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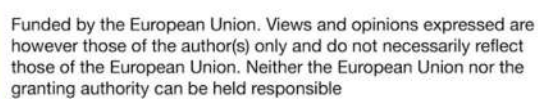
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INTRODUCTION

Abstract

Furniture as a Service (FaaS) extends value creation beyond the initial sale by integrating maintenance, repair, refurbishment, reuse and recovery throughout the furniture lifecycle. This report examines **how this transition reshapes competences, business practices and organisational requirements in the European furniture sector.**

The findings suggest that FaaS primarily transforms existing professional roles rather than creating entirely new occupations, requiring technical expertise to be combined with lifecycle thinking, digital, green and service-oriented competences.

For SMEs in particular, internal capabilities need to be complemented by external collaboration. Competence development, organisational readiness and ecosystem coordination therefore emerge as key conditions for circular servitization and asset-based value creation

Executive Summary

The transition towards Furniture as a Service (FaaS) represents a significant change in how furniture companies can create, maintain and recover value over time. Rather than relying exclusively on the traditional sequence of designing, producing and selling furniture, service-oriented models extend the relationship between companies, products and customers across a larger part of the product lifecycle. **Maintenance, repair, refurbishment, reuse, take-back and recovery can therefore become part of the value proposition.** In this context, furniture can increasingly be considered as an asset whose economic value is not exhausted through the first transaction but can be preserved and reactivated across successive use cycles.

This report examines this transformation from a competence and organisational perspective. One of its main findings is that the development of FaaS does not necessarily depend on the creation of entirely new occupations. **The more immediate transformation concerns existing roles and the way responsibilities and knowledge are distributed across the organisation.**

Designers, production and logistics personnel, procurement specialists, technicians, commercial functions and managers increasingly need to consider decisions that extend beyond their traditional area of responsibility. Lifecycle thinking, digital traceability, circular design, service orientation and collaboration consequently become relevant across different stages of the furniture value chain.

Competence development should therefore be understood as a process of integration and adaptation. Existing manufacturing, technical and craft knowledge remains a fundamental resource for the sector, but needs to be complemented by digital, green and transversal competences. Upskilling and reskilling can support this transition by helping workers understand how decisions concerning design, materials, production, assembly, logistics and customer services affect maintenance, refurbishment, reuse and value recovery later in the product lifecycle.

At the same time, competences alone are not sufficient. The analysis highlights the importance of organisational readiness across **five interconnected dimensions**:

- Products
- Processes
- People
- Digitalisation
- Ecosystem

Companies need products that can support multiple lifecycle loops, processes that extend beyond production and first delivery, **people capable of working across functional boundaries**, digital infrastructures that provide reliable lifecycle information, and external relationships through which complementary capabilities can be accessed. The ecosystem dimension is particularly relevant for European furniture SMEs. Activities such as reverse logistics, maintenance, refurbishment, digital lifecycle management and material recovery may be difficult or inefficient for smaller companies to internalise completely.

Collaboration with technology providers, logistics operators, refurbishment specialists, training organisations and other actors can therefore become an enabling condition for FaaS. The transition towards circular servitization is consequently not only a firm-level transformation but also a question of coordination across the wider furniture ecosystem.

For companies, the report recommends **approaching FaaS as a gradual transformation rather than an immediate replacement of existing business models**. Initial steps can include improving product durability and modularity, integrating repair and refurbishment considerations into design, developing lifecycle-oriented services, strengthening digital traceability and identifying external partners for activities that cannot efficiently be managed internally. Training providers can support this process through flexible upskilling and reskilling pathways that combine technical knowledge with sustainability, digital literacy, systems thinking and collaboration. Sectoral organisations and policymakers can contribute by supporting common standards, knowledge sharing, Digital Product Passport implementation, collaborative innovation and mechanisms that make lifecycle-oriented solutions more accessible to SMEs.

Furniture as a Service should not be interpreted simply as an additional service attached to furniture products. It represents a broader transition from product-centred manufacturing towards lifecycle-oriented and asset-based value creation. Technology can enable this transition, but its practical implementation depends on the capacity of companies to combine established sectoral expertise with new competences, organisational adaptation and effective ecosystem coordination.

The report addresses the following overarching **research question**:

- How does the transition towards Furniture as a Service reshape skills needs, business practices, and competence strategies in the European furniture sector?

Rather than approaching this question through the identification of new occupational profiles, the report adopts the furniture lifecycle as its main analytical perspective. This makes it possible to examine how competences, responsibilities and decision-making evolve across existing organisational functions as companies progressively assume a longer-term role in managing furniture products.

Following the introduction and definition of the research scope in Chapter 2, Chapter 3 establishes the conceptual foundations of the analysis. It examines the progression from servitization and Product-Service Systems towards Furniture as a Service, circular business models and assetization. The chapter shows how the extension of product responsibility beyond the first sale changes the economic logic of furniture production and identifies the resulting research gap concerning competence transformation.

Chapter 4 moves from business models to the furniture lifecycle. It analyses competence transformation across three interconnected areas: designing furniture for multiple lifecycles; managing products throughout production, use, maintenance and customer relationships; and closing lifecycle loops through reverse logistics, digital traceability and ecosystem coordination. The analysis demonstrates how FaaS redistributes responsibilities and lifecycle awareness across existing organisational functions rather than simply generating a separate set of new occupations.

Building on these findings, Chapter 5 translates the analysis into an organisational readiness and recommendation framework. Five dimensions – products, processes, people, digitalisation and ecosystem – are proposed as a basis for companies to assess their preparedness for FaaS. The chapter then considers ecosystem integration and formulates recommendations for SMEs, training providers and sectoral stakeholders.

Finally, Chapter 6 brings together the main implications of the report. It argues that competence development, organisational readiness and ecosystem coordination are mutually dependent conditions for circular servitization. The future development of Furniture as a Service in Europe will therefore depend not only on the availability of technologies or individual skills, but on the capacity of furniture companies and their wider ecosystems to organise these resources around longer product lifecycles and new forms of asset-based value creation.

1. INTRODUCTION AND RESEARCH SCOPE: Servitization, Furniture as a Service, assetization, circular economy, research questions, and methodology

The European furniture sector is undergoing a profound transformation driven by the convergence of circular economy principles, sustainability objectives, changing customer expectations, and the emergence of service-oriented business models. Within this context, Furniture as a Service (FaaS) is progressively moving beyond the traditional linear logic of *design→produce→sell*, encouraging manufacturers to extend their responsibility throughout the entire lifecycle of furniture products. Products are increasingly expected to remain valuable beyond their first sale through maintenance, repair, refurbishment, reuse, remanufacturing, and end-of-life recovery, requiring companies to rethink not only their business models but also the organisation of production processes and value creation.

The theoretical foundations of this transition lie within the literature on servitization, which describes the evolution of manufacturing firms from product-oriented organisations towards integrated product-service providers capable of generating value throughout the customer relationship rather than solely through product ownership¹. Closely related to this perspective is the Product-Service System (PSS) framework, which conceptualises products and services as integrated solutions designed to satisfy user needs while potentially reducing environmental impacts and extending product lifecycles². More recently, these approaches have increasingly converged with circular economy strategies, emphasising durability, repairability, modularity, remanufacturing, and reverse logistics as fundamental dimensions of sustainable business models.

Within this evolving debate, the concept of assetization represents a further step in the evolution of value creation³. Rather than considering furniture as a product whose economic value is exhausted after the first transaction, assetization interprets furniture as an asset capable of generating multiple value streams throughout its lifecycle. Under

¹ Cfr. Vandermerwe, S., & Rada, J. (1988). *Servitization of Business: Adding Value by Adding Services*. European Management Journal, 6, 314-324; Baines, Tim & Lightfoot, Howard & Benedettini, Ornella & Kay, J.M.. (2009). *The servitization of manufacturing: A review of literature and reflection on future challenges*. Journal of Manufacturing Technology Management. 20. 547-567. 10.1108/17410380910960984.

² Cfr. Tukker, A. (2004), *Eight types of product-service system: eight ways to sustainability?* Experiences from SusProNet. Bus. Strat. Env., 13: 246-260. <https://doi.org/10.1002/bse.414>

³ See: Birch, K., & Ward, C. (2024), *Assetization and the 'new asset geographies'*. Dialogues in Human Geography, 14(1): 9–29; Chiapello, E. (2024), *So what is assetization? Filling some theoretical gaps*. Dialogues in Human Geography, 14(1). Although these contributions do not specifically address the furniture sector, they provide the conceptual foundations for understanding assetization as the process through which products and resources are transformed into assets capable of generating value throughout their lifecycle rather than through a single transaction. In this report, they are adopted as the theoretical framework for interpreting assetization, while their application to the furniture industry is developed in light of the FurnSERVICE project and the emerging debate on Furniture as a Service.

this perspective, maintenance, refurbishment, leasing, resale, component recovery, and material valorisation become integral elements of the business model. Consequently, companies progressively shift their strategic focus from maximising the margin generated by the first sale towards maximising the lifetime value of furniture assets through continuous management, traceability, and recovery.

These developments have important implications for the furniture industry. They require companies to integrate lifecycle thinking into every stage of product development, from design decisions and material selection to packaging, logistics, maintenance, refurbishment, and end-of-life management. They also imply stronger collaboration among manufacturers, suppliers, logistics operators, repair services, technology providers, retailers, and other actors operating across the furniture value chain. Furniture as a Service therefore becomes not only a new commercial model but also a new organisational paradigm built upon ecosystem collaboration and distributed value creation.

Several European initiatives have already contributed to advancing this debate. Projects such as Furn5.0⁴ investigated the competences required by Industry 5.0, analysing the evolution of occupations, emerging green and digital skills, and strategies for competence development within the furniture sector. CirCLER⁵ addressed circular economy transition through the definition of new competence profiles and training pathways for Circular Economy Transition Managers. R-evolve⁶, together with other initiatives including FurnCIRCLE⁷, explored circular business models, sustainable product development, digital transformation, and lifecycle approaches within the European furniture ecosystem.

Building upon these initiatives, the present report adopts a complementary perspective. Rather than identifying entirely new occupational profiles or developing a new taxonomy of competences, it investigates how servitization and assetization redistribute responsibilities, decision-making processes, and competence requirements across existing organisational functions. The central assumption is that Furniture as a Service primarily requires a different allocation of competences and a stronger lifecycle-oriented process awareness throughout the organisation, rather than the creation of completely new professions. Consequently, previous analyses developed within past projects provide the competence baseline upon which this report builds, while selected occupational profiles already examined in that project are used as illustrative examples to demonstrate how servitization reshapes competence requirements within existing professional roles.

Against this background, the report addresses the following research question:

⁴ Project ID: 101145616.

⁵ Project ID: 101140033.

⁶ Project ID: 10118222.

⁷ Project ID: 101102389.

How does the transition towards Furniture as a Service reshape skills needs, business practices, and competence strategies in the European furniture sector?

This overarching question is explored through four complementary sub-questions:

- *How does servitization transform the furniture value chain from design to end-of-life management?*
- *Which competences are required to support circular and service-based furniture models?*
- *How should companies adapt design, material selection, packaging, assembly, maintenance, and after-sales processes?*
- *What recommendations can support SMEs, training providers, and sectoral ecosystems in adopting Furniture as a Service models?*

The report adopts a desk-based research methodology combining academic literature on servitization, Product-Service Systems, circular economy, and assetization with European policy documents, sectoral reports, and the outputs of previous and ongoing European projects.

Particular attention is devoted to the integration of evidence generated by previous projects FurnSERVICE (D2.1), Furn5.0, CirCLER, R-evolve and FurnCIRCLE, allowing the report to position itself within the continuity of existing European research while addressing a distinct analytical gap.

Methodologically, the analysis follows the furniture lifecycle as its principal interpretative framework. Rather than organising the discussion around occupations, it examines how Furniture as a Service modifies the requirements associated with successive stages of the value chain, including design, material selection, production, packaging, assembly, logistics, maintenance, repair, refurbishment, reverse logistics, and end-of-life recovery. Competence implications are therefore analysed primarily at the level of business processes and organisational functions. Subsequently, selected occupations are revisited in the recommendations chapter to illustrate how lifecycle-oriented business models translate into concrete upskilling priorities and organisational practices for companies. The report complements previous competence analyses while maintaining a clear focus on the organisational transformation required by Furniture as a Service and asset-based value creation.

2. STATE OF ART

This chapter builds upon both the international literature on servitization and circular business models and the conceptual and empirical findings developed within the

FurnSERVICE project through Deliverable D2.1 – Report on Current and Emerging Circular Business Models in EU Industries (WP2, Task 2.1).

While Deliverable D2.1 provides a comprehensive review of emerging circular business models and practical experiences across European manufacturing industries, the present report extends this analysis by **focusing specifically on the competence implications of Furniture as a Service (FaaS) and assetization for the furniture sector**. Rather than proposing new business models, the objective is to understand how these transformations reshape existing occupations, redistribute responsibilities across the value chain, and require new forms of organisational learning and competence development.

2.1 From servitization to Product-Service Systems

The transition towards Furniture as a Service should be understood within the broader evolution of manufacturing business models that has progressively shifted the focus from selling products to delivering integrated product–service solutions. The concept of servitization, first introduced by Vandermerwe and Rada in the late 1980s, describes precisely this transformation, whereby manufacturing firms increasingly complement or replace traditional product offerings with services capable of generating value throughout the customer relationship rather than only at the point of sale⁸.

Over the last three decades, **servitization has evolved from being interpreted as a commercial strategy into a broader organisational transformation affecting business models, production processes, customer relationships, and innovation capabilities**. According to Baines et al., servitization represents *"the innovation of an organisation's capabilities and processes to shift from selling products to selling integrated products and services that deliver value in use"*⁹. This perspective emphasises that value creation increasingly depends on the ability to integrate manufacturing capabilities with service provision, lifecycle management, digital technologies, and customer support.

The operational implications of this transformation have been further explored by Baines and Lightfoot, who argue that advanced services require manufacturing firms to rethink organisational structures, operational processes, digital infrastructures, and workforce competences¹⁰. Hence, services are no longer considered complementary activities but become strategic components of industrial competitiveness.

This interpretation is fully consistent with the conceptual framework developed in the FurnSERVICE Deliverable D2.1, which identifies servitization as one of the principal

⁸ Cfr. Vandermerwe, S., & Rada, J. (1988). *Servitization of Business: Adding Value by Adding Services*.

⁹ Cfr. Baines, Tim & Lightfoot, Howard & Benedettini, Ornella & Kay, J.M.. (2009). *The servitization of manufacturing: A review of literature and reflection on future challenges*.

¹⁰ Baines, Tim & Lightfoot, Howard. (2013). *Servitization of the Manufacturing Firm: Exploring the Operations Practices and Technologies that Deliver Advanced Services*. International Journal of Operations & Production Management. 34. 10.1108/IJOPM-02-2012-0086.

drivers supporting the transition towards circular business models. The report highlights that manufacturers increasingly create value through maintenance services, repair, refurbishment, take-back schemes, leasing, and lifecycle management rather than relying exclusively on one-off product sales¹¹. Consequently, servitization contributes not only to improving customer relationships but also to extending product lifetimes, preserving material value, and facilitating circular economy strategies.

An important implication emerging from both the academic literature and D2.1 concerns the relationship between manufacturers and products after the first sale. Under traditional linear business models, ownership transfer generally interrupts the producer's access to information regarding product use, maintenance history, failure mechanisms, and residual value. Servitized models partially reconstruct this relationship by maintaining contractual, operational, or digital links between companies, customers, and products throughout the lifecycle. In doing so, firms gain access to valuable information that can support continuous improvement, predictive maintenance, product redesign, and future innovation.

Servitization should therefore not be interpreted simply as the addition of after-sales services. Rather, it represents a **fundamental reconfiguration of how value is created, delivered, and captured within manufacturing industries**. Particularly in sectors characterised by durable products, such as furniture, service integration enables companies to progressively move from transactional relationships towards long-term lifecycle partnerships.

2.2 Product-Service Systems and Furniture as a Service

One of the most influential theoretical frameworks supporting servitization is represented by **Product-Service Systems (PSS)**. **Product-Service Systems combine tangible products and intangible services into integrated solutions** designed to satisfy customer needs while simultaneously improving resource efficiency and reducing environmental impacts¹². Rather than considering products and services separately, PSS conceives them as complementary components of a single value proposition.

Among the various classifications proposed in the literature, Tukker's distinction between product-oriented, use-oriented, and result-oriented Product-Service Systems remains the most widely adopted¹³. Product-oriented systems mainly complement products with additional services such as maintenance or repair. Use-oriented systems

¹¹ FurnSERVICE Project, Deliverable D2.1, *Report on Current and Emerging Circular Business Models in EU Industries*, WP2 Task 2.1.

¹² Cfr. Tukker, Arnold. (2004). *Eight Types of Product-Service System: Eight Ways to Sustainability? Experiences from Suspronet*. Business Strategy and the Environment 13: 246 - 260. Business Strategy and the Environment. 13. 246 - 260. 10.1002/bse.414.

¹³ Cfr. Tukker, Arnold. (2013). *Product services for a resource-efficient and circular economy - A review*. Journal of Cleaner Production. 97. 10.1016/j.jclepro.2013.11.049.

retain provider ownership while customers purchase access through leasing or rental agreements. Result-oriented systems go one step further, compensating providers according to the performance or outcomes delivered rather than the physical product itself.

Building upon this framework, recent contributions have shown that Product–Service Systems require profound changes in business model architecture. Reim, Parida and Örtqvist identify several dimensions that characterise successful PSS implementation, including customer relationships, contractual arrangements, network configuration, revenue mechanisms, operational capabilities, and lifecycle responsibility¹⁴. The transition from product sales to service provision therefore requires manufacturing firms to develop new organisational capabilities extending well beyond production activities.

The FurnSERVICE Deliverable D2.1 adopts Product–Service Systems as one of the principal analytical frameworks for interpreting current and emerging circular business models. The report identifies Product-as-a-Service (PaaS) as one of the most mature forms of servitization currently emerging across European manufacturing industries¹⁵. Instead of transferring ownership through a single commercial transaction, Product-as-a-Service enables customers to purchase functionality, access, or performance through leasing, subscription, rental, or pay-per-use arrangements.

Applied to the furniture sector, this approach gives rise to the concept of Furniture as a Service (FaaS). **Furniture products are no longer conceived exclusively as goods to be manufactured and sold but increasingly become components of integrated service offerings that may include design consultancy, installation, maintenance, refurbishment, upgrades, relocation, take-back schemes, and end-of-life recovery.**

Maintaining ownership, or at least retaining contractual control over products, fundamentally reshapes manufacturers' incentives. Rather than focusing primarily on the point of sale, firms become economically motivated to maximise product longevity, enhance reparability, facilitate refurbishment, and ensure effective end-of-life recovery, as these activities directly affect lifecycle costs and future value creation. Consequently, product quality, modularity, ease of disassembly, traceability, and maintainability are no longer merely technical design considerations but emerge as strategic drivers of competitiveness and long-term economic performance.

The transition towards Furniture as a Service consequently requires companies to develop capabilities that extend far beyond manufacturing. Lifecycle costing, predictive maintenance, digital product identification, reverse logistics, customer relationship management, refurbishment planning, and asset monitoring become integral parts of the business model. As already anticipated in Deliverable D2.1, the value proposition

¹⁴ Cfr. Reim, Wiebke & Parida, Vinit & Örtqvist, Daniel. (2014). *Product-Service Systems (PSS) business models and tactics - A systematic literature review*. Journal of Cleaner Production. 97. 10.1016/j.jclepro.2014.07.003.

¹⁵ Cfr. FurnSERVICE Project, Deliverable D2.1, *Report on Current and Emerging Circular Business Models in EU Industries*, WP2 Task 2.1.

gradually shifts from selling furniture products towards managing furniture performance throughout their entire lifecycle¹⁶.

This evolution also provides the conceptual bridge towards the **notion of assetization**, discussed in the following sections. While Product–Service Systems explain how products and services become integrated within a single business model, assetization further expands this perspective by interpreting **furniture itself as a long-term economic asset** capable of generating value through multiple use cycles, rather than through a single transaction.

2.3 Servitization as an enabler of circular business models

The relationship between servitization and the circular economy has attracted growing attention within both academic research and European industrial policy. Although the two concepts originate from different theoretical traditions, they increasingly converge around a common objective: extending product lifecycles while preserving the economic, functional, and material value embedded in products and resources.

Circular business models seek to replace the traditional linear sequence of "take–make–dispose" with production and consumption systems capable of maintaining products, components, and materials in circulation for as long as possible. As argued by Bocken and colleagues, this transition requires simultaneous innovation in both product design and business model configuration, combining technical solutions with new forms of value creation and customer interaction¹⁷. Similarly, Stahel's concept of the Performance Economy emphasises that economic growth can increasingly derive from preserving product performance rather than continuously increasing material throughput¹⁸. Within this framework, servitization represents one of the principal operational mechanisms through which circular economy principles can be implemented. Rather than generating value exclusively through product ownership transfer, manufacturers progressively create value through maintenance, repair, upgrading, refurbishment, remanufacturing, take-back schemes, reverse logistics, and reuse. These services contribute to extending product lifetimes while simultaneously creating new revenue opportunities throughout the lifecycle.

¹⁶ *Ibidem*.

¹⁷ Cfr. Bocken, N. M. P., de Pauw, I., Bakker, C., & van der Grinten, B. (2016). *Product design and business model strategies for a circular economy*. *Journal of Industrial and Production Engineering*, 33(5), 308–320. <https://doi.org/10.1080/21681015.2016.1172124>

¹⁸ Cfr. Stahel, Walter. (2010). *The Performance Economy*, Palgrave Macmillan, London <https://doi.org/10.1057/9780230274907>.

This interpretation strongly emerges from the FurnSERVICE Deliverable D2.1, which identifies a broad portfolio of green service strategies currently adopted across European manufacturing industries¹⁹.

Among the most relevant are maintenance services, repair activities, refurbishment programmes, remanufacturing, leasing models, product-sharing solutions, reverse logistics systems, recycling services, and mediated second-hand marketplaces. Although these strategies differ in their operational characteristics, they all contribute to preserving value by reducing premature product replacement and facilitating multiple use cycles.

However, both the literature and D2.1 underline that servitization should not automatically be considered synonymous with sustainability. The environmental benefits of service-based models depend upon several enabling conditions. Products must be conceived for durability, modularity, repairability, upgradeability, and disassembly; logistics systems must efficiently support product recovery and redistribution; digital infrastructures must enable product traceability and lifecycle monitoring; and business models must align economic incentives with long-term resource preservation rather than short-term sales volume.

Consequently, servitization should be interpreted not simply as the addition of services, but as the organisational infrastructure that enables circular economy principles to become economically viable. Services such as maintenance, repair, refurbishment, and product recovery do not merely accompany the physical product; they become mechanisms through which manufacturers preserve, regenerate, and repeatedly capture value over time.

The contribution of servitization is therefore twofold. On the one hand, it supports environmental objectives by reducing waste generation, extending product life, and improving resource efficiency. On the other hand, it creates new competitive opportunities by establishing continuous relationships with customers, generating recurring revenues, and strengthening firms' capacity to manage products beyond their first commercial transaction.

2.4 Furniture as a Service, Assetization and implications for the furniture value chain

Building upon these conceptual foundations, the furniture sector represents one of the industrial domains where servitization and circular economy naturally converge. Furniture products are generally characterised by long technical lifespans, significant residual value, repairability, modularity, and the possibility of being reused across

¹⁹ Cfr. FurnSERVICE Project, Deliverable D2.1, *Report on Current and Emerging Circular Business Models in EU Industries*, WP2 Task 2.1.

different users and contexts. These characteristics make furniture particularly suitable for lifecycle-oriented business models.

The FurnSERVICE Deliverable D2.1 analyses several practical experiences²⁰ which demonstrate that the furniture industry is progressively moving beyond the traditional "design-produce-sell" paradigm²¹. Instead, manufacturers increasingly integrate services such as leasing, maintenance, refurbishment, repair, relocation, buy-back schemes, certified second-hand markets, and end-of-life recovery into their value propositions.

These developments also introduce a broader conceptual evolution that can be interpreted through the notion of assetization. While servitization explains how products and services become integrated into new business models, assetization shifts attention towards the economic nature of the product itself. Furniture is no longer understood as an item whose value is exhausted at the moment of sale, but rather as an asset capable of generating multiple streams of value throughout its lifecycle.

Although the concept has been primarily developed within economic geography and political economy rather than manufacturing studies, Birch and Ward describe assetization as the process through which resources become assets capable of generating future income streams²². Similarly, Chiapello argues that assetization should be understood as a transformation in how economic value is created, preserved, and repeatedly appropriated over time²³. Applied to Furniture as a Service, this perspective suggests that companies progressively shift their strategic objective from maximising the profit associated with the first sale towards maximising the lifetime value generated by each furniture asset.

Under this perspective, maintenance, refurbishment, repair, component replacement, leasing, resale, reverse logistics, and material recovery are no longer peripheral activities. They become integral components of value creation, allowing firms to reactivate economic value embedded in products long after their initial commercial transaction. Assetization therefore complements servitization by providing the economic rationale for designing products and business models around multiple use cycles. This transition has profound implications for the entire furniture value chain. Design activities increasingly need to incorporate durability, modularity, repairability, adaptability, and disassembly from the earliest stages of product development. Material selection extends beyond traditional concerns related to cost, aesthetics, and technical performance to include maintenance requirements, refurbishment potential, recyclability, environmental impact, and residual value. Packaging systems can no longer be conceived solely for first delivery, but increasingly need to support repeated

²⁰ Including IKEA Circular Hub, Gispén and numerous cross-sectoral case studies.

²¹ Cfr. FurnSERVICE Project, Deliverable D2.1, *Report on Current and Emerging Circular Business Models in EU Industries*, WP2 Task 2.1.

²² See footnote 3.

²³ See footnote 3.

transportation, storage, return logistics, and product protection throughout multiple lifecycle phases.

Assembly methods similarly acquire strategic importance. Products designed for Furniture as a Service should facilitate installation, disassembly, component replacement, upgrading, and reconfiguration, reducing intervention costs throughout the lifecycle. Maintenance and refurbishment activities become continuous rather than exceptional, requiring structured processes, technical documentation, spare-part availability, and collaboration between manufacturers and specialised service providers.

Finally, customer relationships evolve from one-off commercial transactions into long-term service partnerships. Companies increasingly manage contracts, maintenance schedules, product monitoring, customer support, relocation services, take-back operations, refurbishment programmes, and secondary-market activities. As highlighted throughout Deliverable D2.1, these activities frequently extend beyond the boundaries of individual firms and require collaboration with logistics providers, maintenance companies, refurbishment specialists, digital platform providers, financial institutions, and recycling operators.

Furniture as a Service should therefore not be interpreted merely as an additional commercial service. Rather, it represents a **systemic transformation of the furniture value chain, where products, services, digital information, and collaborative ecosystems jointly contribute to preserving and regenerating value throughout the entire lifecycle of furniture assets.**

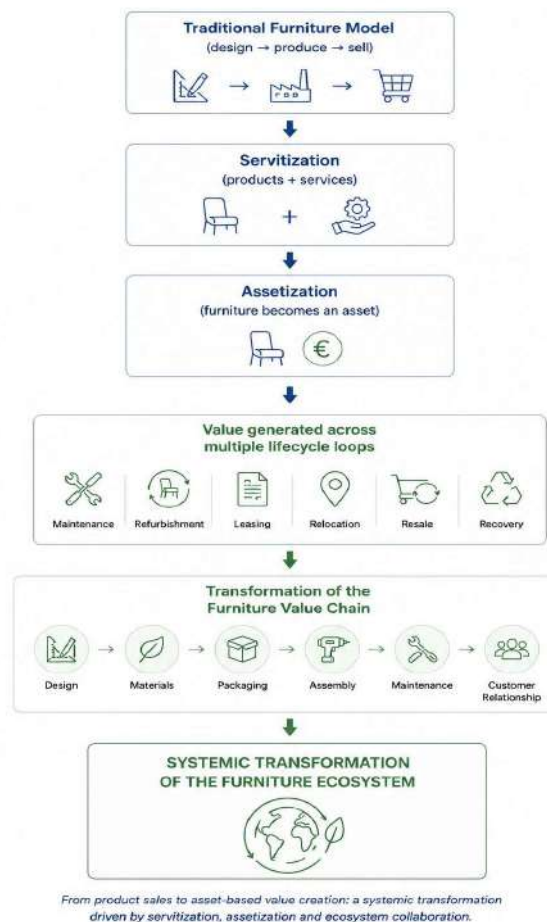


Figure 1: From product sales to asset-based value creation: the evolution from servitization to assetization and its implications for the furniture value chain. – Image generated by AI

The following chapter builds directly upon this perspective. Rather than analysing new business models per se, it investigates how these transformations reshape competence requirements across the different stages of the furniture lifecycle, identifying the new forms of process awareness, lifecycle thinking, and organisational capabilities required to operationalise Furniture as a Service in practice.

2.5 Lessons learned from existing Furniture as a Service experiences

The case studies analysed in the FurnSERVICE Deliverable D2.1 demonstrate that Furniture as a Service cannot be reduced to a single business model. Rather, it encompasses a family of organisational solutions through which companies progressively extend their responsibility beyond manufacturing, assuming an active role throughout the lifecycle of furniture products. Although the analysed organisations differ considerably in terms of size, target markets, ownership structures, and strategic

positioning, several common patterns emerge that provide valuable insights for the future development of the sector.

A first recurring element concerns the centrality of product design. Across the analysed cases²⁴, design is no longer conceived exclusively as an activity aimed at optimising production efficiency or customer aesthetics. Instead, products are increasingly designed to facilitate maintenance, repair, refurbishment, upgrading, disassembly, transportation, and multiple use cycles. Durability and modularity therefore become strategic economic characteristics rather than purely technical attributes.

A second lesson concerns the growing importance of lifecycle management. Companies progressively maintain responsibility for furniture beyond its initial commercial transaction through maintenance services, technical support, refurbishment programmes, take-back systems, and certified resale channels. The economic relationship with customers therefore evolves from a one-off transaction towards continuous interaction supported by service contracts, product monitoring, and recurring interventions.

The analysed experiences also demonstrate the strategic role of digitalisation. Digital platforms support product traceability, maintenance scheduling, customer interaction, inventory management, product identification, and reverse logistics. Rather than representing an independent technological innovation, digital tools become enabling infrastructures supporting circular business models and lifecycle value creation.

Perhaps the most significant finding emerging from Deliverable D2.1 concerns the growing importance of collaborative ecosystems. None of the analysed organisations performs every activity internally. Maintenance, refurbishment, transportation, logistics, material recovery, financing, digital services, and customer support frequently involve specialised external partners. Consequently, Furniture as a Service increasingly depends upon the capacity to coordinate networks of organisations rather than solely internal company resources.

These experiences demonstrate that the transition towards Furniture as a Service is primarily an organisational transformation. Products, services, logistics, digital technologies and external partnerships become progressively integrated into a single value creation system centred on the lifecycle of furniture assets rather than on their initial production and sale.

2.6 Research implications: from business models to competence transformation

The state of the art reviewed throughout this chapter highlights a significant evolution in the academic and industrial understanding of servitization. Existing

²⁴ Including IKEA Circular Hub and Gispén.

literature has successfully explained how Product–Service Systems, circular business models, and more recently assetization can reshape value creation within manufacturing industries. Likewise, the FurnSERVICE Deliverable D2.1 has provided an extensive mapping of current business models and practical experiences across the European furniture sector and related industries.

Nevertheless, an important analytical gap remains. Most existing contributions concentrate on what companies should do, that is, how they should redesign products, services, business models, and customer relationships to support circularity. Comparatively less attention has been devoted to how companies should reorganise their competences to implement these transformations successfully.

The transition towards Furniture as a Service does not necessarily generate entirely new occupations. Instead, it modifies the responsibilities, decision-making processes, and competence requirements associated with existing professional roles. Designers, engineers, production managers, logistics specialists, procurement officers, customer service professionals, sustainability managers, and sales teams all become involved in decisions that influence the product long after its initial manufacture. Lifecycle thinking therefore becomes distributed across the organisation rather than concentrated within individual departments.

This observation represents the principal conceptual contribution of the present report. Rather than interpreting Furniture as a Service primarily as a business model innovation, the report analyses it as a competence transformation process. The focus consequently shifts from identifying entirely new professional profiles towards understanding how existing occupations require new forms of process awareness, lifecycle thinking, collaborative capabilities, and systemic understanding.

This perspective is particularly relevant for SMEs, which represent the overwhelming majority of companies operating within the European furniture industry. Unlike large multinational organisations, SMEs rarely create dedicated departments for servitization or circularity. Instead, organisational transformation generally occurs through the progressive redistribution of responsibilities across existing functions. Designers become increasingly responsible for serviceability and refurbishment; production engineers consider future maintenance and disassembly during process planning; procurement managers evaluate suppliers according to circular criteria; logistics personnel organise reverse flows alongside traditional distribution; and commercial departments increasingly manage long-term service relationships rather than one-off sales.

The transition towards Furniture as a Service should be understood less as the creation of entirely new professions than as the emergence of a new organisational culture in which lifecycle thinking permeates every stage of the furniture value chain. Competence development therefore becomes the principal enabling condition through which servitization and assetization can be translated from theoretical concepts into everyday industrial practice.

This observation provides the conceptual bridge towards the following chapter, which investigates in greater detail how competence requirements evolve across the different phases of the furniture lifecycle, from product design and material selection to assembly, maintenance, refurbishment, reverse logistics, and digital lifecycle management.

2.7 Implications for competence development across the furniture lifecycle

The transition towards Furniture as a Service and assetization extends far beyond the redesign of business models. It fundamentally reshapes the way companies conceive products, organise production processes, interact with customers, and coordinate value creation throughout the lifecycle of furniture assets. As a consequence, competence requirements evolve across every stage of the furniture value chain.

Unlike traditional manufacturing models, where each organisational function primarily focuses on optimising its own operational performance, Furniture as a Service requires decisions to be taken from a lifecycle perspective. Design activities increasingly incorporate durability, modularity, reparability, adaptability, and future refurbishment into product development. Material selection expands beyond technical performance and production costs to include recyclability, maintenance requirements, environmental impacts, and residual value preservation. Packaging systems are no longer conceived exclusively for first delivery but increasingly need to support multiple transportation cycles, reverse logistics, storage, and product protection throughout successive use phases.

Production and assembly processes are similarly affected. Furniture intended for multiple lifecycle loops must facilitate installation, disassembly, component replacement, upgrading, and reconfiguration, reducing intervention time and maintenance costs while preserving product quality. Reverse logistics, refurbishment, and recovery become planned operational activities rather than exceptional end-of-life interventions.

Commercial functions also experience significant transformation. Customer relationships evolve from one-off sales transactions towards long-term service partnerships based on maintenance agreements, leasing contracts, refurbishment programmes, take-back schemes, and continuous customer support. At the same time, financial and managerial functions increasingly need to evaluate lifecycle costs, residual value, asset utilisation rates, refurbishment investments, and recurring revenue streams generated throughout the useful life of furniture products.

The FurnSERVICE Deliverable D2.1 repeatedly highlights that these activities cannot be understood as isolated organisational functions. Instead, they form an integrated lifecycle management system in which design, manufacturing, logistics, digital

technologies, customer services, maintenance providers, refurbishment operators, and recycling organisations jointly contribute to preserving and regenerating value.

This means that **the implementation of Furniture as a Service depends not only on technological innovation or new commercial models, but also on the capacity of organisations to redistribute knowledge, responsibilities, and decision-making across the entire value chain.** Lifecycle thinking progressively becomes a shared organisational capability rather than the responsibility of a single department or specialised function.

2.8 Research gap and conceptual framework for the present report

The literature reviewed throughout this chapter demonstrates that servitization, Product–Service Systems, circular business models, and assetization have considerably advanced the understanding of how manufacturing firms can generate economic and environmental value beyond the traditional product-sale paradigm. Likewise, the FurnSERVICE Deliverable D2.1 has provided a comprehensive mapping of current business models, industrial practices, and service strategies emerging across the furniture sector and related manufacturing industries. However, a significant research gap remains.

Existing studies predominantly investigate how companies should redesign their business models, which services should be integrated, or how circular economy principles can improve environmental performance. Comparatively limited attention has been devoted to understanding how these organisational transformations reshape competence requirements within firms and across the broader furniture ecosystem.

Rather than identifying entirely new occupations, **this report starts from the assumption that Furniture as a Service primarily modifies the way existing professional roles operate.** Designers, process engineers, procurement specialists, logistics managers, customer service professionals, sustainability officers, sales teams, and production personnel continue to perform their traditional functions, yet they are increasingly required to incorporate lifecycle thinking, service orientation, digital traceability, collaboration with external actors, and circular value creation into their daily activities.

The central hypothesis underpinning this report is therefore that **Furniture as a Service does not primarily require new professions, but rather a new distribution of competences, responsibilities, and process awareness throughout the organisation.** The transition towards servitized and asset-based business models depends less on creating specialised departments than on embedding lifecycle thinking within existing organisational structures.

This perspective is particularly relevant for the European furniture sector, where SMEs represent the dominant industrial structure. Unlike large multinational corporations, smaller firms rarely possess dedicated departments for circular economy, servitization, or lifecycle management. Organisational transformation therefore occurs

through incremental upskilling processes that progressively integrate new competences into existing occupations and operational routines.

Building upon the conceptual framework developed in Deliverable D2.1, the following chapter investigates this competence transformation in greater detail. Rather than classifying occupations, it analyses how every stage of the furniture lifecycle, from design and material selection to production, packaging, maintenance, refurbishment, reverse logistics, and digital lifecycle management, requires new forms of knowledge, skills, and organisational capabilities to operationalise Furniture as a Service and assetization in practice.

3. FURNITURE AS A SERVICE AND FURNITURE TRANSFORMATION

The previous chapter showed that the transition towards Furniture as a Service extends well beyond the introduction of new business models. Rather than creating entirely new occupations, it progressively reshapes how existing functions contribute to value creation throughout the furniture lifecycle. This competence transformation represents the core analytical focus of the present report and directly addresses the research question introduced in §2.

More specifically, the chapter responds to the three operational sub-questions that underpin the study. First, it examines how servitization transforms the furniture value chain from product design to end-of-life management. Second, it identifies the competences required to support service-oriented and circular business models. Finally, it analyses how companies need to rethink key operational processes, including design, material selection, production, maintenance, logistics, and digital lifecycle management, to successfully implement Furniture as a Service.

Rather than presenting competences as isolated knowledge domains, the analysis follows the evolution of the furniture lifecycle itself. This process-oriented perspective reflects the central assumption developed throughout the report: the transition towards Furniture as a Service is primarily characterised by a redistribution of responsibilities, decision-making processes, and lifecycle awareness across existing organisational functions. Consequently, competence development becomes embedded within each stage of the value chain, where technical decisions increasingly influence future maintenance, refurbishment, reuse, reverse logistics, and asset value preservation.

The chapter is therefore organised around three interconnected dimensions of competence transformation:

- product conception and design for multiple lifecycles;
- lifecycle management through production, use, maintenance, and customer services;
- value recovery through reverse logistics, digital traceability, and ecosystem coordination.

3.1 Designing furniture for multiple lifecycles

The transition towards Furniture as a Service begins long before furniture reaches the customer. The ability to maintain, repair, refurbish, relocate, reuse, or recover a product throughout multiple lifecycle loops is largely determined during the design phase. Consequently, product development becomes the first stage where competence transformation takes place.

Within traditional manufacturing models, furniture design has primarily sought to optimise aesthetics, functionality, manufacturing efficiency, and production costs. While these objectives remain fundamental, **Furniture as a Service requires designers to simultaneously anticipate future service activities that may occur several years after production.** Decisions concerning product architecture, component accessibility, fastening systems, modularity, dimensions, and material combinations directly influence maintenance operations, refurbishment costs, transportation efficiency, and end-of-life recovery.

This evolution introduces a **broader design perspective in which durability and serviceability become strategic design variables rather than simply quality attributes.** Products are increasingly expected to remain economically valuable beyond their first use cycle, making longevity, adaptability, repairability, and ease of disassembly integral elements of product development. In this context, design no longer aims exclusively at producing better furniture but at enabling furniture to remain functional, maintainable, and economically valuable throughout its entire lifecycle.

Material selection follows the same logic. Rather than focusing exclusively on mechanical performance, aesthetics, or procurement costs, companies increasingly evaluate materials according to their durability, replaceability, recyclability, maintenance requirements, environmental performance, and compatibility with refurbishment processes. Standardisation of components and the selection of materials capable of supporting repeated maintenance interventions become essential for reducing lifecycle costs and preserving residual value.

These transformations do not necessarily require new professional profiles. Instead, they expand the scope of existing design and engineering functions. Designers, product developers, process engineers, procurement specialists, and technical managers progressively incorporate lifecycle considerations into their decision-making processes, integrating principles such as modularity, Design for Disassembly, Design for Repair, circular design, and service-oriented product development. Their role therefore extends beyond the production phase to encompass the future operational life of furniture assets.

From a competence perspective, this shift is characterised less by the acquisition of isolated technical skills than by the development of a broader process awareness. Professionals are increasingly required to understand how early design decisions affect downstream activities performed by different organisational functions, including

logistics, maintenance, refurbishment, customer services, and recovery operations. Product development thus becomes the point at which technical, environmental, economic, and organisational considerations converge, laying the foundations for the successful implementation of Furniture as a Service and assetization strategies.

3.2 Managing products throughout their lifecycle

Within Furniture as a Service models, value creation does not conclude when furniture is delivered to the customer. Instead, delivery marks the beginning of a continuous management process in which manufacturers, service providers, customers, and external partners interact throughout the operational life of the product. This shift fundamentally changes how companies organise production, customer relationships, and post-sales activities, extending responsibility well beyond manufacturing.

Packaging and assembly represent the first stages of this transformation. Under traditional business models, packaging is primarily designed to protect products during a single transportation cycle, while assembly focuses on efficient installation at the customer's premises. Furniture as a Service introduces different priorities. Packaging solutions increasingly need to support multiple transport cycles, facilitate reverse logistics, reduce material consumption, and simplify storage and handling during maintenance or relocation. Likewise, assembly methods are progressively designed to facilitate future disassembly, replacement of components, upgrades, and repeated installation without compromising product integrity.

The operational phase similarly evolves from a reactive after-sales service into a structured lifecycle management strategy. Preventive maintenance, periodic inspections, refurbishment programmes, software or hardware upgrades where applicable, and customer support become integral components of the business model rather than optional services. Their objective is not only to ensure customer satisfaction but also to preserve the technical performance, residual value, and economic viability of furniture assets over extended periods of use.

These changes reshape the responsibilities associated with several organisational functions. Production managers are increasingly required to consider future maintenance requirements during manufacturing planning. Logistics specialists coordinate product delivery with installation, collection, refurbishment, and redistribution activities. Customer service functions evolve into long-term relationship management, requiring continuous interaction with clients throughout successive service cycles. Procurement departments similarly contribute by selecting suppliers and components capable of supporting repeated maintenance interventions and long-term availability of spare parts.

From a competence perspective, Furniture as a Service therefore requires organisations to integrate operational, technical, and relational capabilities within a single lifecycle management framework. Professionals are increasingly expected to understand how decisions taken during production, installation, maintenance, and

customer interaction influence the long-term performance of furniture assets. Rather than introducing entirely new occupations, servitization expands the decision-making horizon of existing organisational functions, encouraging a stronger integration between manufacturing, service provision, and customer value creation.

Ultimately, **lifecycle management transforms furniture from a product delivered once into an asset that remains under continuous organisational attention.** The ability to coordinate production, maintenance, refurbishment, customer services, and operational planning throughout successive use cycles becomes one of the defining competences of Furniture as a Service, directly supporting both circular economy objectives and long-term business competitiveness.

3.3 Closing the loop: Reverse logistics, digital traceability and ecosystem coordination

The transition towards Furniture as a Service ultimately depends on companies' ability to recover, monitor, and reintroduce furniture assets into successive lifecycle loops. While product design establishes the conditions for durability and serviceability, and lifecycle management preserves value during use, the closing phase determines whether this value can effectively be retained and regenerated over time. In this respect, reverse logistics, digital traceability, and ecosystem coordination become strategic enablers of assetization, allowing companies to transform circularity into long-term economic value.

Unlike traditional linear business models, where products typically leave the manufacturer's responsibility after the point of sale, **Furniture as a Service requires mechanisms capable of bringing products back into organised value chains. Reverse logistics therefore extends well beyond the physical transportation of returned furniture.** It encompasses product collection, inspection, condition assessment, refurbishment planning, spare-parts management, component replacement, redistribution, remanufacturing, recycling, and, where appropriate, responsible end-of-life treatment. These activities transform product recovery from a regulatory or environmental obligation into a core business function that contributes to preserving asset value and extending product lifecycles.

The effectiveness of these processes increasingly depends on **digital traceability.** Throughout multiple lifecycle loops, companies need reliable information regarding product identity, material composition, maintenance history, repair interventions, component replacement, ownership or contractual arrangements, and residual value. Technologies such as **Digital Product Passports, QR codes, RFID systems, IoT-enabled monitoring devices, and cloud-based lifecycle management platforms** make it possible to collect and share this information across different actors involved in the lifecycle of furniture products. Beyond facilitating regulatory compliance, digital traceability provides the informational infrastructure necessary to support maintenance planning,

refurbishment decisions, performance monitoring, and the continuous optimisation of service-based business models.

At the same time, the successful implementation of Furniture as a Service extends beyond the organisational boundaries of individual companies. **Many lifecycle activities, including maintenance, refurbishment, transportation, reverse logistics, product certification, recycling, and digital services, are likely to be carried out by specialised external organisations.** As a result, **value creation progressively shifts from individual firms to interconnected service ecosystems composed of manufacturers, suppliers, logistics operators, maintenance providers, refurbishment centres, digital platform developers, recycling companies, certification bodies, and training organisations.** The competitiveness of Furniture as a Service models therefore depends not only on internal organisational capabilities but also on the capacity to coordinate these distributed networks efficiently.

From a competence perspective, this evolution reinforces the importance of coordination, collaboration, and governance capabilities alongside technical expertise. Managers, logistics specialists, procurement professionals, sustainability managers, customer service teams, and digital platform operators increasingly need to work across organisational boundaries, integrating technical knowledge, lifecycle data, contractual arrangements, and customer requirements into coherent operational processes. Consequently, competence transformation concerns not only the evolution of individual professional roles but also the organisational ability to orchestrate complex value networks in which products, information, and responsibilities continuously circulate among multiple actors.

Taken together, the three dimensions analysed throughout this chapter demonstrate that the transition towards Furniture as a Service is fundamentally a process of organisational transformation. Competence development no longer concerns isolated training interventions or the acquisition of new technical knowledge alone. Instead, it requires the progressive integration of lifecycle thinking across the entire furniture value chain, from product conception and material selection to maintenance, recovery, and ecosystem coordination. In this perspective, servitization does not simply redistribute activities along the lifecycle of furniture products; it redistributes responsibilities, decision-making processes, and competence requirements across organisations and their external partners.



Figure 2: Conceptual framework of organisational transformation in Furniture as a Service. Image generated by AI

These findings also suggest that adopting Furniture as a Service cannot be assessed solely through technological readiness or workforce training initiatives. **Companies must evaluate whether their organisational structures, business processes, governance models, and collaborative networks are collectively prepared to support lifecycle-based value creation.** Readiness therefore becomes a multidimensional concept, encompassing products, competences, organisational capabilities, and ecosystem integration.

Building upon these considerations, the following chapter shifts from analysis to action. It proposes a framework for assessing company readiness, identifies the principal organisational areas requiring adaptation, and formulates practical recommendations for SMEs, training providers, and sectoral stakeholders seeking to implement Furniture as a Service and assetization strategies within the European furniture sector.

4. COMPANY READINESS, ECOSYSTEM INTEGRATION AND RECOMMENDATIONS

4.1 Assessing Company Readiness for Furniture as a Service

The transition towards Furniture as a Service requires companies to rethink not only their products and business models, but also their overall organisational readiness. As discussed throughout the previous chapters, successful implementation depends less on the introduction of isolated technological solutions or the creation of entirely new professional roles than on the capacity of organisations to progressively integrate

lifecycle thinking across existing business functions. Consequently, assessing company readiness becomes a fundamental step for organisations seeking to adopt service-oriented and circular business models.

Organisational readiness should not be interpreted as a binary condition in which companies are either prepared or unprepared to implement Furniture as a Service. Rather, it represents a **gradual process through which products, organisational structures, competences, digital infrastructures, and external relationships progressively evolve to support lifecycle-based value creation**. This perspective is particularly relevant for SMEs, which constitute the vast majority of firms operating within the European furniture industry. Unlike large corporations, smaller organisations rarely possess dedicated departments for servitization, circular economy, or lifecycle management. Instead, transformation generally occurs incrementally, through the adaptation of existing processes and the gradual redistribution of responsibilities across organisational functions.

Readiness hence extends beyond workforce skills or technological investments alone. Companies may possess highly qualified personnel while lacking products designed for refurbishment, digital systems capable of supporting lifecycle traceability, or partnerships necessary to manage reverse logistics and maintenance services. Conversely, organisations may have introduced circular design principles but still operate according to governance models primarily oriented towards one-off product sales. **Furniture as a Service therefore requires organisations to develop a balanced combination of technical, organisational, digital, and collaborative capabilities.**

Building upon the analysis developed in the previous chapters, this report proposes a conceptual framework for assessing organisational readiness based on five complementary dimensions: Products, Processes, People, Digitalisation, and Ecosystem. Together, these dimensions provide an integrated perspective on the organisational capabilities required to support Furniture as a Service and asset-based value creation throughout the furniture lifecycle.

The first dimension concerns Products. Readiness begins with the characteristics of the furniture itself. Products intended to support multiple lifecycle loops should incorporate principles such as durability, modularity, repairability, ease of disassembly, and material traceability. These characteristics determine whether maintenance, refurbishment, reuse, and end-of-life recovery can be carried out efficiently and economically.

The second dimension focuses on Processes. Companies should evaluate whether their operational activities extend beyond manufacturing to include lifecycle management practices such as preventive maintenance, refurbishment planning, reverse logistics, customer support, and product recovery. Furniture as a Service requires production and service processes to be conceived as interconnected components of a continuous value creation system rather than as isolated organisational functions.

The third dimension addresses People. Rather than creating entirely new occupations, organisations need to ensure that existing professional roles progressively incorporate lifecycle thinking into everyday decision-making. Designers, engineers, production managers, procurement specialists, logistics personnel, customer service teams, and commercial departments all contribute to preserving product value throughout successive lifecycle phases. Readiness therefore depends on the extent to which lifecycle considerations are embedded across organisational functions and reflected in coordinated decision-making.

The fourth dimension concerns Digitalisation. Digital technologies increasingly provide the informational infrastructure supporting Furniture as a Service. Product identification, Digital Product Passports, lifecycle data management, predictive maintenance, inventory monitoring, and digital traceability systems enable organisations to manage furniture assets throughout multiple use cycles while supporting informed operational and strategic decisions.

Finally, **the fifth dimension relates to the Ecosystem.** Furniture as a Service rarely operates within the boundaries of a single organisation. Maintenance providers, logistics operators, refurbishment centres, recycling companies, digital platform providers, certification bodies, and training organisations all contribute to lifecycle value creation. Organisational readiness therefore depends not only on internal capabilities but also on the ability to establish, coordinate, and maintain collaborative relationships across the broader furniture ecosystem.

These five dimensions suggest that readiness should be understood as a systemic organisational capability rather than a collection of isolated initiatives. Companies are not required to achieve complete maturity in every dimension before experimenting with Furniture as a Service. Instead, the framework provides a structured basis for identifying organisational strengths, recognising areas requiring further development, and prioritising incremental transformation pathways.

4.2 Ecosystem Integration and Organisational Transformation

While organisational readiness provides the internal foundations for implementing Furniture as a Service, long-term success ultimately depends on the ability of companies to operate within broader collaborative ecosystems. Unlike traditional linear business models, where value creation is concentrated around manufacturing and product sales, Furniture as a Service extends organisational responsibilities throughout the entire product lifecycle. This shift requires manufacturers to coordinate a wider range of activities, many of which involve specialised external actors rather than being performed entirely in-house.

The transition from product ownership to lifecycle management therefore transforms the nature of organisational boundaries. Companies are no longer responsible solely for designing, manufacturing, and delivering furniture, but

increasingly participate in networks that support maintenance, refurbishment, logistics, digital monitoring, component replacement, material recovery, and product recirculation. Consequently, organisational competitiveness depends not only on internal capabilities but also on the ability to coordinate distributed resources, expertise, and services across the value chain.

This ecosystem perspective is particularly relevant for SMEs, which often lack the financial and organisational resources required to internalise every lifecycle activity. Rather than replicating the vertically integrated structures typical of larger corporations, smaller firms can achieve competitiveness by developing strategic partnerships with specialised organisations. Maintenance providers, logistics companies, refurbishment centres, digital technology providers, recycling operators, certification bodies, and training organisations each contribute complementary capabilities that collectively enable Furniture as a Service.

The role of digital technologies becomes particularly important in supporting ecosystem integration. Shared information systems, Digital Product Passports, asset management platforms, predictive maintenance tools, and lifecycle traceability solutions facilitate information exchange among different actors while improving transparency, coordination, and decision-making throughout the product lifecycle. Digital infrastructures therefore function not only as operational tools but also as enablers of collaboration across organisational boundaries.

However, ecosystem integration should not be understood merely as the creation of contractual relationships between independent organisations. It requires the alignment of objectives, responsibilities, and information flows across multiple actors contributing to the same lifecycle outcomes. As organisations progressively adopt service-oriented business models, competitive advantage increasingly derives from the capacity to coordinate complementary expertise rather than from controlling every stage of production internally. In this context, collaboration becomes a strategic organisational capability rather than a simple operational necessity.

Furniture as a Service represents a shift from firm-centred value creation towards ecosystem-centred value creation. Manufacturers continue to play a central role in product design and lifecycle governance, but value is increasingly co-created through interactions among multiple organisations contributing different resources and competences throughout successive lifecycle phases. Organisational transformation therefore extends beyond the boundaries of individual firms, becoming a collective process involving the wider furniture ecosystem.

4.3 Recommendations for SMEs, Training Providers and Sectoral Stakeholders

The successful implementation of Furniture as a Service depends not only on the readiness of individual companies but also on the coordinated efforts of the wider

furniture ecosystem. As discussed throughout this report, the transition towards service-oriented and circular business models requires the progressive integration of lifecycle thinking into products, organisational processes, competences, digital infrastructures, and collaborative relationships. Consequently, different stakeholder groups have complementary roles in supporting this transformation.

For SMEs, the priority should be to approach Furniture as a Service as a gradual organisational transition rather than as a radical change of business model. Most companies are unlikely to adopt fully service-based models immediately. Instead, organisations can progressively strengthen their readiness by improving product durability and modularity, introducing maintenance and refurbishment services, investing in digital traceability solutions, and establishing partnerships with specialised service providers. Incremental experimentation allows firms to develop internal capabilities while reducing the risks associated with organisational change.

For training providers, the challenge extends beyond updating technical curricula. Education and vocational training programmes should increasingly prepare learners to understand products from a lifecycle perspective, combining technical competences with systems thinking, collaboration, digital literacy, and sustainability awareness. Since Furniture as a Service redistributes responsibilities across existing professional roles, continuous upskilling and interdisciplinary learning become essential to enable workers to operate effectively within evolving organisational contexts.

For sectoral stakeholders, including industry associations, policymakers, research organisations, and standardisation bodies, the priority is to create enabling conditions that facilitate collaboration across the furniture value chain. Common standards for lifecycle information, support for Digital Product Passport implementation, knowledge-sharing initiatives, collaborative innovation projects, and dedicated funding instruments can accelerate the diffusion of service-oriented and circular business practices, particularly among SMEs with limited internal resources.

The transition towards Furniture as a Service should be understood as an ecosystem transformation rather than a purely technological or organisational one. Competitive advantage increasingly derives from the ability of organisations to combine product innovation with lifecycle management, digital infrastructures, collaborative networks, and continuous competence development. In this context, skills represent one enabling component of a broader organisational capability that integrates people, processes, technologies, and partnerships throughout the product lifecycle.

Furniture as a Service does not simply redefine how furniture is commercialised; it redefines how value is created, maintained, and recovered over time. Organisations capable of embedding lifecycle thinking within their strategies and collaborating effectively across the wider ecosystem will be better positioned to respond to evolving sustainability requirements, changing customer expectations, and emerging circular economy opportunities.



Figure 3: Conceptual framework illustrating the transition from traditional product sales to asset-based value creation through servitization, assetization, and lifecycle-oriented transformation of the furniture value chain. Image generated by AI

5. CONCLUSIONS AND KEY INSIGHTS

5.1 Furniture as a Service and the transformation of competences

The findings discussed in this report indicate that Furniture as a Service (FaaS) involves more than a change in the way furniture is offered to customers. Its relevance lies in a different understanding of the product itself and of the value that can be generated from it over time. In a conventional model, much of the relationship between producer and customer ends with the sale. In a service-based model, instead, companies may remain involved throughout a larger part of the product lifecycle. Maintenance, repair, refurbishment, reuse and recovery consequently become part of the value proposition. This also creates a closer connection between servitization and circularity, since preserving the functionality and value of furniture for longer becomes economically relevant for the provider as well as environmentally desirable.

Such a transition inevitably affects the competences required within furniture companies. However, the results do not point to a simple replacement of existing occupations by entirely new professional profiles. In many cases, the more significant change concerns what workers are expected to know and do within established roles. Designers, production workers, technicians, sales staff and managers may all need to

incorporate new knowledge into their activities. Digital competences are increasingly relevant for working with product information, connected technologies and lifecycle data, while green competences support decisions concerning materials, durability, reparability and environmental performance. At the same time, a service relationship extending beyond the initial sale places greater emphasis on customer interaction, problem-solving and collaboration between different functions of the company.

The competence challenge associated with FaaS can be understood primarily in terms of adaptation and integration. The furniture sector already relies on a substantial base of technical, manufacturing and craft knowledge, which remains important in a more circular model. What changes is the context in which this knowledge is applied. Existing expertise has to interact with digital tools, environmental considerations and service-oriented practices that cut across traditional occupational boundaries. Upskilling and reskilling therefore become important not simply to respond to technological change, but to enable firms to reorganise existing knowledge around the entire lifecycle of the product. The capacity to combine established sectoral expertise with these emerging competences represents one of the main conditions for turning FaaS from a business model concept into a viable form of circular and asset-based value creation.

5.2 Organisational readiness and ecosystem coordination for circular servitization

The availability of appropriate competences is only one part of the transition towards Furniture as a Service. Firms also need to create the organisational conditions in which these competences can be effectively used. FaaS extends company activities beyond production and sales and requires attention to what happens to products during and after their use. As a result, **functions that may traditionally operate quite separately, such as design, production, sales, logistics and after-sales services, become more closely connected.** Information collected during the use phase, for example, can support maintenance activities but can also provide useful feedback for product design, material choices and future production decisions. Organisational readiness therefore depends on the ability to connect different functions and integrate lifecycle considerations into ordinary business processes.

This also means that **the transition cannot be reduced to the adoption of individual technologies.** Digital tools can support traceability, data collection, product monitoring and communication with customers, but their contribution depends on how they are embedded within organisational practices. Responsibilities for managing data, maintaining customer relationships, coordinating return flows or assessing opportunities for repair and refurbishment need to be clearly defined. Circular servitization requires firms to develop capabilities that combine technological adoption with changes in processes, responsibilities and forms of internal collaboration. This organisational dimension is particularly important because FaaS introduces activities

that may be unfamiliar to companies whose structures and routines have historically been centred on manufacturing and product sales. At the same time, many of the activities required by a lifecycle-oriented model cannot necessarily be managed by a single company. Maintenance, logistics, refurbishment, digital services, material recovery and training may involve different organisations and areas of expertise. The implementation of FaaS should therefore also be considered from an ecosystem perspective. Manufacturers need to interact with suppliers, customers, technology and service providers, education and training organisations and other actors across the value chain. The capacity to coordinate these relationships, exchange relevant information and define complementary responsibilities becomes an important part of the business model itself. Circular value creation consequently depends not only on what individual firms are able to do internally, but also on their capacity to participate in networks through which resources, knowledge and competences can be shared. Organisational readiness and ecosystem coordination can thus be regarded as complementary conditions for translating the potential of FaaS into workable and scalable practices.

5.3 Implications for European furniture SMEs and future perspectives

The transition towards Furniture as a Service presents both opportunities and challenges for the European furniture sector. This is particularly relevant for SMEs, which represent a substantial part of the sector and often operate with more limited financial, technological and human resources. Implementing a service-based model may require capabilities that are difficult for smaller firms to develop entirely in-house, especially when activities such as digital infrastructure, product monitoring, reverse logistics, refurbishment or data management are involved. For SMEs, the transition towards FaaS is therefore unlikely to depend on the internalisation of every competence and activity required by the model. A more realistic pathway may involve identifying the capabilities that remain strategic within the firm while accessing complementary knowledge and services through external collaboration.

The wider sectoral ecosystem becomes particularly relevant. Cooperation between companies, technology providers, training organisations, research institutions and other intermediaries can reduce some of the barriers associated with the adoption of circular and service-based models. Shared training initiatives, access to technological expertise and collaboration along the value chain can allow firms to experiment with new practices without having to develop all the necessary resources independently. This also has implications for competence development policies. Training provision needs to respond not only to specific technical skill gaps, but also to the growing interaction between digitalisation, sustainability and servitization. Flexible forms of training, including short learning programmes and micro-credentials, may be particularly useful in supporting the progressive upskilling and reskilling of workers while responding to the practical constraints faced by SMEs.

Looking ahead, **the development of FaaS in the European furniture sector will depend on the capacity to bring together these different dimensions. Technology** provides important tools for managing products and information throughout their lifecycle, but technological availability alone does not determine whether a new business model can be successfully implemented. Firms also need **appropriate competences, organisational structures and access to external capabilities**. The transition is therefore likely to be gradual and to take different forms depending on company size, market position, product characteristics and existing networks. Rather than representing a single model to be adopted uniformly across the sector, FaaS can be understood as a direction of transformation towards longer product lifecycles, stronger service relationships and a more continuous management of value. Its future development will ultimately depend on how effectively European furniture companies and their ecosystems are able to combine established manufacturing expertise with new digital, green and service-oriented capabilities.

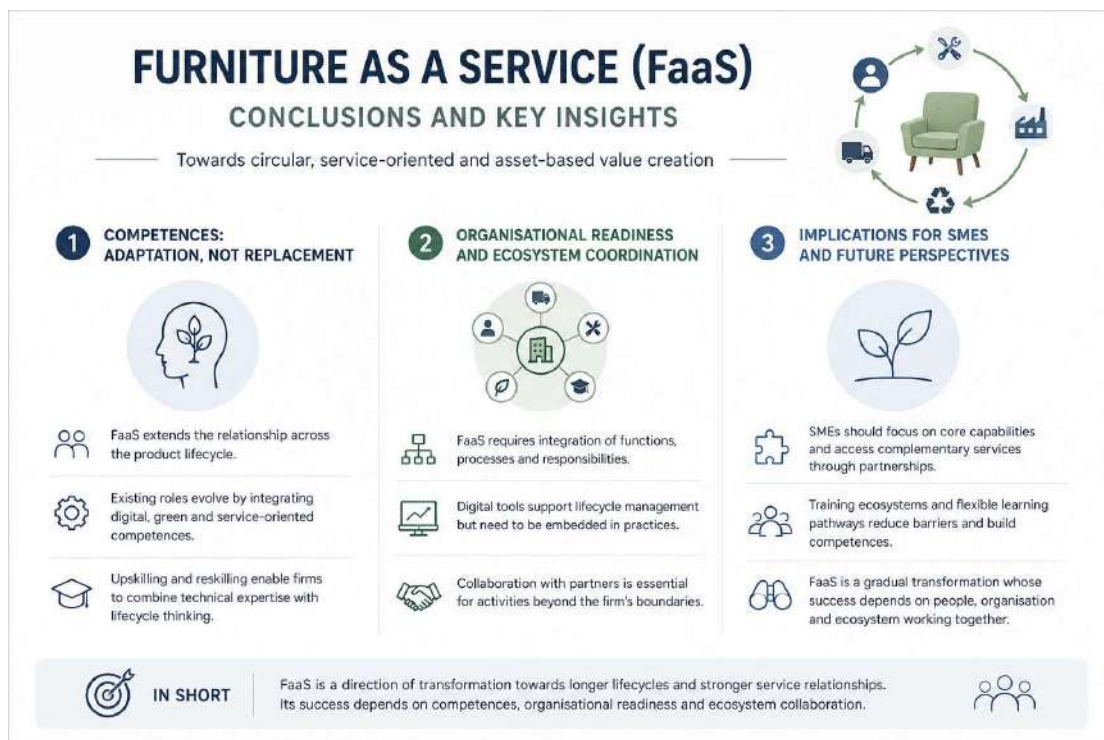


Figure 4: Key conclusions of the report: competence development, organisational readiness and ecosystem coordination as enabling conditions for Furniture as a Service. Image generated by AI

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