THE CIRCULAR OPPORTUNITY

HARNESSING THE POWER OF PRODUCT-AS-A-SERVICE IN CONSTRUCTION

BNP PARIBAS
LEASING SOLUTIONS

Equipment finance for a changing world

ABOUT THIS REPORT

This sector report forms part of the more detailed report, "The Circular Opportunity: Harnessing the Power of Product-as-Service", which was commissioned by BNP Paribas and BNP Paribas Leasing Solutions. The research was conducted by Do Well Do Good, a purpose-led strategy consultancy. The report aims to contribute to advancing Product-as-a-Service (PaaS) business models, in line with the European Union's efforts to promote the transition towards a circular economy.

The report offers an overview of the role of the PaaS in the circular economy ecosystem. It also explores two key sectors in depth, examining how agricultural equipment and green tech have responded to opportunities and challenges presented by PaaS models. These industries have been identified as core sectors for BNP Paribas Leasing Solutions due to their significant economic impact and the possibility of integrating PaaS models into their operations. Additional insights have also been gathered across four other sectors – heavy vehicles, healthcare, IT, and construction.

While researching this report, interviews were conducted with 28 industry experts across six industries, who were asked to share their comprehensive understanding of how PaaS models are transforming traditional business practices in their field.

You can access the full report and more insights into Product-as-a-Service models here.

Thank you to everyone who shared their time, knowledge, and insights:

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INTRODUCTION

Regulators in the EU, and the world over, have made their intentions clear – linear consumption models must become a thing of the past if we are to tackle the immense challenges of climate change and resource scarcity.

The EU's target to transition to a fully circular economy by 2050 sets a firm deadline, just over two decades away, to achieve seismic and systemic changes to the way we design, produce, distribute, sell, buy, use, and dispose of goods and services. This will require new laws, new technologies, new processes, and new business models. But most crucially, this transition will require a level of global collaboration, trust, partnership, and goodwill throughout the value chain and across industries and borders.

If circularity is the concept that can lead us to a more sustainable future, now we urgently need practical tools to help make progress on the ground. New financial models and operating systems that prioritize servitization will be important levers that enable organizations to adopt the principles of a circular economy in practice.

Product-as-a-Service (PaaS) models support a shift away from purchasing products outright to buying the services, value, and benefits products provide. This has the potential to reduce the demand on natural resources, by laying the foundations for producers to take responsibility for assets throughout the entire product lifecycle and to retain the value of materials by keeping them in use.

Financial and contractual mechanisms, such as leasing, are a key part of the PaaS equation. Crucially, leasing can allow the use and possession of an asset to transfer between different parties, while ownership is maintained by one entity; and it encourages optimal use of assets over time.

Today, most of these circular service models are still in their infancy and all major sectors still have a long road ahead to develop mature PaaS offerings. Every part of the value chain must contribute to progressing this new, circular approach to production and consumption, and there are undoubtedly complex challenges ahead.

This mini report explores the role of PaaS in the agriculture sector. It forms part of the wider report, "The Circular Opportunity: Harnessing the Power of Product-as-a-Service". As part of this broader research, we discuss the role of service models in enabling a circular economy and the challenges and opportunities this presents for businesses.

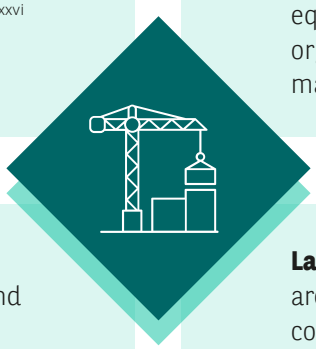
THE PAAS OPPORTUNITY: CONSTRUCTION

The construction industry is very literally building our future. The EU's construction revenue amounted to roughly 2.1 trillion euros in 2022, which in most European countries made up between 4-7 percent of their GDP.[lxxv] As our population grows, demand for housing and development in cities is on the rise. As urban areas expand, we need more roads, schools factories, offices, and hospitals, and ageing infrastructure needs maintenance and upgrades. Today, there is also huge investment in sustainable infrastructure projects, such as renewables. Construction companies recognize this opportunity and the need to make sustainable investments in modern equipment to meet the demand.

Trends in construction

Reducing emissions and waste is a priority for the sector, with construction accounting for 37% of global emissions[lxxvi] and more than a third of all waste generated in the EU.[lxxvii]

Supply chain disruptions have impacted delivery times for new construction equipment, which has seen some organizations engage with the secondary market to address demand.



Electrification of fleets is underway as companies target sustainable reform and respond to regulatory changes, such as diesel bans in some cities.

Labor shortages in the construction sector are increasingly driving businesses to consider the role that digitalization and automation could play in their operations.

Innovation in construction

Automated materials handling equipment is a growing construction trend, as is the electrification of fleets. Developments in Machine Learning and Artificial Intelligence are helping to manage machinery more safely, efficiently, and sustainably. Telematics is also delivering important gains by combining GPS, vehicle diagnostics, and wireless technology to share vehicle data and cross-reference it with the vehicle's internal behavior.[lxxviii] This means information data insights can automatically trigger service needs, such as predictive maintenance and repair.

The PaaS opportunity

Budget control:

Fluctuating payment schedules, rising material costs, and supply chain challenges can make it difficult for construction operators to plan and execute investments. PaaS models remove the upfront costs of investment, prevent capital from being tied up in expensive machinery, and allow organizations to control and plan costs through monthly payment schedules that include the cost of value-add services.

Supporting the energy transition:

Overhauling a construction fleet and adopting electrification can be expensive. Electric equipment generally carries a higher price tag, and organizations must also invest in additional infrastructure, like new batteries and charging stations, as well as training for their teams. PaaS contracts bundle these services in one contract serviced by a monthly fee, supporting organizations to transition to sustainable energy sources.

Diversify revenue streams:

Construction has a long lifespan, sometimes exceeding 20 years or more. PaaS models allow manufacturers to move away from one-time sales and create multiple touch points with customers by offering services across the lifecycle of equipment. PaaS models can accelerate the sales process, grow margins per sale, and improve customer relationships.

Reduce resource costs and mitigate supply challenges:

Producing new construction equipment is extremely resource intensive, and the industry is facing ongoing supply challenges. PaaS models close the loop on resources used in the original manufacturing process, allowing producers to reclaim valuable materials at the end of the equipment's life.

Top 3 challenges to PaaS adoption

The long lifespan of construction equipment can mean progress to modernize the industry with more sustainable solutions and adoption of circular models, like PaaS, can be slow.

New industry standards and regulations are needed to guarantee the quality of refurbished equipment and assist with transparent and consistent grading of used parts.

The recycling and refurbishing market is still developing and needs investment to scale and meet future demand as PaaS adoption accelerates.

PAAS IN ACTION

Caterpillar: Remanufacturing construction equipment

The company

Caterpillar Inc. is the world's leading manufacturer of construction and mining equipment, off-highway diesel and natural gas engines, industrial gas turbines and diesel-electric locomotives.[lxxix]

PaaS features

Caterpillar has embraced PaaS models as part of its commitment to circularity, with its products now being "built to be rebuilt". Caterpillar construction equipment is designed to be restored and used for multiple lifecycles.[lxxx]

Benefits to customers

Remanufactured parts, commonly used in equipment rebuilds, provide customers with quality products that help lower the total cost of ownership, keep high-value raw materials, such as iron, in productive use, and help extend the value of resources used in the manufacturing process.

Circular impact

The company's goal is to increase sales and revenues from remanufacturing offerings by 25% by 2030. It has already taken back 147 million pounds of material for remanufacturing and collects 88% end-of-life eligible returns. The company has seen a 31% increase in sales and revenue from remanufacturing offerings since 2018.[lxxxi]

CONCLUSION

BNP Paribas Leasing Solutions has identified the circular economy as a key business priority, and an essential part of its alignment with the European Union's Green Deal. The transition to a circular economy has a clear role in addressing the causes of climate change and resource scarcity. But crucially, we believe that it also has the potential to build resilience in our business, in our customer's businesses, and in the global economy.

Our goal is to find new financial products and services that meet our clients' needs and drive business value, while respecting the planet's limits. That's why as circular solutions emerge and mature, we see a key role for our business in supporting our partners and clients to unlock the opportunities this transition presents.

As this report explains, leasing can bring to life a crucial principle of circularity. A lease contract can act as a thread that weaves through a product's lifecycle, linking the people and organizations who manufacture, finance, distribute, sell, and use it. By connecting this circular ecosystem, products can be used more efficiently and reused by more people, increasing lifetime utilisation, retaining value, and preventing unnecessary waste.

Through our research, we have explored the financial, operational, and environmental benefits of PaaS models as practical tools that organizations can use to embed circularity into their operations. However, we believe it's equally important to highlight the challenges that exist today, in what is still a nascent and emerging sector.

The linear economy remains deeply embedded in every industry and achieving a circular economy will require a complete transformation of the way we produce, sell, buy, use, and dispose of goods, as well as systems our society has in place to enable these economic exchanges to happen.

This is the important job ahead of us all, as we work towards the EU's deadline of achieving a fully circular economy by 2050. Only through new partnerships and greater levels of collaboration will this seismic change be possible. That's why we are inviting our network to transition with us as we unlock new ideas, solutions, and partnerships that help to build a circular economy.

All research references can be found in the main report.

You can access the full report and more insights into Product-as-a-Service models here.

READ THE FULL REPORT

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