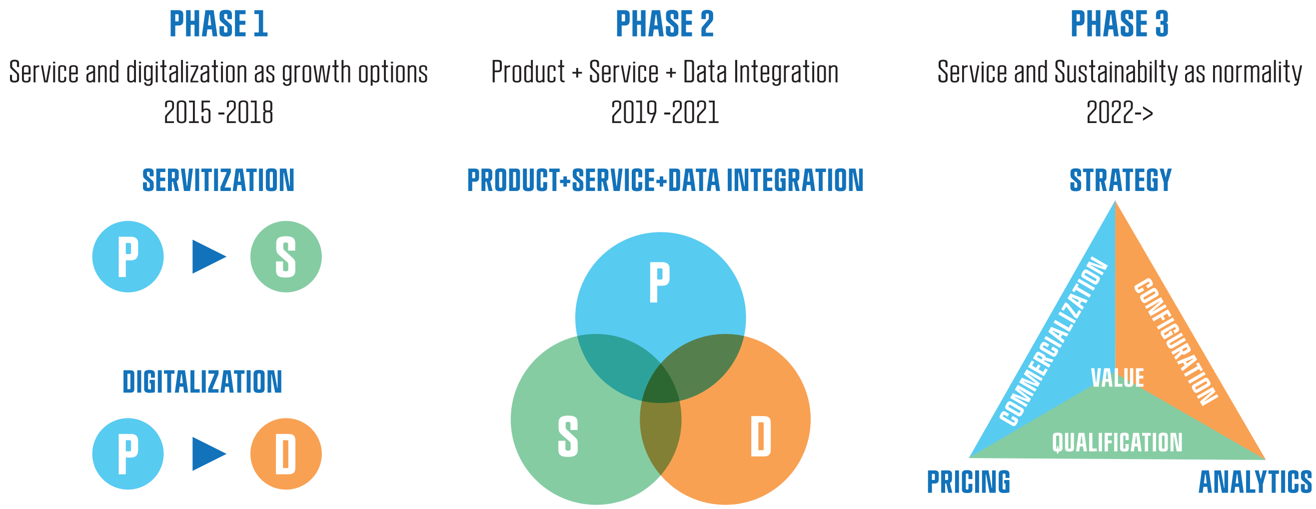
Successful P+S+D integration has become a key differentiator that enables firms to create and deliver value to their customers (Raja et al., 2020). P+S+D integration depends on successful interplay among strategy, analytics, pricing, commercialization, configuration, and qualification (see e.g., Frandsen et al., 2022a; Pedersen & Ritter, 2022; Ritter, Pedersen, & Andersen, 2022; Hsuan et al., 2021; Hsuan, 2021). By adjusting offerings and pricing structures, value can be captured through value-based pricing (Frandsen et al., 2019).

Further information about the P+S+D Integration project is available at: https://blog.cbs.dk/servitization/. Booklets and tools from this project alongside numerous interesting material (e.g., cases and podcasts) can be found at **servitize.dk**.

FROM SERVITIZATION AND DIGITALIZATION TO SERVICE AS THE NORM

TOWARDS SERVICE AS THE NORM

Service and digitalization have been – and still are – important growth options for Danish firms pursuing national and international competitiveness (Raja et al., 2017). The development of servitized and digitalized business models implies a need to integrate products, services, and data into complete offerings and solutions. This change is pervasive, and the provision of services, the consideration of product serviceability, and the digital enablement of services are becoming the norm. Recently, this shift has become even more prominent owing to the challenges associated with the Covid-19 pandemic (Mansard & Ulaga, 2020; Ritter & Pedersen, 2020).



Just a few years ago, it would have been considered novel for manufacturers to "think service" or to have a good understanding of the concept of "servitization." In this early phase, servitization and digitalization were seen as opportunities for growth. However, how to understand, develop, and utilize these options was viewed as a matter for exploration (Phase 1). Today, it is nearly impossible for Danish manufacturing firms to avoid considering service as part of their business models (Phase 2). This implies that service has become an important and common part of strategic decision-making regardless of whether an organization decides to offer services itself or rely on external partners in its eco-system for service provision as part of developing and delivering advanced solutions that meet customers' needs (Frandsen et al., 2022; Raja & Frandsen, 2017;2021).

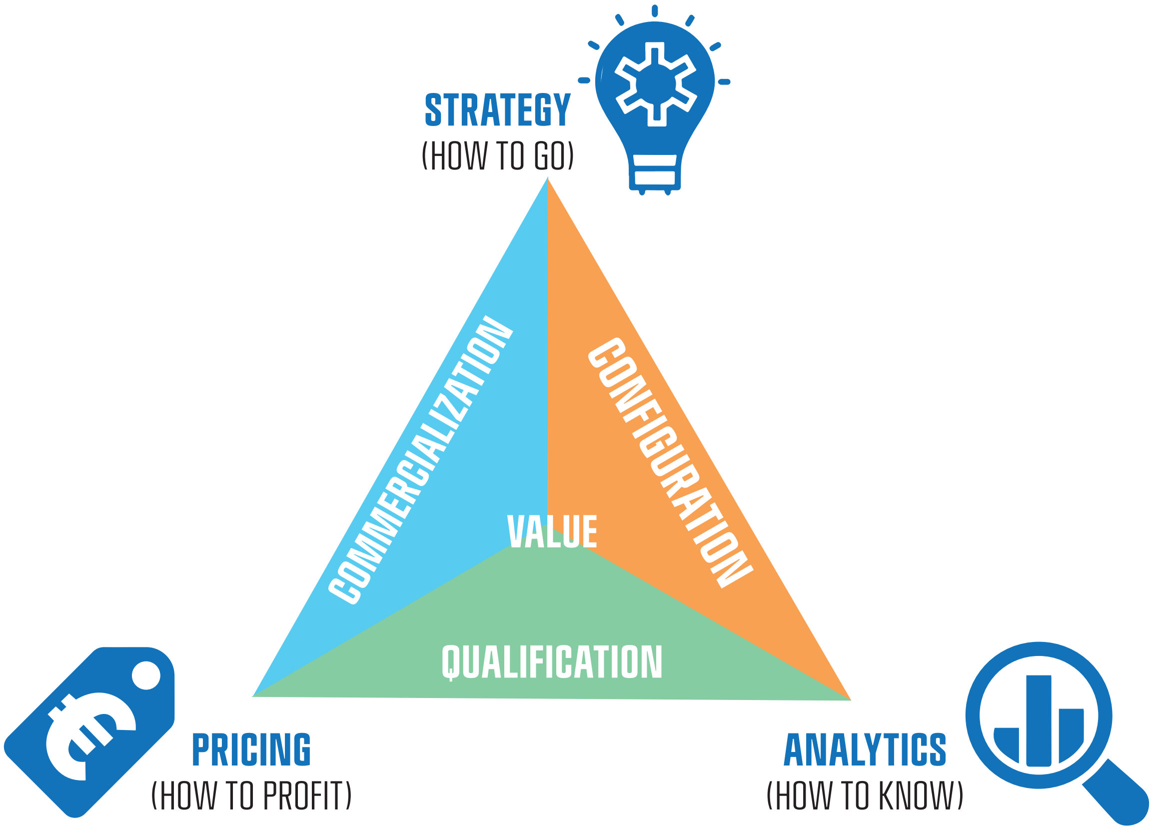
The current shift toward service as the norm (Phase 3) has inevitably created a situation in which an understanding of the multifaceted, integrated nature of products, services, and data has become essential for competitiveness. The leveraging of capabilities and insights into P+S+D integration enables firms to configure value systems and resources (Hsuan et al., 2021) that skillfully combine and integrate products, services, and data. In this regard, the need for careful pricing requires firms to develop and qualify complex offerings and commercialize those market offerings in line with their strategic market positioning (Frandsen et al., 2022b). This need to integrate formerly distant transformations and competitive priorities presents a complex challenge for Danish firms – but is now the norm rather than an exception. At the same time, the new "service as a norm" situation demands new sources of competitive advantage in a constantly changing, complex world.

SUSTAINABILITY AS A SERVICE OFFERING

The capabilities needed to compete in a world where service is the norm present opportunities to embrace new competitive priorities. In particular, firms are embracing sustainability as a service differentiator in response to the UN Compact Goals and the ESG agenda, and in recognition of their societal responsibilities. Similarly, there is an increasing interest in subscription business models (e.g., Ulaga et al., 2019) as alternative payment options, which are also becoming part of the "new normal" and offer interesting perspectives in business-to-business settings. We therefore propose that "Sustainability as a Service Offering" and "Sustainability Subscriptions" are major growth opportunities for Danish firms that should be investigated.

SUSTAINABILITY AS A SERVICE OFFERING

Concurrently with the transition toward servitization and digitalization as a norm, many firms find that the sustainability agenda requires urgent attention and action not only to benefit the planet but also as a source of competitive advantage. Today, firms are often held accountable for their environmental and social impacts, and most firms are actively developing their sustainability agendas to address climate change, which is viewed as a "super-wicked" problem (Levin et al., 2012). For example, many organizations have announced ambitious goals for climate neutrality, including targets for reductions in energy and waste consumption. Likewise, there are strong, concerted efforts to positively affect employees', customers', and suppliers' lives and livelihoods. Moreover, the need to protect the environment for future generations figures prominently in policy discussions, as reflected in the fact that several major economies have committed to a zero-carbon future. We are also witnessing greater volatility in global markets for energy and resources, leading to increasing strategic and financial concerns for firms and their viability. In a nutshell, sustainability has become a key and pressing business priority.



The sustainability of industrial products and services is a major issue, but we also view the provision of "sustainability as a service offering" as a key business opportunity. Providers of industrial offerings can develop business models that offer sustainability improvements to their customers.

Many sustainability initiatives are hindered by the need for upfront investments. To ease such situations, the current drive towards subscription business models (i.e., turning upfront payments into recurring revenues) provides an additional business opportunity. Investigating the potential for "Sustainability Subscriptions" and succeeding in creating value through such offerings are not trivial processes. Moreover, our knowledge of business models that feature sustainability as a service offering is limited. This type of value creation must bridge strategy, analytics, and pricing, and requires the careful configuration, qualification, and commercialization of value systems.

In markets where customers increasingly value sustainability-related factors, such as reductions in CO_2 emissions, resource consumption, and waste, sustainability becomes a differentiating factor on which suppliers compete. To some extent, sustainability is already today establishing itself as an order qualifier (i.e., in the form of requirements for sustainably produced solutions and logistics). It is also important in creating opportunities to develop new order winners, as sustainability is becoming a vital element of various offerings – and may become a commercial offering of its own. Order winners are the factors which are the key reasons for customers to buy an offering. In contrast order qualifiers are the required factors, which will disqualify the offering if they are not met. (Paton et al., 2020; Hill, 1993).

Identifying and assessing changes in competitive factors is vital for the competitiveness of Danish firms. The mapping of changes can provide a basis for considering how sustainability can contribute to the development of new offerings. Development activities can also reduce the costs and environmental footprints of current offerings. Furthermore, research on sustainability as a service offering can lead to new business models in which P+S+D Integrators provide sustainability as a market offering. Therefore, we propose that "Sustainability as a Service Offering" offers new competitive opportunities to Danish firms, and that an understanding and development of these business models will not only drive growth opportunities for businesses but also address environmental and societal concerns.

DENMARK AS A LEADER

IN "SUSTAINABILITY AS A SERVICE OFFERING" BUSINESS MODELS

Danish manufacturers are already well positioned to leverage their superior capabilities in P+S+D integration to develop new business opportunities and strategic initiatives that utilize green technologies as well as commercial offerings that explicitly target customers' sustainability agendas. Two firms that have already announced initiatives in this area are FLSmidth, which is active in the cement and minerals industries, and Haldor Topsøe, which plays a key role in the chemical and refining industries.

ABOUT FLSMIDTH

"FLSmidth provides sustainable productivity to the global mining and cement industries. We deliver market-leading engineering, equipment, and service solutions that enable our customers to improve performance, drive down costs, and reduce environmental impact." [1]

ABOUT TOPSOE

"Topsoe wants to be the global leader within carbon emission reduction technologies for the chemical and refining industries. By perfecting chemistry for a better world, we enable our customers to succeed in the transition towards renewable energy." [2]

A desire to understand how "Sustainability as a Service Offering" can successfully be leveraged as a competitive response in a changing world raises important questions for managers and researchers, such as:

- How can we understand industrial firms' positioning in business ecosystems when providing sustainability service offerings?
- What are the implications for developing and configuring operational capabilities for sustainability services and solutions?
- How can we develop clear value propositions for complex offerings and capture value through sustainable solutions?
- How should we make sense of the vast amount of available data and information in order to understand what matters to customers and predict outcomes in complex, circular supply chains?

1 www.flsmidth.com
2 www.topsoe.com

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