This research paper describes the transition to integrate products and services into systems and contributes to a broader understanding of the research field PSS design as an emerging area and phenomenon. Ensuing a synthesis approach, we outline different organizational drivers that emerge from the transition toward PSS as innovation strategy. Based on five in-depth interviews with experts that have specific knowledge and involvement in PSS design projects, the paper confronts a previous literature review with its practical counterpart. Findings clarify the definition, related terminology and context of PSS, but also advocate a future effort to appropriately support an operational integration of product and service side. Additionally, we observe an obvious evolution of value creation - through a focus on the (user) experience - as part of the rise of the product service system itself, an essential insight that can contribute in various ways to current PSS practices.

**keywords:** product service systems, front-end of innovation, in-depth interviews, value creation

**Introduction and exposition of chapters**

Rapid advancements in electronics, information and communication technology are constantly challenging organizations to introduce new offerings to the market. More frequently the outcome results in product service combinations or systems that require the organization to systematically rethink the design process in order to integrate both tangible and intangible components. The main challenge is to manage the variety of underlying design processes, based on service, interaction and (user) experience design - in order to explore the opportunities provided by emerging PSS concepts. In the case of product service systems (PSS) it’s important that products and services are designed as a combined value carrier, rather than merely adding services as by-product or using
products only as a means to provide services. In order to support a valuable inclusion or transition, this paper targets current academic researchers and design practitioners in the field of PSS in need of a logic that sets focus on the synthesis of both.

*A fixation on goods is understandable considering design’s historical role, the half-hearted integration of services increasingly out of touch with times.* (Secomandi & Snelders, 2011)

We hypothesize that, following a synthesis approach (Drejer, 2004; Sayem, 2012; Carlborg, Kindström & Kowalkowski, 2014; Morrar, 2014) previous neglected characteristics of innovation will surface, relevant for both manufacturing and service provider context.

The paper is organized as follows: the first part outlines why we choose in-depth interviews as research method, the specific research unit details and its sampling. Secondly, we introduce typical PSS associated terminology and its respective connotation before tapping into a broader definition for PSS and its clear connection to the user experience. A third part introduces the transition toward PSS that organizations undertake. Different pathways and characteristics will be discussed and set the dominance on the product or service side for PSS. Finally, an overall organizational approach is put forward to add to the habitual practice and motives for deciding on PSS as an innovation strategy, and recurring process characteristics are presented.

**Methodological approach**

The aim was to better describe and interpret the experts’ empirical descriptions about PSS in organizational context. We therefore selected semi-structured in-depth interviews as qualitative and interrogative research method for exploratory purposes. The interviews describe strategic and process parameters, conditions, decisions, activities, etc. to pinpoint potential added value in the early stages of design. Therefore, the research required opinions of people with specific knowledge and involvement in PSS design projects in order to generate theory from industrial context and practice, opposed to or complementing a previous literature review by Dewit (2014). Consequently, purposive-expert sampling was used as a nonprobability method to build on the experts’ experience.

Five interviewed experts, the research unit, represent their institutions respectively in Belgium, the Netherlands and Germany, and are all recently moving into the design and development of product-service systems. The first two experts represent Flanders InShape (BE), a program manager for knowledge transfer and a design management coach. In order to create capacity and competences in Flemish SME’s, they develop knowledge and tools in the areas of product and service development, design and design management, with the user as source and inspiration for innovation. The third expert is partner at Namahn (BE), a full service design agency that recently refocused toward a better understanding of human behavior, organizational processes and whole systems, in order to design products, services and purposeful experiences in a complex, digital environment. The fourth interviewed expert lead the Competitive Advantage through Strategic Design (CASD) project related to the Creative Industry Scientific Program (CRISP) at TU Delft (NL). The project was about achieving effective strategic design thinking that enhances the competitive position of PSS. The last expert was a project manager for service design and innovation at the Service Science Factory (SSF). Their innovation projects focus on design
and development of a new/improved service concept, complex service systems, technology-intensive services and transformative services both at Maastricht (NL) and Köln (DE).

**Getting the facts straight**

*PSS associated terminology and respective connotation*

Although PSS is widely accepted throughout the academic scene, in practice organizations use terminology as they see fit. A broad range of similar terms, concepts and methods proposed in literature that describe this transition in include products and services (Vandermerwe & Rada, 1988; Penttinen & Palmer, 2007; McAlone, 2011; Sakao, 2011; Vijaykumar, Vasantha, Hussain, Roy, Tiwari, & Evans, 2011, Vijaykumar, Rajkumar, Lelah, & Brissaud, 2012) was introduced to the interviewees. According to their specific knowledge and involvement in PSS design projects, the subsequent terminology applies to PSS in descending order. The choice of terminology on product service systems is not on the ‘what’, but more dependent on ‘who’ you talk to and the respective connotation they put on the former or the latter component in the system, product or service.

*Product-service combinations* are self-explaining. E.g., now you’re delivering products, what if you add a service component to add more value to the customer; sometimes they already provide after sales, but you can also add services before sales; etc. *Product-service, Product-service mix or system and hybrid product service* fall under the same category of understanding. However these term are slightly less in scope or profound than PSS itself, where the focus is on the system. The terms *hybrid product service* and *Industrial PSS* have a too technical connotation and interpretation.

*Integrated solutions* as a term is also a good alternative. Integrating the service part in the solution, makes it easier to talk about experiences and satisfaction by means of e.g., the customer journey.

A known term and used occasionally, but evoking some controversy is *servitization*, because of unfamiliarity to SMEs and often scary to manufacturers because of its association with total cost of ownership. Some argue that servitization is the process in which you develop PSS, others don’t associate servitization with PSS under any circumstance or at least not exclusively.

Because of a more clear connotation to the service and linkage to management and marketing fields, following terms are associated - but not entirely - with PSS; *service economy, service engineering, service/product engineering, service economy, SD logic* and *functional (total care) products*.

**Definitely, defining PSS**

Although many authors in the field of PSS contributed, no general accepted definition is formulated so far. However, after an analyzing a vast array of current definitions (Shostack, 1977; Goedkoop, van Halen, te Riele & Rommens, 1999; Brezet, Bijma, Ehrenfeld & Silvester, 2001; Manzini & Vezzoli, 2003; Mont, 2004; Wild, 2009; Ceschin, 2012; Tischner & Vezzoli, 2013), some recurrent characteristics surface. Dewit (2014) further elaborated on clusters of recurring characteristics that emerged from an analysis of PSS definitions by Vijaykumar et al. (2012). We inquired the five experts after their
personal definition of PSS, in search of recurring elements comparable to the six clusters: ‘value constellation’, ‘evaluation criteria / selection’, ‘integration’, ‘scenarios’, ‘product/service definition’ and ‘user centered’. Table 1 depicts the experts wording that refers to the different clusters. However noticeable, also addressed subsequently in this paper, the experts leave out every phrasing that refers to ecological aspects, it is not the distinguishing factor to strategically engage in product service integration.

Table 1  PSS clusters.

<table>
<thead>
<tr>
<th>From theory emerging clusters</th>
<th>Experts used wording such as</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Value constellation</td>
<td>ecosystem; value proposition; end user and other people’s characteristics within (affected by or affecting) the context or system (as is)</td>
</tr>
<tr>
<td>(2) Evaluation criteria</td>
<td>context (project brief) dependent; discussion and convergence approach; both components add value (criteria); checking perspective affected/-ing</td>
</tr>
<tr>
<td>(3) Integration</td>
<td>the process of getting products and services combined in the system; providing a solution regardless of its components</td>
</tr>
<tr>
<td>(4) Scenarios</td>
<td>the transition from as is toward to be; enabling the solution to come about and grow naturally; it holds something more complete, the system, a story</td>
</tr>
<tr>
<td>(5) Product</td>
<td>briefing or defining the specifications of the to brief or defining the specifications of the to be solution, whatever the designed components (touch points) might be - affecting the context</td>
</tr>
<tr>
<td>(6) User centered</td>
<td>verifying a user’s perspective (central) throughout the entire process; bring a valued experience to those affected by the as is / to be context</td>
</tr>
</tbody>
</table>

Without aiming to put forward a new definition for PSS, the clusters archetypically build, add to and to some extent redefine PSS.

PSS design is a constant discussion and convergence approach to understand, explore and define different perspectives on value of those that affect the context and others that are affected by it. Regardless of the distribution of product and service components in the solution, the PSS aims to sustain the ecosystem and allow continuous growth, essential to keep the PSS alive and enable the transition that goes beyond the design itself, toward meaningful innovation. It’s not about the design of the solution itself, but the enablers that make the envisioned change come about naturally. (Dewit, Baelus, Van Ael, De Roeck, De Rijck & Coreynen, 2016).
Experience is king

You might tackle a need apart from any experience at all and work purely on performance. But without the focus, it’s bound to end up in technology or market driven products. Fortunately with the rise of PSS, especially recognizing the service part in the transition toward PSS, more interaction comes into play between people, beyond user friendliness or usability. With services and less(er) tangible components (Young, 2008), the experience has become more important because once it is about human interaction and emotion. E.g., sharing economy concepts are more than a just cost argument or reducing the amount of products sold, it also a way to involve and engage people. It’s constantly about the experience the users may have, interacting with each other, product and service side and trying to keep that as positive and as long as possible. Conclusively, the user experience contributes to PSS, however it remains very complex due to its multiplicity of touchpoints and their necessary coherence. So if you don’t design it in a consistent - emotional before aesthetic - way, the user will not like it. Ideally, the better user experience goes alongside the better PSS.

The important thing is the ‘integration’ of product and service, how they complement each other. The user experience has an intermediate role and therefore its necessary presence throughout the entire process. E.g., gathering information by spending an entire day with veterinarians to spot their latent needs; determining pre-purchase expectations by means of a preliminary concept or prototype of the future PSS; experiencing the actual use of the PSS.

Clearly, the road to synthesis has its primary objective to satisfy the customer and increase value. The customer perspective, need fulfillment and value creation are put at a central stage.

Aim for PSS

Based on the knowledge of the experts with multiple projects and company cases that aim for PSS, we were interested in what companies believe in, where they are going, how they get there, what makes them different and how they bring the message out.

The success of PSS is - partially - due to a trend in service design and some of its relevant principles. Service design terminology in terms of user research is what now can be referred to as design research. A lot of people are interested in the tools and its hands-on approach, allowing them to go further than determining or redesigning only one or two physical touchpoints. The aim is to extend to a completely new customer journey with all necessary touchpoints of the user in interaction with the organization, basically providing the possibility to create the whole story.

A PSS approach tends to open up knowledge and empathize with the user and his/her context. It strengthens, professionalizes and supports the innovation process and makes it more adept to technological, economic and societal trends. The aim is often to perform research and create relative knowledge, externalizing it throughout the organization to make it more implementable. Often - even with a small SME budget - you can have some quick wins by applying the tools, with or without external collaboration.

The idea of PSS is to gain or create a broader space in the (early) strategy making of a company, involving the company in more human centered, sense making or meaningful
innovation, design and development. Nonetheless it implies a different organization and mindset to reshape the innovation strategy of the company toward PSS.

However, instead of reinventing the wheel for every process, it’s necessary to work toward standardized processes and a qualitative and quantitative set of tools, e.g., customer analysis; market trends analysis; competitor analysis; value analysis; service blueprint; persona development; etc. This helps to formalize and establish a sense of urgency and highlights the need for change, developing a vision and strategy for innovation integrating both products and services and to initiate a mind shift that understands different levels and perspectives on value. Whereas now manufacturers too often see service integration as something that creates loyalty, customer satisfaction or a necessary cost factor to stay in contact with the customer in order to increase purchases.

What every designer wants, is to ultimately improve the world. PSS enables a deep understanding of human behavior and organizational structures. Likewise, its processes and the systems themselves allows us to go to the essence together with the client/organization and user to find solutions - products and services - that provide the best possible user experience.

**Drivers for PSS**

Comparing our empirical findings with a categorization by Cheschin (2012), the benefits that drive PSS are foremost economic and competitive. We acknowledge a considerable effort in corporate social responsibility or eco-efficiency throughout business. However, unanimously, the socio-ethical and environmental aspects that Cheschin mentions are hardly ever the strategic driver to engage into PSS, unless enforced by law or public pressure/awareness. Every organization has clearly developed an interest or willingness to bridge product and service to boost its value creation and noticeably in Table 2. The motivational aspects set a focus on the user and his/her experience.

**Table 2  PSS drivers.**

- Fulfil user needs in a new way, with an added value opposed to solely answering to customers’ demand, a rather incremental, market pull situation.
- Appear more disruptive and innovative for the more demanding customer.
- The competitor (abroad) drives the market and sets a new standard to follow.
- Creating value and competitive advantage through the better offer, the customer’s need is better fulfilled thanks to the added experience.
- Human insight drives organizations to improve and diversify through PSS to secure and expand their market situation.
- Improvement of image by consistency, branding and design management.
- The PSS enables the user to interact more frequently with the company.
- Important for the brand and its related experience - in the sense that it bounds the user to the company - uplifting loyalty.
- In order to keep existing customers for a longer period and attract new.
- You can involve technology that is meaningful to people without a too technological or industrial connotation.
**PSS dominance**

Besides a handful, most companies haven’t got any experience in terms of service innovation or aren’t aware. Ideally (see Figure 1) horizontally companies evolve toward the center, the line between the pure product and the pure service. Not the distinction in terms of product versus service is of importance, however the emphasis of the first part relative to the second and its context is (Chan, 2003). Vertically, incorporating human centeredness is a step in the right direction. Both logics have their up and downside, the point is to evolve toward a state between logics, an integrated logic, rather than substituting GD-logic for SD-logic. It remains equally important for organizations to adopt customer-centric service design methods, as to adopting product design methods to the requirements of services in order to increase the breadth of its PSS offering (Kowalkowski, 2010; Ryan, 2013; Dewit, 2014).

![Figure 1](source:image)

Figure 1  A transitions model; (1) GD - SD logic shift, (2) service integration and (3) product integration. source: Dewit (2014)

**Appropriateness of PSS typologies and characteristics**

It remains uncertain if current typologies and their categorization are driving PSS design. Additionally, it’s hard to believe that companies base their PSS management and design on static thinking. One of the most important things of PSS success, based on the discussions with industrial partners, is that you need to be able to plan the growth of the PSS, what it is right now and even more how it develops over time. For that reason, typologies like Tukker and Tischner’s (2004) are not good enough, because originally intended, their eight types of PSS work quite unidirectional. This addresses the need for a typology to evolve from the service side toward the product side, productization (see Figure 1). E.g., Fifthplay services for older people are no longer only about the product,
but evolving more toward pure service provision by people who come to your home that 
provide a gateway to new products, such as self-monitoring; self-care; connected 
weighing scales; etc. all to support that service. 

Besides an update of the typology, a discussion tool with a clear set of PSS characteristics 
would also add considerably to the design process (Valencia, Mugge, Schoormans, & 
Schifferstein, 2015). These characteristics could be used as critical success factors for 
evaluative or process condition purposes, to look how criteria are in place now and 
whether they are still relevant after some time (Dewit, 2016: Procedia CIRP journal paper).

**A transition toward PSS**

Manufacturing companies and service providers regularly come from a product-dominant 
logic, a general perspective on the product side, the technology and marketing. There still 
is no real understanding of services, not even in combination with products (e.g., 
aftersales and maintenance) usually they remain product-centered and standard, and 
foremost these are not new services. Their whole mindset has to change from product to 
service on a more strategic level. The in-depth interviews highlight a first basic step with 
choosing a pathway, to make it more explicit what type of PSS you are going to work with 
and the consequences each type entails. A second step is to underpin the innovation-
through-services transition and place the user’s perspective central as a substitute for the 
technological or process-oriented (performance) motivation for innovation.

Table 3 below - as introduced in previous case-based research by Dewit (2014) - illustrates 
the different pathways an organization can undertake. Companies usually start designing 
PSS in a *sequential* manner, and frequently this addition comes in later stages of the 
design process. However more opportunities lie in a nested or even better a parallel 
approach, both can be described as pathways that consider integrating product and 
service in the early stages of the design process. Likewise it’s important to acknowledge 
how product and service work together instead of designing separate elements. *Nested* 
suggests that the product has to be designed to meet the service aspects and vice versa. 
*Parallel* goes even further and integrates the consideration of constant front-end 
interdependencies and strategic linkages between product and service.

<table>
<thead>
<tr>
<th>Table 3 PSS pathways. Source: Dewit (2014)</th>
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<tbody>
<tr>
<td><strong>SEQUENTIAL</strong></td>
</tr>
<tr>
<td><img src="image" alt="Diagram" /></td>
</tr>
<tr>
<td>you already have the product and/or</td>
</tr>
<tr>
<td>service and you want to simply combine</td>
</tr>
<tr>
<td>or develop the other part</td>
</tr>
<tr>
<td>[servitization</td>
</tr>
<tr>
<td><strong>NESTED</strong></td>
</tr>
<tr>
<td><img src="image" alt="Diagram" /></td>
</tr>
<tr>
<td>developed from scratch, the design</td>
</tr>
<tr>
<td>process starts from the product side and</td>
</tr>
<tr>
<td>stepwise iterates on the necessary service</td>
</tr>
<tr>
<td>[or vice versa]</td>
</tr>
</tbody>
</table>
PSS (design process) forms the core, both component sides work closely together, iterate at the same pace and regularly confront it with the user

**Strategy as enabler for operational product service integration**

There is a clear shift toward intangibles and the addition of service components to the current offering, pure product development evolves toward (product and service) design in innovation. But it loses its integrality if organizations can’t design a product and then add a service to it or vice versa. A PSS process or approach - depending on the project - has to start from the beginning onward to see it as a one whole. Adding to Jacoby (2012), the innovation processes of products and services depend to a large extent on the input for the process, the reason why we focus on the early stages or front-end of innovation (FEI). Pointed out by prior research (Langerak, Hultink, & Robben, 2004; Reid & de Brentani, 2004), FEI decisions impact both product and service parts in the supposed offer, decisions taken in the development phase can only have an impact on partial aspects of the product or service (Dewit, 2014).

Unfortunately, PSS as such doesn’t appear much in a company’s strategy, however more often specific wording of product service - the addition of its components and the design - and intangibles do. It merely reflects society, that evolves from manufacturing, alongside and intertwining with the omnipresent share of service provision in an ever more growing experience economy. Clearly - besides PSS - a strategy has to say something about user centeredness as well, to at least be able to aim for a better customer or user experience (UX). Ideally, UX should be central throughout the design process and result in product and service specifications, but in reality it’s still very much used as a marketing tool to appeal aesthetically and emotionally to potential buyers.

PSS also affects the project briefing, because you don’t choose to design a product and a service, you choose to design a system. Without this distinction - product or service - you grow toward a better design challenge and actually start designing a system. What rolls out of the process later on - product and/or service components - surfaces with the scenarios, where you find out which needs are better solved by a product or by a service, combined into the system. Only after the front-end of innovation - right before development - product and service components have to be well defined or specified in the design brief. However regularly, everything is already fixed, the organization has a certain set of facilities, a portfolio, a market and related expertise, unfortunately this leads to vague project briefings and an ill-defined problem definition to start from. It’s particularly difficult to design and evaluate a good service, product-service or experience when (1) a company is not clear on what they want and (2) evaluation criteria are still very product-driven. Moreover, managers tend to link their strategy making to something concrete; a product or a service, however - clearly emerging from the interviews - if you get them to link with SD logic, you can get them to think about the needs, a more intangible talk (e.g., aging) that links the innovation strategy to a long-term horizon.
By expanding with the service component, the way we look at the design briefing is changing or at least bound to change. Product service systems are evaluated differently, the same KPI’s for product and service do not work. Adding different components set other focal points in the strategy and ask for different questions during exploration and ideation. The process should be more in function of filters - continuous evaluation and selection - instead of in function of solutions. Besides (e.g., product) appearance and usability, the whole service provision (sequence of touchpoints) is important in every aspect where the user’s experience - strategically - is to be kept as optimal and as long as possible. So a lot goes wrong when implementing the PSS, because of the lack of (systems) theory to be able to adjust in practice. Internally everyone should agree on principles of human centered design (HCD), but the depth always depends on the project and its context. The deeper it goes, the more you involve people into the process, which makes it evolve toward co-creation. The danger is to pull the user linearly through the process, which has absolutely nothing to do with the user experience. That’s why specific tools and their unique purpose come into play (e.g., power interest grid, context mapping, customer journeys, scenario’s, etc.). PSS design is the result of more user or human centered design, the focus is more on the experience s/he has with the product and/or service component and a better defined connotation of the former or the latter (Dewit et al., 2016).

Preferred approach increasing feasibility in the transition toward PSS
So ultimately, co-operation is the core of PSS, a multidisciplinary effort and best facilitated to incorporate and internalize the knowledge and competence to the core-business of the company, if not present. This hybrid implementation starts with the right amount of PSS design expertise - possibly together with a design agency - to facilitate a specific set of tools and enable collaboration between the company itself and the other stakeholders in the ecosystem. Short follow-ups have shown that companies can deliver some preliminary work themselves (e.g., preparation of personas), necessary to really push the internalization of PSS (design) knowledge, necessary because the company will continuously have to adjust the service part. It’s not the product anymore that you put on the market that’s good for three years. Services are alive, are the people, and if it’s not embedded in the culture of the company, it will not work. Facilitation should not be mistaken for complete outsourcing, the company will end up with something that is not theirs, relying too much on that external partner’s knowledge afterward. The design or consultancy agency might (appear to) be doing too much their own thing, instead of learning the people in the organization how to do it on their own. It regularly depends on what the company wants, and external agencies get paid by them to execute what they ask. So sometimes the result is too incremental, connecting too closely to the core business to reduce risk and accountability issues - rather than creating totally new business, an exploitation versus exploration discussion. There is a big difference in having the right tools, having the competences to act on them and being able to question the overall approach independently. Thus, a facilitating or mediating (university or government - not distorting the market) role in the PSS design support during introduction and start-up of the co-operation works really well aligning mutual benefit.

In current practices, middle management is often confronted - accountability - with a mere focus on implementation (e.g., industrial release) and performance (e.g., production process), not on change. PSS helps to rule out hidden agendas, when people have their
own stake, interest and outcome already in mind. If the organization really is curious to
know what customers or users want and say, than they just cannot start with an end in
mind for these kind of projects. Typically for PSS, it’s important to open up the design brief
and (re)define problem definition at the beginning of the project to guarantee a good
quality design brief to start with. It’s necessary that everybody understands the (primary)
question and all variables. This new design brief might point toward different projects and
priorities.

Discussion
The subjects in this small (five) nonprobability sample were selected on the basis of their
accessibility and purposive personal judgment. Therefore, this study can be subject to bias
and we do not attempt to generalize its results. However, the results are likely to benefit
from a reflected respect and to be more credible with an audience that accepts those
institutions and its people as experts in the matter.

Where it seems interesting to see individual background differences, we would agree
when it supports an assimilation or demarcation approach (with reference to research in
service innovation) to highlight those differences. However, since we are researching with
a focus on a synthesis approach, we will present the results as joint findings - focusing on
the transition toward PSS - rather than the background or original/specific domain
knowledge the interviewees stem from. As we state that this approach will surface new
elements because of the synthesis focus and provide an overarching view on the
phenomenon of institutions and organizations that are fully going through the transition
and already lead projects in PSS context.

This paper and previous research by Dewit concentrates on the delivery of value to the
customer as the distinguishing factor to provide support for product service integration.
For this reason, we deliberately leave out all aspects that gear toward ecology and related
sustainability issues. However, we hope our research focus on (user) experience value
creation can ultimately contribute to appropriately designed PSS, bearing externalities or
rebound effects in mind, that sometimes result from PSS with a predominantly economic
or competitive motive.

Conclusions
The aim of this paper was to consolidate the theory on PSS with a practical context. As a
result from this research, we propose the most relevant findings that support the inclusion
or transition toward PSS:

Proposition 1: For a complementing ‘integration’, product and service sides need to ‘flirt’
early and ‘date’ regularly throughout the design process, we therefore advocate a FEI
approach for PSS where the UX has an intermediate role throughout the entire process.

Proposition 2: The PSS pathways explicitly visualize and supports what type of approach
an organization chooses when embarking on PSS.

Proposition 3: Instead of a stage-gate method, PSS design requires ‘staged’ gates that
symbolize a constant discussion and convergence attitude, preferably in filters of
continuous evaluation and selection, rather than in filters of functionality.
Proposition 4: PSS hints the organization to move toward more long term oriented thinking to achieve its objectives. In order to provide the capability for growth of the PSS together with changing needs of the user, C-level management (and resources) must enable the capacity to lock in and prolong the interaction with the user.

Proposition 5: With a focus on the system in PSS, all stakeholders come into play; (1) the one(s) providing / affecting the context, the ecosystem and (2) those affected by it, the user - and his resulting experience through interaction with the system’s components.

Proposition 6: We evolve toward an integrated logic, where intangibles reflect society’s omnipresent share of the product service provision in an ever more growing experience economy. More specifically, through integration - a clear understanding of - the user’s perspective becomes a focal point in the integral nature of PSS as a substitute for the technological or process-oriented motivation for innovation.

Future research should integrate this PSS approach and its principles in a comprehensible framework for strategic insight and support, and a corresponding operational PSS design methodology to empirically test its applicability in the design process.

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References


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