



Reframing Customer Value through Lifecycle Responsibility in Circular Product-Service Systems

Xiaofei Zhang*

University of New South Wales
Sydney, New South Wales, Australia

*yishuzhang16@gmail.com

Abstract. This study examines how lifecycle responsibility within circular Product-Service Systems (PSS) reshapes customer value. Existing research has paid limited attention to the role of lifecycle responsibility in shaping customer value perception. To address this gap, the study develops a conceptual framework that positions lifecycle responsibility as the key mechanism linking circular PSS to changes in customer value. Drawing on a comparative analysis of Philips Lighting and Hilti, the findings show that customer value is not directly transformed by adopting PSS models but emerges through the extent to which firms assume responsibility across the product lifecycle. As firms extend their role into maintenance, optimisation, and end-of-life management, value shifts from product ownership to continuous service. This results in a more multidimensional form of value, including improved performance reliability, more predictable costs, stronger customer relationships, and enhanced sustainability outcomes. Despite differences in industry context and service structure, both cases reveal a consistent pattern in which the redistribution of responsibility underpins value transformation. This study contributes by identifying lifecycle responsibility as a central mechanism of value creation in circular business models and by integrating insights from servitization and customer value theory. It further shows that sustainability objectives and customer value creation can be jointly advanced through lifecycle responsibility.

Keywords: circular Product-Service Systems, lifecycle responsibility, value transformation, sustainability

1 Introduction & Literature Review

Product-Service Systems (PSS) have emerged as a strategic response to increasing pressures on firms to deliver not only economic performance, but also sustainability outcomes [1]. By shifting from selling products to providing integrated product-service offerings, PSS enables firms to move beyond one-time transactions and engage in ongoing value creation. This transformation is particularly significant in the context of growing environmental concerns, where firms are expected to take greater responsibility for the lifecycle of their products. In recent years, with the rise of the

circular economy, customers are increasingly encouraged to rethink how they derive value beyond simply owning a product. As a result, customer value is gradually shifting away from ownership-based benefits to service-based experiences. From a theoretical standpoint, customer value has traditionally been understood in relation to product ownership and is broadly defined as the trade-off between the benefits customers receive and the costs they bear, benchmarked against available alternatives [2]. This understanding, however, is being challenged as business models evolve. As PSSs have gained wider adoption, firms have shifted their focus toward delivering ongoing services, fundamentally altering how value is created and experienced [3]. Within this context, value is no longer a discrete outcome of a single exchange, but rather something that emerges through sustained interaction between firms and customers. Concepts such as value-in-use and service logic underscore the importance of ongoing service interaction [4]. Consequently, customer value has come to reflect not just what is received, but how effort, risk, and responsibility are distributed across the relationship. Yet despite these developments, existing scholarship has given relatively limited attention to how lifecycle responsibility within such models specifically reshapes customer value.

While PSS are widely recognized for their potential to improve resource efficiency and support sustainable business practices, less attention has been given to how this shift affects the way customer value is created and perceived [5]. In particular, the role of lifecycle responsibility in shaping customer value remains insufficiently explored. Existing studies tend to focus more on operational outcomes or environmental benefits, rather than how customers make sense of these changes in practice [6]. For instance, there is a common challenge in servitization, where "added value" services are often perceived by customers as baseline features rather than additional value [7]. Furthermore, there is a lack of in-depth understanding of whether these changes merely improve efficiency or truly reshape customers' perception of value. More specifically, existing research often treats customer value as a relatively stable concept, failing to fully recognize its continuous evolution as business models evolve [8]. In a circular PSS context, where firms retain responsibility for products throughout their lifecycle in line with circular economy principles, value is created from both product performance and the way responsibility is distributed between firms and customers. Understanding how the mechanism operates within this new business model is critical, as it provides insight into how firms align sustainability objectives with value creation. For example, some customers can't recognize the added value they can gain from a new model, and may instead view them as expected features, increased dependency, or even as an extra cost [9].

Building on this gap, this study aims to explore how lifecycle responsibility within circular Product-Service Systems reframes customer value. In this paper, lifecycle responsibility is conceptualised as a mediating mechanism linking circular PSS to customer value perception. Based on this, the following research question guides the study: How does lifecycle responsibility within circular Product-Service Systems reshape customer value? To address this question, this paper will provide three interconnected dimensions. First, it examines how lifecycle responsibility is embedded in circular Product-Service Systems, with a particular focus on how firms extend their

role beyond the point of sale. Second, it explores how this extended responsibility influences different aspects of customer value, including not only functional and economic value, but also more intangible forms such as relational and sustainability value. Third, it develops a conceptual explanation of how lifecycle responsibility acts as a mechanism linking circular business models to changes in customer value, helping to explain how value is created throughout the lifecycle rather than at a single point of transaction. In doing so, this study contributes to the literature on service transformation and sustainable business models by repositioning responsibility as a central organizing principle in value creation.

2 Conceptual Framework

This study develops a conceptual framework in which lifecycle responsibility serves as the key mechanism linking circular Product-Service Systems (PSS) to changes in customer value. Instead of assuming that PSS adoption directly changes customer value, this framework suggests that such changes emerge through a series of interconnected shifts in how value is created, delivered, and experienced. As shown in Figure 1, the framework can be understood as a step-by-step process. It starts with the adoption of PSS, which can take different forms, including product-oriented, use-oriented, and result-oriented models. These models mainly differ in how responsibility is shared between firms and customers. In product-oriented PSS, firms still focus on selling products, but they offer extra services such as maintenance or repair. Customers own the product, so the customer still bears most of the responsibility. Firms play a relatively limited role, typically responding only when issues occur [10]. In use-oriented PSS, customers no longer own the product but pay to use it, such as through leasing or sharing [10]. In this case, firms keep ownership and are responsible for maintenance and availability. Compared to the previous model, more responsibility is shifted from customers to firms. Finally, in result-oriented PSS, the change is more pronounced. Customers no longer pay for the product itself or the service, but instead for the outcomes it delivers [10].

Because of this, firms are required to ensure that products function reliably over time, including through maintenance, upgrades, and end-of-life management. Therefore, lifecycle responsibility is embedded in the business model rather than treated as an add-on service.

Across the three models, lifecycle responsibility increases progressively in terms of the scope and depth of firm involvement. In product-oriented PSS, lifecycle responsibility remains relatively limited, with firms mainly providing support when needed. It becomes more substantial in use-oriented models and is most fully developed in result-oriented PSS, where firms take primary responsibility for performance over time. For this reason, result-oriented PSS provides a clearer setting for examining how lifecycle responsibility shapes customer value, as responsibility is more fully internalised by the firm. In this context, lifecycle responsibility becomes the key link between PSS and changes in customer value. The process also includes a feedback effect,

where the results of value creation influence how firms adjust their strategies and services across the lifecycle.

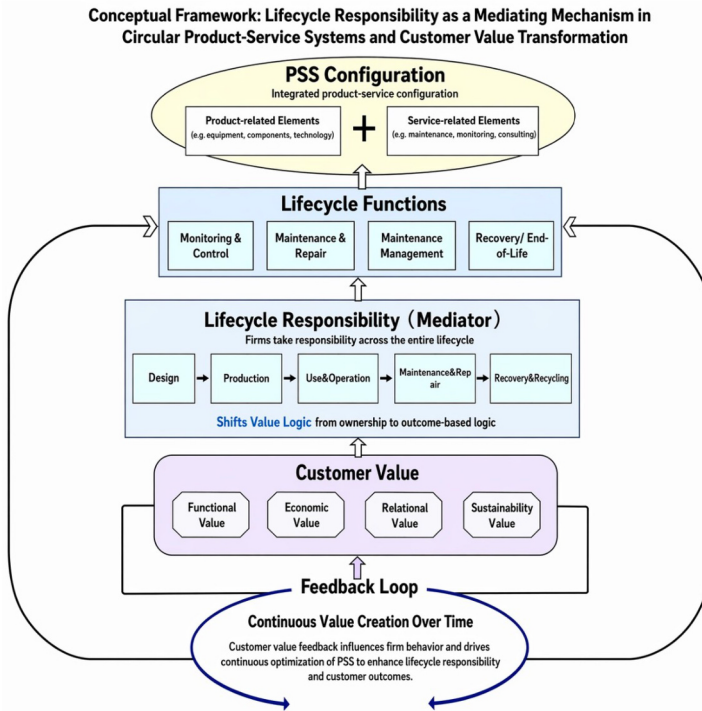


Fig. 1. Overall framework of lifecycle responsibility in circular PSS

Building on this process view, Figure 1 also presents a more structured representation of the framework by showing how these elements are organised in practice. The framework can be understood across three interconnected domains: PSS configuration, lifecycle functions, and customer value. At the foundational level, PSS configuration combines product-related and service-related elements into an integrated system. These configurations enable a set of lifecycle functions, including performance management, maintenance and repair, monitoring, upgrading, and end-of-life recovery. At the centre of this structure, lifecycle responsibility extends firm involvement across the entire lifecycle, from design and production to use, maintenance, and recovery activities. Through this mechanism, customer value is reshaped into a multi-dimensional and evolving outcome. Four dimensions of value can be identified. Functional value is enhanced through reliable and continuous performance supported by ongoing service provision. Economic value is improved through reduced upfront investment, more predictable cost structures, and lower lifecycle management burdens. Relational value is strengthened as continuous provider involvement fosters trust and long-term engagement. Sustainability value emerges from responsible lifecycle man-

agement, particularly through practices such as reuse, recycling, and resource efficiency [11].

Taken together, the process and structural elements of the framework help to clarify how this transformation unfolds. Viewed in this way, the transformation of customer value depends not simply on the adoption of PSS, but on how deeply lifecycle responsibility is integrated into the system. As firms become more actively involved across different lifecycle stages, value moves away from ownership and is increasingly tied to performance, ongoing support, and system outcomes. An important aspect of this framework is the presence of a reinforcing feedback loop. As firms take on greater lifecycle responsibility, they are encouraged to improve product durability, optimise resource use, and enhance system performance. These improvements not only reduce costs and increase efficiency for firms, but also strengthen customer value across functional, economic, and sustainability dimensions. Thus, higher customer value encourages firms to improve how they manage products, such as through better maintenance, monitoring, and recovery. Over time, this creates a positive cycle in which lifecycle responsibility and customer value reinforce each other, rather than operating as a one-way relationship. In this sense, lifecycle responsibility is not merely an additional feature of circular PSS, but a fundamental element that reshapes how customer value is created and experienced. It transforms the company's role from a product provider to a continuous service partner, while also shifting customer expectations toward reliability, performance, and long-term support.

3 Case Study

Philips Lighting and Hilti are chosen not because they operate in similar sectors, but because they offer complementary analytical insights. Both are widely cited as mature examples of result-oriented Product-Service Systems in which lifecycle responsibility has been systematically embedded into the business model. Importantly, however, they operate in different industrial contexts: Philips delivers long-term infrastructure services to commercial clients, while Hilti provides usage-based tool management to construction professionals. This contrast helps reveal a more nuanced examination of how lifecycle responsibility functions across varying service structures, customer relationships, and operational intensities. By analysing these two cases in parallel, this study aims to demonstrate that lifecycle responsibility functions as a consistent mechanism linking circular PSS to customer value transformation.

3.1 Industry Background: The Rise of LED Technology

In recent years, LED lighting has established itself as the dominant successor to conventional lighting technologies, including incandescent, halogen, and compact fluorescent lamps. As presented in Figure 2, adoption rates among U.S. households have risen considerably, reflecting a broader societal shift toward energy efficiency and environmental responsibility [12]. Compared to conventional lighting, LEDs significantly reduce energy consumption, extend product lifespan (often exceeding 15,000

hours), and lower maintenance requirements [13]. Critically, because most lighting-related costs accrue during the operational phase rather than at the point of purchase, these characteristics create favourable conditions for long-term, service-based delivery models. In this sense, the technological properties of LED lighting do not merely improve product performance but also enable a different kind of commercial relationship between firms and customers.

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More U.S. homes used LEDs over other bulb types for indoor lighting in 2024

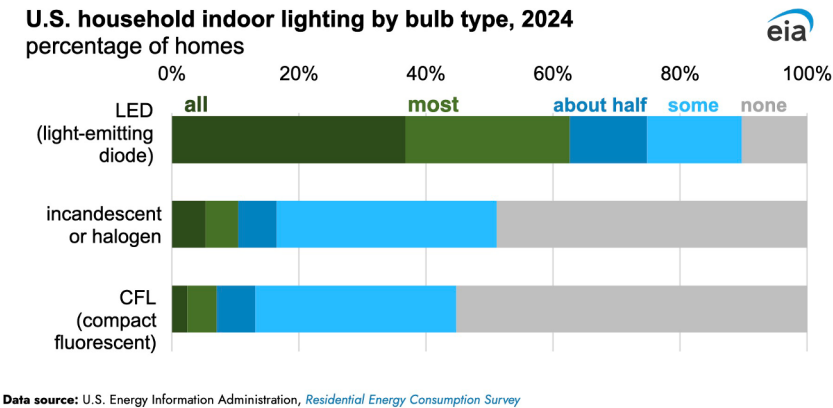


Fig. 2. Increasing use of LED lighting in U.S. households compared to other bulb types, 2024 [12]

3.2 Case One: Philips Lighting — Lighting-as-a-Service

Against this technological backdrop, figure 3 illustrates how lifecycle responsibility is embedded across both the Philips Lighting-as-a-Service model and Hilti’s fleet management system, highlighting differences in how responsibility is structured and delivered in each case. Philips provides a successful example of the transition from a traditional product-based model to a result-oriented PSS, particularly through its Lighting-as-a-Service (LaaS) offering operated by Signify. Signify is an independent company licensed to use the Philips brand for lighting. It provides Lighting-as-a-Service (LaaS), where customers do not purchase lighting equipment but instead pay for lighting performance, such as the level of illumination. For instance, through its partnership with the Maxeda DIY Group, Signify has equipped over 100 retail facilities across the Netherlands and Belgium with LED lighting systems without requiring upfront investment [14]. This subscription-based or pay-per-use model shifts the focus from product ownership to access and outcomes.

The development of LED technology has become a key enabler of this model, supporting long-term service delivery by reducing energy consumption, extending prod-

uct lifespan, and lowering maintenance requirements. In this sense, LED itself is not the service model, but it makes the model possible by providing the necessary technological support. More importantly, the LaaS model fundamentally reshapes corporate responsibility. In contrast to traditional models, where responsibility ends after the product is sold, PSS providers are responsible for the lighting system throughout its whole lifecycle, including installation, maintenance, optimization, and end-of-life management. This marks a broader scope of lifecycle responsibility, as firms are required to ensure stable performance over the long term instead of focusing only on delivering a product. What is particularly significant in this case is that lifecycle responsibility is not simply extended but deeply embedded into the business model. This shift in responsibility directly transforms how customer value is created and perceived. Instead of focusing on upfront costs and product ownership, customers benefit from reliable performance, lower operating costs, and reduced responsibility for maintenance and disposal. In the case of Philips, the LaaS model allows customers to delegate the management of lighting systems to the provider. As noted by a business development manager, Philips Lighting often signs long-term contracts (e.g., 15 years) to ensure predictable costs and reduce uncertainty. In addition, these contracts include future upgrades, ensuring that customers continue to benefit from the latest LED technology over time [13]. Therefore, customer value is derived from ongoing use and performance outcomes rather than ownership. In this way, the case illustrates that changes in customer value are not driven simply by adopting a PSS model, but by the extent to which firms assume responsibility across the product lifecycle.

3.3 Case Two: Hilti — Fleet Management as a Service

The second case study worth exploring is Hilti, which is widely recognised as a successful example of a result-oriented PSS [15]. As also illustrated in Figure 3, Hilti's fleet management system represents a distinct way of embedding lifecycle responsibility within a result-oriented PSS. In this model, customer value shifts from product ownership to performance-based value. Instead of selling tools, Hilti offers maintenance, repair, and replacement services, operating on a 'use instead of own' mode [16]. To be specific, key elements of this service model not only include fixed monthly cost, maintenance repairs and replacement service, but also involve the theft protection, tools on demand services. These stages all have the same purpose, which is designed to increase productivity, lower total cost and ensure continuous access to the latest and safest tools for customers [17]. Moreover, Hilti is not just renting tools but managing a fleet of tools for customers as an ongoing service, starting from the early 2000s [15]. This fleet management system also represents a brand-new business model. This would give Hilti a strong competitive advantage over its competitors that still rely mainly on direct sales model. In practice, Hilti has successfully built strong and stable relationships with customers while strengthening brand loyalty. For example, Hilti fleet management contracts are typically for 3 to 5 years, providing long-term leasing solutions for tools. These contracts include tool maintenance, repairs, and end-of-term upgrades. Meanwhile, most tools are covered by a 2-year warranty from the

date of purchase except for the fleet contract [18]. This reflects a fundamental shift in business logic, where firms deliver outcomes instead of products.

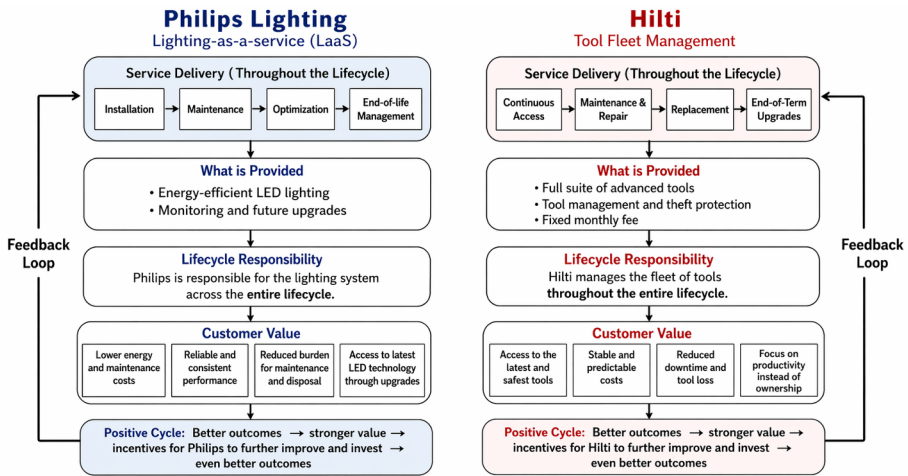


Fig. 3. Case illustration of Philips Lighting and Hilti PSS models

In this context, lifecycle responsibility acts as a mediating mechanism, as Hilti retains responsibility for the performance and condition of tools throughout their lifecycle. This redistribution of responsibility shifts risks and operational burdens from customers to the provider, thereby reducing uncertainty and management effort. As a result, customer value is enhanced across multiple dimensions. Functionally, customers benefit from reliable and high-performing tools supported by continuous service. Economically, upfront investment is reduced and costs become more predictable over time. In addition, operational burdens are minimised, as customers no longer need to manage ownership, repairs, or end-of-life disposal. Through integrated services such as repair centres, maintenance, training, and asset management [19], Hilti demonstrates how lifecycle responsibility enhances both efficiency and customer experience. These findings highlight that value transformation is driven by the extent of lifecycle responsibility rather than the specific form of the service model.

3.4 Comparative Observations

While both Philips and Hilti adopt result-oriented PSS models, they differ in how lifecycle responsibility is structured and delivered in practice. Table 1 provides a summary of the key differences in their business characteristics. Based on their different industries and customer groups, Philips focuses on healthcare systems and consumer products, while Hilti operates in the professional construction sector. In the Philips case, lifecycle responsibility is closely linked to long-term system performance. The company manages lighting systems over extended periods, with a focus on energy efficiency, optimisation, and ongoing technological upgrades [20]. This

makes its responsibility more system-level and long-term. In contrast, Hilti’s model is more usage-focused and operational. Instead of managing a fixed system, Hilti supports customers through services such as maintenance, repair, and replacement of tools. This ensures that tools remain available and functional on a daily basis. As a result, Hilti’s model involves more frequent interaction with customers and responds more directly to day-to-day operational needs. Despite these differences, both cases show that extending lifecycle responsibility plays an important role in shaping customer value. In both models, customers move away from ownership and instead benefit from reliable performance, reduced uncertainty, and lower management effort. This suggests that customer value is not driven by the specific form of the PSS model, but by how far firms take responsibility across the product lifecycle.

Table 1. Overview of Philips Lighting and Hilti business characteristics

Feature	Philips Lighting	Hilti
Industry	Health Technology (Healthcare& Personal Health)	Professional Construction
Core Products	Medical devices (e.g. MRI/CT), personal care products (e.g. toothbrushes, shavers)	Power tools, anchors, and fastening systems
Primary Customers	Hospitals and individual consumers	Contractors, engineers, and construction professionals
Target Market	Consumer health and healthcare sectors	Construction industry and professional job sites
Sales Approach	Retail, online, and B2B healthcare sales	Direct sales supported by sales representatives and engineering services

4 Discussion & Conclusion

This paper set out to examine how lifecycle responsibility within circular Product-Service Systems reshapes customer value, drawing on existing literature and two illustrative case studies — Philips Lighting and Hilti. The analysis yields a consistent finding: lifecycle responsibility is not a peripheral feature of PSS models, but a central mechanism through which value is generated, sustained, and perceived by customers. Rather than being delivered at a discrete moment of exchange, value accumulates over time as firms maintain ongoing involvement in maintenance, performance optimisation, monitoring, and end-of-life management. From the customer's standpoint, at a practical level, customers benefit from more dependable product performance, lower and more predictable operational costs, and a significant reduction in the management effort traditionally associated with ownership. At a less tangible level, they gain confidence that products are being responsibly handled throughout their entire lifecycle — encompassing maintenance, potential reuse, and eventual

disposal or recycling. Trust emerges as an underappreciated component of this value proposition: as firms assume greater responsibility, customers are not merely receiving a service but entering a relationship premised on accountability.

4.1 Contributions

The findings of this study make three substantive contributions to the literature on service transformation, circular economy, and customer value theory. The first and most central contribution is the identification of lifecycle responsibility as the operative mechanism connecting circular PSS adoption to shifts in customer value perception. Prior research has tended to treat PSS primarily as an organisational or environmental strategy, with customer value addressed as a downstream benefit. This study shows that lifecycle responsibility is a core part of how firms create value, offering a clearer explanation of why circular PSS models succeed or fail to gain customer acceptance. The second contribution lies in the cross-industry generalisability of this mechanism. The comparative analysis of Philips and Hilti, two firms operating in fundamentally different sectors with distinct customer bases, service structures, and contractual arrangements, shows that different forms of lifecycle responsibility can still lead to similar value outcomes. Philips manages long-cycle infrastructure systems over extended time horizons; Hilti operates in a high-frequency, usage-intensive environment demanding continuous operational responsiveness. Despite these differences, both cases produce a consistent pattern: customers shift from ownership to access, from cost uncertainty to financial predictability, and from operational burden to delegated management. The third contribution is theoretical, bridging two bodies of literature that have developed largely in parallel: circular economy thinking and customer value theory. Existing scholarship on the circular economy has predominantly focused on resource flows, business model design, and environmental outcomes, while customer value research has tended to operate within relatively static frameworks derived from product-ownership logics. This study brings these two streams into productive dialogue by showing that sustainability objectives and value creation are not in tension but can be systematically aligned through lifecycle management practices.

4.2 Limitations and Future Research

This study has some limitations. It focuses on a small number of cases, so while these cases provide useful insights, they may not fully reflect how lifecycle responsibility operates across different industries or institutional settings. In addition, the qualitative approach is well suited to exploring this concept, but it does not allow for a systematic assessment of how different aspects of lifecycle responsibility contribute to specific customer value outcomes. Future research could address these limitations in several ways. Comparative studies across a broader range of sectors, including healthcare, mobility, and consumer electronics, would help establish the boundary conditions of the proposed mechanism and identify the contextual factors that shape its effects. Quantitative approaches could be employed to test the relationships between lifecycle responsibility and measurable outcomes such as customer satisfaction, perceived trust,

and long-term engagement. At a finer level of granularity, future work might also examine how customers differentially weight functional, economic, and sustainability-related value, and whether these priorities vary systematically across demographic or organisational profiles. Finally, as PSS models continue to evolve in conjunction with digital technologies, future research would benefit from investigating how capabilities such as real-time data analytics, predictive maintenance, and smart connected products reshape both the scope of lifecycle responsibility and the nature of the value it generates.

References

1. Zhao, Y., Zhang, L., Maytorena-Sanchez, E. and Zhang, J. 2025, 'Advancing complex product-service systems (CoPSS) design: An integrative literature review', *Journal of Cleaner Production*, 527, p.146690, accessed 23 April 2026, <<https://doi.org/10.1016/j.jclepro.2025.146690>>.
2. Mahajan, G. 2020, 'What Is Customer Value and How Can You Create It?', *Journal of Creating Value*, 6(1), pp.119–121, accessed 20 April 2026, <<https://doi.org/10.1177/2394964320903557>>.
3. Verhoef, P.C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Qi Dong, J., Fabian, N. and Haenlein, M. 2021, 'Digital transformation: a Multidisciplinary Reflection and Research Agenda', *Journal of Business Research*, 122(122), pp.889–901, accessed 24 April 2026, <<https://doi.org/10.1016/j.jbusres.2019.09.022>>.
4. Medberg, G. and Grönroos, C. 2026, 'Shibboleth Authentication Request', *Unsw.edu.au*, accessed 20 April 2026, <<https://www-emerald-com.wwwproxy1.library.unsw.edu.au/jstp/article-pdf/30/4-5/507/2849681/jstp-09-2019-0207.pdf>>.
5. Muylaert, C., Thiry, G., Roman, P., Ruwet, C., De Hoe, R. and Maréchal, K. 2022, 'Consumer perception of product-service systems: Depicting sector-specific barriers in the mobility, clothing and tooling sectors', *Frontiers in Environmental Science*, accessed 21 April 2026, <<https://doi.org/10.3389/fenvs.2022.1048554>>.
6. Adah-Kole Emmanuel Onjewu, Vahid Jafari-Sadeghi, Kock, N., Mohamed Yacine Hadoud and Sakka, G. 2023, 'The catalyzing role of customer pressure on environmental initiatives and export intensity: A study of family firms', *Journal of Business Research*, 166, pp.114134–114134, accessed 24 April 2026, <<https://doi.org/10.1016/j.jbusres.2023.114134>>.
7. Ali-Marttila, M., Marttonen-Arola, S., Kärri, T., Pekkarinen, O. and Saunila, M. 2017, 'Understand what your maintenance service partners value', *Journal of Quality in Maintenance Engineering*, 23(2), pp.144–164, accessed 7 April 2026, <<https://doi.org/10.1108/jqme-08-2016-0035>>.
8. Costa Climent, R. and Haftor, D.M. 2021, 'Value creation through the evolution of business model themes', *Journal of Business Research*, 122, pp.353–361, accessed 25 April 2026, <<https://doi.org/10.1016/j.jbusres.2020.09.007>>.
9. Catulli, M. 2012, 'Journal of Manufacturing Technology Management', *emerald PUBLISHING*, 23(6), pp.780–793, accessed 8 April 2026, <<https://doi.org/10.1108/17410381211253335>>.
10. Batlles-de-laFuente, A., Belmonte-Ureña, L.J., Plaza-Úbeda, J.A. and Abad-Segura, E. 2021, 'Sustainable Business Model in the Product-Service System: Analysis of Global Re-

- search and Associated EU Legislation', *International Journal of Environmental Research and Public Health*, 18(19), p.10123, accessed 7 April 2026, <https://doi.org/10.3390/ijerph181910123>
11. Khan, N., Syed, S., Kadir, A. and Hoe, H. 2013, 'Exploring Multi-Dimensions Of Customer Value In Service Industry', *Australian Journal of Basic and Applied Sciences*, 7(4), pp.43–55, accessed 19 April 2026, < <http://www.ajbasweb.com/old/ajbas/2013/March/43-55.pdf>>
 12. U.S. Energy Information Administration 2024, 'More U.S. homes used LEDs over other bulb types for indoor lighting in 2024', *Eia.gov.*, accessed 11 April 2026, <https://www.eia.gov/todayinenergy/detail.php?id=67368>
 13. Jeremy, P 2014, 'Pay per lux: Philips innovation in lighting', *Proquest.com*, accessed 17 April 2026, <https://www.proquest.com/docview/1785962813?parentSessionId=ynMJvhBJygNsQZLlGRIVsKXwDL8YzHWoA9S3BbdEjHg%3D&pq-origsite=primo&accountid=12763&sourcetype=Scholarly%20Journals>
 14. Jablanski, D 2021, 'Connected Lighting and Light as a Service in Manufacturing', Commissioned by Signify, accessed 15 April 2026, <https://www.assets.signify.com/is/content/Signify/Assets/signify/global/20210428-connected-lighting-and-light-as-a-service-insights.pdf>
 15. Casadesus-Masanell, R., Gassmann, O. and Sauer, R. 2017, 'Hilti Fleet Management (A): Turning a Successful Business Model on Its Head', *Hbs.edu*, accessed 8 April 2026, <https://www.hbs.edu/faculty/Pages/item.aspx?num=52550>
 16. IPBA® Connect 2026, 'Hilti Case Study: Shifting to Tool as a Service', IPBA® Connect, accessed 15 April 2026, <https://profwurzer.com/from-power-tools-to-uptime-hiltis-business-model-transformation-and-the-ip-logic-behind-it/>
 17. Hilti Australia 2026, 'Hilti Tool Service', *Hilti.com.au*, accessed 13 April 2026, <https://www.hilti.com.au/content/hilti/A2/AU/en/support/support/hilti-tool-service.html>
 18. Hilti Australia 2026, 'Fleet Contract Extension', *Hilti.com.au*, accessed 13 April 2026, <https://www.hilti.com.au/content/hilti/A2/AU/en/business/business/equipment/fleet-management/fleet-contract-extension.html>
 19. Hilti at Glance 2026, 'Pt Hilti - Company Profile - Approval Chemical Anchor', *Scribd*, accessed 15 April 2026, <https://www.scribd.com/document/425364054/Pt-Hilti-Company-Profile-Approval-Chemical-Anchor?>
 20. Philips 2019, 'Philips – Australia', *Philips*, accessed 22 April 2026, <https://www.philips.com.au>

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