EDHEC | Centre for Net Positive Business

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White Paper

Servitisation as a Key Lever to Accelerate Deep Retrofit

Opportunities for End Users and the Retrofit Value Chain

May 2025

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About the **Regenerative Built Environment Programme**

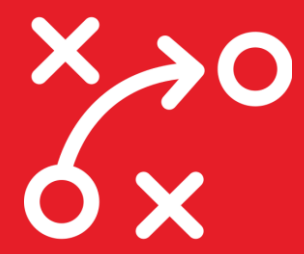
We are the largest market-led initiative to develop new business and drive net positive impact across the value chain

The **Circular Leaders Group** supports this shared effort, reinforcing our position as the largest market-led initiative to develop new business and drive net-positive impact across the value chain.

Together with our partner network, we work

across 3 Strategic Playing Fields:

1. Retrofit at scale
2. Circularity across the value chain
3. Digitalisation of built futures



Based on Co-creation

Working together across the built environment value chain, including material suppliers, manufacturers, technology providers, designers, service providers, investors, public authorities and platform operators.

Focus on 3-5 year Horizons

We focus on strategic opportunities that balance urgency for action with the time needed to develop, test and scale systemic solutions.

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This document is a call for action by the participants of the EDHEC's *Future Of Buildings* programme to leverage servitisation to accelerate retrofit in Europe.

Servitisation is a strategy for new revenues and higherprofitability across the built environment value chain. It is also a powerful catalyst for the acceleration of deep retrofit. Today we only renovate 1.2% of Europe's building stock per year, new solutions are required to lift this to 2-3%[1]. The white paper explains how to develop and connect the five elements of servitisation to build powerful business models and we share inspiring case study examples.

Test your servitisation readiness here!

Executive Summary and Introduction

Servitisation is emerging as a key strategy not only to generate new business but also to sustain existing operations, while accelerating the pace of building retrofit across Europe.

The built environment accounts for approximately 40% of global energy-related carbon emissions[2]. To operate within planetary boundaries, it is essential to rethink material consumption during both construction and building operation. Central to this effort is the EU Renovation Wave, which aims to **upgrade 35 million buildings by 2030** to improve energy efficiency and asset utilisation [3]. Achieving Europe's greenhouse gas reduction targets over the next five years will require that 70% of renovations to be deep retrofits. **Deep retrofitting** involves a systemic approach, deploying multiple energy-saving measures to reduce energy consumption by 30–70% while enhancing indoor comfort[4]. This level of renovation is critical: if the building industry fails to meet its decarbonisation goals, it could leave a 10–14% emissions gap - one that other sectors cannot compensate for, even with full decarbonisation [5].

However, the current renovation rate of 1.2% annually falls short of the 2–3% needed[1]. To close this gap, the market must embrace innovative solutions that make retrofitting faster, more affordable, and less complex. There is a clear opportunity for organisations to lead by offering simplified retrofit processes, reducing upfront capital barriers, building strong customer trust, and delivering locally tailored, high-impact solutions. Servitisation models are well-positioned to meet these needs and play a pivotal role in scaling deep renovation across Europe.

WHAT IS SERVITISATION?

Servitisation refers to the strategic shift from solely offering physical products to delivering integrated solutions that combine products with value-added services, enhancing customer outcomes and long-term engagement.

The Business Case for Servitisation in Renovation

In 2022, a survey of IFS construction customers found that 25% of contracts included services such as maintenance and facilitiy management. These contracts were typically worth 120–200% more than the cost of construction alone[5].

Servitisation models offer a transformative approach where customers pay a fixed fee for services, while ownership and operational responsibility remain with the technology provider. This incentivises long-term thinking in design and technology selection, often resulting in lower operating and maintenance costs. By retaining ownership, providers are encouraged to develop modular, efficient systems and leverage digital technologies for enhanced data collection and service optimisation. The exponential growth in data capture, driven by Moore's Law, is a game changer for servitisation. As sensor and processing costs fall, providers can deliver real-time performance insights, enabling smarter pricing, accountability, and outcome-based contracts. In the renovation context, servitisation accelerates innovation and enables access to advanced components and systems without requiring significant upfront capital, shifting costs to the operational phase. It facilitates the integration of data systems across organisations, supporting smarter decision-making.

A notable example is **Enpal,** which is known for renting out solar systems as opposed to selling them. As part of this business case, customers pay for energy savings instead of equipment. The servitisation model has gained traction in building energy systems and helped Enpal become a unicorn within four years of its funding [6]. Figure 1 (below) outlines the key drivers for servitisation across the built environment value chain.

Market and Customer Evolution

Solution-Oriented Demand
More construction customers are shifting from buying products to seeking **integrated system solutions** that reduce complexity, risk, and total cost.

Relationship & Differentiation
Services enable **stronger customer loyalty** and clear **market differentiation** in a competitive, commoditized industry.

Business and Performance

Margin & Revenue Model Enhancement
Services typically offer **higher, more stable margins** and enable **recurring revenue** (e.g., subscriptions, leasing, maintenance).

Competitive Resilience
Service offerings help **protect against price wars** and support **longer-term contracts** or frameworks – i.e., value creation over the full building life-cycle.

Technology and Sustainability Enablers

Digital Capability
Advancements in **IoT, BIM, AI, and analytics** allow suppliers to offer digital services like monitoring, automation, and smart logistics.

Circular Thinking
Services support **circular economy goals** (i.e., reuse, carbon tracking) and help clients comply with **green building regulations**.

Figure 1: The Retrofit Servitisation Imperative

Key components of successful servitisation business models

Servitisation models are streamlining the renovation process by offering integrated, outcome-based services that reduce complexity and risk. Concepts like Building-as-a-Service and Maintenance-as-a-Service bundle design, installation, and long-term performance into a single offering thus enabling faster, efficient renovations through simplified delivery and sustained value.

Key components of servitisation for renovation	Explanation	Example
Integrated product-service offering	Combine physical retrofit and/or renovation work with services such as maintenance, energy management, smart system upgrades, or warranties.	Effy is a one stop shop aiming to accelerate retrofit, focusing on energy efficiency. For example, homeowners receive an integrated solution tailored to energy needs, often with subsidies, focused on long term user outcomes.
Lifecycle value creation	Focus on long-term customer outcomes, not just one-time project delivery. Tailor offerings to solve client pain points — like minimizing downtime, improving efficiency, reducing capex, or simplifying upgrades over time.	Enpal creates lifecycle value by solving pain points of high up-front costs and technical risk via zero-euro solar leasing, full maintenance, and long-term ownership with digitally-controlled integrated energy solutions.
Subscription or performance-based revenue models	Move to recurring revenue streams: • Maintenance subscriptions • Pay-per-use utilities (i.e., HVACaaS) • Outcome-based contracts (i.e., energy savings guarantees)	Circlease Floor Leasing provides Flooring-as-a-Service model, with a subscription for annual cleaning and maintenance as well as end of life removal (and reuse).
Digital enablement and data integration	Use IoT, sensors, and BIM (Building Information Modelling) to monitor usage, performance, and maintenance / retrofit needs. Offer predictive maintenance and data-driven insights to optimize building operations.	1KOMMA5°'s servitisation model is a one-stop-shop for AI-optimized solar and home energy solutions. Enabled by the Heartbeat operating system, it intelligently manages energy for customers, connecting them to flexible tariffs to leverage low-cost electricity.
Ecosystem partnerships	Collaborate with tech firms, materials suppliers, utility providers, FM, etc. Enables bundled solutions (i.e.., solar + roofing + energy optimization) that are hard to deliver in-house.	BASE launched the Cooling-as-a-Service Initiative, which now has more than 65 companies on board. This ecosystem shares best practice as well as scaling investments and innovation together.

Case studies and best practices

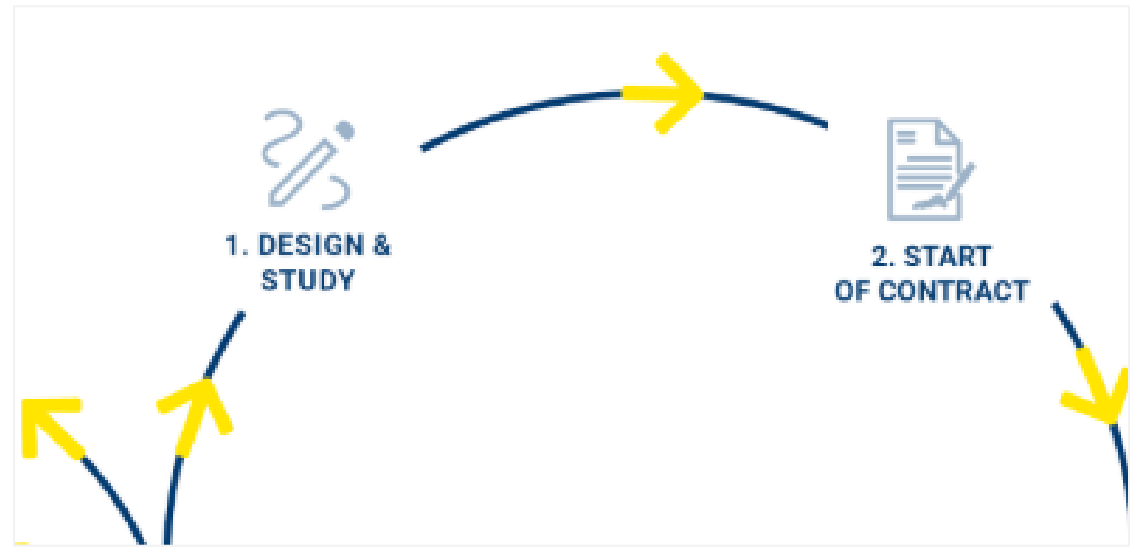
Danfoss – building services on top of a product portfolio and collaborating with partners [8,9]

Danfoss, traditionally known for high-quality components, evolved its business model to deliver greater value by shifting from selling standalone devices to offering integrated system solutions focused on customer outcomes.

To support this, Danfoss established a digital services unit to develop cloud-based platforms that embed deeply into customer operations. This strategic move required new capabilities, engagement of stakeholders, and a shift in commercial models from transactional sales to recurring revenue and subscription-based services.

Danfoss collaborated with Aneo Retail to deliver an *Efficiency-as-a-Service* (EaaS) model for Coop, a major Norwegian retailer. *Instead of purchasing equipment, Coop pays for energy performance outcomes.* The project involved retrofitting refrigeration systems across 10 stores (before scaling), with Aneo taking ownership of facilities and Danfoss providing technology and expertise.

This capital-free model allowed Coop to modernise infrastructure without upfront investment. The project delivered over 50% energy efficiency gains in several stores, a 20% average energy reduction across the portfolio, saving 6 million kWh annually and avoiding 1,650 tonnes of CO_2e emissions. This demonstrates how servitisation, when paired with strong partnerships and innovation, can drive measurable environmental and business impact.



ETAP - Lighting-as-a-Service on a 20 year contract model for a school renovation project [10, 11]

ETAP, a lighting specialist with over 70 years of technical expertise, launched a *Lighting-as-a-Service* (LaaS) offering to support sustainable renovation and long-term performance. This model reflects a shift from product sales to outcome-based service delivery, aligning with circular economy principles and customer needs.

Campus Hemelvaart, a school with buildings constructed in the 19th century and a growing footprint, faced challenges with an outdated, fragmented, and energy-intensive lighting system. Seeking a sustainable and circular solution during renovation, the school partnered with ETAP. Following a site survey, ETAP developed a tailored LaaS contract in June 2022. By October, the new lighting system was fully operational. The service included *design, financing, installation, commissioning, and maintenance* which was delivered for a *fixed annual fee over a 10-year contract.* The school retained responsibility only for electricity costs.

This model enabled better outcomes for the school, including a 70% reduction in energy consumption and significantly lower operational costs. It improved lighting quality and delivered faster, low-waste refurbishment, as no additional ceiling work was required. ETAP handles all upkeep and compliance as well as remotely monitoring, enabling performance tracking and proactive energy efficiency improvements.

Case studies and best practics *(continued)*

Cristal Habitat, a social landlord from the Haute-Savoie region in France, has recently pioneered a groundbreaking approach to renovating its multi-story dwellings.

Following the EnergieSprong approach, Cristal Habitat engaged in pioneering energy-plus refurbishment method centred on sustainability and tenant well-being, supported by strong collaboration with public bodies and private partners. This evolution demanded new technical expertise, stakeholder coordination, and innovative financing models prioritizing long-term social impact over immediate returns.

In Chambéry, Cristal Habitat successfully retrofitted 244 social housing units across 12 buildings with high-performance prefab wooden facades made from bio-based materials and integrated photovoltaic panels. This capital-intensive endeavour was made possible through a mix of subsidies and innovative rent restructuring mechanisms that encourage social inclusion and diversity while preserving affordability. The engaged companies committed to an energy performance guarantee for a period of 30 years, carrying out building monitoring and maintenance.

This model allowed Cristal Habitat to improve energy efficiency dramatically, achieving net-zero energy consumption and enhancing occupant comfort without displacing residents. The project yielded significant environmental benefits, reducing energy use and CO_2 emissions while demonstrating scalable solutions for sustainable social housing.

Value creation across ecosystems

Successful deployment of a servitaisation business model or offering requires a deep understanding of users and required enablers for customers.

1. Servitisation Reduces Risk & Enhances Performance

Servitisation shifts responsibility for performance, maintenance, and compliance from the client to the service provider. This reduces operational risk for tenants and building owners by ensuring predictable outcomes, fewer unexpected costs, and improved comfort. Long-term performance guarantees and data-driven service models, enabled by IoT and remote monitoring, ensure that systems operate efficiently. This approach addresses challenges such as fragmented accountability between installers and FM, and hidden performance issues in non-visible systems like ceiling infrastructure.

A provider offering a **Heating-as-a-Service** model would monitor system performance in real time, proactively maintain equipment, and guarantee indoor comfort levels, reducing tenant complaints and maintenance disruptions.

2. Capital Efficiency & Financing Innovation

Servitisation enables a shift from CapEx to OpEx, giving clients access to high-performance systems without large upfront investments. This model is particularly attractive in retrofit scenarios, where budget constraints often influence project scope. Innovative financing mechanisms, such as energy performance contracts or green loans, are increasingly available, especially when energy savings can be clearly demonstrated. Leading companies like Enpal use asset-backed securities to refinance CAPEX and unlock exponential growth / and to scale exponentially.

A financier would provide **better loans for renovations** due to anticipated energy savings, enabling broader adoption of energy-efficient upgrades, such as in the Netherlands.

3. Faster, Smarter Renovation Through Prefabrication and Digital Tools

Prefabricated and modular renovation solutions significantly reduce on-site construction time, cost, and disruption to occupants. These systems are often paired with service contracts that cover installation, maintenance, and performance monitoring. Additionally, digital platforms and toolkits empower end users to make informed decisions, while enabling providers to optimise lifecycle performance through data analytics. Technologies like BIM, IoT, and digital twins further enhance precision.

A construction company offering **Facade-as-a-Service** can deliver prefabricated, energy-efficient facades with minimal disruption, while using digital twins to monitor thermal performance and suggest future upgrades.

Value creation across ecosystems

Servitisation enables new value to be unlocked from the same material inputs, transforming one-off contracts into ongoing engagement.

4. Stable Revenue & Shared Risk Drive Business Resilience

Servitisation transforms the traditional project-based revenue model into a stable, recurring income stream through long-term service contracts. This predictability supports better financial planning and business continuity. By structuring contracts to share innovation and performance risks with technology partners and financiers, the building industry can reduce individual exposure while accelerating the adoption of new solutions. This model encourages robust design and lifecycle thinking, as providers are incentivised to deliver durable, efficient systems that perform over time.

A building firm offering **Energy-as-a-Service** (EaaS) can secure 10–15-year contracts, with performance guarantees backed by shared risk agreements with HVAC or lighting technology partners.

5. Integrated Solutions Unlock Market Growth & Competitive Advantage

By bundling design, installation, maintenance, and compliance into a single offering, firms can deliver seamless, high-value renovation experiences. This approach strengthens client relationships, opens opportunities for upselling higher-margin services, and supports scalable delivery through models like OSS. Removing upfront capital barriers through outcome-based contracts, such as Energy Performance Contracts, makes advanced solutions more accessible to a broader customer base.

A firm delivering **Building-as-a-Service** can offer clients a full retrofit package with no upfront cost, paid through energy savings, while layering in digital monitoring, maintenance, and compliance services.

6. Digitalisation & Data Ownership Enable Scalable, High-Performance Delivery

Digital tools such as IoT, Digital Twins, and BIM allows the building industry to monitor building performance in real time, optimise operations, and retain valuable data across the asset lifecycle. This data-driven approach supports tailored service delivery, predictive maintenance, and continuous performance improvement. By owning and leveraging this data, firms can differentiate themselves, improve operational efficiency, and create new value streams through analytics and performance insights.

A provider using IoT sensors and Digital Twins can track energy use, occupancy, and indoor air quality, offering clients **customised upgrades** and long-term **optimisation** strategies based on real-world performance data.

Conclusion

Servitisation is not a conceptual trend but a practical, scalable mechanism to address the systemic inefficiencies in Europe's renovation market.

The scale of Europe's renovation challenge is immense, but so is the opportunity. Servitisation offers a powerful pathway to accelerate deep renovation, unlock new value streams, and deliver measurable environmental and economic benefits. With the annual retrofit rate stagnating at 1.2%, well below the 2–3% required to meet EU climate targets, technical and commercial innovation must converge. Servitisation models offer a structured pathway to do just that.

The time to act is now

To get started with your servitisation journey we recommend to follow four questions:

1. Where can we deliver measurable outcomes instead of products?
2. What digital infrastructure is required to support lifecycle performance?
3. How can we structure partnerships to share risk and scale delivery?
4. What internal capabilities must evolve to support a service-centric model?

By addressing these questions, you can position your organisation to lead in a market that is increasingly defined by outcomes, not ownership. The time to act is now. Servitisation is not just a business model shift, but a strategic imperative for sustainable renovation at scale.

Activity: To engage your colleagues, we recommend to use the figure below to map your products and services. This is a great starting point to assess your current offering and define future ambitions.

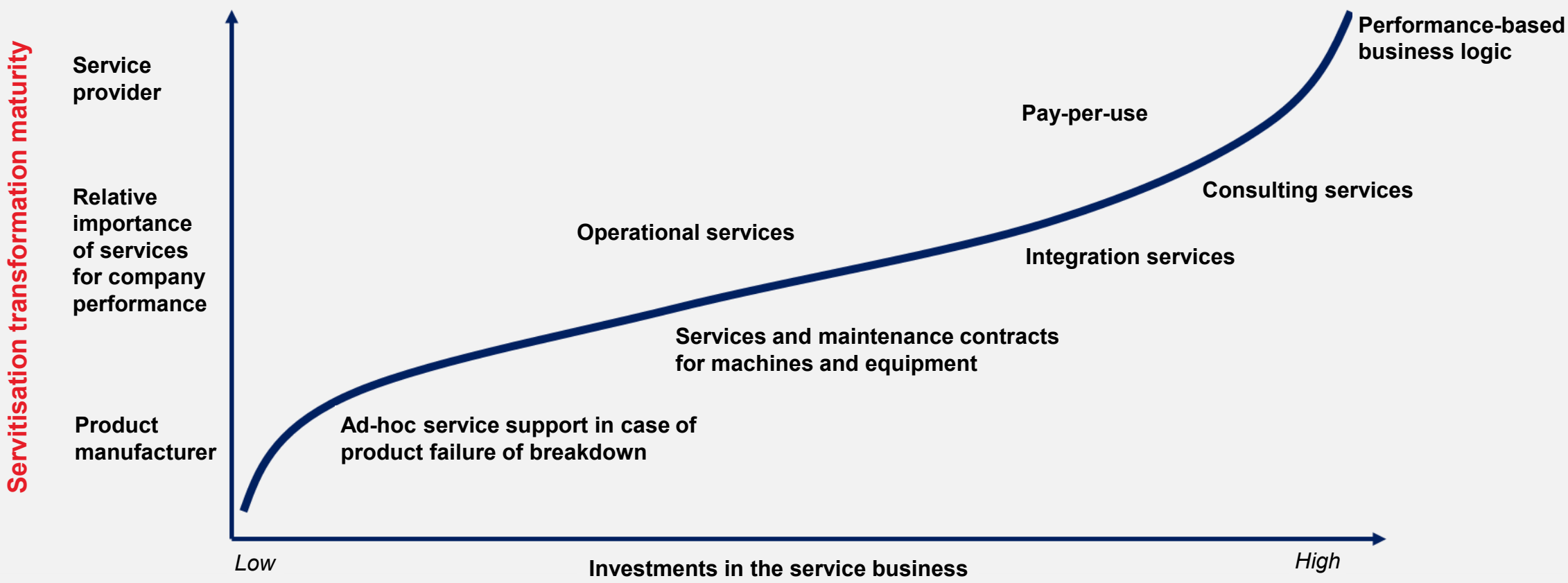


Figure 2: Where are you currently? Adapted by R. Rohrbeck [12]

Post workshop reflection

Rabot Dutilleul

"Rabot Dutilleul is committed to driving transformative construction solutions that reshape the real estate landscape in our region.

Achieving this vision requires several key levers. A stronger political framework is necessary to stimulate greater market demand, though Rabot Dutilleul's influence here is limited, we recognize its critical role in unlocking growth opportunities. Enhancing our productivity and reducing operational costs will enable us to accomplish more with fewer resources, as process optimization leads to greater value and scalability. Pioneering new business models also has the potential to activate latent market demand, and this workshop focuses specifically on this dimension of innovation, underlining its strategic priority for the organization.

Moving forward, ***the main priority is to generate actionable ideas around servitisation*** *and, most importantly, to launch pilot construction projects with actual clients and real buildings. Proving these concepts in the field is essential; if successful, rapid scaling will be pursued."*

Rodolphe Deborre - Directeur Innovation et Renaissance Ecologique , Rabot Dutilleul

Thank you for all who have contributed to the report and join the mission to accelerate building renovation in Europe.

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